INTERNATIONAL ENERGY AGENCY/AGENCE INTERNATIONALE DE L'ENERGIE

OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

www.oilmarketreport.org

INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

16 January 2008

HIGHLIGHTS

- **NYMEX light sweet crude futures breached $100/bbl in early January** and remain near record highs, lifted by falling stocks, cold weather and tight fundamentals. Tensions in Nigeria and the Middle East and fund positioning remain important supportive factors.

- **OECD total oil industry stocks fell by 38.1 mb in November** (-123.8 mb year-on-year), extending the move below the five-year average and lowering forward cover to 51 days. Preliminary December data for the US, Japan and EU-16 show another 30.7 mb draw.

- **World oil supply averaged 87.0 mb/d in December**, up 870 kb/d from November on increases in OPEC-10, North America, the FSU, Brazil and China. Global supply in 4Q was more than 1.0 mb/d higher than a year earlier, having averaged at or below levels of a year ago in the previous three quarters.

- **December OPEC crude supply rose by 825 kb/d to 32.0 mb/d**, following the inclusion of 500 kb/d from Ecuador and the remaining 325 kb/d coming from restored UAE production and higher Iranian exports. Nigerian supply was stable below 2.2 mb/d, despite threats of further rebel attacks. Effective OPEC spare capacity fell to 2.2 mb/d, of which 80% was held by Saudi Arabia.

- **2007 world oil demand is revised up by 150 kb/d to 85.8 mb/d** on stronger-than-expected deliveries in Asia and the Middle East and cold OECD weather. Offsetting adjustments leave 2008 demand virtually unchanged at 87.8 mb/d. Downside risks to US and global GDP have increased, but remain outside consensus and institutional forecasts.

- **December global refinery throughput of 74.9 mb/d** is estimated to have fallen just short of last August's peak. January throughputs are expected to remain high at 75.2 mb/d, up 1.3 mb/d on the year, before seasonal maintenance kicks in from February onwards.

Next Issue: 13 February 2008

Notice to Subscribers

A recent review of readership of the *Oil Market Report (OMR)* shows that distribution is now overwhelmingly electronic. In the interest of pursuing this trend towards maximum environmental benefit, the production of the paper version of the report will cease entirely in January 2009. Of course, existing paper subscriptions will be honoured, but non-electronic subscriptions or renewals will no longer be accepted.

A project to enhance the website and electronic services to subscribers is underway, and additional features will be made available over the coming months.

It is also planned to simplify the subscription process and to integrate the *OMR* subscription service more closely with the IEA's Online Bookshop placing increasing emphasis on online payment, with immediate automatic fulfilment. This will be associated with a move to calendar-year subscription periods. Returning and new subscribers will be invited to renew to December 2008, or December 2009, on a pro-rata basis.

We expect that these changes will help improve the quality of subscriber support.

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FAR FROM PERFECT

After brushing perilously close at the end of last year, front month NYMEX light sweet crude futures finally surpassed $100/bbl in intra-day trading. The breach was largely a symbolic: from an economic or analytical perspective it makes little difference if prices move to $99.29 or $100, and in reality there are many different crudes, some which trade at a premium, some at a discount to the WTI benchmark on which this futures contract is based. But it underscored the 10 fold increase in oil prices seen since 1999 – a dramatic move by anyone's standards, and in particular, a sharp jump in prices from a year earlier.

The most recent rise would appear the easiest to explain: OECD stocks have been falling since July 2007, reflecting a tightening physical market. Total OECD oil inventories are now below five-year average levels and demand cover has, over the past five months, moved from the upper-end of the five-year range to the lower-end. Fourth quarter demand has also been stronger-than-expected and supply-side concerns have played a role. Rebel groups in Nigeria have been threatening attacks again, we have had a reported spat between the US Navy and Iranian Revolutionary Guards and producers have shown little public interest in lifting output targets further. Further, there has also been the perennial New Year investor positioning – a market factor every year for the past 20 years.

These factors provide an explanation for the recent trend higher - even in the face of more bearish economic projections - but do they justify $100/bbl oil? If we look to basic economic theory, then the clearing price is reached where marginal supply equals marginal demand. We know the cost of producing oil is going up, with some analysts estimating current marginal costs as high as $50 to $75/bbl.

But when has oil ever traded at its marginal cost? Over the medium term, the marginal costs should act as a floor, but with OPEC managing supply, there is the potential for prices to trade at a premium. Other factors may similarly confer an upside on prices. Tightness in refinery capacity, the underperformance of non-OPEC supply, low spare capacity, fears of peak oil and accelerating demand for transportation fuels could work in the same way.

Such strong fundamentals can generate lasting price trends, which can also create their own momentum. Why should a producer hedge his production, if the price is always rising? Doing so incurs a heavy insurance premium. Technical traders who follow price patterns buy when prices fall back to their trend lines, and also when new highs are made. Risk managers can also adopt derivatives strategies which look good on paper, but which may lead them to buy additional contracts if the price range is particularly wide (option buying may have accelerated the initial push above $90).

Fund flows may also have an impact: certainly, the weight of money argument has an intuitive feel. But the answer may not be clear-cut. While we do not have disaggregated data on index fund activity in the oil markets, there is some information available for other commodity markets. For example, according to the CFTC, index funds currently account for a very large share of wheat futures open interest (around 40%) on the Chicago Board of Trade. That seems remarkably high, yet despite wheat prices nearly tripling since 2006, the share of index funds relative to open interest has actually fallen. Certainly, tight fundamentals seem to be playing a major role there, rather than speculation.

Ultimately, this is a complex and interactive web of fundamentals, which are both variable over time and difficult to untangle. Many would like to see the oil price as a composite ladder of identifiable factors, i.e. Oil price = marginal cost + product tightness + cold weather + geopolitics + speculation. But the market does not work that way.

Recent newspaper articles have been eerily similar to those seen in the summer of 2004 when crude oil prices doubled from a year earlier to $50/ bbl. It created the same level of consumer disquiet as we are

seeing three years later at $100. $50/bbl seemed outrageously high. Speculation was blamed for up to half of the prevailing price. Plenty of reasons for $50 oil were subsequently found, none of them 'irrational'. That price now seems relatively low, bearing in mind higher marginal costs.

Recently, we have seen quotes attributing $25-$50 of the current oil price to speculation, but where do those numbers come from? If the numbers were derived from a formal price model that would be impressive, particularly as when we hit $100 we only had partial inventory data for half of the OECD and precious little for the rest of the world, and accurate supply and demand data dating back to October at best. As for speculators, the only comprehensive data we have are those for futures market open interest. Partial trader classifications are only available on US markets and there is only a three-yearly survey by the Bank of International Settlements on the total activity in Over-the-Counter (OTC) paper contracts for all the commodity markets.

In a perfect market, price embodies all the information we need, but without perfect information, we are a long way from what academics would term an efficient market. Information will never be perfect, but more information, from both the physical side and the financial side, would improve our understanding.

DEMAND

Summary

- **Global oil product demand** has been adjusted up by roughly 150 kb/d in 2007, as a result of baseline revisions in several non-OECD areas (Asia and the Middle East) and stronger-than-expected 4Q07 submissions for OECD North America and Europe. In 2008, by contrast, global demand has remained largely unchanged. World demand is now expected to average 85.8 mb/d in 2007 (+1.2% or +1.0 mb/d over 2006) and 87.8 mb/d in 2008 (+2.3% or +2.0 mb/d). The 2008 forecast, however, may be further revised if forthcoming assessments from the IMF and the OECD point to a weaker-than-expected outlook for the US economy, which may be only partially offset by strong GDP growth in the Middle East and China

- **OECD oil product demand** has been upped by 53 kb/d in 2007 following stronger-than-expected 4Q07 demand in North America and Europe. By contrast, the 2008 demand forecast was lowered by 83 kb/d, following a reassessment of gasoil demand prospects in 1Q08, particularly in the US. OECD demand, estimated at 49.2 mb/d in 2007 (-0.2% year-on-year), is expected to average 49.7 mb/d in 2008 (+1.1%).

Global Oil Demand (2006-2008)

(million barrels per day)

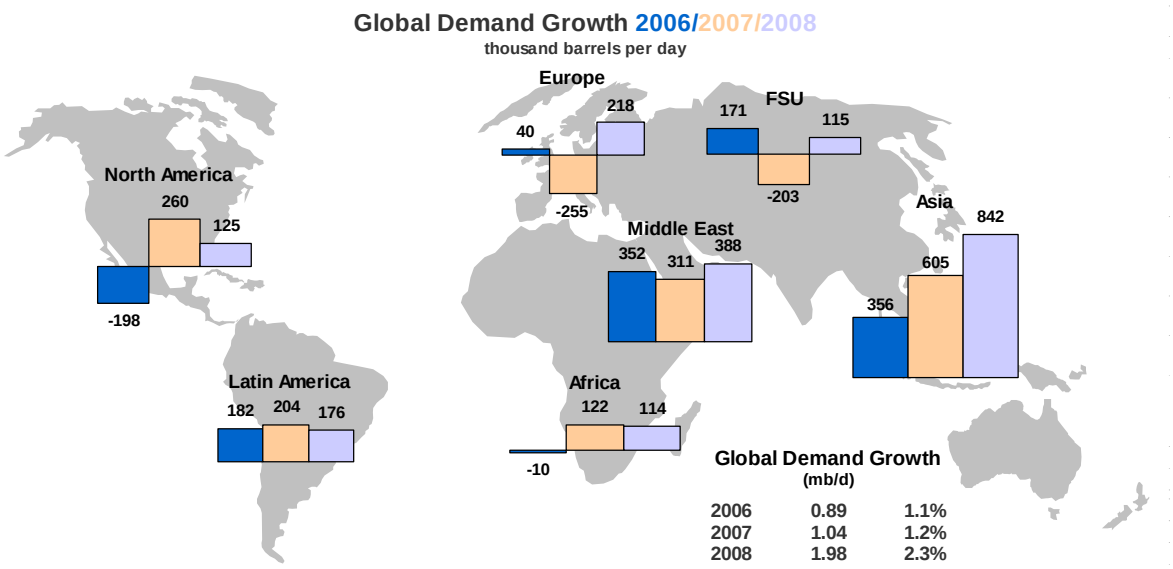
	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Americas	30.4	30.4	30.9	30.7	30.6	31.0	31.0	31.2	31.1	31.1	31.2	31.3	31.5	31.5	31.4
Asia/Pacific	25.1	24.1	23.7	24.8	24.4	25.3	24.7	24.3	25.7	25.0	26.3	25.5	25.1	26.5	25.9
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.6	16.1	16.5	15.9	16.3	16.6	16.3
FSU	4.1	3.9	4.1	4.4	4.1	3.9	3.7	3.9	4.2	3.9	4.0	3.8	4.0	4.3	4.0
Middle East	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.9	6.6	6.7	6.9	7.0	7.3	7.0	7.0
World	**85.5**	**83.5**	**84.4**	**85.7**	**84.8**	**85.9**	**84.8**	**85.4**	**87.2**	**85.8**	**88.2**	**86.7**	**87.3**	**89.1**	**87.8**
Annual Chg (%)	0.6	1.0	1.2	1.4	1.1	0.4	1.6	1.1	1.8	1.2	2.7	2.2	2.2	2.1	2.3
Annual Chg (mb/d)	0.5	0.8	1.0	1.2	0.9	0.4	1.3	0.9	1.5	1.0	2.3	1.9	1.9	1.8	2.0
Changes from last month's report (mb/d)	0.04	0.05	0.10	0.03	0.05	0.11	0.10	0.11	0.29	0.15	-0.13	0.03	-0.01	0.18	0.02

- **Non-OECD oil product demand** has been revised up by some 100 kb/d in both 2007 and 2008, following the baseline reappraisal of several countries, including Chinese Taipei, Indonesia, Malaysia and Iran, which largely offset a small downward adjustment in shortage-stricken China. As such, non-OECD demand is now seen averaging 36.6 mb/d in 2007 (+3.2% on an annual basis) and 38.1 mb/d in 2008 (+4.0%).

OECD

In November, according to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 0.1% year-on-year. The resilience of oil product demand in the Pacific (+0.4% on a yearly basis) and North America (+0.1%) failed to offset Europe's demand weakness (-0.6%).

Oil product demand in OECD **North America** (including US Territories) was supported by transportation fuel deliveries in both the US and Mexico and strong residual fuel demand in the US as a result of relatively cold temperatures. In OECD **Pacific**, demand continued to be mostly driven by strong electricity consumption in Japan, which boosted residual fuel and direct crude use. OECD **Europe** demand, meanwhile, continued to feature lower-than-average deliveries of heating oil and residual fuel oil in Germany.

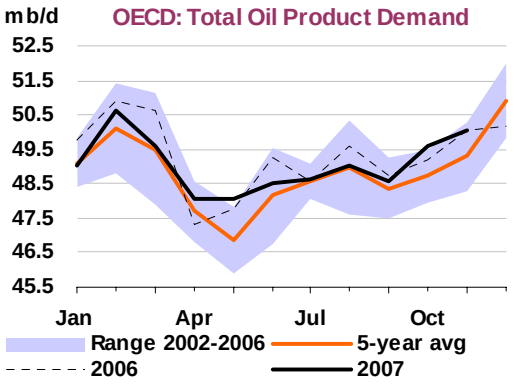


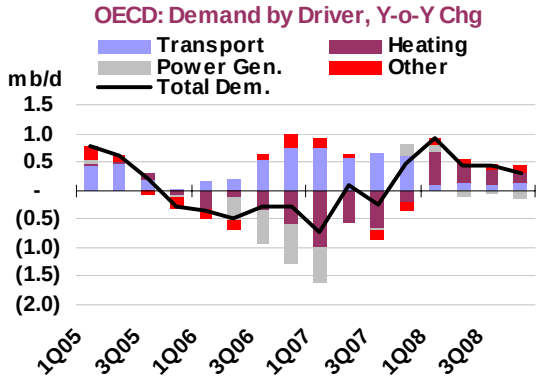
OECD Demand based on Adjusted Preliminary Submissions - November 2007

(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.82**	**0.8**	**1.97**	**5.5**	**4.08**	**6.6**	**1.21**	**-14.9**	**1.10**	**8.9**	**6.25**	**-4.34**	**25.44**	**0.1**
US50	9.29	0.5	1.74	6.2	3.53	5.2	0.67	-18.2	0.58	10.9	4.80	-5.5	20.62	-0.3
Canada	0.71	-0.1	0.12	-3.1	0.20	5.5	0.38	-3.1	0.17	21.9	0.78	-0.3	2.37	0.9
Mexico	0.75	5.3	0.07	7.7	0.29	4.4	0.13	4.4	0.24	-0.2	0.60	-0.5	2.08	2.8
OECD Europe	**2.45**	**-3.3**	**1.25**	**-0.5**	**4.44**	**3.0**	**2.23**	**-2.3**	**1.81**	**-3.8**	**3.66**	**-0.4**	**15.83**	**-0.6**
Germany	0.50	-3.3	0.19	4.3	0.71	5.3	0.44	-21.7	0.16	-15.3	0.54	-17.1	2.54	-8.5
United Kingdom	0.43	-4.8	0.34	-5.2	0.47	-1.3	0.16	7.5	0.09	27.1	0.36	5.5	1.86	0.1
France	0.21	-3.5	0.15	2.2	0.67	4.3	0.36	18.4	0.18	51.4	0.52	8.5	2.10	9.6
Italy	0.27	-6.7	0.08	3.9	0.56	-0.6	0.13	-6.8	0.26	-7.6	0.40	-1.4	1.71	-3.2
Spain	0.15	-2.8	0.11	-0.7	0.55	7.5	0.25	7.5	0.21	-11.1	0.37	-1.2	1.64	1.2
OECD Pacific	**1.55**	**-0.5**	**1.00**	**-5.6**	**1.33**	**-0.1**	**0.56**	**-5.2**	**0.99**	**-2.1**	**3.33**	**4.9**	**8.75**	**0.4**
Japan	0.98	-1.9	0.67	-4.6	0.64	-2.4	0.40	-9.5	0.56	10.2	1.98	4.0	5.23	0.3
Korea	0.17	0.2	0.19	-13.1	0.31	0.4	0.15	8.4	0.40	-16.6	1.13	7.9	2.35	-0.6
Australia	0.35	3.0	0.11	1.7	0.33	3.8	0.00	5.9	0.02	-2.3	0.20	1.8	1.01	2.8
OECD Total	**14.83**	**-0.1**	**4.22**	**0.9**	**9.85**	**4.0**	**4.00**	**-6.9**	**3.89**	**-0.1**	**13.24**	**-1.1**	**50.03**	**-0.1**

* Including US territories





Overall, OECD demand is estimated at 49.2 mb/d in 2007 (-0.2% year-on-year), about 50 kb/d higher than last month's report, and is forecast to average 49.7 mb/d in 2008 (+1.1%). As highlighted in the chart (previous page), most of the oil demand growth in 2008 is expected to come from heating use on the basis of a return to normal weather patterns. By contrast, transportation fuels, which drove most of the demand growth in the previous years, are likely to remain subdued as a result of weaker economic activity and higher oil prices.

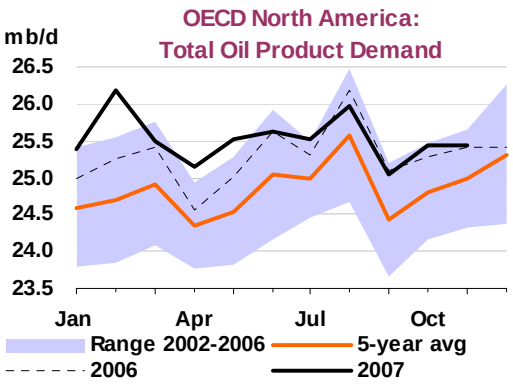
Total OECD Demand by Product
(million barrels per day)

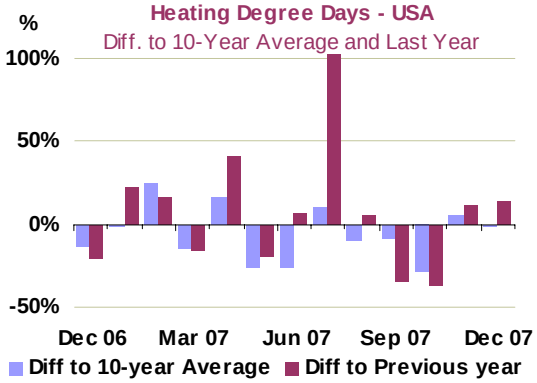
	2006	2007	4Q06	1Q07	2Q07	3Q07	Aug 07	Sep 07	Oct 07*	Latest month vs. Sep 07	Latest month vs. Oct 06
LPG & Ethane	4.76	4.80	4.80	5.24	4.65	4.43	4.39	4.37	4.61	0.24	0.23
Naphtha	3.17	3.21	3.37	3.38	3.06	3.15	3.17	3.12	3.10	-0.02	-0.20
Motor Gasoline	14.86	14.93	14.92	14.45	15.07	15.29	15.54	14.87	14.90	0.04	0.03
Jet & Kerosene	4.16	4.14	4.24	4.35	3.90	3.95	4.01	3.88	4.13	0.26	0.15
Gas/Diesel Oil	13.25	13.22	13.61	13.51	12.61	12.90	12.83	13.29	13.91	0.62	0.10
Residual Fuel Oil	4.04	3.96	3.88	4.20	3.87	3.78	3.83	3.79	3.79	0.00	0.10
Other Products	5.08	4.97	4.99	4.58	5.03	5.24	5.27	5.27	5.17	-0.10	0.04
Total Products	**49.33**	**49.23**	**49.80**	**49.71**	**48.20**	**48.75**	**49.03**	**48.59**	**49.62**	**1.03**	**0.45**

* Latest official OECD submissions (MOS)

North America

Preliminary data indicate that oil product demand in North America (including US Territories) rose by 0.1% year-on-year in November, underpinned by transportation fuels and residual fuel oil growth. In particular, US gasoline demand has turned out to be stronger than expected despite high retail prices; together with sustained Mexican demand, the region's gasoline deliveries rose by 0.8% on a yearly basis. Moreover, buoyant gas/diesel oil demand across the region and relatively cold temperatures in the US and Canada supported overall gasoil deliveries (+0.8%). Demand in OECD North America has thus been revised up slightly compared with last month's report. It is now expected to average 25.6 mb/d in 2007 (+1.0% on a yearly basis) and 25.7 mb/d in 2008 (+0.5%).





OECD North America Demand by Product
(million barrels per day)

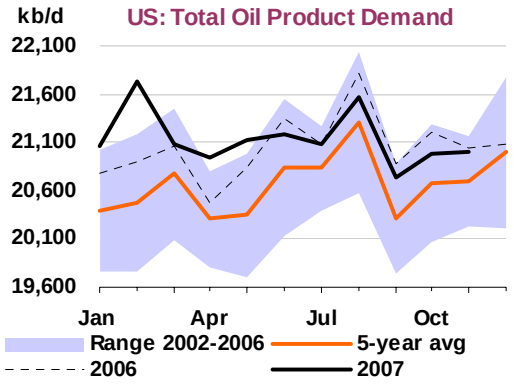
	2006	2007	4Q06	1Q07	2Q07	3Q07	Aug 07	Sep 07	Oct 07*	Latest month vs. Sep 07	Latest month vs. Oct 06
LPG & Ethane	2.86	2.91	2.92	3.24	2.75	2.70	2.69	2.68	2.80	0.12	0.12
Naphtha	0.44	0.43	0.50	0.42	0.45	0.43	0.40	0.44	0.45	0.01	-0.07
Motor Gasoline	10.72	10.85	10.78	10.53	10.94	11.07	11.22	10.76	10.84	0.08	0.09
Jet & Kerosene	1.91	1.91	1.88	1.88	1.89	1.91	2.00	1.79	1.91	0.12	0.03
Gas/Diesel Oil	5.17	5.27	5.28	5.48	5.13	5.14	5.26	5.18	5.31	0.13	-0.05
Residual Fuel Oil	1.20	1.26	1.09	1.38	1.26	1.19	1.25	1.16	1.13	-0.02	0.05
Other Products	2.99	2.93	2.92	2.74	3.02	3.07	3.14	3.03	3.00	-0.03	-0.01
Total Products	**25.30**	**25.56**	**25.37**	**25.67**	**25.43**	**25.51**	**25.96**	**25.03**	**25.44**	**0.41**	**0.16**

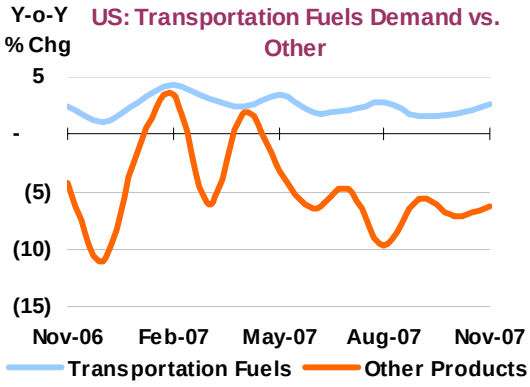
* Latest official OECD submissions (MOS)

Inland deliveries in the continental **United States** – a proxy of oil product demand – fell by 0.3% year-on-year in November, according to adjusted preliminary data. The weakness in demand growth was due to lower-than-expected deliveries of naphtha, heating oil and 'other products', which offset strong residual fuel oil demand (+10.9%), partly related to slightly colder-than-normal temperatures. Indeed, the number of heating-degree days in November was 5% higher than the ten-year average (and 12% higher than in November 2006). Nevertheless, many climatologists are now predicting another mild winter (January is expected to be warmer than normal). Gasoline deliveries, meanwhile, rose by 0.5%, as well as jet fuel

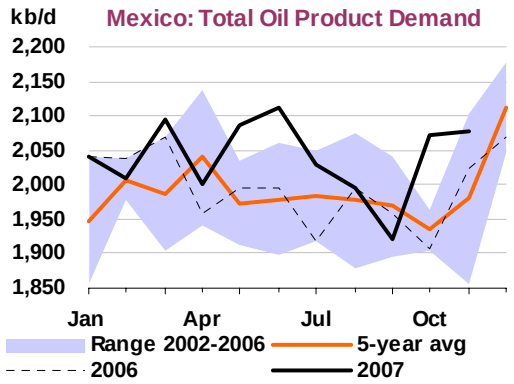
(6.2%) and transportation diesel (5.2%). It should be noted, though, that the strength of diesel demand is also partly related to the change in sulphur specifications since mid-2006, whereby some of non-road, locomotive and marine gasoil is now counted as diesel. The fact that transportation fuel demand has continued to be resilient in the US appears to cast doubts on dire predictions of significant demand destruction as a result of high oil prices, suggesting that US oil demand is much more price inelastic than commonly assumed. Yet oil demand would arguably be affected by an economic slowdown.

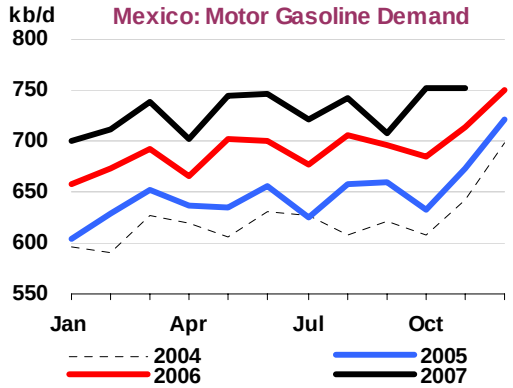
Given data revisions in 4Q07 and a reassessment of gasoil demand in 1Q08 (taking into account the prediction of a mild January but assuming that the rest of the quarter will post normal temperatures), US50 total oil product demand is slightly revised when compared with last month's report. In 2007, demand is now seen averaging 20.8 mb/d in 2007 (50 kb/d higher than in the last report and representing a growth rate of 0.5% over 2006). In 2008, demand is expected to rise by 0.3% to 20.9 mb/d (70 kb/d lower than in the previous report).



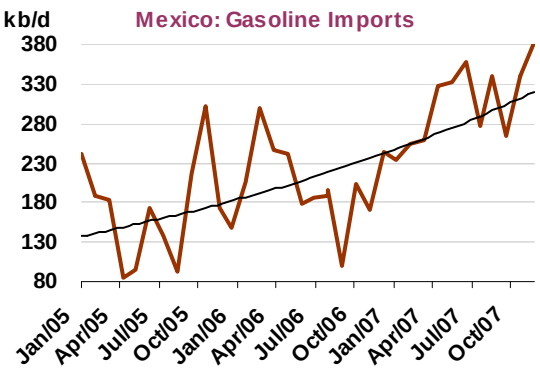


According to November preliminary data, oil product demand in **Mexico** grew by 2.8% on a yearly basis. All product categories bar LPG and naphtha posted positive growth rates. In particular, transportation fuels continue to remain resilient: gasoline deliveries expanded by 5.3% year-on-year, jet fuel/kerosene by 7.7% and diesel by 4.4%, suggesting that the Mexican economy is holding its ground despite the uncertainties north of the border.





In fact, demand for gasoline – driven by rising car ownership amid a consumer credit boom – is so strong that imports have continued to rise almost exponentially (reaching 380 kb/d in November, roughly half of total demand), since the country's refining capacity has barely increased over the past decade. Although several refineries have been upgraded with crackers in order to increase volumes of lighter products (such as gasoline), this has been insufficient to meet the growth in demand. Given current high prices, the country's product import bill has also soared as a result.



New Directions for the US Economy?

Over the past several weeks, many observers assessing the short-term effects of the US subprime crisis and its effects on the country's economy have become patently more pessimistic. Admittedly, several closely watched indicators, such the leading indices surveying house prices (Case-Schiller and OFHEO) or the Institute of Supply Managers (ISM) index of manufacturing activity, have reported a marked deterioration. The Case-Schiller index, for example, contracted by 5.5% year-on-year in 3Q07. This bodes ill for consumer spending, which has been bolstered by rising house prices. Moreover, the stock exchange volatility and credit tightness have continued. Other signs, though, are less gloomy: the steep fall of the dollar has been contained and the nominal GDP growth rate for 3Q07 has been revised up (to 4.9%, from a previous estimate of 3.9%). However, inflationary pressures could be building up, since the US economy has been expanding above trend growth (estimated by the Federal Reserve at some 2.5% per year) for two quarters in a row. Such pressures, furthermore, could be compounded by the weakness of the dollar and by prevailing high food and energy prices.

Nevertheless, by cutting the federal funds rate by a quarter of percentage point in mid-December – for the third month in a row – the Federal Reserve has clearly signalled it thinks the risks to economic growth outweigh inflationary risks, and has even hinted that the loosening may continue. Yet, given the financial markets' jittery mood, it is unclear whether a loose monetary policy will rapidly stabilize credit lending or lead to a resumption of the dollar's fall and the unwelcome entrenching of inflationary expectations.

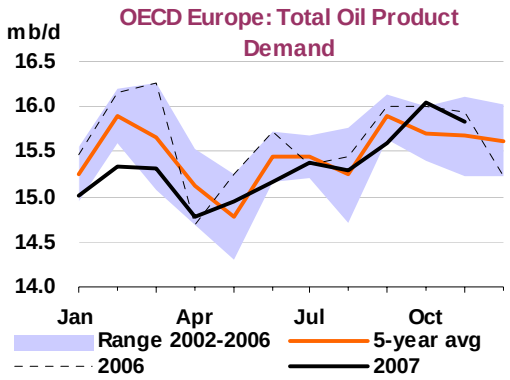
Under a pessimistic scenario, household spending would be hit by falling house prices, while corporate investment would also probably contract, further compounding the economic slow down. US economic growth would then be essentially driven by net exports (and would be arguably running below trend). Even though the US external balance vis-à-vis the rest of the world would improve – i.e., the country's large current account deficit would narrow – this would entail a major challenge to the world economy. Indeed, by absorbing most of the global surplus savings – as reflected in its current account deficit – the US has acted as the main engine of the global economy over the past two decades. Therefore, in order to maintain the global economic momentum, other countries – those with the largest current account surpluses, namely the European Union, Japan and China – would arguably be required to boost their own domestic demand.

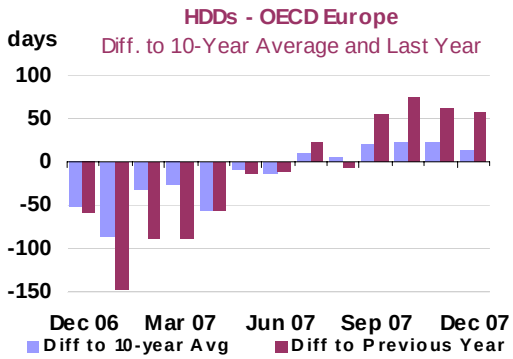
Yet, by launching a significant fiscal stimulus package, the US government might still compensate for the private sector's weakness. By running a large budget deficit, the US would effectively remain the world's buyer of last resort. In sum, given that the possibility of a fiscal package is started to be seriously debated in Washington, anticipating a sharp slowdown during 2008 – or even a recession, as some banks have predicted – might be premature. As such, this report will wait from the forthcoming assessments from the IMF and the OECD before making any revisions to its US oil demand forecasts.

Europe

Official data submissions for October and preliminary November data for several countries suggest that year-on-year demand growth was somewhat stronger than previously expected. France posted higher growth in October (+4.1%) and November (+9.6%). Italian and German demand was also higher in October; however, in the case of Germany this was offset by lower-than-expected November and December preliminary data. Overall, OECD Europe demand was revised up by 67 kb/d in 4Q07, and is now estimated at 15.4 mb/d in 2007 (-1.8% over 2006) and 15.6 mb/d in 2008 (+1.3%), on the back of an expected rebound in winter heating demand.

The weather, though, remains the main forecasting uncertainty. Until the turn of the year, the winter had proved much colder than the previous year, with heating-degree days (HDDs) slightly above the ten-year average. Heating oil purchases by end-consumers were nevertheless low – and much weaker than anticipated. Stocks were abnormally high at the start of the heating season due to the unusually mild 2006/07 winter, and high prices arguably deterred consumers, who seemingly preferred to keep their tanks at low levels. Moreover, this year began with abnormally warm temperatures; if this January proves to be as mild as last year (which seems unlikely at this point, according to recent prognoses), the forecast will have to be revised down in due course.





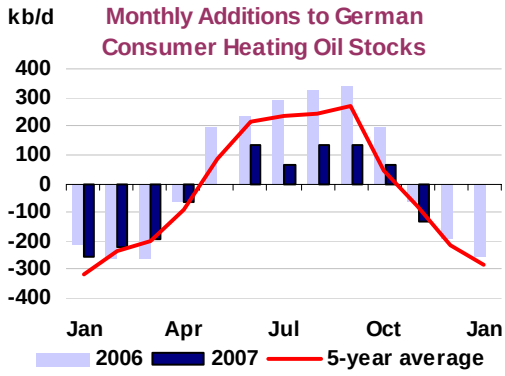
OECD Europe Demand by Product

(million barrels per day)

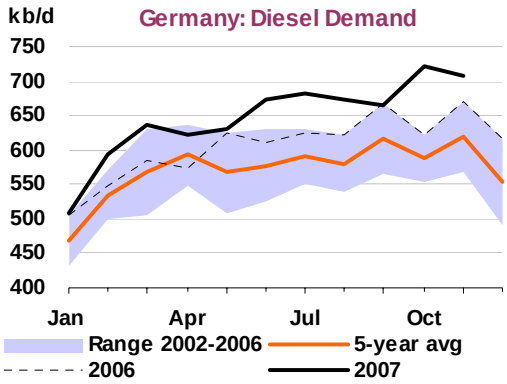
	2006	2007	4Q06	1Q07	2Q07	3Q07	Aug 07	Sep 07	Oct 07*	Latest month vs. Sep 07	Latest month vs. Oct 06
LPG & Ethane	0.99	0.96	0.95	1.03	0.98	0.87	0.80	0.89	0.91	0.02	0.04
Naphtha	1.12	1.12	1.14	1.21	1.05	1.09	1.11	1.08	1.12	0.04	0.00
Motor Gasoline	2.57	2.51	2.55	2.39	2.59	2.59	2.65	2.48	2.50	0.02	-0.08
Jet & Kerosene	1.27	1.30	1.26	1.22	1.28	1.39	1.41	1.36	1.38	0.02	0.07
Gas/Diesel Oil	6.25	6.17	6.44	6.19	5.74	6.10	5.96	6.37	6.76	0.39	0.08
Residual Fuel Oil	1.86	1.76	1.81	1.83	1.72	1.69	1.67	1.71	1.70	-0.01	-0.06
Other Products	1.57	1.55	1.57	1.35	1.60	1.69	1.69	1.71	1.68	-0.03	-0.01
Total Products	**15.63**	**15.35**	**15.72**	**15.21**	**14.96**	**15.42**	**15.28**	**15.60**	**16.05**	**0.45**	**0.04**

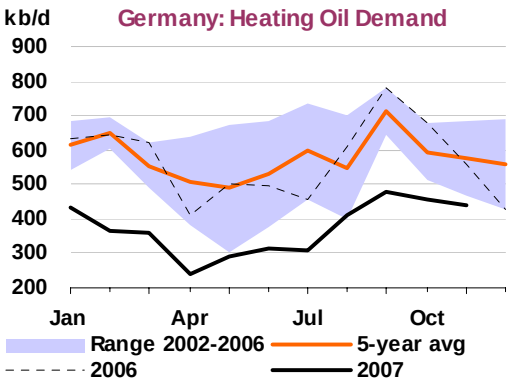
* Latest official OECD submissions (MOS)

In **Germany**, the only European country which collects and publishes end-user heating oil stocks, tanks were filled at 59% of capacity by the end of November (8% lower than a year before). Month-on-month, this represents a decline of 2%, equivalent to a 134 kb/d stock draw – much higher than last year (-67 kb/d) and than the five-year average (-80 kb/d). Yet despite this higher draw and slightly below-normal temperatures, heating oil demand was again lower than anticipated, thus suggesting an end-user response to high prices, and possibly expectations of future lower prices.



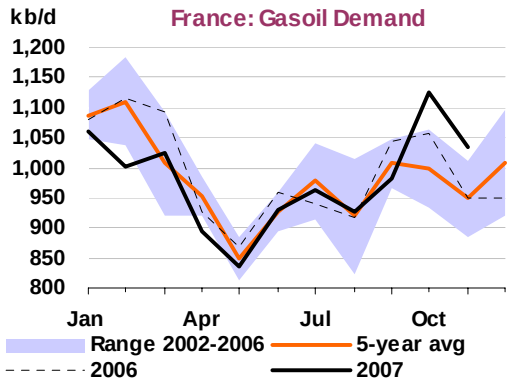
German naphtha deliveries, meanwhile, were also much weaker than expected in November, leading to a total downward revision of 110 kb/d for the month. October, by contrast, was revised up by 120 kb/d following the submission of official data (demand for both gasoil and residual fuel oil was higher than indicated by the preliminary delivery data). Diesel demand, in particular, continues to post strong annual growth, rising by an astounding 15.8% in October and by an estimated 5.3% in November. Preliminary data for December, though, suggest a somewhat weaker picture. As such, we have lowered our 4Q07 estimate by 25 kb/d to 2.6 mb/d (-4.7% year-on-year).

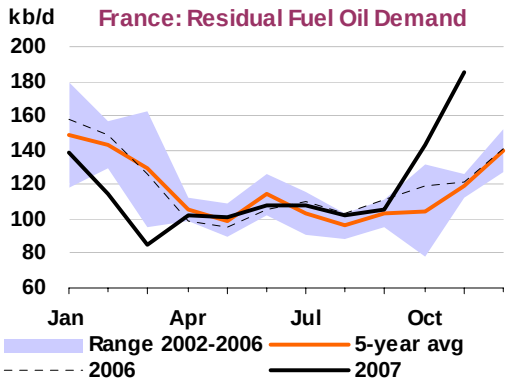




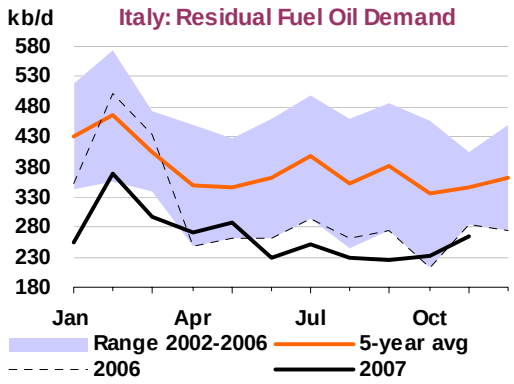
In **France**, 4Q07 demand is set to be stronger than anticipated. October figures were revised up by 60 kb/d following official submissions, while preliminary delivery data for November prompted an upward adjustment of 180 kb/d – total oil demand thus rose by 4.1% and 9.6% year-on-year, respectively. The changes were largely due to higher residual fuel oil consumption, but also to higher gasoil and 'other products' demand.

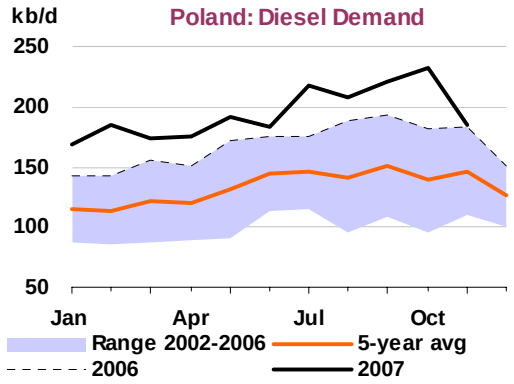
Buoyant electricity helps explain the strength of residual fuel oil demand. Indeed, power generation rose by 2.8% year-on-year in October, with thermal power production increasing by 37% (nevertheless, its share of total generation remains marginal). In November, power generation (mostly from nuclear facilities) shrank by 1.6%, probably as a result of plant closures during the national strikes. Thermal electricity production partly compensated for the decline, rising by 18.2% year-on-year. Finally, gasoil demand (diesel and heating oil) also posted strong annual growth in October and November (6.4% and 8.8% respectively), arguably due to increased driving during the strikes as well as colder weather.





Italy's October demand also turned out to be stronger than indicated by preliminary data. Total oil product demand was revised up by about 60 kb/d, mostly due to higher residual fuel oil demand. October now show total annual growth of 3.5%. For November, preliminary data point to a 3.2% contraction, in line with our forecast. Italian electricity demand was 0.8% higher year-on-year, due to one additional working day and slightly colder weather. Fuel-fired generation rose by 7.6% as cheap hydro power contracted by 4.4%. In December, electricity demand hit an all-time high, according to power grid Terna. The year-on-year increase of 1.2% was prompted by colder weather, as well by an extra working day. Hydro fell by 13.2%, and fossil fuel-fired generation rose 6.6%, although natural gas continues to displace residual fuel oil for power generation, leading to the gradual fall in residual fuel oil demand.





Poland has been revised up by 50 kb/d in October, due to higher diesel (+45 kb/d) and naphtha (+15 kb/d) consumption. Polish diesel demand was quite high during 2007, pointing to a 14.7% annual increase for the year as a whole, as GDP (+6.6% in 2007) and domestic purchasing power increased with market liberalization. Total product demand, however, rose by only 1.4% in 2007 (compared with 6.9% in 2006), given weaker heating oil (-15.1%) and residual fuel oil demand (-37.6%).

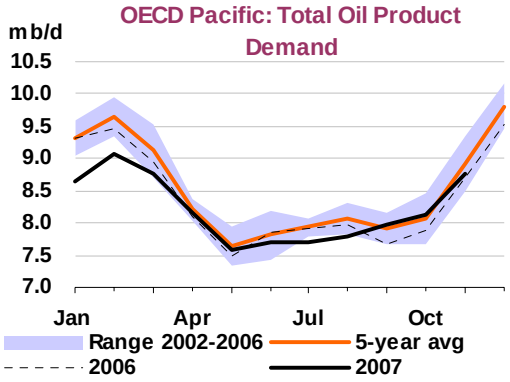
Demand in the **UK** fell by 1.8% year-on-year in October, due in large part to a larger-than-expected 14.8% decrease in motor gasoline consumption (officially explained as evidence of the ongoing dieselization, but nonetheless implausibly large). This 50 kb/d downward adjustment to our gasoline demand forecast was partly offset by higher jet fuel/kerosene and 'other products' demand. Demand in 2007 now looks to be contracting by 2.7%, due in most part to lower LPG/ethane and naphtha demand but also to structurally declining gasoline demand and slightly lower jet kerosene consumption.

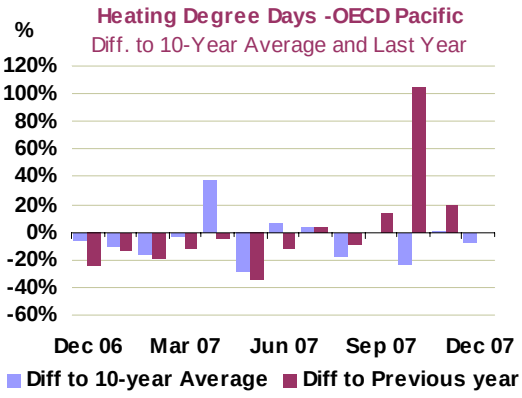
Preliminary JODI data for November suggest that **Spanish** demand grew by 1.2% annually. Gasoil demand (the split between diesel and heating oil is not yet available), in particular, grew by a strong 7.5%. Final data for October led to a slight downward adjustment to our forecast (-26 kb/d), although growth is still seen at a robust 4.3%. All products bar naphtha reported gains, notably diesel and heating oil, which grew by 9.4% and 8.2%, respectively.

Some uncertainty surrounds the ability of **Turkey** to source adequate natural gas supplies this winter, after a Russian energy official announced in early January that Russia would be unable to allocate additional supplies to replace lost volumes from Iran. Although Russia normally provides gas to Turkey when Iranian supplies run short, cold weather in Russia has meant that domestic supplies are needed to meet local demand. The shortage in Iranian supplies is due to an interruption of shipments from Turkmenistan, which may last 'a long time'. Gazprom later stated it had increased flows to Turkey in December and January, replacing the lost volumes from Iran. We may revise our forecast of Turkish oil demand forecast when it becomes clear whether Turkey's gas demand will indeed be covered by Russian supplies, whether Turkey will have to turn to the spot LNG market or whether it will be obliged to use oil for power generation, even though switching capacity is limited.

Pacific

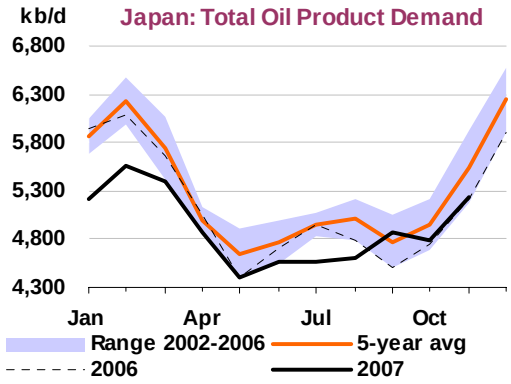
According to preliminary data, oil product demand in the Pacific rose by 0.4% year-on-year in November. Strong direct crude burning in Japan offset losses in all product categories bar LPG. Japan's demand – some two-thirds of the region's total – was again boosted by strong power demand, notably for heating – the number of heating-degree days in November was 1% higher than the ten-year average (and 20% higher than in the same month of the previous year). The outlook for OECD Pacific oil demand remains largely unchanged compared with last month's report, and is expected to average 8.3 mb/d in 2007 (-1.0% on a yearly basis) and 8.5 mb/d in 2008 (+2.4%).

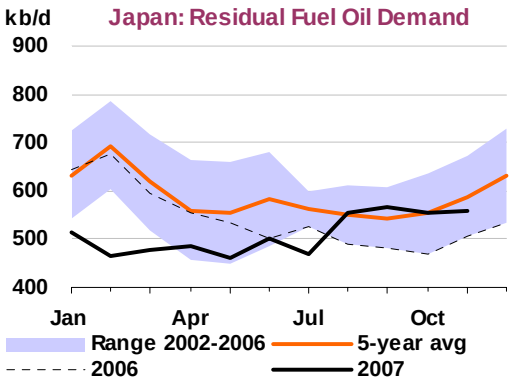




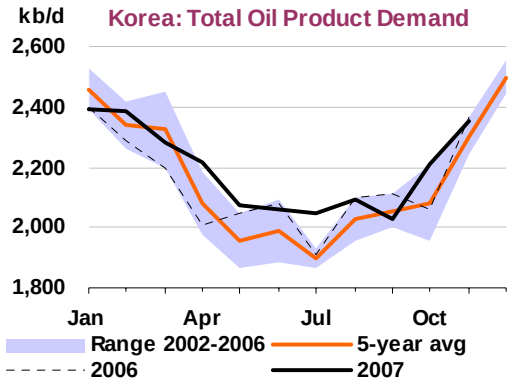
According to preliminary data, oil product demand in **Japan** rose by 0.3% year-on-year in November. As in the past several months, oil demand growth has been largely supported by strong electricity demand amid continued nuclear outages. As such, demand for fuel oil and 'other products' (including direct crude for power generation) rose by 10.2% and 31.2% on a yearly basis. However, Japanese preliminary estimates of direct crude consumption are usually revised down: October's preliminary figure for 'other products' was cut by almost 70 kb/d, implying a year-on-year growth of +4.8%, instead of the previous estimate of +23.5%.

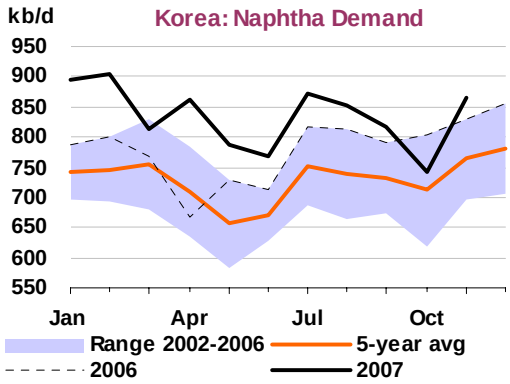
Meanwhile, demand for kerosene (used as a heating fuel) shrank by 4.6% year-on-year. On the one hand, end-users reportedly built up stocks in October in anticipation of a wholesale price increase effective 1 November. On the other hand, although temperatures were noticeably colder than in the same month in the previous year, the start of the winter has proved to be relatively mild in the Pacific.



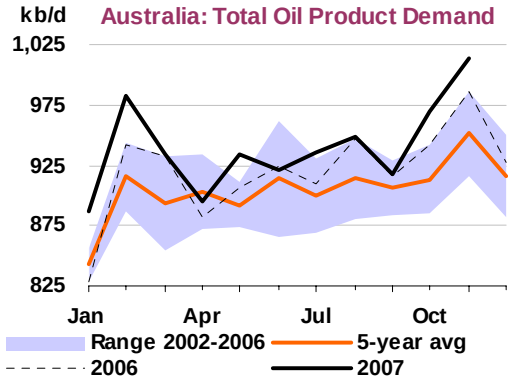


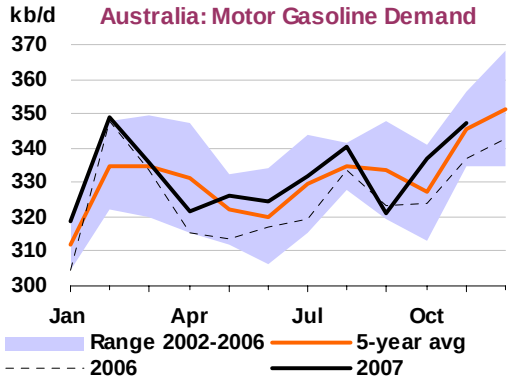
In **Korea**, preliminary data indicate that total oil product demand was 0.6% lower year-on-year in November, possibly as a consequence of the previous month's extensive stock rebuilding. Although naphtha deliveries, which account for the largest share of total Korean demand, rose by 4.6%, they failed to offset somewhat subdued transportation fuel deliveries (gasoline increased by a paltry 0.2% and diesel by 0.4%) and the weakness in fuel oil demand (-16.6%). Relatively cold temperatures supported LPG (+9.3%) and other gasoil demand (+8.4%), but jet fuel/kerosene deliveries fell by 13.1% (as in Japan, kerosene is used as a heating fuel in Korea), probably reflecting stock draws.





In **Australia**, oil product demand rose by an estimated 2.8% year-on-year in November, according to preliminary data. The country's demand continues to be sustained by strong transportation fuel deliveries (gasoline rose by 3.0%, diesel by 3.8% and jet fuel/kerosene by 1.7%), driven in turn by buoyant economic growth. In that respect, it is interesting to note that the Australian Competition & Consumer Commission (ACCC) found in late December that the country's gasoline market is fundamentally competitive, following a six-month probe into allegations that the four major refiners (BP, Caltex, ExxonMobil and Shell, which together control some 98% of the market) had engaged in price fixing and collusion. Nevertheless, the ACCC admits that Australia's well-defined gasoline price cycles are very difficult, if not impossible, to explain.





OECD Pacific Demand by Product
(million barrels per day)

	2006	2007	4Q06	1Q07	2Q07	3Q07	Aug 07	Sep 07	Oct 07*	Latest month vs. Sep 07	Latest month vs. Oct 06
LPG & Ethane	0.92	0.93	0.94	0.97	0.92	0.86	0.90	0.80	0.89	0.10	0.08
Naphtha	1.60	1.66	1.72	1.75	1.57	1.63	1.66	1.61	1.53	-0.08	-0.14
Motor Gasoline	1.57	1.58	1.60	1.53	1.54	1.63	1.66	1.63	1.57	-0.06	0.02
Jet & Kerosene	0.98	0.93	1.10	1.25	0.73	0.65	0.60	0.73	0.84	0.12	0.05
Gas/Diesel Oil	1.83	1.79	1.88	1.85	1.75	1.67	1.61	1.74	1.84	0.10	0.06
Residual Fuel Oil	0.98	0.95	0.97	0.99	0.89	0.90	0.92	0.92	0.96	0.03	0.11
Other Products	0.52	0.49	0.50	0.49	0.41	0.48	0.44	0.54	0.49	-0.05	0.06
Total Products	**8.40**	**8.32**	**8.71**	**8.83**	**7.80**	**7.81**	**7.79**	**7.96**	**8.13**	**0.17**	**0.25**

* Latest official OECD submissions (MOS)

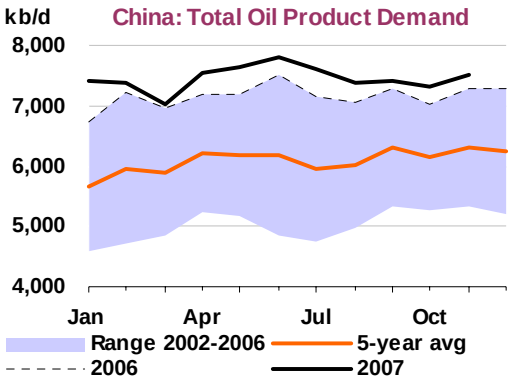
Non-OECD

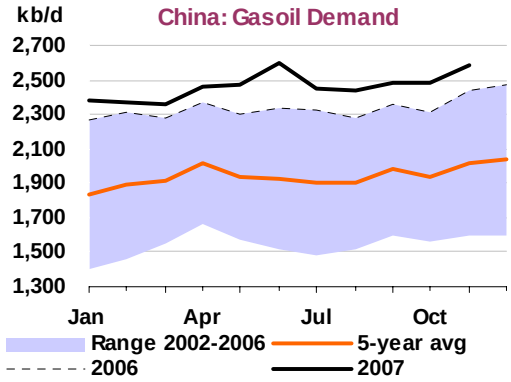
China

According to preliminary data, China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning, smuggling and stock changes) increased by an estimated 3.1% year-on-year in November, with all product categories bar LPG and residual fuel oil posting gains.

Demand for gasoline, jet fuel/kerosene and gasoil remains buoyant (+8.4%, +39.1% and +6.1%, respectively). More notably, the fact that China has been coping with gasoline and gas/diesel oil shortages over the past several months suggest that pent-up demand is significant. As such, overall oil demand would probably be largely unaffected were capped end-user prices to rise. However, this possibility has once again been officially discarded by the government, which is concerned about accelerating inflation; as such, it has sternly warned against hoarding oil products or selling them above 'guidance' prices. Meanwhile, fuel oil demand remains depressed (-13.5%) since 'teapot' refineries – which act as the country's swing producers – continue to shun expensive residual (which is used as the main feedstock) in favour of subsidised crude provided by state-owned companies.

The continued strength of these fuels is indicative of the structural changes that are occurring in China – i.e., an exponential increase of energy use as rising incomes boost the demand for cars, trucks and aeroplanes, to name a few energy-intensive items. In this respect, as this report has repeatedly argued, global oil demand will likely continue to expand, driven by non-OECD growth and almost irrespective of developments in OECD countries. Although our Chinese forecast is slightly revised down in light of the continuing fuel oil weakness, oil demand growth remains strong: total demand is expected to average 7.5 mb/d in 2007 (+4.8% year-on-year) and 7.9 mb/d in 2008 (+5.9%).





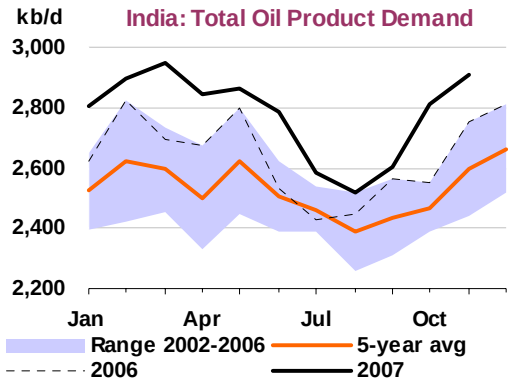
Meanwhile, despite being under increasing government pressure to adequately supply the domestic market, the two largest state-owned companies (Sinopec and PetroChina) are seemingly struggling to produce more – their refinery runs in November were roughly the same as in October, according to preliminary data. However, there are reports that the 'Big 2' are providing subsidised crude to teapots in order to entice them to boost production (teapots, though, are obliged to revert part or their production to the NOCs). This seems to be supported by trade data: November's net crude imports, at 3.3 mb/d were 13% higher than in October (suggesting than either the NOCs are no longer drawing down stocks or that the build-up of strategic stocks is continuing). In the same vein, net diesel imports rose by 57% month-on-month to 41 kb/d. Despite these moves, though, there are reports of continued shortages in some regions.

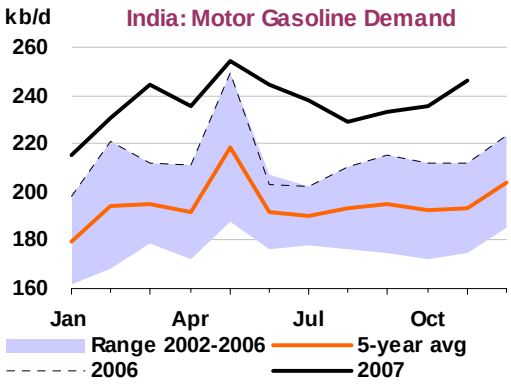
China Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2005	2006	2007	2006	2007	2006	2007
LPG & Ethane	650	633	609	-17	-25	-2.6	-3.9
Naphtha	707	826	897	119	71	16.8	8.6
Motor Gasoline	1,131	1,170	1,206	39	37	3.4	3.1
Jet & Kerosene	246	280	302	34	23	13.8	8.1
Gas/Diesel Oil	2,239	2,338	2,476	99	138	4.4	5.9
Residual Fuel Oil	778	776	741	-2	-35	-0.2	-4.5
Other Products	943	1,135	1,272	192	137	20.3	12.1
Total Products	**6,693**	**7,157**	**7,503**	**464**	**345**	**6.9**	**4.8**

Other Non-OECD

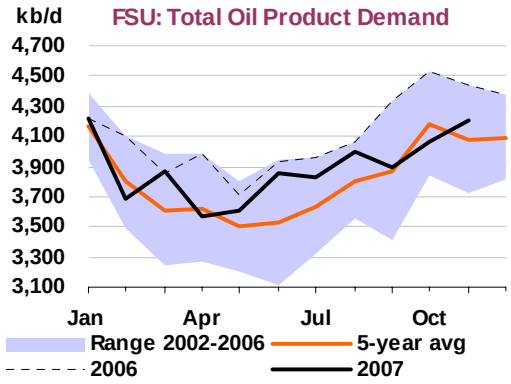
According to preliminary data, oil product sales in **India** – a proxy of demand – rose by an estimated 5.7% year-on-year in November. As has been the case for most of the year, transportation fuels constitute the main source of oil demand growth, with gasoline, jet fuel/kerosene and gasoil sales rising by 16.2%, 4.4% and 10.2%, respectively (gasoil figures, though, also reflect ongoing agricultural work). Meanwhile, the slow decline of naphtha demand, gradually displaced by natural gas, continues (-6.6%). This trend, however, may be interrupted in the short term given the current tightness of Asia's LNG market, which has seen prices rise to as much as $17-18/mmbtu. India's oil demand outlook is largely unchanged from last month's report. Total demand is expected to rise by 5.5% in 2007 to roughly 2.8 mb/d, and by 3.9% in 2008 to 2.9 mb/d.

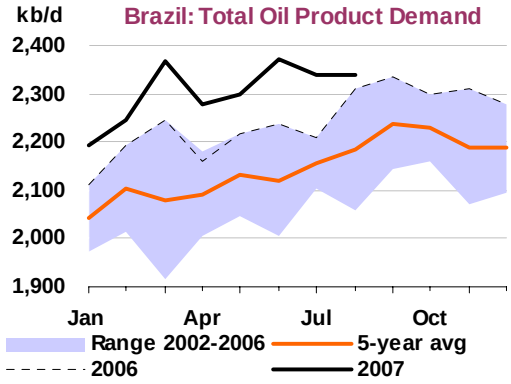




In early January, India's Tata Group grabbed the headlines by launching the Nano, the world's cheapest car to date. Given its low price tag, the $2,500 vehicle is geared towards the country's aspiring – and rapidly growing – middle-class. Aside from the environmental and congestion consequences that the massive adoption of cars will likely pose, this suggests that India's gasoline demand will continue to grow at a very rapid pace over the coming years.

Following minor changes to both supply and trade data, **FSU** apparent demand – defined as domestic crude production minus net exports of crude and oil products – remains essentially unchanged. The region's total oil product demand is thus expected to average 3.9 mb/d in 2007 (-4.9% year-on-year) and 4.0 mb/d in 2008 (+2.9%).



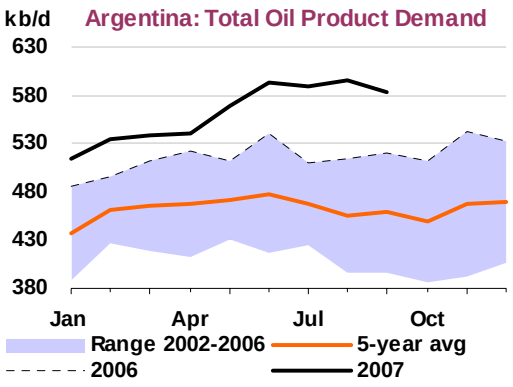


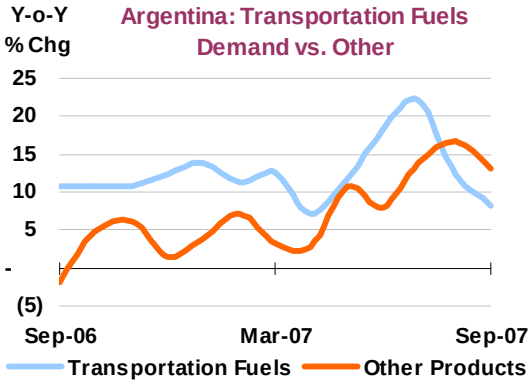
As noted in last month's report, the release of **Brazil's** oil demand data has been somewhat erratic since early 2007. Following last month's posting of data from March to August in the *Joint Oil Data Initiative (JODI)*, the National Petroleum Agency (ANP) published the missing series for some specific products (gasoline, diesel and ethanol) over the March-June period. The new figures allowed the correction of

some anomalies implicit in *JODI's* data, notably what had been reported as falling demand for 'other products', which comprise mostly ethanol. In fact, ethanol has actually turned out to register positive growth, in line with anecdotal evidence of abundant supply. In the end, though, our demand assessment remains largely unchanged – total oil demand is estimated at 2.3 mb/d in 2007 and 2.4 mb/d in 2008 (implying a year-on-year growth rate of 3.3% for both years). These figures, however, are bound to be adjusted again if the ANP resumes the timely and up-to-date release of demand data.

Meanwhile, the ANP mandated a 2% biodiesel blend for all diesel sold in Brazil – requiring some additional 700 million litres per year, according to local sources (current capacity stands at 1.8 billion litres per year). The measure, which took effect on 1 January, is intended to boost the country's biofuels industry and reduce its dependence on imported supplies. By 2013, the biodiesel mandated blend is set to rise to 5% – necessitating about 2.5 billion additional litres annually. With regards to gasoline, since last July the mandated ethanol blend has stood at 25%.

Oil demand in **Argentina** continues to expand unabated, supported by strong economic growth, end-user subsidies to gasoline and gas/diesel oil, soaring power needs and natural gas shortages. According to September data (the latest available at the time of writing), total demand surged by 12.1% year-on-year – the fifth consecutive month of double-digit growth. Gasoline sales rose by 11.4%, and gasoil consumption expanded by 7.8%. Meanwhile, residual fuel oil demand jumped by 70.3%, as the high temperatures registered over this summer have boosted demand for electricity for air-conditioning. Natural gas shortages have also encouraged the use of fuel oil in industrial activities.





As previously noted in this report, the policy of capping prices has led to severe market distortions, most notably widespread shortages. Adamantly opposed to a sharp increase in retail prices amid rising inflation, the government resorted to a number of administrative measures aimed at forcing private companies, which dominate the downstream sector, to supply the market – or face stern penalties. The latest measure, decreed earlier this month, was to ban altogether gasoline and gasoil exports, ostensibly to oblige companies to bring down prices by 10-15%, to the levels that prevailed in late 2007.

However, by closing the last avenue to profitability open to refiners – which, by exporting at higher international prices, were able to partially offset their domestic losses – the supply picture could worsen. According to some reports, the private players may decide to confront the government by simply refusing to hike supplies, especially during the forthcoming winter. In addition, the move may entail severe consequences for neighbouring countries, such as Paraguay, which imports some 50% of its oil product requirements from Argentina. Perhaps aware of these risks, the government is trying to reach an agreement to allow exports to continue in exchange of retail price cuts. At the time of writing, the local units of Petrobras, Repsol-YPF and ExxonMobil had reportedly signed such an agreement with the Commerce Department – but the local unit of Royal Dutch Shell did not.

SUPPLY

Summary

- **World oil supply** averaged 87.0 mb/d in December, up 870 kb/d from November after monthly increases estimated for the OPEC-10, North America, the FSU, Brazil and China. Fourth quarter global supply regained a year-on-year growth trend, up by over 1.0 mb/d on average versus 4Q06, after running at or below year-ago levels in the previous three quarters.

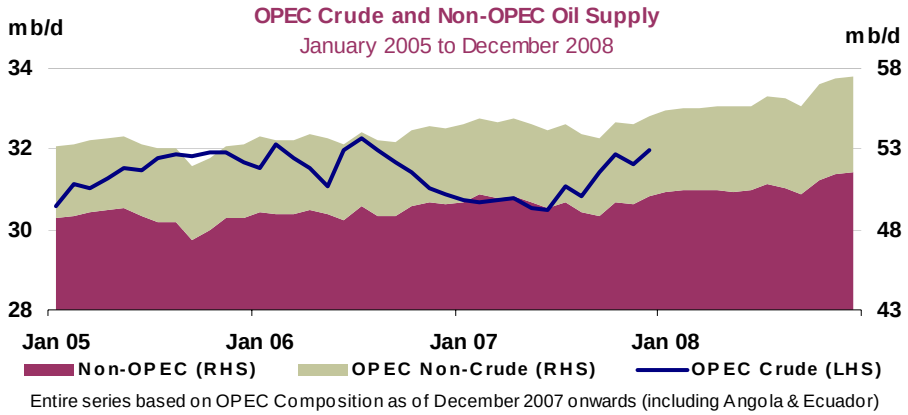
- **Non-OPEC December production** was largely unchanged from November at 50.1 mb/d, with the shift of 500 kb/d of Ecuador output from December 2007 into the OPEC category offsetting an increase of 535 kb/d elsewhere. Supply from Mexico, Brazil, China, Kazakhstan, Russia and the UK recovered from prior outages. Non-OPEC 2007 growth is trimmed by 30 kb/d to 525 kb/d, and 2008's level by 60 kb/d to 1.02 mb/d on lower expectations for the OECD, FSU and China.

- **Historical data** in the *OMR*, *Annual Statistical Supplement* and *Monthly Oil Data Service* include primary non-OPEC and OPEC totals reflecting prevailing membership for each point in time. Secondary non-OPEC and OPEC totals extend current aggregates back historically to facilitate yearly comparison. Changing methodology and categorisation can distort trends in non-OPEC oil supply. Like-for-like, forecast 2007 non-OPEC supply is within 160 kb/d of levels forecast one year ago, after sharp initial adjustments made in 2H06.

- **December OPEC crude supply** rose 825 kb/d versus November to reach 32.0 mb/d, with 500 kb/d of the increase attributable to Ecuador's move into the OPEC category. Comparing OPEC-13 supplies, growth was 335 kb/d, with UAE supply recovery after November maintenance augmented by an uptick in Iranian crude exports. Iraqi December supply fell to 2.3 mb/d from 2.4 mb/d in November. Nigerian supply was stable below 2.2 mb/d despite threats of further attacks on Niger Delta facilities. Effective OPEC spare capacity narrowed to 2.2 mb/d, with Saudi Arabia accounting for 80% of the total.

- **OPEC-12 supply (excluding Iraq)** averaged 29.7 mb/d in December, approximately the level inferred by production targets announced in September and December. Angola and Ecuador, which were allocated targets for the first time last month, produced below their respective guidance of 1.9 mb/d and 520 kb/d in December. An extraordinary OPEC meeting will take place in Vienna on 1 February 2008.

- **The call on OPEC crude and stock change** is revised up by 0.7 mb/d for 4Q07, reflecting stronger OECD demand, weaker OECD and Chinese supply and December's reclassification of Ecuador into OPEC (170 kb/d for the quarter). Ecuador's exit from the non-OPEC category also underpins a 0.6 mb/d upward revision to the average 2008 'call' to 31.8 mb/d, 300-600 kb/d above 2007 levels.



All world oil supply figures for December discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary December supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages in North America). In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

Headline December OPEC crude supply rose 825 kb/d versus November to reach 32.0 mb/d. However, 500 kb/d of this increase came from Ecuador's December shift from the non-OPEC into the OPEC category. Adjusting for OPEC's additional member, a comparison of OPEC-13 supplies shows growth in December of 335 kb/d. Key increases derived from the UAE, where Abu Dhabi offshore crude output resumed after November maintenance, and to a lesser extent from an uptick in Iranian crude exports. In contrast, Iraqi December crude supply fell to 2.3 mb/d from 2.4 mb/d in November amid lower tanker liftings from Ceyhan. Nigerian December supply was stable below 2.2 mb/d despite threats of further attacks on Niger Delta facilities. Effective OPEC spare capacity narrowed to 2.2 mb/d, with Saudi Arabian production around 9 mb/d, implying that it holds some 80% of the spare capacity total.

OPEC Crude Production[1]
(million barrels per day)

	Sep 2007 Production	Oct 2007 Production	Nov 2007 Production	Dec 2007 Production	Current Target	Sustainable Production Capacity[2]	Spare Capacity vs Dec 2007 Production
Algeria	1.37	1.38	1.39	1.40	1.36	1.40	0.00
Indonesia	0.83	0.83	0.83	0.84	0.87	0.87	0.03
Iran	3.92	4.00	3.93	4.00	3.82	3.95	-0.05
Kuwait[3]	2.47	2.49	2.53	2.53	2.53	2.64	0.11
Libya	1.72	1.72	1.75	1.75	1.71	1.78	0.03
Nigeria[4]	2.23	2.16	2.16	2.16	2.16	2.47	0.31
Qatar	0.79	0.79	0.80	0.82	0.83	0.88	0.06
Saudi Arabia[3]	8.85	9.05	9.06	9.06	8.94	10.80	1.75
UAE	2.55	2.55	2.15	2.48	2.57	2.75	0.28
Venezuela[5]	2.38	2.41	2.43	2.43	2.47	2.60	0.18
OPEC-10[1]	**27.10**	**27.37**	**27.02**	**27.46**	**27.25**	**30.13**	**2.68**
Angola[1]	1.63	1.71	1.72	1.70	1.90	1.70	0.00
Ecuador[1]				0.50	0.52	0.50	0.00
OPEC-12[1]				**29.65**	**29.67**	**32.33**	**2.68**
Iraq	2.18	2.30	2.40	2.30		2.40	0.10
Total OPEC	**30.90**	**31.38**	**31.13**	**31.95**		**34.73**	**2.78**
							2.16)

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 545 kb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 565 kb/d in December.

With the announcement of production targets in early December for Angola and Ecuador, OPEC-12 in effect replaced the previous OPEC-10 grouping as the focus for OPEC production management. Supply from the OPEC-12 (excluding Iraq) in December averaged 29.7 mb/d, in line with the aggregated total of recently-stated official targets. Angola and Ecuador produced below their allocations of 1.9 mb/d and 520 kb/d respectively.

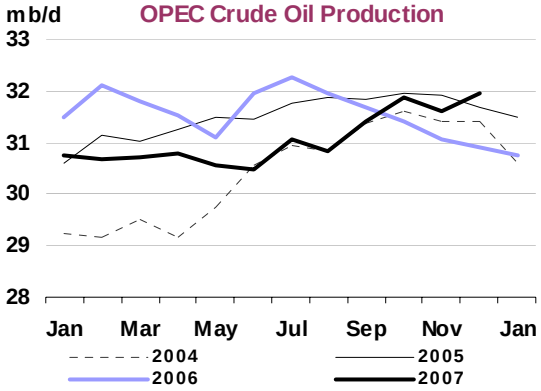
Change in Classification for Ecuador

With effect from this month's *OMR*, Ecuador's oil production is reclassified within OPEC and excluded from the non-OPEC total for the period December 2007 onwards. Historical data for January 1993 to November 2007 inclusive allocate Ecuador production to non-OPEC. The *Monthly Oil Data Service*, the *OMR* and the *OMR's Annual Statistical Supplement* all show historical data with a primary OPEC total representing OPEC as it was comprised at the time in question, and similarly for non-OPEC. In summary:

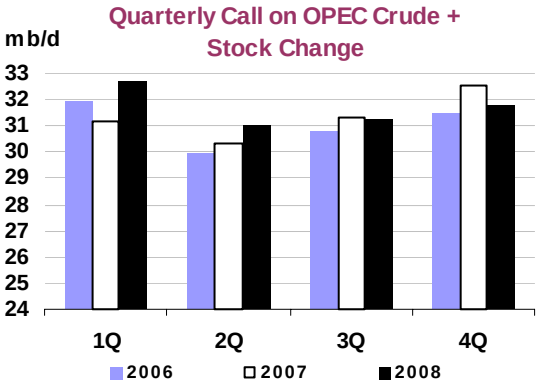
- **Ecuador** is included in OPEC totals through 1992, and again from December 2007 onwards, in line with its membership, but in non-OPEC for the intervening period;
- **Angolan** supply is allocated to the non-OPEC total through December 2006, but included within the OPEC aggregate from January 2007 onwards;
- **Gabon** is included in OPEC totals through 1994, but in non-OPEC thereafter.

To facilitate year-on-year comparisons, secondary aggregates showing current OPEC and non-OPEC compositions extended back into history are included in the databases.

Preliminary indications of OPEC exports for January suggest some additional physical supply this month. An extraordinary OPEC meeting will take place in Vienna on 1 February 2008 to review market conditions and consider the existing production target. February's Ministerial review will take place against a backdrop of growing concerns about the US economy on the one hand, but high prices and demonstrably tight OECD inventory on the other.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



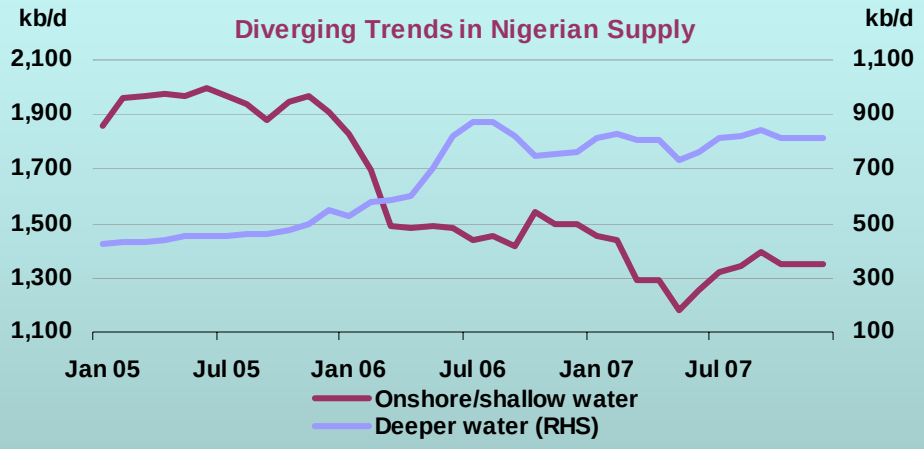
Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

The estimate for November **Iraqi** crude supply has been revised up by 80 kb/d to 2.4 mb/d, comprising 1.96 mb/d of exports and 0.44 mb/d of local crude use. Export assessments for November from both Ceyhan and the southern ports of Basrah and Khor al-Amaya have been revised higher from an earlier total of 1.88 mb/d. However, in December, while southern exports proved less prone to weather-related disruption than in November, liftings from Ceyhan in Turkey fell, amounting to around 7 mb compared with a scheduled 12 mb. With refinery and power plant use largely unchanged at 0.44 mb/d, the fall in total exports to 1.86 mb/d pushed total supply down to 2.3 mb/d.

A shortage of available ships and maintenance work at Ceyhan storage tanks underpinned the slippage in December northern exports compared with an originally planned 12 mb. State marketer SOMO plans to sell 300-400 kb/d of Kirkuk crude via Ceyhan on a term basis from January onwards, although stop-start pipeline flows from northern Iraq since early January may again see actual exports slip below target. Recent fires at the Baiji and Basrah refineries may also curb January domestic crude runs.

Nigeria: One Step Forward, One Step Back

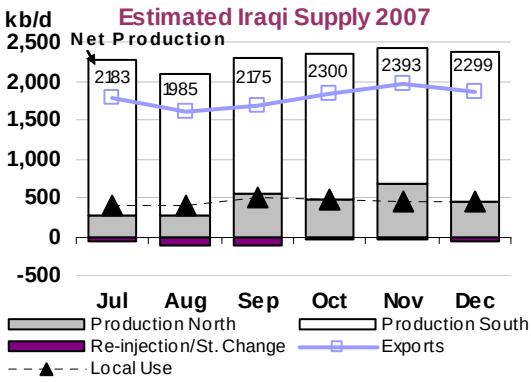
December began promisingly for the Nigerian hydrocarbon sector, where 550 kb/d of Niger Delta production has been shut-in on a sustained basis since early 2006 due to attacks on Forcados, Escravos and EA field facilities. On 6 December a 12-month ceasefire was signed by the government and eight Niger Delta rebel groups. In early January Shell was reported to have re-opened eight out of 15 Forcados flow stations, boosting production into a 120-160 kb/d range with further recovery towards 380 kb/d capacity targeted in coming months. Nigeria LNG's Bonny Train 6 began operations on 23 December, adding 4 mt of LNG capacity and 15-20 kb/d of LPG and condensate supply. Potential restart of 240 kb/d of idled refining capacity at the Warri and Kaduna plants by end-January was announced after repairs to the Chanomi Creek crude pipeline. Refinery reactivation could curb product imports, which have underpinned the government's raising of domestic prices and resultant public and labour union protests.



However, positive developments must be balanced against renewed signs that Delta insurgents are embarking on a renewed campaign of attacks. The Movement for the Emancipation of the Niger Delta (MEND) denounced the 6 December ceasefire, saying it did nothing to address issues about control of natural resources in the region. Rebel groups have cited the government's dual-track approach of negotiations alongside further arrests and militarisation of the Delta as undermining its claims to address regional grievances. A decline in violence was evident between May and August 2007 following President Yar'Adua's election, but with little to show at that time by way of re-instated production.

After a Christmas holiday period lull in both oil sector activity and attacks on facilities, disruption now appears to have picked up again. Shipping, export facilities and the oil refinery at Port Harcourt have all been targeted in the past month. At the time of writing, Shell declared force majeure on Forcados exports after pipeline attacks on 11 January. Shipping firm Maersk has said that its vessels will avoid calling at Port Harcourt until security is improved. MEND and the Ijaw Youth Council say that further major attacks are now planned, aimed at paralysing the oil industry. With this in mind, industry sources have been more cautious than NNPC and government representatives in assessing the timing and extent of any crude and refinery restarts. The next year should see renewed gains in Nigerian upstream capacity with start-up of the Agbami and Akpo projects (450 kb/d of liquids capacity) located further offshore. But Ministerial claims that Nigeria can boost capacity by 1.0 mb/d short-term by re-instating shuttered facilities look more like positioning ahead of future OPEC quota discussions than industrial reality.

Border tensions remain high between the Turkish military and PKK insurgents based inside Iraq, but recent outages on the Kirkuk-Ceyhan pipeline are believed due to technical issues rather than sabotage by the PKK or other insurgent groups. This report also counts some 10-12 kb/d of cross-border pipeline exports to Syria in the monthly export total. Pending confirmation, we omit 5-10 kb/d of crude now reportedly being sent by truck from the Tawke field in northern Iraq to Iran by the Kurdish Regional Government. Tawke output may ultimately rise to 50-90 kb/d subject to access to the Ceyhan pipeline. Baghdad has also signed an agreement with an affiliate of Russia's Gazprom to study the reactivation of 300 kb/d of pipeline capacity from Kirkuk to Banias, Syria, which has been out of service since early 2003.

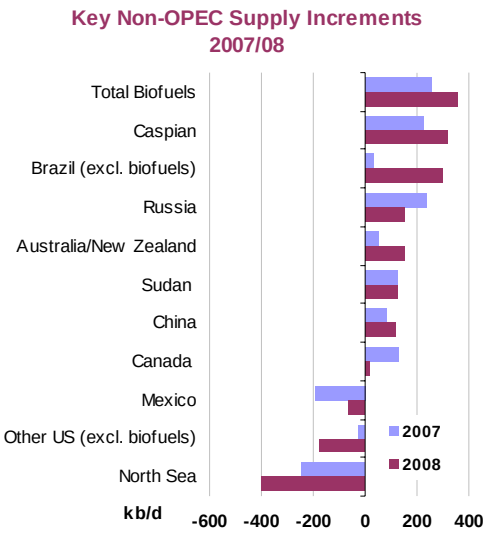


Angolan supply fell in December as production outages affected blocks 17 (home to the Girassol, Rosa and Dalia fields) and 18 (Greater Plutonia). Monthly crude supply was estimated at 1.7 mb/d, off by 20 kb/d from November. Slippage at the Kizomba C project also contributed to lower-than-expected December supply. Start-up of Kizomba C's 100 kb/d Mondo field was pushed back from December to 9 January. Mondo will be followed by a combined 100 kb/d from the Saxi and Batuque fields in completing the Kizomba C development later in 2008. Build-up at Kizomba C and at Greater Plutonia should take Angolan capacity close to 2.0 mb/d by end-2008, compared with an OPEC production allocation of 1.9 mb/d. Further capacity increases up to 2.2 mb/d are possible early in the next decade, notably with field operator Total recently giving final investment approval for the 200 kb/d Pazflor development.

Saudi Arabian December production is unchanged from November at 9.05 mb/d. The Kingdom, together with Angola, underpins OPEC capacity expansion in 2008. Start-up of 500 kb/d of Arab Light crude from the Khursaniyah project was pushed back from end-2007 into 1Q08, apparently due to delays in completing crude processing facilities. Khursaniyah will also generate up to 300 kb/d of natural gas liquids. A further 350 kb/d of light/sweet crude capacity will come from upgrades to the Shaybah and Nuayyim fields before the end of 2008. Under fairly conservative build-up and decline rate assumptions, our assumed Saudi crude capacity level reaches 11.3 mb/d by end-2008 from 10.8 mb/d currently (both levels being net of some 150 kb/d of Abu Safah production and 100 kb/d of field condensates).

Non-OPEC Overview

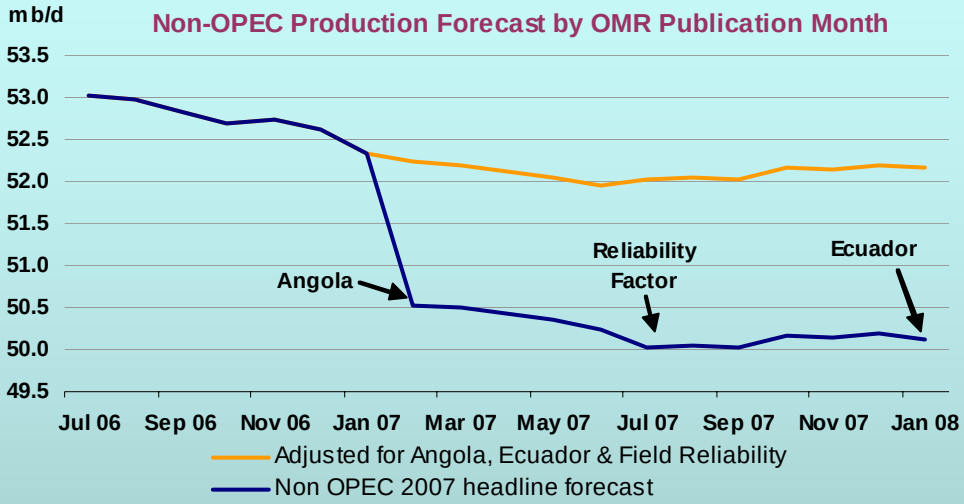
December saw non-OPEC production increase by an estimated 535 kb/d (net of the impact of a 0.5 mb/d shift of Ecuadorean production into the OPEC category), with Mexico, Brazil, China, Kazakhstan, Russia and the UK recovering from prior outages. Total non-OPEC supply for 2007 now averages 50.1 mb/d (or 49.7 mb/d excluding Ecuador). Stripping out Ecuador, 2007 growth has been trimmed by 30 kb/d to 525 kb/d, and 2008's growth is cut by 60 kb/d to 1.02 mb/d on lower OECD, FSU and China supply.



Key gains in 2007 supply came from global biofuels (+265 kb/d), Russia (+235 kb/d), Azerbaijan and Kazakhstan (collectively +230 kb/d), Canada (+130 kb/d), Sudan (+125 kb/d) and China (+80 kb/d). These producers will also drive 2008 growth, augmented by Brazil (+300 kb/d) and Australia/New Zealand (+150 kb/d), although Canadian production growth slows. Mexico, the North Sea and the US outside of the Gulf of Mexico see continued production losses in 2008.

Non-OPEC Performance in 2007: Avoid Comparing Apples and Oranges

January habitually brings a temptation to review the year just gone, albeit solid data for the previous year, barring individual country exceptions, only runs through 3Q at best. Bearing in mind this partial picture, it is nonetheless clear that 2007 non-OPEC supply has lagged initial expectations published in July 2006, continuing the suppressed growth trend evident in 2005 and 2006. July is the first month in which the *OMR* forecast for the following year is rolled out, although with only one full quarter of data for the prevailing year available, July projections for the following year are by their nature highly provisional. Given the more solid foundation underpinning January 2007's forecast, it is perhaps more illuminating to compare 2007 projections in this month's report with those from January 2007, rather than July 2006.



Headline non-OPEC supply for 2007 was estimated at 52.3 mb/d in January 2007. On paper, this month sees a non-OPEC projection for 2007 (it will remain a projection until late-2008 in the case of some OECD producers and until 2009 in the case of elements of non-OECD production) of 50.1 mb/d. Superficially, this looks like a reduction of over 2.0 mb/d, or some 4%, in 12 months. However, the devil is in the detail, and 2007 was notable for changes in classification and forecasting methodology which distort the picture:

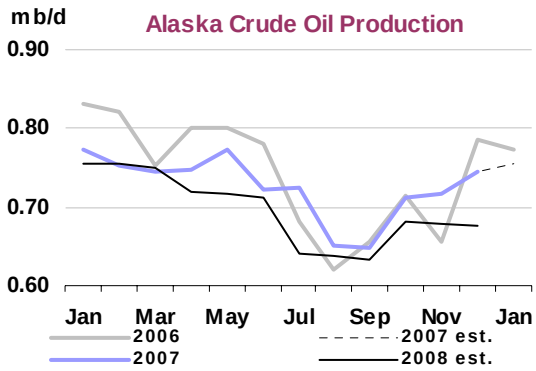
- **Angola** left the ranks of non-OPEC to join OPEC from January 2007, removing 1.7 mb/d of oil production from the non-OPEC total;
- The *OMR* internalised a **field reliability adjustment factor** of 410 kb/d at mid-year to reflect unscheduled field outages (mainly at mature OECD production capacity), affecting data from 2Q 2007 onwards, and netting a further 0.3 mb/d off annual 2007 estimates;
- The shift of 0.5 mb/d producer **Ecuador** from non-OPEC to OPEC effective December 2007 nets 42 kb/d off this month's full-year 2007 non-OPEC assessment.

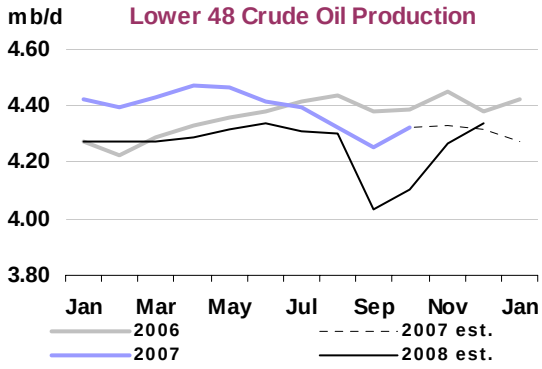
Like-for-like non-OPEC supply for 2007 therefore stands at 52.1 mb/d, only 160 kb/d below last January's number. This is not to say that data for the final months of 2007 will be free from surprises, or that revisions to early 2007 data may not also reduce the total. Diminishing international company access, cost and fiscal inflation, chronic project start-up delays, prolonged outages at aging infrastructure, extended maintenance schedules and accelerating decline rates at older fields can all undermine any forecast in the months to come. But the tendency for non-OPEC estimates to trend remorselessly down, ***on a like-for-like basis***, appears to have abated, at least for now. Whether this offset to the negative factors itemised above is due to better forecasting, a delayed supply-side price response, or both, remains to be seen.

OECD

North America

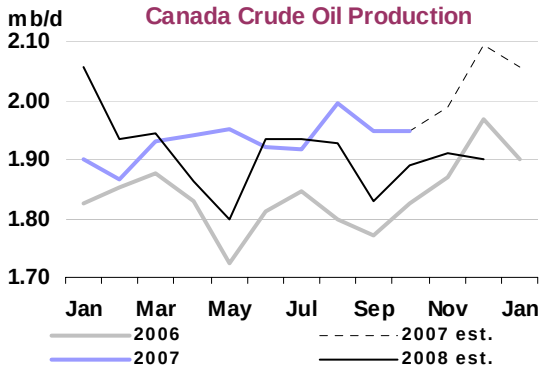
US – December Alaska actual, others estimated: Crude production in 2007 averages 5.1 mb/d, slipping to 5.0 mb/d in 2008. This month's forecast trims the assessments for 2007 and 2008 US crude output by 10 kb/d and 20 kb/d respectively, centred on Alaska and the US GOM. Alaska's Revenue Department last month said it envisages 4% decline in production in fiscal 2009, implying steeper losses due to maintenance on mature production and transportation assets than previously assumed by this forecast. Although GOM supply is also trimmed for the forecast, growth in output here amounts to 50 kb/d net in 2008 after 60 kb/d in 2007. Commissioning of the long-delayed Atlantis project was completed in December, although production began in October. Output is seen hitting 70 kb/d by March and full capacity of 200 kb/d by end-2008. US ethanol supply, after rising by 100 kb/d to 415 kb/d in 2007, averages 475 kb/d in 2008. Monthly ethanol output data for 2007 have tended to come in stronger than initial forecasts, despite weak basic economics.

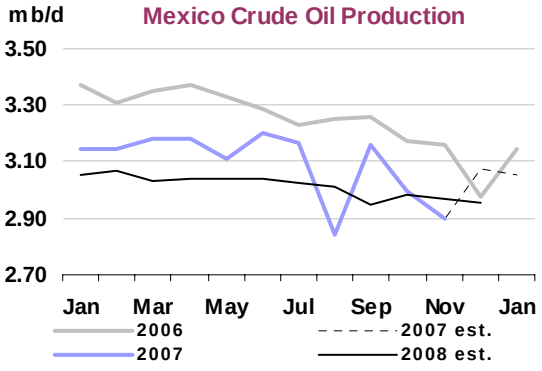




Canada – Newfoundland November actual, others October actual: Downward revisions to 4Q07 Canadian oil supply carry over into 1Q08, largely based on weaker bitumen and synthetic crude supply from Alberta's oil sands. A coker outage at Syncrude's heavy oil upgrader and a fire at Shell's Athabasca unit may have curbed December syncrude supply by up to 300 kb/d, with production remaining affected to a lesser extent in January. Synthetic crude nonetheless gains 70 kb/d in 2008 to average 0.73 mb/d after flat performance in 2007.

Conventional oil output slips from 2.0 mb/d last year to 1.9 mb/d in 2008, with a levelling off in offshore East Coast supply after strong 2007 growth. All told, Canadian liquids supply averages 3.3 mb/d in both 2007 and 2008 from 3.2 mb/d in 2006. The Canadian forecast includes a field reliability adjustment which nets 100 kb/d off the calculated total. Any easing in the unscheduled outages seen in the past two to three years holds the potential to boost forecast Canadian supply accordingly in 2008.

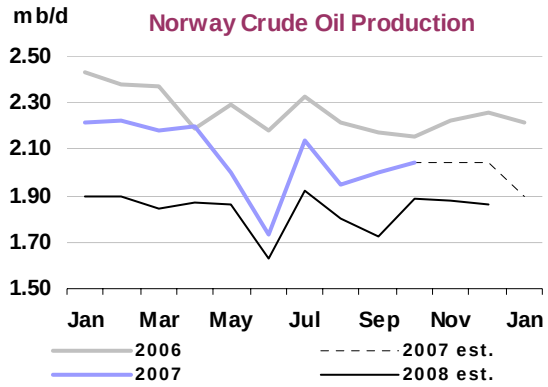


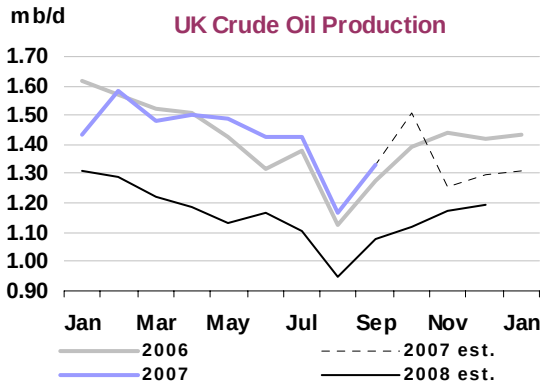


Mexico – November actual: Mexican November crude production remained suppressed at 2.9 mb/d after production shut-ins due to storms in October. We have not yet carried this reduction into December and 2008 however, on the assumption that the dip in October/November output was indeed weather-related and not evidence of further acceleration in decline at Cantarell and other offshore fields. 2008 Mexican crude supply is forecast at 3.0 mb/d, a drop of 100 kb/d from 2007, after a fall of 165 kb/d last year.

North Sea

Norway – November actual, December provisional: Preliminary 4Q Norwegian crude production averaged 2.04 mb/d, alongside 545 kb/d of gas liquids, an upward revision of 60 kb/d for the quarter compared with last month's estimates. However, this is offset by an equal and opposite revision for 1Q08 after unscheduled outages affecting condensate supply from the Kvitebjorn, Snohvit and Ormen Lange fields. StatoilHydro announced lower targets for 2008 oil and gas production, in line both with these gas-related outages and with this report's already conservative forecast for total Norwegian supply. As a result we have left the 2008 forecast largely unchanged at 1.84 mb/d of crude and 540 kb/d of gas liquids, collectively 180 kb/d below total 2007 liquids production.

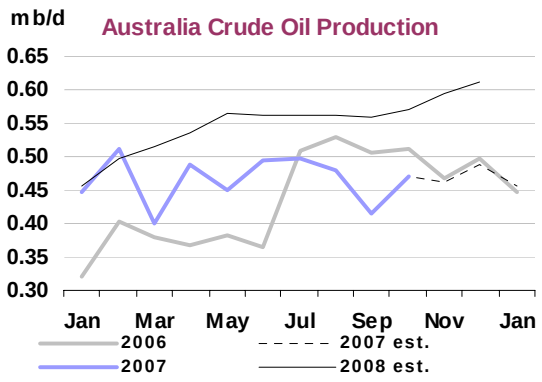




UK – October actual: Data through October 2007 show UK oil production rebounding from peak summer maintenance. Total output reached 1.74 mb/d in October (including 1.5 mb/d of crude) from 1.33 mb/d in August. However, loading schedules for the main crude streams suggest a November/December dip in supply to 1.5 mb/d, around 50 kb/d below last month's forecast for end-year production. A 20 kb/d downward adjustment to UK supply is carried through 2008, taking total oil supply to 1.42 mb/d from 1.64 mb/d in 2007 (offshore crude comprising 1.41 mb/d in 2007 and 1.16 mb/d in 2008). The reduction results in part from a later start-up at the Chestnut field at the end of 1Q08, and plateau production below the previously-assumed levels at 10 kb/d. Recent new field start-ups include Duart, Saxon and Wood. Our 2008 supply forecast, as with officially reported data, incorporates output from these fields within the totals for larger adjacent fields to which their infrastructure is tied.

Pacific

Australia – October actual: Despite rising by 50 kb/d from September's level of 500 kb/d, Australian oil production in October lagged expectations by 65 kb/d. A spate of subsequent production outages reduces forecast 4Q07 production by 40 kb/d and 1Q08 by 80 kb/d compared with the previous forecast. January supply was curbed by an estimated 35 kb/d, as the 2008 storm season got an early start with the arrival of cyclone Melanie. Mechanical outages have also affected the Mutineer/Exeter and Woolybutt fields and



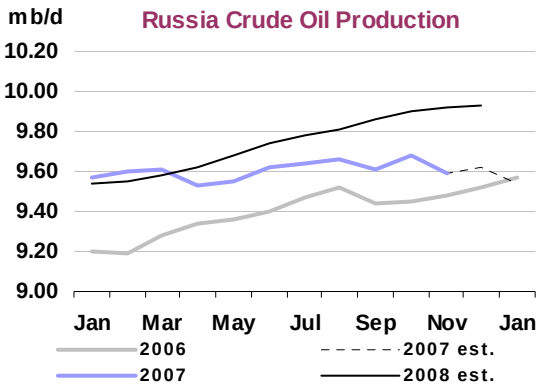
condensate supplies at the Karratha gas plant. Nonetheless, overall 2008 supply increases due to recent start-up at the Puffin and Stybarrow fields, likely to be followed later in 2008 by new output from Skua and Angel. Total oil production is assessed at 555 kb/d in 2007 (465 kb/d of crude) and 670 kb/d in 2008 (550 kb/d of crude).

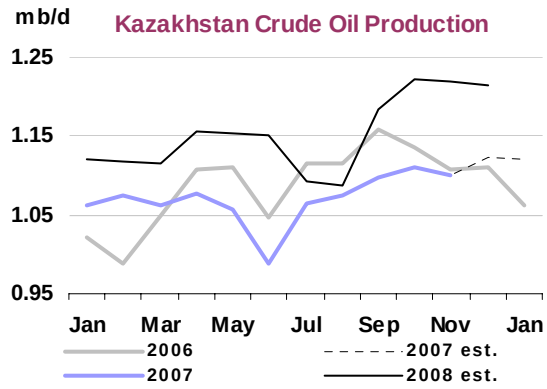
Solid growth is also expected from **New Zealand,** where oil supply is slated to reach 45 kb/d in 2007 and potentially 80 kb/d in 2008 from the 25 kb/d seen during 2004-2006. Offshore liquids growth from the Tui-Amokura-Pateke, Maari and Cheal fields accounts for this rise from New Zealand.

Former Soviet Union (FSU)

Russia – November actual, December provisional: November/December crude production from Russia remained stable around the 9.6 mb/d level evident since mid-year, with assumed condensate/NGL supply adding a further 460 kb/d to give total oil output of 10.1 mb/d. Both month-on-month and annual growth levels have slowed since mid-year. We have trimmed the forecast of 2008 output by 15 kb/d from last month to a total of 10.23 mb/d. This represents 1.5% annual growth compared with the 2.4% now estimated for 2007.

A combination of lower 2007 baseline supply and weaker company growth expectations for 2008 affect Surgutneftegaz, Rosneft and output from the PSA projects (at Sakhalin and Kharayaga). Technical problems forced the early seasonal closure of the production season at Sakhalin 2, although the commencement of year-round production via the Piltun-Astokhskoye-B platform from the second half of 2008 could push peak output up in excess of 150 kb/d from 80 kb/d currently. Strong December performance at the Sakhalin 1 project belies now-weaker expectations for 2008. Government refusal to sanction further drilling at the Chayvo field, and ongoing disagreement over contract territory and reserves, will reportedly see output decline in 2008 to 200 kb/d from 230 kb/d in 2007.





Kazakhstan – November actual: The forecast for 2008 Kazakhstan output is trimmed by 25 kb/d after the Tengizchevroil consortium deferred to end-1Q08 expansion at the Tengiz field. This follows technical problems and extended testing of compressors used for sour gas reinjection at the field. Overall, we have curbed the contribution from Tengiz in the early part of 2008, but boosted late-year supply from the field to over 400 kb/d, from current output near 300 kb/d. Total Kazakhstan oil supply (crude and gas liquids) rises by 90 kb/d in 2008 to 1.44 mb/d, having gained 15 kb/d in 2007 to average 1.35 mb/d.

The Kazakh President reported in December that Russia has approved expansion of the CPC export pipeline now that Kazakhstan has joined the Bourgas-Alexandroupolis pipeline scheme, although there is no sign to date of Russian confirmation of this. January saw reports that state producer Kazmunaigaz will double its stake in the troubled Kashagan project to 16.8% and that all consortium members have now agreed to the transfer of equity. Compensation is to be paid to the Kazakh government for cost over-runs

and delays so far. Italian Eni's sole operatorship of the project remains to be confirmed with some press reports suggesting that joint operatorship by Eni, Exxon Mobil, Shell and Total may be the preferred option. Target start-up date for the project is now late-2011, versus initial estimates of 2005.

The supply forecast for **Azerbaijan** in 2008 has been revised up by 20 kb/d to 1.09 mb/d, sustaining the 200 kb/d growth seen in 2006 and 2007. Higher Shah Deniz condensate accounts for the change, with output currently around 30 kb/d and potentially reaching 45 kb/d in late 2008.

FSU Net Exports of Crude & Petroleum Products
(million barrels per day)

	2005	2006	4Q2006	1Q2007	2Q2007	3Q2007	Sep 07	Oct 07	Nov 07	Latest month vs. Oct 07	Latest month vs. Nov 06
Crude											
Black Sea	2.27	2.22	2.08	2.30	2.23	2.09	2.12	2.25	2.02	-0.22	-0.09
Baltic	1.59	1.55	1.43	1.58	1.60	1.58	1.66	1.66	1.47	-0.20	0.11
Arctic/FarEast	0.19	0.15	0.19	0.29	0.30	0.38	0.33	0.34	0.30	-0.03	0.13
BTC	0.00	0.00	0.38	0.43	0.58	0.57	0.38	0.51	0.67	0.15	0.21
Crude Seaborne	4.05	4.07	4.08	4.60	4.70	4.61	4.50	4.76	4.46	-0.30	0.36
Druzhba Pipeline	1.15	1.20	1.19	1.17	1.13	1.08	1.17	1.11	1.16	0.05	-0.04
Other Routes	0.25	0.38	0.45	0.47	0.46	0.40	0.39	0.43	0.45	0.02	-0.03
Total Crude Exports	5.45	5.64	5.71	6.23	6.29	6.09	6.06	6.30	6.06	-0.23	0.28
Of Which: Transneft	4.12	4.22	4.06	4.33	4.31	4.19	4.42	4.37	4.12	-0.24	0.11
Products											
Fuel oil	0.93	0.95	0.95	1.04	1.15	1.13	1.08	0.99	1.12	0.13	0.18
Gasoil	0.87	0.95	0.91	0.94	0.88	1.01	0.95	0.97	0.86	-0.11	-0.06
Other Products	0.58	0.61	0.54	0.59	0.69	0.57	0.49	0.53	0.55	0.03	0.01
Total Product	2.38	2.51	2.40	2.57	2.73	2.71	2.53	2.49	2.54	0.05	0.14
Total Exports	7.83	8.16	8.11	8.80	9.02	8.80	8.58	8.79	8.60	-0.19	0.42
Imports	0.02	0.04	0.04	0.02	0.04	0.04	0.05	0.04	0.05	0.01	0.00
Net Exports	7.81	8.12	8.07	8.78	8.98	8.76	8.53	8.75	8.56	-0.19	0.41

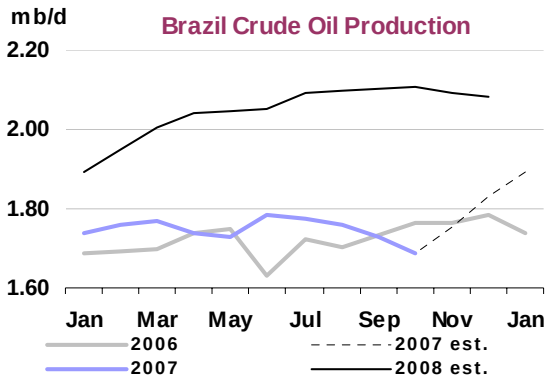
Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

Net oil exports from the FSU totalled a preliminary 8.56 mb/d in November, down 190 kb/d from October. Although 410 kb/d higher than last November, this was well below the 700 kb/d average annual increase in FSU exports seen throughout 2007. Respective monthly decreases of 220 kb/d and 200 kb/d in November crude exports from Black Sea and Baltic port were driven by weather issues (including a storm-related closure of Novorossiysk) and maintenance on the BPS pipeline. These were partially offset by an extra 150 kb/d flowing through the BTC pipeline in November. While fuel oil exports rose by 130 kb/d in November, gasoil flows decreased by 110 kb/d. Total FSU product exports in November, at 2.54 mb/d, were 50 kb/d higher than October and 140 kb/d higher than November 2006.

Russian export duties rose again from 1 December, but while exports likely remained flat from the Black Sea, Primorsk loadings were scheduled to rebound after pipeline maintenance, suggesting a modest net increase in December exports overall. January however may see an offsetting drop of around 50 kb/d, as potentially higher Baltic flows due to the introduction of new, larger Baltimax tankers is overshadowed by disrupted exports from Gdansk, underpinned by a pipeline contractual dispute.

Other Non-OPEC

Brazil – October actual, November provisional: Despite slow progress in expanding total production in 2007, Brazil is still expected to be the largest single contributor to non-OPEC growth in 2008. Crude supply is forecast to increase by 0.3 mb/d to 2.08 mb/d, from 1.76 mb/d in 2007. December saw start-up of the Roncador field's P-54 platform in the Campos Basin and reports by state Petrobras that record company-wide production of 2.0 mb/d had been attained. Further gains in 2008 come from the Roncador, Polvo, Piranema, Golfino, Marlim Leste, Marlim Sul, Albacore Leste, Espadarte and Jubarte fields, offset in part by declining output from older deepwater fields. Brazilian ethanol output is projected to gain a further 50 kb/d this year to reach 360 kb/d.



Revisions to Non-OPEC Estimates

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.29	14.15	0.08	-0.14	14.27	14.15	0.06	-0.12	-0.02	0.00	-0.02	0.02
Europe	4.91	4.52	-0.28	-0.38	4.93	4.50	-0.26	-0.43	0.02	-0.03	0.02	-0.05
Pacific	0.65	0.81	0.07	0.16	0.64	0.78	0.06	0.15	-0.01	-0.03	-0.01	-0.01
Total OECD	**19.85**	**19.49**	**-0.13**	**-0.36**	**19.83**	**19.43**	**-0.14**	**-0.40**	**-0.01**	**-0.05**	**-0.01**	**-0.04**
Former USSR	12.71	13.20	0.47	0.49	12.71	13.18	0.47	0.47	0.00	-0.02	0.00	-0.02
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.77	3.90	0.10	0.13	3.75	3.87	0.08	0.12	-0.02	-0.03	-0.02	-0.01
Other Asia	2.68	2.80	-0.03	0.12	2.68	2.80	-0.03	0.12	0.00	0.00	0.00	0.00
Latin America	3.89	4.23	0.04	0.34	3.88	4.23	0.03	0.34	-0.01	0.00	-0.01	0.00
Middle East	1.64	1.56	-0.11	-0.07	1.64	1.56	-0.11	-0.07	0.00	0.00	0.00	0.00
Africa*	2.55	2.69	0.05	0.14	2.55	2.69	0.05	0.14	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.37**	**28.51**	**0.51**	**1.13**	**27.35**	**28.46**	**0.48**	**1.11**	**-0.02**	**-0.05**	**-0.02**	**-0.02**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.70**	**50.78**	**0.56**	**1.08**	**49.66**	**50.68**	**0.52**	**1.02**	**-0.04**	**-0.10**	**-0.03**	**-0.06**

OMR = Oil Market Report

* adjusted to exclude Angola and Ecuador throughout

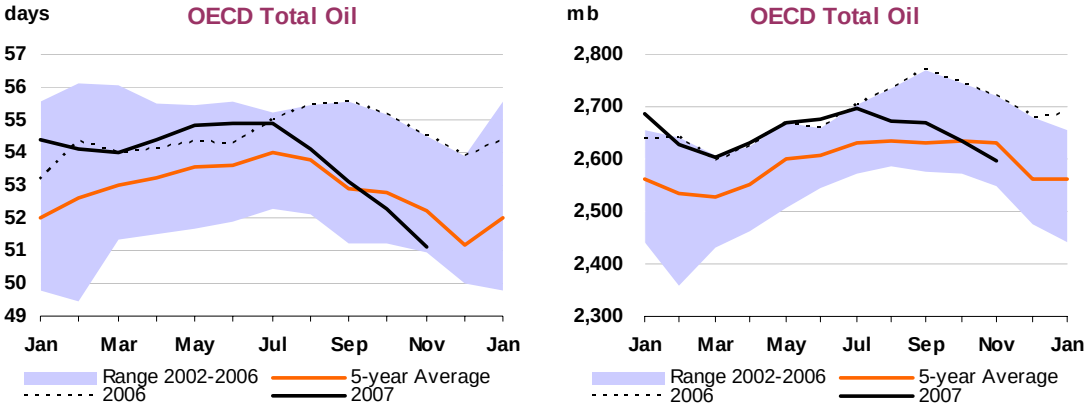
OECD STOCKS

Summary

- **OECD industry stocks fell by 38.1 mb in November**, and are now 123.8 mb lower than last year. This puts them below their nominal five-year average and at the bottom of their five-year range in terms of forward demand cover, at 51.1 days, reflecting tighter market fundamentals. While crude stocks fell 17.9 mb, product levels were down by 20.9 mb, slipping below their five-year range, as refinery maintenance prevented throughputs from meeting seasonally strong demand.

- **Preliminary December data for the US, Japan and the EU-16 show a further stock draw of 30.7 mb**, mostly in crude and driven by a 30.8 mb decrease in the US. A small stock build in Europe offset a draw in Japan. Added to October and November OECD data, this implies a fourth-quarter stock draw of 1.1 mb/d, which compares to a 10-year average 4Q decrease of around 0.7 mb/d.

- **End-October OECD stock data were revised down by 13.1 mb,** with a total downward correction of 22.3 mb for products more than offsetting an upward correction in crude stocks of 7.0 mb.



OECD Inventory Position at End-November and Revisions to Preliminary Data

Total OECD industry stocks fell by 38.1 mb in November, to 2,597 mb, or 123.8 mb lower than end-November 2006. Slightly more than half of this was due to a product stock draw of 20.9 mb, lowering product inventories 80.1 mb year-on-year to 1,356 mb. Total OECD industry product stocks have thus fallen below their five-year range, or to 44 mb below their five-year average, as maintenance-constrained refinery outputs lagged demand growth. OECD crude stocks meanwhile fell by 17.9 mb to 930 mb, in line with their five-year average, but were 56.6 mb lower than end-November 2006.

Regionally, the product stock draws were spread more or less evenly over all three constituent areas of the OECD, while in crude, drawdowns in the US and to a lesser extent Japan were contrasted by a small build in Europe.

Preliminary Industry Stock Change in November 2007 and Third Quarter 2007

	November (preliminary) *(million barrels)*				November (preliminary) *(million barrels per day)*				Third Quarter 2007 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**-14.5**	**4.1**	**-7.5**	**-17.9**	**-0.48**	**0.14**	**-0.25**	**-0.60**	**-0.38**	**-0.13**	**-0.10**	**-0.62**
Gasoline	7.4	-0.1	0.3	7.6	0.25	0.00	0.01	0.25	-0.07	0.02	-0.03	-0.08
Distillates	-4.3	-8.5	-1.0	-13.8	-0.14	-0.28	-0.03	-0.46	0.12	-0.07	0.10	0.15
Fuel Oil	-0.6	0.6	-2.1	-2.1	-0.02	0.02	-0.07	-0.07	0.00	0.06	0.04	0.10
Other Products	-7.7	0.0	-4.9	-12.6	-0.26	0.00	-0.16	-0.42	0.10	0.07	0.03	0.20
Total Products	**-5.3**	**-8.0**	**-7.6**	**-20.9**	**-0.18**	**-0.27**	**-0.25**	**-0.70**	**0.15**	**0.08**	**0.15**	**0.37**
Other Oils[1]	0.5	-0.9	1.1	0.8	0.02	-0.03	0.04	0.03	0.19	-0.01	-0.01	0.17
Total Oil	**-19.3**	**-4.8**	**-14.0**	**-38.1**	**-0.64**	**-0.16**	**-0.47**	**-1.27**	**-0.04**	**-0.07**	**0.03**	**-0.08**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Year-on-Year OECD Industry Stock Comparisons for November 2007

	(million barrels)					*(Days of Forward Demand)*			
	North America	Europe	Pacific	Total		North America	Europe	Pacific	Total
Crude Oil	**-28.3**	**-8.5**	**-19.8**	**-56.6**	**Total Oil**	**-2.4**	**-4.3**	**-6.0**	**-3.6**
Total Products	-27.3	-33.5	-19.3	-80.1	*Versus 2005*	-2.2	-1.0	-1.1	-1.6
Other Oils[1]	10.8	2.5	-0.4	12.9	*Versus 2004*	1.1	-1.3	-5.3	-0.9
Total Oil	**-44.9**	**-39.5**	**-39.5**	**-123.8**	**Total Products**	**-1.4**	**-3.2**	**-2.9**	**-2.2**
Versus 2005	-32.0	-27.7	-15.6	-75.3	*Versus 2005*	-1.2	-1.3	-1.0	-1.2
Versus 2004	43.6	-29.3	-51.1	-36.8	*Versus 2004*	-0.2	-0.3	-2.2	-0.7

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

The overall stock drawdown was a continuation of a trend observed since end-July, which has seen total OECD inventories fall nearly 100 mb to below their five-year average. In terms of forward demand, cover has fallen from 54.9 days at end-July to 51.1 days at end-November – or from the top of its five-year range to the bottom, reflecting the tighter market conditions this report has highlighted throughout most of the past year.

Revisions versus 14 December 2007 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Sep 07	Oct 07	Sep 07	Oct 07	Sep 07	Oct 07	Sep 07	Oct 07
Crude Oil	**0.6**	**2.8**	**0.9**	**6.1**	**0.1**	**-1.9**	**1.6**	**7.0**
Gasoline	-0.6	-4.9	-0.3	-1.1	-0.3	1.0	-1.2	-5.0
Distillates	-0.8	-2.1	-1.2	-7.9	-0.3	-0.5	-2.2	-10.5
Residual Fuel Oil	-0.1	1.0	-0.6	-0.5	0.0	0.0	-0.7	0.5
Other Products	0.3	-5.8	0.0	-1.2	0.0	-0.4	0.3	-7.3
Total Products	**-1.1**	**-11.8**	**-2.1**	**-10.6**	**-0.6**	**0.0**	**-3.8**	**-22.3**
Other Oils[1]	0.5	1.1	-0.8	1.5	0.0	-0.4	-0.3	2.2
Total Oil	**0.0**	**-8.0**	**-2.1**	**-3.0**	**-0.4**	**-2.2**	**-2.6**	**-13.1**

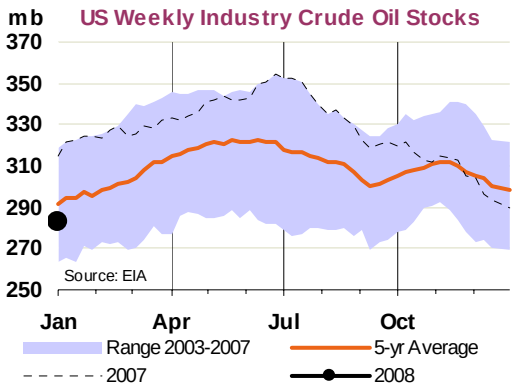
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

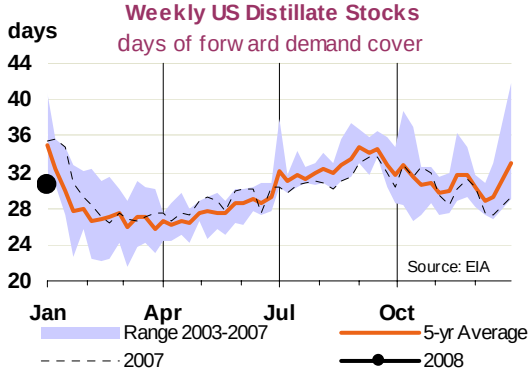
End-October OECD stocks were revised down by 13.1 mb, with a total downward correction of 22.3 mb for products more than offsetting a slight upward correction in crude stocks of 7.0 mb. North America and Europe accounted for the product inventory revision, seeing downward corrections of 11.8 mb and 10.6 mb respectively (while the Pacific remained unchanged). For crude, all three regions saw slight corrections in end-October inventory numbers.

OECD Industry Stock Changes in November 2007

OECD North America

Total North American industry inventories fell by 19.3 mb in November, most of which was crude, which drew by 14.5 mb, equally split between the US and Mexico. Total products meanwhile fell by 5.3 mb, as a drawdown of 6.0 mb in the US was only marginally offset by a small build of 0.7 mb in Mexico.





Preliminary US data for December show that crude stocks fell by a further 18.5 mb on lower imports, and gradually higher crude refinery throughputs. The difference to the five-year average is wholly due to

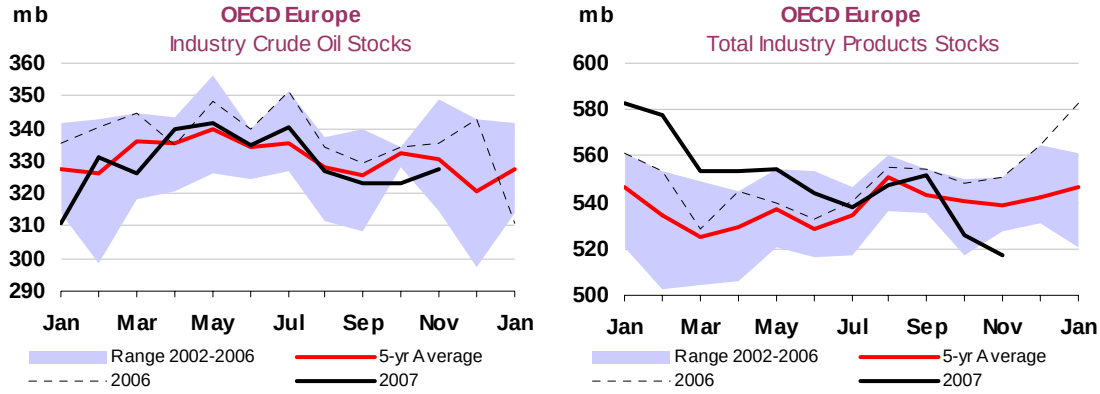
below-average crude stocks on the US Gulf Coast, the country's main refining and main crude import hub. In December, stocks there fell by 8.6 mb to 153.8 mb on lower imports, and as refineries ramped up throughputs to their seasonal peak. Meanwhile, despite a total PADD 2 (Midwest) draw in December, Cushing, Oklahoma, crude stocks rose by 1.7 mb in the same period, though overall remain at the bottom of their four-year range.

The total North American product stock draw of 5.3 mb was mainly due to lower distillate and 'other product' inventories, which fell by 4.3 mb and 7.7 mb respectively, while fuel oil stocks saw only a marginal draw. These decreases were somewhat offset by an increase in total gasoline stocks of 7.4 mb. Virtually all of the drawdown took place in the US.

Preliminary US data for December showed total product inventories decreasing by 12.3 mb. Again, this was driven by lower heating oil stocks, which fell by 6.2 mb on seasonal demand. Diesel stocks on the other hand increased by 1.7 mb, bringing the total middle distillate draw to 4.5 mb. Unfinished and 'other product' stock levels fell by 5.8 mb and 3.5 mb respectively, while gasoline and fuel oil rose by 9.5 mb and 0.6 mb. Early-January weekly data showed both gasoline and distillates at the bottom of their respective five-year ranges in terms of forward cover.

OECD Europe

European industry stocks declined by 4.8 mb in November, to 39.5 mb lower than end-November 2006. A total monthly product draw of 8.0 mb was only partly offset by a crude build of 4.1 mb, while 'other oils' were 0.9 mb lower. In terms of forward demand cover, European stocks are regionally the lowest relative to their historical range, having fallen to the bottom of their five-year range or to 59.0 days.



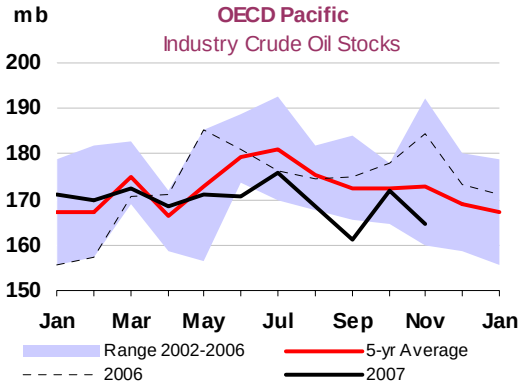
Europe was the only region to see crude inventories increase in November, rising in Norway by 7.0 mb and in the Netherlands (+1.5 mb). Balancing these developments, crude stocks were drawn down in Italy (-3.7 mb), the UK (-0.7 mb) and France (-0.5 mb). Preliminary December Euroilstock data for the EU-16 showed a small dip of 0.8 mb.

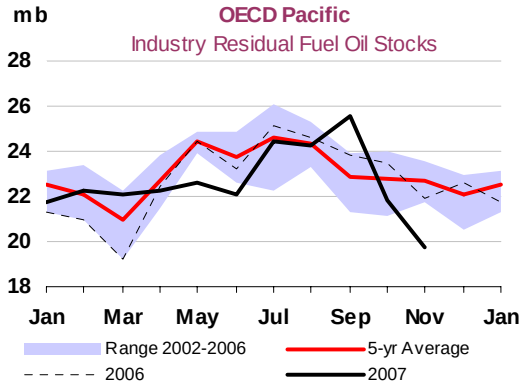
Total OECD Europe product stocks fell by 8.0 mb in November, 33.5 mb below the previous year. The drawdown was due to an 8.5 mb dip in distillate stocks. Residual fuel oil stocks increased by a marginal 0.6 mb, while gasoline and 'other products' stayed flat. On a country-by-country basis, distillate draws were seen in Germany (-5.3 mb), the UK (-2.3 mb) and the Netherlands (-1.9 mb). This was partly offset by increases in France (+4.9 mb) and Italy (+1.5 mb). Some of the French increase may have stemmed from authorities' temporary loan of around 2.1 mb of heating oil to the market in early November, when a series of refinery glitches caused short-term logistical problems.

Preliminary Euroilstock data for December showed a total product build of 5.6 mb, with middle distillates somewhat surprisingly increasing by 3.1 mb, despite the cold weather in many parts of Europe. Gasoline and naphtha inventories also rose, by 1.9 mb and 0.9 mb respectively, while fuel oil saw a small dip of 0.3 mb. Product stocks held independently in the Amsterdam-Rotterdam-Antwerp region also showed a build, with increases in all product categories.

OECD Pacific

Total industry stocks in the OECD Pacific fell by 14.0 mb in November, 39.5 mb lower than a year earlier. This was spread evenly between crude and product drawdowns of 7.5 mb and 7.6 mb respectively, while 'other oils' rose by 1.1 mb. The crude stock draw took place almost wholly in Korea, where levels dipped by 7.8 mb, to their lowest level since February, and 8.4 mb lower than end-November last year. In contrast, Japanese crude stocks were virtually flat.



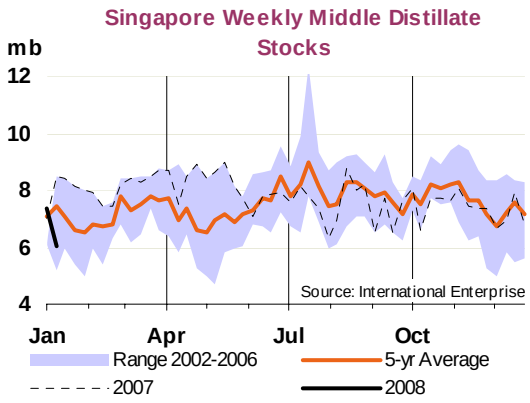


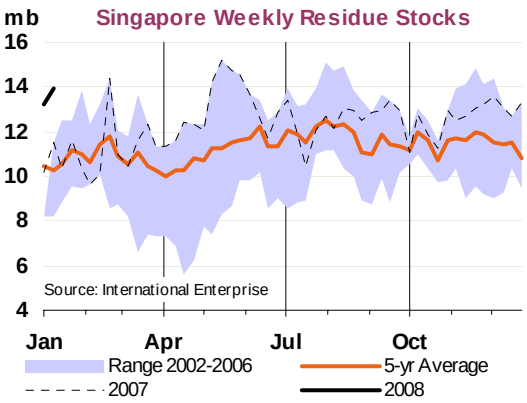
Preliminary Japanese data for November from the Petroleum Association of Japan (PAJ) show a crude stock draw of 3.3 mb, which implies inventories remain near the bottom of their five-year range. Refinery runs accelerated in December to meet seasonal product demand, ending the year at the top of their range.

Pacific product inventories fell by 7.6 mb in November, or to 19.3 mb below end-November 2006. The decrease was split between Japan and Korea and was centred on 'other products' (-4.9 mb), residual fuel oil (-2.1 mb) and middle distillate (-1.0 mb) stocks, while gasoline levels inched up slightly. The fuel oil decline leaves total Pacific fuel oil stocks well below their five-year average, with increased power generation needs taking them down from their end-September peak. Preliminary December data for Japan from PAJ showed a further 1.4 mb drawdown, stemming from falls in kerosene (-1.6 mb) and residual fuel oil (-1.0 mb), likely due to winter heating and utility demand.

Recent Developments in Singapore Stocks

Product stocks in Singapore, as reported by International Enterprise, increased by 1.3 mb in December. This was caused by light distillates rising by 1.4 mb, while middle distillate and residue stocks were flat. Notably, while light and middle distillates ended the year in line with their respective five-year averages, fuel oil stocks were at the top of their range and indeed increased further at the beginning of this year. Partly, this may be due to a collapse in Chinese fuel oil imports after high prices made the running of residual fuel oil at independent, 'teapot' refineries uneconomical, contributing to recent product shortages.

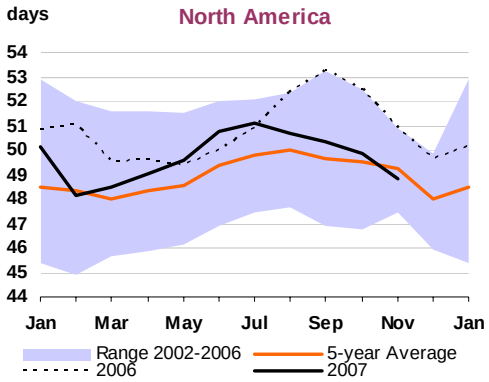


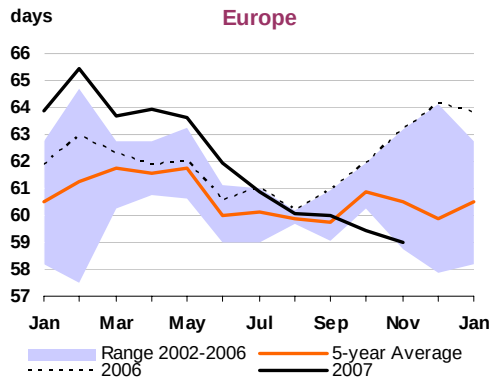


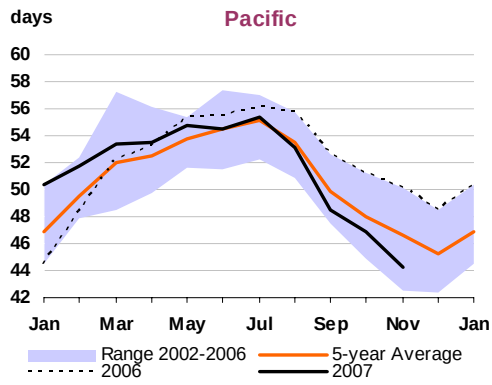
Regional OECD End-of-Month Industry Stocks

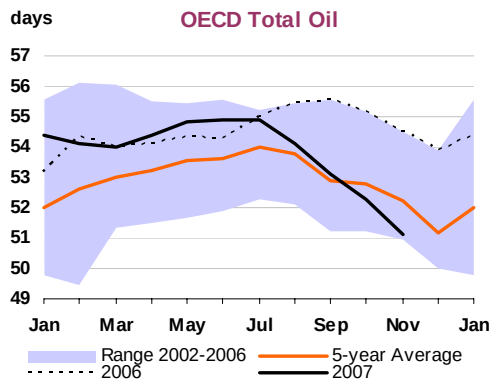
(in days of forward demand and millions barrels of total oil)

Days[1]

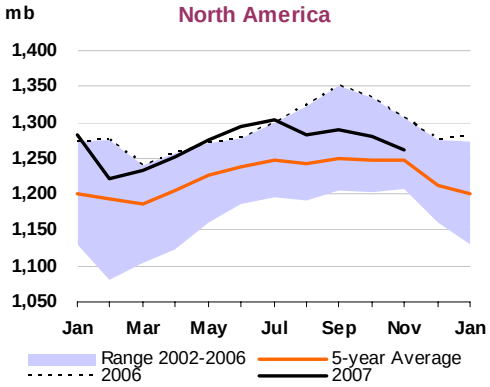


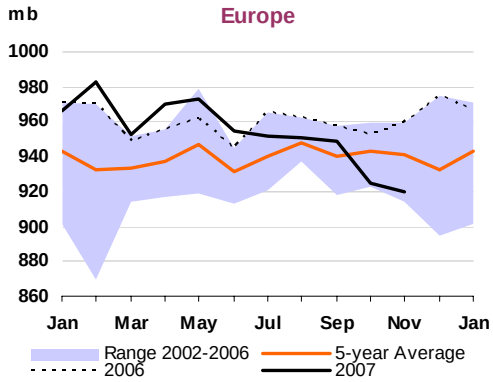


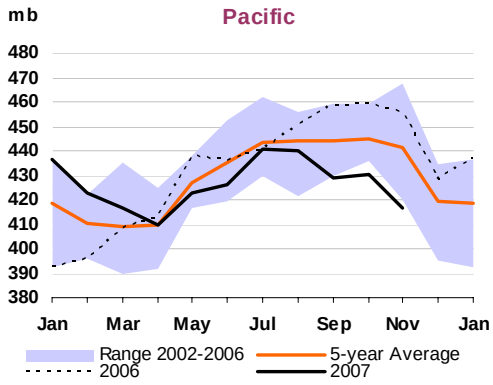


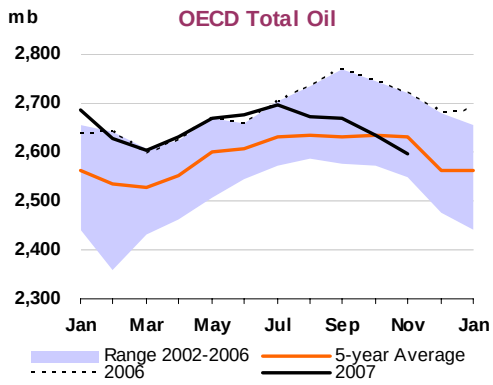


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

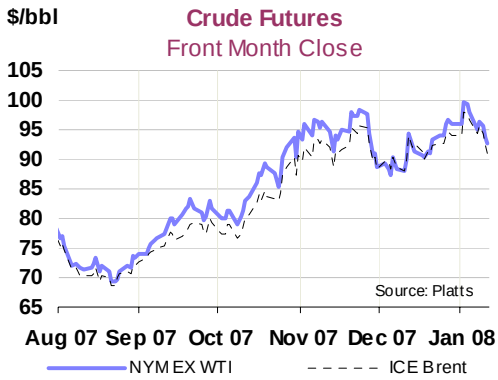
Summary

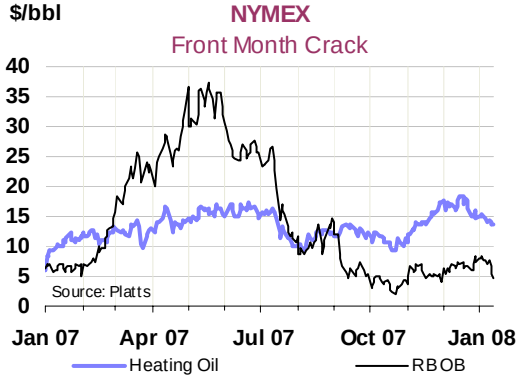
- **NYMEX light sweet crude futures (WTI) crossed and retreated from the symbolic $100/bbl threshold** in early January. A continued slide in industry stocks, colder weather in December and increased tensions in Nigeria and the Middle East kept prices high. Subsequent warmer weather and economic jitters however saw prices weaken again to the lower $90s by mid-January.

- **Refining margins weakened in all regions**, as markets remained crude-driven amid seasonally high refinery throughputs. US Gulf Coast cracking margins were particularly weak, discouraging runs and therefore crude imports into the region, and negative hydroskimming spreads in Europe and elsewhere prompted hints of economic run cuts.

- **Product crack spreads mostly weakened**, despite cold weather in December and sustained gasoline demand in the US. Japanese winter fuel kerosene stocks rebuilt to above-average levels in early January, removing a key supportive factor, while reduced high-sulphur fuel oil imports into China caused discounts to crude to widen.

- **Crude tanker rates have retreated from the multi-year highs seen in mid-December**, following a drop in chartering activity in the Middle East and a broader easing of vessel fundamentals. Shipping delays related to weather in the Baltic and Black Seas have so far been milder than usual, but fog in the Houston shipping channel has dented US imports and boosted Caribbean Aframax rates.





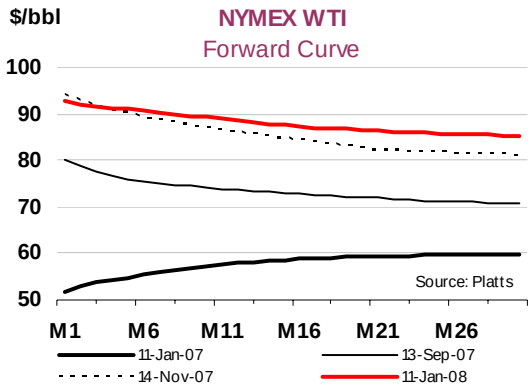
Overview

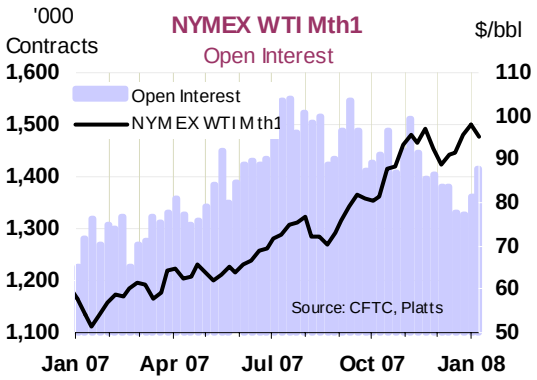
Oil prices continued to rise in December and, early in the New Year, WTI futures crossed the symbolic $100/bbl threshold for the first time ever. Market fundamentals remained tight, with cold weather and falling stocks, while funds were reported to be re-entering commodities as part of the annual January allocation process. Geopolitical jitters also contributed to the price increase, with bombs in Algeria, more violence in Nigeria and turmoil in Pakistan, even though none of these events actually led to lower oil supply. Early January subsequently saw prices sliding downwards again, partly as a correction, partly as a result of warmer weather and of worries of an economic downturn in the US and, by extension, elsewhere.

The move to $100/bbl by WTI futures made headlines in the mainstream press around the world but is largely symbolic in the sense that some spot crude grades (and various refined products) had previously been traded at even higher prices. Nevertheless, $100/bbl represents an astonishing doubling of prices since a mid-January 2007 low and a five-fold rise since early 2002. From an economic perspective, yearly averages often matter more and here the jump is less significant. Oil prices in 2007 averaged around $72/bbl compared with $66 in 2006 (spot WTI in Cushing) – a rise of only 9%. Of equal symbolic

significance is the fact that US gasoline retail prices are now above $3.00/gallon and above €1.30/litre in much of Europe.

The main factors that contributed to December's price rise include colder-than-expected weather in the US, Europe and Japan, drawing down previously-high heating fuel stocks. The contrast to the unusually warm winter in 2006/07 is pronounced, even though temperatures this season are in line with ten-year averages. OECD industry stocks continued their slide in November and December, based upon preliminary data, falling from near the top of their five-year range in July to the bottom of the range at the end of November in terms of forward cover. These moves come despite higher OPEC output following its pledge to increase supplies to the market from 1 November and a slight narrowing of WTI and Brent futures' backwardation.





Much was made of an influx of index fund and other investor money into oil and commodity markets in general, amid both the uncertain global economic outlook and as part of the annual early-year reweighting of positions. But while NYMEX WTI non-commercials show an increase in net-long positions around the end of the year, open interest only rose in early January, after falling in December. This would appear to indicate a *reaction* to high oil prices rather than a *cause*. Nevertheless, commodities overall are clearly strong, with highs seen in gold, platinum, wheat and indeed all other oil contracts on the NYMEX and ICE exchanges.

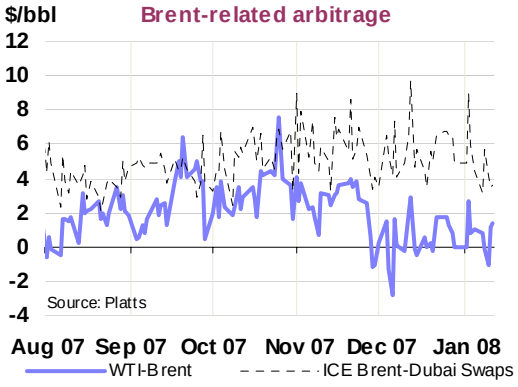
Oil prices' rapid retreat from $100/bbl shows, however, how volatile markets remain and, in early 2008, there would appear to be some downside potential. The latest weekly unemployment figures and other economic data from the US show weakness, amid much talk of a possible recession, though oil demand so far appears little affected. Refining margins have fallen further, as a late-year surge in refinery throughputs boosted product stocks in the US and Japan. Perhaps the most crucial factor remains winter weather, which so far in January has been warmer than average, as opposed to the colder-than-average temperatures seen in the west in the fourth quarter.

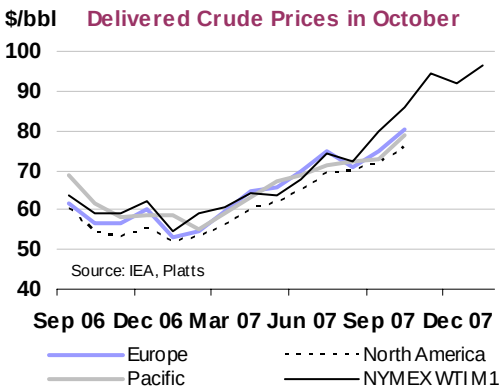
Spot Crude Oil Prices

Markets were crude-driven in December and early January, as refineries geared up throughputs to meet winter demand. By all accounts, light sweet crudes were in particularly strong demand and dirty freight rates surged in the first half of December, also on increased exports from the Middle East Gulf. North Sea Brent was strong vis-à-vis other grades, maintaining its premium of around $5/bbl over Dubai and remaining steady versus other light, sweet crudes from Africa and Asia. Urals differentials in the Mediterranean weakened versus Brent as Kirkuk and more Middle Eastern sour barrels entered the region.

US spot benchmark WTI in contrast weakened slightly relative to similar grades such as LLS, as cracking margins on the US Gulf Coast slipped further into negative territory, and crude imports into the region fell. Spot WTI even traded at a discount to Brent briefly in December and early January, amid a slight

recovery in stock levels at Cushing, Oklahoma. Heavier, sourer grades such as Mars, Maya and Kern River also narrowed discounts to WTI.





Exchange-traded Oman rose to a strong premium to spot Dubai, continuing the recent volatility in the contract. The UAE's kerosene-rich Murban returned to a premium over Brent, while in Asia, both Tapis and Minas picked up versus the North Sea benchmark, the latter taking strength from strong direct-burn demand in Japan, as nuclear capacity remains constrained.

Spot Crude Oil Prices and Differentials

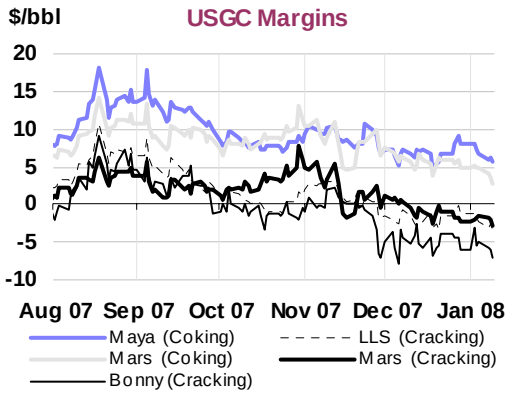
(monthly and weekly averages, $/bbl)

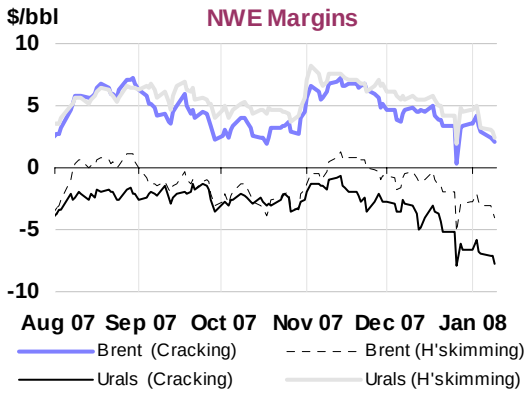
	Oct	Nov	Dec	Dec-Nov Avg Change	%	Week Commencing: 10 Dec	17 Dec	24 Dec	31 Dec	07 Jan
Crudes										
Dated Brent	82.50	92.61	90.97	-1.64	-1.8	90.39	90.86	95.53	97.39	94.29
Brent (Asia) Mth1 adjusted	82.22	92.85	90.95	-1.90	-2.0	90.34	91.66	94.13	96.68	95.05
WTI (Cushing) Mth1 adjusted	85.87	94.74	91.37	-3.37	-3.6	91.16	91.30	96.20	98.90	94.71
Urals (Mediterranean)	79.52	90.24	88.76	-1.48	-1.6	88.87	88.63	92.68	94.63	91.50
Dubai Mth1 adjusted	77.12	86.87	85.58	-1.29	-1.5	84.97	86.20	88.33	91.28	89.83
Tapis (Dated)	87.24	97.20	95.72	-1.48	-1.5	95.01	96.31	98.83	101.62	99.88
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	3.38	2.12	0.39	-1.73		0.77	0.44	0.67	1.51	0.43
Urals (Mediterranean)	-2.98	-2.37	-2.21	0.16		-1.52	-2.23	-2.85	-2.77	-2.79
Dubai Mth1 adjusted - Dated Brent	-5.37	-5.74	-5.40	0.35		-5.43	-4.66	-7.20	-6.11	-4.46
Tapis (Dated)	4.74	4.59	4.75	0.16		4.62	5.45	3.30	4.23	5.60
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.37	0.35	0.22	-0.13		0.17	0.19	0.20	0.26	0.30
Forward WTI Cushing Mth1-Mth2 adj	1.12	0.91	0.08	-0.83		-0.04	-0.12	0.37	0.25	0.38

Source: Platts

Refining Margins

Refining margins fell in all regions in December, despite healthy seasonal heating oil demand, as markets remained crude-driven and, with a few exceptions, crack spreads fell for all products. At current rates, some economic run cuts may be in the offing for less complex refineries. US Gulf Coast cracking margins are particularly depressed, sliding into negative territory. This is especially true for cracking margins of foreign crude, as a result cutting imports into the region and contributing to the pronounced US stock draw. West Coast margins remain healthier in comparison, though Oman cracking also turned negative on high crude prices. Trendwise, margins fell sharply over the course of the month and in early January.





Margins fell across the board in Europe, driven largely by weaker diesel cracks. Northwest European spreads remain higher, a trend observed for recent months, and hydroskimming margins linger in negative territory. In Singapore, only Dubai hydrocracking is positive, after Dubai hydroskimming margins fell sharply in December. Weakness here is rather in jet fuel spreads, while naphtha and some fuel oil cracks improved.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Oct 07	Nov 07	Dec 07	Dec 07-Nov 07	12 Dec	19 Dec	26 Dec	02 Jan	09 Jan
NW Europe	Brent (Cracking)	3.16	6.17	3.91	-2.27	4.60	4.45	2.89	3.54	2.60
	Urals (Cracking)	4.66	7.04	5.08	-1.95	5.63	5.47	3.91	4.77	3.15
	Brent (Hydroskimming)	-2.44	0.00	-1.60	-1.60	-0.71	-0.93	-2.51	-2.70	-3.31
	Urals (Hydroskimming)	-2.10	-0.82	-2.90	-2.08	-2.21	-2.43	-4.06	-4.04	-5.28
Mediterranean	Es Sider (Cracking)	2.71	5.65	3.42	-2.22	3.94	3.83	2.65	3.33	2.11
	Urals (Cracking)	4.33	6.66	4.20	-2.45	4.92	4.71	3.24	3.37	2.07
	Es Sider (Hydroskimming)	-3.19	-0.95	-2.32	-1.38	-1.91	-1.83	-2.74	-2.88	-3.80
	Urals (Hydroskimming)	-2.69	-1.93	-4.45	-2.52	-3.46	-3.82	-5.51	-6.40	-7.14
US Gulf Coast	Bonny (Cracking)	0.23	0.29	-4.89	-5.18	-4.52	-6.12	-3.89	-4.05	-5.00
	Brent (Cracking)	-0.92	-0.88	-4.90	-4.02	-3.93	-5.58	-4.29	-5.17	-5.87
	LLS (Cracking)	0.33	1.12	-1.83	-2.95	-1.79	-2.31	-1.73	-0.99	-2.63
	Mars (Cracking)	3.07	1.98	-0.89	-2.86	-0.58	-1.28	-0.99	-2.06	-2.04
	Mars (Coking)	8.79	8.26	5.72	-2.55	5.65	5.50	5.89	5.13	4.07
	Maya (Coking)	8.14	8.93	6.78	-2.15	6.84	6.20	6.67	8.28	6.35
US West Coast	ANS (Cracking)	0.55	1.55	2.83	1.29	4.61	2.45	1.54	0.58	-2.95
	Kern (Cracking)	4.14	5.94	8.19	2.25	12.45	6.06	6.36	3.96	0.48
	Oman (Cracking)	5.18	4.13	-3.02	-7.15	1.03	-6.36	-5.72	-3.08	-7.87
	Kern (Coking)	16.03	14.92	14.13	-0.79	13.88	12.98	16.14	14.66	8.85
Singapore	Dubai (Hydroskimming)	-0.23	0.18	-3.03	-3.21	-2.92	-3.00	-3.20	-4.08	-4.20
	Tapis (Hydroskimming)	-7.00	-5.10	-4.80	0.30	-5.07	-4.48	-4.70	-5.21	-6.53
	Dubai (Hydrocracking)	3.66	4.85	2.06	-2.79	1.94	2.09	1.88	1.65	0.88
	Tapis (Hydrocracking)	-3.02	-1.15	-1.15	0.00	-1.78	-0.73	-0.89	-1.25	-2.91
China	Cabinda (Hydroskimming)	-7.02	-4.36	-6.28	-1.92	-5.81	-6.11	-6.93	-7.89	-6.38
	Daqing (Hydroskimming)	-11.18	-6.95	-8.02	-1.07	-8.19	-7.95	-8.04	-8.41	-9.31
	Dubai (Hydroskimming)	-0.57	-0.41	-4.91	-4.50	-4.39	-5.17	-5.48	-6.11	-5.76
	Daqing (Hydrocracking)	-4.73	-0.35	-2.47	-2.12	-2.82	-2.32	-2.58	-2.57	-3.55
	Dubai (Hydrocracking)	3.34	4.31	0.09	-4.22	0.42	-0.16	-0.52	-0.50	-0.74

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

Spot Product Prices

Refined product crack spreads to crude were mostly weaker in December and early January. Key refining centres saw an uptick in throughputs towards the end of the year, boosting product availability. At the same time, crude prices were supported by crude stock draws and geopolitics. Despite colder December weather in the northern hemisphere, and strong heating oil consumption, distillate cracks were weaker in the US, Europe and Asia. In Japan, stocks of heating fuel kerosene built back to above-average levels at the end of the year as production was boosted. Higher Chinese gasoil imports in December were somewhat offset by lower purchases from Indonesia and Vietnam. Meanwhile, the jet fuel arbitrage from East Asia to the US West Coast closed after a sharp narrowing of differentials. In Europe, the introduction of 0.1% sulphur heating oil from 1 January apparently passed smoothly, despite requiring blending of higher-sulphur Russian export barrels.

Light distillates also were weak, with gasoline crack spreads remaining more or less unchanged. Higher gasoline production in the US towards the end of the year resulted in a stock build in December, drawing lower volumes across the Atlantic. Naphtha cracks meanwhile fell again in December and early January, sliding into negative territory in Northwest Europe. In Asia, the unplanned shutdown of large naphtha crackers in Taiwan and Japan lowered demand, despite a concurrent dip in Indian exports.

Spot Product Prices

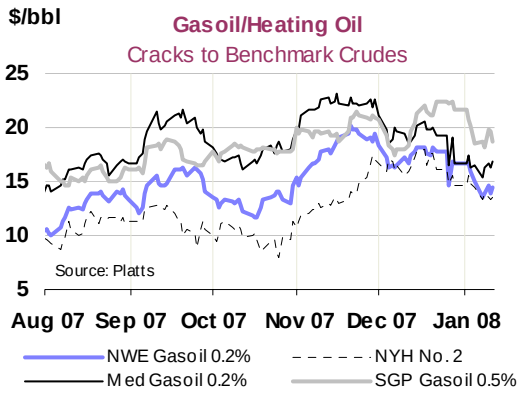
(monthly and weekly averages, $/bbl)

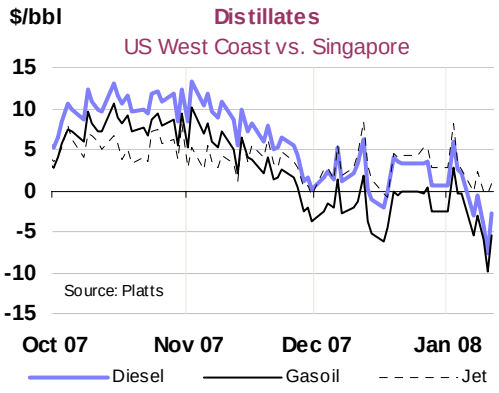
	Oct	Nov	Dec	Dec-Nov		Week Commencing:					Oct	Nov	Dec
				Change	%	10 Dec	17 Dec	24 Dec	31 Dec	07 Jan			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	88.06	98.79	95.74	-3.05	-3.1	96.04	95.85	101.38	103.17	98.60	5.56	6.18	4.77
Naphtha	82.41	91.26	92.60	1.34	1.5	92.70	92.36	95.35	96.13	92.89	-0.09	-1.35	1.63
Jet/Kerosene	100.67	115.76	111.42	-4.35	-3.8	111.48	111.23	115.44	115.50	110.74	18.18	23.15	20.44
ULSD	99.44	118.34	109.94	-8.40	-7.1	109.56	110.43	114.20	0.00	0.00	16.94	25.73	18.97
Gasoil .2%	95.68	110.76	107.98	-2.79	-2.5	107.83	108.67	112.77	113.30	108.40	13.19	18.15	17.00
LSFO 1%	66.90	75.03	78.16	3.13	4.2	78.75	79.73	80.95	81.99	80.68	-15.60	-17.59	-12.82
HSFO 3.5%	64.91	73.62	68.87	-4.74	-6.4	68.34	69.59	71.67	73.94	70.50	-17.58	-19.00	-22.10
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	86.42	98.06	95.02	-3.04	-3.1	95.57	94.84	100.67	102.32	97.64	6.90	7.82	6.26
Naphtha	82.40	90.09	91.39	1.29	1.4	91.52	91.19	94.39	95.33	92.39	2.88	-0.14	2.63
Jet Aviation fuel	99.53	113.50	108.75	-4.75	-4.2	109.05	108.57	112.18	112.40	109.15	20.01	23.26	19.99
Gasoil .2%	97.12	112.29	107.88	-4.41	-3.9	108.07	108.53	111.03	111.38	107.77	17.60	22.05	19.12
LSFO 1%	66.58	77.32	76.02	-1.30	-1.7	76.10	77.45	79.54	82.13	77.70	-12.94	-12.92	-12.74
HSFO 3.5%	65.03	72.99	68.07	-4.93	-6.7	68.31	68.17	68.07	71.23	67.54	-14.49	-17.25	-20.69
New York Harbour, Barges											**Differential to WTI**		
Super Unleaded	97.85	105.27	101.10	-4.17	-4.0	100.43	100.98	107.30	109.53	103.78	11.97	10.53	9.73
Unleaded	91.04	101.59	97.34	-4.25	-4.2	96.98	96.90	103.80	104.97	99.61	5.16	6.86	5.98
Jet/Kerosene	100.62	113.78	111.68	-2.10	-1.8	111.73	111.87	114.67	118.67	113.43	14.75	19.04	20.32
No. 2 (Heating Oil)	95.82	108.54	107.80	-0.73	-0.7	107.70	108.47	111.19	113.88	108.20	9.95	13.80	16.44
LSFO 1%	62.18	71.65	72.52	0.86	1.2	72.27	73.37	75.38	78.45	76.31	-23.69	-23.08	-18.85
No. 6 3%	64.66	72.26	69.10	-3.15	-4.4	69.22	69.92	69.30	73.92	71.45	-21.22	-22.48	-22.26
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	88.71	100.29	98.38	-1.91	-1.9	98.15	98.40	102.29	105.63	103.13	11.59	13.42	12.80
Naphtha	81.18	91.38	92.24	0.86	0.9	91.90	93.48	93.55	94.99	94.77	4.06	4.51	6.66
Jet/Kerosene	96.62	112.77	108.31	-4.46	-4.0	107.84	109.36	110.17	112.33	108.86	19.49	25.90	22.73
Gasoil .5%	95.08	106.97	105.69	-1.28	-1.2	104.49	107.94	110.43	111.09	108.82	17.96	20.10	20.11
LSWR Cracked	63.70	77.01	78.03	1.01	1.3	77.76	78.63	79.65	82.41	81.01	-13.42	-9.85	-7.55
HSFO 180 CST	68.53	77.57	73.50	-4.07	-5.2	72.78	74.92	74.91	78.01	76.21	-8.59	-9.30	-12.08
HSFO 380 CST 4%	68.84	77.51	74.30	-3.21	-4.1	73.57	76.03	75.77	78.40	77.07	-8.29	-9.35	-11.28

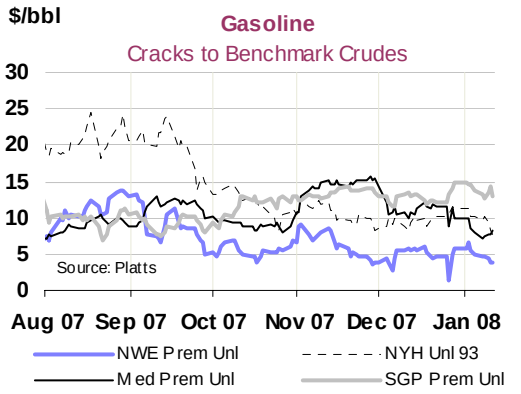
Source: Platts

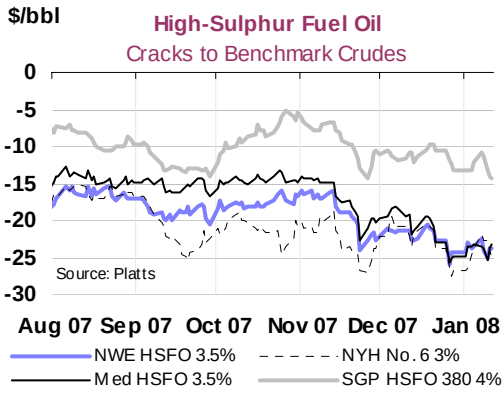
Fuel oil crack spreads were more mixed. Low-sulphur margins were more or less flat last month, despite healthy demand from utilities, especially in Japan, on reduced nuclear capacity. High-sulphur discounts to crude however widened further amid higher supply on raised runs around the world. Independent European product stocks held in the Amsterdam-Rotterdam-Antwerp region are at the top of their five-

year range while, in Singapore, they are above average. Lower Chinese buying in particular contributed to the weakening. The recent product shortage there caused a redirection of domestic crude to independent 'teapot' refineries, lowering their usual import requirements. But steady flows of high-sulphur fuel oil from Europe to Asia in February are expected, also against a background of slightly lower dirty freight rates.









End-User Product Prices in December

End-user product prices in most cases increased in December. Gains were most pronounced for heating oil, which on average rose by 3.4% in US dollars, ex-tax, as temperatures turned cold. In Japan, heating oil prices even rose by 10%. Diesel retail prices were also strong, with an average gain of 3.2% in US dollars, ex-tax. Diesel prices were particularly strong in the UK and Japan, but dipped slightly in Germany and the US. Gasoline prices were more mixed, despite an overall increase. France, Germany, Canada and the US saw lower prices, while increases were registered elsewhere.

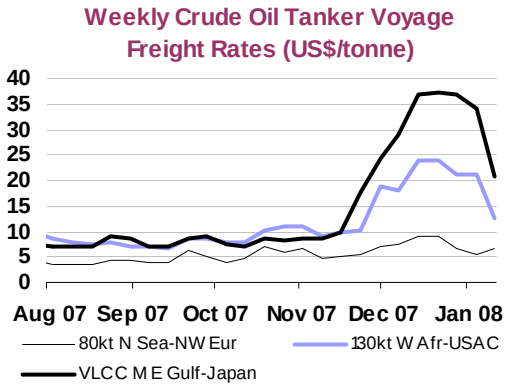
Freight

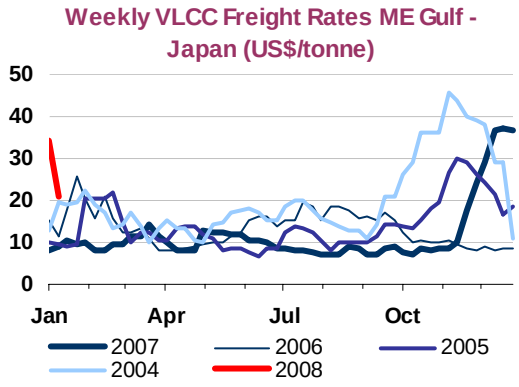
Crude tanker rates have retreated from the multi-year highs seen in mid-December, following a drop in chartering activity in the Middle East. As a result, early-January vessel fundamentals have eased considerably from the tightness seen in mid-December, when extra OPEC cargoes led a rush on VLCCs in the Middle East. Although vessel demand spilled over into Suezmax and some Aframax sectors, rates in these sectors have also now corrected downwards with winter delays so far proving less severe than normal. By early January, clean tanker rates had softened slightly from fourth-quarter peaks.

New Year demand for VLCCs in the Middle East has been considerably weaker than the early-December scramble for vessels to cover extra OPEC cargoes. Tanker availability for late-January and February loading has consequently improved. This has eased concerns over double-hulled vessel supply, which

had intensified in mid-December following a spill from a single-hulled tanker in Korea. The medium-term effect of this incident may yet be significant, if the Koreans decide to accelerate a phase-out of single hulled vessels. For now, rates have dropped and the long-haul arrival horizon for VLCCs on prompt charter now falls after the usual peak of winter. In the second week of January, VLCC rates ended around $21 and $41/tonne respectively on trades to Japan and the US Gulf. This marks a significant retreat from the respective peaks of over $37 and $65/tonne in mid-December on the same benchmark routes.

Suezmax and Aframax rates also rose to multi-year highs by mid-December, linked to spillover vessel demand from the robust VLCC sector. The lack of VLCC availability reportedly prompted the splitting of cargoes into smaller vessel sizes. Shipping delays related to weather typically play a key role in dirty rates at this time of year. Fog delays in the Houston shipping channel pushed already-rising Caribbean Aframax rates to $26/tonne in mid-December, compared with last winter's peak of $15/tonne, and put a much publicised dent in US PADD 3 crude imports. However, weather delays in the Turkish Straits and Baltic have been much less severe than usual so far this winter. North Sea to Northwest Europe Aframax rates peaked around $9/tonne in December, significantly lower than last winter's maximum of $14/tonne, and, at the time of writing, have fallen to $7/tonne.





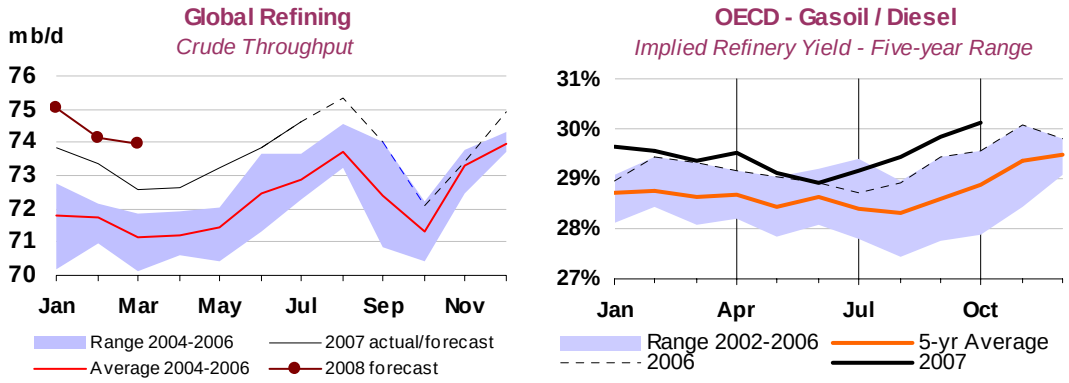
By early January, Asian clean tanker rates had eased from late-2007 peaks. Vessel availability in Eastern markets was boosted by the arrival of arbitrage cargoes from the West, while December temperatures were mild, easing heating fuel (kerosene) import needs. However, China is still facing diesel shortages and looks set to follow record December imports with high incoming volumes in January. This could lend support to rates despite reports of a prospective reduction in Indian naphtha export cargoes. In the Atlantic, diesel flows to Europe look to have become more economic in recent weeks and rates for 33,000-tonne-cargo vessels have risen from around $15/tonne in mid-December to over $22/tonne in early January.

REFINING

Summary

- **January global refinery crude throughput is forecast to average 75.2 mb/d, up 1.3 mb/d on the year** and at its highest level since last August. Growth is driven by higher throughput in the OECD, China and Russia. First-quarter crude throughput is forecast to average 74.5 mb/d as planned maintenance subsequently reduces February and March refinery crude runs.

- **Fourth-quarter global crude throughput is unchanged from last month's report at 73.5 mb/d,** following offsetting revisions to October and November of around 0.5 mb/d. Lower OECD North America and Pacific throughput, and weaker throughput in Russia underpinned the October reduction. Conversely, November estimates are revised higher due to record crude runs in China and Russia as well as higher crude runs in OECD Europe, India, Chinese Taipei and Iran.



- **October OECD gasoil/diesel yields achieved a new high, driven by higher North American output.** Pacific yields hit record levels for the time of year, driven by the start-up of new upgrading capacity in Korea, while European distillate yields declined, following problems at Neste's Porvoo hydrocracker.

- **Chinese state refiners have resorted to heavy diesel imports to combat supply shortages,** following the collapse of independent 'teapot' refinery utilisation rates due to unfavourable economics. Heavy imports are expected to continue into the first quarter, and possibly longer, depending on the level of throughput at independent refineries.

Global Refinery Throughput

First-quarter global refinery crude throughput is projected to average 74.5 mb/d; 0.2 mb/d higher than our previous estimate, representing an increase of 1.2 mb/d from 1Q07. 65% of the growth comes from non-OECD regions, led by China, Asia and the FSU. Details on refinery activity in Singapore and the start of operations at refineries in Cuba and the UAE have led us to revise up forecasts for these countries. Significantly higher diesel imports into China suggest that crude runs by Petrochina and Sinopec to meet strong domestic demand will not need to be as high as we had assumed. Consequently we have trimmed our Chinese estimates for 1Q08. OECD throughputs are assumed to decline from their December peak, as maintenance work starts sequentially in the US, Europe and Pacific.

Fourth-quarter global crude throughput is unchanged at 73.5 mb/d. October's 0.6 mb/d downward revision is partly offset by upward revisions of 0.5 mb/d in November and 0.1 mb/d in December. Lower throughput estimates for all OECD regions, Russia Japan, Brazil and India in October largely reflect, heavier-than-estimated maintenance work and delays to refinery restarts. In addition, crude throughput estimates have been reduced for Chile and Nigeria following a more detailed review of throughput data.

Nigeria should reportedly achieve the re-start of the Warri and Kaduna refineries in the first quarter of 2008. These plants shut in February 2006, due to disruption of the crude supply pipelines. While we remain cautious as to the eventual timing of these re-starts, we have included a gradual build-up over the course of 1Q08. Furthermore, we have revised down our assumed crude runs at Nigeria's Port Harcourt refinery as we appear to have been around 50 kb/d too optimistic on the 4Q07 level of refinery activity.

Global Refinery Crude Throughput[1]

	million barrels per day								
	Jul 07	Aug 07	Sep 07	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08
OECD Crude Runs									
North America	18.7	18.7	18.1	17.8	*18.0*	*18.4*	*18.5*	*18.1*	*17.9*
Europe	13.8	13.8	13.7	13.2	*13.4*	*13.8*	*13.6*	*13.5*	*13.4*
Pacific	7.0	7.2	6.7	6.7	*7.3*	*7.6*	*7.6*	*7.4*	*7.2*
Total OECD	39.4	39.7	38.5	37.6	*38.7*	*39.9*	*39.7*	*38.9*	*38.5*
NON-OECD Crude Runs									
FSU	5.9	5.9	*5.7*	*5.4*	*5.9*	*5.8*	*5.9*	*6.0*	*6.0*
Europe	0.7	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.5	6.5	6.6	6.5	*6.7*	*6.7*	*6.7*	*6.7*	*6.7*
Other Asia	*8.1*	8.3	*8.4*	*8.1*	*8.1*	*8.1*	*8.3*	*8.3*	*8.3*
Latin America	*5.4*	5.5	*5.5*	*5.3*	*5.4*	*5.2*	*5.6*	*5.5*	*5.5*
Middle East	*6.2*	6.3	*6.2*	*6.1*	*5.7*	*6.0*	*5.8*	*5.8*	*5.9*
Africa	*2.4*	2.3	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*	*2.4*	*2.4*
Total Non-OECD	35.2	35.6	35.5	34.5	34.9	35.1	35.5	35.3	35.5
Total Crude Runs	*74.6*	*75.4*	*74.0*	*72.1*	*73.5*	*74.9*	*75.2*	74.2	*74.0*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

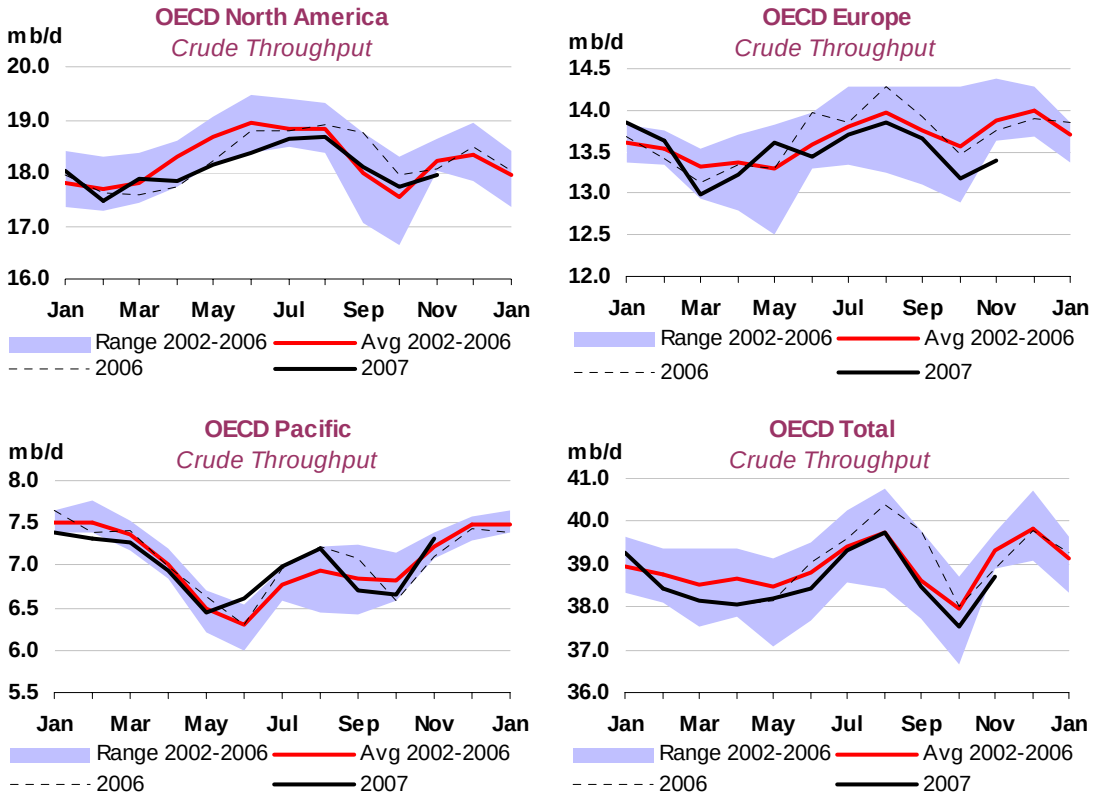
November crude throughput estimates are revised up by 0.4 mb/d, driven by higher-than–forecast runs in OECD Europe (+0.3 mb/d), Singapore (+0.2 mb/d) and Iran (+0.1 mb/d), plus record throughputs in Russia (4.8 mb/d) and China (6.7 mb/d).

Refinery Crude Throughput and Utilisation in OECD Countries

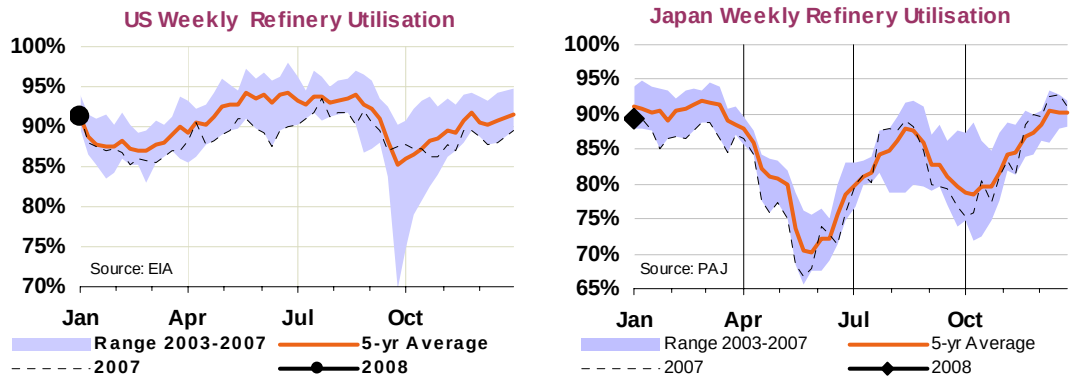
	million barrels per day						*Change from*		Utilisation rate[2]	
	Jun 07	Jul 07	Aug 07	Sep 07	Oct 07	Nov 07	*Oct 07*	*Nov 06*	Nov 07	Nov 06
OECD North America										
US[3]	15.24	15.66	15.68	15.22	14.93	15.21	0.28	0.20	87.16	86.32
Canada	1.86	1.79	1.87	1.78	1.59	1.52	-0.07	-0.29	75.35	89.66
Mexico	1.26	1.20	1.14	1.13	1.26	1.24	-0.02	0.00	80.67	71.96
Total	18.36	18.66	18.69	18.13	17.72	17.97	0.25	-0.09	85.55	85.62
OECD Europe										
France	1.56	1.79	1.71	1.64	1.54	1.76	0.21	-0.06	89.75	91.68
Germany	2.29	2.31	2.14	2.30	2.24	2.21	-0.04	-0.20	91.38	99.06
Italy	1.85	1.89	1.91	1.85	1.82	1.92	0.10	-0.07	81.98	85.32
Netherlands	0.95	1.02	1.05	1.08	1.01	0.90	-0.11	-0.14	74.26	85.51
Spain	1.16	1.15	1.16	1.16	1.08	1.07	-0.01	-0.04	83.87	87.13
UK	1.56	1.55	1.67	1.57	1.62	1.55	-0.08	0.04	82.02	80.11
Other OECD Europe	4.09	4.05	4.20	4.06	3.85	4.00	0.14	0.11	85.22	80.68
Total	13.45	13.70	13.85	13.67	13.18	13.39	0.22	-0.36	84.91	86.34
OECD Pacific										
Japan	3.45	3.86	4.15	3.66	3.69	4.03	0.34	0.16	86.19	82.85
Korea	2.45	2.39	2.31	2.35	2.30	2.58	0.28	0.07	94.40	97.36
Other OECD Pacific	0.70	0.72	0.73	0.68	0.67	0.71	0.04	-0.01	88.26	89.07
Total	6.61	6.98	7.19	6.69	6.66	7.32	0.66	0.23	89.12	88.12
OECD Total	38.42	39.33	39.73	38.49	37.56	38.69	1.13	-0.22	85.98	86.32

1 Estimate
2 Based on crude throughput and current operable refining capacity
3 US50

OECD fourth-quarter crude runs are estimated to average 38.7 mb/d – broadly unchanged from last month's forecast. Data submissions indicate lower-than-anticipated runs in October in all three regions, but preliminary November data point to higher-than-estimated November crude throughput, mainly in Europe, although still below the five-year range. Consequently, we have revised up Europe's December and January crude throughput estimates to reflect the higher activity levels. However, the continued weak state of margins suggests economic run cuts could reduce crude runs in January. North American forecast crude runs have been reduced, due to further delays to the return of BP Texas City's sour crude unit. Elsewhere in the US there remains little reported planned maintenance compared with 1Q07 levels, raising the possibility that throughputs will be higher than currently forecast. In contrast, some refiners point to increased maintenance levels as a result of the tightening sulphur specifications for gasoline and diesel, and the potential for increased seasonal volatility in refining margins as refiners move maintenance into the first quarter from the second quarter.



Weekly data for the US point to early January crude runs reaching 15.8 mb/d, their highest level since last August, driven by gains in the Midwest, Gulf and West Coasts. Japanese weekly data indicate that refineries hit a seasonal peak of over 4.5 mb/d in mid-December (a slight downward revision from last month's report) and that kerosene production has returned to its seasonal average yield compared with jet fuel, i.e. in excess of 80% of overall jet/kerosene production.



November **Middle East** crude runs were in line with expectations. However, Saudi Arabian crude throughput was 0.1 mb/d lower than forecast, suggesting that the planned turnaround at the Rabigh refinery was heavier than expected. Offsetting this, Iranian and Iraqi crude runs exceeded our estimate. The re-commissioning of Fujairah's 85 kb/d refinery in the UAE has prompted us to increase first-quarter Middle East throughput estimates by 20 kb/d as the plant gradually returns to processing after a four-year hiatus. Planned maintenance work at refineries in Iran and the UAE offsets this, leaving crude runs for 1Q08 flat compared with last year.

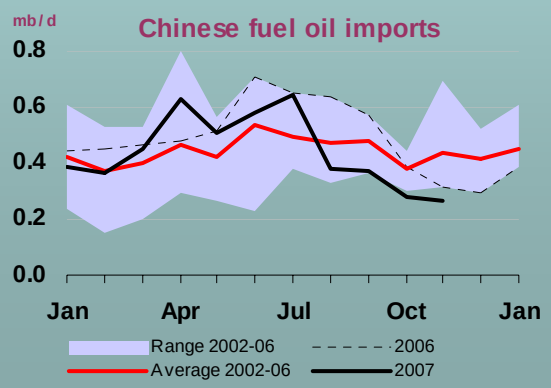
Latin American crude throughput in December is revised down by 0.1 mb/d following reports of ongoing operational problems with PDVSA's 300 kb/d Cardon refinery and the two-week unplanned shutdown of its Curacao refinery. First-quarter crude throughput forecast is revised up by 0.1 mb/d, following the earlier than expected completion of work at the PDVSA Amuay refinery and the inauguration of the 65 kb/d Cienfuegos refinery in Cuba, which we assume will average 20 kb/d in 1Q08.

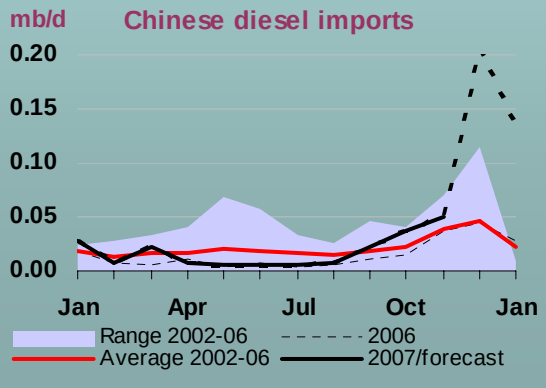
Chinese Product Supply – Diesel Imports Soar

In response to the widely reported product shortages that appeared in the fourth quarter, Chinese state refiners raised crude throughputs to record levels in November. However, China's domestic pricing system caps most product prices below international levels and has led to a dramatic decline in processing operations at independent "teapot" refineries, many of whom purchase fuel oil at international prices as a feedstock. This is reflected in the decline in fuel oil imports. To offset the economic disparity caused by the price caps, Chinese state refiners have supplied some teapot refineries with crude, either at heavily discounted prices, or in return for guaranteed access to the resulting product output.

However, state oil companies have also responded by increasing net diesel imports. Gross diesel imports for the first three quarters of 2007 averaged approximately 12 kb/d while exports averaged around 15 kb/d, a balance of 3 kb/d net exports. October data indicates that imports leapt to 36 kb/d, while exports declined to 10 kb/d. Provisional data for November point to minimal exports and imports of 50 kb/d. December imports reportedly reached almost 200 kb/d with minimal exports, while January import levels are expected to be at least 130 kb/d. Given the full utilisation of state refining capacity, incremental distillate yields from higher crude runs could be as low as 20%, suggesting the import of diesel has increased product supply by the equivalent of 0.6-1.0 mb/d of additional crude runs. Without further incentives for teapot refiners to increase utilisation rates this level of imports is likely to continue through much of 2008, given the limited capacity additions expected in China in the first half of this year.

While the Chinese government remains keen on limiting fuel price increases due to concerns over domestic inflation, the state has suspended VAT on imports for 1Q08 and a halved import duty to 1%. Refiners will also need to prepare for the Chinese New Year in early February, which typically sees stronger demand. If sustained, this level of imports would put China on a par with countries such as France, Turkey and Australia in terms of distillate imports, while refiners providing the incremental supply in recent months include Korea and more recently Japan.





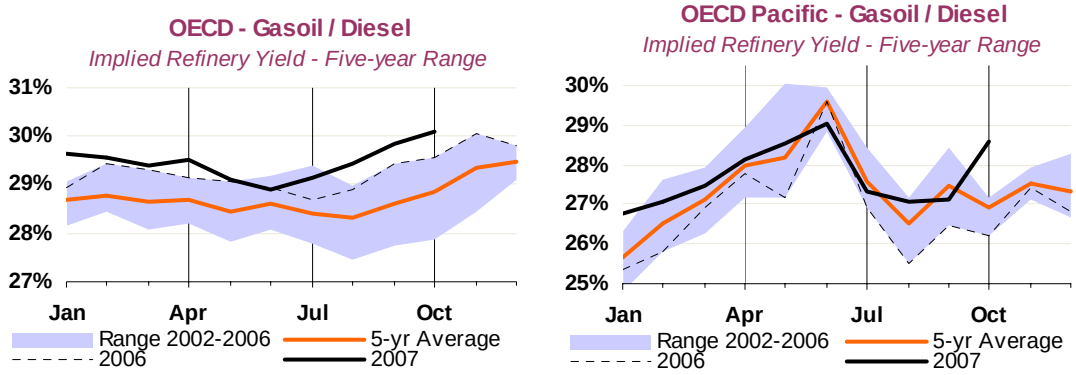
Chinese November crude throughputs reached a record 6.7 mb/d, as state oil companies struggled with diesel supply shortages. Recent trade reports point to a significant increase in net diesel imports during the fourth quarter (see above Chinese Product Supply – Diesel Imports Soar). Due to the higher diesel import volumes we have trimmed our 1Q08 forecast crude throughput by 0.1 mb/d, but still expect crude runs to average 6.7 mb/d in 1Q08, consistent with annual growth of 0.3 mb/d.

Russian crude throughput is revised down in October by 0.2 mb/d to 4.4 mb/d, following heavier-than-expected refinery maintenance at the Moscow, Saratov and Kuibyshev refineries during the month. Crude throughputs rebounded to new record levels in November, continuing the trend in recent months for refiners to maximise the benefit of refining and exporting products versus simply exporting crude oil. Further export duty increases, which increase the incentive to export products rather than crude, have been signalled from 1 February, suggesting refineries will continue to maximise throughputs. Consequently, we have revised up our 1Q08 throughputs by 0.1 mb/d to 4.8 mb/d, representing annual growth of 0.2 mb/d.

Asian crude runs in 1Q08 are revised up by following a reassessment of **Singapore** crude throughputs. These have tracked above our forecast for three months running and consequently we have revised up our estimates for 2008 by 0.1 mb/d. Elsewhere, the expansion of Bangchak Petroleum's refinery at the beginning of 2008 has resulted in a slight upward revision to Thailand's forecast throughput, during the first quarter.

OECD Refinery Yields

Middle distillate yields reached record levels in October thanks to a strong performance from North America and the Pacific. In particular, Korean gasoil/diesel yields improved by four percentage points from September to 29% and are five percentage points above last year's level following the start-up of LG Caltex's residue hydrocracker.



North American gasoil/diesel yields reached 26%, a new record high for the region, driven by the record US distillate yields. This reflects the record level of hydrocracker throughput and the relative strength of distillate cracks over gasoline. As highlighted in previous reports, problems with the Neste's Porvoo Hydrocracker cut Finnish diesel output and maintenance at Total's Gonfreville refinery reduced French diesel production. Consequently, European gasoil/diesel yields declined during October. These temporary issues have been resolved and gasoil/diesel yields in Europe, and the OECD as a whole, likely recovered over the balance of the fourth quarter. OECD fuel oil yields remain below the five-year average, (despite the increase in European fuel oil yield, a corollary of the lower upgrading unit throughput), and likely trended lower over the balance of the fourth quarter and into 2008.

US Refining – Product Supply Is More Than Just Crude Throughput

Weekly crude throughput data for the US indicate that refineries processed 15.2 mb/d in 2007, slightly lower than the 2006 average. This report has previously highlighted the impact of tighter fuel specifications on refinery reliability; suggesting the tighter sulphur specifications are contributing to lower crude throughput by placing increased operational constraints on refineries. However, total US throughput data (including crude, NGLs and feedstocks) point to refineries running closer to historical highs. This raises the possibility that refiners are substituting other feedstocks for crude in an attempt to boost overall profitability by filling upgrading units with more economic feedstocks.

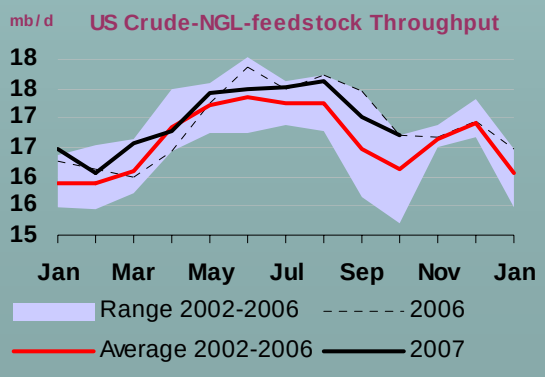
The US was the first major consumer to introduce ultra low sulphur or sulphur free specification for diesel. Gasoline specifications are still in the ultra low range, but have stopped short of the move to 10 parts per million (ppm) – for the moment at least. As such it leads the way in understanding the impact of sulphur free fuels on refinery reliability. The removal of sulphur from light products typically requires existing hydrotreating capacity to be run harder, requires more hydrogen and the units feeding the hydrotreaters to meet more demanding standards for feed quality.

Perhaps the most important difference between ultra-low sulphur specifications and previous sulphur specifications is the impact that even small operational issues can have on output levels. Prior to the introduction of ultra-low-sulphur levels in diesel and gasoline, operational issues could be compensated for by subsequently tightening desulphurisation targets on processing units, e.g. producing diesel with significantly less sulphur to bring the composite blend into line with specification. Alternatively, re-blending of off-spec product would also allow refiners to meet specifications, if spare tank space was available.

However, with a 10 or 15 ppm limit on sulphur in fuels for end-use, refiners must produce diesel ex-refinery at 5-8 ppm to allow for possible contamination through the primary and secondary distribution systems and meet multi-shipper pipeline specifications. This level of sulphur prohibits re-blending for all but the most marginal of off-spec products, while the existing constraints on hydrotreating capacity suggests reprocessing through a hydrotreater is also not likely to be an option.

Producing fuels to such demanding specifications, represents a significant challenge to refiners. Operating practices must ensure that previously acceptable levels of operational excellence are improved, and can require real-time continuous monitoring of unit performance and product quality. Unsurprisingly, all of the above requires significant investment, not only in hardware but in processes and people. The alternative is to invest in spare hydrotreating capacity, not a cheap option in today's tight oil services market. In recent months several US refiners have highlighted these operational constraints facing refiners. Some have suggested that the tighter product specifications now in force in the US may limit refinery utilisation to below 90% in the future, compared with the recent historical average of 92-94%.

However, the crude, NGL and feedstock throughput data suggest that refineries have fared better than the crude throughput number indicates. Total feed rates are in the top of the five-year range rather than at the bottom, suggesting that while crude throughput levels have dipped, the actual supply of products has not been as adversely affected as might initially be presumed.



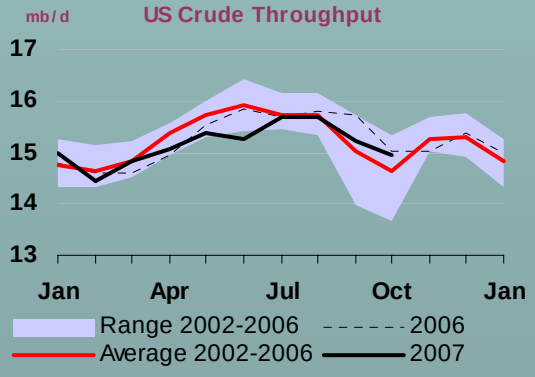


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.6	25.7	25.6	25.7	25.8	25.7
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	15.0	15.4	15.8	15.4	15.7	15.1	15.5	15.9	15.6
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.8	8.3	9.2	7.9	8.0	8.9	8.5
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	50.3	49.2	50.6	48.6	49.2	50.5	49.7
NON-OECD DEMAND																	
FSU	3.9	4.0	4.1	3.9	4.1	4.4	4.1	3.9	3.7	3.9	4.2	3.9	4.0	3.8	4.0	4.3	4.0
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.2	7.2	7.3	7.7	7.5	7.6	7.5	7.7	8.1	7.9	8.1	7.9
Other Asia	8.6	8.8	8.9	8.9	8.6	8.9	8.8	9.2	9.3	9.0	9.3	9.2	9.4	9.5	9.2	9.5	9.4
Latin America	5.0	5.1	5.2	5.3	5.4	5.4	5.3	5.3	5.5	5.6	5.5	5.5	5.5	5.7	5.8	5.7	5.7
Middle East	5.7	6.0	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.9	6.6	6.7	6.9	7.0	7.3	7.0	7.0
Africa	2.8	2.9	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	33.1	34.2	35.1	35.4	35.5	35.9	35.5	36.2	36.6	36.6	37.0	36.6	37.6	38.1	38.1	38.5	38.1
Total Demand[1]	82.5	83.9	85.5	83.5	84.4	85.7	84.8	85.9	84.8	85.4	87.2	85.8	88.2	86.7	87.3	89.1	87.8
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.4	14.1	14.0	14.1	14.2
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	4.9	4.9	4.7	4.4	4.3	4.5	4.5
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.8	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.7	19.8	19.8	19.4	19.1	19.5	19.4
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.7	12.7	12.7	12.8	12.7	12.9	13.1	13.2	13.5	13.2
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.9	2.8
Latin America	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.3	4.1	4.2	4.3	4.3	4.2
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.7	2.7	2.7	2.7	2.7
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	27.9	27.8	27.7	27.8	27.8	28.0	28.3	28.6	28.9	28.5
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.4	50.2	49.7	50.1	50.1	50.4	50.4	50.5	51.4	50.7
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	49.9	49.7	49.2	49.8	49.7	50.4	50.4	50.5	51.4	50.7
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.2	30.1	30.6	31.5	30.6					
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	5.1	5.2	5.5	5.9	5.4
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.0	34.9	35.4	36.4	35.4					
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.8	36.3	35.5	35.4	35.9	36.7	35.9					
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.4	85.1	85.1	86.5	85.5					
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-1.0	0.2	-0.9	0.8	-0.1							
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1							
Total	0.2	0.2	0.0	0.7	1.2	-0.9	0.3	-0.8	0.8	0.1							
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.1	-0.2							
Miscellaneous to balance[8]	0.7	0.6	-0.2	0.9	-0.3	1.2	0.4	0.1	-0.4	-0.2							
Total Stock Ch. & Misc	0.9	0.7	-0.1	1.6	1.2	-0.3	0.6	-0.5	0.3	-0.3	-0.7	-0.3					
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	29.0	30.0	28.1	28.8	29.5	29.1	30.7	29.8	30.9	32.2	30.9	32.7	31.0	31.3	31.7	31.7
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.8	29.4	30.7	32.4	30.8	33.0	31.3	31.5	32.0	31.9
"Call" incl. Angola & Ecuador[2]	29.5	30.8	31.9	29.9	30.8	31.5	31.0	31.2	30.3	31.4	32.5	31.4	32.7	31.0	31.3	31.7	31.7
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.3	31.7	30.9	30.5	32.7	31.5	31.3	29.9	31.2	32.8	31.3	33.0	31.3	31.5	32.0	31.9

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	0.3	0.1	-0.2	-0.1	-0.1	0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-
Total OECD	-	-	-	-	-	-	-	-	-	-	0.2	0.1	-0.2	-0.1	-0.1	0.1	-0.1
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-
Other Asia	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	-	-	0.1	0.1	0.1
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	0.1	0.1	0.1	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	0.1	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Demand	-	-	-	-	0.1	-	0.1	0.1	0.1	0.1	0.3	0.2	-0.1	-	-	0.2	-
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.1	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.2	-	-	-	-0.1
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-0.2	-	-0.5	-0.5	-0.5	-0.4	-0.5
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-0.3	-0.1	-0.6	-0.6	-0.5	-0.4	-0.5
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-	-0.3	-0.1	-0.8	-0.6	-0.5	-0.4	-0.6
Non-OPEC excl. Angola & Ecuador	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.7	-0.5	-0.8	-0.6	-0.5	-0.4	-0.6
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-							
NGLs	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-0.1	-	0.1	-
Total OPEC	-	-	-	-	-	-	-	-	-	-							
OPEC incl. Angola & Ecuador	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5							
Total Supply	-	-	-	-	-	-	-	-	-	-							
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	0.1	-0.1	-	-	-	-							
Government	-	-	-	-	-	-	-	-	-	-							
Total	-	-	-	-	0.1	-0.1	-	-	-	-							
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-							
Miscellaneous to balance	-	-	-	-0.1	-0.2	-	-0.1	-0.1	-0.1	-0.1							
Total Stock Ch. & Misc	-	-	-	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1							
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	0.1	0.1	-	0.1	0.1	0.1	0.1	0.7	0.2	0.8	0.7	0.5	0.5	0.6
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-0.1	0.1	-	-	-	-	0.6	0.2	0.7	0.6	0.4	0.4	0.5

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.37	25.30	25.67	25.43	25.51	25.62	25.56	25.73	25.55	25.69	25.76	25.68
Europe	15.61	15.96	15.23	15.60	15.72	15.63	15.21	14.96	15.42	15.81	15.35	15.65	15.15	15.53	15.86	15.55
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.84	8.32	9.23	7.95	7.96	8.92	8.52
Total OECD	49.67	50.42	48.11	48.98	49.80	49.33	49.71	48.20	48.75	50.26	49.23	50.61	48.65	49.18	50.55	49.75
FSU	3.95	4.06	3.87	4.12	4.45	4.12	3.93	3.68	3.91	4.17	3.92	4.04	3.80	4.02	4.28	4.04
Europe	0.72	0.80	0.75	0.70	0.75	0.75	0.83	0.77	0.71	0.77	0.77	0.85	0.79	0.73	0.79	0.79
China	6.69	6.96	7.29	7.17	7.20	7.16	7.27	7.67	7.46	7.60	7.50	7.73	8.09	7.89	8.06	7.94
Other Asia	8.79	8.93	8.94	8.65	8.87	8.85	9.20	9.28	9.03	9.27	9.19	9.38	9.47	9.23	9.51	9.40
Latin America	5.13	5.15	5.29	5.40	5.38	5.31	5.35	5.54	5.64	5.51	5.51	5.52	5.71	5.82	5.70	5.69
Middle East	5.99	6.22	6.27	6.57	6.32	6.35	6.51	6.64	6.89	6.58	6.66	6.86	7.01	7.32	6.99	7.05
Africa	2.94	2.97	2.97	2.86	2.93	2.93	3.10	3.08	2.98	3.07	3.06	3.22	3.19	3.09	3.18	3.17
Total Non-OECD	34.23	35.10	35.39	35.46	35.91	35.47	36.19	36.65	36.62	36.97	36.61	37.60	38.06	38.10	38.51	38.07
World	83.90	85.52	83.50	84.45	85.71	84.79	85.90	84.84	85.37	87.23	85.84	88.21	86.71	87.28	89.05	87.82
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.78*	*20.80*	*20.90*	*20.81*	*20.90*	*20.88*	*20.87*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.85*	*7.69*	*7.87*	*8.20*	*7.91*	*8.10*	*7.79*	*7.93*	*8.15*	*7.99*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.32*	*5.00*	*5.70*	*4.70*	*4.76*	*5.35*	*5.13*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.38*	*2.22*	*2.42*	*2.15*	*2.09*	*2.41*	*2.27*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.10*	*2.05*	*2.08*	*2.09*	*2.01*	*2.13*	*2.08*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.26*	*2.26*	*2.34*	*2.28*	*2.40*	*2.36*	*2.34*	*2.36*	*2.31*	*2.42*	*2.38*	*2.37*
Brazil	*2.19*	*2.18*	*2.20*	*2.28*	*2.30*	*2.24*	*2.27*	*2.32*	*2.36*	*2.31*	*2.32*	*2.35*	*2.39*	*2.43*	*2.39*	*2.39*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.70*	*2.64*	*2.88*	*2.83*	*2.57*	*2.86*	*2.79*	*2.99*	*2.94*	*2.68*	*2.98*	*2.89*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.7	-0.8	1.8	1.5	-0.1	1.0	1.0	0.2	0.5	0.7	0.6	0.5
Europe	0.8	1.5	-0.2	-0.4	-0.5	0.1	-4.7	-1.8	-1.2	0.5	-1.8	2.9	1.3	0.7	0.3	1.3
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	1.4	-1.0	4.6	1.8	1.9	1.0	2.4
Total OECD	0.6	-0.7	-1.0	-0.6	-0.6	-0.7	-1.4	0.2	-0.5	0.9	-0.2	1.8	0.9	0.9	0.6	1.1
FSU	1.4	2.2	0.3	4.5	10.0	4.3	-3.1	-5.0	-5.1	-6.3	-4.9	2.8	3.3	2.9	2.9	2.9
Europe	4.2	3.4	3.4	3.4	3.4	3.4	2.9	2.7	2.6	2.1	2.6	2.3	2.7	2.7	2.6	2.6
China	4.2	4.2	12.1	7.1	4.6	6.9	4.5	5.2	4.1	5.5	4.8	6.2	5.5	5.8	6.0	5.9
Other Asia	2.0	-0.4	-0.7	1.3	2.4	0.6	3.1	3.7	4.4	4.4	3.9	1.9	2.1	2.2	2.7	2.2
Latin America	2.9	3.7	3.2	2.9	4.4	3.6	3.8	4.6	4.4	2.5	3.8	3.3	3.2	3.1	3.3	3.2
Middle East	4.6	6.9	6.7	5.5	4.5	5.9	4.5	6.0	4.9	4.2	4.9	5.5	5.5	6.2	6.1	5.8
Africa	6.1	-1.3	-0.9	-0.1	1.1	-0.3	4.4	3.6	4.0	4.6	4.2	3.8	3.7	3.7	3.8	3.7
Total Non-OECD	3.3	2.6	3.8	3.7	4.3	3.6	3.1	3.6	3.3	2.9	3.2	3.9	3.9	4.0	4.2	4.0
World	1.7	0.6	1.0	1.2	1.4	1.1	0.4	1.6	1.1	1.8	1.2	2.7	2.2	2.2	2.1	2.3
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.17	-0.20	0.44	0.37	-0.02	0.25	0.26	0.06	0.12	0.17	0.15	0.12
Europe	0.12	0.24	-0.03	-0.06	-0.08	0.02	-0.74	-0.27	-0.18	0.08	-0.27	0.44	0.19	0.11	0.05	0.20
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	0.12	-0.09	0.40	0.14	0.15	0.09	0.20
Total OECD	0.32	-0.35	-0.48	-0.28	-0.28	-0.35	-0.72	0.09	-0.24	0.46	-0.10	0.90	0.45	0.43	0.29	0.52
FSU	0.06	0.09	0.01	0.18	0.40	0.17	-0.12	-0.19	-0.21	-0.28	-0.20	0.11	0.12	0.11	0.12	0.12
Europe	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
China	0.27	0.28	0.79	0.47	0.32	0.46	0.31	0.38	0.29	0.40	0.35	0.45	0.42	0.43	0.45	0.44
Other Asia	0.17	-0.04	-0.06	0.11	0.21	0.06	0.28	0.33	0.38	0.39	0.35	0.18	0.19	0.20	0.25	0.21
Latin America	0.14	0.19	0.16	0.15	0.23	0.18	0.20	0.24	0.24	0.13	0.20	0.17	0.18	0.17	0.18	0.18
Middle East	0.26	0.40	0.40	0.34	0.27	0.35	0.28	0.37	0.32	0.26	0.31	0.36	0.36	0.43	0.40	0.39
Africa	0.17	-0.04	-0.03	0.00	0.03	-0.01	0.13	0.11	0.12	0.14	0.12	0.12	0.11	0.11	0.12	0.11
Total Non-OECD	1.10	0.90	1.29	1.27	1.48	1.24	1.10	1.26	1.16	1.06	1.14	1.41	1.41	1.48	1.54	1.46
World	1.41	0.55	0.81	0.99	1.21	0.89	0.38	1.35	0.92	1.51	1.04	2.31	1.86	1.91	1.83	1.98
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	-0.05	0.25	0.05	-0.17	-0.08	-0.13	0.12	-0.07
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.02	-0.01	0.00	-0.01	0.04	0.00
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.09	-0.02	-0.03	0.00	0.00	-0.06	-0.02
Total OECD	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	-0.02	0.23	0.05	-0.20	-0.08	-0.14	0.09	-0.08
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	-0.04	-0.01	-0.01	-0.02	-0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	-0.02	0.00	0.01	0.01	-0.08	-0.01
Other Asia	0.00	-0.02	-0.01	-0.02	-0.02	-0.02	0.04	0.06	0.07	0.08	0.06	0.02	0.05	0.06	0.08	0.05
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.04	0.00	0.00	-0.01	0.00	-0.02	0.01	0.03	0.01
Middle East	0.00	0.07	0.06	0.09	0.05	0.07	0.08	0.07	0.06	0.06	0.07	0.08	0.07	0.07	0.07	0.07
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00
Total Non-OECD	0.00	0.04	0.04	0.08	0.02	0.05	0.11	0.10	0.14	0.05	0.10	0.07	0.11	0.13	0.09	0.10
World	0.00	0.04	0.05	0.10	0.03	0.05	0.11	0.10	0.11	0.29	0.15	-0.13	0.03	-0.01	0.18	0.02
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.10	0.15	0.04	-0.08	0.05	0.06	0.05	0.02	0.26	0.10	-0.24	-0.07	-0.12	-0.11	-0.13

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	3Q07	4Q07	1Q08	2Q08	3Q08	Oct 07	Nov 07	Dec 07
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.47		8.42	8.77				8.77	8.77	8.77
Iran	3.89	3.92		3.92	3.97				4.00	3.93	4.00
Iraq	1.90	2.09		2.11	2.33				2.30	2.40	2.30
UAE	2.62	2.51		2.57	2.39				2.55	2.15	2.48
Kuwait	2.21	2.16		2.18	2.23				2.21	2.25	2.25
Neutral Zone	0.58	0.56		0.55	0.57				0.56	0.57	0.57
Qatar	0.82	0.80		0.80	0.80				0.79	0.80	0.82
Angola[6]		1.61		1.61	1.71				1.71	1.72	1.69
Nigeria	2.24	2.14		2.17	2.16				2.16	2.16	2.16
Libya	1.71	1.71		1.70	1.74				1.72	1.75	1.75
Algeria	1.35	1.36		1.36	1.39				1.38	1.39	1.40
Ecuador[6]											0.50
Venezuela	2.56	2.39		2.36	2.42				2.41	2.43	2.43
Indonesia	0.89	0.84		0.83	0.83				0.83	0.83	0.84
Total Crude Oil[6]	29.69	30.60		30.59	31.49				31.38	31.13	31.95
Total NGLs[1,6]	4.63	4.82	5.44	4.83	4.89	5.07	5.24	5.52	4.89	4.89	4.89
Total OPEC[6]	34.32	35.42		35.41	36.38				36.27	36.02	36.84
OPEC incl. Angola & Ecuador[6]	36.27	35.88		35.92	36.71				36.77	36.51	36.84
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.15	14.19	14.14	14.36	14.12	13.99	14.14	14.02	14.26
United States	7.34	7.46	7.39	7.39	7.46	7.42	7.46	7.31	7.48	7.44	7.46
Mexico	3.68	3.49	3.42	3.44	3.37	3.45	3.45	3.41	3.37	3.26	3.47
Canada	3.19	3.32	3.34	3.36	3.31	3.49	3.21	3.28	3.29	3.32	3.33
Europe	5.18	4.93	4.50	4.69	4.90	4.68	4.44	4.33	5.02	4.84	4.84
UK	1.66	1.64	1.42	1.49	1.60	1.56	1.41	1.28	1.74	1.50	1.56
Norway	2.78	2.56	2.38	2.48	2.59	2.42	2.33	2.35	2.58	2.62	2.57
Others	0.74	0.73	0.70	0.73	0.71	0.71	0.70	0.70	0.70	0.73	0.72
Pacific	0.58	0.64	0.78	0.64	0.69	0.71	0.78	0.79	0.65	0.69	0.71
Australia	0.53	0.56	0.67	0.55	0.58	0.61	0.68	0.68	0.55	0.58	0.61
Others	0.05	0.08	0.11	0.09	0.10	0.11	0.11	0.11	0.10	0.11	0.11
Total OECD	19.97	19.83	19.43	19.52	19.73	19.75	19.35	19.11	19.81	19.55	19.81
NON-OECD											
Former USSR	12.24	12.71	13.18	12.67	12.80	12.89	13.05	13.25	12.82	12.77	12.83
Russia	9.84	10.07	10.23	10.09	10.10	10.04	10.16	10.30	10.14	10.05	10.10
Others	2.40	2.64	2.96	2.57	2.71	2.86	2.89	2.95	2.68	2.72	2.73
Asia	6.39	6.44	6.67	6.34	6.51	6.61	6.64	6.68	6.44	6.46	6.61
China	3.67	3.75	3.87	3.71	3.78	3.87	3.86	3.86	3.73	3.73	3.87
Malaysia	0.75	0.75	0.81	0.76	0.79	0.79	0.81	0.82	0.79	0.78	0.79
India	0.79	0.81	0.81	0.81	0.82	0.82	0.81	0.81	0.82	0.82	0.82
Others	1.17	1.11	1.18	1.07	1.12	1.13	1.15	1.18	1.11	1.13	1.13
Europe	0.15	0.13	0.12	0.13	0.13	0.13	0.12	0.12	0.13	0.13	0.13
Latin America	4.39	4.34	4.23	4.39	4.23	4.14	4.23	4.28	4.33	4.39	3.97
Brazil	2.10	2.15	2.50	2.15	2.15	2.40	2.50	2.55	2.08	2.15	2.23
Argentina	0.77	0.77	0.75	0.76	0.76	0.76	0.75	0.75	0.76	0.76	0.76
Colombia	0.53	0.53	0.55	0.53	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Ecuador[6]	0.54	0.50		0.50	0.50				0.50	0.49	
Others	0.45	0.39	0.43	0.44	0.27	0.43	0.43	0.43	0.44	0.44	0.43
Middle East[3]	1.74	1.64	1.56	1.63	1.60	1.58	1.57	1.56	1.61	1.60	1.59
Oman	0.75	0.71	0.69	0.71	0.70	0.70	0.69	0.69	0.70	0.70	0.70
Syria	0.42	0.39	0.37	0.39	0.38	0.38	0.37	0.36	0.39	0.38	0.38
Yemen	0.38	0.34	0.31	0.33	0.32	0.32	0.32	0.32	0.33	0.32	0.32
Africa	3.91	2.55	2.69	2.52	2.58	2.66	2.69	2.71	2.54	2.60	2.60
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.63	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.24	0.23	0.23	0.24	0.24	0.24	0.23	0.23	0.23
Others	1.63	1.68	1.83	1.65	1.72	1.79	1.83	1.85	1.67	1.74	1.74
Total Non-OECD	28.81	27.81	28.46	27.67	27.85	28.00	28.31	28.59	27.87	27.95	27.73
Processing Gains[4]	2.04	2.07	2.13	2.10	2.11	2.11	2.10	2.14	2.11	2.11	2.11
Other Biofuels[5]	0.26	0.40	0.65	0.40	0.46	0.55	0.66	0.66	0.46	0.46	0.46
TOTAL NON-OPEC	51.09	50.12	50.68	49.69	50.14	50.42	50.42	50.50	50.24	50.06	50.11
Non-OPEC excl. Angola & Ecuador[6]	49.14	49.66	50.68	49.19	49.81	50.42	50.42	50.50	49.74	49.57	50.11
TOTAL SUPPLY	85.41	85.54		85.10	86.52				86.51	86.08	86.95

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jul2007	Aug2007	Sep2007	Oct2007	Nov2007*	Nov2004	Nov2005	Nov2006	4Q2006	1Q2007	2Q2007	3Q2007
North America												
Crude	473.9	454.6	456.2	452.4	437.9	410.6	457.4	466.2	-0.23	0.28	0.31	-0.38
Motor Gasoline	233.7	222.8	227.6	225.7	233.1	241.0	234.0	232.0	-0.05	-0.14	0.04	-0.07
Middle Distillate	204.1	206.7	206.3	206.4	202.0	195.2	210.7	210.5	-0.08	-0.29	0.05	0.12
Residual Fuel Oil	48.6	45.8	44.5	47.4	46.8	50.1	47.2	51.8	-0.03	-0.03	-0.03	0.00
Total Products[3]	675.4	667.9	669.5	664.1	658.8	656.6	676.1	686.1	-0.36	-0.71	0.28	0.15
Total[4]	1303.1	1282.4	1290.4	1280.3	1261.0	1217.4	1293.0	1305.8	-0.82	-0.48	0.67	-0.04
Europe												
Crude	340.3	326.8	322.9	323.1	327.2	348.8	326.7	335.7	0.14	-0.18	0.10	-0.13
Motor Gasoline	103.0	102.9	104.3	102.4	102.3	111.0	109.2	108.8	0.11	-0.04	-0.08	0.02
Middle Distillate	263.0	267.2	265.0	245.8	237.3	239.5	258.2	261.8	0.05	-0.08	0.03	-0.07
Residual Fuel Oil	70.3	72.7	76.0	72.7	73.3	72.9	77.2	75.0	0.02	-0.01	-0.02	0.06
Total Products[3]	537.7	547.8	551.4	525.5	517.5	527.5	545.5	551.0	0.11	-0.13	-0.10	0.08
Total[4]	952.1	950.5	948.6	924.3	919.5	948.8	947.2	959.0	0.19	-0.25	0.02	-0.07
Pacific												
Crude	175.8	168.4	161.0	172.0	164.5	192.3	166.2	184.4	-0.02	-0.01	-0.02	-0.10
Motor Gasoline	22.8	22.8	21.6	23.5	23.8	24.8	24.3	23.2	-0.01	0.03	0.00	-0.03
Middle Distillate	75.4	81.3	77.5	72.6	71.7	82.9	79.1	82.5	-0.14	-0.14	0.08	0.10
Residual Fuel Oil	24.4	24.3	25.6	21.8	19.7	23.7	23.2	21.9	-0.01	-0.01	0.00	0.04
Total Products[3]	191.7	197.4	195.7	187.4	179.8	200.9	191.6	199.1	-0.30	-0.14	0.12	0.15
Total[4]	440.4	439.9	429.0	430.4	416.5	467.6	432.1	456.0	-0.33	-0.13	0.10	0.03
Total OECD												
Crude	989.9	949.8	940.1	947.5	929.6	951.7	950.3	986.2	-0.11	0.09	0.39	-0.62
Motor Gasoline	359.5	348.5	353.5	351.5	359.1	376.8	367.5	364.0	0.04	-0.15	-0.04	-0.08
Middle Distillate	542.5	555.1	548.8	524.8	511.0	517.6	547.9	554.8	-0.17	-0.52	0.16	0.15
Residual Fuel Oil	143.3	142.8	146.1	141.9	139.8	146.7	147.6	148.7	-0.02	-0.05	-0.05	0.10
Total Products[3]	1404.8	1413.2	1416.7	1377.1	1356.1	1384.9	1413.3	1436.2	-0.54	-0.97	0.30	0.37
Total[4]	2695.5	2672.8	2668.0	2635.0	2596.9	2633.7	2672.2	2720.8	-0.96	-0.86	0.79	-0.08

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jul2007	Aug2007	Sep2007	Oct2007	Nov2007*	Nov2004	Nov2005	Nov2006	4Q2006	1Q2007	2Q2007	3Q2007
North America												
Crude	690.3	690.4	692.8	694.1	695.5	672.8	685.6	688.6	0.01	0.00	0.02	0.03
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	177.0	176.7	177.4	180.6	180.6	164.1	167.1	174.9	-0.01	-0.01	0.01	0.02
Products	247.5	248.0	246.5	240.2	240.2	204.7	236.9	233.3	0.00	0.05	-0.01	0.08
Pacific												
Crude	385.0	385.0	385.1	385.0	385.0	382.5	380.5	381.6	0.03	0.01	0.00	0.00
Products	16.8	17.6	17.9	18.4	18.4	11.0	11.3	11.8	0.00	0.05	0.00	0.02
Total OECD												
Crude	1252.2	1252.1	1255.2	1259.7	1261.1	1219.3	1233.3	1245.1	0.04	0.00	0.03	0.05
Products	266.3	267.6	266.3	260.6	260.6	217.8	250.2	247.1	0.00	0.10	-0.01	0.10
Total[4]	1519.5	1520.7	1522.5	1521.3	1522.7	1438.1	1484.5	1493.2	0.04	0.10	0.02	0.15

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End September 2006		End December 2006		End March 2007		End June 2007		End September 2007 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	185.0	82	180.1	77	182.5	80	189.7	79	198.7	-
Mexico	47.0	24	42.3	21	40.5	20	43.8	22	43.5	-
United States[4]	1787.0	86	1721.5	83	1678.8	81	1731.0	84	1720.9	-
Total[4]	2041.1	80	1966.0	77	1923.9	76	1986.6	78	1985.2	77
Pacific										
Australia	35.3	37	34.8	37	34.3	37	38.9	42	36.8	-
Japan	649.1	123	630.8	117	619.9	134	622.4	133	629.6	-
Korea	160.5	69	151.8	65	156.1	74	158.3	77	157.4	-
New Zealand	7.0	46	7.1	46	7.7	49	7.7	50	8.1	-
Total	851.9	98	824.6	93	818.0	105	827.3	106	831.9	94
Europe[5]										
Austria	19.0	64	21.9	76	23.8	78	21.5	68	22.0	-
Belgium	30.5	53	30.2	48	28.2	51	28.7	51	28.2	-
Czech Republic	19.3	93	19.7	101	20.2	92	20.5	95	19.5	-
Denmark	21.2	113	18.5	97	18.3	96	17.1	89	18.9	-
Finland	26.8	116	26.6	113	29.5	138	26.3	114	29.7	-
France	187.5	96	192.4	98	177.0	96	185.7	96	186.7	-
Germany	281.9	104	282.8	117	290.5	120	285.6	110	278.2	-
Greece	36.7	76	36.8	79	33.6	85	35.6	85	34.8	-
Hungary	17.5	98	16.6	108	18.1	107	16.0	94	17.1	-
Ireland	13.9	70	12.5	62	12.9	69	11.1	56	12.6	-
Italy	134.1	78	133.1	79	133.9	80	133.0	82	134.2	-
Luxembourg	0.9	15	1.0	16	0.9	15	0.9	15	0.9	-
Netherlands	121.1	119	118.6	138	117.7	137	120.6	133	118.7	-
Norway	29.4	127	35.1	156	20.2	78	23.5	91	24.2	-
Poland	37.3	70	41.5	89	43.9	90	50.0	90	50.9	-
Portugal	23.8	83	24.0	77	23.7	78	24.7	80	23.2	-
Slovak Republic	7.4	95	7.5	101	7.0	83	6.9	79	7.7	-
Spain	133.9	84	134.8	83	129.3	81	130.5	82	136.7	-
Sweden	38.6	104	33.8	94	35.6	99	32.1	90	31.5	-
Switzerland	38.9	135	38.1	150	38.7	173	38.5	157	38.1	-
Turkey	52.2	73	52.8	85	59.2	89	60.5	80	61.1	-
United Kingdom	97.4	54	108.5	60	105.8	59	100.8	58	98.5	-
Total	1369.2	87	1386.8	92	1368.2	92	1370.0	89	1373.4	87
Total OECD	4262.2	86	4177.3	84	4110.0	86	4183.9	86	4190.5	83
DAYS OF IEA Net Imports[6]	-	118	-	121	-	121	-	121	-	122

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End September 2007 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
3Q2004	4016	1435	2581	80	28	51
4Q2004	3998	1450	2547	79	29	50
1Q2005	4005	1462	2543	82	30	52
2Q2005	4117	1494	2623	84	30	53
3Q2005	4132	1494	2638	83	30	53
4Q2005	4083	1487	2597	81	29	52
1Q2006	4084	1487	2597	85	31	54
2Q2006	4151	1493	2658	85	30	54
3Q2006	4262	1495	2767	86	30	56
4Q2006	4177	1499	2679	84	30	54
1Q2007	4110	1507	2603	86	31	54
2Q2007	4184	1509	2675	86	31	55
3Q2007	4190	1523	2668	83	30	53

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 3Q2007 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2004	2005	2006	4Q06	1Q07	2Q07	3Q07	Aug 07	Sep 07	Oct 07	Year Earlier Oct 06	Year Earlier change
Saudi Light & Extra Light												
North America	0.55	0.46	0.60	0.60	0.68	0.73	0.71	0.66	0.78	0.50	0.56	-0.06
Europe	1.03	0.90	0.78	0.78	0.72	0.64	0.74	0.79	0.73	0.66	0.87	-0.21
Pacific	1.24	1.31	1.32	1.28	1.17	1.20	1.15	1.09	1.11	1.11	1.30	-0.19
Saudi Medium												
North America	0.80	0.81	0.64	0.61	0.47	0.59	0.59	0.65	0.56	0.57	0.55	0.02
Europe	0.11	0.16	0.14	0.10	0.05	0.10	0.02	0.01	0.04	0.06	0.14	-0.07
Pacific	0.23	0.26	0.35	0.32	0.34	0.31	0.31	0.33	0.39	0.33	0.33	0.00
Saudi Heavy												
North America	0.22	0.17	0.21	0.19	0.15	0.05	0.11	0.04	0.27	0.04	0.20	-0.17
Europe	0.23	0.23	0.18	0.14	0.09	0.16	0.11	0.13	0.04	0.11	0.19	-0.08
Pacific	0.15	0.25	0.23	0.23	0.20	0.18	0.20	0.17	0.23	0.25	0.25	-0.01
Iraqi Basrah Light[2]												
North America	0.71	0.60	0.52	0.46	0.51	0.39	0.64	0.61	0.76	0.37	0.47	-0.10
Europe	0.21	0.23	0.32	0.36	0.29	0.28	0.38	0.28	0.42	0.27	0.38	-0.12
Pacific	0.12	0.06	0.08	0.07	0.11	0.18	0.20	0.27	0.24	0.21	0.06	0.14
Iraqi Kirkuk												
North America	0.02	-	0.00	-	-	-	-	-	-	-	-	-
Europe	0.08	0.05	0.01	0.01	0.04	-	0.06	0.05	0.10	0.22	0.02	0.20
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.24	0.20	0.26	0.27	0.31	0.31	0.27	0.28	0.24	0.26	0.29	-0.03
Pacific	0.16	0.15	0.13	0.11	0.12	0.06	0.07	0.12	0.04	0.10	0.08	0.03
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.57	0.63	0.58	0.60	0.55	0.62	0.60	0.67	0.57	0.50	0.51	-0.01
Pacific	0.65	0.62	0.56	0.61	0.66	0.63	0.56	0.65	0.39	0.62	0.58	0.04
Venezuelan Light & Medium												
North America	0.67	0.82	0.66	0.57	0.68	0.71	0.74	0.64	0.80	0.78	0.69	0.09
Europe	0.01	0.04	0.11	0.11	0.09	0.07	0.09	0.05	0.06	0.02	0.07	-0.05
Pacific	-	-	-	-	-	-	-	-	-	0.07	-	-
Venezuelan 22 API and heavier												
North America	0.88	0.72	0.72	0.72	0.55	0.70	0.75	0.80	0.66	0.67	0.65	0.02
Europe	0.05	0.06	0.06	0.05	0.06	0.09	0.06	0.06	0.06	0.08	0.05	0.03
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.36	1.27	1.24	1.15	1.19	1.19	1.25	1.20	1.18	1.07	1.24	-0.16
Europe	0.16	0.17	0.16	0.15	0.14	0.11	0.18	0.12	0.22	0.17	0.20	-0.03
Pacific	0.00	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	-	0.03	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	-0.01
Europe	0.01	0.03	0.01	0.01	0.01	0.06	-	-	-	-	0.03	-
Pacific	0.00	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.12	0.13	0.09	0.05	0.11	0.12	0.01	-	-	-	0.02	-
Europe	1.86	1.77	1.68	1.54	1.85	1.97	1.90	1.81	1.81	1.71	1.40	0.31
Pacific	0.01	0.00	0.00	-	0.00	-	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.80	0.90	0.79	0.72	0.95	0.77	0.87	0.85	1.02	0.86	0.78	0.08
Europe	0.28	0.35	0.33	0.37	0.23	0.27	0.22	0.25	0.19	0.23	0.38	-0.15
Pacific	0.11	0.05	0.04	0.03	0.02	0.02	-	-	-	-	0.03	-
Nigerian Medium												
North America	0.23	0.17	0.17	0.17	0.24	0.15	0.22	0.25	0.26	0.29	0.19	0.10
Europe	0.04	0.07	0.10	0.14	0.06	0.02	0.08	0.05	0.03	0.08	0.08	0.00
Pacific	0.01	0.01	0.00	-	0.02	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2004	2005	2006	4Q2006	1Q2007	2Q2007	3Q2007	Aug-07	Sep-07	Oct-07	Year Earlier Oct-06	Year Earlier % change
Crude Oil												
North America	8431	8457	8156	7937	8038	8151	8268	8317	8471	7967	7665	4%
Europe	9478	9792	9771	9770	9344	9760	10065	10403	10151	9387	9822	-4%
Pacific	6659	6801	6813	6674	6953	6340	6576	6699	6205	6780	6207	9%
Total OECD	24569	25050	24740	24381	24335	24251	24909	25419	24827	24134	24232	0%
LPG												
North America	24	18	14	28	16	14	38	42	56	35	14	154%
Europe	225	248	265	274	287	283	241	221	238	305	240	27%
Pacific	541	527	579	497	565	588	502	554	450	576	492	17%
Total OECD	790	793	858	799	867	885	782	817	744	916	746	23%
Naphtha												
North America	99	115	62	96	33	31	33	20	25	87	114	-24%
Europe	282	273	312	314	271	222	280	284	289	308	318	-3%
Pacific	769	746	754	783	838	812	768	762	867	787	738	7%
Total OECD	1150	1133	1128	1193	1141	1066	1081	1066	1181	1182	1170	1%
Gasoline[3]												
North America	794	1034	1141	944	916	1362	1225	1213	1186	1187	945	26%
Europe	137	165	154	153	261	219	130	127	76	112	136	-18%
Pacific	105	102	97	96	76	83	56	75	45	84	96	-12%
Total OECD	1035	1301	1392	1192	1253	1663	1410	1415	1306	1382	1177	17%
Jet & Kerosene												
North America	101	173	152	130	179	204	205	194	190	171	142	21%
Europe	293	375	375	407	329	349	387	412	375	448	430	4%
Pacific	77	66	71	76	49	35	37	38	43	40	66	-40%
Total OECD	471	614	598	612	557	588	629	644	608	659	638	3%
Gasoil/Diesel												
North America	123	143	172	116	130	142	141	173	68	117	140	-17%
Europe	751	845	971	944	905	635	739	711	781	743	1000	-26%
Pacific	74	79	81	81	83	97	90	99	89	117	69	70%
Total OECD	947	1067	1224	1141	1119	873	971	984	938	977	1209	-19%
Heavy Fuel Oil												
North America	453	527	340	254	362	323	286	257	270	272	273	0%
Europe	397	491	476	494	458	420	474	526	512	412	512	-19%
Pacific	76	85	92	65	79	97	92	120	70	128	65	98%
Total OECD	926	1102	908	813	898	840	852	902	852	812	850	-4%
Other Products												
North America	872	1024	1107	991	1035	1209	1032	1021	942	913	1039	-12%
Europe	676	781	920	939	863	858	937	1051	885	842	929	-9%
Pacific	256	248	243	267	256	207	262	234	289	245	272	-10%
Total OECD	1805	2052	2270	2197	2154	2274	2231	2306	2116	2001	2239	-11%
Total Products												
North America	2466	3034	2988	2559	2670	3285	2961	2921	2736	2782	2667	4%
Europe	2759	3177	3473	3525	3373	2987	3188	3332	3155	3169	3563	-11%
Pacific	1898	1852	1918	1865	1947	1918	1808	1882	1853	1977	1798	10%
Total OECD	7123	8063	8379	7949	7990	8190	7957	8134	7744	7928	8029	-1%
Total Oil												
North America	10897	11490	11144	10496	10708	11436	11229	11238	11207	10749	10871	-1%
Europe	12237	12969	13243	13295	12717	12747	13253	13735	13306	12556	13385	-6%
Pacific	8558	8654	8731	8539	8900	8258	8384	8581	8058	8757	8005	9%
Total OECD	31692	33113	33118	32330	32325	32441	32866	33554	32571	32062	32261	-1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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User's Guide and Glossary to the IEA *Oil Market Report*

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INTERNATIONAL ENERGY AGENCY/AGENCE INTERNATIONALE DE L'ENERGIE

OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

www.oilmarketreport.org

INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

13 February 2008

HIGHLIGHTS

- **Crude oil prices** are little changed from mid-January at just over $90/bbl. Weaker projections for global economic growth are offset by low stocks, forecast cold weather in the US and parts of Asia, supply disruptions (Nigeria/North Sea) and concern about Venezuelan supplies. Products have underperformed crude, leading to weak refining margins.
- **Global oil product demand** has been revised down by roughly 200 kb/d to 87.6 mb/d in 2008, following weaker GDP growth figures in an interim report by the IMF. Weaker OECD growth, however, stands against still-robust projections for GDP growth in China and the Middle East, the key oil demand growth centres.
- **January world oil supply** rose 745 kb/d to 87.2 mb/d on new output from Brazil, and recovering non-OPEC output elsewhere. However, a reassessment of 2008 prospects lowers OPEC gas liquids growth by 250 kb/d to 365 kb/d. Rising FSU, Asia-Pacific, Brazil and biofuels supplies generate 2008 non-OPEC growth of 0.97 mb/d.
- **January OPEC crude supply** remained close to 32.0 mb/d, on higher output from Angola, UAE, Saudi Arabia and Kuwait, offset by lower Iraq, Nigeria and Qatar volumes. Effective spare capacity increased to 2.4 mb/d in January but revisions to both supply and demand lift the 2008 call on OPEC crude and stock change by 0.1 mb/d.
- **Economic refinery run cuts** in January and February were the most extensive for five years. Coupled with seasonal maintenance, February global refinery crude throughput should average 74.0 mb/d, down by 0.6 mb/d from January. However, higher runs in China, Other Asia and Russia underpin year-on-year throughput growth of 0.9 mb/d in 1Q08.
- **OECD industry stocks** fell by 39.5 mb in December, driven by constrained crude supplies and peak seasonal refinery runs. The 4Q07 stock draw of 1.15 mb/d was substantially higher than the 750 kb/d 10-year average and reduces OECD industry stock forward cover to 50.7 days - its lowest since December 2004. Preliminary data for the US, Japan, the EU-15 and Norway indicate a 22.1 mb stock build in January.

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A PERIOD OF ADJUSTMENT

Changes are taking place in the oil market - not just to demand, but also to the supply-side and the refining industry. The economic environment is clearly paramount: just as the demand shock of 2004 shaped the oil market for the next three years, so too could the pending slowdown. We have made further adjustments to demand growth projections in this report, reflecting the changes for key countries published in the latest IMF forecasts. As a result, global oil demand in this report has been revised down by about 200 kb/d in 2008, leaving global oil demand ***growth*** - which was projected at 2.2% last July - at 1.9%. Considering that a proportion of that demand growth represents a weather-related rebound in the OECD, the underlying trend is even weaker.

Lower demand growth affects other sectors of the oil market - particularly the refining sector. In the July 2007 *Medium-Term Oil Market Report (MTOMR)*, one major shift was an improvement in gasoline supply potential in the Atlantic Basin. Globally there have been minor downward revisions to transportation fuel demand projections since the *MTOMR* release, but the changes have been more significant in the Atlantic basin (compounded by faster-than expected ethanol supply growth) – hence the currently weak gasoline cracks. Low margins are forcing US refiners to cut runs despite pending seasonal maintenance, filling the gap with European imports. Ample European gasoline supplies (as drivers switch to diesel cars) are also highlighted by an exceptionally high price differential between Europe and Singapore. However, that does not mean we have avoided the usual summer supply tightness – that will depend on the level of refinery runs over the coming months (which are in turn subject to crude availability and price) and the seasonal difficulty of blending in ethanol to meet summer volatility requirements.

Upstream, new capacity additions over the next two years should lift spare capacity, but this will only provide comfort if the market feels it will be available when needed. Geopolitics will also play a role. It is still not clear whether Iraq can sustain its recent strong performance; hopes of a rapid return of Nigerian capacity have been set back by recent disruptions, and Venezuela and Iran are back in the headlines. The tight non-OECD supply-side environment and the impact of service-sector cost inflation has been highlighted in recent quarterly results, with corporate analysts suggesting companies are preparing for a sustained $60-$80/bbl oil world.

The power sector is also creating upward price pressures. In the Atlantic basin, generators use fuel oil as the feed of last resort, leaving the surplus to be shipped to Asia to compete against LNG and coal in the power market. Fuel oil prices look expensive when compared with Henry Hub natural gas prices, but when compared with recent spot LNG deals in Asia, they have been far more competitive. Coal prices have also soared dramatically, driven by strong global demand, particularly from China – which has had to withdraw from the coal export market for the next two months. While weak fuel oil cracks suggest that the coal market is acting independently of oil and gas, undoubtedly the strong demand for coal-generated power stems partly from high oil and gas prices over the past few years (also a desire for energy independence). For oil, the strength of coal and LNG prices certainly serves to provide a price floor.

The demand shock of 2004 was largely responsible for shaping the oil market we have today, but equally importantly, it was followed by three more years of strong growth. In a similar vein, an economic slowdown has the potential to change the landscape over the next few years: depending on how deep it is and how long it lasts. Volatility, particularly in refining margins, will be a natural consequence, but it would be a mistake to see this as a one-way influence on oil prices. As the last three years have shown, the markets are looking to sustainability for the future as well as the present. Although stocks have recovered slightly in January, they remain low, as does spare capacity. Given the rapid upside recovery of prices following a resurgence of geopolitical issues in Nigeria, Venezuela, Iraq and Iran there is clearly, despite demand side risks, the need to rebuild stocks.

DEMAND

Summary

- **Global oil product demand** has been revised down by roughly 200 kb/d to 87.6 mb/d in 2008 (+1.9% or +1.7 mb/d). This change results from minor downward adjustments to 3Q07 and 4Q07 in the OECD, which have been carried through to 2008, and most importantly, from a lower prognosis of US economic growth by the IMF, which nonetheless continues to see strong GDP growth in both the Middle East and China. In 2007, by contrast, global demand has been adjusted up by roughly 110 kb/d to 86.0 mb/d in 2007 (+1.4% or +1.1 mb/d over 2006), because of baseline revisions to several non-OECD countries in Asia and Latin America.

- **OECD oil product demand** has been marginally lowered in 2008 by almost 300 kb/d to 49.5 mb/d (+0.6%), given data revisions and downward adjustments to GDP predictions in several key countries by the IMF, notably the US. Approximately half of OECD oil demand growth in 2008 is expected to come from heating use; transportation fuel growth, by contrast, is seen dropping compared with previous years because of weaker economic activity and higher oil prices. In 2007, our demand estimate has been adjusted down (-50 kb/d) to 49.2 mb/d (-0.3% year-on-year), compared with last month's report, given revisions to 3Q07 data and lower-than-expected 4Q07 figures.

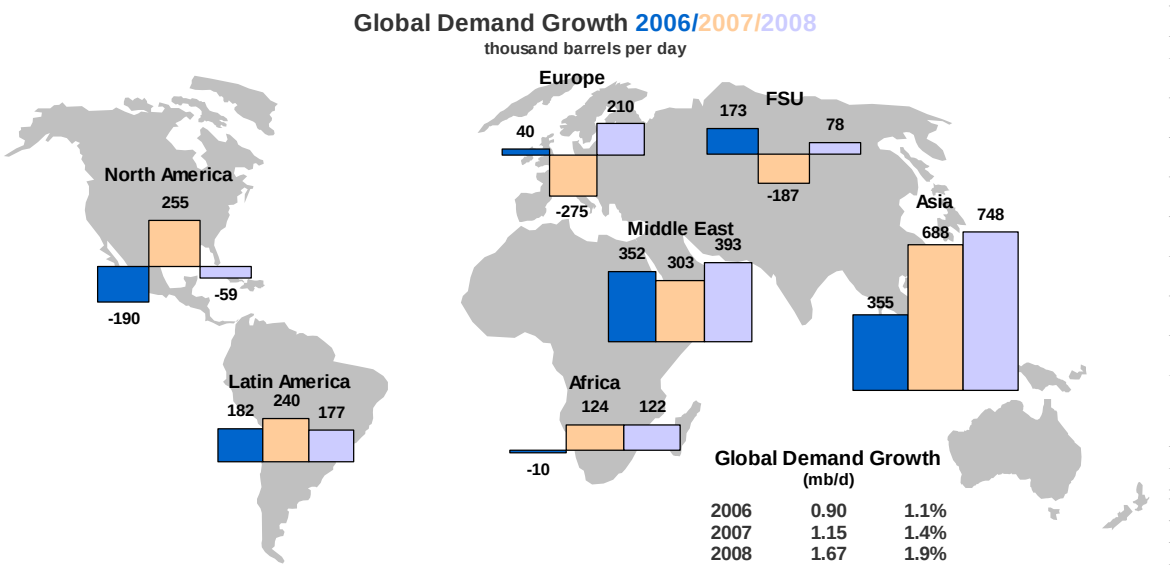
Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Americas	30.4	30.4	30.9	30.8	30.6	31.0	31.0	31.2	31.3	31.1	31.2	31.1	31.3	31.3	31.2
Asia/Pacific	25.1	24.1	23.7	24.8	24.4	25.3	24.8	24.4	25.8	25.1	26.3	25.5	25.1	26.5	25.8
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.5	16.1	16.5	15.9	16.3	16.6	16.3
FSU	4.1	3.9	4.1	4.5	4.1	4.0	3.7	4.0	4.0	3.9	4.0	3.8	4.1	4.1	4.0
Middle East	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.9	6.6	6.6	6.9	7.0	7.3	7.0	7.0
World	**85.5**	**83.5**	**84.5**	**85.7**	**84.8**	**86.0**	**85.0**	**85.6**	**87.2**	**86.0**	**88.0**	**86.6**	**87.2**	**88.7**	**87.6**
Annual Chg (%)	0.6	1.0	1.2	1.5	1.1	0.5	1.8	1.3	1.7	1.4	2.4	1.8	1.9	1.7	1.9
Annual Chg (mb/d)	0.5	0.8	1.0	1.2	0.9	0.5	1.5	1.1	1.5	1.1	2.1	1.6	1.6	1.4	1.7
Changes from last month's report (mb/d)	0.00	0.00	0.00	0.03	0.01	0.09	0.15	0.21	0.00	0.11	-0.17	-0.15	-0.09	-0.37	-0.20

- **Non-OECD oil product demand** has been revised up by about 160 kb/d in 2007 and 90 kb/d in 2008. The changes were related to the baseline reappraisal of Chinese Taipei and Brazil, where data submissions have been somewhat erratic over the past few months. Only part of the Asian revisions were carried through to 2008, given concerns that the region could be hurt by the US economic slowdown. In China, by contrast, demand remains largely unchanged but could be revised up given uncertainties regarding coal-fired power generation. Overall, non-OECD demand is expected to average 36.8 mb/d in 2007 (+3.7% on an annual basis) and 38.2 mb/d in 2008 (+3.8%).

- **China's power crisis** has once again highlighted the economic and social disruptions of capped end-user prices. Attempting to contain inflation, the government effectively promotes robust energy demand growth, which eventually led to shortages and further price controls (since energy shortages tend to feed inflationary pressures elsewhere in the economy). Although the magnitude of the power shortages has encouraged the use of diesel- and fuel oil-fired electricity generators, this is likely to be temporary. As opposed to what happened in 2004, the country's generation capacity itself is adequate, with the main problem at this point being logistical and likely to be solved once the weather improves. Moreover, despite price controls, diesel-powered generation is now almost twice as expensive as coal. Nevertheless, the power grid may again be tested this summer, particularly if it turns out to be exceptionally warm and if coal stocks prove to be insufficient, which could entail an eventual resumption of oil-fired electricity generation.



OECD

According to preliminary data, total OECD inland deliveries in December (oil products supplied by refineries, pipelines and terminals) rose by 0.6% year-on-year. The relative strength of oil product demand in North America (+1.8% on a yearly basis) and Europe (+0.6%) largely offset demand weakness in the Pacific (-2.5%). Transportation fuel deliveries, notably of diesel, contributed to support oil product demand in OECD **North America** (including US Territories). OECD **Europe** demand growth was largely supported by a rebound of heating oil and residual fuel oil as a result of slightly colder-than-average temperatures. In OECD **Pacific**, meanwhile, demand contracted as mild weather conditions depressed jet fuel/kerosene deliveries, failing to offset strong residual fuel oil and direct crude consumption for power generation in Japan.

OECD Demand based on Adjusted Preliminary Submissions - December 2007

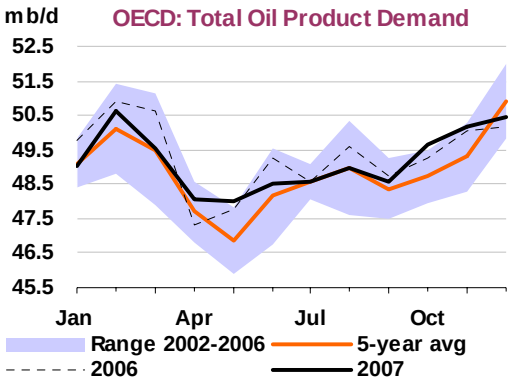
(million barrels per day)

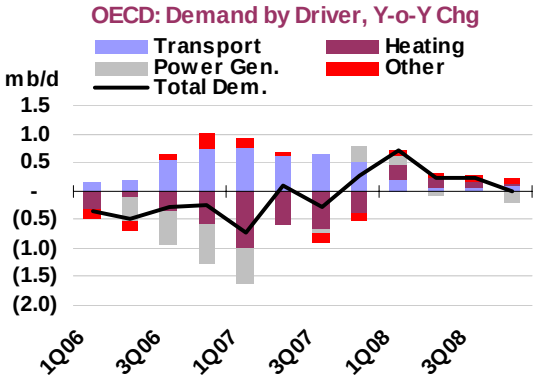
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.92**	**0.7**	**1.91**	**1.0**	**4.17**	**13.0**	**1.27**	**-17.9**	**1.35**	**14.0**	**6.25**	**-0.17**	**25.87**	**1.8**
US50	9.36	0.2	1.69	1.0	3.66	12.7	0.76	-25.2	0.90	22.9	4.78	0.1	21.16	1.8
Canada	0.71	2.0	0.11	0.4	0.18	7.3	0.37	5.2	0.15	9.4	0.80	-0.3	2.32	2.4
Mexico	0.79	5.5	0.07	1.8	0.27	4.3	0.12	4.3	0.23	-6.4	0.62	-2.1	2.10	1.5
OECD Europe	**2.37**	**-6.4**	**1.24**	**3.1**	**3.97**	**0.8**	**2.42**	**13.2**	**1.82**	**0.8**	**3.50**	**-3.3**	**15.31**	**0.6**
Germany	0.46	-16.8	0.17	2.4	0.62	0.2	0.49	14.7	0.16	-18.4	0.57	-4.4	2.47	-3.4
United Kingdom	0.42	-1.2	0.37	1.0	0.41	-1.6	0.14	13.9	0.09	7.7	0.35	-10.2	1.79	-1.3
France	0.20	-9.0	0.15	2.6	0.63	0.5	0.38	20.2	0.14	0.4	0.44	1.1	1.95	3.0
Italy	0.27	-7.9	0.08	7.4	0.51	-1.7	0.15	2.7	0.30	9.1	0.36	-5.8	1.67	-1.2
Spain	0.15	-4.0	0.11	4.0	0.50	2.9	0.28	6.2	0.22	8.9	0.37	7.0	1.63	4.5
OECD Pacific	**1.60**	**-5.1**	**1.22**	**-16.0**	**1.23**	**-3.6**	**0.60**	**-11.4**	**1.06**	**0.2**	**3.59**	**5.8**	**9.30**	**-2.5**
Japan	1.01	-8.8	0.88	-16.1	0.60	-8.3	0.44	-14.1	0.63	18.3	2.25	9.5	5.82	-1.7
Korea	0.17	-2.7	0.21	-23.9	0.30	-2.8	0.15	-3.4	0.40	-19.1	1.13	0.4	2.36	-6.9
Australia	0.36	4.6	0.10	2.6	0.29	6.7	0.00	18.6	0.02	-2.0	0.19	-2.2	0.96	3.5
OECD Total	**14.89**	**-1.1**	**4.37**	**-3.9**	**9.36**	**5.2**	**4.28**	**-1.6**	**4.23**	**4.5**	**13.33**	**0.5**	**50.48**	**0.6**

* Including US territories

OECD demand has been marginally revised down in 2007 (-50 kb/d) to 49.2 mb/d (-0.3% year-on-year), compared with last month's report, given revisions to 3Q07 data and lower-than-expected 4Q07 figures. In 2008, the forecast has been lowered by almost 300 kb/d to 49.5 mb/d (+0.6%). The changes are related to both data revisions and downward adjustments to GDP predictions in several key countries, following the release in early January of the IMF's *World Economic Outlook Interim Update*.

As illustrated in the chart below, in the OECD roughly half of the oil demand growth in 2008 is expected to come from heating use, even though 1Q08 temperatures are expected to be relatively mild once again – for the third year in a row (but nonetheless somewhat colder than 1Q07). By contrast, transportation fuel growth is seen dropping sharply as a result of weaker economic activity and higher oil prices.





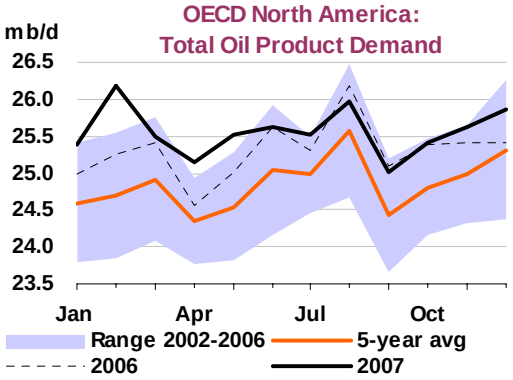
Total OECD Demand by Product
(million barrels per day)

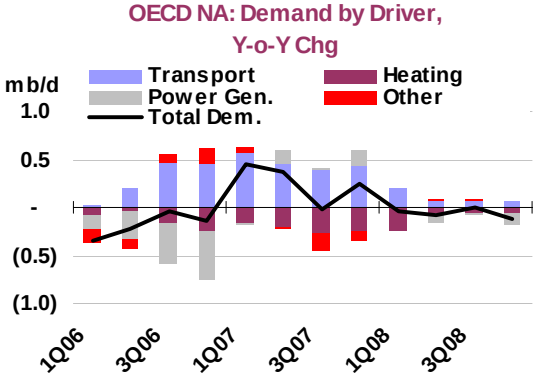
	2006	2007	4Q06	1Q07	2Q07	3Q07	Sep 07	Oct 07	Nov 07*	Latest month vs. Oct 07	Latest month vs. Nov 06
LPG & Ethane	4.77	4.81	4.83	5.25	4.65	4.43	4.37	4.61	4.92	0.31	0.10
Naphtha	3.17	3.21	3.37	3.38	3.06	3.15	3.12	3.12	3.28	0.17	-0.08
Motor Gasoline	14.86	14.92	14.92	14.45	15.07	15.29	14.87	14.89	14.78	-0.12	-0.06
Jet & Kerosene	4.16	4.11	4.24	4.35	3.90	3.95	3.88	4.13	4.20	0.07	0.02
Gas/Diesel Oil	13.25	13.20	13.61	13.51	12.61	12.89	13.29	13.92	13.82	-0.10	0.06
Residual Fuel Oil	4.04	3.96	3.88	4.19	3.87	3.77	3.78	3.82	4.00	0.18	0.10
Other Products	5.08	4.98	4.99	4.58	5.03	5.23	5.26	5.18	5.15	-0.03	-0.06
Total Products	**49.33**	**49.18**	**49.83**	**49.71**	**48.19**	**48.72**	**48.57**	**49.67**	**50.14**	**0.47**	**0.08**

* Latest official OECD submissions (MOS)

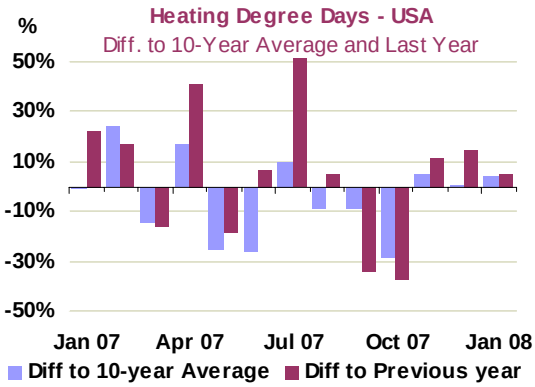
North America

Preliminary data indicate that oil product demand in North America (including US Territories) rose by 1.8% year-on-year in December, underpinned by stronger-than-expected diesel and residual fuel oil growth (+13.0% and +14.0% year-on-year, respectively). Diesel demand has been particularly resilient in all three North American countries, although in the case of the US this could be related to classification issues (as suggested by the very weak deliveries of 'other gasoil'). Relatively cold temperatures in the US and Canada, meanwhile, supported regional fuel oil deliveries. Following downward adjustments to US GDP growth in 2008 in the IMF's *World Economic Outlook Interim Update*, OECD North America demand has been revised down by roughly 180 kb/d compared with last month's report. It is expected to average 25.6 mb/d in 2007 (+1.0% on a yearly basis) and slightly decline to 25.5 mb/d in 2008 (-0.2%).

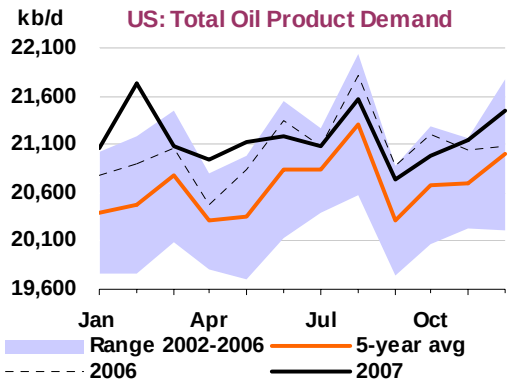


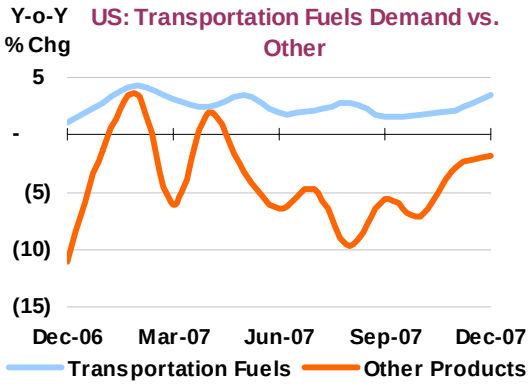


Inland deliveries in the continental **United States** – a proxy of oil product demand – rose by 1.8% year-on-year in December, according to adjusted preliminary data. The strength of demand growth was mostly due to higher-than-expected deliveries of distillates (diesel: +12.7% year-on-year) and residual fuel oil (+22.9%). As previously noted, the resilience of diesel demand is partly attributable to the change in sulphur specifications since mid-2006 (whereby some off-road, locomotive and marine gasoil is now counted as diesel). The gains in residual deliveries are related to a return to normal temperatures in December: the number of heating-degree days was identical to the 10-year average, but 15% higher than in the same month of the previous year.



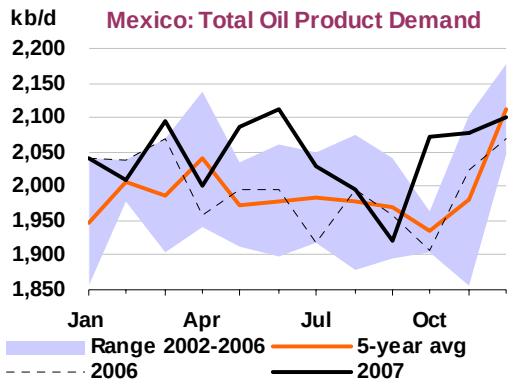
More surprisingly, given continuing high pump prices and increasing evidence of an economic slowdown, notably in 4Q07, gasoline deliveries managed to rise by 0.2% year-on-year in December. Some observers, such as the American Petroleum Institute (API), argue that such a slow pace suggests that US end-users, having concluded that high gasoline prices have become a permanent feature, are thus gradually adjusting their driving habits – by telecommuting, car pooling, using public transportation if available and even replacing their current cars with more efficient vehicles. This may indeed be the case for the marginal consumer, but it should be noted that gasoline demand grew by an estimated 0.8% in 2007, within the average of the previous two years, when prices were much lower and when economic growth was buoyant. However, even though US gasoline demand may be highly price inelastic in the short term, it is still responsive to economic dynamics in the medium term: higher unemployment would likely reduce driving (and congestion) and hence soften gasoline demand. On the basis of the IMF's new GDP forecast for 2008 (+1.5%, instead of 1.9%), we expect US gasoline demand to increase by only 0.2% this year.

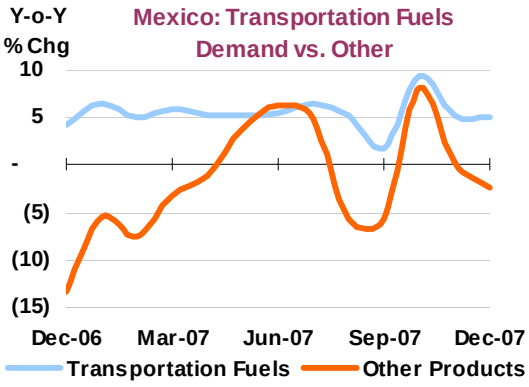




Overall, US50 total oil product demand in 2007 is virtually unchanged at 20.8 mb/d (+0.6% year-on-year) when compared with last month's report. However, given the IMF's downward adjustment of its 2008 GDP prognosis, demand is now seen averaging 20.7 mb/d in 2008 (170 kb/d lower than in the last report and representing a 0.5% contraction over 2007).

According to preliminary data, oil product demand in **Mexico** grew by 1.5% on a yearly basis in December. All product categories bar LPG and residual fuel posted positive growth rates. Transportation fuel growth continues unabated: gasoline deliveries expanded by 5.5% year-on-year, jet fuel/kerosene by 1.8% and diesel by 4.3%. So far, oil demand in Mexico is being supported by the country's domestic market, despite the slowing economy of its main export market, the US.





A new *Law for the Promotion and Development of Bioenergy* was passed by the Mexican Congress in late January, following President Calderón's veto of a first draft in late 2007. The new legislation seeks to promote feedstock production from domestic agricultural resources – and hopefully stem the flow of economic migrants to the United States. However, the law is also explicit regarding the need to ensure food security, since the country has already experienced rising – and socially disruptive – corn prices as a result of strong US ethanol demand. The Energy Ministry will eventually issue permits for the production, transportation and sale of biofuels, as well as regulations establishing fuel quality standards for gasoline and diesel blends containing biofuels.

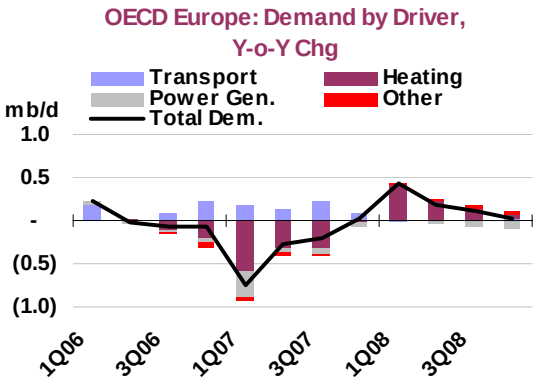
OECD North America Demand by Product
(million barrels per day)

	2006	2007	4Q06	1Q07	2Q07	3Q07	Sep 07	Oct 07	Nov 07*	Latest month vs. Oct 07	Latest month vs. Nov 06
LPG & Ethane	2.87	2.91	2.95	3.24	2.75	2.70	2.68	2.79	2.98	0.19	-0.01
Naphtha	0.44	0.43	0.50	0.42	0.45	0.43	0.44	0.45	0.43	-0.02	-0.09
Motor Gasoline	10.72	10.85	10.78	10.53	10.94	11.07	10.76	10.84	10.83	-0.01	0.09
Jet & Kerosene	1.91	1.90	1.88	1.88	1.89	1.91	1.79	1.91	1.90	-0.01	0.03
Gas/Diesel Oil	5.17	5.27	5.28	5.48	5.13	5.13	5.18	5.32	5.33	0.01	0.08
Residual Fuel Oil	1.20	1.27	1.09	1.38	1.26	1.18	1.15	1.12	1.27	0.15	0.25
Other Products	2.99	2.93	2.92	2.74	3.02	3.07	3.02	3.00	2.90	-0.10	-0.13
Total Products	**25.30**	**25.56**	**25.40**	**25.67**	**25.43**	**25.50**	**25.00**	**25.41**	**25.63**	**0.22**	**0.22**

* Latest official OECD submissions (MOS)

Europe

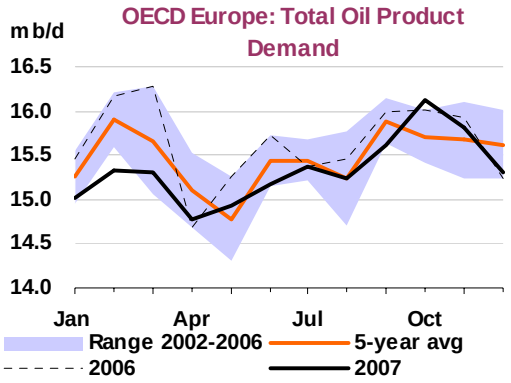
Demand in OECD Europe increased by 0.6% annually in December, as heating oil demand posted its first annual increase (+13.2%) since October 2006. Preliminary inland delivery data and JODI submissions were nevertheless weaker than anticipated, leading to a downward revision of 220 kb/d to our forecast. Deliveries in France and Italy were particularly weak, accounting for most of the changes. Demand in 4Q07 is now seen at 15.7 mb/d, 0.2% above 4Q06; for 2007 as a whole, demand in OECD Europe is estimated at 15.3 mb/d (-1.9%). In 2008, oil demand is seen rising by 1.2% to 15.5 mb/d, largely pulled up by heating needs.

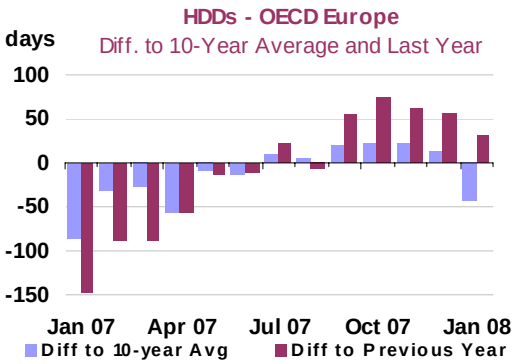


Final monthly oil statistics (MOS) for November were largely in line with expectations, as lower figures for the UK, Greece, the Netherlands and France were offset by higher estimates for Switzerland, Slovakia, Poland and Turkey. The structural weakness in motor gasoline and residual fuel oil, which declined annually by 5.4% and 6%, respectively, was offset by increasing LPG and ethane demand. While total

gasoil demand was unchanged from November 2006, lower heating oil deliveries (-6.4%) were offset by higher diesel demand (+3.5%).

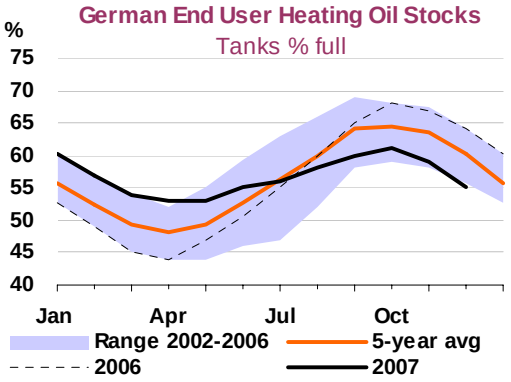
By contrast, preliminary inland delivery data for major consumer countries and JODI submissions for December were weaker than expected. Motor gasoline declined by a stronger-than-expected 6.4% year-on-year, while LPG, naphtha and other products also contracted by 2%, 5.1% and 2.7%, respectively. Heating oil deliveries were also weaker than expected in both France and Italy, but German deliveries were in line with expectations. More interestingly, heating oil deliveries posted a strong annual growth of 13.2% compared with a warm December 2006 – demand, however, is still below its five-year average.

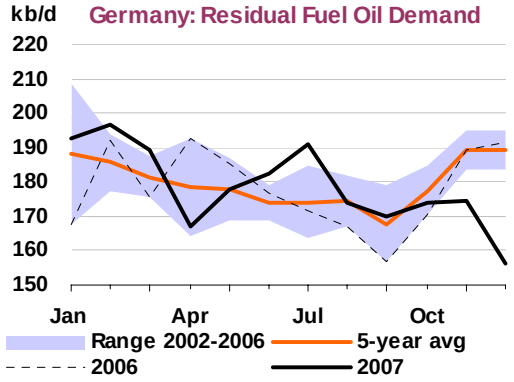




German heating oil demand – whose weakness largely explains the fall in European demand in 2007 – posted a year-on-year increase in December, for the first time since October 2006. After 13 consecutive months of contraction – in some months by more than 40% on a yearly basis – demand seems finally to be moving in line with expectations. As the large overhang in consumer stocks due to pre-tax buying and subsequent mild weather in 2006/2007 has now been largely eroded, consuming patterns will most likely be less influenced by end-user stock holding behaviour. However, as stocks are currently at the bottom of their historical range (and at their lowest seasonal level in 20 years, according to Reuters), consumers may rebuild inventories if they expect that prices will rise further – or if prices dip.

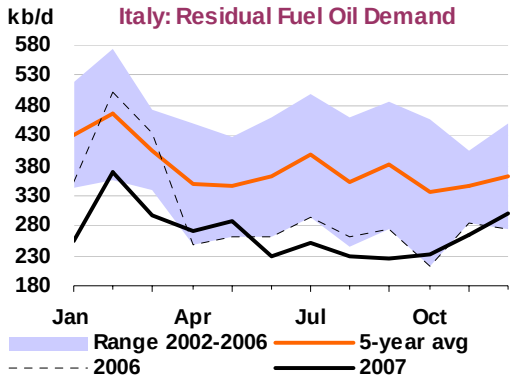
Meanwhile, motor gasoline and residual fuel oil deliveries were in line with expectations, contracting by 16.8% and 18.4%, respectively. Germany's residual fuel oil demand posted its lowest level since 2000, and is expected to have increased by only 0.5% in 2007. This declining trend, which is explained by the commissioning of new gas- and waste-fuelled power plants (some 2,400 MW of electricity generation capacity were added during 2007), is expected to continue in 2008 (-2.1%). Meanwhile, naphtha deliveries were weaker than anticipated, possibly due to maintenance in the petrochemical sector. Overall, total German demand contracted by 3.4% in December.

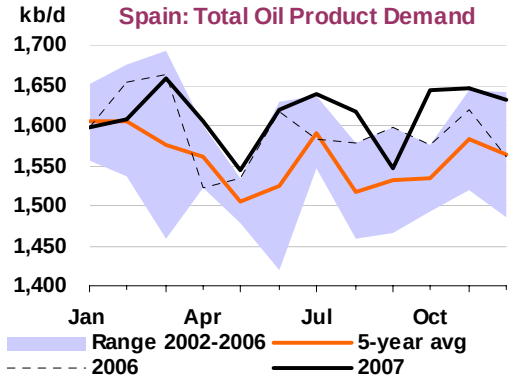




In **France**, preliminary inland delivery data were weaker than expected, with the exception of residual fuel oil. Fuel oil deliveries increased by as much as 72% year-on-year in December, due to stock building by large industrial users, rather than stronger demand. Indeed, JODI submissions (which measure real demand and upon which we based our December estimate) indicate that demand was relatively unchanged compared with last year. By contrast, according to final monthly statistics, residual fuel oil demand was particularly high in both October and November, given very low hydropower output in both months and reduced nuclear generation in November. Heating oil deliveries, meanwhile, were slightly weaker than expected in December, but nevertheless rose by 20% from the previous year as temperatures were somewhat colder than the 10-year average. Finally, despite having posted robust annual gains for most of 2007, diesel demand was relatively subdued in December, at 630 kb/d.

Italian deliveries were weaker than expected in December, leading to a downward revision of 94 kb/d. Naphtha and other products contracted by 11.6% and 13%, respectively, offsetting gains in LPG, jet fuel/kerosene, heating oil and residual fuel oil deliveries. Although diesel and heating oil deliveries were lower than expected, fuel oil demand was in line with our forecast, posting a 9.1% year-on-year increase (December 2006 had been exceptionally warm). Finally, the country's electricity demand increased by 1.2% due both to colder weather and to an extra working day compared with 2006.





Spain continues to show strong oil demand growth, as economic activity remains robust despite concerns about its housing sector. Oil demand in 4Q07 is seen growing by 3.5% annually, pulled up by strong gasoil and jet fuel/kerosene demand. **Turkey's** demand was again revised up following the submission of official data for November, as higher gasoil and kerosene demand added 45 kb/d to our forecast. Turkey's demand is now seen 1.4% higher in 2007 as a whole, as gasoil posted a 16.5% increase.

OECD Europe Demand by Product
(million barrels per day)

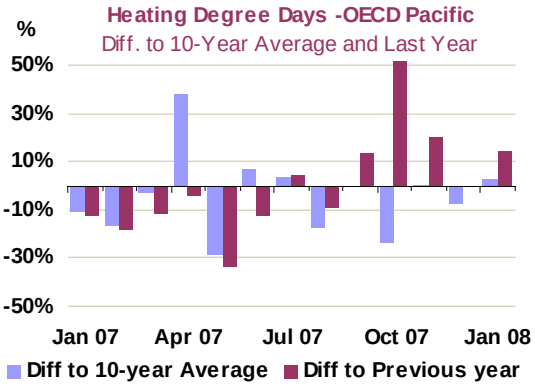
	2006	2007	4Q06	1Q07	2Q07	3Q07	Sep 07	Oct 07	Nov 07*	Latest month vs. Oct 07	Latest month vs. Nov 06
LPG & Ethane	0.99	0.97	0.95	1.04	0.99	0.88	0.90	0.93	1.01	0.08	0.11
Naphtha	1.12	1.12	1.14	1.22	1.05	1.08	1.08	1.14	1.14	0.00	0.01
Motor Gasoline	2.57	2.50	2.55	2.39	2.59	2.59	2.48	2.49	2.40	-0.09	-0.14
Jet & Kerosene	1.27	1.30	1.26	1.22	1.28	1.39	1.36	1.38	1.26	-0.12	0.00
Gas/Diesel Oil	6.25	6.15	6.44	6.18	5.74	6.08	6.37	6.76	6.59	-0.18	0.00
Residual Fuel Oil	1.86	1.75	1.81	1.83	1.71	1.68	1.71	1.74	1.76	0.02	-0.11
Other Products	1.57	1.55	1.57	1.35	1.60	1.69	1.71	1.68	1.65	-0.03	0.00
Total Products	**15.63**	**15.33**	**15.72**	**15.21**	**14.96**	**15.40**	**15.61**	**16.12**	**15.81**	**-0.31**	**-0.12**

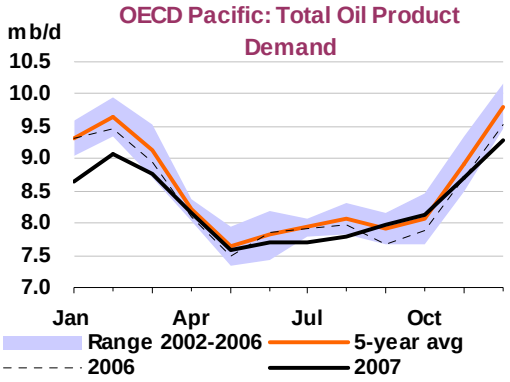
* Latest official OECD submissions (MOS)

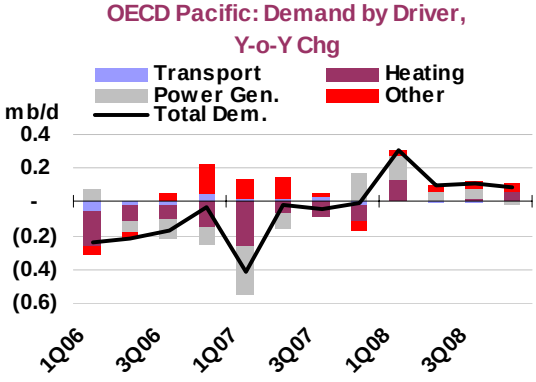
Pacific

According to December preliminary data, oil product demand in the Pacific fell by 2.5% year-on-year. Strong Japanese demand for fuel oil and direct crude for power generation failed to offset losses in all product categories. Indeed, Japan's demand – some two-thirds of the region's total – was weaker than

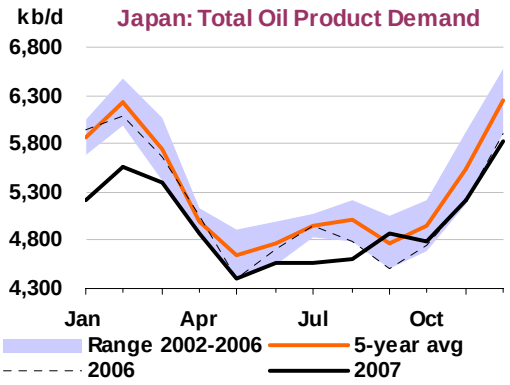
expected, as temperatures became much milder than in November – the number of heating-degree days in December was 7% lower than the 10-year average (and 1% lower than in the same month of the previous year). Moreover, the IMF's *World Economic Outlook Interim Update* has revised down its forecast of Japanese GDP growth in 2008. As such, the estimate of OECD Pacific oil demand in 2007 has been slightly adjusted, compared with last month's report, to 8.3 mb/d in 2007 (-1.4% on a yearly basis) and to 8.4 mb/d in 2008 (+1.9%).

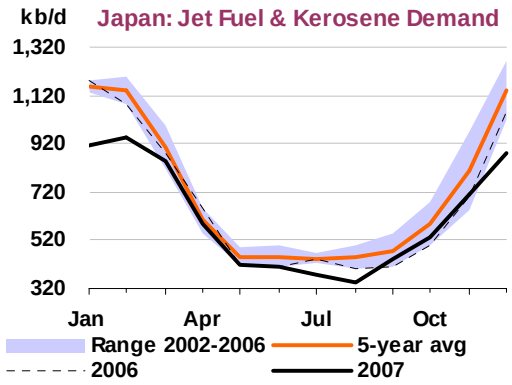






According to preliminary data, oil product demand in **Japan** fell by 1.7% year-on-year in December. All product categories registered losses, with the exception of fuel oil and direct crude burning (included in 'other products'), which rose by 18.3% and 69.5% on a yearly basis as a result of strong electricity demand amid continued nuclear shortfalls. In particular, demand for kerosene (used as a heating fuel) shrank by 16.1% year-on-year. Although part of this decline is probably related to October's stock build-up by end-users (in anticipation of November's wholesale price increase), temperatures were much milder than a year ago. In fact, there have been reports that Japanese refiners are producing less kerosene for lack of heating demand. Japan's Meteorological Agency is actually predicting average or warmer-than-average weather from February to April. In addition, a structural factor may be also at play – Japanese households may be choosing to use electricity for heating rather than more expensive oil-fired systems.

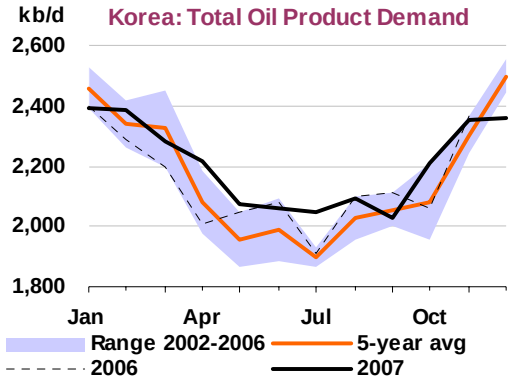


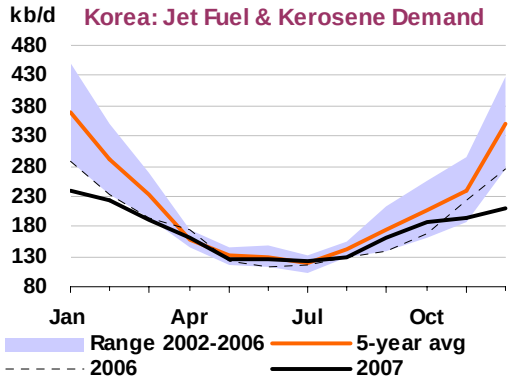


A full set of annual data also indicates that oil product demand in Japan – the world's third largest oil consumer after the US and China – plummeted by 3.4% year-on-year to 5.0 mb/d in 2007. The overall contraction – for the second year in a row – is largely due to lower gasoline demand (-2.0%), which had

already fallen in 2006 for the first time in almost three decades. This is due to both structural and short-term issues: on the one hand, the country's population is aging, while the younger generation is purchasing smaller and more fuel-efficient cars; on the other hand, high retail prices have also contributed to put a lid on demand (gasoline consumption is expected to fall by about 0.9% in 2008). In addition, an industrial structural change – the switch from fuel oil (notably the so-called fuel oil 'A', a blend of gasoil and fuel oil in a 90 to 10 ratio) to natural gas for environmental reasons – has also contributed to curb Japanese demand. Nevertheless, the nuclear woes seen in 2007 (and expected to last until late 2008) have somewhat reversed that trend, as utilities have been obliged to greatly increase purchases of fuel oil and direct crude for power generation, which will support overall oil demand growth. These factors, coupled with the IMF's downward revisions of its forecast of Japanese GDP growth in 2008 (from +1.7% to 1.5%) suggest that Japan's oil demand will rise this year by a modest 1.7% to 5.1 mb/d.

In **Korea**, preliminary data indicate that total oil product demand contracted by 6.9% year-on-year in December, mostly because of relatively mild temperatures, which softened heating and power demand. Although naphtha deliveries, which account for the largest share of total Korean demand, rose by 3.8%, they failed to offset the weakness in transportation fuel deliveries (gasoline deliveries were down by 2.7% and those of diesel by 2.8%), heating-dependent jet fuel/kerosene (-23.9%) and fuel oil demand (-19.1%).





OECD Pacific Demand by Product
(million barrels per day)

	2006	2007	4Q06	1Q07	2Q07	3Q07	Sep 07	Oct 07	Nov 07*	Latest month vs. Oct 07	Latest month vs. Nov 06
LPG & Ethane	0.92	0.92	0.94	0.97	0.92	0.86	0.80	0.90	0.94	0.04	0.00
Naphtha	1.60	1.65	1.72	1.75	1.57	1.63	1.61	1.53	1.71	0.18	0.00
Motor Gasoline	1.57	1.57	1.60	1.53	1.54	1.63	1.63	1.57	1.55	-0.02	-0.01
Jet & Kerosene	0.98	0.91	1.10	1.25	0.73	0.65	0.73	0.84	1.04	0.20	-0.02
Gas/Diesel Oil	1.83	1.78	1.88	1.85	1.75	1.67	1.74	1.84	1.90	0.06	-0.02
Residual Fuel Oil	0.98	0.94	0.97	0.99	0.89	0.90	0.92	0.96	0.97	0.01	-0.04
Other Products	0.52	0.50	0.50	0.49	0.41	0.48	0.54	0.49	0.59	0.10	0.07
Total Products	**8.40**	**8.29**	**8.71**	**8.83**	**7.80**	**7.81**	**7.96**	**8.14**	**8.70**	**0.57**	**-0.02**

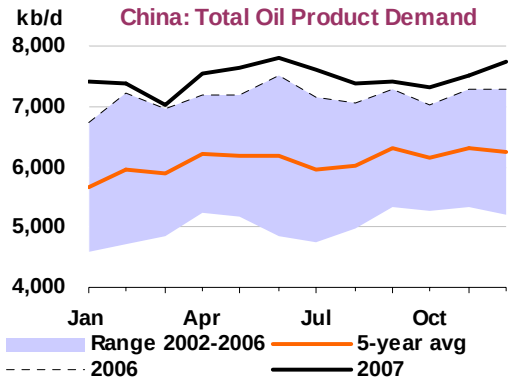
* Latest official OECD submissions (MOS)

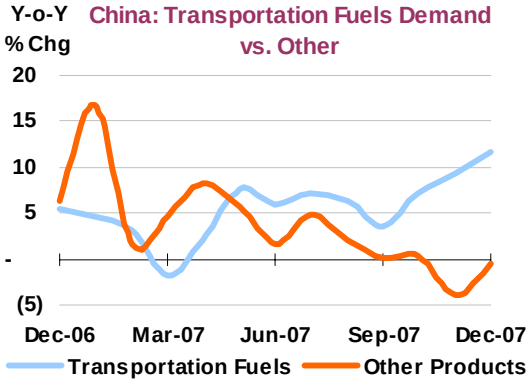
Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 6.1% year-on-year in December, with all product categories bar LPG, naphtha and residual fuel oil registering gains. Demand for gasoline, jet fuel/kerosene and gasoil remains very strong (+6.1%, +30.3% and +12.6%, respectively). In the case of gasoline and particularly gasoil, this suggests that shortages have receded and that the domestic market is better supplied, mostly thanks to higher refinery runs and massive net product imports.

At roughly 6.9 mb/d, refinery runs were almost 100 kb/d higher than in November (and almost 8% higher than in December 2006). Yet runs by 'teapot' refineries – which act as the country's swing producers – appear to have remained stable month-on-month. This could be related to limited feedstock availability. On the one hand, residual fuel oil remained expensive: demand contracted by 3.4% year-on-year in December, while net imports, at 165 kb/d, reached their lowest level since February 2000. On the other hand, net crude imports were much lower in December (2.9 mb/d, roughly as much as in October, which was the weakest month in 2007), which suggests that state-owned Sinopec and PetroChina have been drawing down stocks for the third month in a row in the face of high oil prices, in order to boost their own refinery runs and provide subsidised crude to the teapots (draws are estimated at about 800 kb/d in December).





Net gasoil imports, meanwhile, jumped by 363% month-on-month to 191 kb/d, the highest level ever registered. Interestingly, though, total net product imports in 2007 were much lower than in the previous year (-24%), given higher gasoline exports and much weaker fuel oil imports. Nevertheless, product imports are likely to be a significant source of supply during 2008: the government cut import taxes on several refined products to 1% across the board (with the exception of fuel oil, which remains at 3%), effective on 1 January. The measure means that the import tax on gasoline, gasoil and jet fuel was halved from 2% to 1%, while the tax on naphtha was cut from 6% to 1%. The previous round of import tax cuts dated back to November 2006 (the tax on gasoline and jet fuel was then reduced from 5% to 2%, while that on gasoil fell from 6% to 2%; as for fuel oil, its import tax was halved from 6% to 3% last June). Still, given domestic price controls, imports continue to be unprofitable – but the NOCs will likely continue to be prompted to supply the domestic market at any cost.

China Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2005	2006	2007	2006	2007	2006	2007
LPG & Ethane	650	633	600	-17	-33	-2.6	-5.2
Naphtha	707	826	885	119	60	16.8	7.2
Motor Gasoline	1,131	1,170	1,204	39	35	3.4	3.0
Jet & Kerosene	246	280	303	34	23	13.8	8.2
Gas/Diesel Oil	2,239	2,338	2,492	99	154	4.4	6.6
Residual Fuel Oil	778	776	728	-2	-48	-0.2	-6.2
Other Products	943	1,135	1,270	192	135	20.3	11.9
Total Products	**6,693**	**7,157**	**7,483**	**464**	**325**	**6.9**	**4.5**

Overall, our Chinese forecast remains largely unchanged, with oil demand growing by 4.5% year-on-year in 2007 to 7.5 mb/d (a weaker pace than in 2006, mostly because of the transportation fuel shortages of the past few months) and by 5.8% in 2008 to 7.9 mb/d. Yet recent and unexpected events have cast a shadow over the 2008 prognosis, namely the widespread power shortages and inclement weather that have hit the country since January. The former could herald a surge in oil demand for power generation – although, as discussed below, this is likely to be temporary – while the latter has severely disrupted the key Lunar

New Year holiday (when millions of migrant workers based in the country's southern industrial heartland return home), which will probably weigh down on transportation fuel demand. Therefore, the 2008 forecast is liable to be revised over the next few months as data for the current quarter become available.

Frozen Prices + Freezing Weather = Energy Shortages

In early January, several southern Chinese provinces were struck by severe power shortages. Coupled with unusually bad weather, the electricity shortages unfolded into a national crisis over the next several weeks, extending to provinces and municipalities across the country, including Chongqing, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Henan, Jiangxi, Shaanxi, Shanxi, Sichuan and Yunnan. At the peak of the shortages, in late January, the power deficit nationwide had reportedly reached some 40 GW, almost 6% of China's total power generation capacity of 713 GW (by end-2007). Although at the time of writing the emergency had largely receded, it has brought again to the fore a key issue: the lack of price signals in China's energy markets.

Several factors combined to bring about the current power crisis. These include:

1. the shutdown of some 550 small coal mines in 2007, notably in the provinces of Shanxi and Yunnan, following more stringent safety and environmental standards, which reduced the available feedstock for power generation (China relies on coal for about 83% of its electricity needs);
2. labour scarcity in coal mines, as millions of migrant workers returned home for the Lunar New Year and Spring Festival (which began on 7 February);
3. a drought in the south, which led to lower hydropower capacity (which accounts for roughly 15% of the country's total installed capacity);
4. the country's aging power grid, which limits regional inter-connectivity (which would allow regions with surplus power to supply deficit-prone areas);
5. extremely poor weather (widespread snow, heavy rain and cold temperatures across the country, which had not been seen in half a century), which a) contributed to coal transportation bottlenecks (deliveries from coal producing regions to key consuming areas have been hampered), b) damaged power lines and other transmission facilities and c) boosted power demand for heating;
6. rising passenger rail traffic as a result of the holiday season, which meant that passenger trains were competing against freight trains, notably with respect to coal deliveries (even though hundreds of thousands were stranded and unable to travel); and
7. China's energy pricing policy, both regarding oil products (the recent gasoil shortages affected the transportation of domestic coal supplies, as approximately 50% of deliveries are made by truck) and coal (wholesale prices, which were liberalised in 2006, have risen to historically high levels, but retail prices remain capped, thus squeezing power plants' margins and discouraging electricity generation).

Beijing initially reacted to the emergency by imposing administrative measures – centralizing emergency and relief efforts, halting all domestic coal exports for two months from 25 January in a bid to boost supplies and restricting power to manufacturing industries, in order to supply households and other key sectors. In addition, the government vigorously denied that current policies – such as the closure of small mines and the cap on retail power prices – are the cause of the power shortages. Instead, it has attributed most of the blame to power generators, which allegedly failed to acquire adequate supplies of coal ahead of the winter peak demand. However, as with the recent gasoil shortages, price controls arguably nurtured the seeds of the current power scarcity. Unable to pass on cost increases to end-users (ironically, part of coal's cost increase is related to last November's 9% diesel price hike, which raised transportation charges), some generators simply decided to sharply reduce their electricity output, while others opted to draw down their coal stocks or even shut down their operations.

Do the current power shortages herald a repeat of 2004, when similar problems boosted China's distillate and fuel oil demand? Admittedly, the magnitude of the shortages have encouraged the use of diesel- and fuel oil-fired electricity generators – some 2,670 mobile back-up units by households cut off from the grid as a result of heavy winter storms, according to the State Electricity Regulatory Commission (SERC), and probably an even larger number by industries in the worst affected areas. However, the resumption of oil-fired power generation will arguably be temporary, for two reasons:

Frozen Prices + Freezing Weather = Energy Shortages (continued)

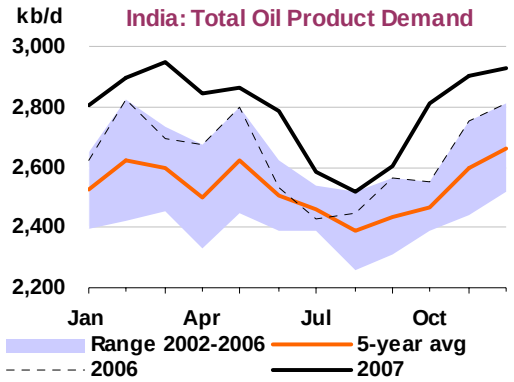
1. As opposed to the situation in 2004, the country's generation capacity itself is adequate; the main problem at this point is logistical – i.e., to ensure that coal reaches power plants in sufficient quantity. Once the weather improves, supplies will likely be fully restored – although the National Development and Reform Commission (NDRC) has indicated that shut coal mines will not be re-opened. Similarly, depleted stocks are poised to build up again (the government aims to increase coal stocks at key power plants to guarantee power generation for at least two weeks).
2. Oil presents a sharp cost disadvantage *vis-à-vis* coal: despite price controls, diesel-powered generation is now almost twice as expensive as coal. Fuel oil is also more expensive, as well as LNG. Unless existing subsidies are increased, oil-fired power generators, particularly in southern Guangdong province, will remain reluctant to run at full operating rates, despite having been asked to do so by the provincial government. Diesel is relatively scarce as well, as evidenced by the recent shortages; moreover, given the poor weather, oil companies have reportedly also been struggling to deliver oil products across the country.

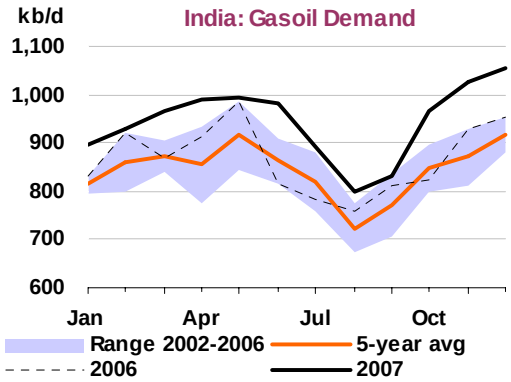
The power crisis illustrates a pattern that has seemingly become a permanent feature of China's energy sector, with all the economic and social disruptions that it entails. By capping end-user prices in order to contain inflation – which has become a policy priority – the government encourages strong demand growth, be it diesel or electricity. Eventually supply struggles and fails to catch up and shortages emerge, leading to an administrative response and a further entrenching price controls – since energy shortages tend to feed inflationary pressures elsewhere in the economy.

Looking ahead, the power grid may again be tested this summer. At present, although coal supplies and logistical networks are presumably able to cope with expected demand, the overall supply picture will remain tight – and could worsen considerably if the summer months were exceptionally warm. Should the government fail to curb power demand growth, either through price adjustments, efficiency improvements or even blackouts, coal imports from an already tight Asian market may be required, as well as an eventual resumption of oil-fired electricity generation.

Other Non-OECD

According to preliminary data, oil product sales in **India** – a proxy of demand – increased by an estimated 4.1% year-on-year in December. Transportation fuels continue to be the main driver of oil demand growth, with gasoline, jet fuel/kerosene and gasoil sales rising by 10.0%, 3.4% and 10.7%, respectively. Naphtha's slow decline carries on, with demand contracting by 13.9%. Our forecast for India's oil demand has been slightly revised upwards from last month's report. Total demand is now seen rising by 5.7% in 2007 to roughly 2.8 mb/d, and by 4.1% in 2008 to 2.9 mb/d.

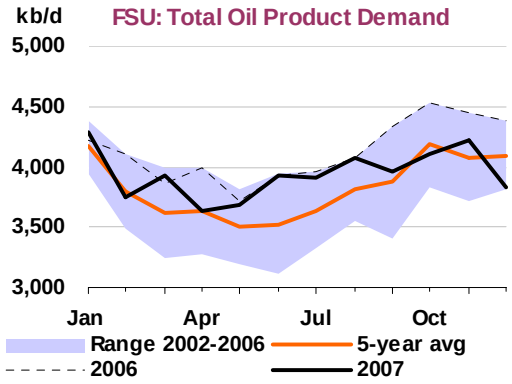




As in other countries, the strength of India's demand is largely related to end-user subsidies. Once again, New Delhi was abuzz with rumours regarding whether the Group of Ministers (GoM) would raise retail prices of transport and cooking fuels at a meeting on 7 February (following an inconclusive gathering in mid-January), while slashing government duties to offset the adverse impact of the rises. Such a move

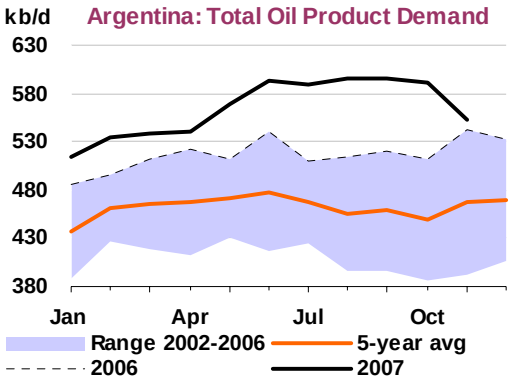
would attempt to balance the burden to consumers against the losses incurred by state-owned downstream oil companies – because of the subsidies (so-called 'under-recoveries') these are projected to lose as much as Rs 718 billion ($18.4 billion) on fuel sales in fiscal year 2007-2008 (April-March). However, even though the proposed price hikes are marginal (Rs 2-4/litre for gasoline and diesel), the Communist Party has once again threatened to bring down the government coalition if they were to pass. As such, the cost of subsidies will continue to be borne by the government (43% of the total, in form of bonds), upstream companies (ONGC, OIL and GAIL, with a combined 33%) and downstream players (IOC, HPCL and BPCL with 24%).

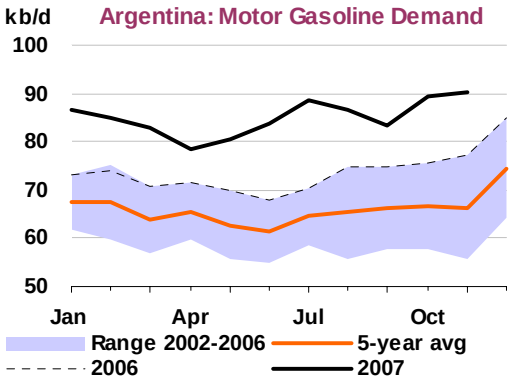
Baseline demand in **Chinese Taipei** was revised upwards in both 2007 and 2008 by roughly 100 kb/d on average. This change is related to recent adjustments in JODI submissions, which suggest that 'other products' demand had been undercounted. However, since the 2006 baseline was left unchanged, growth rates are now somewhat distorted. Total oil product demand is estimated at almost 1.2 mb/d in 2007. These figures, however, could be revised again as annual submissions are received.



FSU apparent demand – defined as domestic crude production minus net exports of crude and oil products – has been slightly revised in both 2007 and 2008 given adjustments to production and trade data. Demand was weaker than expected in 4Q07, owing to buoyant exports. The region's total oil product demand is seen averaging 3.9 mb/d in 2007 (-4.5% year-on-year) and rebounding to 4.0 mb/d in 2008 (+2.0%).

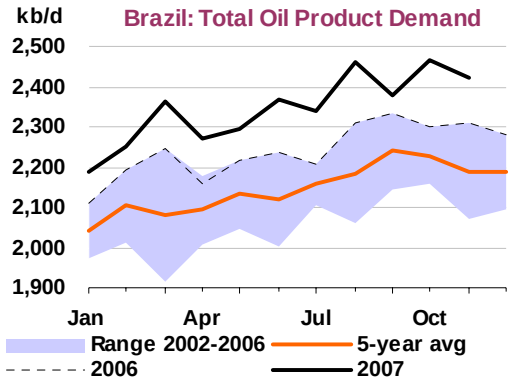
Following the submission of October and November data, oil demand in **Argentina** has been revised upwards slightly, on the back of stronger-than-expected growth in transportation fuels. This is likely to continue, as the main private downstream companies – the local units of ExxonMobil, Petrobras, Shell and Repsol-YPF – have been forced by the government to lower end-user prices. In exchange, the temporary ban on gasoline and gasoil exports, which are the only avenue to profitability open to refiners, will be lifted. Even the local unit of Royal Dutch Shell, which had refused to abide to the government's call to return prices to end-October 2007 levels, in the end accepted to lower its fuel prices by between 5.1% and 14.9%. As such, total oil product demand is expected to average 560 kb/d in 2007 (+9.2% versus 2006) and 600 kb/d in 2008 (+6.0%).

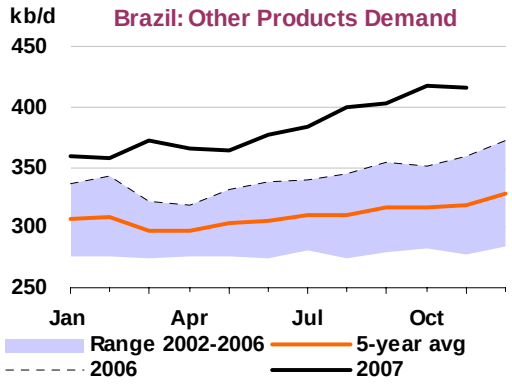




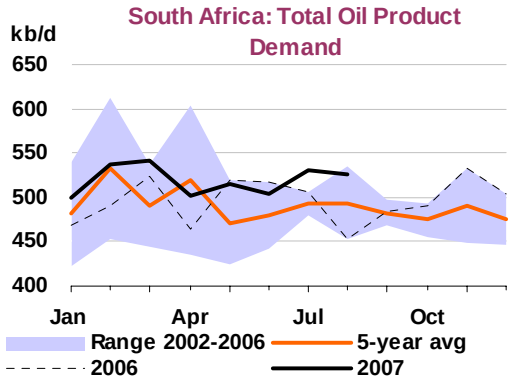
As flagged in last month's report, **Brazil's** oil demand data for 2007 has been revised once again given that the National Petroleum Agency (ANP) published new series for all oil products bar LPG and jet fuel/kerosene over the March-November period. This would appear to suggest that the reporting issues that had prevented the timely release of demand data since early 2007 are being gradually solved. Interestingly, the new figures indicate that ethanol demand, included in the 'other products' category, has

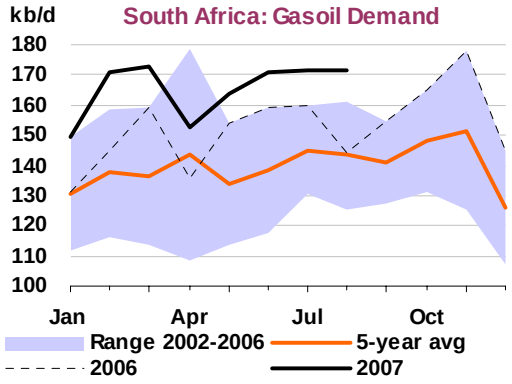
been particularly strong; by the same token, gasoline demand turned out to be almost flat during most of the year. Brazilian flex-fuel motorists arguably sought to benefit from ethanol's lower price. Total oil demand is estimated at 2.3 mb/d in 2007 and 2.4 mb/d in 2008 (implying a year-on-year growth rates of 4.8% and 3.6%, respectively).





The rise in oil product demand in **South Africa** has been fuelled by strong economic growth, notably in the province of Gauteng, which includes Johannesburg and Pretoria (the country's GDP has expanded by roughly 5% per year on average since the early 2000s). As in other non-OECD countries, demand has been pulled up by transportation fuels (gasoline, jet fuel/kerosene and gasoil), which collectively account for 80% of the total. Gasoil demand, in particular, has risen strongly (over 6% per year on average since 2003). It is important to note that retail prices are not subsidised; prices are set monthly according to the Basic Fuels Price formula (BFP), which is linked to international spot product prices (the government, however, is debating whether to control the end-user price of LPG, which is the staple fuel for the poor).





Yet the outlook of South Africa's oil demand is uncertain. Based on current trends (August 2007 is the last available data point), total oil demand is forecast to increase by 4.4% year-on-year in 2007 to 520 kb/d, and should expand by 5.3% in 2008 to almost 550 kb/d. However, over the past few weeks the country has been experiencing repeated and widespread power blackouts, which are largely related to poor planning and underinvestment in capacity expansion, and has coincided with maintenance work at coal-fired plants (over 80% of total domestic power generation). If shortages worsen (rationing has already been introduced), they could eventually hurt economic growth and thus weigh down on overall oil consumption. The mining sector, a pillar of South Africa's economy, has for the first time ever been affected; meanwhile, the refining industry (so far largely spared) is reportedly preparing for eventual power cuts, which could lead to fuel shortages (and higher product imports). Nevertheless, as in China, oil demand could begin to be supported by rising gasoil use if households and industries resort to oil-fired generators. The power deficit is poised to ease only by the end of the decade at the earliest, as new generation capacity comes online (built both by Eskom, the state-owned utility, and by the private sector).

SUPPLY

Summary

- **World oil supply** averaged 87.2 mb/d in January, a rise of 745 kb/d from downward-adjusted December levels of 86.4 mb/d. New output from Brazil, and assumed recovery after December outages in Azerbaijan, China and Mexico, underpin the increase. Despite a weaker-than-expected December total, 4Q07 global supply rose by 1 mb/d versus 4Q06, largely due to higher OPEC supplies.

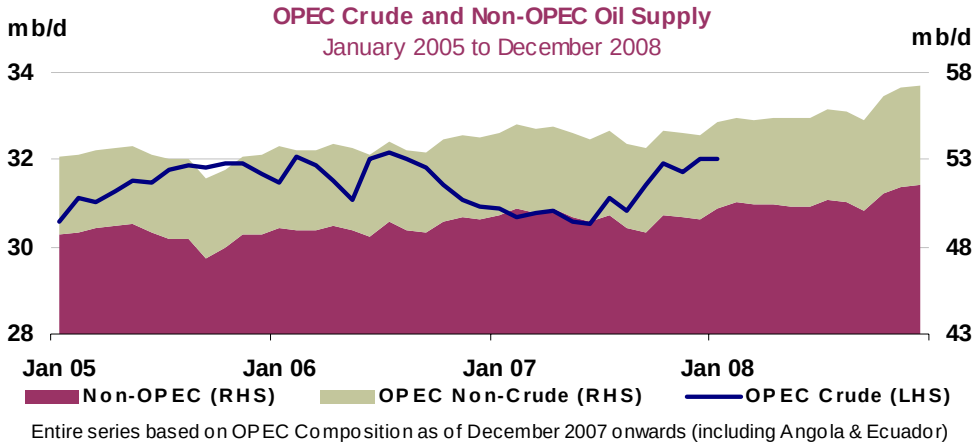
- **Non-OPEC January production** is estimated at 50.2 mb/d, a rise of 0.7 mb/d from December, when output from Mexico, the FSU and China was substantially below preliminary estimates. Preliminary information suggests a January rebound in output from these countries. Overall, non-OPEC totals for 2007 and 2008 (net of Ecuador) remain largely unchanged at 49.7 mb/d and 50.6 mb/d respectively.

- **Non-OPEC supply growth in 2008** averages 0.97 mb/d, heavily weighted to the second half of the year. In contrast, 2007 saw front-end loaded growth. The FSU, Asia-Pacific, Brazil and biofuels underpin rising non-OPEC supply in 2008. Growth in OPEC gas liquids is revised lower for 2008 after reassessing Saudi Arabian start-up schedules. OPEC NGL growth (over and above the non-OPEC total) is now 365 kb/d in 2008, up from 190 kb/d in 2007, but well below earlier 0.6 mb/d estimates.

- **January OPEC crude supply** was unchanged from December, at 32.0 mb/d. Angola, UAE, Saudi Arabia and Kuwait boosted supply, but were offset by lower volumes from Iraq, Nigeria and Qatar. With output close to the latest 29.7 mb/d target, OPEC's 1 February ministerial meeting saw no change in production policy, with the group due to meet again on 5 March. Effective spare capacity increased to 2.4 mb/d in January, but February has seen Nigerian production outages rise to 0.7 mb/d.

- **A review of OPEC installed crude capacity** reveals current levels 300 kb/d higher than in last month's OMR, at 35.0 mb/d, with revisions centred on Angola and the Mid East Gulf producers. Capacity is expected to increase by some 0.8 mb/d during 2008, with Saudi Arabia and Angola driving the increase. Nonetheless, expectations for end-2008 capacity are now 350 kb/d lower than those made earlier.

- **The call on OPEC crude and stock change** (including Angola and Ecuador) has been revised up by 0.1 mb/d to 31.5 mb/d for 2007 and by 0.1 mb/d to 31.8 mb/d for 2008. Higher non-OECD demand underpins the 2007 revision, while weaker OPEC NGL supply outstrips lower OECD demand for 2008.



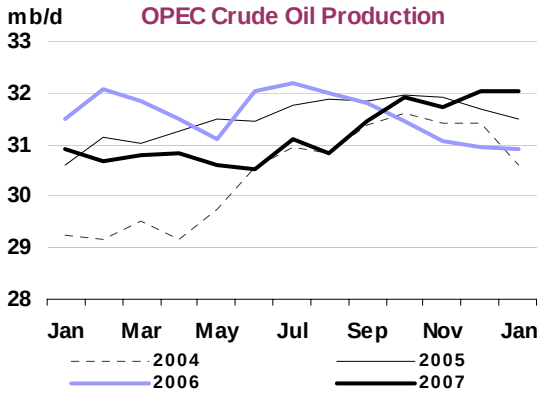
All world oil supply figures for January discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Kazakhstan and Russia are supported by preliminary January supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

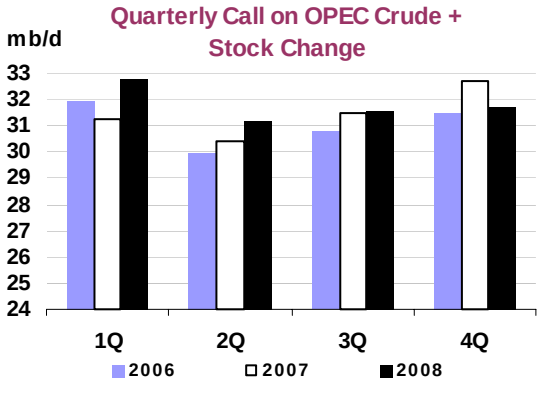
OPEC

January OPEC crude supply was barely changed (-20 kb/d) from December, at 32.0 mb/d. Angola, the UAE, Saudi Arabia and Kuwait boosted supply, but were offset by lower volumes from Iraq, Nigeria, Qatar and Indonesia. After recent improvements, disruptions to Nigerian and Iraqi supply caused by insurgent attacks increased once more. Production estimates for both are based initially on a supply proxy, built up from observed exports and an assessment of domestic crude use. At one stage in January, all three refineries in Iraq were closed, constraining 'supply' under the *OMR* definition. Nigerian supply has also been limited by the involuntary mothballing of two of the country's refineries, Warri and Kaduna, although there are reports that both may resume normal operations again soon following pipeline repairs. This may not result in a corresponding increase in Nigerian 'supply' however unless the security of onshore production and export infrastructure can be assured.

OPEC's 1 February ministerial meeting held production allowances unchanged. News that the group's market monitoring committee would not report ahead of ministerial deliberations only added to analyst perceptions that official target levels would be held steady. With OPEC output (excluding Iraq) in January close to the existing 29.7 mb/d target, and concerns growing over a global economic slow-down, the scene was set for the resultant roll-over. The group is due to meet again on 5 March, although any further deterioration in supply from Nigeria and Iraq in the next couple of weeks could lead OPEC to again leave official targets unchanged. Intriguingly, Ecuador stated it will ask for a higher quota during 2008, reflecting higher government production targets. The past few months have been notable for a slew of comments from oil ministers, talking up their respective output capacities. In the current environment, these may be designed more to protect existing quota shares than to argue for increases *per se*.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Effective OPEC spare capacity is assessed higher at 2.4 mb/d in January, based on revisions to prevailing installed capacity rather than monthly changes in production. However, the increase needs to be put in context, with potentially escalating risks once more in Nigeria and Iraq, plus the ongoing geopolitical uncertainties for supply from locations such as Iran and Venezuela. February saw Nigerian outages rise close to 700 kb/d, and northern pipeline exports from Iraq once more became sporadic. While it is difficult

to make a watertight case for today's supply risks being greater than in years past, the *perception* of heightened geopolitical and security risks means that an easing in market sentiment requires both inventory and spare capacity to move higher on a sustained basis.

OPEC Capacity Growth to Gain Ground in 2008

New facility start-ups, and increments from existing fields scheduled for 2008 could ultimately add around 3.1 mb/d of gross new OPEC liquids capacity, compared with around 1.25 mb/d from projects starting up in 2007. Ramp-up to plateau from last year's projects also augments 2008 capacity. The quality profile of new output also changes, with 42% of the 2008 increment coming from gas liquids (NGL and condensate), compared with 20% in 2007. Not all of this new production will reach the market in 2008, with ramp-up to plateau output varying from one to two months in some cases, to 24 months or more for others. The net change in OPEC capacity in 2008 is of course markedly less than implied by gross additions starting up in 2008 because of the lag before plateau output is attained and also the offsetting impact of mature field decline. Moreover, stretched drilling capacity and installation and service crew availability will likely continue to strain project deadlines again this year. OPEC members themselves may defer project start-ups if they perceive global demand growth to be slowing markedly. Nonetheless, the proliferation of potential additional liquids volumes in 2008 holds forth the prospect that tight OPEC spare capacity could temporarily ease, even if not everything comes to fruition on schedule.

Main OPEC Capacity Expansion Projects Due Online in 2008

(thousand barrels per day)

Country	Project	Peak crude	Peak NGL	Peak cond.
Angola	Kizomba C - Mondo	100		
Angola	Kizomba C - Saxi/Batuque	100		
Indonesia	Kerisi-Hiu			20
Iran	Darkhovin II	110		
Iran	Khesht	35		
Iran	Jufeyr I	25		
Iran	Salman	50		
Iran	Masjid e Suleiman expansion	15		
Iran	Azadegan I	50		
Iran	Pars 6-8			120
Iran	Pars 9-10			80
Iran	Pars 9-10		16	
Iraq	Taq Taq	20		
Iraq	Majnoon increase	50		
Kuwait	Burgan water treatment etc	40		
Kuwait	Sabriyah			50
Libya	NC186 ramp up	20		
Libya	Waha EOR	20		
Libya	El Shahara ramp up	10		
Libya	Elephant ramp up	25		
Nigeria	Akpo			180
Nigeria	Agbami	250		
Qatar	Al Shaheen increments	100		
Qatar	RasGas Train 6			50
Qatar	RasGas Train 6		25	
Qatar	Qatargas Train 4			160
Saudi Arabia	Khursaniyah	500		
Saudi Arabia	Khursaniyah			80
Saudi Arabia	Khursaniyah		220	
Saudi Arabia	Shaybah	200		
Saudi Arabia	Hawiyah NGL		300	
Venezuela	Corocoro	75		
	Peak output from 2008 start-ups	**1795**	**561**	**740**

OPEC Capacity Growth to Gain Ground in 2008 *(continued)*

Gas liquids additions this year centre on the Khursaniyah and Hawiyah projects in Saudia Arabia, belated completion of phases 6-10 of Iran's South Pars gas development project and new production trains at Qatar's North Field (the same geological structure as South Pars). Lesser contributions come from Nigeria's offshore Akpo condensate project and Kuwait's onshore Sabriyah gas and condensate development. Despite a still-impressive increment in NGL and condensate supply in 2008, this month's report actually scales back expected net additions from OPEC gas liquids due to the later expected start for the Khursaniyah project's gas phase (now assumed for mid-year 2008). This adjustment offsets a faster liquids build-up from Qatar's Dolphin project. OPEC gas liquids are now seen increasing by 365 kb/d in 2008, to average 5.18 mb/d, compared with a previous forecast increment of 620 kb/d.

OPEC Crude Production[1]
(million barrels per day)

	Dec 2007 Production	Jan 2008 Production	Current Target	Sustainable Production Capacity[2]	Spare Capacity vs Jan 2008 Production	Capacity end-2008
Algeria	1.40	1.40	1.36	1.40	0.00	1.42
Indonesia	0.84	0.83	0.87	0.86	0.03	0.84
Iran	3.93	3.93	3.82	3.96	0.03	4.02
Kuwait[3]	2.55	2.57	2.53	2.68	0.11	2.71
Libya	1.75	1.77	1.71	1.82	0.06	1.84
Nigeria[4]	2.16	2.07	2.16	2.47	0.41	2.49
Qatar	0.80	0.75	0.83	0.90	0.15	0.98
Saudi Arabia[3]	9.10	9.15	8.94	10.90	1.75	11.30
UAE	2.54	2.59	2.57	2.85	0.26	2.85
Venezuela[5]	2.43	2.44	2.47	2.50	0.06	2.40
OPEC-10[1]	**27.49**	**27.49**	**27.25**	**30.34**	**2.85**	**30.84**
Angola[1]	1.70	1.80	1.90	1.80	0.00	2.12
Ecuador[1]	0.50	0.50	0.52	0.50	0.00	0.50
OPEC-12[1]	***29.68***	**29.79**	**29.67**	**32.64**	**2.85**	**33.46**
Iraq	2.35	2.23		2.40	0.18	2.42
Total OPEC	***32.03***	**32.02**		**35.04**	**3.02**	**35.88**
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.35)*	

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 545 kb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 590 kb/d in January.

As regards crude oil, our latest review of current installed capacity results in modest upward revisions for Saudi Arabia, Iran, UAE, Kuwait, Qatar and Libya but downward adjustments for Algeria, Indonesia and Venezuela. This month's assessment pegs total OPEC-13 installed capacity at 35.0 mb/d, versus 34.7 mb/d in the report dated 16 January 2008. But these occasional updates of capacity are, at best, a highly imperfect snapshot of current physical supply potential, such is the paucity of consistent, field-specific data. Definitional issues also cloud analysts' perceptions of capacity. The *OMR* definition of sustainable capacity is that level of production that can be attained within 30 days and sustained for 90 days. Ideally therefore, surge capacity is excluded. We try also to exclude condensate volumes and, for example, Saudi crude accruing to Bahrain from the Abu Safah field (hence our relatively low Saudi capacity number).

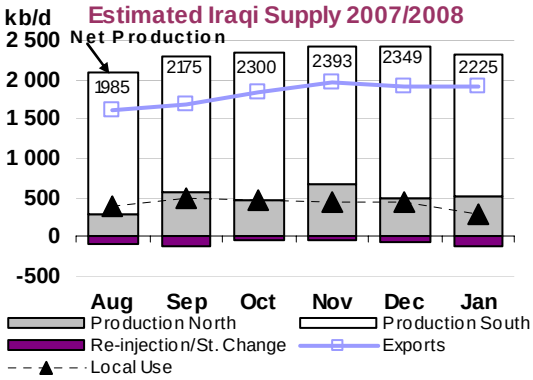
These caveats aside, OPEC crude capacity could rise by some 840 kb/d, net of decline, between now and end-2008. The increase comes overwhelmingly from Saudi Arabia (400 kb/d) and Angola (320 kb/d). However, while we have assumed a fairly static crude capacity profile for Iraq, Nigeria, Iran and Venezuela, there is the risk that if recent security problems (Iraq and Nigeria), shortages of gas for reinjection (Iran) and uncertain investment climate (Venezuela) persist through the year, capacity in these producers could come in lower than shown here. As ever, we will be watching these developments closely, and where appropriate, adjusting capacity estimates accordingly.

Iran's oil minister reported in early February that oil production had reached a post-revolution record of 4.18 mb/d. Assuming this refers to crude oil only, this is rather higher than our assessment for average January supply, flat at December levels of 3.93 mb/d. Although January exports are believed to have moved higher to around 2.45 mb/d, this was likely offset by a reduction in domestic crude runs owing to

maintenance at the Bandar Abbas refinery. That said, previous months' estimates of Iranian crude supply have been revised up by some 20 kb/d for 2006 and 45 kb/d for 2007 to reflect higher domestic crude runs.

A spell of extreme cold weather in January, allied to disrupted gas imports from Turkmenistan reduced January gas reinjection at several oilfields, focussing attention again on the competing calls within the Iranian system for limited gas supplies. Maintaining current oil production will require both extensive gas reinjection at mature fields to offset decline, and timely implementation of new field investment. Gas reinjection requirements are expected to treble by 2020, to levels around 280 mcm/d. Early production of some 25 kb/d from Iran's giant Azadegan field (8 billion bbls of recoverable reserves) was due to start in mid-February, with 50 kb/d attainable by end-year. Iran's buy-back model of service contracts has generally proved unpopular with foreign investors. Attaining Azadegan's ultimate 250 kb/d potential within a decade will require both easing geopolitical tensions and improved upstream investment terms.

January supply from **Iraq** fell by an estimated 125 kb/d compared with December, averaging 2.23 mb/d. The total comprised exports of 1.93 mb/d (20 kb/d higher for the month) and 0.3 mb/d of domestic crude use in refineries and power plants (sharply lower than December's 445 kb/d). Export liftings from Ceyhan were marginally higher at 315 kb/d, with shipments from the southern ports of Basrah and Khor al-Amaya unchanged at 1.6 mb/d. A series of power outages restricted refinery operations at the Baiji and Daura plants in January, also affecting production and pipeline exports from Kirkuk. However, these refineries, and northbound crude shipments, had resumed in the first week of February. The Basrah refinery was closed for the second half of January after a fire, and was reportedly still offline in early February.



The government is negotiating technical support agreements with western companies aimed at boosting production capacity by 500 kb/d in the short term at a number of fields (although for now we have excluded these projects from our assessment of 2008 capacity, above). These agreements would cover the Kirkuk field (Shell), Rumaila (BP), Zubair (ExxonMobil), and West Qurna (Total and Chevron). It is not certain to what extent participation in the West Qurna project will be affected by a recent agreement between Russia and Iraq, whereby the former writes off Iraqi debt in return for Iraqi commitment to revisit earlier oilfield development contracts. Bagdad has also reacted to what it views as uncompetitive bidding in upstream contracts between companies and the Kurdistan Regional Government (KRG). Term crude sales to SK Energy and OMV have been terminated following unilateral exploration deals signed with the KRG.

Venezuelan crude output nudged higher to 2.44 mb/d in January, with upgraded heavy oil from the Orinoco basin comprising 590 kb/d of the total. This volume will fall during 25 February to mid-April, as PDVSA shuts down the 180 kb/d Petrocedeno (formerly Sincor) upgrader for maintenance. Output of 200 kb/d of heavy crude feedstock may be partly sustained during the shut-down however.

At writing, ExxonMobil had obtained court orders freezing PDVSA assets worth over $12 billion worldwide. The freeze was sought in support of ExxonMobil's arbitration case against PDVSA after the latter took over the oil major's stake in the Cerro Negro heavy oil project (now renamed Petromanagas) in the Orinoco. Analysts have said that while day-to-day operations at PDVSA, and downstream affiliate Citgo's US facilities, are unlikely to be affected, any resultant block on the sale assets might ultimately affect PDVSA's ability to fund other investments. Venezuela's President Hugo Chavez also resurrected earlier threats to halt oil exports to the USA if actions against Venezuela continue. ExxonMobil and ConocoPhillips both refused to negotiate reductions in their previous 40-50% stakes in heavy oil projects,

although Total, StatoilHydro, BP and Chevron appear to have accepted the compensation packages offered for their stakes. The ExxonMobil action comes after signs of some thaw in the recently frosty relations between Venezuela and foreign investors:

- PDVSA and CNPC of China will reportedly soon embark on the Sinovensa Orinoco joint venture aimed at producing up to 300 kb/d from the Orinoco belt by 2012;
- Minority partner Shell will expand production at the 45 kb/d Urdaneta West field in Lake Maracaibo to 80 kb/d, and draft a proposal for development of the nearby Urdaneta Lago field;
- StatoilHydro and Total signed agreements to appraise reserves and prepare a development plan for the Junin 10 block of the Orinoco belt;
- Brazil's state Petrobras recently completed evaluation of 10 billion bbls of heavy oil in the Orinoco's Carabobo I block.

Nigerian January supply is assessed down by nearly 100 kb/d from December, at 2.07 mb/d. Shell had already declared *force majeure* on Forcados exports in early January after pipeline sabotage and this subsequently led to the renewed shut in of 100-150 kb/d of Forcados production during the month. Early February then saw force majeure declared on Bonny Light crude exports for February and March and the loss of 130 kb/d of crude production after leaks on the recently reinstated Nembe Creek pipeline. Security concerns were reported to be impeding Shell repair efforts.

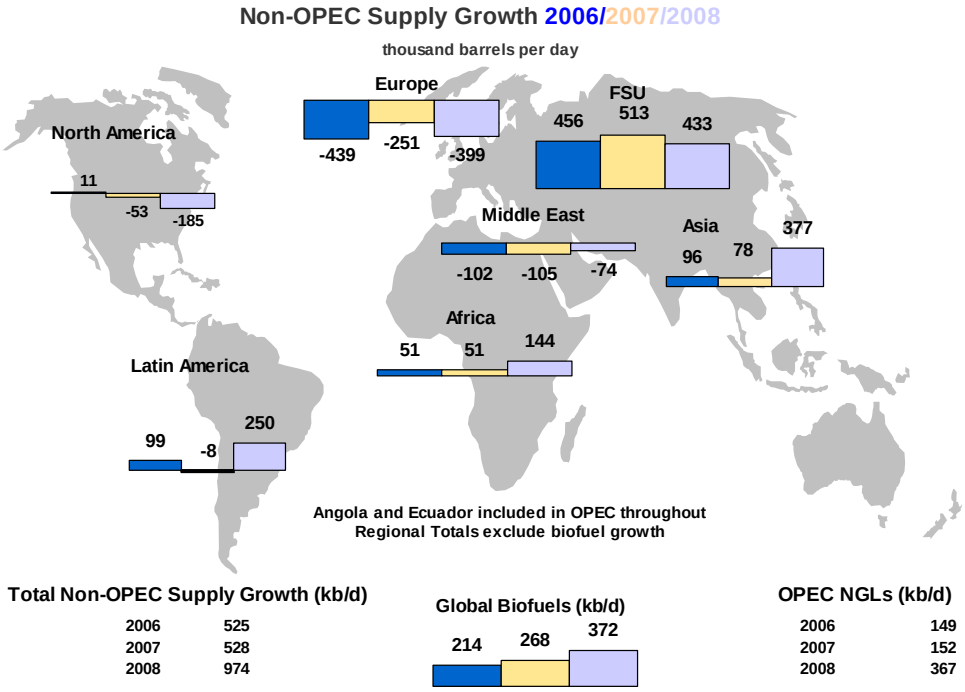
Total Nigerian crude production outages have now risen to around 0.7 mb/d once again, albeit remaining below the near-1.0 mb/d highpoint seen in May 2007. Nonetheless, total output looks likely to remain curtailed in February. And without reinstatement of some of the currently shuttered production, Nigerian crude availability could fall further in March. Maintenance at the deepwater Bonga field will curb monthly average supply there by some 100 kb/d, while exports may be further curbed following the recent restart of the 125 kb/d Warri refinery.

Non-OPEC Overview

Non-OPEC January production is estimated at 50.2 mb/d, a rise of 0.7 mb/d from December, when output from Mexico, the FSU and China was substantially below preliminary estimates. However, there were signs of a January rebound in output from these countries. Overall, Non-OPEC totals for 2007 and 2008 (net of Ecuador and Angola) remain largely unchanged at 49.7 mb/d and 50.6 mb/d respectively. Downward revisions for Brazil, Russia, China and Canada are countered by upward revisions for the UK, USA and Kazakhstan.

A weaker-than-expected December supply level reinforced the sharp slow-down in non-OPEC growth apparent over the course of 2007. While early-year growth stood at around 1.0 mb/d compared with 1Q06, 4Q supply was barely 0.1 mb/d above end-2006 output levels. Last year's overall non-OPEC growth came to some 530 kb/d. This year is expected to be a mirror image of 2007, with the annual increment accelerating from 345 kb/d in 1Q08, to nearly 1.7 mb/d in 4Q, averaging 975 kb/d for the year as a whole. New production from Brazil, the FSU and China appears to be heavily back-end loaded for 2008. This raises the possibility that project slippage could to some extent ultimately diminish growth for 2008.

Biofuels supply continues to rise in 2008, despite tenuous basic economics, with growth of 370 kb/d (including US and Brazilian ethanol) to 1.5 mb/d incorporated within the non-OPEC supply total. We also expect a temporary surge in liquids supply from Australasia and SE Asia in 2008 as light crude and gas liquids projects are brought on stream from Australia, New Zealand, Malaysia, Vietnam, the Philippines and Thailand. South East Asian regional supply growth is expected to amount to 270 kb/d this year, compared with around 25 kb/d in 2007, taking production to nearly 3.6 mb/d in 2008.



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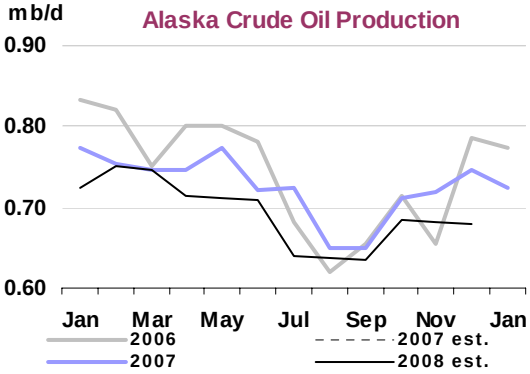
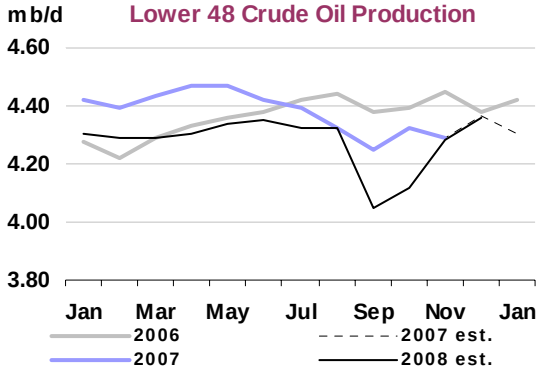
OECD

North America

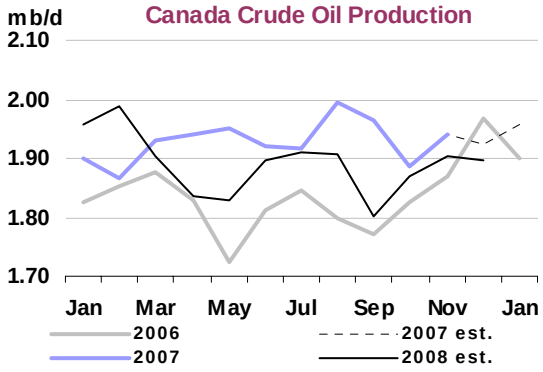
US – Alaska January actual, others estimated: Estimates for total US oil production are revised up by between 20-40 kb/d for the period 4Q07 to 4Q08, averaging 7.41 mb/d for 2008. Stronger November NGL supply in November contributes, although this is not carried into 2008, with this year's NGL total remaining at 1.79 mb/d. Another strong month for US ethanol supply causes an upgrade to 2008 production, to 490 kb/d. This is a rise of 70 kb/d compared with the 2007 total. US crude oil output is now assessed at 5.1 mb/d for 2007 and 5.0 mb/d in 2008, with upward revisions of 15 kb/d this month reflecting a stronger performance from smaller producing states. In 2008, the US Gulf of Mexico (GOM) sees supplies repeat 2007's growth of 55 kb/d, to average 1.41 mb/d. Another relatively storm-free autumn in 2008 would boost this by around 85 kb/d, as we currently apply a downward forecast adjustment in line with typical five-year average hurricane outages.

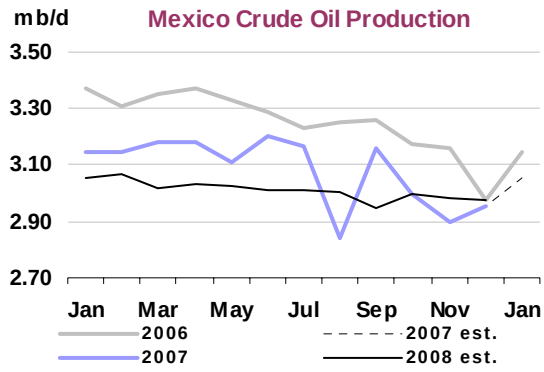




Alaskan January crude production again lagged this report's initial estimates, crude coming in at 725 kb/d, or 30 kb/d weaker-than-expected. 2008 supply is seen falling below 700 kb/d for the first time since 1977. However, shallow water developments worth around 60 kb/d may help to stem Alaskan decline, with expected start-up over the next two years of Eni's Oooguruk and Nikaitchuq fields.

Canada – Newfoundland December actual, others November actual: December and January Canadian supply is revised sharply lower, by 145 kb/d, with renewed weather-related and mechanical outages affecting the Alberta oil sands, and operator Husky advancing maintenance at the offshore White Rose field from August into January. Total Canadian oil supply for 2008 is now expected to remain flat at 2007 levels of 3.31 mb/d, with increases in bitumen and syncrude output of a combined 100 kb/d offset by declines elsewhere. Despite concerns over costs, energy supplies, pipeline capacity and changing fiscal regime in Alberta, oil sands expansion is progressing. Suncor has now formally approved plans to boost synthetic crude production by 200 kb/d to 550 kb/d by 2012 under its Voyageur project. This follows agreement with the Albertan authorities over increased royalties.



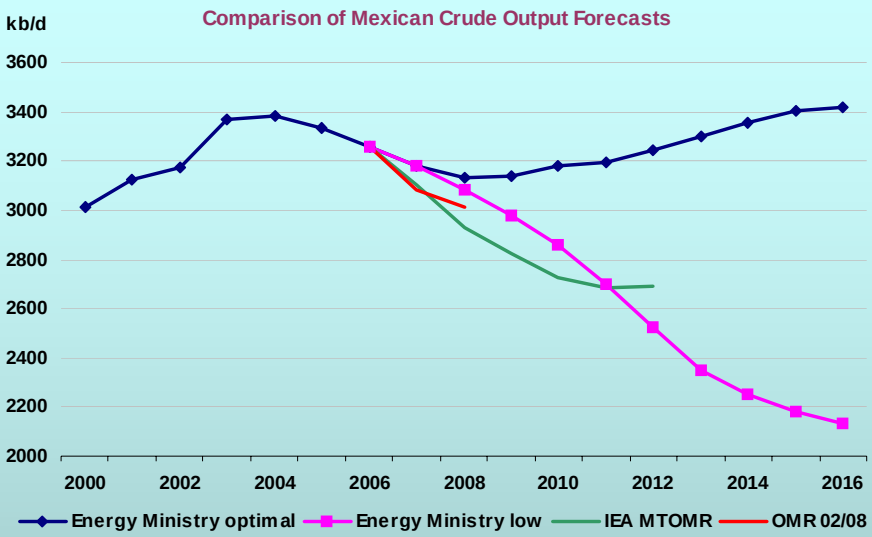


Mexico – December actual: Weather-related delays dented Mexican crude supplies in December. Although crude production showed modest recovery versus November to reach 2.95 mb/d, it remained well below recent peak levels closer to 3.2 mb/d. Exports matched October lows around 1.5 mb/d compared with November's 1.87 mb/d. This report assumes further production recovery in January, although brief port closures are again likely to have impeded exports. Once again, Cantarell production remains the focus of concerns about future output, with Pemex announcing in January that Cantarell output this year will likely fall by 200 kb/d, in line with this report's prevailing forecast. However, some offset is coming from rising supply from the Ku-Maloob-Zaap fields (see below).

Which Path Ahead for Mexican Crude Production?

Mexico's Energy Ministry in December set out two starkly different scenarios for Mexican crude production and exports through 2016. Outside observers see a lighter fiscal burden on Pemex, combined with organisational reform of the state producer and the opening of the upstream to foreign/private investment as fundamental to halting the recent slide in Mexican production. As shown below, the choice appears to be between 'business-as-usual' in which production slips towards 2.1 mb/d from a current 3.1 mb/d, or a more optimal, reform-based scenario in which Pemex attains both the funding and technology to significantly expand onshore, but complex, Chicontepec reserves and to begin exploiting deepwater resources in water depths of 500 metres or more, for mid-decade production. The optimal scenario envisages upstream spend of 157 billion pesos annually ($15 billion) – close to Pemex's allocated 2008 levels, while the low case assumes 100 billion pesos ($9 billion) per year through 2016. Both scenarios see mature Cantarell production continuing to decline, by as much as 15% a year.

Which Path Ahead for Mexican Crude Production? (continued)



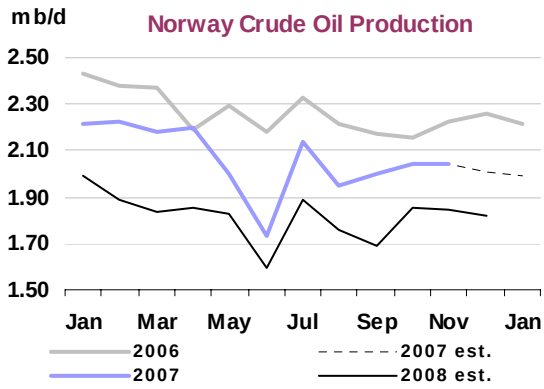
Last July's *Medium-Term Oil Market Report (MTOMR)* assumed a continuation of the prevailing investment climate in Mexico's upstream, with no contribution expected from deepwater in the period through 2012. The latest Ministry forecasts also envisage no initial contribution from deep-water before mid-decade at the earliest under the optimal investment scenario. Contributions from both the Chicontepec and offshore Ku-Maloob-Zaap fields were also later, and more limited, in the *MTOMR* scenario than in the Energy Ministry equivalents. The complexity of exploiting the Chicontepec onshore reserves was seen in the *MTOMR* as limiting their contribution to some 150 kb/d by 2012. Chicontepec is reportedly currently producing 20-30 kb/d, with Pemex aiming for up to 0.6 mb/d by the middle of the next decade, and between 0.2 mb/d and 0.4 mb/d for 2012, depending on the investment environment. Clearly, Pemex's access to capital in the next five years will be critical in determining the extent to which the drilling-intensive Chicontepec project can offset Cantarell decline.

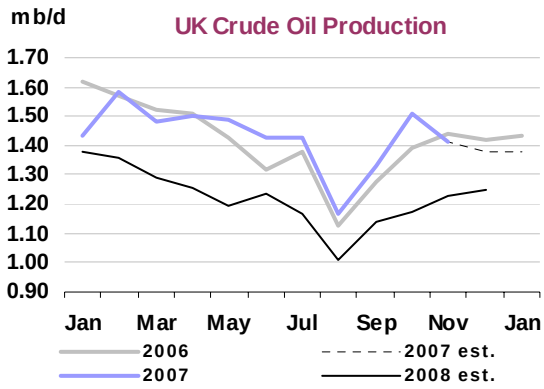
Latest *OMR* Mexican projections, while lower for 2007 after storm-related offshore outages at end-year, have nevertheless been raised for 2008. Development of the offshore Ku-Maloob-Zaap (KMZ) complex has been more rapid than we had assumed. Both the *MTOMR* and earlier issues of the *OMR* foresaw KMZ attaining 600 kb/d only by 2010, but in fact, these fields have already broken through the 600 kb/d mark. But Ministry expectations suggest KMZ could decline from 2011, again focussing attention on Chicontepec and the deepwater as longer-term sources of growth to offset Cantarell decline.

North Sea

Norway – November actual, December provisional: Final December Norwegian data showing field-specific detail was released too late to be included in this report, but will be incorporated in the March *OMR*. However, indications of aggregate production and loading schedules through February, leave our forecast for Norwegian liquids output largely unchanged for 2008 at 2.37 mb/d. Weather-related stoppages and mechanical outages continue to plague North Sea supply in general, but have generally been captured within our field reliability adjustment. Kvitebjorn, Snohvit and Ormen Lange condensate supplies have all been affected in December and January, while February has seen renewed stoppages at the Njord field and within the Ekofisk system. All told, this forecast sees Norwegian crude production falling 0.2 mb/d in 2008 to 1.82 mb/d, a repeat of the trend seen in the past three year. Some offset derives from gas liquids and condensate supplies, which grow by 50 kb/d combined to attain 550 kb/d in 2008.

The Norwegian Petroleum Directorate (NPD) has released a lower production outlook for 2008-2012, although these appear to be in line with our own *MTOMR* expectations as regards likely 2012 output.



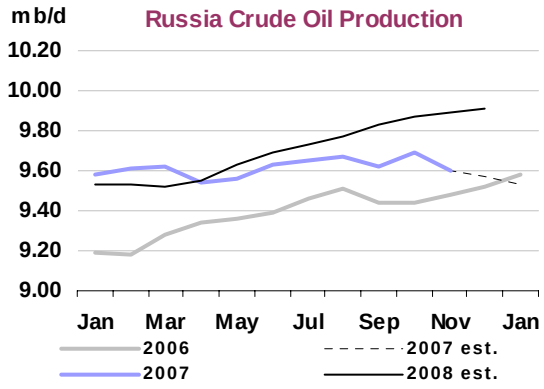


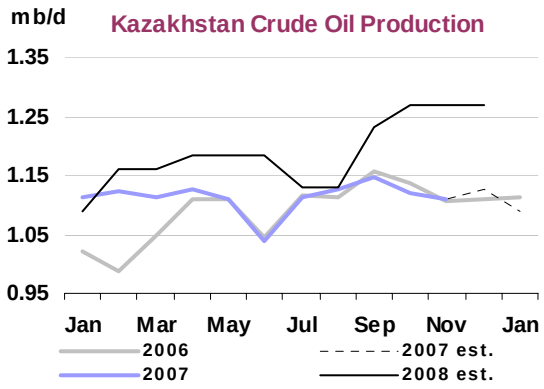
UK – November actual: Preliminary UK data for November turned out 160 kb/d higher than this report's estimates. Moreover, field-specific data for October points to higher output from the Forties system and for a number of fields including Schiehallion, Captain and Blane. These adjustments are carried through the 2008 forecast. The Thistle field also restarted on 12 January after a seven week stoppage following a November turbine fire. Upward adjustments to the UK outlook amount to 80 kb/d for 4Q07 and 65 kb/d for 2008. Preliminary numbers for 2007 suggest a temporary flattening off in UK oil output (at 1.66 mb/d) brought about by the ramp-up of Nexen's 200 kb/d Buzzard field. However, 2008's upward adjustment is insufficient to reverse a renewed decline in UK oil production, now seen falling by 0.2 mb/d to 1.48 mb/d (1.22 mb/d of offshore crude).

Former Soviet Union (FSU)

Russia – December actual, January provisional: December and January Russian supply came in lower than expected to the tune of 55 kb/d and 10 kb/d respectively. December's lower output resulted from weaker performance from the Sakhalin 1 project than indicated by preliminary data. Indeed, having scaled back 2008 expectations for Sakhalin 1 in last month's report, subsequent expectations from Rosneft suggest even lower output in 2008. Natural decline is now seen reducing supply from 225 kb/d in 2007 to 175 kb/d in 2008. The government earlier refused to allow operators ExxonMobil to tap extra reserves at the Chayvo field which would have offset decline. As a result, Sakhalin 1 output is likely to fall until later phases centred on the Arkutun Daginskoye and Odoptu fields enter production.

In all, Russian crude and gas liquids output for 2008 is trimmed by 35 kb/d compared with last month's forecast, now averaging 10.19 mb/d (of which 9.7 mb/d is crude). Growth in 2008 is halved relative to the 2.4% (+235 kb/d) achieved in 2007. Aside from Sakhalin 1, we have also trimmed expected supply for Rosneft and Lukoil in line with revised company expectations.





Kazakhstan – December and January actual: Revised data for smaller producers for the full 12 months of 2007 add 35 kb/d to baseline Kazakh supply and offset lower-than-expected output from the Karachaganak and Tengiz projects in December and January. A similar upward adjustment is carried through 2008, resulting in total supply this year of 1.47 mb/d (including 1.2 mb/d of crude), which is 90 kb/d higher than in 2007. Some 75% of 2008's growth comes from the Tengiz project. However, we have limited actual Tengiz production to 420 kb/d for 4Q08, well below expected capacity of 540 kb/d, until it becomes clear how resultant export expansion will be accommodated. With reports in late January that production from Tengiz was already testing 400 kb/d, there may well be scope for revising output projections higher if sufficient sustainable export capacity is available.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Oct 07	Nov 07	Dec 07	Latest month vs. Nov 07	Latest month vs. Dec 06
Crude											
Black Sea	2.22	2.18	2.30	2.23	2.09	2.10	2.25	2.02	2.04	0.01	0.04
Baltic	1.55	1.60	1.58	1.60	1.58	1.64	1.66	1.49	1.76	0.26	0.17
Arctic/FarEast	0.15	0.32	0.29	0.30	0.38	0.31	0.34	0.30	0.29	-0.02	0.12
BTC	0.00	0.55	0.43	0.58	0.57	0.61	0.51	0.67	0.64	-0.02	0.22
Crude Seaborne	4.07	4.64	4.60	4.70	4.61	4.66	4.76	4.49	4.72	0.23	0.54
Druzhba Pipeline	1.20	1.13	1.17	1.13	1.08	1.13	1.11	1.16	1.12	-0.03	-0.12
Other Routes	0.38	0.44	0.47	0.46	0.40	0.43	0.43	0.43	0.43	-0.01	0.03
Total Crude Exports	5.64	6.21	6.23	6.29	6.09	6.22	6.30	6.08	6.27	0.20	0.45
Of Which: Transneft	4.22	4.28	4.33	4.31	4.19	4.27	4.37	4.15	4.29	0.14	0.03
Products											
Fuel oil	0.95	1.10	1.04	1.15	1.13	1.08	0.99	1.12	1.14	0.02	0.18
Gasoil	0.95	0.95	0.94	0.88	1.01	0.96	0.97	0.88	1.03	0.15	0.14
Other Products	0.61	0.60	0.59	0.69	0.57	0.55	0.53	0.57	0.56	-0.01	0.01
Total Product	2.51	2.65	2.57	2.73	2.71	2.59	2.49	2.56	2.72	0.16	0.33
Total Exports	8.16	8.86	8.80	9.02	8.80	8.81	8.79	8.64	9.00	0.35	0.78
Imports	0.04	0.04	0.02	0.04	0.04	0.05	0.04	0.05	0.05	0.00	0.01
Net Exports	8.12	8.82	8.78	8.98	8.76	8.76	8.74	8.59	8.95	0.36	0.77

Sources: Petro-Logistics, IEA estimates

Note: Transneft data has been revised to exclude Russian CPC volumes.

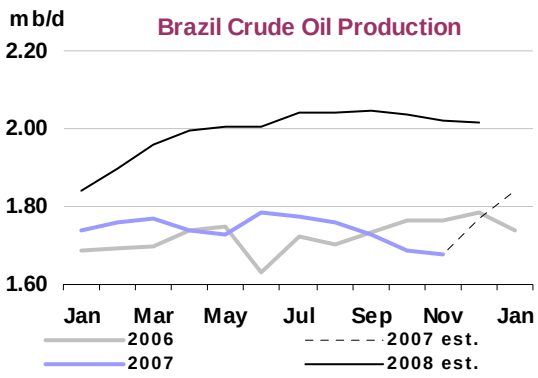
Net oil exports from the FSU in December gained rather more ground than we anticipated last month, increasing by 360 kb/d versus November. At 8.95 mb/d total net exports stood fully 770 kb/d higher than in December 2006. A 200 kb/d increase in crude exports versus November, to 6.27 mb/d, was driven by Baltic seaborne trade, notably a rebound in Primorsk liftings after earlier pipeline maintenance. Crude exports on other routes were flat-to-down modestly compared with November. December products exports were also up by 160 kb/d on the month, reaching 2.72 mb/d. Gasoil was the driver here, exports breaching 1.0 mb/d again after a lull in October/November

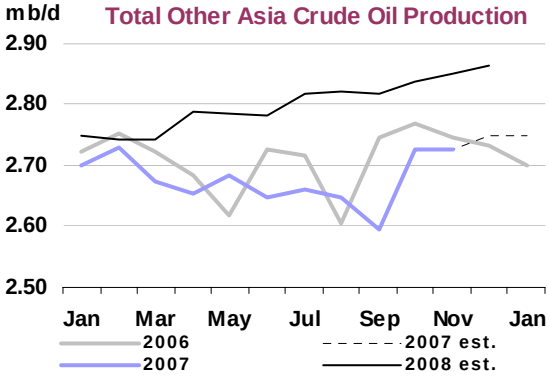
A 55 kb/d rebound in BTC shipments in January may have been enough to offset lower scheduled Russian Transneft crude volumes, potentially sustaining FSU crude exports close to December levels. A further rise in export duties scheduled for February also suggests that Russian exporters may have tried to boost sales ahead of the duty increase. Despite further likely Caspian increases in February however, these are likely to be overshadowed by sharply lower Transneft seaborne volumes from Gdansk and Primorsk.

Other Non-OPEC

Brazil – November actual, December provisional: Some 50 kb/d is cut from our estimate of Brazilian production for the 4Q07-4Q08 period. Weaker baseline supply in November, and the deferral of the Marlim Leste project from the 2008 forecast into 2009, underpin this adjustment. Crude production edged higher to 1.71 mb/d in November, but preliminary Petrobras data suggest a more substantial December increase to 1.8 mb/d on average, with Petrobras reporting at end-December that record production levels

of 2.0 mb/d had been achieved. In all, crude output is expected to gain some 280 kb/d in 2008, with biofuels growing by a further 50 kb/d. Our field reliability adjustment nets 35 kb/d off the 2008 total, suggesting total liquids production this year of 2.44 mb/d.





Other Asia – Data through November/December: Last month's report highlighted the trebling in oil supply growth expected from Australia and New Zealand in 2008, incremental supplies of 155 kb/d taking total OECD Pacific production to 785 kb/d this year, from 630 kb/d in 2007. Other regional producers are also increasing supplies of generally light, sweet crude and gas liquids in 2008. Non-OECD Asian production, net of China, is expected to increase by 115 kb/d in 2008, to average 2.8 mb/d.

Despite a 20% increase in costs, the Galoc project offshore the **Philippines** is due on stream in March. This will be followed shortly thereafter by the Calauit project, with the two fields generating an incremental 30 kb/d later in 2008. **Thailand** sees incremental gas liquids projects generating a net 15 kb/d increase in oil output in 2008, the fourth straight year of rising production. In **Malaysia**, further build up towards peak 120 kb/d is expected from the deepwater Kikeh project, which entered service in August 2007. Meanwhile, **Vietnam** could see a temporary production surge as the Ca Ngu Vang, Song Doc, Su Tu Vang and Bunga Pakma projects (the latter shared with Malaysia) start up.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

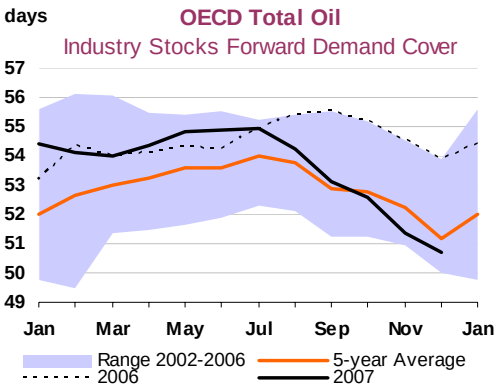
	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.15	0.06	-0.12	14.26	14.15	0.05	-0.11	-0.01	-0.01	-0.01	0.01
Europe	4.93	4.50	-0.26	-0.43	4.94	4.56	-0.24	-0.39	0.02	0.06	0.02	0.04
Pacific	0.64	0.78	0.06	0.15	0.63	0.78	0.05	0.15	0.00	0.00	0.00	0.00
Total OECD	**19.83**	**19.43**	**-0.14**	**-0.40**	**19.84**	**19.49**	**-0.14**	**-0.35**	**0.00**	**0.05**	**0.00**	**0.05**
Former USSR	12.71	13.18	0.47	0.47	12.76	13.19	0.51	0.43	0.05	0.01	0.04	-0.04
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.75	3.87	0.08	0.12	3.73	3.83	0.05	0.11	-0.03	-0.04	-0.03	-0.01
Other Asia	2.68	2.80	-0.03	0.12	2.68	2.80	-0.03	0.12	0.00	0.00	0.00	0.00
Latin America	3.88	4.23	0.03	0.34	3.87	4.17	0.01	0.30	-0.02	-0.06	-0.02	-0.04
Middle East	1.64	1.56	-0.11	-0.07	1.64	1.56	-0.11	-0.07	0.00	0.00	0.00	0.00
Africa*	2.55	2.69	0.05	0.14	2.55	2.69	0.05	0.14	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.35**	**28.46**	**0.48**	**1.11**	**27.36**	**28.37**	**0.49**	**1.01**	**0.01**	**-0.09**	**0.00**	**-0.09**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.66**	**50.68**	**0.52**	**1.02**	**49.67**	**50.64**	**0.53**	**0.97**	**0.01**	**-0.04**	**0.00**	**-0.05**

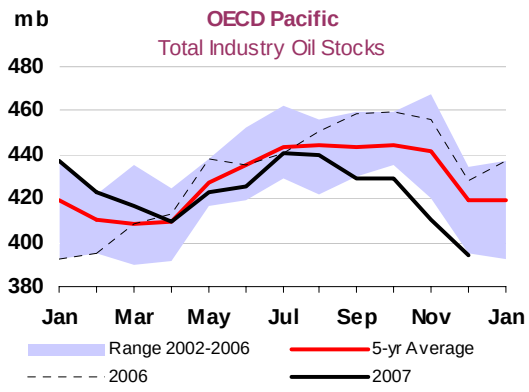
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

OECD STOCKS

Summary

- **OECD industry stocks fell 39.5 mb in December**, mainly on a 30.3 mb draw in crude oil, as supply remained relatively constrained amid peak seasonal refinery runs. 'Other oils' fell 9.0 mb, while product stocks remained virtually unchanged. This brings the 4Q07 stock draw to 1.15 mb/d, substantially higher than the 10-year average of around 750 kb/d and lowers OECD industry stock forward cover to 50.7 days - its weakest since December 2004.
- **Regionally, inventories are particularly low in the Pacific** (relative to previous years' averages), with crude stocks falling to their lowest level in at least 20 years. This is likely due to curtailed OPEC exports to the east, a strong rise in throughputs around the end of the year and a structural shift towards lower stock holding due to efficiency and higher costs.
- **Preliminary January data for the US, Japan and the EU-15 and Norway indicate a 22.1 mb stock build.** Crude stocks in the US rose as refinery maintenance set in and some discretionary run cuts were made. In Europe, distillate stocks increased, largely due to warmer-than-expected weather.





OECD Inventories at End-December and Revisions to Preliminary Data

Total OECD industry stocks fell 39.5 mb in December, to 2,555 mb, led by a 30.3 mb draw in crude inventories. Product stocks were virtually unchanged at 1,357 mb and 'other oils' fell by 9.0 mb. This pattern corresponds with refineries running at a seasonal peak in December, but with demand for heating fuels, in particular, remaining relatively robust. In terms of forward demand cover OECD inventory stocks fell to 50.7 days, their lowest since December 2004.

The crude stock draw was spread across all three regions, while product stocks fell in North America and the Pacific. In Europe, unusually high diesel prices after an early-November fire at the UK's Coryton refinery and other outages tightened the market and subsequently attracted strong arbitrage flows from all around the globe, pushing up stock levels.

Preliminary Industry Stock Change in December 2007 and Fourth Quarter 2007

	December (preliminary) *(million barrels)*				December (preliminary) *(million barrels per day)*				Fourth Quarter 2007 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**-17.9**	**-2.4**	**-10.0**	**-30.3**	**-0.58**	**-0.08**	**-0.32**	**-0.98**	**-0.33**	**0.10**	**-0.12**	**-0.35**
Gasoline	8.8	1.6	0.9	11.4	0.29	0.05	0.03	0.37	0.13	0.06	0.00	0.19
Distillates	-2.9	6.7	-1.9	1.9	-0.09	0.22	-0.06	0.06	-0.04	-0.24	-0.09	-0.37
Fuel Oil	0.8	0.6	1.2	2.6	0.03	0.02	0.04	0.08	0.03	0.02	-0.05	0.00
Other Products	-11.8	0.0	-4.4	-16.1	-0.38	0.00	-0.14	-0.52	-0.33	-0.01	-0.11	-0.44
Total Products	**-5.1**	**9.0**	**-4.1**	**-0.2**	**-0.16**	**0.29**	**-0.13**	**-0.01**	**-0.21**	**-0.17**	**-0.24**	**-0.63**
Other Oils[1]	-5.7	-0.9	-2.5	-9.0	-0.18	-0.03	-0.08	-0.29	-0.15	-0.01	-0.02	-0.17
Total Oil	**-28.7**	**5.8**	**-16.6**	**-39.5**	**-0.92**	**0.19**	**-0.54**	**-1.27**	**-0.69**	**-0.08**	**-0.38**	**-1.15**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Revisions versus 16 January 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Oct 07	Nov 07	Oct 07	Nov 07	Oct 07	Nov 07	Oct 07	Nov 07
Crude Oil	**4.1**	**0.5**	**1.0**	**6.8**	**0.1**	**-4.2**	**5.3**	**3.1**
Gasoline	-0.5	-2.5	0.1	3.3	-1.4	-2.7	-1.9	-2.0
Distillates	-0.4	3.4	2.1	-1.3	0.0	-0.5	1.7	1.7
Residual Fuel Oil	0.0	-0.1	0.1	3.6	0.0	0.0	0.1	3.5
Other Products	0.0	-3.7	0.1	0.8	0.0	0.8	0.1	-2.1
Total Products	**-0.9**	**-2.9**	**2.3**	**6.4**	**-1.4**	**-2.5**	**0.0**	**1.0**
Other Oils[1]	0.6	-6.6	-0.1	-0.4	0.0	0.8	0.5	-6.2
Total Oil	**3.8**	**-9.1**	**3.2**	**12.8**	**-1.3**	**-5.9**	**5.8**	**-2.1**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

The overall revision to end-November stock data (-2.1 mb) was relatively minor, with downward adjustments in North America and the Pacific of -9.1 mb and -5.9 mb respectively offsetting an upward correction of 12.8 mb in Europe. On a net basis, 'other oils' saw the greatest change, being revised downward by -6.2 mb, while crude and product stock levels were adjusted upwards by 3.1 mb and 1.0 mb respectively.

Year-on-Year OECD Industry Stock Comparisons for December 2007

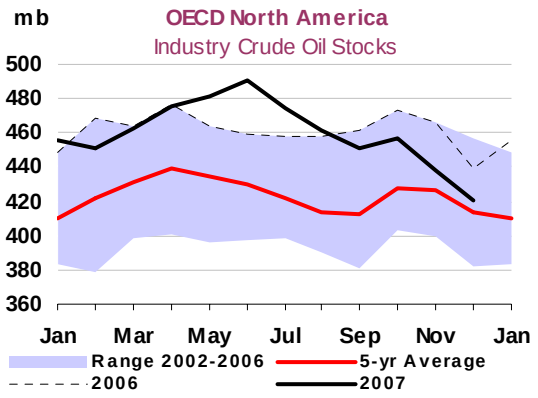
	(million barrels)					*(Days of Forward Demand)*			
	North America	Europe	Pacific	Total		North America	Europe	Pacific	Total
Crude Oil	**-19.2**	**-10.9**	**-23.0**	**-53.1**	**Total Oil**	**-2.0**	**-4.1**	**-5.4**	**-3.2**
Total Products	-40.1	-32.0	-10.2	-82.2	*Versus 2005*	-2.1	0.8	0.4	-0.8
Other Oils[1]	7.1	6.0	-1.1	11.9	*Versus 2004*	1.1	1.2	-2.3	0.5
Total Oil	**-52.2**	**-36.9**	**-34.3**	**-123.3**	**Total Products**	**-1.5**	**-3.0**	**-1.8**	**-2.0**
Versus 2005	-34.0	-6.4	-1.1	-41.5	*Versus 2005*	-0.7	0.0	0.8	-0.3
Versus 2004	30.6	13.9	-36.4	8.1	*Versus 2004*	-0.2	0.3	-0.9	-0.1

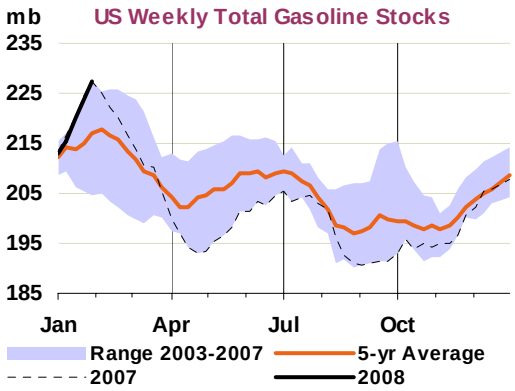
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD Industry Stock Changes in December 2007

OECD North America

Total North American industry stocks fell 28.7 mb, with a 31.5 mb drop in the US only slightly offset by a small build of 2.8 mb in Mexico. Total North American crude stocks fell 17.9 mb, while products and 'other oils' fell by 5.1 mb and 5.7 mb respectively. A US crude stock draw of 19.3 mb offset a Mexican build of 1.4 mb. Besides a seasonal high in refinery runs and WTI's contango, which encourages a stock draw, refiners typically try to run down crude stocks at the end of the year for tax purposes, and weather disruptions also had an impact. Preliminary weekly US data for January indicate a crude build of 12.3 mb, as imports rose again while refinery crude inputs declined due to the onset of seasonal maintenance and some discretionary run cuts.



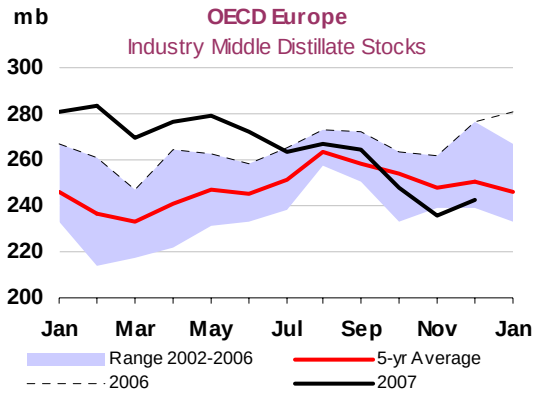


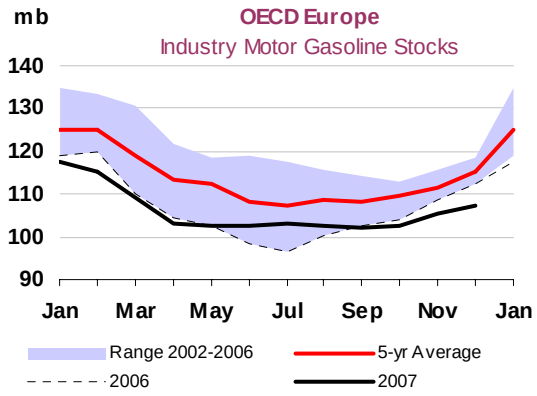
While total North American product stocks fell by 5.1 mb, movements for individual products were quite divergent. Gasoline stocks rose by 8.8 mb and residual fuel oil by 0.8 mb, while middle distillates and 'other products' fell by 2.9 mb and 11.8 mb respectively. US stock changes dominated the shifts, particularly a 9.8 mb increase in gasoline stocks in December.

Preliminary January data for the US based on weekly figures show total products falling by 3.9 mb. However, an early-year peak in refinery throughputs and high imports, combined with anaemic demand saw gasoline stocks increase by 16.9 mb, thus rising from mid-range to their highest level in a decade. In terms of forward cover, the picture is similar, having moved to the top of the range in late January. But in contrast, stocks of other products fell, with distillates and fuel oil down 0.7 mb and 2.3 mb respectively.

OECD Europe

European industry stocks rose 5.8 mb in December, as a 9.0 mb product stock build was offset by draws in crude and 'other oils' of 2.4 mb and 0.9 mb respectively. Crude draws were observed in the Netherlands (-2.2 mb) and Italy (-0.7 mb), while France and Germany saw small increases. Preliminary January Euroilstock data for the EU-15 & Norway show crude stocks effectively unchanged.





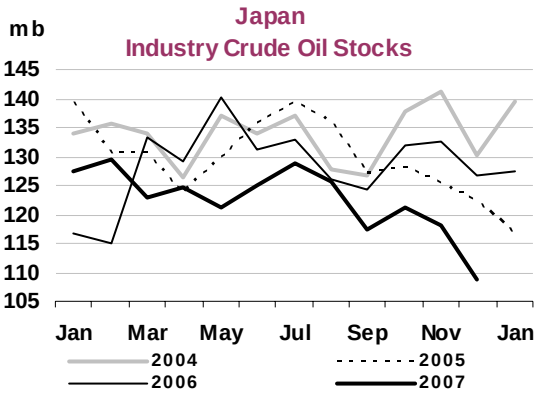
Product inventories in Europe rose by 9.0 mb in December, as refinery throughputs increased and high diesel prices drew in imports from around the world. Distillate stocks increased by 6.7 mb despite winter heating demand, while gasoline and fuel oil added 1.6 mb and 0.6 mb respectively. The biggest distillate stock build was in France, where levels increased 4.8 mb, while in the Netherlands, they rose 1.9 mb. Meanwhile, Germany and the UK saw small offsetting draws of 1.5 mb and 0.8 mb respectively. Despite the December increase, total European distillate stocks remain near the bottom of their five-year range in contrast with above-range levels for the first half of 2007. The IEA has been notified of an under-counting of Swedish distillate stocks, which will be included when a full historical perspective is available.

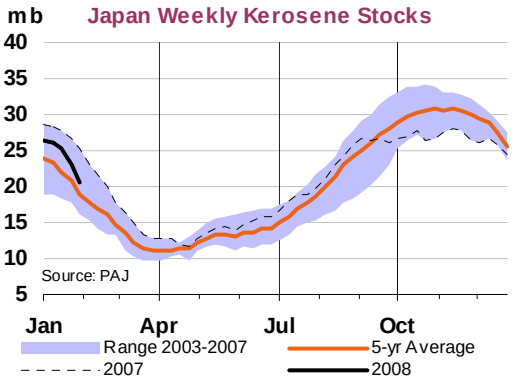
Preliminary January data for the EU-15 and Norway show a strong product stock build, largely of distillates, as temperatures were warmer-than-average. Distillate levels rose by 12.1 mb, while gasoline and fuel oil saw smaller increases of 2.5 mb and 1.2 mb respectively. Product stocks in the Amsterdam-Rotterdam-Antwerp region rose by 2.4 mb in January, mainly on a large gasoline stock build. Indeed, gasoline stocks are now at their highest level ever recorded, following strong output and lower-than-average exports to the US and elsewhere.

OECD Pacific

Industry stocks in the Pacific region fell by 16.6 mb in December. While the fall was driven by crude stocks, which were 10.0 mb lower, total products and 'other oils' fell by 4.1 mb and 2.5 mb respectively. In crude, the draw was mainly in Japan, where stocks fell by 9.2 mb, which, if confirmed, would be a fall to the lowest level in at least 20 years. The Japanese crude draw partly stems from above-average refinery throughputs in November and December. Total Pacific crude stocks at end-December have now fallen to

150 mb, 10 mb below their five-year range and nearly 20 mb below their five-year average. Preliminary Japanese data for January from the Petroleum Association of Japan (PAJ) show a further crude stock draw of 1.7 mb. In part these developments appear to show a reluctance of refiners to hold large crude stocks when weak margins are causing discretionary run cuts. But it also reflects the structural shrinking of Japan's overall crude refining capacity.



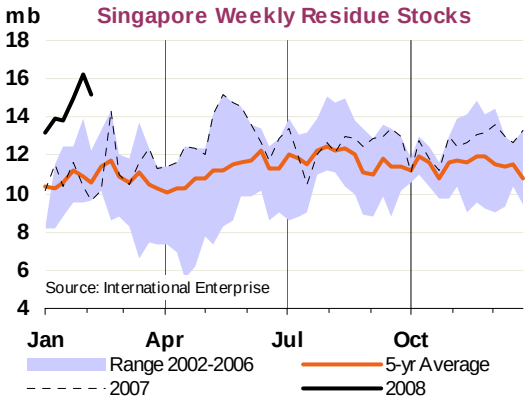


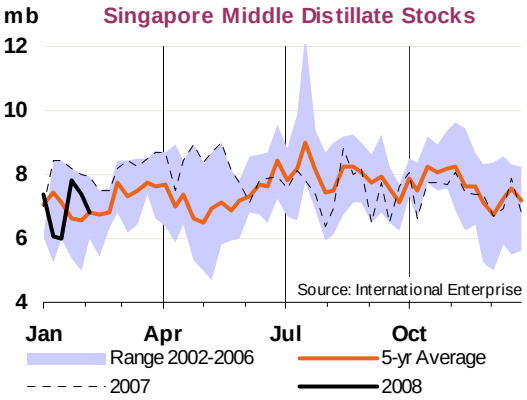
In contrast, most of the product stock draw took place in Korea, where levels were down 3.3 mb. 'Other products' fell by 2.3 mb, distillates by 1.3 mb and gasoline by a mere 0.1 mb. Residual fuel oil inventories increased by 0.4 mb. In Japan, total product stocks fell by 0.9 mb despite above-average refinery runs.

Preliminary January product stock data for Japan from PAJ show a small draw of 1.1 mb as refinery runs fell again, partly due to the weak margin environment. Notably, kerosene stocks fell by 3.7 mb, with a smaller dip in residue stocks. Gasoil/diesel inventories rose 1.2 mb, while there were smaller increments for gasoline, naphtha and jet fuel.

Recent Developments in Singapore Stocks

Product stocks in Singapore, as reported by International Enterprise, rose by 3.4 mb in January. The increase was dominated by a strong rise in residual fuel oil stocks of 2.8 mb to their highest level ever. While in part this stems from lower regional demand, notably from China, and a steady influx from outside the region, the picture is somewhat distorted by new large fuel oil storage capacity commissioned in December. Light distillate inventories rose by 540 kb, while middle distillates were flat in January. Both remain in line with five-year averages.

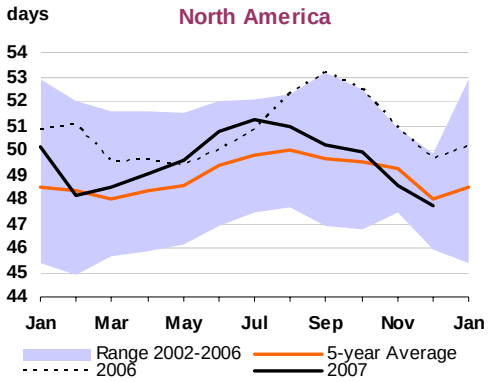


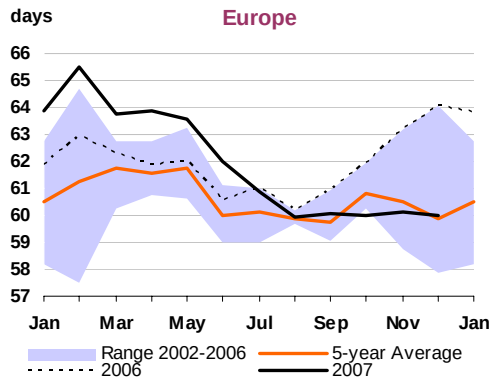


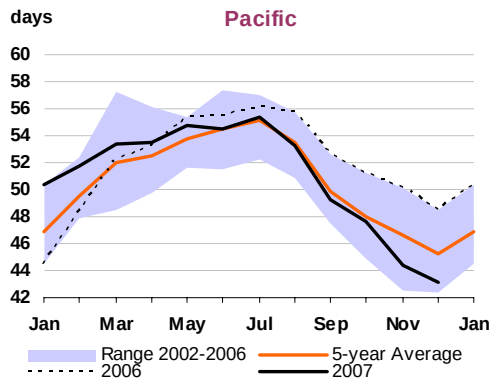
Regional OECD End-of-Month Industry Stocks

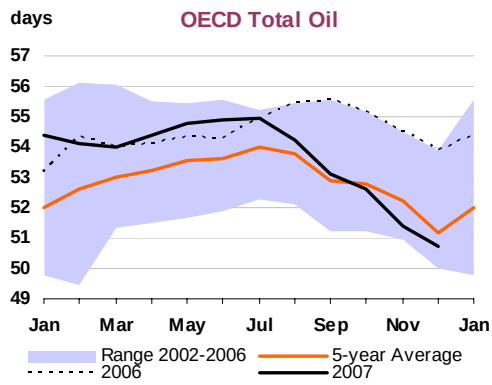
(in days of forward demand and millions barrels of total oil)

Days[1]

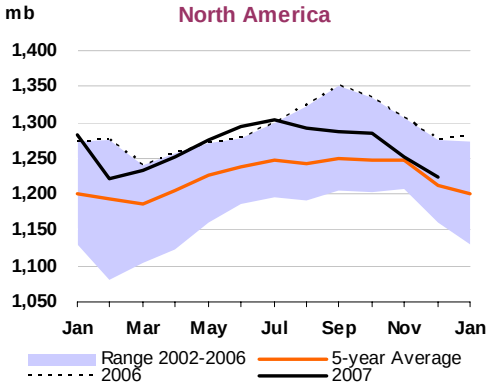


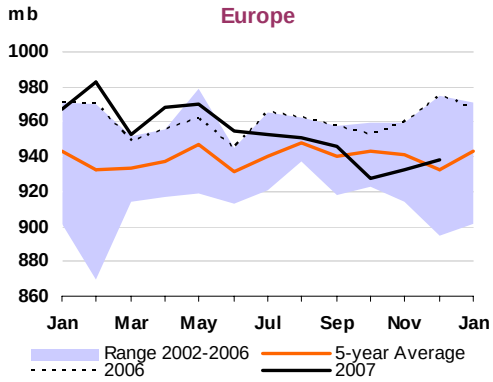


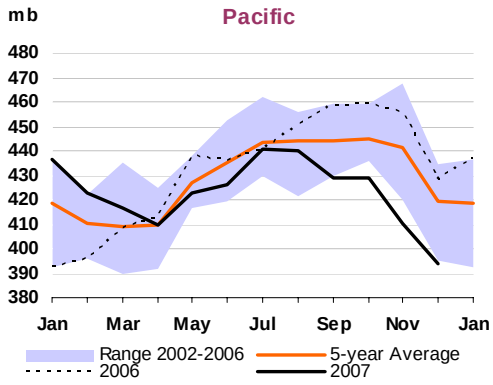


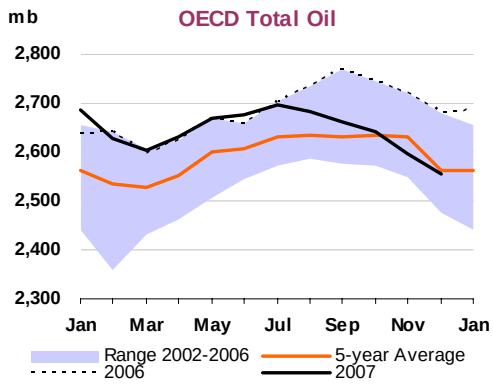


Million Barrels







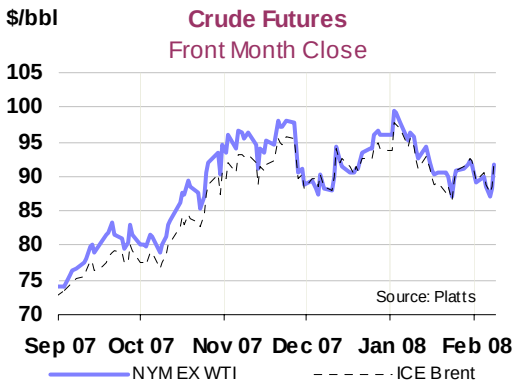


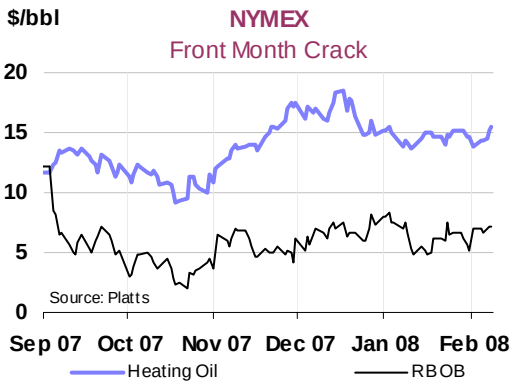
1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

- **Crude oil prices are little changed from mid-January at just over $90/bbl**, pressured by bearish US economic data, warmer weather in Europe and Japan and a stock build in OECD regions (based upon preliminary data). But some countervailing support came from interest rate cuts, a $150 billion stimulus package for the US economy and crude production shut-ins in Nigeria and the North Sea.
- **Refined product prices fell more than crude** on rising gasoline stocks in the US and warmer weather in Europe and Japan. Chinese import needs have declined from December/January highs as fuel shortages eased and pre-Lunar New Year buying ceased, leading to weaker Asian fundamentals.
- **Already-weak refining margins fell further** due to product prices' relative weakness, causing economic run cuts in all three OECD regions. The exception was the US Gulf Coast, where margins rose due to a slight rebound in gasoline cracks – but there too, cracking margins remain negative.
- **Freight rates in January continued their dramatic fall from December highs**, as seasonal refinery maintenance and some discretionary run cuts curbed VLCC demand in the Middle East. Clean tanker rates softened slightly in January and remain around seasonal averages.



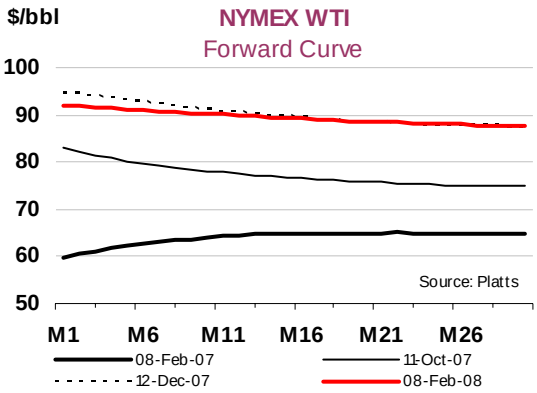


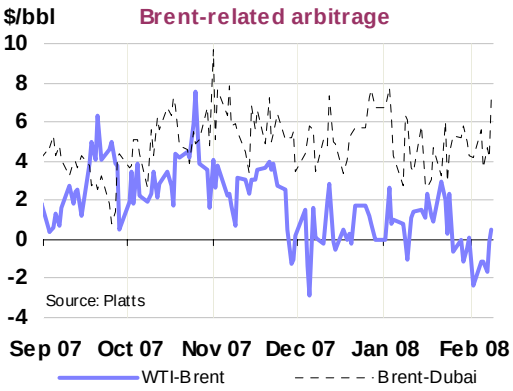
Overview

Crude oil prices are little changed from mid-January at just over $90/bbl, although economic worries, stemming mainly from the US, continued to cast a pall over the prospects for demand growth. The IMF revised down GDP growth figures for the US, while a steady stream of bearish data on consumer and business confidence, jobless claims and the housing market emanated from the world's largest oil consumer, pressuring prices and causing large day-to-day swings.

To offset the negative economic trend, the US Federal Reserve made two aggressive interest rate cuts totalling 125 basis points, eventually followed by the Bank of England. The US is also set to implement a $150 billion economic stimulus package. Moreover, February weather appears so far to be relatively mild in parts of the OECD. Japan is expected to see warmer-than-average temperatures in February-April while in much of Europe weather is currently warmer than average.

Some price support came from crude production outages in Nigeria, where Shell's inability to access pipelines made repairs impossible and caused the company to declare force majeure on some 130 kb/d of Bonny Light exports. This brings total shut-in capacity in Nigeria to around 700 kb/d. Rough weather conditions forced production shut-ins in the North Sea in early February. On the geopolitical front, the question of a nuclear Iran has been prominent in the media again in recent weeks, as have security issues in Iraq and a spat between Venezuela and ExxonMobil over the renationalisation of the latter's holdings in Venezuela. Meanwhile, OPEC decided in early February to keep its production levels unchanged, and comments by officials will likely revolve around the supposed need for a cut at the early-March meeting rather than an output increase.

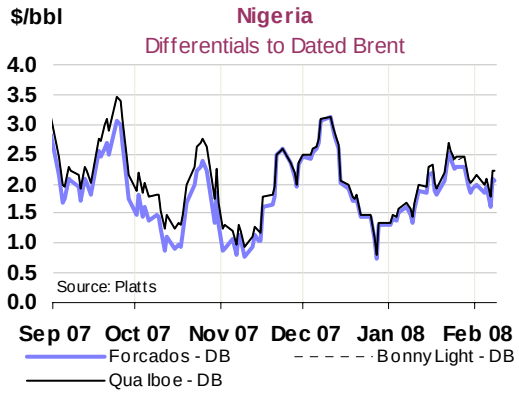


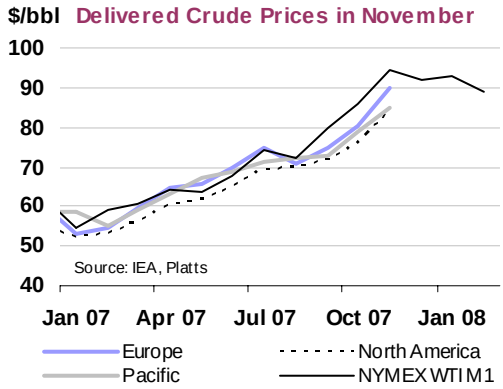


After a 40 mb OECD stock draw in December, preliminary data for the US, Japan, the EU-15 and Norway indicate a 20 mb rise in January. Several large weekly stock build headlines in the US had tempted talk of a loosening of markets, but a step back and a more global perspective show that this is only really true for US gasoline. However, the onset of seasonal refinery maintenance generally results in rising crude stocks ahead of the peak summer demand. Additional economic run cuts over the past few weeks amid weak refining margins should only accentuate this tendency (though conversely, product stocks should fall). As a consequence, near-month WTI futures contracts occasionally slipped into a shallow near-month contango in early February.

Spot Crude Oil Prices

Crude prices have remained relatively steady compared with product prices. The onset of refinery maintenance and some economic run cuts will ultimately impact upon demand for crude. On the other hand, China's recent oil and electricity supply shortages have caused it to seek record-high volumes of West African and other high-distillate-yield grades, which were needed to offset apparent crude stock draws.





As a consequence of lower refinery runs in the US, as well as sustained high imports and rising crude stocks, WTI and Mars have occasionally flipped into near-month contangos. Also, with Brent supported by North Sea and Nigerian outages, the North Sea benchmark has risen to a slight premium over WTI. Within the US, WTI has remained quite steady overall versus common US Gulf Coast grades such as Mars, LLS and even far heavier crudes such as Maya.

West African and other light sweet Atlantic Basin crudes are benefiting from the above-mentioned outages as well as Asia's thirst for transport fuels. Nigerian premia to Brent have risen since early January, as have Mediterranean grades such as Azeri Light and Saharan Blend. The prospect of a restart of Nigeria's Warri and Kaduna refineries, which would leave less domestic crude for exports, would serve to further underpin West African crude strength. In the Far East, crude production outages in Australia and Papua New Guinea have served to support Tapis prices, again making inflows from the west more attractive.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, $/bbl)

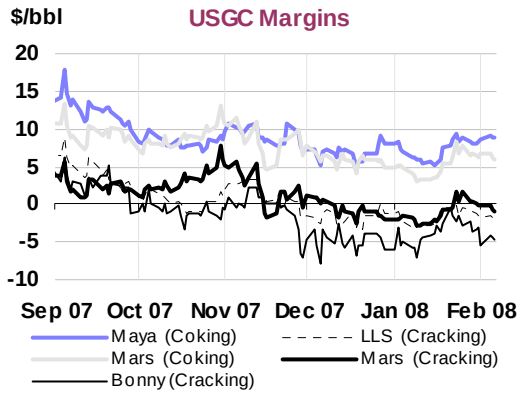
	Nov	Dec	Jan	Jan-Dec Avg Change	%	Week Commencing: 07 Jan	14 Jan	21 Jan	28 Jan	04 Feb
Crudes										
Dated Brent	92.61	90.97	92.00	1.02	1.1	94.29	90.12	88.31	91.90	89.80
Brent (Asia) Mth1 adjusted	92.85	90.95	92.18	1.23	1.3	95.05	90.86	88.28	91.71	89.52
WTI (Cushing) Mth1 adjusted	94.74	91.37	92.98	1.62	1.8	94.71	91.54	89.47	91.14	89.10
Urals (Mediterranean)	90.24	88.76	89.26	0.50	0.6	91.50	87.44	85.70	88.94	86.10
Dubai Mth1 adjusted	86.87	85.58	87.37	1.79	2.1	89.83	86.32	83.92	87.01	85.21
Tapis (Dated)	97.20	95.72	97.45	1.73	1.8	99.88	96.06	93.96	97.39	95.36
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	2.12	0.39	0.98	0.59		0.43	1.42	1.16	-0.76	-0.70
Urals (Mediterranean)	-2.37	-2.21	-2.74	-0.53		-2.79	-2.68	-2.61	-2.95	-3.70
Dubai Mth1 adjusted - Dated Brent	-5.74	-5.40	-4.63	0.76		-4.46	-3.81	-4.39	-4.89	-4.60
Tapis (Dated)	4.59	4.75	5.45	0.70		5.60	5.94	5.65	5.49	5.56
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.35	0.22	0.25	0.04		0.30	0.16	0.16	0.42	0.31
Forward WTI Cushing Mth1-Mth2 adj	0.91	0.08	0.34	0.26		0.38	0.44	0.39	0.12	-0.05

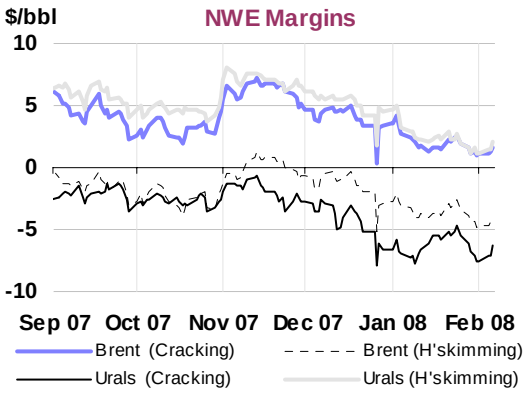
Source: Platts

As for sour grades, DME Oman futures prices recently rose to a strong premium to spot Dubai. There is concern that this reflects the imbalance of market participation, with most Asian refiner trade still linked to term deals. Russian Urals saw discounts to Brent widen on lower demand for the former from European refiners and higher Iraqi output. Conversely however, Urals slipped into a discount versus Oman, due to the latter's strength, increasing the viability of shipping Urals to Asia.

Refining Margins

Refining margins were almost all down in January, bar a mild recovery on the US Gulf Coast. Sustained outperformance of crude over products – despite a slight downtick in outright prices – has kept margins very weak or even negative in key refining areas. This has prompted run cuts on the US West Coast, Northwest Europe and the Mediterranean, and Japan and Korea. The greatest downturn was on the US West Coast, where weak gasoline crack spreads in particular have dragged once-high cracking margins into negative territory. The US Gulf Coast saw margins improve briefly, but cracking margins all remain negative. Europe and Asia saw a similar deterioration.





Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Nov 07	Dec 07	Jan 08	Jan 08-Dec 07	09 Jan	16 Jan	23 Jan	30 Jan	06 Feb
NW Europe	Brent (Cracking)	6.17	3.89	2.08	-1.81	2.58	1.61	1.96	1.73	1.19
	Urals (Cracking)	7.03	5.07	2.57	-2.49	3.13	2.24	2.50	1.79	1.46
	Brent (Hydroskimming)	0.00	-1.61	-3.51	-1.90	-3.32	-3.86	-3.28	-3.75	-4.56
	Urals (Hydroskimming)	-0.83	-2.91	-5.41	-2.50	-5.29	-5.50	-5.14	-6.01	-6.71
Mediterranean	Es Sider (Cracking)	5.64	3.41	2.49	-0.92	2.09	2.48	2.97	2.30	2.15
	Urals (Cracking)	6.65	4.19	2.58	-1.61	2.06	2.55	3.25	2.44	1.75
	Es Sider (Hydroskimming)	-0.95	-2.34	-3.27	-0.93	-3.81	-3.19	-2.66	-3.34	-3.67
	Urals (Hydroskimming)	-1.93	-4.46	-6.25	-1.79	-7.16	-6.14	-5.41	-6.03	-7.12
US Gulf Coast	Bonny (Cracking)	0.43	-4.83	-2.95	1.89	-4.86	-3.56	-1.44	-1.93	-3.25
	Brent (Cracking)	-0.75	-4.83	-3.66	1.18	-5.74	-3.98	-2.03	-2.71	-4.11
	LLS (Cracking)	1.26	-1.77	-1.57	0.20	-2.49	-2.63	-0.50	-0.89	-1.35
	Mars (Cracking)	2.07	-0.82	-1.08	-0.26	-1.94	-2.46	-0.32	0.58	-0.31
	Mars (Coking)	8.42	5.79	5.20	-0.59	4.24	3.37	6.01	6.95	6.66
	Maya (Coking)	9.08	6.88	7.20	0.31	6.51	5.46	7.88	8.29	8.92
US West Coast	ANS (Cracking)	1.66	2.95	-3.66	-6.61	-2.84	-7.06	-5.91	-1.11	0.83
	Kern (Cracking)	6.06	8.30	0.67	-7.63	0.59	-2.34	-1.90	4.11	5.66
	Oman (Cracking)	4.24	-2.91	-6.80	-3.89	-7.76	-10.45	-7.84	-3.71	-3.06
	Kern (Coking)	15.09	14.30	9.49	-4.81	9.06	2.63	5.55	16.98	16.22
Singapore	Dubai (Hydroskimming)	0.21	-2.99	-3.75	-0.75	-4.16	-3.94	-3.21	-3.39	-4.91
	Tapis (Hydroskimming)	-5.07	-4.77	-6.14	-1.36	-6.50	-5.87	-5.80	-6.57	-6.70
	Dubai (Hydrocracking)	4.91	2.12	1.51	-0.61	0.93	1.43	2.03	1.72	0.71
	Tapis (Hydrocracking)	-1.10	-1.10	-2.66	-1.56	-2.85	-2.37	-2.43	-3.33	-3.51
China	Cabinda (Hydroskimming)	-4.36	-6.28	-4.10	2.18	-6.38	-3.49	-3.00	-2.25	-2.25
	Daqing (Hydroskimming)	-6.95	-8.02	-8.27	-0.25	-9.31	-8.69	-7.71	-7.51	-7.51
	Dubai (Hydroskimming)	-0.41	-4.91	-4.75	0.16	-5.76	-5.09	-4.00	-3.79	-3.79
	Daqing (Hydrocracking)	-0.35	-2.47	-2.80	-0.32	-3.55	-3.16	-2.49	-2.23	-2.23
	Dubai (Hydrocracking)	4.31	0.09	0.48	0.39	-0.74	0.24	1.19	1.46	1.46

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

Spot Product Prices

Most product crack spreads declined as gasoline stocks rose in the US and weather in Europe and Japan turned warmer in late January and early February. US weather is currently colder, but is not reflected in year-on-year comparisons, as February 2007 was unusually cold there. In Europe, surging **gasoil/diesel** prices in December caused an influx of barrels from around the world, but German domestic heating oil stocks still fell to their lowest level in 20 years, partly because of high prices. Chinese thirst for gasoil/diesel appears to have declined for the time being, following record-high imports in December and January. February diesel net imports are expected to be around 25 kb/d, far lower than the 190 kb/d seen in December and January following fuel shortages and ahead of Lunar New Year celebrations. The Asian jet/kerosene market too has weakened, as warmer weather in Japan and elsewhere has seen excess volumes exported. China is set to buy only 1.7 mb of jet fuel for March, following 3 mb purchases for February.

Gasoline markets have weakened due to surging stocks in the US and Europe, and cracks have remained relatively flat in January/early February. The US is drawing in high import volumes, and US West Coast gasoline's premium over Singapore barrels has recovered from a weak patch in mid-January, thus opening up further arbitrage possibilities. On the other hand, European gasoline stocks held in the Amsterdam-Rotterdam-Antwerp (ARA) region rose to their highest ever after export flows to the US and elsewhere dipped. In Asia, gasoline cracks gained some strength due to the absence of regular Chinese exports for February, following greater domestic needs due to the recent fuel shortages there. Naphtha cracks meanwhile declined further as large parts of the Asian petrochemical sector headed into maintenance and India looks set to increase exports even further.

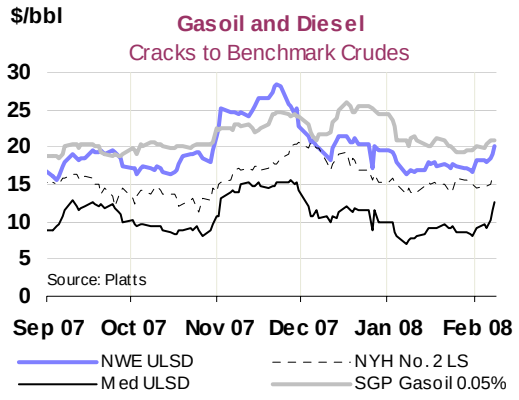
Spot Product Prices

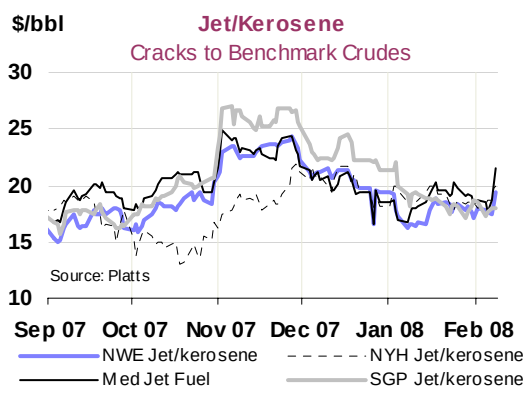
(monthly and weekly averages, $/bbl)

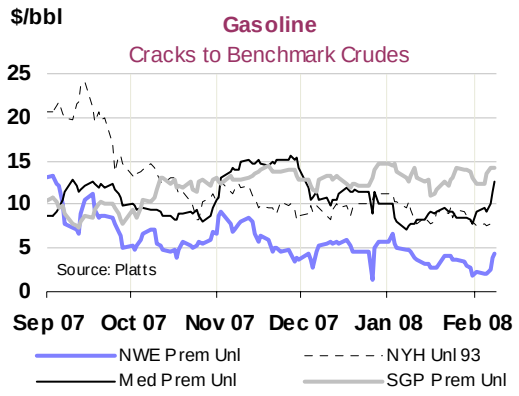
	Nov	Dec	Jan	Jan-Dec		Week Commencing:					Nov	Dec	Jan
				Change	%	07 Jan	14 Jan	21 Jan	28 Jan	04 Feb			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	98.79	95.74	95.83	0.08	0.1	98.60	93.05	92.26	94.53	92.76	6.18	4.77	3.83
Naphtha	91.26	92.60	91.43	-1.17	-1.3	92.89	90.23	89.06	90.03	86.93	-1.35	1.63	-0.57
Jet/Kerosene	115.76	111.42	109.62	-1.79	-1.6	110.74	108.06	106.47	109.61	107.92	23.15	20.44	17.62
ULSD	118.06	111.09	109.38	-1.71	-1.5	110.95	107.71	105.76	109.10	108.58	25.44	20.12	17.38
Gasoil .2%	110.76	107.98	106.83	-1.15	-1.1	108.40	105.01	103.40	106.58	105.56	18.15	17.00	14.83
LSFO 1%	75.03	78.16	77.79	-0.37	-0.5	80.68	77.10	75.19	74.70	72.61	-17.59	-12.82	-14.21
HSFO 3.5%	73.62	68.87	68.53	-0.34	-0.5	70.50	67.08	65.62	66.98	63.07	-19.00	-22.10	-23.46
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	98.06	95.02	95.61	0.59	0.6	97.64	93.94	92.89	93.28	92.57	7.82	6.26	6.35
Naphtha	90.09	91.39	91.19	-0.20	-0.2	92.39	90.18	89.11	89.89	86.78	-0.14	2.63	1.93
Jet Aviation fuel	113.50	108.75	108.00	-0.75	-0.7	109.15	106.88	105.28	107.79	105.40	23.26	19.99	18.74
Gasoil .2%	112.29	107.88	106.87	-1.00	-0.9	107.77	105.80	104.29	106.91	106.66	22.05	19.12	17.61
LSFO 1%	77.32	76.02	75.94	-0.08	-0.1	77.70	74.14	73.13	74.27	71.22	-12.92	-12.74	-13.32
HSFO 3.5%	72.99	68.07	66.71	-1.36	-2.0	67.54	65.36	64.78	65.71	62.11	-17.25	-20.69	-22.55
New York Harbour, Barges											**Differential to WTI**		
Super Unleaded	105.27	101.10	101.98	0.88	0.9	103.78	99.80	98.62	99.45	96.93	10.53	9.73	9.00
Unleaded	101.59	97.34	97.99	0.64	0.7	99.61	95.75	94.70	96.13	93.12	6.86	5.98	5.01
Jet/Kerosene	113.78	111.68	111.92	0.24	0.2	113.43	111.16	107.69	109.49	108.14	19.04	20.32	18.94
No. 2 (Heating Oil)	108.54	107.80	107.29	-0.52	-0.5	108.20	106.13	103.51	105.71	103.59	13.80	16.44	14.31
LSFO 1%	71.65	72.52	74.39	1.87	2.6	76.31	73.40	71.36	72.41	67.67	-23.08	-18.85	-18.59
No. 6 3%	72.26	69.10	69.08	-0.02	0.0	71.45	68.29	64.58	67.37	64.49	-22.48	-22.26	-23.90
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	100.29	98.38	100.51	2.13	2.2	103.13	98.24	96.87	100.51	98.56	13.42	12.80	13.14
Naphtha	91.38	92.24	93.13	0.88	1.0	94.77	92.51	90.95	93.07	89.94	4.51	6.66	5.76
Jet/Kerosene	112.77	108.31	106.18	-2.14	-2.0	108.86	105.10	101.90	105.01	102.81	25.90	22.73	18.81
Gasoil .5%	106.97	105.69	105.70	0.01	0.0	108.82	104.77	101.66	104.07	102.77	20.10	20.11	18.33
LSWR Cracked	77.01	78.03	78.78	0.75	1.0	81.01	77.70	75.81	78.39	77.49	-9.85	-7.55	-8.59
HSFO 180 CST	77.57	73.50	73.15	-0.35	-0.5	76.21	71.94	69.00	72.07	68.46	-9.30	-12.08	-14.21
HSFO 380 CST 4%	77.51	74.30	73.96	-0.34	-0.5	77.07	72.67	70.01	72.83	68.66	-9.35	-11.28	-13.41

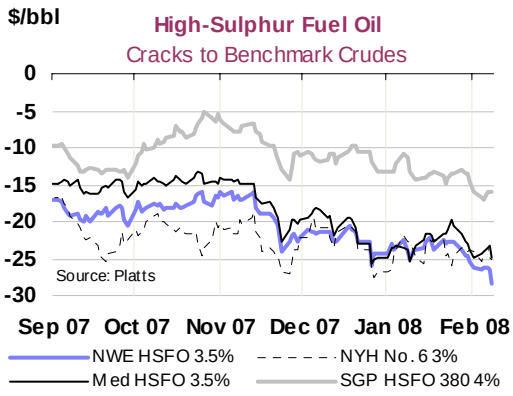
Source: Platts

Fuel oil discounts to crude widened on growing stocks and weak fundamentals. China has continued to limit imports after redirecting domestic crude to independent 'teapot' refineries. As a consequence, independently-held Singapore fuel oil stocks surged to their highest level ever in January. Strong inflows from the west assisted this development, but it is also due to substantial new storage capacity being commissioned at the end of last year. What remains to be seen is how the electricity shortages in China develop, and to what extent this requires fuel oil or diesel imports to serve utility needs. To a large extent this will depend on the restoration of coal stocks at power generators over the coming months and the availability of coal supplies during peak demand periods (see *Frozen Prices + Freezing Weather = Energy Shortages* on page 14-15).









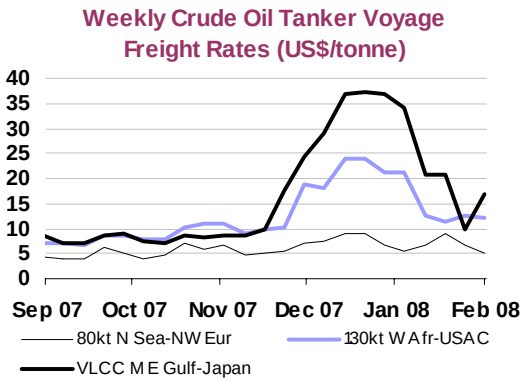
End-User Product Prices in January

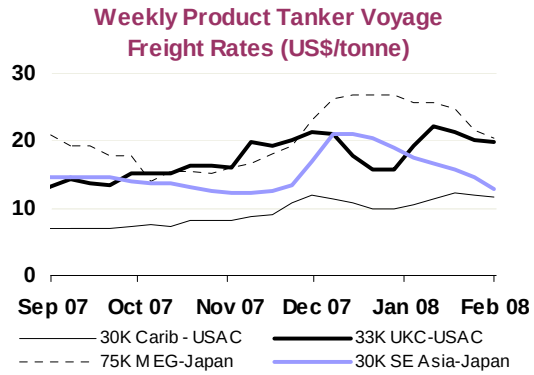
End-user product prices were mixed in January, but were mostly up, lagging December's surge in spot prices. Gasoline retail prices were up 2.0% on average, in US dollars, ex-tax, though this masks some divergent movements. Germany saw end-user gasoline rise by 10.4% in December, in US dollars, ex-tax, and France had an increase of 5.5%, while Italy, Spain and the UK saw dips in the 1-3% range. Average diesel prices were up 0.5%, with rises of over 3% in France and Japan offset by a similar dip in Italy. Heating oil prices on average rose 1.8% in US dollars, ex-tax, while low-sulphur fuel oil for industry saw strong gains of 5-10% in Europe.

Freight

In January, crude tanker rates completed their dramatic fall from the multi-year highs of December to below five-year seasonal averages. Westbound VLCC demand in the Middle East has decreased as the arrival horizon for long-haul voyages now falls well within the spring refinery maintenance period. Discretionary refinery run cuts in several regions may also have undermined dirty rates in January, while transit delays in the Turkish Straits remain very low compared with previous years. Clean tanker rates softened slightly in January and remain around seasonal averages.

With refinery maintenance typically hitting a seasonal peak in March, prompt westbound crude tanker demand has fallen in the Middle East. This has been exacerbated by discretionary run cuts in the US, Europe and the Far East, further undermining demand for dirty vessels. Middle Eastern tanker availability has consequently risen, easing freight rates. From the Middle East to Japan and the US Gulf respectively, VLCC rates were at $17/tonne and $25/tonne in early February, down from $34/tonne and $60/tonne at the start of 2008. By the end of January, Suezmax and Aframax rates also fell from December highs to within seasonal ranges. Early February did however see a small uptick in dirty rates from the Middle East Gulf to Japan.



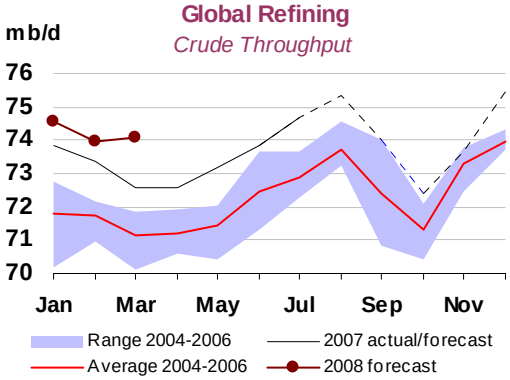


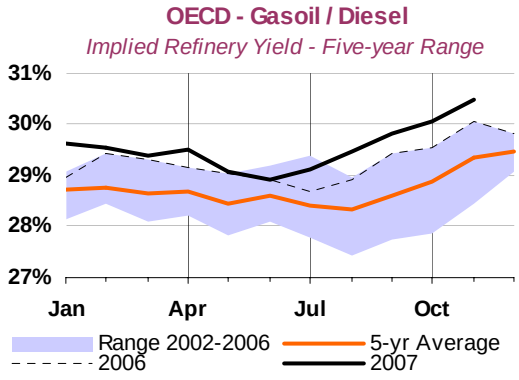
Intra-Asian clean rates softened in January on signs of continued weak regional kerosene demand and ample vessel availability in the region. High Chinese product imports remained supportive in January, although sales dropped off at the start of the Lunar New Year holiday, prompting a hiatus in chartering. Transatlantic clean rates improved slightly until mid-January, but weakened again as less gasoline flowed towards the US.

REFINING

Summary

- **Refinery throughputs in January and February** have been pressured by the most extensive economic run cuts in five years. Coupled with seasonal maintenance, February global refinery crude throughput is therefore forecast to average 74.0 mb/d, down 0.6 mb/d from January. Consequently, estimated 1Q08 crude throughput at 74.2 mb/d, is down 0.3 mb/d from last month's projection. However, runs are still 0.9 mb/d higher year-on-year, driven by increases in China, Other Asia and Russia.





- **December crude throughputs have been revised upwards by 0.5 mb/d** on the back of much stronger-than-anticipated Middle East crude throughput, and higher-than-expected Russian and Chinese runs. Provisional data for OECD regions indicate that crude throughput was 39.8 mb/d, marginally below expectations.

- **November OECD gasoil/diesel yields reached another record level**, following the installation of new upgrading capacity. The increase in US distillate yields continues apace, as refiners concentrate on the production of ultra-low-sulphur diesel rather than boosting gasoline supplies ahead of the spring - preferring instead to import gasoline blendstocks from Europe.

- **Russian refinery throughput averaged 4.6 mb/d in 2007, significantly ahead of the five-year average of 4.0 mb/d.** Increased crude throughput has come from a mixture of complex and hydroskimming refineries, which, given the poor state of hydroskimming margins, suggest that upstream and export tax regimes are partly responsible for the growth. However, the current tax system appears to penalise investment in upgrading capacity, which may become an issue for the medium term.

Global Refinery Throughput

January saw reports of refiners trimming crude runs in response to the weak margin environment in Europe, the Pacific and the US. European refiners are reported to have cut runs by 150 kb/d, including Preem's Gothenburg, Conoco's Wilhelmshaven and Whitegate, and Petroplus's Belgian refineries in Northwest Europe and Hellenic Petroleum's Elefsis refinery in the Mediterranean. Other refineries are likely to have also implemented cuts where possible, given that the January Urals hydroskimming margin was negative $5.41/bbl in NWE.

US refineries cut runs in most regions in January and early February, although the reported cuts appear heavier on the West and Gulf Coasts. Poor margins, driven by weakness in gasoline cracks, have forced several refiners, notably Valero, Tesoro and Alon, to cut back runs by around 5% at some plants. Run cuts are also likely on the US East Coast, as warmer weather in the US Northeast reduced demand for heating oil, which normally drives winter margins. Furthermore, the weakness in margins has already prompted some refiners to re-evaluate planned capital spending programmes, with a view to delaying or cancelling projects.

In the Pacific, Japanese refiners have moved quickly to curtail runs, dropping crude throughput by 7% from the December peak. Some refiners are planning to raise exports to offset the weakness in domestic kerosene demand. Conversely, four of the five refiners in Korea have cut runs to reduce export volumes; while the fifth, GS Caltex, is preparing for a turnaround at its plant, following operational problems with its recently commissioned heavy oil upgrading unit.

First-quarter global refinery crude throughput is projected to average 74.2 mb/d, 0.3 mb/d lower than in last month's report, on the back of a weak margin environment and widespread economic run cuts. Further downward revision to 1Q08 estimates is possible if the current weak margins persist. Annual growth of 0.9 mb/d is concentrated in China, Other Asia and the FSU. Weaker Latin American throughput reflects the operational problems at the Aruba refinery and some Venezuelan refineries. Offsetting the impact of weaker margins, renewed pressure from the Chinese central government on state oil companies looks likely to result in higher-than-forecast crude throughput in China, lifting our forecast by 0.2 mb/d for the quarter.

December global crude throughput is estimated to have averaged 75.5 mb/d, 0.5 mb/d higher than estimated in last month's report, given a reported surge in Middle East crude runs, largely due to higher Saudi Arabian crude throughput. Furthermore, crude throughput in Iran and Kuwait continued to run 50-100 kb/d ahead of our forecasts in December. Consequently, fourth-quarter global crude throughput is revised upward by 0.3 mb/d to 73.8 mb/d, after factoring in smaller upward revisions to November (+0.1 mb/d) and October (+0.3 mb/d), following upwardly revised Belgian crude throughput and higher-than-forecast fourth quarter crude runs in Indonesia.

Global Refinery Crude Throughput[1]

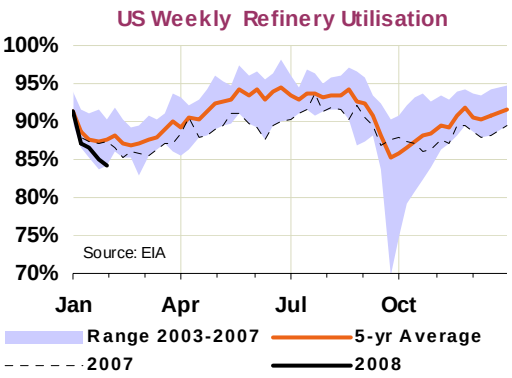
million barrels per day

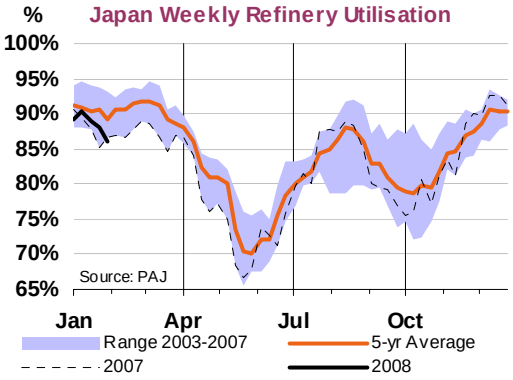
	Jul 07	Aug 07	Sep 07	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08
OECD Crude Runs									
North America	18.7	18.7	18.1	17.7	*18.0*	*18.4*	*18.0*	*17.9*	*17.8*
Europe	13.8	13.8	13.7	13.3	*13.4*	*13.8*	*13.8*	*13.4*	*13.4*
Pacific	7.0	7.2	6.7	6.7	*7.3*	*7.6*	*7.5*	*7.2*	*7.2*
Total OECD	39.4	39.7	38.5	37.7	*38.7*	*39.8*	*39.3*	*38.4*	*38.4*
NON-OECD Crude Runs									
FSU	5.9	5.9	*5.7*	*5.4*	*5.9*	*5.9*	*5.9*	*6.0*	*6.0*
Europe	0.7	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.5	6.5	6.6	6.5	*6.7*	*6.9*	*6.9*	*7.0*	*6.8*
Other Asia	*8.1*	8.3	*8.4*	*8.1*	*8.2*	*7.9*	*8.3*	*8.3*	*8.3*
Latin America	*5.5*	5.6	*5.5*	*5.3*	*5.4*	*5.3*	*5.4*	*5.4*	*5.4*
Middle East	*6.2*	6.3	*6.2*	*6.1*	*5.6*	*6.5*	*5.7*	*5.8*	*5.9*
Africa	*2.4*	2.3	*2.3*	*2.4*	*2.3*	*2.3*	*2.3*	*2.4*	*2.4*
Total Non-OECD	35.3	35.6	35.5	34.7	34.9	35.6	35.3	35.6	35.7
Total Crude Runs	*74.7*	*75.3*	*74.0*	*72.4*	*73.7*	*75.5*	*74.6*	74.0	*74.1*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

US crude runs averaged around 14.9 mb/d in January, significantly below our estimate. Having started the month at 15.8 mb/d, crude runs declined rapidly over the course of the month to end at 14.5 mb/d, as a result of the factors discussed above. Further weakness in February is likely, depending on the evolution of margins. Should margins deteriorate from current levels, run cuts may be more prevalent at cracking refineries as these also seek to curtail crude runs. The purchase of cheaper atmospheric residue would allow them to continue running upgrading capacity, which remains profitable, and simultaneously purchase distillate requirements from the market. However, such a strategy entails significant costs in terms of additional freight and refiners have not had the need to consider such strategies since 2002, the last time there was a protracted period of poor margins. The switch to summer grade gasoline in the coming months is seen as a possible catalyst for boosting margins, due to the increased complexity of

blending summer grade gasoline with ethanol, the use of which continues to rise in the US. Furthermore the restoration of full operations at BP Texas City, likely to be completed in the second quarter, will significantly improve the supply picture for Gulf Coast gasoline.





Japanese weekly data point to a declining trend in crude runs in January, although not as dramatic as in the US. Nevertheless, crude runs were off 7% from their mid-December peak by month-end and are estimated to average 4.2 mb/d for the month. We forecast crude runs to decline further in February, to an average of 4.1 mb/d, as the aforementioned economic run cuts curtail crude throughput. Nippon Oil, the largest refiner in Japan, recently highlighted the weakness in kerosene demand relative to historic heating requirements, pointing towards a breakdown of the relationship between demand for kerosene and heating degree days, due to the high price of kerosene relative to gas and electricity.

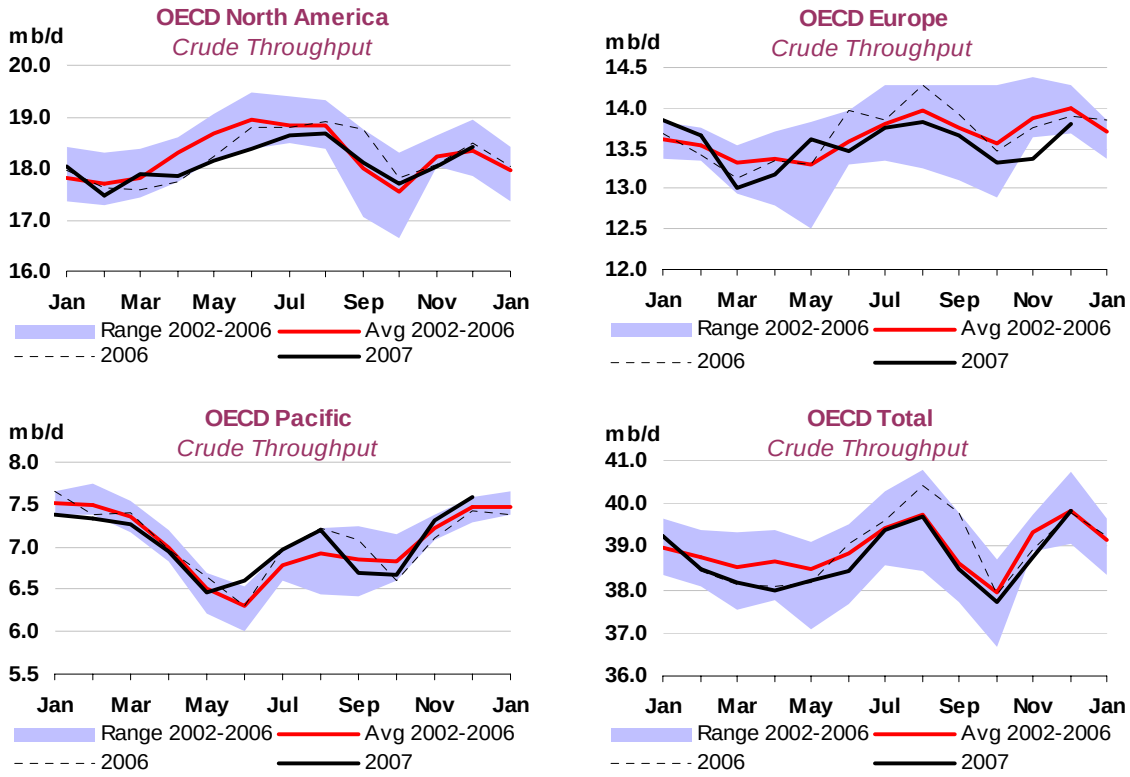
Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[2]	
	Jul 07	Aug 07	Sep 07	Oct 07	Nov 07	Dec 07	*Nov 07*	*Dec 06*	Dec 07	Dec 06
OECD North America										
US[3]	15.66	15.68	15.22	14.93	15.14	15.34	0.20	-0.03	87.94	88.37
Canada	1.79	1.86	1.78	1.53	1.66	1.86	0.20	0.06	92.09	89.10
Mexico	1.20	1.14	1.13	1.26	1.24	1.23	-0.01	-0.08	79.98	71.96
Total	18.66	18.69	18.13	17.71	18.04	18.43	0.39	-0.04	87.75	87.59
OECD Europe										
France	1.79	1.71	1.64	1.54	1.75	1.73	-0.01	-0.07	88.45	91.01
Germany	2.31	2.14	2.30	2.24	2.21	2.31	0.09	-0.02	95.42	95.63
Italy	1.89	1.91	1.85	1.82	1.73	1.95	0.22	-0.01	83.36	84.09
Netherlands	1.02	1.05	1.08	1.01	0.94	1.01	0.08	-0.02	83.46	84.63
Spain	1.15	1.16	1.16	1.08	1.07	1.13	0.06	-0.03	88.74	90.79
UK	1.55	1.67	1.57	1.62	1.55	1.52	-0.03	-0.12	80.30	87.09
Other OECD Europe	4.06	4.19	4.06	4.01	4.13	4.17	0.04	0.18	88.89	82.73
Total	13.76	13.84	13.67	13.33	13.38	13.81	0.43	-0.08	87.56	87.23
OECD Pacific										
Japan	3.86	4.15	3.66	3.69	4.03	4.29	0.26	0.11	91.72	89.57
Korea	2.39	2.31	2.35	2.30	2.58	2.57	-0.02	0.10	93.79	95.75
Other OECD Pacific	0.72	0.73	0.68	0.67	0.70	0.73	0.03	-0.05	90.16	96.32
Total	6.97	7.19	6.69	6.66	7.31	7.58	0.27	0.15	92.25	92.22
OECD Total	39.40	39.72	38.49	37.70	38.73	39.83	1.09	0.03	88.51	88.29

1 Estimate
2 Based on crude throughput and current operable refining capacity
3 US50

The relative importance of independent refiners in the US (and similarly Japan) suggests that average run-rates will be more responsive to the margin environment than in areas where refineries are predominantly owned by integrated or national oil companies. Independent refiners generally have no

upstream business with which to offset the weakness in refining profitability, and consequently will react more vigorously to restore profit margins in the face of over-supplied markets.



Provisional December data for the **OECD** show that crude runs reached 39.8 mb/d, up 1.1 mb/d from November and flat on December 2006 level. Stronger year-on-year crude runs in the Pacific, relative to both seasonal norms and the previous year reflect stronger demand for heating-related products and a small increase in Korean refining capacity. European crude throughput recovered in December from a weak November, driven by higher throughput in Germany, Italy, the Netherlands and Spain.

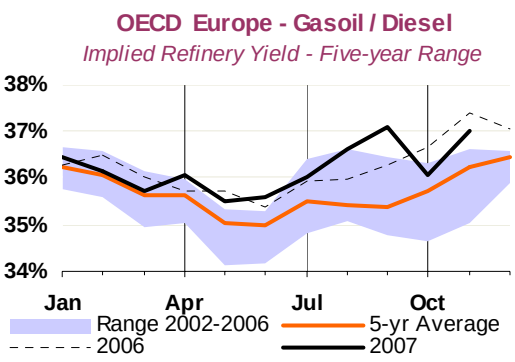
December **Middle East** crude runs were significantly ahead of our estimate, driven by a strong rebound in Saudi Arabian crude throughput. Reported Saudi Arabian crude throughput was exceptionally strong, at nearly 2.1 mb/d, 0.2 mb/d above nameplate capacity of 1.9 mb/d. This level of crude throughput is 0.8 mb/d higher than November, when the 0.4 mb/d Rabigh refinery was reported to be under maintenance. Pending confirmation of the level of crude throughput, we have left forecast Saudi crude runs in the range of 1.8 mb/d. Elsewhere, crude throughput in Iran and Kuwait continued to run 50-100 kb/d ahead of our forecasts in December, and we have lifted forecasts by 50 kb/d for each country. Conversely, operational problems at Iraqi refineries in January have cut forecasts by around 150 kb/d, following fires at refinery units and electricity supply problems which reduced crude throughput.

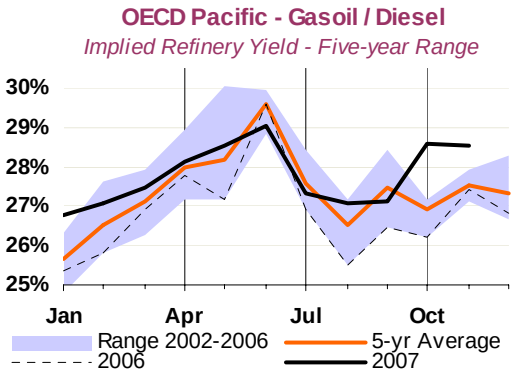
Latin American crude throughput in January is revised down by 0.1 mb/d, with further operational problems at PDVSA refineries reducing throughputs in Venezuela. Similarly, a fire and operational problems at Valero's Aruba refinery also reduced our estimate for February by 0.1 mb/d, with a prolonged outage of the vacuum tower likely to tighten US Gulf Coast vacuum gasoil markets. While reports suggest the Valero refinery has restarted some crude processing, the problems at PDVSA refineries seem more entrenched, possibly linked to reports of minimal spending on preventative maintenance.

Chinese December crude throughput hit a new record level of 6.9 mb/d, up by 0.1 mb/d on the month, and by 0.5 mb/d on previous year levels. Chinese state oil companies have raised crude throughput in response to renewed political pressure from central government to alleviate product shortages. The unattractive economics of refining crude as a result of capped domestic prices has been partly offset by the rising value of the Chinese currency against the US dollar and reports of payments by the Chinese government to at least partly compensate Chinese state oil companies for losses incurred. The continued supply of crude by state oil companies to independents, who have shunned processing fuel oil as part of their normal feedstock in recent months, and increased guidance from state refiners, suggest that 1Q08 crude throughput could average 6.9 mb/d. Diesel imports are estimated at 170 kb/d for January, down slightly from December's record 200 kb/d, while February imports are currently estimated at just 25 kb/d as weaker demand has cut the need to import such large volumes.

OECD Refinery Yields

OECD middle distillate yields reached a new record level in November, as European yields bounced back with the restart of hydrocracking capacity in France and despite the operational issues with Neste's Porvoo residue hydrocracker during the month. December data on gasoil/diesel yields could see further increases, given the restoration of the Neste hydrocracker and the continued premium of ULSD cracks to gasoline. North American middle distillate yields also reached record levels, driven by the continued trend of rising US diesel/gasoil yields. OECD Pacific gasoil/diesel yields were steady at 28%, following the start-up of LG Caltex's heavy oil upgrading unit. First-quarter gasoil/diesel yields will be depressed if recent reports of operational problems with this unit are accurate, but as was the case in early 2007, economic run cuts may depress overall fuel oil yields in the Pacific as refiners scale back crude throughput to limit exposure to weak hydroskimming margins.

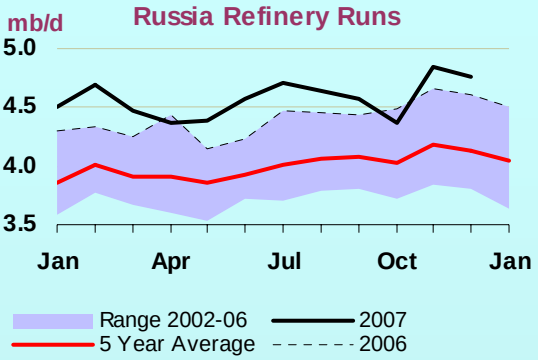




The corollary of the strengthening gasoil/diesel yield has been pressure on fuel oil yields which have been at or below the bottom of the five-year range for the OECD for much of 2007. This continues the long-term trend seen for many years. More recently it has been Europe and the Pacific that have driven the reduction. Year to date fuel oil yields have averaged 14.9% in Europe and 15.6% in the Pacific, a decline of 0.8 and 1.4 percentage points (5% and 8% respectively) from their respective five-year averages. North American fuel oil yields, already the lowest of the three OECD regions, have not witnessed such a move, largely as lower petroleum coke yields, possibly linked to increased downtime, has resulted in higher fuel oil yields compared with 2006.

Russian Refining – Driven by Economics or Taxes?

The Russian petroleum tax structure heavily incentivises the industry to export refined products, rather than crude oil. As a result, Russian crude throughput averaged 4.6 mb/d in 2007, a new post Soviet era record and an increase of 4% on 2006 and 15% above the five-year average. However, while this 'value added' strategy is common among oil producing countries, in Russia the tax structures may result in strategies which fail to properly promote the necessary long-term investment in the industry.



Refinery	Owner	Throughput Growth (kb/d)
Nizhegorod	Lukoil	84
Kirishi	Surgutneftgas	58
Ryazan	TNK-BP	49
Omsk	GazpromNeft	42
Afipsky	Rosneft	34
Komsomolsk	Rosneft	28
	Sub-total	**295**
	Others	289
	Total	**584**

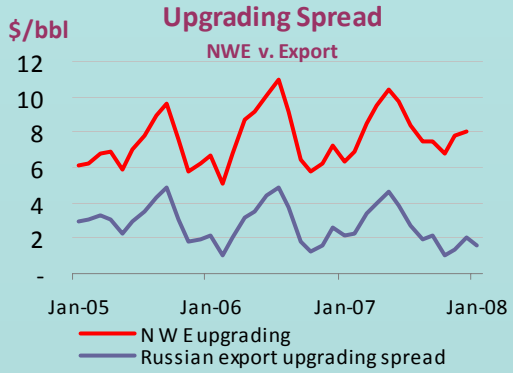
The 2004 change to the tax code has contributed to sharply higher product exports, concentrated in the six plants detailed above, which accounted for more than half the increase in Russian throughputs in 2007. As these refineries are owned by upstream producers, they face a clear choice between selling crude domestically, exporting it or refining it, taking into account a variety of factors, including:

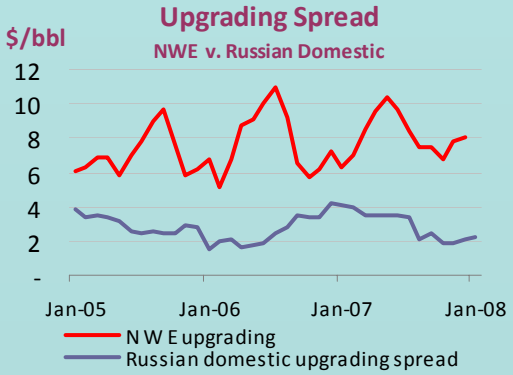
- domestic refining capacity and domestic product sales;
- crude and product pipeline capacity, (both domestic and export);
- access to alternative export infrastructure, e.g. rail or barge shipments; and
- the incentive provided by the Russian tax code to optimise between domestic and export sales of both crude and products.

The revenue flows to these companies are heavily influenced by the Russian tax code and can change dramatically depending on the evolution of world oil prices, providing significant incentives to integrated Russian oil companies to adjust their sales methods. Russian oil companies pay three separate taxes on their activities:

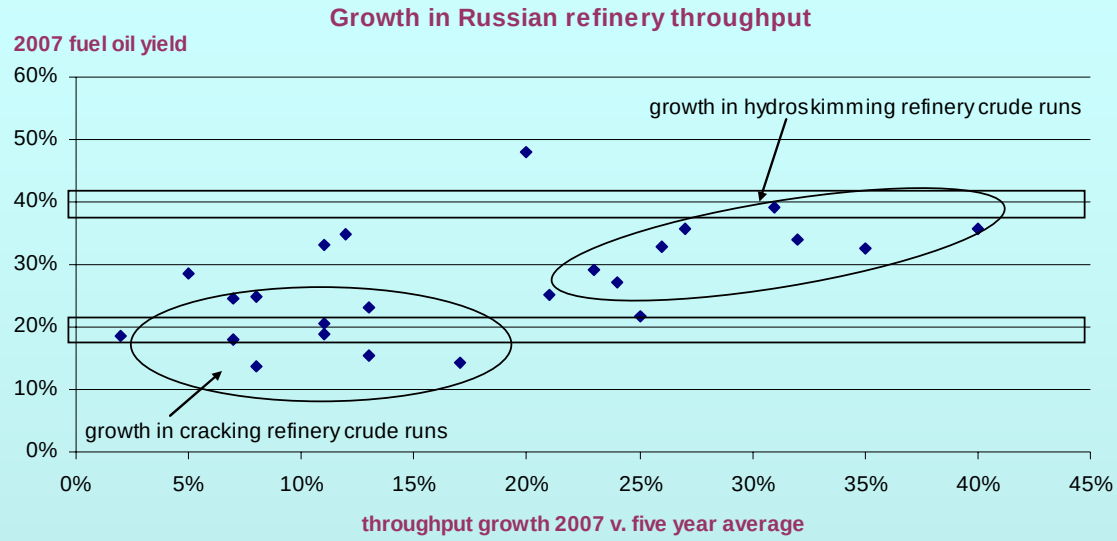
- Royalty on crude production; taxed at 22% after certain allowances.
- Export tax; based on the market price of Urals crude in the preceding two months. Light products attract a 30% discount on the tax charged and fuel exports benefit from a 60% discount.
- Corporate profit tax of 24%, charged on net income, in common with other industries.

At the time of writing, Russian government tax revenues were around $65/bbl while integrated oil companies report *net income* closer to $10/bbl. The lagged nature of the current tax structure can also significantly distort the economic incentive to refine crude oil, and at times, sell products into the domestic market, rather than export them. The lower tax burden on fuel oil reduces the incentive to invest in upgrading capacity, with the post-tax margin between hydroskimming and cracking refineries much narrower than in Europe. The graphs below show the incentives created by the tax system.





The tax structure is clearly effective in incentivising the running of crude through a refinery, targeting products either for domestic or export sale, against the alternative of exporting the crude. However, the increase in refining crude runs has also been influenced by other factors such as pipeline capacity constraints and local demand for transportation fuels and the imperative to sustain gas availability for export.



These factors aside, it is apparent that the net income per barrel that companies achieve is quite dramatically affected by the overall price trend, i.e. in a falling market the lagged nature of the export tax can materially depress net income. Similarly, in a rising market, the impact of the export tax is offset as revenues rise ahead of the calculated tax burden.

Whereas in Europe refinery throughput has been expanded in complex refineries, or simple refineries have been upgraded to a more sophisticated configuration, in Russia it would appear that more than half of the refiners who have increased runs would be categorised as hydroskimming operators rather than catalytic cracking, based on fuel oil yields. This is partly driven by the current tax structure, which appears to reduce the incentive to invest in upgrading equipment by a refinery over the medium term.

In the short term, this is not necessarily a problem as long as the market is able to absorb or reprocess partly refined fuel elsewhere. The tighter fuel specifications coming into force in many countries around the world may make it harder for importing countries to be in a position to readily process partly refined fuel. In particular, given the uncertainty of sustainable supplies from Russia in a fluctuating oil market and the high cost of installing upgrading and desulphurisation equipment, European or American refiners may be less-than-enthusiastic about installing surplus additional capacity to handle Russian exports. The potential for Russia in future to require greater domestic fuel oil use as a substitute for tightening gas supplies complicates matters further.

The Russian tax system has clearly incentivised the export of products over crude oil. However, with an eye to the future, the structure as it currently stands may fail to deliver long-term benefits to the refining industry. A simpler tax system could have provided Russian refiners with the same incentive to boost crude throughput, while investing in upgrading capacity, as has been seen in the OECD and that has delivered significant results.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.6	25.6	25.4	25.5	25.5	25.5
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	15.0	15.4	15.7	15.3	15.6	15.1	15.5	15.8	15.5
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.7	8.3	9.1	7.9	7.9	8.8	8.4
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	50.1	49.2	50.4	48.4	48.9	50.1	49.5
NON-OECD DEMAND																	
FSU	3.9	4.0	4.1	3.9	4.1	4.5	4.1	4.0	3.7	4.0	4.0	3.9	4.0	3.8	4.1	4.1	4.0
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.2	7.2	7.3	7.7	7.5	7.5	7.5	7.7	8.1	7.9	8.0	7.9
Other Asia	8.6	8.8	8.9	8.9	8.6	8.9	8.8	9.2	9.4	9.2	9.5	9.3	9.4	9.5	9.3	9.7	9.5
Latin America	5.0	5.1	5.2	5.3	5.4	5.4	5.3	5.3	5.5	5.7	5.6	5.5	5.5	5.7	5.9	5.8	5.7
Middle East	5.7	6.0	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.9	6.6	6.6	6.9	7.0	7.3	7.0	7.0
Africa	2.8	2.9	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	33.1	34.2	35.1	35.4	35.5	35.9	35.5	36.3	36.8	36.9	37.1	36.8	37.6	38.2	38.2	38.6	38.2
Total Demand[1]	82.5	83.9	85.5	83.5	84.4	85.7	84.8	86.0	85.0	85.6	87.2	86.0	88.0	86.6	87.2	88.7	87.6
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.3	14.1	14.0	14.2	14.1
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	4.9	4.8	4.5	4.4	4.6	4.6
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.8	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.7	19.8	19.8	19.4	19.1	19.6	19.5
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.7	12.8	12.8	12.9	13.0	13.3	13.6	13.2
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.9	2.8
Latin America	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.3	4.1	4.2	4.2	4.2	4.2
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.7	2.7	2.7	2.7	2.7
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	28.0	27.9	27.7	27.7	27.8	27.9	28.2	28.5	28.8	28.4
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.5	50.3	49.8	50.0	50.1	50.4	50.4	50.5	51.4	50.6
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	50.0	49.8	49.3	49.7	49.7	50.4	50.4	50.5	51.4	50.6
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.1	30.6	31.6	30.7					
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.6	5.2
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	34.9	35.4	36.4	35.5					
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.4	35.9	36.8	35.9					
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.6	85.2	85.2	86.4	85.6					
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-1.0	0.2	-0.9	0.8	-0.1	-1.2	-0.3					
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1					
Total	0.2	0.2	0.0	0.7	1.2	-0.9	0.3	-0.8	0.8	0.0	-1.2	-0.3					
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.1	-0.2	0.2	0.0					
Miscellaneous to balance[8]	0.7	0.6	-0.2	1.0	-0.3	1.2	0.4	0.2	-0.4	-0.2	0.1	-0.1					
Total Stock Ch. & Misc	0.9	0.7	-0.1	1.6	1.3	-0.3	0.6	-0.4	0.2	-0.4	-0.8	-0.3					
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	29.0	30.0	28.1	28.8	29.6	29.1	30.7	29.9	31.0	32.4	31.0	32.7	31.2	31.5	31.7	31.8
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.9	29.5	30.8	32.5	30.9	32.9	31.4	31.7	31.9	32.0
"Call" incl. Angola & Ecuador[2]	29.5	30.8	31.9	29.9	30.8	31.5	31.0	31.2	30.4	31.5	32.7	31.5	32.7	31.2	31.5	31.7	31.8
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.3	31.7	30.9	30.5	32.8	31.5	31.4	30.0	31.3	32.8	31.4	32.9	31.4	31.7	31.9	32.0

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.2	-0.2	-0.2
Europe	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-
Pacific	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-	-0.2	-	-0.2	-0.2	-0.2	-0.5	-0.3
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.1	-	-	-	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-
Other Asia	-	-	-	-	-	-	-	-	0.1	0.1	0.3	0.1	-	0.1	0.1	0.2	0.1
Latin America	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	0.1	0.2	0.2	0.2	0.2	-	0.1	0.1	0.1	0.1
Total Demand	-	-	-	-	-	-	-	0.1	0.1	0.2	-	0.1	-0.2	-0.1	-0.1	-0.4	-0.2
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	0.1	-	0.1	-	-	-	0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	0.1
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	0.1	0.1	0.1	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-0.1	-0.1	-0.1
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.2	-	-0.1	-0.1	-0.1	-0.1	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.1	-	-0.1	-	-0.1	-	-
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.1	-	-0.1	-	-0.1	-	-
OPEC																	
Crude	-	-	-	-	-	-	-	0.1	-	-	0.1	0.1					
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.3	-0.3	-0.3	-0.3
Total OPEC	-	-	-	-	-	-	-	0.1	-	-	0.1	0.1					
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	0.1	-	-	0.1	0.1					
Total Supply	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.1	0.1					
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-0.1							
Government	-	-	-	-	-	-	-	-	-	-							
Total	-	-	-	-	-	-	-	-	-	-0.1							
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-							
Miscellaneous to balance	-	-	-	-	-	-	-	0.1	-	-							
Total Stock Ch. & Misc	-	-	-	-	-	-	-	0.1	-0.1	-0.1	-0.1	-0.1					
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	-	0.1	0.1	0.2	0.1	-	0.2	0.3	-0.1	0.1
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	0.1	-	0.1	0.1	-0.2	-0.1	0.1	0.2	-0.1	-

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.30	25.67	25.43	25.50	25.64	25.56	25.63	25.35	25.50	25.52	25.50
Europe	15.61	15.96	15.23	15.60	15.72	15.63	15.21	14.96	15.40	15.75	15.33	15.64	15.15	15.52	15.78	15.52
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.71	8.29	9.14	7.90	7.93	8.80	8.44
Total OECD	49.67	50.42	48.11	48.98	49.83	49.33	49.71	48.19	48.72	50.10	49.18	50.40	48.41	48.94	50.10	49.46
FSU	3.96	4.06	3.88	4.12	4.45	4.13	3.99	3.74	3.98	4.05	3.94	4.04	3.83	4.06	4.15	4.02
Europe	0.72	0.80	0.75	0.70	0.75	0.75	0.83	0.77	0.71	0.77	0.77	0.85	0.79	0.73	0.79	0.79
China	6.69	6.96	7.29	7.17	7.20	7.16	7.27	7.67	7.46	7.52	7.48	7.72	8.09	7.88	7.97	7.92
Other Asia	8.79	8.93	8.94	8.65	8.87	8.85	9.24	9.37	9.16	9.54	9.33	9.41	9.53	9.30	9.70	9.49
Latin America	5.13	5.15	5.29	5.40	5.38	5.31	5.35	5.53	5.68	5.63	5.55	5.53	5.71	5.85	5.80	5.72
Middle East	5.99	6.22	6.27	6.57	6.32	6.35	6.51	6.64	6.89	6.56	6.65	6.87	7.01	7.32	6.97	7.04
Africa	2.94	2.97	2.97	2.86	2.93	2.93	3.10	3.08	2.98	3.07	3.06	3.23	3.20	3.10	3.20	3.18
Total Non-OECD	34.23	35.10	35.39	35.47	35.91	35.47	36.28	36.80	36.87	37.13	36.77	37.64	38.15	38.25	38.58	38.16
World	83.90	85.52	83.50	84.45	85.75	84.80	85.99	84.99	85.58	87.23	85.95	88.04	86.56	87.19	88.68	87.62
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.83*	*20.81*	*20.80*	*20.61*	*20.72*	*20.67*	*20.70*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.85*	*7.69*	*7.87*	*8.10*	*7.88*	*8.08*	*7.79*	*7.93*	*8.08*	*7.97*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.27*	*4.99*	*5.61*	*4.66*	*4.73*	*5.28*	*5.07*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.42*	*2.15*	*2.09*	*2.36*	*2.26*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.08*	*2.09*	*2.01*	*2.11*	*2.07*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.34*	*2.28*	*2.38*	*2.36*	*2.34*	*2.36*	*2.30*	*2.41*	*2.36*	*2.36*
Brazil	*2.19*	*2.18*	*2.20*	*2.28*	*2.30*	*2.24*	*2.27*	*2.31*	*2.39*	*2.42*	*2.35*	*2.36*	*2.40*	*2.47*	*2.50*	*2.43*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.70*	*2.64*	*2.88*	*2.83*	*2.57*	*2.88*	*2.79*	*3.00*	*2.94*	*2.68*	*3.00*	*2.90*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.6	-0.7	1.8	1.5	-0.1	0.9	1.0	-0.1	-0.3	0.0	-0.5	-0.2
Europe	0.8	1.5	-0.2	-0.4	-0.5	0.1	-4.7	-1.8	-1.3	0.2	-1.9	2.8	1.3	0.8	0.2	1.2
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	0.0	-1.4	3.5	1.3	1.5	1.0	1.9
Total OECD	0.6	-0.7	-1.0	-0.6	-0.5	-0.7	-1.4	0.2	-0.5	0.5	-0.3	1.4	0.4	0.5	0.0	0.6
FSU	1.5	2.2	0.4	4.5	10.1	4.4	-1.7	-3.6	-3.4	-9.0	-4.5	1.1	2.3	2.0	2.5	2.0
Europe	4.2	3.4	3.4	3.4	3.4	3.4	2.9	2.7	2.6	2.1	2.6	2.3	2.7	2.7	2.6	2.6
China	4.2	4.2	12.1	7.1	4.6	6.9	4.5	5.2	4.1	4.4	4.5	6.2	5.4	5.6	6.0	5.8
Other Asia	2.0	-0.4	-0.7	1.3	2.4	0.6	3.5	4.8	5.9	7.5	5.4	1.9	1.7	1.5	1.8	1.7
Latin America	2.9	3.7	3.2	2.9	4.4	3.6	3.8	4.5	5.1	4.6	4.5	3.4	3.2	3.0	3.2	3.2
Middle East	4.6	6.9	6.7	5.5	4.5	5.9	4.5	6.0	4.9	3.7	4.8	5.5	5.5	6.3	6.3	5.9
Africa	6.1	-1.3	-0.9	-0.1	1.1	-0.3	4.4	3.6	4.1	4.8	4.2	4.1	4.0	3.9	4.0	4.0
Total Non-OECD	3.3	2.6	3.8	3.7	4.3	3.6	3.4	4.0	3.9	3.4	3.7	3.7	3.7	3.7	3.9	3.8
World	1.7	0.6	1.0	1.2	1.5	1.1	0.5	1.8	1.3	1.7	1.4	2.4	1.8	1.9	1.7	1.9
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.44	0.37	-0.03	0.24	0.25	-0.04	-0.08	-0.01	-0.12	-0.06
Europe	0.12	0.24	-0.03	-0.06	-0.08	0.02	-0.74	-0.27	-0.20	0.03	-0.29	0.42	0.19	0.12	0.03	0.19
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	0.00	-0.12	0.31	0.10	0.11	0.09	0.15
Total OECD	0.32	-0.35	-0.48	-0.28	-0.24	-0.34	-0.72	0.08	-0.27	0.26	-0.16	0.70	0.21	0.23	0.00	0.29
FSU	0.06	0.09	0.01	0.18	0.41	0.17	-0.07	-0.14	-0.14	-0.40	-0.19	0.04	0.09	0.08	0.10	0.08
Europe	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
China	0.27	0.28	0.79	0.47	0.32	0.46	0.31	0.38	0.29	0.32	0.33	0.45	0.42	0.42	0.45	0.43
Other Asia	0.17	-0.04	-0.06	0.11	0.20	0.05	0.31	0.43	0.51	0.66	0.48	0.17	0.16	0.14	0.17	0.16
Latin America	0.14	0.19	0.16	0.15	0.23	0.18	0.20	0.24	0.28	0.25	0.24	0.18	0.18	0.17	0.18	0.18
Middle East	0.26	0.40	0.40	0.34	0.27	0.35	0.28	0.37	0.32	0.24	0.30	0.36	0.37	0.43	0.41	0.39
Africa	0.17	-0.04	-0.03	0.00	0.03	-0.01	0.13	0.11	0.12	0.14	0.12	0.13	0.12	0.12	0.12	0.12
Total Non-OECD	1.10	0.90	1.30	1.27	1.48	1.24	1.19	1.41	1.40	1.22	1.30	1.35	1.35	1.38	1.45	1.38
World	1.42	0.55	0.82	0.99	1.24	0.90	0.47	1.49	1.13	1.48	1.15	2.05	1.57	1.61	1.45	1.67
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	-0.01	0.02	0.00	-0.10	-0.20	-0.19	-0.24	-0.18
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.06	-0.02	-0.02	0.00	-0.01	-0.08	-0.03
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-0.03	-0.09	-0.04	-0.04	-0.13	-0.07
Total OECD	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	-0.03	-0.16	-0.05	-0.20	-0.24	-0.24	-0.45	-0.28
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.08	-0.12	0.02	0.00	0.03	0.04	-0.13	-0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.08	-0.02	0.00	0.00	-0.01	-0.08	-0.03
Other Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.13	0.27	0.13	0.03	0.06	0.07	0.19	0.09
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.04	0.11	0.04	0.00	0.00	0.04	0.11	0.04
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.01	0.00	0.00	0.00	-0.02	0.00
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Total Non-OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.15	0.24	0.17	0.16	0.04	0.09	0.15	0.08	0.09
World	0.00	0.00	0.00	0.00	0.03	0.01	0.09	0.15	0.21	0.00	0.11	-0.17	-0.15	-0.09	-0.37	-0.20
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.00	0.00	0.00	0.03	0.01	0.09	0.15	0.21	-0.03	0.10	-0.26	-0.30	-0.30	-0.38	-0.31

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	3Q07	4Q07	1Q08	2Q08	3Q08	Nov 07	Dec 07	Jan 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.42	8.78				8.77	8.81	8.86
Iran	3.91	3.97		3.94	4.00				4.01	3.93	3.93
Iraq	1.90	2.09		2.11	2.35				2.40	2.35	2.23
UAE	2.62	2.51		2.57	2.39				2.15	2.54	2.59
Kuwait	2.21	2.16		2.18	2.24				2.25	2.26	2.28
Neutral Zone	0.58	0.56		0.55	0.57				0.57	0.58	0.58
Qatar	0.82	0.80		0.80	0.80				0.80	0.80	0.75
Angola[6]		1.61		1.61	1.71				1.72	1.69	1.80
Nigeria	2.24	2.14		2.17	2.17				2.18	2.16	2.07
Libya	1.71	1.71		1.70	1.74				1.75	1.75	1.77
Algeria	1.35	1.36		1.36	1.39				1.39	1.40	1.40
Ecuador[6]										0.50	0.50
Venezuela	2.56	2.39		2.36	2.42				2.43	2.43	2.44
Indonesia	0.89	0.84		0.83	0.83				0.83	0.84	0.83
Total Crude Oil[6]	29.71	30.65		30.61	31.56				31.23	32.03	32.01
Total NGLs[1,6]	4.63	4.82	5.19	4.83	4.88	4.94	4.98	5.20	4.88	4.88	4.96
Total OPEC[6]	34.34	35.47		35.44	36.44				36.11	36.92	36.97
OPEC incl. Angola & Ecuador[6]	36.29	35.93		35.94	36.77				36.60	36.92	36.97
NON-OPEC[2]											
OECD											
North America	14.21	14.26	14.15	14.19	14.09	14.29	14.12	13.98	14.11	14.03	14.18
United States	7.34	7.47	7.41	7.39	7.50	7.44	7.48	7.33	7.52	7.51	7.43
Mexico	3.68	3.48	3.42	3.44	3.32	3.44	3.43	3.40	3.26	3.33	3.44
Canada	3.19	3.31	3.31	3.36	3.27	3.41	3.20	3.25	3.33	3.19	3.31
Europe	5.18	4.94	4.56	4.69	4.97	4.81	4.49	4.36	5.00	4.90	4.93
UK	1.66	1.66	1.48	1.49	1.68	1.63	1.48	1.34	1.66	1.64	1.67
Norway	2.78	2.56	2.37	2.48	2.57	2.47	2.30	2.31	2.62	2.53	2.54
Others	0.74	0.73	0.71	0.73	0.72	0.72	0.71	0.71	0.72	0.72	0.72
Pacific	0.58	0.63	0.78	0.64	0.67	0.72	0.78	0.79	0.65	0.73	0.69
Australia	0.53	0.55	0.67	0.55	0.57	0.61	0.67	0.68	0.54	0.62	0.58
Others	0.05	0.08	0.12	0.09	0.10	0.11	0.11	0.11	0.11	0.11	0.11
Total OECD	19.97	19.84	19.49	19.53	19.74	19.82	19.39	19.13	19.76	19.65	19.80
NON-OECD											
Former USSR	12.25	12.76	13.19	12.74	12.80	12.87	13.05	13.26	12.81	12.73	12.79
Russia	9.84	10.08	10.19	10.10	10.08	10.01	10.11	10.26	10.06	10.04	10.01
Others	2.40	2.68	3.00	2.64	2.71	2.87	2.94	3.00	2.75	2.69	2.78
Asia	6.39	6.41	6.64	6.34	6.42	6.56	6.62	6.65	6.45	6.35	6.55
China	3.67	3.73	3.83	3.70	3.68	3.82	3.83	3.83	3.73	3.60	3.80
Malaysia	0.75	0.76	0.81	0.76	0.79	0.79	0.81	0.83	0.78	0.80	0.80
India	0.79	0.81	0.81	0.81	0.82	0.82	0.81	0.81	0.81	0.82	0.82
Others	1.17	1.11	1.17	1.07	1.13	1.13	1.16	1.18	1.13	1.14	1.13
Europe	0.15	0.13	0.12	0.13	0.13	0.13	0.12	0.12	0.13	0.13	0.13
Latin America	4.39	4.33	4.17	4.38	4.17	4.08	4.18	4.22	4.28	3.91	4.02
Brazil	2.10	2.14	2.44	2.15	2.11	2.35	2.45	2.49	2.07	2.17	2.29
Argentina	0.77	0.76	0.75	0.76	0.75	0.75	0.75	0.75	0.73	0.76	0.75
Colombia	0.53	0.53	0.55	0.53	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Ecuador[6]	0.54	0.50		0.50	0.50				0.49		
Others	0.45	0.39	0.43	0.43	0.26	0.43	0.43	0.43	0.43	0.43	0.43
Middle East[3]	1.74	1.64	1.56	1.63	1.60	1.58	1.57	1.56	1.60	1.59	1.59
Oman	0.75	0.71	0.69	0.71	0.70	0.70	0.69	0.69	0.70	0.70	0.70
Syria	0.42	0.39	0.37	0.39	0.38	0.38	0.37	0.36	0.38	0.38	0.38
Yemen	0.38	0.34	0.31	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Africa	3.91	2.55	2.69	2.52	2.58	2.66	2.69	2.71	2.60	2.60	2.66
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.63	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.24	0.23	0.23	0.24	0.24	0.24	0.23	0.23	0.23
Others	1.63	1.68	1.83	1.65	1.72	1.79	1.83	1.85	1.74	1.74	1.80
Total Non-OECD	28.82	27.82	28.37	27.73	27.69	27.88	28.23	28.52	27.87	27.30	27.74
Processing Gains[4]	2.04	2.07	2.13	2.10	2.11	2.11	2.10	2.14	2.11	2.11	2.11
Other Biofuels[5]	0.26	0.40	0.65	0.40	0.46	0.55	0.66	0.66	0.46	0.46	0.55
TOTAL NON-OPEC	51.09	50.13	50.64	49.76	49.99	50.37	50.38	50.45	50.19	49.52	50.21
Non-OPEC excl. Angola & Ecuador[6]	49.14	49.67	50.64	49.25	49.66	50.37	50.38	50.45	49.69	49.52	50.21
TOTAL SUPPLY	85.43	85.60		85.20	86.43				86.29	86.43	87.18

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Aug2007	Sep2007	Oct2007	Nov2007	Dec2007*	Dec2004	Dec2005	Dec2006	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	461.9	451.1	456.5	438.4	420.5	400.1	457.0	439.7	0.28	0.31	-0.43	-0.33
Motor Gasoline	222.7	227.6	225.2	230.5	239.4	244.8	236.1	239.2	-0.14	0.04	-0.07	0.13
Middle Distillate	206.6	206.3	206.0	205.4	202.5	198.8	213.0	217.2	-0.29	0.05	0.12	-0.04
Residual Fuel Oil	45.6	44.5	47.5	46.7	47.5	50.5	44.6	50.3	-0.03	-0.03	0.00	0.03
Total Products[3]	670.0	670.0	663.2	655.8	650.8	655.2	658.9	690.8	-0.71	0.28	0.15	-0.21
Total[4]	1291.8	1286.5	1284.1	1251.9	1223.2	1192.7	1257.2	1275.4	-0.48	0.67	-0.09	-0.69
Europe												
Crude	327.0	322.7	324.2	334.0	331.7	321.5	327.9	342.6	-0.18	0.09	-0.13	0.10
Motor Gasoline	102.6	102.0	102.4	105.5	107.2	113.9	112.4	112.5	-0.03	-0.08	-0.01	0.06
Middle Distillate	266.6	264.6	247.8	236.0	242.7	240.5	257.0	276.5	-0.08	0.03	-0.08	-0.24
Residual Fuel Oil	73.2	76.1	72.8	76.9	77.5	73.6	73.2	73.6	-0.01	-0.02	0.06	0.02
Total Products[3]	547.4	548.8	527.8	523.9	532.9	531.3	544.6	564.9	-0.13	-0.10	0.05	-0.17
Total[4]	950.4	945.7	927.6	932.4	938.2	924.3	944.6	975.1	-0.24	0.01	-0.10	-0.08
Pacific												
Crude	168.4	161.0	172.1	160.3	150.3	171.2	158.7	173.3	-0.01	-0.02	-0.10	-0.12
Motor Gasoline	22.8	21.6	22.0	21.0	21.9	24.2	22.5	22.2	0.03	0.00	-0.03	0.00
Middle Distillate	81.3	77.5	72.6	71.2	69.3	75.1	61.0	73.4	-0.14	0.08	0.10	-0.09
Residual Fuel Oil	24.3	25.6	21.8	19.7	20.9	22.4	20.5	22.6	-0.01	0.00	0.04	-0.05
Total Products[3]	197.4	195.7	186.0	177.4	173.2	187.8	167.6	183.4	-0.14	0.12	0.15	-0.24
Total[4]	439.9	429.0	429.1	410.6	394.0	430.3	395.1	428.2	-0.13	0.10	0.03	-0.38
Total OECD												
Crude	957.3	934.8	952.8	932.7	902.5	892.8	943.5	955.6	0.09	0.39	-0.67	-0.35
Motor Gasoline	348.1	351.1	349.6	357.1	368.5	382.8	371.1	373.8	-0.15	-0.04	-0.10	0.19
Middle Distillate	554.6	548.4	526.4	512.6	514.6	514.4	531.1	567.1	-0.51	0.16	0.14	-0.37
Residual Fuel Oil	143.0	146.2	142.0	143.3	145.9	146.5	138.3	146.6	-0.05	-0.05	0.10	0.00
Total Products[3]	1414.8	1414.5	1377.0	1357.1	1356.9	1374.4	1371.1	1439.1	-0.97	0.30	0.35	-0.63
Total[4]	2682.1	2661.2	2640.8	2594.9	2555.4	2547.3	2596.9	2678.7	-0.86	0.79	-0.15	-1.15

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Aug2007	Sep2007	Oct2007	Nov2007	Dec2007*	Dec2004	Dec2005	Dec2006	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	690.4	692.8	694.1	695.5	696.5	675.6	684.5	688.6	0.00	0.02	0.03	0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	176.7	177.4	180.6	182.3	182.3	168.0	166.9	175.0	-0.01	0.01	0.02	0.05
Products	248.0	246.5	237.0	234.7	234.7	208.2	239.0	235.6	0.05	-0.01	0.08	-0.13
Pacific												
Crude	385.0	385.1	385.0	385.1	385.1	384.5	381.6	384.5	0.01	0.00	0.00	0.00
Products	17.6	17.9	18.4	18.9	18.9	11.0	11.5	11.8	0.05	0.00	0.02	0.01
Total OECD												
Crude	1252.1	1255.2	1259.7	1262.9	1263.9	1228.1	1233.0	1248.1	0.00	0.03	0.05	0.09
Products	267.6	266.3	257.4	255.6	255.6	221.2	252.5	249.4	0.10	-0.01	0.10	-0.12
Total[4]	1520.7	1522.5	1518.1	1519.4	1520.4	1450.3	1486.5	1498.5	0.10	0.02	0.15	-0.02

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End December 2006		End March 2007		End June 2007		End September 2007		End December 2007 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	180.1	77	182.5	80	189.7	80	194.8	-	-	-
Mexico	42.3	21	40.5	20	43.8	22	43.5	-	-	-
United States[4]	1721.5	83	1678.8	81	1731.0	84	1720.9	-	-	-
Total[4]	1966.0	77	1923.9	76	1986.6	78	1981.3	77	1921.7	75
Pacific										
Australia	34.8	37	34.3	37	38.9	42	36.8	-	-	-
Japan	630.8	117	619.9	134	622.4	133	629.6	-	-	-
Korea	151.8	65	156.1	74	158.3	77	157.4	-	-	-
New Zealand	7.1	46	7.7	49	7.7	50	8.1	-	-	-
Total	824.6	93	818.0	105	827.3	106	831.9	96	798.0	87
Europe[5]										
Austria	21.8	78	24.0	81	21.1	72	22.0	-	-	-
Belgium	30.2	48	28.2	51	28.7	51	27.8	-	-	-
Czech Republic	19.7	101	20.2	92	20.5	95	19.5	-	-	-
Denmark	18.5	97	18.3	96	17.1	89	18.9	-	-	-
Finland	26.6	109	29.5	136	26.3	111	29.7	-	-	-
France	192.4	98	177.0	96	185.7	96	186.7	-	-	-
Germany	282.8	117	290.5	120	285.6	110	278.2	-	-	-
Greece	36.8	79	33.6	85	35.6	85	34.8	-	-	-
Hungary	16.6	108	18.1	107	16.0	94	17.1	-	-	-
Ireland	12.5	62	12.9	69	11.1	56	12.6	-	-	-
Italy	133.1	79	133.9	80	133.0	82	134.2	-	-	-
Luxembourg	1.0	16	0.9	15	0.9	15	0.9	-	-	-
Netherlands	118.6	138	117.7	137	120.6	133	116.2	-	-	-
Norway	35.1	156	20.2	78	23.5	91	24.2	-	-	-
Poland	41.5	89	43.9	90	50.0	90	50.9	-	-	-
Portugal	24.0	77	23.7	78	24.7	80	23.2	-	-	-
Slovak Republic	7.5	101	7.0	83	6.9	79	7.7	-	-	-
Spain	134.8	83	129.3	81	130.5	82	136.7	-	-	-
Sweden	33.8	94	35.6	99	32.1	90	31.5	-	-	-
Switzerland	38.1	150	38.7	173	38.5	157	38.1	-	-	-
Turkey	52.8	85	59.2	89	60.5	80	61.1	-	-	-
United Kingdom	108.5	60	105.8	59	100.8	58	98.5	-	-	-
Total	1386.6	92	1368.3	92	1369.6	89	1370.5	87	1356.1	87
Total OECD	4177.2	84	4110.1	86	4183.5	86	4183.7	84	4075.8	81
DAYS OF IEA Net Imports[6]	-	121	-	121	-	121	-	122	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End Sep 2007 and December 2007 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
4Q2004	3998	1450	2547	79	29	50
1Q2005	4005	1462	2543	82	30	52
2Q2005	4117	1494	2623	84	30	53
3Q2005	4132	1494	2638	83	30	53
4Q2005	4083	1487	2597	81	29	52
1Q2006	4084	1487	2597	85	31	54
2Q2006	4151	1493	2658	85	30	54
3Q2006	4262	1495	2767	86	30	56
4Q2006	4177	1499	2679	84	30	54
1Q2007	4110	1507	2603	86	31	54
2Q2007	4183	1509	2675	86	31	55
3Q2007	4184	1523	2661	84	30	53
4Q2007	4076	1520	2555	81	30	51

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 3Q2007 and 4Q2007 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2004	2005	2006	4Q06	1Q07	2Q07	3Q07	Sep 07	Oct 07	Nov 07	Year Earlier Nov 06	Year Earlier change
Saudi Light & Extra Light												
North America	0.55	0.46	0.60	0.60	0.68	0.73	0.71	0.79	0.50	0.87	0.73	0.14
Europe	1.03	0.90	0.78	0.78	0.72	0.64	0.74	0.73	0.66	0.67	0.72	-0.05
Pacific	1.24	1.31	1.32	1.28	1.17	1.20	1.15	1.11	1.11	1.33	1.28	0.05
Saudi Medium												
North America	0.80	0.81	0.64	0.61	0.47	0.59	0.59	0.56	0.57	0.52	0.65	-0.13
Europe	0.11	0.16	0.14	0.10	0.05	0.10	0.02	0.04	0.06	0.02	0.08	-0.06
Pacific	0.23	0.26	0.35	0.32	0.34	0.31	0.31	0.39	0.33	0.34	0.33	0.01
Saudi Heavy												
North America	0.22	0.17	0.21	0.19	0.15	0.05	0.11	0.27	0.04	0.04	0.19	-0.16
Europe	0.23	0.23	0.18	0.14	0.09	0.16	0.11	0.04	0.11	0.06	0.11	-0.06
Pacific	0.15	0.25	0.23	0.23	0.20	0.18	0.20	0.23	0.25	0.22	0.21	0.01
Iraqi Basrah Light[2]												
North America	0.71	0.60	0.52	0.46	0.51	0.39	0.64	0.76	0.37	0.55	0.52	0.03
Europe	0.21	0.23	0.32	0.36	0.29	0.28	0.38	0.42	0.27	0.19	0.39	-0.21
Pacific	0.12	0.06	0.08	0.07	0.11	0.18	0.20	0.24	0.21	0.15	0.06	0.08
Iraqi Kirkuk												
North America	0.02	-	0.00	-	-	-	-	-	-	-	-	-
Europe	0.08	0.05	0.01	0.01	0.04	-	0.06	0.10	0.22	0.38	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.24	0.20	0.26	0.27	0.31	0.31	0.27	0.24	0.26	0.18	0.16	0.01
Pacific	0.16	0.15	0.13	0.11	0.12	0.06	0.07	0.04	0.10	0.12	0.09	0.03
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.57	0.63	0.58	0.60	0.55	0.62	0.60	0.57	0.50	0.47	0.74	-0.27
Pacific	0.65	0.62	0.56	0.61	0.66	0.63	0.56	0.39	0.62	0.77	0.65	0.12
Venezuelan Light & Medium												
North America	0.67	0.82	0.66	0.57	0.68	0.71	0.75	0.85	0.80	0.96	0.53	0.43
Europe	0.01	0.04	0.11	0.11	0.09	0.07	0.09	0.06	0.02	0.05	0.14	-0.10
Pacific	-	-	-	-	-	-	-	-	0.07	-	-	-
Venezuelan 22 API and heavier												
North America	0.88	0.72	0.72	0.72	0.55	0.70	0.76	0.70	0.71	0.58	0.72	-0.14
Europe	0.05	0.06	0.06	0.05	0.06	0.09	0.06	0.06	0.08	0.05	0.05	0.00
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.36	1.27	1.24	1.15	1.19	1.19	1.25	1.18	1.07	1.48	1.19	0.28
Europe	0.16	0.17	0.16	0.15	0.14	0.11	0.18	0.22	0.17	0.12	0.13	-0.01
Pacific	0.00	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	-	0.03	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.04	-0.04
Europe	0.01	0.03	0.01	0.01	0.01	0.06	-	-	-	0.05	0.01	0.04
Pacific	0.00	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.12	0.13	0.09	0.05	0.11	0.12	0.01	-	-	-	-	-
Europe	1.86	1.77	1.68	1.54	1.85	1.97	1.90	1.81	1.71	1.67	1.62	0.05
Pacific	0.01	0.00	0.00	-	0.00	-	-	-	-	0.02	-	-
Nigerian Light[4]												
North America	0.80	0.90	0.79	0.72	0.95	0.77	0.87	1.02	0.83	0.79	0.67	0.12
Europe	0.28	0.35	0.33	0.37	0.23	0.27	0.22	0.19	0.23	0.27	0.37	-0.11
Pacific	0.11	0.05	0.04	0.03	0.02	0.02	-	-	-	0.03	-	-
Nigerian Medium												
North America	0.23	0.17	0.17	0.17	0.24	0.15	0.22	0.26	0.29	0.35	0.24	0.10
Europe	0.04	0.07	0.10	0.14	0.06	0.02	0.08	0.03	0.08	0.10	0.14	-0.03
Pacific	0.01	0.01	0.00	-	0.02	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2004	2005	2006	4Q2006	1Q2007	2Q2007	3Q2007	Sep-07	Oct-07	Nov-07	Year Earlier Nov-06	Year Earlier % change
Crude Oil												
North America	8431	8457	8156	7937	8038	8151	8265	8461	7892	7914	7209	10%
Europe	9478	9792	9771	9770	9353	9738	10078	10151	9620	9842	9703	1%
Pacific	6659	6801	6813	6674	6953	6340	6576	6205	6777	6741	6967	-3%
Total OECD	24569	25050	24740	24381	24344	24229	24919	24816	24288	24497	24404	0%
LPG												
North America	24	18	14	28	16	14	38	56	35	50	33	50%
Europe	225	248	265	274	287	282	241	238	303	276	324	-15%
Pacific	541	527	579	497	565	588	502	450	576	493	495	0%
Total OECD	790	793	858	799	867	884	782	744	914	819	852	-4%
Naphtha												
North America	99	115	62	96	33	31	33	25	87	75	101	-26%
Europe	282	273	312	314	271	223	280	289	314	265	341	-22%
Pacific	769	746	754	783	838	812	768	867	787	785	794	-1%
Total OECD	1150	1133	1128	1193	1141	1066	1081	1181	1187	1125	1237	-9%
Gasoline[3]												
North America	794	1034	1142	949	916	1362	1205	1186	1155	1091	982	11%
Europe	137	165	154	153	261	219	129	76	181	179	155	16%
Pacific	105	102	97	96	76	83	56	45	83	66	70	-7%
Total OECD	1035	1301	1393	1197	1254	1663	1391	1306	1420	1336	1207	11%
Jet & Kerosene												
North America	101	173	152	130	179	204	205	190	170	151	74	103%
Europe	293	375	375	407	329	349	387	375	451	344	406	-15%
Pacific	77	66	71	76	49	35	37	43	40	33	50	-34%
Total OECD	471	614	598	612	557	588	629	608	661	528	530	0%
Gasoil/Diesel												
North America	123	143	172	116	130	142	142	68	117	70	103	-32%
Europe	751	845	971	944	906	636	739	781	773	770	918	-16%
Pacific	74	79	81	81	83	97	90	89	115	115	82	41%
Total OECD	947	1067	1224	1141	1120	874	971	938	1005	956	1104	-13%
Heavy Fuel Oil												
North America	453	527	340	254	362	323	286	270	272	385	242	59%
Europe	397	491	476	494	458	420	474	512	307	318	424	-25%
Pacific	76	85	92	65	79	97	92	70	128	81	61	33%
Total OECD	926	1102	908	813	898	840	852	852	707	783	726	8%
Other Products												
North America	872	1024	1107	991	1035	1209	1032	942	913	970	988	-2%
Europe	676	781	920	939	866	855	933	885	881	918	1011	-9%
Pacific	256	248	243	267	256	207	262	289	243	271	284	-4%
Total OECD	1805	2052	2270	2197	2157	2271	2227	2116	2037	2160	2283	-5%
Total Products												
North America	2466	3034	2989	2563	2670	3285	2942	2736	2750	2792	2524	11%
Europe	2759	3177	3473	3525	3377	2984	3183	3155	3208	3071	3579	-14%
Pacific	1898	1852	1918	1865	1947	1918	1808	1853	1972	1845	1836	0%
Total OECD	7123	8063	8380	7953	7994	8187	7933	7744	7930	7708	7939	-3%
Total Oil												
North America	10897	11490	11145	10501	10708	11436	11207	11197	10642	10707	10258	4%
Europe	12237	12969	13243	13295	12730	12722	13261	13306	12827	12913	13281	-3%
Pacific	8558	8654	8731	8539	8900	8258	8384	8058	8749	8585	8804	-2%
Total OECD	31692	33113	33120	32335	32338	32417	32851	32560	32218	32205	32343	0%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

11 March 2008

HIGHLIGHTS

- **Oil prices** again rose to new records above $105/bbl in early March, supported by strong distillate markets, geopolitical tensions and OPEC's decision to rollover targets until the end of the summer. Persistently weak gasoline and fuel oil cracks are forcing distillate cracks higher to encourage marginal refiners to meet strong European gasoil demand.
- **Projected global oil product demand** in 2008 is little changed at 87.5 mb/d, with downward pressures from weaker economic growth in the OECD mostly offset by stronger FSU projections. Historical baseline revisions lift 2006 demand, but in 2007 are more than offset by a weaker-than-expected 4Q07 in the OECD and data revisions to several non-OECD countries.
- **Global oil supply** increased by 185 kb/d in February to 87.5 mb/d with higher January OPEC crude supplies lifting the base. Output recovery in Canada, Mexico and the Caspian republics offset reductions for Norway and OPEC in February. Seasonal limits on OECD production and steady OPEC output may flatten global supply over the next two months.
- **OPEC crude supply** fell by 120 kb/d to 32.1 mb/d in February. Middle East Gulf and West African output fell 300 kb/d, offset by a 150 kb/d increase in Iraqi supply. Rolling over their existing target and assuming steady Iraqi output would leave output 0.56 mb/d below underlying 1Q08 demand, but 0.96 mb/d above this for 2Q08. OPEC effective spare capacity remains near 2 mb/d.
- **OECD industry stocks** built by 32.6 mb in January from an upwardly revised December, to reach 2,617 mb or 52.9 days of forward cover. December OECD revisions totalled +29.5 mb, including large upward adjustments to US and Japanese crude and European distillate stocks. Preliminary data show US and Japan stocks fell 23.0 mb in February.
- **Global refinery crude throughput** remains under downward pressure from poor refining economics, seasonal maintenance and operational problems. Economic run cuts continue to hamper activity in Europe and the Pacific, while year-on-year growth in 1Q08 of 0.7 mb/d is driven by China, the FSU and Asia.

Next Issue: 11 April 2008

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$100/BBL – BUT WHAT DOES IT TELL US?

The rise of oil prices over $100/barrel has been rightly greeted with concern by consumer countries and has been widely cited as a speculative-led event. Headlines referring to a wall of money (prompted by US monetary policy) entering the commodity markets - seeking a safe haven from the weaker dollar and inflation - have pointed to capital flows as one of the causes of recent price rises. So too have OPEC's decision to roll over existing quotas (and not setting a planned meeting until September), surging distillate cracks, and geopolitical tensions in South America, West Africa and the Middle East.

It is fair to say that politicians have greeted most sharp rises in prices over the past eight years as a symptom of speculation. But, in hindsight, have the price moves been irrational? Ali Al Naimi, Saudi Arabian Oil Minister, said last week that oil prices would not go below $60/bbl because that is the cost of alternatives. With current marginal costs and demand trends, he may be right. Short-term prices could dip below this level, but if they did so, then investment in non-OPEC supplies could suffer, creating upward price pressures for the future. Only a protracted and severe global recession would justify a sustained dip in oil prices below these levels.

That does not mean that Gulf producers are not making large profits at current prices: with costs of production in many countries below $10/bbl the profit margin is huge. And lack of access means that traditional economics is turned on its head, with the world developing high-cost but accessible reserves before it fully exploits low-cost oil. But the point is that the price baseline has shifted.

In 2003, moves above $30/barrel were widely cited as speculative and irrational. Now they are seen to reflect the increasing cost of accessing and developing reserves. If it was a speculative push in prices, the speculators were right. Then we have to ask what base is appropriate and how fast it is rising (with continuing service-sector inflation and dollar weakness contributing to ongoing upward pressures). Some academics suggest long-term oil prices should be reflected as a multiple (roughly three to four times) of finding and development costs (F&D). Others would disagree. But we cannot deny that F&D costs have been rising: discussions with industry have put them at $10-$30/bbl, and the EIA in a recent report estimated US offshore costs at $64/bbl.

But is it even correct to use the cost of non-OPEC production as a price base? Oil has rarely traded close to its marginal cost in the past 30 years – arguably in 1986 when OPEC abandoned quotas and in 1998/99 after the Asian currency crisis. So, we are probably looking at a base price somewhere above the marginal cost of production. We are in an era of higher oil prices, and so if we look at $100/bbl oil we have to do so with an understanding that prices are unlikely to return to levels seen in the early part of this decade. But even if cost inflation and a weakening dollar put further upward pressures on the oil price, we have a duty to ensure that the impact of these is not exaggerated. This is especially important in times of economic fragility.

Producers (and some consumers) have an underlying mistrust of the current oil price as an indicator of market fundamentals. Latest data suggest OPEC's rollover should just about redress this winter's stock draws, but the market is concerned that producers are more inclined to react to price declines than price rises. Further, while the latest output decision does not totally ignore price, the decision not to meet until September increases concern that there is no room for stronger demand or delays in non-OPEC production. That by itself provides fertile ground for speculation, as does the lack of timely stock data from many countries. Further, with spare capacity expected to remain tight, part of the price message is surely that higher stocks would provide more comfort.

Producers and consumers clearly need to work together on a number of issues - to better understand current price formation and to improve market transparency. With the current precarious state of the global economy it is imperative that both do everything possible for the right market signals to get through, ensuring that supplies will be there when needed.

DEMAND

Summary

- **Global oil product demand** has been revised down by 80 kb/d to 87.5 mb/d in 2008 (+2.0% or +1.7 mb/d over the previous year), given downward revisions to OECD and non-OECD projections. In 2007, global demand has been adjusted down by 130 kb/d to 85.8 mb/d (+1.1% or +0.9 mb/d over 2006), because of weaker-than-expected 4Q07 OECD data and offsetting, higher 2006 baseline adjustments to several non-OECD countries.

- **OECD oil product demand** has been lowered by almost 190 kb/d to 49.3 mb/d in 2008 (+0.3%). The changes result from weaker 4Q07 figures, notably in Europe, which were carried through, as well as lower-than-expected preliminary deliveries in January 2008. As such, most of the limited OECD oil demand growth in 2008 is expected to come from transportation fuel use, itself weighed down by weaker economic activity and higher oil prices. The US economy is indeed showing further signs of slowdown, which are weighing down on gasoline demand. In 2007, OECD demand averaged an estimated 49.1 mb/d (-0.5% year-on-year).

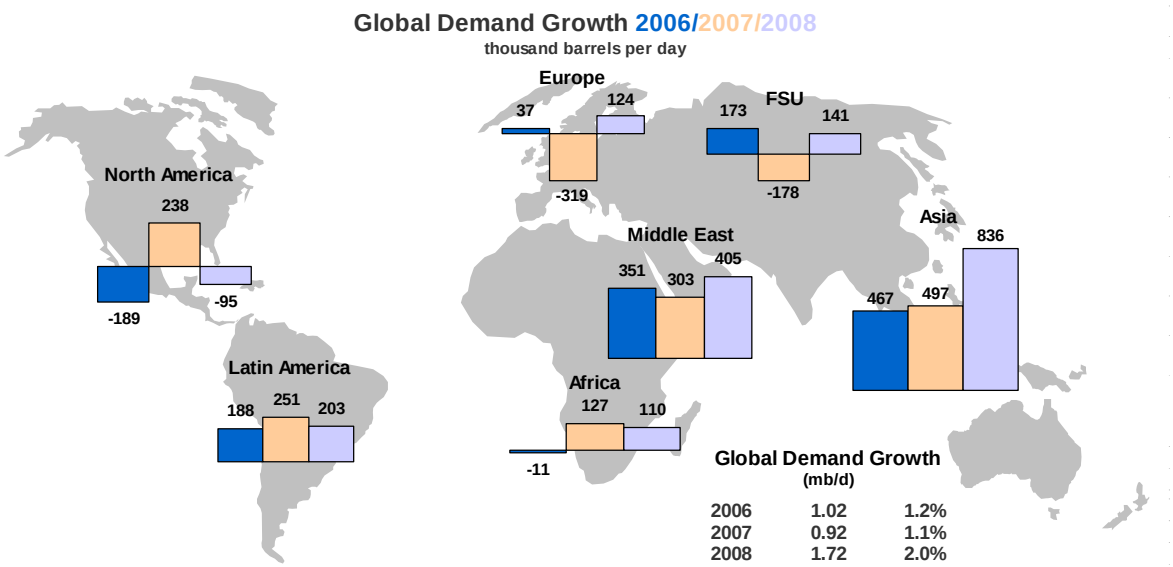
Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Americas	30.4	30.3	30.9	30.8	30.6	31.0	30.9	31.2	31.2	31.1	30.9	31.0	31.4	31.4	31.2
Asia/Pacific	25.2	24.2	23.8	24.9	24.5	25.4	24.8	24.3	25.6	25.0	26.3	25.5	25.1	26.5	25.8
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.3	16.1	16.3	15.8	16.2	16.4	16.2
FSU	4.1	3.9	4.1	4.5	4.1	4.0	3.7	4.0	4.1	4.0	4.3	3.8	4.1	4.2	4.1
Middle East	6.2	6.3	6.6	6.3	6.4	6.5	6.7	6.9	6.6	6.7	6.9	7.0	7.3	7.0	7.1
World	**85.6**	**83.6**	**84.6**	**85.9**	**84.9**	**86.0**	**84.9**	**85.5**	**86.9**	**85.8**	**88.0**	**86.4**	**87.2**	**88.6**	**87.5**
Annual Chg (%)	0.8	1.1	1.3	1.6	1.2	0.5	1.6	1.1	1.2	1.1	2.2	1.8	2.0	2.0	2.0
Annual Chg (mb/d)	0.7	0.9	1.1	1.4	1.0	0.4	1.3	0.9	1.0	0.9	1.9	1.5	1.7	1.7	1.7
Changes from last month's report (mb/d)	0.08	0.09	0.11	0.11	0.10	0.04	-0.10	-0.11	-0.35	-0.13	-0.09	-0.12	-0.01	-0.08	-0.08

- **Non-OECD oil product demand** has been revised down by roughly 60 kb/d in 2007 and up by about 120 kb/d in 2008. The revisions were related to both 2006 baseline reappraisals of several key countries, including Brazil (-50 kb/d), China (+55 kb/d), Saudi Arabia (+19 kb/d) and Thailand (+31 kb/d), and corrections of previous submissions for Brazil (where data had only been partially released for most of 2007) and Chinese Taipei (where we uncovered an issue with conversion factors that had exaggerated submitted data by about 175 kb/d since March 2007). Overall, non-OECD demand is estimated at 36.7 mb/d in 2007 (+3.2% on an annual basis), and is expected to reach 38.3 mb/d in 2008 (+4.2%), on the back of buoyant demand in both China and the Middle East.

- **A higher, retroactive consumption tax on fuel oil and naphtha in China could have unintended consequences.** The tax hike, ostensibly aimed at boosting energy savings and curbing the expansion of resource-intensive sectors, may give way to another spell of oil product shortages, as higher costs will further squeeze the profitability of 'teapot' refineries, which effectively act as the country's swing producers and run mostly on fuel oil. In addition, it may encourage inflationary pressures, as manufacturing plants, mills and some power generators that run on off-spec gasoil and/or fuel oil attempt to pass higher fuel prices on to their customers. The government may thus be forced to spend more on subsidies to guarantee adequate oil product supplies and curb inflation.



OECD

According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) rose by 1.4% year-on-year in January, with all three regions posting gains. Transportation fuel deliveries, notably of diesel, supported oil product demand in OECD **North America** (+1.0%, including US Territories). In OECD **Pacific**, total demand jumped by 2.9% as colder weather conditions boosted jet fuel/kerosene deliveries, together with residual fuel oil and direct crude consumption for power generation. In OECD **Europe**, demand growth (+1.1%) was largely supported by a rebound of heating oil as temperatures moved closer in line with historical averages.

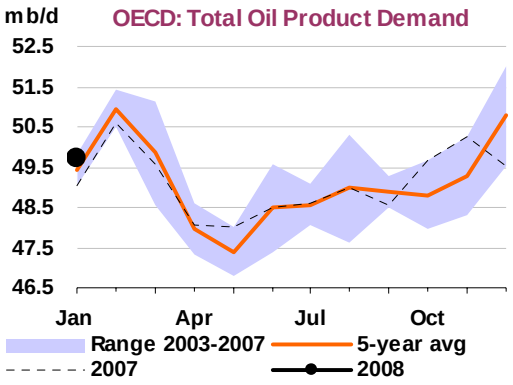
OECD Demand based on Adjusted Preliminary Submissions - January 2008

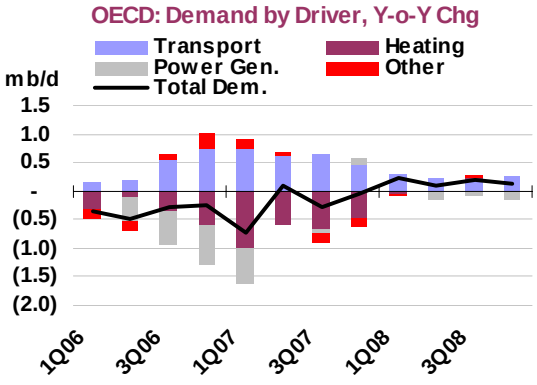
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.38**	**0.2**	**1.87**	**-1.0**	**4.09**	**11.4**	**1.25**	**-23.8**	**1.32**	**-0.1**	**6.72**	**3.45**	**25.64**	**1.0**
US50	8.89	-0.4	1.64	-2.0	3.57	12.3	0.72	-34.8	0.84	6.6	5.28	4.5	20.94	1.1
Canada	0.69	2.5	0.12	8.6	0.19	3.1	0.38	-3.4	0.13	4.8	0.80	1.2	2.30	1.5
Mexico	0.74	5.5	0.07	9.2	0.28	7.2	0.12	7.2	0.26	-19.0	0.57	-2.6	2.04	-0.2
OECD Europe	**2.19**	**-2.8**	**1.23**	**0.2**	**3.89**	**2.2**	**2.50**	**8.7**	**1.73**	**-6.4**	**3.65**	**1.8**	**15.19**	**1.1**
Germany	0.46	7.3	0.18	5.1	0.61	19.8	0.56	28.9	0.18	-8.7	0.59	2.4	2.58	11.4
United Kingdom	0.37	-4.6	0.37	-4.3	0.42	-0.3	0.13	2.1	0.09	-12.0	0.36	-7.3	1.75	-4.1
France	0.19	-6.6	0.15	2.0	0.63	2.3	0.46	3.9	0.13	-5.1	0.50	2.3	2.06	1.2
Italy	0.25	-10.5	0.08	1.3	0.51	0.6	0.11	7.3	0.23	-11.2	0.39	0.1	1.57	-2.8
Spain	0.14	-5.1	0.10	5.1	0.50	3.7	0.28	-1.8	0.21	-0.8	0.39	3.9	1.62	1.4
OECD Pacific	**1.45**	**1.1**	**1.32**	**3.3**	**1.11**	**0.7**	**0.56**	**-2.6**	**1.14**	**12.4**	**3.32**	**2.4**	**8.90**	**2.9**
Japan	0.91	1.0	0.92	0.8	0.52	1.5	0.44	-1.9	0.67	31.1	2.00	4.0	5.47	4.9
Korea	0.16	-0.7	0.27	13.8	0.26	-7.6	0.12	-4.6	0.44	-6.8	1.12	0.1	2.36	-1.1
Australia	0.32	1.8	0.10	2.1	0.28	7.9	0.00	-31.5	0.02	-6.5	0.19	0.3	0.91	3.1
OECD Total	**14.03**	**-0.2**	**4.42**	**0.6**	**9.09**	**5.9**	**4.30**	**-4.5**	**4.19**	**0.1**	**13.69**	**2.8**	**49.72**	**1.4**

* Including US territories

Given lower-than-expected 4Q07 figures, OECD demand has been revised down in 2007 (-75 kb/d) to 49.1 mb/d (-0.5% year-on-year), compared with last month's report. For 2008, the forecast has also been lowered by 190 kb/d to 49.3 mb/d (+0.3%), mostly due to milder weather conditions in January and the carry-through of weaker 4Q07 demand growth. In the OECD as a whole, oil demand growth is now expected to come almost exclusively from transportation fuel – but growth in this category should be weaker than in the past as a result of slowing economic activity, notably in the US, and higher oil prices.





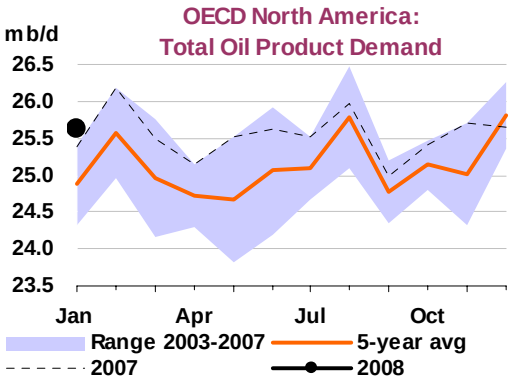
Total OECD Demand by Product
(million barrels per day)

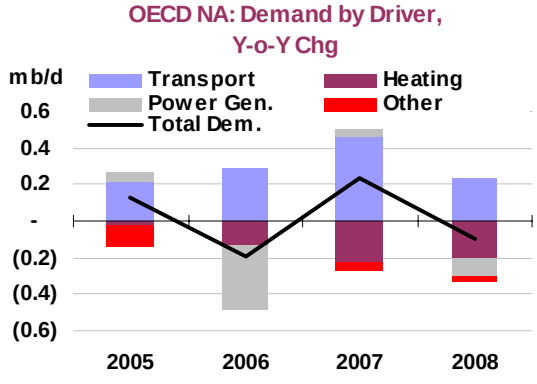
	2006	2007	1Q07	2Q07	3Q07	4Q07	Oct 07	Nov 07	Dec 07*	Latest month vs. Nov 07	Latest month vs. Dec 06
LPG & Ethane	4.77	4.81	5.25	4.65	4.43	4.92	4.62	4.93	5.20	0.27	-0.01
Naphtha	3.17	3.21	3.38	3.06	3.15	3.23	3.12	3.27	3.31	0.04	-0.12
Motor Gasoline	14.86	14.91	14.45	15.07	15.29	14.82	14.89	14.81	14.75	-0.06	-0.31
Jet & Kerosene	4.16	4.11	4.35	3.90	3.95	4.22	4.13	4.22	4.32	0.11	-0.22
Gas/Diesel Oil	13.25	13.17	13.51	12.61	12.88	13.68	13.92	13.85	13.27	-0.57	0.02
Residual Fuel Oil	4.04	3.93	4.19	3.87	3.76	3.89	3.81	4.00	3.87	-0.13	-0.18
Other Products	5.08	4.98	4.58	5.03	5.23	5.05	5.16	5.18	4.82	-0.36	0.18
Total Products	**49.34**	**49.10**	**49.71**	**48.19**	**48.71**	**49.80**	**49.66**	**50.24**	**49.53**	**-0.70**	**-0.65**

* Latest official OECD submissions (MOS)

North America

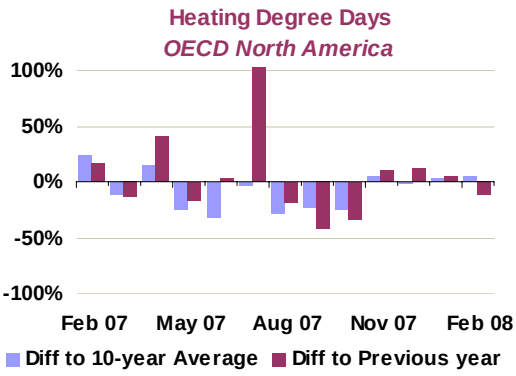
Preliminary data indicate that oil product demand in North America (including US Territories) rose by 1.0% year-on-year in January, mostly underpinned by strong diesel demand (+11.4% year-on-year) and resilient gasoline deliveries (+0.2%). Diesel demand is growing apace in all three North American countries, although in the case of the US this could be related to reclassification issues (low- versus high-sulphur gasoil). As for gasoline, strong growth in Canada and Mexico offset losses in the US. OECD North America demand averaged 25.54 mb/d in 2007 (+0.9% on a yearly basis) and could decline slightly to 25.45 mb/d in 2008 (-0.4%).



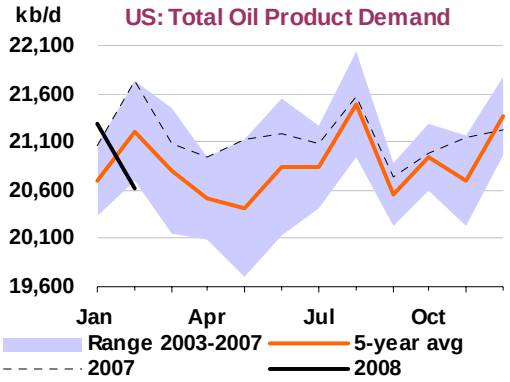


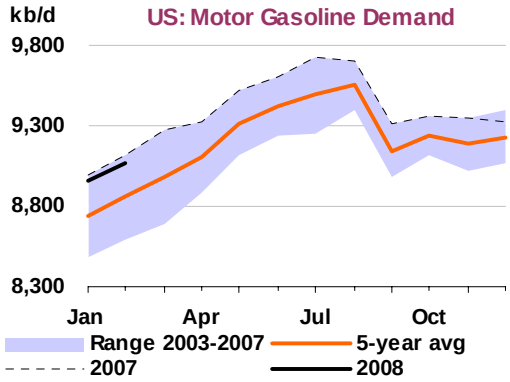
According to adjusted preliminary data, inland deliveries in the continental **United States** – a proxy of oil product demand – rose by 1.1% year-on-year in January. Overall demand growth was mostly due to higher-than-expected deliveries of distillates (diesel: +12.3% year-on-year) and residual fuel oil (+6.6%). As noted in previous reports, the resilience of diesel demand is partly attributable to the change in sulphur specifications since mid-2006 (whereby low-sulphur non-road, locomotive and marine gasoil is now counted as diesel), which also explains the weakness in high-sulphur, heating oil deliveries (-34.8%)

despite slightly colder temperatures. Indeed, in January the number of heating-degree days was 4% higher than the 10-year average (and 5% higher than in the same month of 2007), explaining the rise in residual fuel oil deliveries.

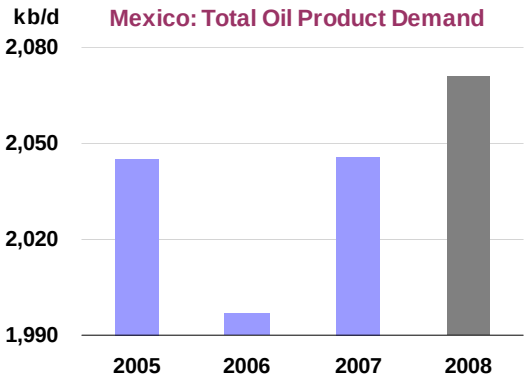


More interestingly, revised figures for December indicate that gasoline deliveries weakened in that month (-0.8% year-on-year, rather than +0.2% as previously estimated). According to unadjusted preliminary weekly data, the trend continued in both January (-0.4%) and February (-0.7%), suggesting that continuing high pump prices and the ongoing economic slowdown are starting to take a toll on gasoline demand. Gasoline demand rose by only 0.7% in 2007, slightly below the average of the previous two years. Although weekly data are likely to be revised, at this point we foresee US gasoline demand marginally declining this year.





According to preliminary data, oil product demand in **Mexico** declined by 0.2% on a yearly basis in January. Declines in LPG and residual fuel oil demand (-3.6% and -19.0%, respectively) offset strong gains in transportation fuel demand (gasoline deliveries rose by 5.5% year-on-year, jet fuel/kerosene by 9.2% and diesel by 7.2%). Despite growing anxieties regarding the true state of the US economy – Mexico's main export market – oil product demand in Mexico continues to be supported by rising incomes and a, so far, resilient domestic market. Total demand increased by 2.5% in 2007 to slightly above 2.0 mb/d, and is expected to expand by 1.2% in 2008.



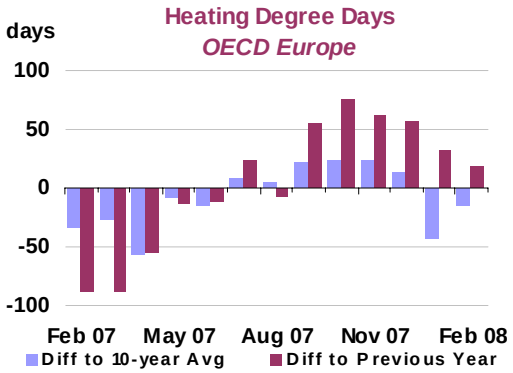
OECD North America Demand by Product
(million barrels per day)

	2006	2007	1Q07	2Q07	3Q07	4Q07	Oct 07	Nov 07	Dec 07*	Latest month vs. Nov 07	Latest month vs. Dec 06
LPG & Ethane	2.87	2.92	3.24	2.75	2.70	2.98	2.80	2.98	3.15	0.17	0.07
Naphtha	0.44	0.43	0.42	0.45	0.43	0.43	0.45	0.43	0.41	-0.02	-0.06
Motor Gasoline	10.72	10.85	10.53	10.94	11.07	10.84	10.84	10.85	10.85	0.00	0.01
Jet & Kerosene	1.91	1.90	1.88	1.89	1.91	1.91	1.91	1.93	1.88	-0.05	-0.01
Gas/Diesel Oil	5.17	5.27	5.48	5.13	5.13	5.33	5.31	5.32	5.35	0.03	0.12
Residual Fuel Oil	1.20	1.24	1.38	1.26	1.18	1.16	1.11	1.26	1.12	-0.14	-0.07
Other Products	2.99	2.94	2.74	3.02	3.07	2.94	2.99	2.93	2.89	-0.04	0.18
Total Products	**25.31**	**25.54**	**25.67**	**25.43**	**25.49**	**25.58**	**25.40**	**25.70**	**25.66**	**-0.05**	**0.24**

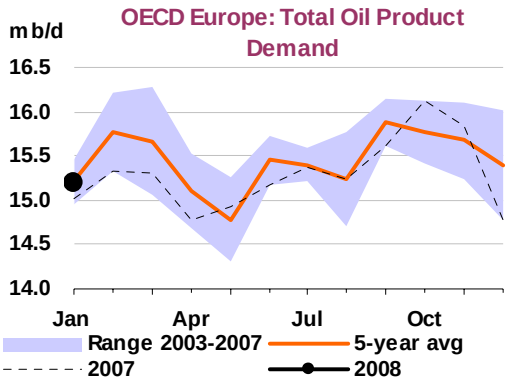
* Latest official OECD submissions (MOS)

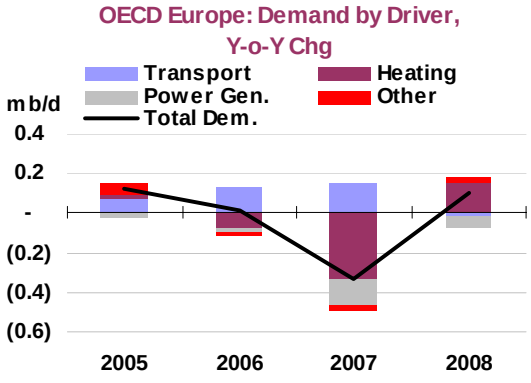
Europe

According to preliminary inland delivery data, European oil demand grew by 1.1% year-on-year in January to 15.2 mb/d, only slightly below our previous forecast. The headline number, however, masks a more substantial downward adjustment of 260 kb/d if excluding stronger-than-expected German demand. Moreover, final monthly data for December came in more than 0.5 mb/d lower than indicated by preliminary data, notably in Belgium, France, Germany, Greece and the UK. Once again, weak heating oil and residual demand led the changes – other product categories, bar naphtha, were also weaker than expected. As a result, 4Q07 demand has been lowered by 171 kb/d, an adjustment which has to a large extent been carried through to the 2008 forecast. European oil product demand in 2007 is now estimated at 15.3 mb/d (-2.2% versus 2006), about 40 kb/d lower than the previous estimate. Meanwhile, the 2008 forecast has been adjusted down by 130 kb/d to 15.4 mb/d (+0.7%).

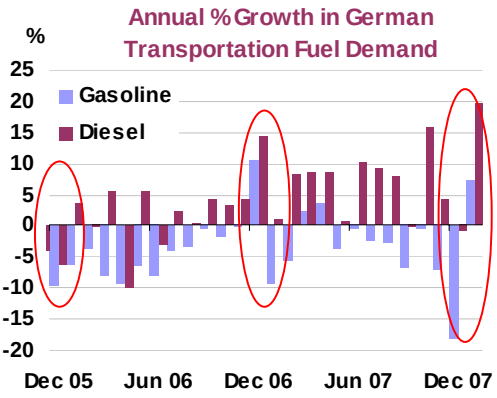


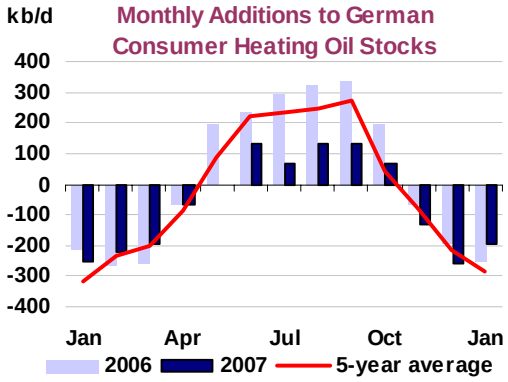
Temperatures in January were above the 10-year average, but the weather was not as mild as last year. Indeed, European heating oil deliveries were 8.7% higher than the same month in 2007. German heating oil deliveries were particularly strong (+28.9%). Last year, however, heating oil demand had been penalised by the value-added tax increase introduced in January 2007. The hike also weighed down on German transportation fuel demand, and this year's deliveries of both gasoline and diesel posted strong gains by comparison. Residual fuel oil, by contrast, was weak in Germany and in other main consumer countries, declining by 6.4% in January in Europe as a whole.

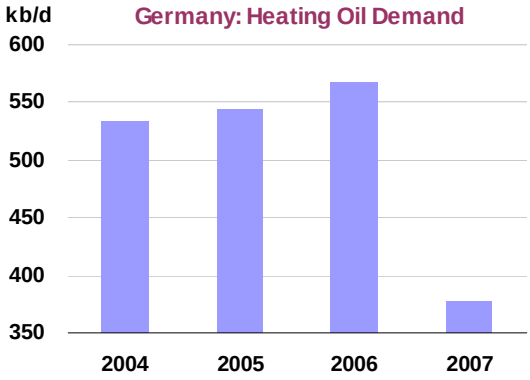


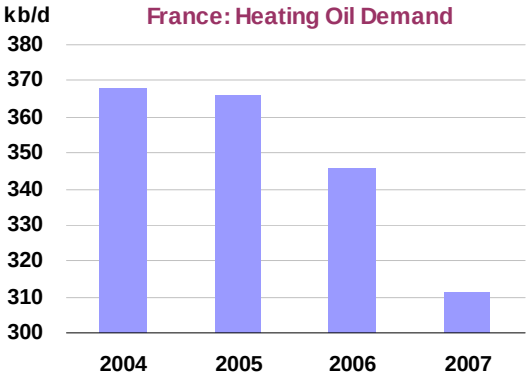


As noted, **German** demand turned out to be about 200 kb/d higher than expected in January. Total oil product demand rose by 11.4% year-on-year, with increases in all products bar fuel oil. Gasoline and diesel, in particular, grew by 7.3% and 19.8%, respectively, year-on-year. This suggests that consumers boosted purchases in December 2006 in anticipation of the value-added tax hike to be implemented in January. By contrast, December 2007 demand for both products fell by 18% and 0.9%, respectively, on a yearly basis. In 2003, when excise taxes were increased, monthly data showed no indication that consumers had shifted their purchases of transportation fuels and heating oil a month ahead. This is probably due to the fact that oil prices at the time were significantly lower. German heating oil deliveries, meanwhile, were up by 28.9% in January, very much in line with expectations. End-user demand, however, might not have been as strong as these figures indicate, since consumer heating oil stock draws were lower than historical norms. Consumer stocks fell to 52% of capacity, 8% less than in January 2007 and 3% less than in December 2007. This decline represents a stock draw of 195 kb/d, compared with a five-year average of about 290 kb/d. As for residual fuel oil, demand fell by 8.7% year-on-year in January.



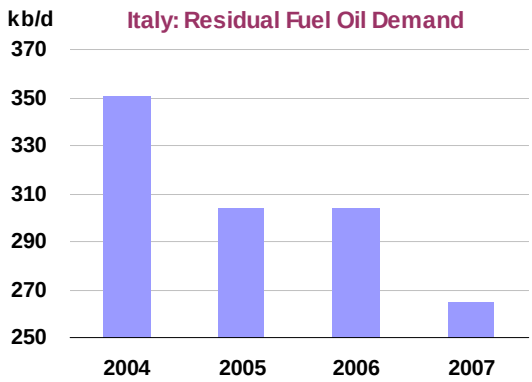


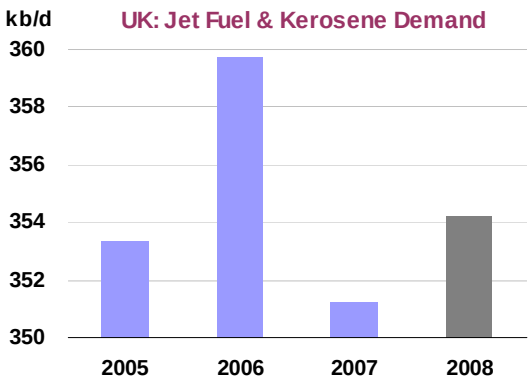




In January, demand in **France** was stronger than anticipated, increasing by 1.2% year-on-year. Gains in diesel (+2.3%) and heating oil demand (+3.9%) offset declines in gasoline (-6.6%) and fuel oil deliveries (-5.1%). January was slightly colder than the previous year, but milder than the 10-year average, while February was slightly colder and closer to historical norms. Final December data, by contrast, were weaker than expected. Whereas preliminary data had shown a 7% increase (+3% excluding fuel oil deliveries to major consumers), finalised MOS data point to a 3.5% contraction, with the largest discrepancies in heating oil, LPG (which is also used for heating) and 'other products'.

Italian demand contracted by 2.8% in January, with gasoline and fuel oil posting double-digit declines, only partly offset by gains in middle distillates. Residual fuel oil deliveries contracted despite higher electricity demand (+0.8%), as power generation needs were met by natural gas (total thermal power generation was 3.1% higher than the previous year, and natural gas use rose by 12% year-on-year in December).





Final demand figures for the **UK** were particularly weak in December (-8.1%), leading to a downward revision of some 120 kb/d. All products bar LPG were revised down; and the adjustments have, to a large extent, been carried through to 2008, lowering the forecast by some 30 kb/d. Preliminary inland delivery data for January was not available at the time of writing (and JODI M-1 data have historically been very unreliable), but our forecast shows continued weakness and total demand falling by 4.1% annually for the month. In 2008, total UK oil product demand is expected to decline by 0.4%, following a 3.6% contraction in 2007. The outlook assumes a partial rebound in naphtha demand (+11.6% over 2007, compared with a 40.7% fall last year) and jet fuel (expected to rebound as logistical problems following the December 2005 Buncefield explosion are solved). Jet fuel demand, which contracted by 2.4% in 2007, should also be boosted by the US/EU 'open-skies' treaty liberalising transatlantic aviation, which comes into force at the end of March, and which is expected to increase the number of transatlantic flights at the expense of short-haul domestic and European flights.

Finally, total demand in **Greece** was weaker than estimated in December, posting a 4.5% annual decline. Both motor gasoline demand and diesel contracted (by 5.1% and 10.0%, respectively, compared with the same month in 2007). As diesel use is discouraged for personal vehicles (it was actually prohibited in urban areas until last December), the decline in diesel consumption is arguably related to a slowdown in commercial activity. Heating oil demand, meanwhile, should have been boosted by colder-than-normal weather in Greece, Turkey and most of the eastern Mediterranean in both January and February.

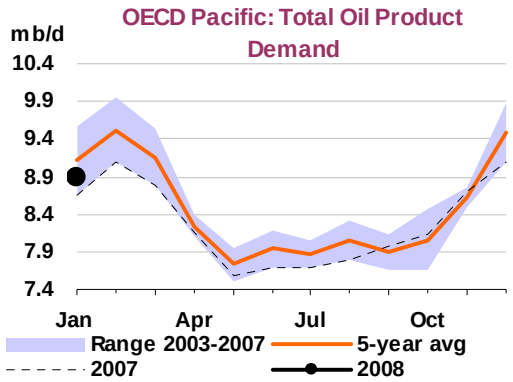
OECD Europe Demand by Product
(million barrels per day)

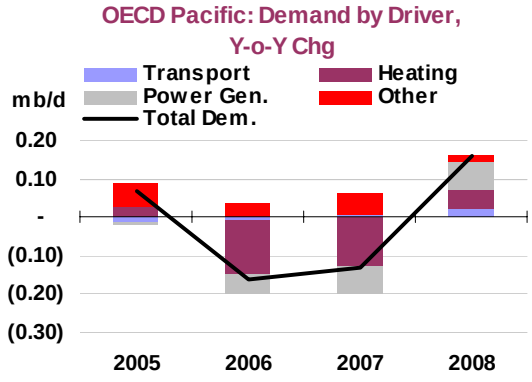
	2006	2007	1Q07	2Q07	3Q07	4Q07	Oct 07	Nov 07	Dec 07*	Latest month vs. Nov 07	Latest month vs. Dec 06
LPG & Ethane	0.99	0.97	1.04	0.99	0.88	0.98	0.93	1.01	1.02	0.01	-0.04
Naphtha	1.12	1.12	1.22	1.05	1.08	1.13	1.14	1.13	1.14	0.01	-0.04
Motor Gasoline	2.57	2.49	2.39	2.59	2.59	2.41	2.49	2.41	2.32	-0.08	-0.21
Jet & Kerosene	1.27	1.29	1.22	1.28	1.39	1.29	1.38	1.25	1.23	-0.03	0.02
Gas/Diesel Oil	6.25	6.12	6.18	5.74	6.08	6.49	6.76	6.62	6.09	-0.53	0.02
Residual Fuel Oil	1.86	1.74	1.83	1.71	1.68	1.74	1.74	1.77	1.69	-0.08	-0.11
Other Products	1.57	1.55	1.35	1.60	1.69	1.54	1.68	1.65	1.28	-0.37	-0.10
Total Products	**15.63**	**15.29**	**15.21**	**14.96**	**15.40**	**15.58**	**16.12**	**15.84**	**14.78**	**-1.06**	**-0.45**

* Latest official OECD submissions (MOS)

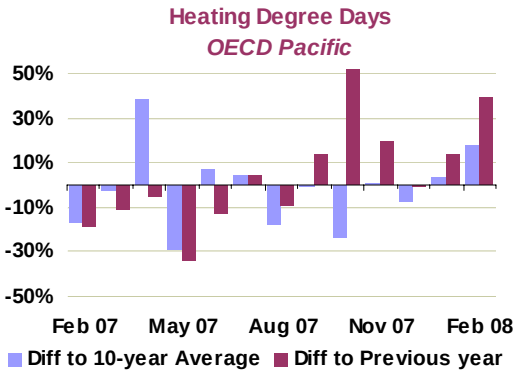
Pacific

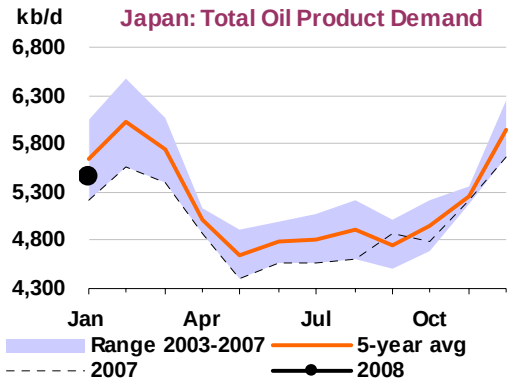
According to January preliminary data, oil product demand in the Pacific rose by 2.9% year-on-year. Demand was largely supported by strong Japanese consumption of jet fuel/kerosene for heating and fuel oil and direct crude for power generation. Temperatures were distinctly colder than in December – the number of heating-degree days in January was 3% higher than the 10-year average (and 14% higher than in the same month of the previous year). At 8.3 mb/d in 2007 (-1.6% on a yearly basis) OECD Pacific oil demand is virtually unchanged compared with last month's report. In 2008, demand is expected to reach 8.4 mb/d (+1.9%).

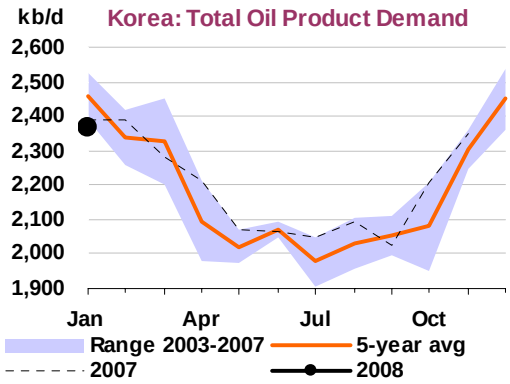




According to preliminary data, oil product demand in **Japan** – which represents some two-thirds of OECD Pacific's total – rose by 4.9% year-on-year in January. Demand was supported by heating and electricity needs amid somewhat colder-than-normal temperatures, notably in northern Japan (the country's main heating fuel region) and eastern Japan (including the densely populated Tokyo area). Jet fuel/kerosene demand (used as a heating fuel) rose by a modest 0.8% year-on-year (following December's 17.0% decline), while fuel oil and direct crude for power generation (included in 'other products') soared by 31.1%. Both fuels are expected to provide most of 2008's demand growth; in fact, there are reports that Tepco's Kashiwazaki-Kariwa nuclear power plant may remain shut much longer than expected – until March 2009, rather than being restarted in the autumn of 2008. As such, Japan's oil demand should rise this year to 5.1 mb/d (+1.6%), compared with a 3.6% decline in 2007 (to 5.0 mb/d).







In **Korea**, preliminary data indicate that total oil product demand contracted by 1.1% year-on-year in January. Colder temperatures boosted jet fuel/kerosene demand (+13.8%), but this failed to offset losses in all other product categories bar naphtha (which account for the largest share of total Korean demand). Total demand, which rose slightly to 2.2 mb/d in 2007 (+1.5%), is expected to reach 2.3 mb/d in 2008 (+2.3%), following a 10% temporary reduction of oil product taxes by the new government of President Lee Myung-Bak. The move, effective until December 2008, is intended to soften the inflationary impact of high fuel costs (South Korea imposes several taxes on refined products, including a special tax, a traffic tax, a driving tax, an education tax and a value-added tax). According to some reports, high oil prices have already encouraged interfuel substitution in power generation in favour of relatively cheaper LNG.

OECD Pacific Demand by Product
(million barrels per day)

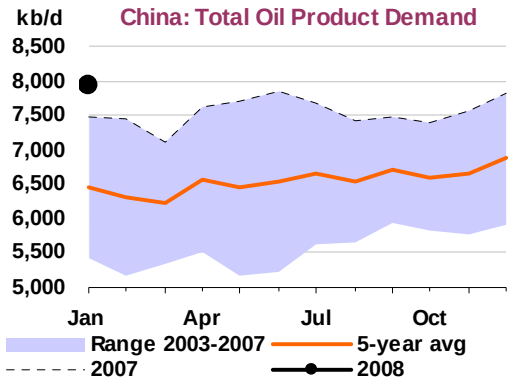
	2006	2007	1Q07	2Q07	3Q07	4Q07	Oct 07	Nov 07	Dec 07*	Latest month vs. Nov 07	Latest month vs. Dec 06
LPG & Ethane	0.92	0.93	0.97	0.92	0.86	0.95	0.90	0.94	1.02	0.09	-0.04
Naphtha	1.60	1.65	1.75	1.57	1.63	1.67	1.53	1.71	1.76	0.05	-0.02
Motor Gasoline	1.57	1.57	1.53	1.54	1.63	1.57	1.57	1.55	1.57	0.02	-0.11
Jet & Kerosene	0.98	0.91	1.25	0.73	0.65	1.03	0.84	1.03	1.21	0.18	-0.24
Gas/Diesel Oil	1.83	1.78	1.85	1.75	1.67	1.86	1.84	1.90	1.83	-0.07	-0.12
Residual Fuel Oil	0.98	0.94	0.99	0.89	0.90	0.99	0.96	0.97	1.05	0.09	-0.01
Other Products	0.52	0.49	0.49	0.41	0.48	0.58	0.49	0.59	0.64	0.05	0.11
Total Products	**8.40**	**8.27**	**8.83**	**7.80**	**7.81**	**8.65**	**8.14**	**8.70**	**9.10**	**0.41**	**-0.43**

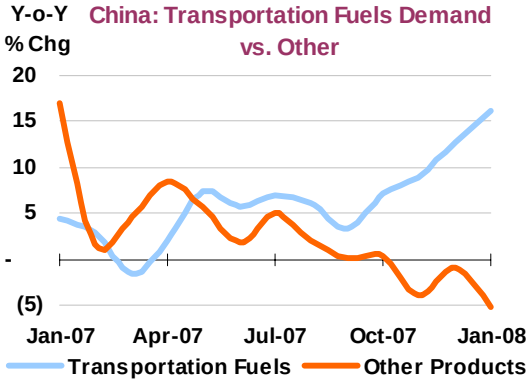
* Latest official OECD submissions (MOS)

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 6.1% year-on-year in January, with all product categories bar LPG, naphtha and residual fuel oil posting significant gains. Demand for gasoline (+11.9%), jet fuel/kerosene (+16.4%) and gasoil (+18.3%) remained very strong. It should be noted, however, that these growth rates are based on partial figures, since at the time of writing refining data for January had not been released.





Assuming that refinery runs were as high in January as in December (6.9 mb/d), these preliminary data estimates would suggest that higher refinery runs and product imports had effectively dealt with the gasoil and gasoline shortages of late 2007. The country, indeed, was preparing for the key Lunar New Year holiday (when millions of migrant workers from the country's southern industrial heartland return home), which normally signals a spike in oil demand – but this year the holiday was severely disrupted by a freezing winter.

Interestingly, even before the weather emergency the domestic supply picture looked tight, with runs by 'teapot' refineries – which act as the country's swing producers – essentially flat. Relative to domestic product prices, residual fuel oil – the teapot feedstock of choice – remained expensive, causing demand to contract, for the sixth month in a row, by 12.5% year-on-year in January. Predictably, given limited domestic output, net gasoil imports filled the gap and remained very high at almost 200 kb/d. Meanwhile, net fuel oil imports, at 200 kb/d, were only about 30 kb/d higher than in the previous month. As for crude, net imports rose by almost 370 kb/d in January (to 3.2 mb/d), as state-owned Sinopec and PetroChina boosted their own refinery runs and provided subsidised crude to the teapots.

China Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	664	-33	-5	-4.6	-0.8
Naphtha	756	812	833	56	21	7.5	2.5
Motor Gasoline	1,221	1,257	1,337	36	80	2.9	6.3
Jet & Kerosene	259	280	306	20	26	7.8	9.5
Gas/Diesel Oil	2,415	2,576	2,818	161	242	6.7	9.4
Residual Fuel Oil	791	744	714	-48	-30	-6.0	-4.1
Other Products	1,068	1,204	1,292	136	88	12.7	7.3
Total Products	**7,213**	**7,542**	**7,963**	**329**	**421**	**4.6**	**5.6**

Baseline revisions in 2006 (+60 kb/d, implying a rate of growth of 7.8% for that year) have lifted our Chinese forecast. Nonetheless, the prognosis remains largely unchanged in terms of growth rates, with oil

demand growing by 4.6% year-on-year in 2007 to 7.5 mb/d and by 5.6% in 2008 to 8.0 mb/d. However, as noted in last month's report, the 2008 forecast may be revised as the extent and magnitude of the widespread power shortages and inclement weather that hit China over the past two months become clear.

New Directions in China's Energy Policy?

Chinese energy policy continues to be torn between market-oriented and administrative measures. Improving the coherence of energy policies and regulations is actually one of the arguments that has long been raised in favour of creating an Energy Ministry, a move that the National Peoples' Congress (which began on 5 March) may consider – although some observers reckon that this seems unlikely at this point given ongoing disagreements among the different agencies that currently deal with energy issues. Indeed, even though policy makers often reiterate the goal of eventually moving towards market-based pricing, administrative directives continue to set the prices of oil products, leading to mounting losses in the country's downstream sector given the widening differences between domestic and international prices. More significantly, the government seems increasingly reluctant to reimburse refiners, even though the country's windfall tax on domestic crude sales is intended precisely for that purpose. Sinopec – the country's largest oil refiner, which received a compensation of roughly $1.4 billion in 2005 and $700 million in 2006 for the losses incurred as a result of Beijing's retail fuel pricing policy – may be reportedly denied an expected payment of at least Rmb 20 billion ($2 billion) for 2007. The reason is probably related to the company's profitability: despite losing about $1.3 billion on domestic sales, Sinopec managed to post Rmb 70 billion ($9.6 billion) in net profits in 2007. Moreover, compensating Sinopec could encourage other state-owned companies – notably in the power sector, where retail prices are also capped – to lobby for cash handouts as well.

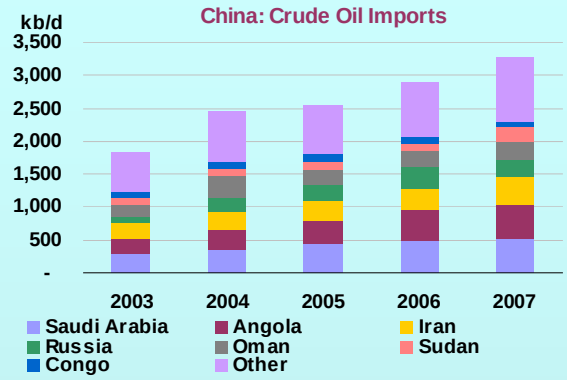
Furthermore, even as end-user prices remain capped, the government has opted to raise consumption taxes for some products. On 18 February, it unexpectedly tripled the consumption tax for fuel oil and naphtha, payable by anyone who produces, processes or imports both fuels into China. The tax of fuel oil thus rose to Rmb 101.50/mt (about $14), while that of naphtha went up to Rmb 0.20/litre – retroactively to 1 January. The hikes are ostensibly aimed at boosting energy savings and curbing the expansion of resource-intensive sectors. They may, however, have two unintended consequences: 1) further tighten the oil product market and potentially prompt another spell of product shortages, as higher costs will further squeeze the profitability of 'teapot' refineries, which effectively act as the country's swing producers and run mostly on fuel oil; and 2) encourage unwelcome inflationary pressures, as manufacturing plants, mills and some power generators that run on off-specification gasoil and/or fuel oil attempt to pass higher fuel prices on to their customers. Ultimately, the government may be forced to spend even more in subsidies to guarantee adequate oil product supplies.

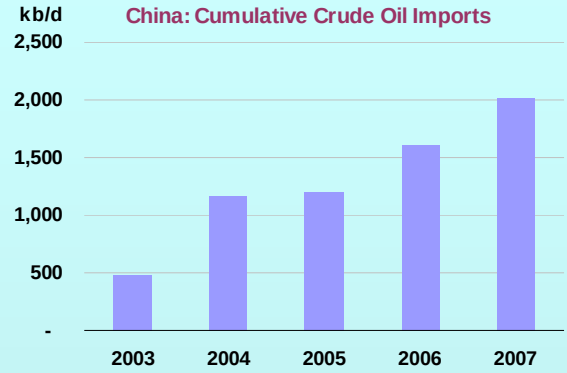
Nevertheless, despite having *de facto* increased the cost of fuel oil, the government has announced other measures that support independent players. In Shandong province, four independent refiners have been allowed for the first time to enter the domestic wholesale oil market, a privilege hitherto reserved for state-owned companies. Presumably the move should make it easier for teapots to import feedstocks – usually straight-run fuel oil from Russia, Singapore and Venezuela. In addition, on 29 February the government asked PetroChina and Sinopec to sell wholesale volumes of gasoline and diesel to independent dealers with a guaranteed profit margin of 5.5-7.0%.

At the same time, there are renewed rumours that the long-debated introduction of a transportation fuel tax will finally be approved during the National Peoples' Congress. The tax, aimed at reining in both consumption and pollution, will reportedly replace the existing road maintenance fee. However, local governments currently receive a large share of the road levy and may be opposed to the move. Moreover, a fuel tax would further exacerbate inflationary pressures – and unless it led to a significant increase in retail prices, would probably do little to limit transportation fuel demand growth. Indeed, introducing a consumer tax while leaving price caps in place is unlikely to change oil demand patterns.

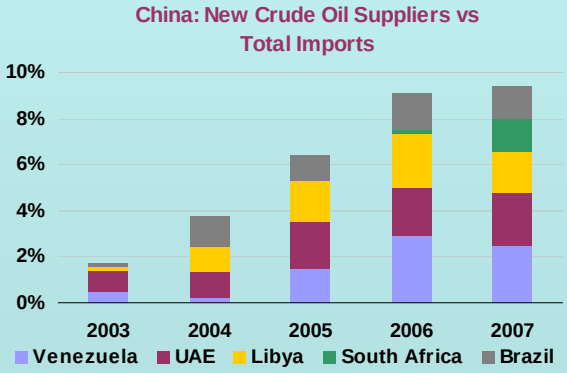
China's Shifting Crude Oil Imports

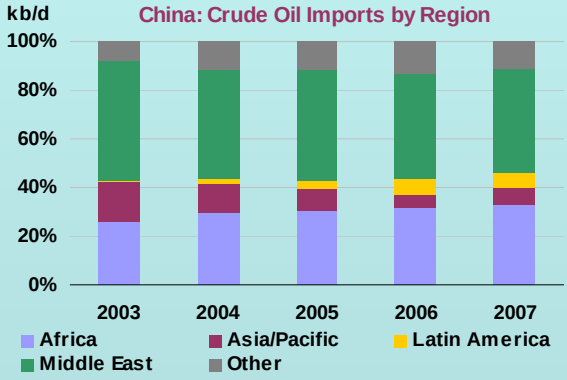
Since the early 2000s, China's crude oil imports have grown rapidly, by almost 20% per year on average since 2003. In the past five years, China's imports have more than doubled to 3.3 mb/d (+135% over that period, equivalent to an incremental demand of over 2 mb/d).





Although a handful of countries – Saudi Arabia, Angola, Iran, Russia, Oman, Sudan and Congo, ranked in order of importance – continue to account for roughly 70% of total imports, China has attempted to diversify its crude import sources. Various countries in Africa, Latin America, the Middle East and Central Asia are becoming significant suppliers; new sources currently account for almost 10% of the total, compared with less than 2% in 2003.

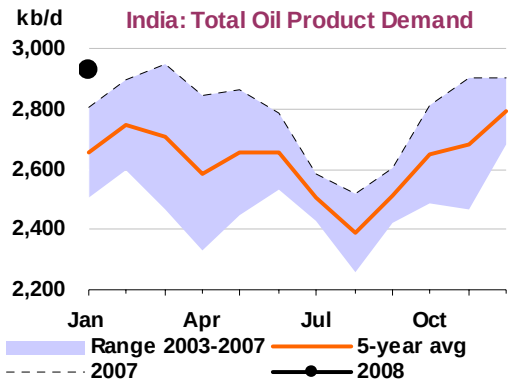


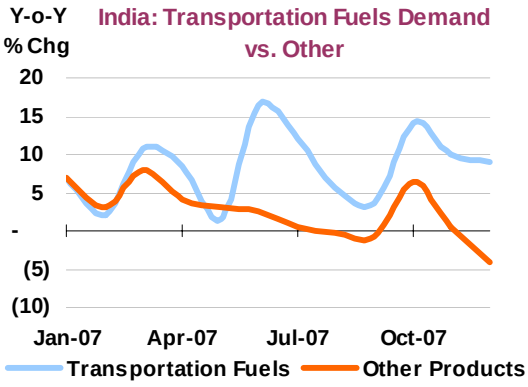


Nevertheless, in terms of geopolitical significance, Africa and the Middle East are the key regions of Chinese supply, with 33% and 42%, respectively, of crude deliveries in 2007. For example, imports from Sudan (where China has invested heavily and continues to oppose international sanctions over the Darfur crisis) have roughly doubled to over 200 kb/d over the past five years. Meanwhile, Saudi Arabia remains China's largest single supplier, with 16% (530 kb/d) of total imports in 2007. By the same token, some countries that have sought to become key Chinese suppliers – most notably Venezuela – have still some way to go. With only 83 kb/d in 2007, Venezuela's imports only represent 3% of China's needs – and are still well below the 300 kb/d that had been promised by President Chávez, suggesting that Caracas' diversification policy is much less successful than Beijing's.

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – rose by 4.4% year-on-year in January. Although the overall growth rate was relatively subdued compared with previous months, demand continues to be supported by transportation fuels, with gasoline, jet fuel/kerosene and gasoil sales rising by 15.6%, 4.3% and 15.9%, respectively. By contrast, both naphtha and fuel oil contracted by 6.5% and 8.1%, respectively, as natural gas made further inroads. Total demand in 2007 is estimated at roughly 2.8 mb/d (+5.5% over 2006). Our forecast for 2008 remains largely unchanged from last month's report, at 2.9 mb/d (+4.2%).

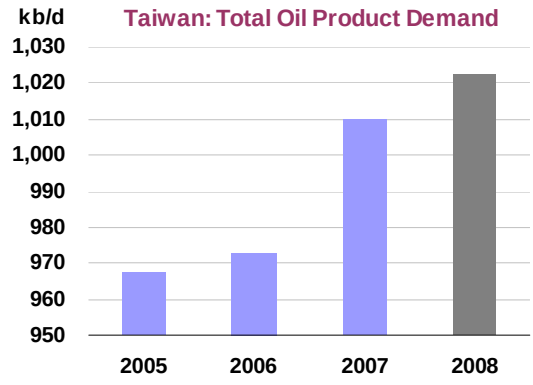


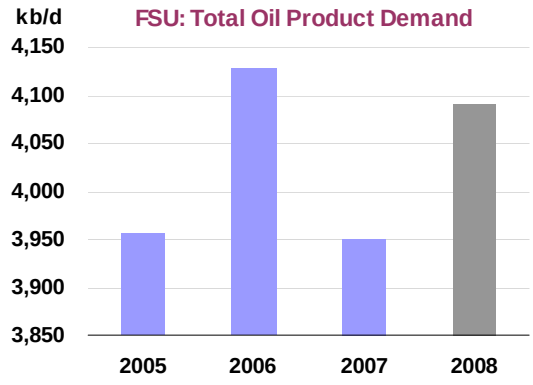


Following months of discussion and rumours, in mid-February the Group of Ministers (GoM) finally decided to raise the retail prices of transportation fuels, which had become considerably lower than international benchmarks. Gasoline prices rose by rise by 4.6% (+2 rupees or $0.05) per litre, while diesel prices increased by 3.3% (+1 rupee). In addition, in late February the government introduced a distinction between unbranded and branded gasoline and gasoil in order to lower the excise duty on the sale of unbranded fuels.

Yet the retail price hike – about half of what had been proposed in January, and excluding household fuels such as LPG and kerosene – is too limited to reduce the losses incurred by state-owned downstream oil companies, which support about 43% of the yearly $18-billion subsidy burden (some observers contend that, in order to be effective, the increase should be around 10-12 rupees per litre for each fuel). Moreover, the price adjustment may still provoke tensions within the governing coalition. Indeed, the Communist Party, worried about the inflationary impact of higher prices upon its main constituency – the country's poor – has repeatedly threatened to bring the government down on this issue (there will be elections in a dozen states this year and national parliamentary polls in 2009).

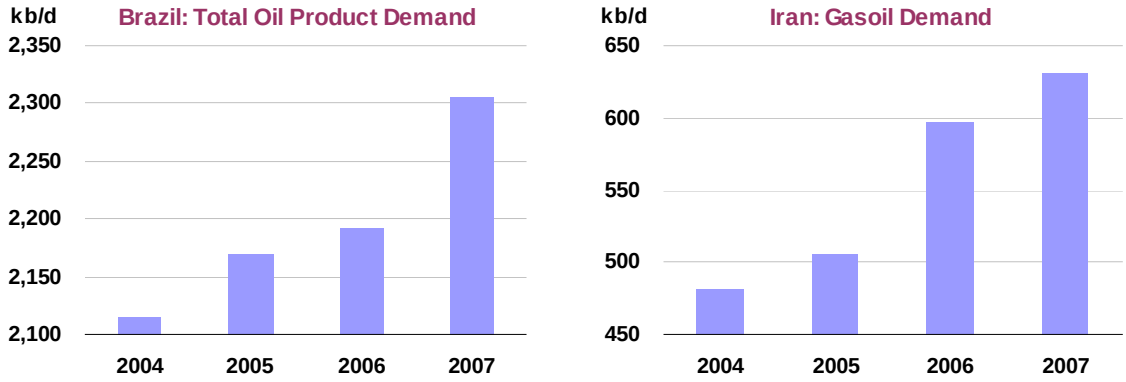
Further investigation suggests that last month's baseline demand revisions in **Chinese Taipei** are related to an error regarding conversion factors used to convert Chinese Taipei's submissions to APEC and JODI. 'Other products', as submitted to JODI, had been inflated by excessive additional naphtha demand. In May 2007, Formosa Petrochemical Corporation (FPCC) brought on line a third 1.2-million tonnes/year ethylene plant, which would consume 122 kb/d of naphtha under full capacity; actual demand figures, however, had been distorted by erroneous conversion factors. As such, the 2007 demand series was revised downwards by about 170 kb/d, largely offsetting last month's adjustment. According to official submissions, total oil product demand stood at roughly 1.0 mb/d in 2007 (+3.8% year-on-year), and is expected to grow by 1.2% in 2008, in line with historical patterns.





FSU apparent demand – defined as domestic crude production minus net exports of crude and oil products – has been revised upwards in 1Q08, given adjustments to production and trade data. Apparent demand was stronger than expected, due to weaker exports in both January and February. The region's total oil product demand, estimated at 4.0 mb/d in 2007 (-4.3% year-on-year), is thus expected to rebound to 4.1 mb/d in 2008 (+3.6%).

As anticipated in last month's report, **Brazil's** National Petroleum Agency (ANP) published the revised series of oil demand data for 2007. Following months of erratic reporting, partial demand figures for 2007 were released last month. In addition, the final data for 2006 have also been updated (-50 kb/d). Nevertheless, the revisions were relatively marginal when compared with last month's report. Total oil demand is now estimated at 2.2 mb/d in 2006 (+1.0% year-on-year) and 2.3 mb/d in 2007 (+5.2%), and is expected to reach 2.4 mb/d in 2008 (+3.0%). In terms of drivers, demand has been pulled by transportation fuels, notably jet fuel/kerosene (+9.1% in 2007) and gasoil (+5.9%), thus reflecting the country's buoyant economic growth. More interestingly, cheaper ethanol has largely supplanted gasoline: 'other products' (which include ethanol) rose by 15.2%, while gasoline demand increased by a paltry 0.8%.



The early-March adoption of Resolution 1803 by the United Nations Security Council (UNSC), which imposes a third set of sanctions on **Iran** because of its refusal to halt uranium enrichment and clear up outstanding questions regarding previous nuclear work, will likely bring back to the fore the question of the country's dependence on oil product imports. In fact, over the past two months Iran has reportedly been forced to find alternative means of payments and meet its needs by buying on the Singapore spot market, after two French banks (BNP Paribas and Crédit Agricole's investment arm Calyon) stopped issuing letters of credit to Indian refiner Reliance over its Iranian sales. This follows the withdrawal of the Swiss-Dutch trader Vitol, Iran's largest supplier of refined products, on the grounds of low profitability.

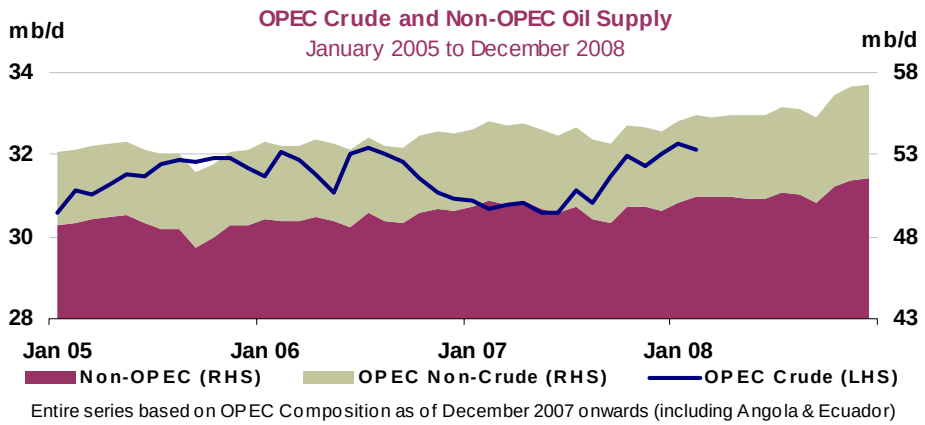
The country's attempt to curb runaway domestic gasoline demand – and hence imports – by imposing a rationing scheme has been well documented. By contrast, Iran's soaring gasoil demand has been less tracked, even though it poses significant dependency problems as well. Given low prices, gasoil use has been growing by almost 9% per year on average since 2004 (in 2006, demand jumped by almost 18%), and now accounts for over a third of total demand. More significantly, gasoil imports have reached about 40 kb/d (about 6% of total gasoil demand), partly as a result of the maximisation of gasoline production. Overall, gasoil subsidies have run as high as $1.3 billion (in the fiscal year to March).

The outlook for gasoil consumption is for growth to remain very strong in the absence of any offsetting policy measures (such as rationing or higher end-user prices). On the one hand, underlying demand from the agriculture and industrial sectors is likely to remain quite vigorous. On the other, gasoil use will arguably be supported by Iran's natural gas woes amid a severe winter – demand for gasoil has reportedly surged following Turkmenistan's decision to cut off deliveries of natural gas to northern Iran in January in a dispute over prices.

SUPPLY

Summary

- **Global oil supply** increased by 185 kb/d in February to 87.5 mb/d. January's total was revised up 110 kb/d, due to higher OPEC crude supply, while 4Q07 supply was raised by 55 kb/d to 86.5 mb/d on non-OPEC revisions. Output recovery in Canada, Mexico and the Caspian republics, offset reductions for Norway and OPEC in February. Seasonal factors may limit OECD production in March and April, and with OPEC likely opting for caution, global supply is likely to level off over the next two months.
- **Non-OPEC production** in February averaged 50.4 mb/d, 0.3 mb/d above January, as the Americas and FSU recovered from disrupted January supply. Forecast 1Q production is cut by 90 kb/d on revisions for Mexico, India, Malaysia and Brazil. Annual 2008 non-OPEC production is trimmed by 50 kb/d, with stronger late-year USA and Canada output partly offsetting now lower supplies from Asia and Latin America. Non-OPEC 2007 supply is nudged up to 49.7 mb/d, with the 2008 total now at 50.6 mb/d.
- **Expected non-OPEC supply growth in 2008** is 910 kb/d, after a 2007 increment of 540 kb/d (netting out the impact of Angola and Ecuador's move into OPEC). Growth is weighted towards the second half of 2008, unlike 2007 when the first six months saw growth averaging 0.9 mb/d before subsequently slowing. Growth in 2008 is split between the FSU, Asia, Latin America, biofuels and Africa. On top of the non-OPEC totals, OPEC NGL supplies reach 5.2 mb/d in 2008, a rise of 375 kb/d from 2007.
- **Assumed net decline for non-OPEC production** in our forecasts remains unchanged at some 4-5% pa. However, decline rates for mature non-OPEC fields have averaged 7.7% pa this decade, net of the inflationary impact of unscheduled field outages. Decline does not seem to have accelerated markedly since 1999, but does vary widely according to depletion, geology, location, extraction rate and reservoir management. Some mature offshore OECD assets face average decline rates closer to 15%.
- **OPEC crude supply in February** averaged 32.1 mb/d, down by 120 kb/d from upward-revised January levels. Amid seasonal adjustments and field outages, Middle East Gulf and West African producers together supplied 0.3 mb/d less crude in February. This was offset in part by a 150 kb/d increase from Iraq, where output reached 2.4 mb/d. Producers chose to roll-over the existing 29.67 mb/d production target at their 5 March meeting, and OPEC effective spare capacity remains near 2 mb/d.
- **The call on OPEC crude and stock change** (including Angola and Ecuador) averages 32.8 mb/d for 1Q08, but then dips seasonally and averages 31.9 mb/d for 2008 as a whole. Downward revisions for the call arising from weaker 4Q07 demand are offset by lower non-OPEC supply through 2008.



All world oil supply figures for February discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Russia and Vietnam are supported by preliminary February supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC crude supply in February averaged 32.1 mb/d, a reduction of 120 kb/d from upward-revised January levels. Estimates for January supply from Iran and Qatar were revised up by a collective 220 kb/d after indications of higher exports and domestic crude runs for Iran, and a lower-than-expected impact from offshore field maintenance for Qatar. In February, field outages and pre-OPEC meeting manoeuvring likely underpinned a 0.3 mb/d reduction from West African and Mid East Gulf producers. Nigeria saw renewed field outages in early February in the troubled Niger Delta area, with shut-ins temporarily breaching 0.7 mb/d at one point in February. However, Iraqi supply increased by 150 kb/d, and output reached 2.4 mb/d following higher northern exports and recovering refinery runs.

OPEC producers chose to roll-over the existing 29.67 mb/d output target at their 5 March meeting, citing their view of a well-supplied market and high prices deriving more from a weak dollar, inflationary pressures and fund flows into the commodity markets than fundamental factors. In the end, arguments about seasonally weakening demand and downside economic risks carried the day in the face of appeals from consumer governments for positive action to help rebuild stocks amid record high prices. The group's next ordinary meeting is scheduled for 9 September in Vienna, although post-meeting comments suggested that the option to convene an extraordinary meeting in the interim remains open.

OPEC Crude Production[1]
(million barrels per day)

	Dec 2007 Supply	Jan 2008 Supply	Feb 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Feb 2008 Supply	Capacity end-2008	Current Target	Dec-Feb Supply vs. Current Target
Algeria	1.40	1.40	1.40	1.40	0.00	1.42	1.36	103%
Indonesia	0.84	0.83	0.87	0.88	0.01	0.84	0.87	98%
Iran	3.94	4.05	3.93	3.98	0.04	4.02	3.82	104%
Kuwait[3]	2.55	2.57	2.58	2.62	0.04	2.66	2.53	101%
Libya	1.75	1.77	1.76	1.82	0.07	1.84	1.71	103%
Nigeria[4]	2.10	2.06	2.01	2.47	0.46	2.49	2.16	95%
Qatar	0.82	0.85	0.83	0.90	0.07	0.98	0.83	101%
Saudi Arabia[3]	9.10	9.15	9.10	10.84	1.74	11.25	8.94	102%
UAE	2.54	2.62	2.59	2.85	0.26	2.85	2.57	101%
Venezuela[5]	2.43	2.44	2.44	2.50	0.06	2.40	2.47	99%
OPEC-10	**27.45**	**27.73**	**27.50**	**30.25**	**2.75**	**30.74**	**27.25**	**101%**
Angola[1]	1.69	1.80	1.76	1.76	0.00	2.12	1.90	92%
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52	96%
OPEC-12			**29.76**	**32.51**	**2.75**	**33.36**	**29.67**	**100%**
Iraq	2.35	2.22	2.37		0.03	2.42		
Total OPEC	**32.00**	**32.24**	**32.12**		**2.78**	**35.78**		
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.22)*			

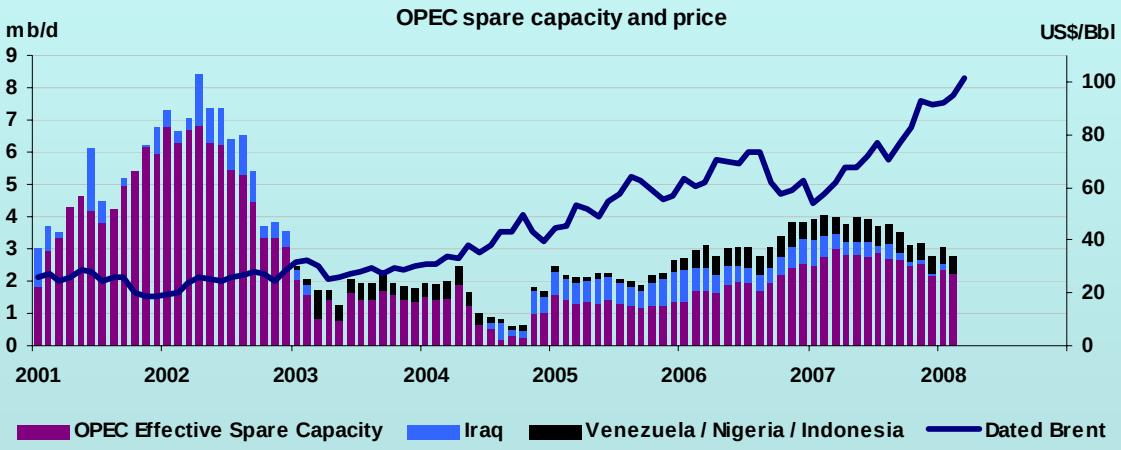
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 545 kb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 555 kb/d in February.

Total February production from the twelve members bound by quotas came in close to the collective target and indeed for the past three months individual producers have generally been producing within a couple of percentage points of the targets briefly published on the OPEC website last November. The only exceptions have been Nigeria and Angola, both producing more than 5% below target, with security-related and technical outages respectively having underpinned this 'shortfall'. Moreover it has been compensated for by above-target output from Algeria, Libya, Saudi Arabia, Kuwait and Iran. From the producers' own viewpoint, the new targets seem to bear closer relationship to output capability than did previous, largely discarded individual quotas.

Breaking the Spare Capacity Logjam

Effective OPEC spare capacity stands at 2.2 mb/d (net of Indonesia, Iraq, Nigeria and Venezuela – deemed likely to struggle to increase production in the short term). Saudi Arabia and the UAE hold 2.0 mb/d of this total. Recent pipeline outages and border tensions affecting Ecuador and Colombia, weather-related disruptions in the North Sea and Australia and the ongoing susceptibility of Nigerian and Iraqi facilities to insurgent attacks illustrate market vulnerability and suggest that a more comfortable supply cushion is desirable. Delays in completing projects such as Saudi Arabia's 500 kb/d Khursaniyah, while understandable in the currently stretched market for equipment and engineering, nonetheless highlight the minimal spare capacity that has persisted for the past five years.

By accident or design, a trend towards 'just-in-time' capacity development is following on the heels of a previous move towards 'just-in-time' inventory (arguably, the two now coexist, helping explain the strength in prices, though conversely, if tight spare capacity is seen persisting, consumers may actually revert to holding higher stocks again to compensate). Bottlenecks in labour, raw materials, fabrication, drilling and service capacity contribute to slower capacity growth. So too may producer reticence about expanding capacity ahead of uncertain future demand growth in a high price/weaker economy environment. Some OPEC members are also struggling to sustain existing capacity, for security reasons or in the face of reservoir maturity. Finally, high prices are encouraging producers (not just in OPEC) to strike a harder bargain with IOCs over access, contract terms and fiscal take, undermining marginal investments.



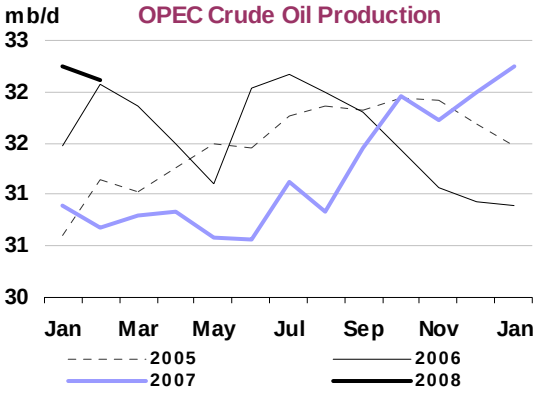
Breaking this investment logjam may require greater clarity and consensus between producers and consumers on demand levels for the future. This report has pointed out for some time that, in our view, demand growth can remain robust even in the face of high prices and OECD economic slowdown. This is not least because the main centres of growth in the developing Asian and Middle Eastern economies are largely insulated from some of the pricing pressures affecting other markets.

Secondly however, the traditional relationship between NOCs and the international companies likely needs to evolve to reflect new industrial realities. Many IOCs already accept the inevitability of contract renegotiation, not only in the face of higher prices, but also as hitherto high-risk, prospective exploration plays become better established as producing areas. However, as regions mature further into late life, this too will require flexibility from OPEC governments and NOCs to sustain investment and maximise recovery from marginal assets. Enjoying a greater share of revenues from producing fields at a time of high prices is one thing. But sustaining, let alone increasing, capacity in future may require more innovative investment models. Iran and Kuwait spring to mind in this regard, but also perhaps Libya and

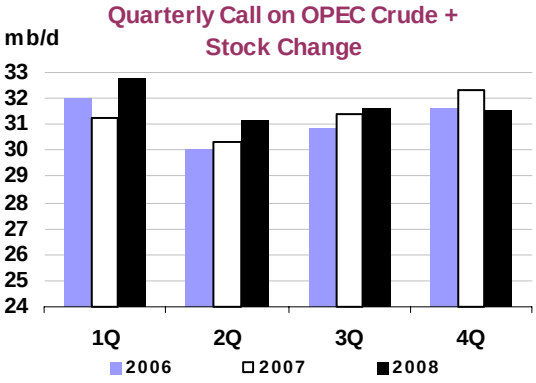
Algeria, where an initial opening up now looks to have been replaced by more caution. And all eyes are on Iraq to see the eventual shape of the investment regime there and its success or otherwise in rehabilitating production in one of the world's pre-eminent resource holders.

Some producers will need to call on newer technologies to sustain recovery from depleting assets, something the international service companies may be ideally placed to provide. Others may see future oil development prospects lying in more remote or complex formations, often involving large, integrated oil/gas and upstream/downstream facilities. Contract flexibility needs to be a two way street if the integrated operation and project management skills of the IOCs are to be called upon again. Ensuring that hydrocarbon development leads to widespread, maximised local benefits, while at the same time sustaining an attractive climate for long-term foreign investment is a challenge for all host governments.

The main movers of February OPEC supply appeared to be Iraq (+150 kb/d versus January), offset by Iran (-120 kb/d), Nigeria (-50 kb/d) and Saudi Arabia (-50 kb/d). **Iran's** reduction came after January supply estimates were revised up from 3.93 mb/d to 4.05 mb/d. Both export and domestic refinery runs are now adjudged higher, the latter due to refinery maintenance work reportedly slipping into February. Thus, amid signs of Middle East Gulf tanker sailings falling back in February, and with weaker local crude throughput, Iranian supply is assessed to have fallen below 4.0 mb/d once again. This is despite the start-up, as noted in last month's report, of an initial 25 kb/d of new production from the Azadegan field.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

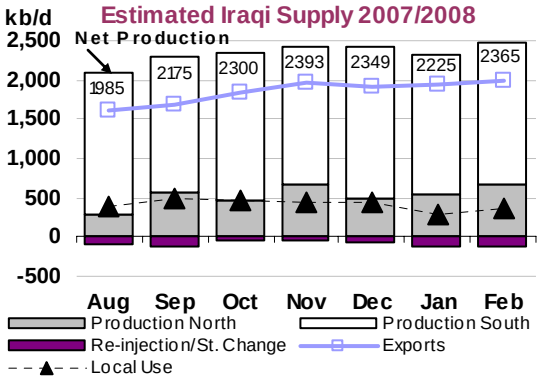
As noted above, **Nigerian** supply was adversely affected by shut-ins affecting Bonny, Forcados and Brass River crude, sending outages to around 700 kb/d at one stage. In all, output is assessed to have slipped from 2.06 mb/d in January to 2.01 mb/d in February. However, some of this disrupted output has now restarted, with current outages assessed at below 0.5 mb/d once again. Specifically, repairs on the Nembe Creek pipeline allowed reinstatement of 130 kb/d of Bonny crude, while earlier pipeline attacks or malfunctions affecting up to 250 kb/d of Forcados and Brass River production were also resolved around mid-month. On 3 March Shell announced that earlier force majeure on Bonny and Forcados exports had been lifted. Resumed crude supplies have also enabled progress in reopening the idled Warri refinery (reactivated in February) and the Kaduna plant which is scheduled back onstream in March.

However, Nigerian supply may remain constrained in March, with maintenance at the deepwater Bonga field likely to remove around 100 kb/d of monthly supply. There have also been reports that recent technical issues have shuttered volumes of Qua Iboe production.

Middle East Gulf tanker sailings data also imply a modest downturn in **Saudi Arabian** crude supply, here assessed to have slipped from 9.15 mb/d in January to 9.1 mb/d in February. Some uncertainty surrounds comments from state-producer Aramco about start-up at the Khursaniyah project. The three constituent fields – Abu Hadriyah, Fadhili and Khursaniyah – were due to begin contributing up to 500 kb/d of Arab Light crude from late 2007. However, delays with the Khursaniyah gas-oil separation plant (GOSP) have

pushed start-up into 2008. There were reports in February that attainment of plateau volumes from Khursaniyah have slipped into April. While our existing capacity estimates envisage 1Q08 start-up, we were already assuming full 500 kb/d output was more likely to occur in 2Q08, although Aramco has suggested that build-up in production will be rapid.

Net **Iraqi** supply (excluding movements of crude into storage or reinjection) rose by 150 kb/d to 2.37 mb/d in February. Partial recovery in domestic refinery runs after widespread outages affecting the Baiji, Daura and Basrah plants in January allowed crude throughput to rise to an estimated 375 kb/d from 280 kb/d the month before. This remains however less than 50% of total Iraqi nameplate refining capacity. Total exports rose from 1.94 mb/d to 1.99 mb/d, comprising 1.57 mb/d from southern ports (unchanged from January), 10 kb/d cross-border to Syria and an estimated 410 kb/d lifted from the Turkish port of Ceyhan, a rise of 55 kb/d from January levels. Exports on the northern route have been unaffected by military engagements between Turkish troops and Kurdish PKK insurgents in the Turkey-Iraq border region.



The oil ministry has received cabinet approval to enter technical support agreements with western companies aimed at boosting production capacity by 500 kb/d at a number of fields (see page 22 of report dated 13 February 2008). However financial and contractual negotiations are seen taking until perhaps mid-2008 to conclude.

Venezuelan crude supply is estimated unchanged in February at 2.44 mb/d, despite maintenance at the Petrocedeno (formerly Sincor) heavy oil upgrader, on assumption that sales of unupgraded heavy crude have continued. The communiqué released after the OPEC conference in Vienna expressed support for Venezuela in its ongoing legal dispute with ExxonMobil, effectively condemning moves to freeze PDVSA assets overseas. Venezuelan oil minister Rafael Ramirez announced that, following ExxonMobil's rejection of 80 kb/d shipments of Cerro Negro crude for the two parties' joint venture Chalmette refinery, this crude is being diverted to China, reportedly taking total Chinese imports of Venezuelan crude to 250 kb/d.

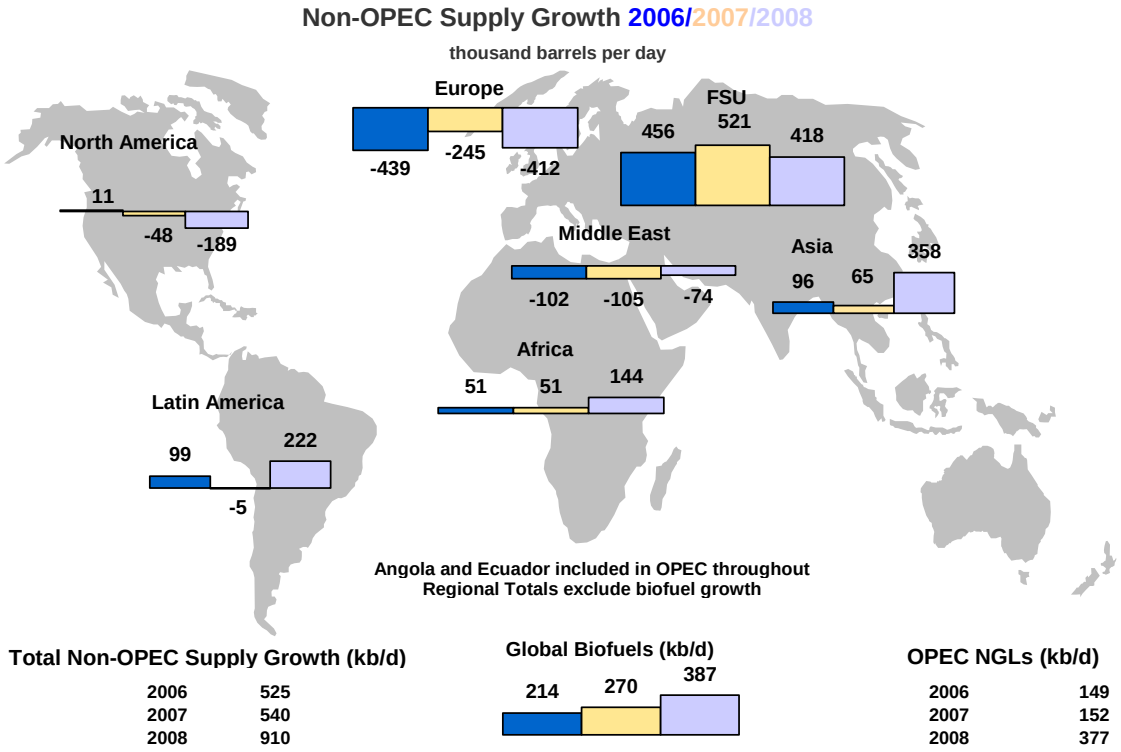
Ecuadorean production was also assessed largely unchanged in February at 500 kb/d, despite a brief outage of the SOTE pipeline caused by a landslide. Analysts have played down the likely oil supply impact of increased tensions in the Venezuela-Ecuador-Colombia border area, following the strike by Colombian government troops against FARC rebels inside Ecuadorean territory. Both Venezuela and Ecuador condemned the attack and at one point moved troops closer to the border with Colombia.

Non-OPEC Overview

Non-OPEC production in February averaged 50.4 mb/d, 0.3 mb/d above January as the Americas and FSU recovered from disrupted January supply. Forecast 1Q production is cut by 90 kb/d on downward revisions for Mexico, India, Malaysia and Brazil. Seasonal factors are likely to kick in from March onwards, potentially capping non-OPEC production at around 50.3 mb/d until June. Robust growth is expected to resume in 4Q08, when non-OPEC production jumps to 51.4 mb/d from 50.4 mb/d in 3Q.

Annual 2008 non-OPEC production is trimmed by 50 kb/d, with stronger late-year USA and Canada output partly offsetting now-lower supplies from Asia and Latin America. Non-OPEC 2007 supply is nudged up to 49.7 mb/d, with the 2008 total now at 50.6 mb/d. Expected non-OPEC supply growth in 2008 is therefore 910 kb/d, after a 2007 increment of 540 kb/d (netting out the impact of Angola and Ecuador's move into OPEC). As noted above, growth is heavily weighted towards the second half of

2008, unlike 2007 when the first six months saw growth averaging 0.9 mb/d, before subsequently slowing. Growth in 2008 is split between the FSU, Asia, Latin America, biofuels and Africa, with Europe, North America and non-OPEC Middle East regions seeing continued decline. In addition to the non-OPEC totals, OPEC gas liquids and condensate supplies (traditionally counted as de facto non-OPEC supply) reach 5.2 mb/d in 2008, a rise of 375 kb/d from 2007.



While we retain a forecast of 4-5% pa for baseload decline applied to all existing non-OPEC production, the mature portion of that output looks to be declining at closer to 7.7% pa once the impact of unscheduled weather, technical and geopolitical outages is netted out. Decline does not appear to have accelerated markedly since 1999. Nonetheless, declines rates vary widely according to reservoir depletion, geology, location, extraction rate and reservoir management practices. As might be expected, mature offshore OECD fields are facing the steepest annual decline rates, at around 15%.

OECD

North America

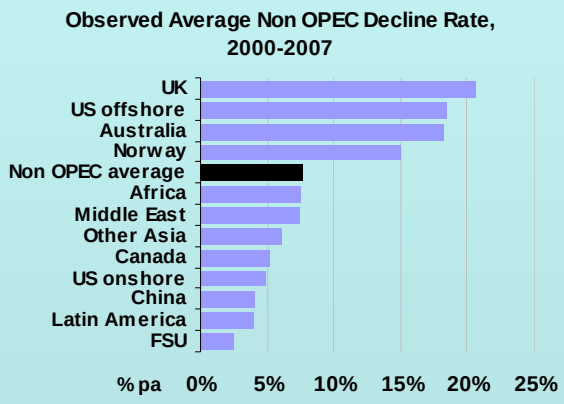
US – Alaska February actual, others estimated: Total US oil production is estimated some 50 kb/d lower in February than in January, at 7.4 mb/d (of which some 5.0 mb/d is crude oil). Preliminary data for December however came in around 50 kb/d higher than our earlier estimates, largely on the strength of higher NGL and ethanol production levels. Physical supply for both components has been running ahead of expectation, despite the apparent economic disincentives accruing from high natural gas and grain prices respectively. After several months of upward revisions to baseline data, a combined 30 kb/d upward adjustment for these two components has now been carried through the 2008 US forecast.

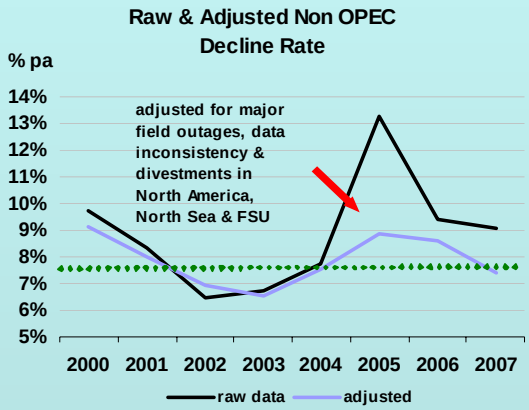
Non-OPEC Decline Rates – Stripping Out the 'Noise'

Non-OPEC supply has consistently lagged analyst expectations since 2004. Some assign this to accelerating decline rates, with a conclusion that it will preclude material future growth in supply. Our analysis suggests that, while sizeable volumes of non-OPEC crude and condensate have to be replaced due to depletion, averaging nearly 2 mb/d per annum (pa) so far this decade, raw year-on-year production data have to be treated with caution. This data can exaggerate decline due to resource depletion, by masking temporary or systematic reductions in output from other causes. These can include weather-related outages, strikes and security-related disruptions, lower investment and mechanical break-downs. Since our forecast methodology specifically includes adjustments to supply to account for field 'reliability', our projected decline rate has to be based on 'clean' historical data net of these factors.

This periodic review of non-OPEC oil field decline rates* focuses on mature crude oil and condensate fields (not NGL and non-conventional oil) showing sustained, yearly output decline over periods of at least 12-18 months. Aggregate decline rates are production weighted, and reflect managed, rather than natural, decline, according to prevailing investment levels. The results from 1999-2007 production data suggest aggregate non-OPEC decline of 7.7% pa, and that this has not accelerated markedly in the period under review (notwithstanding, boosting recovery over the short term can imply faster longer term decline).

We have previously discussed 4-5% as an appropriate forecast *net decline* for all current base load non-OPEC production, encompassing fields in decline and those at, or building to, plateau. This has not changed in light of our recent assessment, since the distinct, 7.7% level applies only to the mature portion of production that is in sustained decline. Moreover, the latest analysis generally accords with the decline rates previously assumed in OMR projections, resulting in only modest, and largely offsetting, alterations in the forecast decline rate. Deviation in non-OPEC outcome versus forecast in 2008 thus seems unlikely to derive primarily from decline rates, unless observed rates shift markedly this year. Put another way, we believe that sluggish non-OPEC performance is being driven by other, largely above-ground constraints, not solely by resource depletion, important though this is for the longer term.





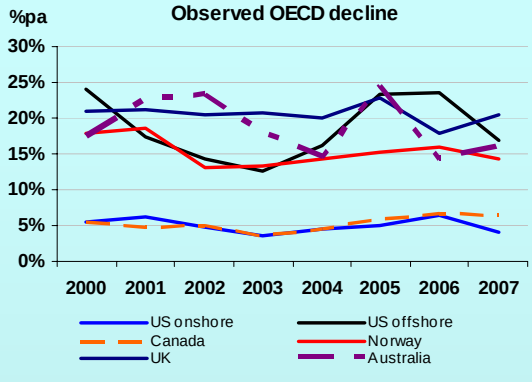
Building from disaggregated data, we have calculated adjusted decline rates for regional and non-OPEC totals, which net out the impact of non-geological factors. Not surprisingly, decline rates vary significantly geographically and over time. However, a surge in 'raw' decline rates in 2005 and 2006 to levels at or above 10% needs to be seen in the context of the distortions from Hurricanes Katrina and Rita, extended North Sea field shut-ins, asset divestments in Russia etc. Once these factors are excluded, 'real' decline comes in closer to the decade average. We would not claim to have captured all above-ground related field outages, nor to have sufficient field-specific production data to make a definitive judgement on decline rates themselves. But for this nine year snapshot at least, oscillation around a 7.7% pa mean is more representative than widely perceived acceleration.

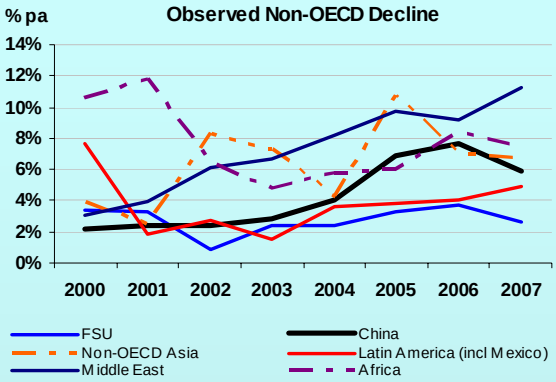
The mature producing areas of the OECD tend to show the sharpest decline. Depleted assets in the North Sea, Australia and offshore US all exhibit typical decline of at least 15% pa (as indeed do parts of Mexico's offshore production, included here alongside non-OECD Latin America). Newer fields in these areas - often deepwater, smaller accumulations of oil - are also prone to rapid build to plateau, followed quickly by sharp decline. Deepwater development planning and well configurations differ markedly from onshore fields, aiming to rapidly recoup high up-front expenditures.

One proviso is worth noting however, both for these and for other areas. Detailed data for 2004-2007 field outages are more extensive than for 1999-2003. This raises the possibility that:

- adjusted 1999-2003 decline would be shallower than shown above, and as a consequence, average decline for the entire period in reality is below our headline 7.7% pa level;
- consequently, some acceleration in decline rates did occur in the later years under study.

Notwithstanding this uncertainty due to variable data quality, and while some individual fields undoubtedly show signs of decline accelerating over time, there is no compelling evidence that aggregate decline is picking up speed, after non-geological factors have been accounted for.





Elsewhere in the OECD, decline from onshore US and Canadian production (excluding the Alberta mining and upgrading projects) looks fairly stable at around 5% per annum, close to the industry rule-of-thumb for onshore production. Indeed, the surprisingly static overall profile of decline in OECD basins may actually suggest the beginnings of a price response on the supply side. Renewed drilling and enhanced oil recovery (EOR) may, at the margin, be starting to help offset natural decline, although it is dangerous to be too definitive about this. Indeed there is some evidence that engineering shortages are restricting EOR effort by the IOCs at smaller assets. Nonetheless, EOR projects can be lower profile than new green field developments, and can slip below analysts' radar, being the (albeit more cost-intensive) upstream equivalent of refinery capacity creep.

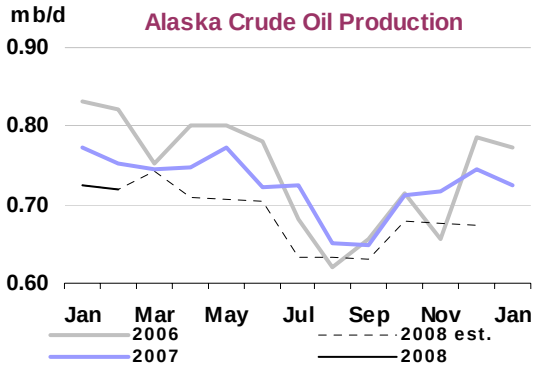
Regional aggregate decline rates for the non-OECD (plus OECD Mexico) vary from 2.5% per annum for the FSU and 4% pa for China and Latin America to 6-7.5% pa for Asia, the Middle East and Africa. The preponderance of Russian onshore production in the FSU total, and an early-decade surge in Russian brown field spending, helps explain low aggregate FSU levels. However, the mix of company and field-specific production data obscures the FSU picture. Latin American decline rates are surprisingly shallow, despite the inclusion of Mexican production. However, Mexico's ageing Cantarell field only entered sustained decline in 2005, having earlier seen production sustained by the application of a nitrogen injection programme. We have for some time assumed that Cantarell decline attains steeper levels around 15% for 2008 and beyond. Decline from Brazil's deepwater Campos Basin fields is also, so far, limited, playing a minor role compared with prevailing shallower onshore declines in determining the regional average. Our longer-term forecasts assume that the pace of deepwater decline accelerates, gaining rising importance for national/regional averages.

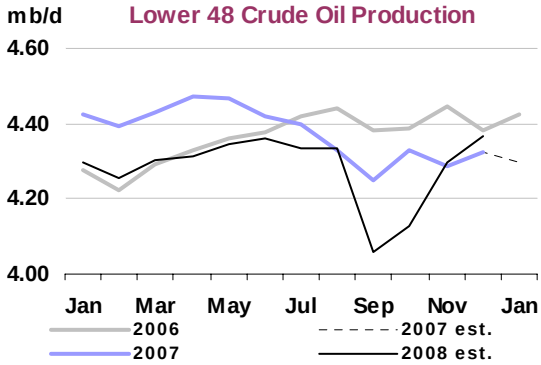
On a trend basis, China, other Asia and the Middle East have seen mature field decline accelerate this decade. The ageing onshore Daqing and Shengli fields, plus maturing early-phase offshore developments, have seen Chinese declines gathering pace. The rising proportion of offshore production in Asia and the problems in sustaining output from older, more complex Middle Eastern carbonate reservoirs may underpin the accelerating trend for the other two regions.

- An extensive study of the impact of decline rates on longer-term oil and gas supply will also be included in the *World Energy Outlook (WEO)* for release in November 2008

The US crude production forecast is largely unchanged for 2008, at 4.97 mb/d, compared with 5.1 mb/d for 2007. Output levels for 4Q07 from the Gulf of Mexico (GOM) have been trimmed by 45 kb/d to 1.3 mb/d. However, the GOM is likely to prove one of the few bright spots for US crude in 2008, expected to gain a net 70 kb/d to 1.41 mb/d for the year as a whole. Chevron announced in February that its 45 kb/d capacity Blind Faith platform is being towed into position for 2Q08 start-up. BHP's Neptune project is another

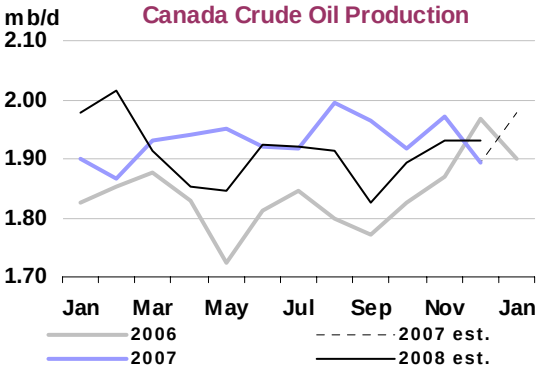
April start-up, although otherwise new GOM start-ups are weighted towards the end of the year, when Typhoon, Mirage and Thunder Horse are expected online.

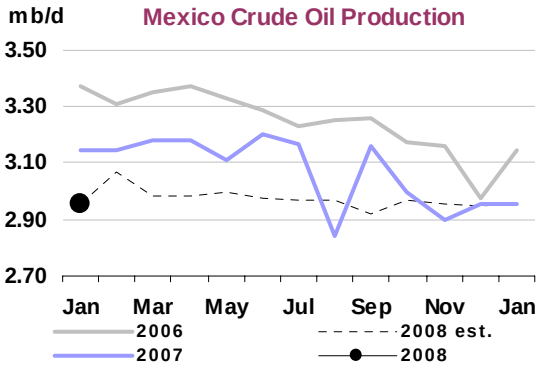




Alaskan production again disappointed in February, with crude output of 720 kb/d some 35 kb/d below expectation. This report sees Alaskan output decline continuing, averaging 685 kb/d for 2008 from 725 kb/d in 2007. However, longer-term prospects may improve after numerous announcements from major companies recently. Shell is hopeful of new discoveries in the remote and challenging Beaufort and Chukchi Sea areas. BP will seek financial sanction in April for the Liberty project, from which 40 kb/d is expected from early 2011. Meanwhile ExxonMobil has submitted a revised development plan for the Point Thomson gas and condensate field, now involving 10 kb/d of liquids output (down from an original 70 kb/d) and gas reinjection. The high pressure nature of the reservoir makes reinjection difficult.

Canada – December actual: After two years of 100 kb/d-plus output growth, Canadian production growth in 2008 is seen slowing to 30 kb/d, as total oil output reaches 3.35 mb/d. In fact, over 100 kb/d of growth is expected from bitumen and synthetic crude production capacity in 2008, but this is partly offset by conventional oilfield decline and by a field reliability adjustment that nets around 80 kb/d off the 2008 total. That said, we have revised forecast Albertan conventional output up by 25 kb/d for 2008, after several months of higher-than-expected output.

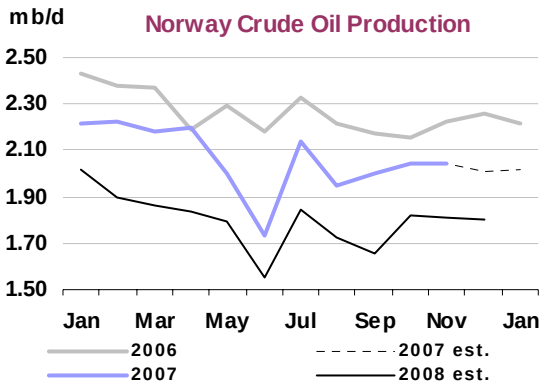


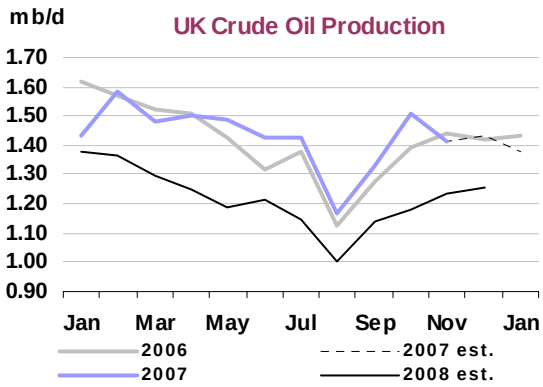


Mexico – January actual: Alongside Brazil, the Mexican 2008 forecast sees the biggest adjustment this month at around -50 kb/d. Weaker than expected January Cantarell field performance was partly offset once more by higher-than-expected output from Ku-Maloob-Zaap. February output from the southern onshore fields has also been adjusted downwards to account for blockades reportedly called by former presidential candidate Lopez Obrador. State oil company Pemex reported in February that it will spend $16.6 billion on the upstream in 2008. The company has reiterated plans to hold output close to 3.1 mb/d through 2010. This report takes a more cautious view, projecting crude output of 2.97 mb/d for 2008, while NGL output is held steady at some 400 kb/d.

North Sea

Norway – December actual, January provisional: Baseline 2007 data for Norway remains largely unchanged with total 2007 oil output at 2.56 mb/d. Near-200 kb/d declines seen in the past three years are expected to be repeated in 2008, as liquids output slips to 2.36 mb/d, with crude (net of condensate) at 1.8 mb/d and total gas liquids at some 550 kb/d. Loading schedules suggest weaker February production, but, conversely, upward adjustment for March supply. The Volve field came onstream as anticipated in February, although we have trimmed the expected ramp-up in supplies on reports that plateau 50 kb/d will not be attained until 1Q09. Unscheduled outages affected the Nord, Ekofisk, Eldfisk, Aasgard and Kristin fields in February, while Sleipner production has been hampered in March. The impact on our forecast was minimised by the existing field reliability adjustment applied for all forecast months.



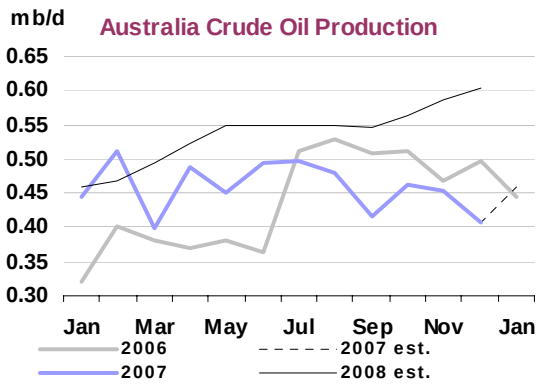


UK – December actual: UK offshore production looks to have remained fairly steady at around 1.4 mb/d during the November-February period. However, production is seen declining sharply by as much as 25% in the period through August as seasonal maintenance takes effect. Industry association Oil & Gas UK envisages total oil production averaging a stable 1.6 mb/d during 2008, including some 250 kb/d of NGL and onshore crude production. Our forecast is weaker at 1.48 mb/d but includes a 160 kb/d field reliability adjustment, without which the two forecasts would be broadly similar.

Minor adjustments this month to UK output make little change to overall production levels. A February gas processing unit outage at the Elgin/Franklin fields reduced condensate supply but was resolved within days. Market reports on progress at the Ettrick field development have caused us to push back start-up from April to August, while we have also trimmed plateau output for 2008 to 20 kb/d from an earlier-assumed 30 kb/d. New entries in our field-specific database include Duart and Saxon, although again this has no impact on forecast supply as we were previously including these developments as tie-backs to the existing Tartan and Guillemot fields.

Pacific

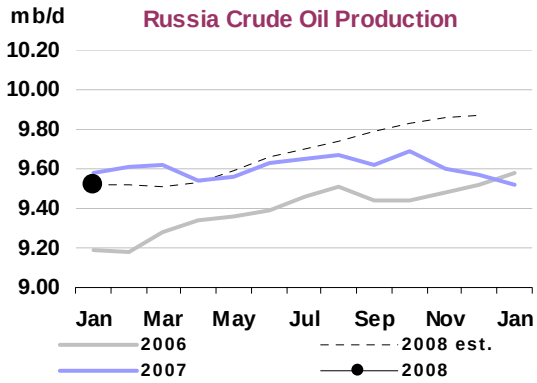
Australia – December actual: Australian crude production came in some 100 kb/d lower than earlier estimates, with unscheduled outages in the Carnarvon Basin proving more pervasive than initial information had suggested. Field outages also affected February output, with precautionary outages during the passage of Cyclone Nicholas. A prevailing -35 kb/d cyclone adjustment in our February forecast has subsequently been revised to -50 kb/d. Forecast Bonaparte basin production has been cut by 15 kb/d compared with last month, with water encroachment affecting the recently



started Puffin field. AED Oil Ltd, which was operator of the Puffin and Talbot fields, has just announced the sale of a 60% stake in the two fields to China's Sinopec. Despite recently disappointing performance, Australian crude production is nevertheless expected to increase by some 80 kb/d in 2008 to 535 kb/d, largely on the strength of production build-up from the 80 kb/d Stybarrow field.

Former Soviet Union (FSU)

Russia – January actual, February provisional: Russian total oil output has begun 2008 at a fairly stable 10.0 mb/d (including 9.52 mb/d of crude), marginally below both 4Q07 and levels of a year ago. We have trimmed the Russian 2008 forecast this month by a net 25 kb/d on the basis of latest reported plans from the country's largest producer, Rosneft, and also lower baseline January and February supply from Lukoil and Surgutneftegaz. A partially offsetting 10 kb/d upward adjustment is however applied to NGL supply, after reports of higher Gazprom expenditures on gas processing in 2008. Total Russian production growth for 2008 is now seen at 90 kb/d (+0.9%), less than half the 2007 level. Moreover, analysts see growth remaining constrained going forward unless incoming president Dmitry Medvedev pursues earlier statements about the need for fiscal reform.



Rosneft shows the largest year-on-year production increment in our forecast, although the company may struggle to exceed recent 2.27 mb/d levels in the absence of further acquisitions. A late-year increment of 50 kb/d is also expected with the start-up of year-round production at the Sakhalin 2 project (which presently only produces for six months of the year). We have previously reported on the weaker expectations for 2008 supply from the neighbouring Sakhalin 1 project, where production was supposed to fall towards 170 kb/d from last year's 225 kb/d after permission to drill new wells was refused by the Russian authorities. January/February output data actually show Sakhalin 1 still producing in excess of 200 kb/d, raising the possibility that output may be sustained at higher levels. However, for now we retain the lower planned levels in our forecast.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Nov 07	Dec 07	Jan 08	Latest month vs. Dec 07	Latest month vs. Jan 07
Crude											
Black Sea	2.22	2.18	2.30	2.23	2.09	2.10	2.02	2.02	1.89	-0.13	-0.30
Baltic	1.55	1.59	1.58	1.60	1.58	1.61	1.49	1.66	1.58	-0.08	-0.03
Arctic/FarEast	0.15	0.32	0.29	0.30	0.38	0.31	0.30	0.29	0.25	-0.04	-0.01
BTC	0.00	0.55	0.43	0.58	0.57	0.61	0.67	0.64	0.64	0.00	0.31
Crude Seaborne	4.07	4.63	4.60	4.70	4.61	4.62	4.49	4.61	4.36	-0.25	-0.03
Druzhba Pipeline	1.20	1.13	1.17	1.13	1.08	1.13	1.16	1.12	1.16	0.03	0.05
Other Routes	0.38	0.44	0.47	0.46	0.40	0.43	0.43	0.42	0.44	0.03	-0.10
Total Crude Exports	5.64	6.20	6.23	6.29	6.09	6.18	6.08	6.15	5.96	-0.19	-0.08
Of Which: Transneft	4.22	4.27	4.33	4.31	4.19	4.23	4.15	4.18	4.14	-0.04	-0.18
Products											
Fuel oil	0.95	1.10	1.04	1.15	1.13	1.08	1.12	1.14	1.17	0.03	0.26
Gasoil	0.95	0.95	0.94	0.88	1.01	0.96	0.88	1.04	0.98	-0.05	0.12
Other Products	0.61	0.60	0.59	0.69	0.57	0.56	0.57	0.58	0.62	0.03	0.03
Total Product	2.51	2.65	2.57	2.73	2.71	2.60	2.56	2.75	2.77	0.01	0.41
Total Exports	8.16	8.85	8.80	9.02	8.80	8.78	8.64	8.90	8.73	-0.17	0.32
Imports	0.04	0.04	0.02	0.04	0.04	0.04	0.05	0.03	0.04	0.01	0.02
Net Exports	8.12	8.82	8.78	8.98	8.76	8.74	8.60	8.88	8.69	-0.19	0.30

Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

Net oil exports from the FSU averaged 8.69 mb/d in January, according to preliminary data. This was 190 kb/d lower than December's average but 300 kb/d higher than the previous January (due to the 2007 rise in BTC volumes plus higher product exports). January crude exports were down 250 kb/d on the month, with a notable 130 kb/d drop in Black Sea exports as poor weather impeded loadings. Baltic crude exports fell by 80 kb/d in January with fewer of the new, enlarged 135,000-tonne cargoes loading from Primorsk than expected. Far East crude loadings also fell by 40 kb/d. January FSU product exports were almost flat on December. Severe weather reportedly disrupted Black Sea product exports but higher gasoil and gasoline volumes left northern terminals.

An increase in Russian export duties is set to reduce February exports significantly. Transneft crude oil schedules suggest that both Black Sea and Baltic loadings will be lower, with planned pipeline maintenance an added constraint to exports from Primorsk. A pricing dispute also interrupted crude flows from Russia to Germany through the Druzhba pipeline in February.

Other Non-OPEC

Elsewhere in the non-OPEC fold, a 20 kb/d upward revision is applied for 4Q07 through end-2008 for **Turkmenistan**. This follows stronger than expected 3Q07 output data. Total liquids production in 2008 is seen rising by 20 kb/d to 220 kb/d, broadly in line both with government plans and attainment evident for January-October 2007.

Brazilian crude production rises by 225 kb/d in 2008 to 1.97 mb/d, growth having slowed markedly in 2007 due to unplanned field outages and delays in bringing new projects onstream. This month's 2008 forecast has been trimmed by 55 kb/d, largely with a downward revision for the Espadarte field, where enhanced recovery has reportedly achieved less than originally planned. The Brazilian adjustment is partially offset by a 35 kb/d upward revision for **Colombia**, where data through end-2007 shows sharply higher-than-expected output from foreign operated projects. National oil production attained 560 kb/d in 4Q07 and is seen averaging 580 kb/d in 2008. February Colombia supply was affected by a bomb attack on the 60 kb/d Trans Andes pipeline, although government sources expected this to take days, rather than weeks to repair.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.26	14.15	0.05	-0.11	14.27	14.16	0.06	-0.10	0.01	0.02	0.01	0.01
Europe	4.94	4.56	-0.24	-0.39	4.95	4.55	-0.23	-0.40	0.01	-0.01	0.01	-0.01
Pacific	0.63	0.78	0.05	0.15	0.62	0.78	0.04	0.16	-0.01	-0.01	-0.01	0.00
Total OECD	**19.84**	**19.49**	**-0.14**	**-0.35**	**19.84**	**19.49**	**-0.14**	**-0.35**	**0.00**	**0.01**	**0.00**	**0.00**
Former USSR	12.76	13.19	0.51	0.43	12.77	13.19	0.52	0.42	0.01	-0.01	0.01	-0.01
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.83	0.05	0.11	3.73	3.83	0.05	0.11	0.00	0.00	0.00	0.00
Other Asia	2.68	2.80	-0.03	0.12	2.68	2.77	-0.03	0.09	0.00	-0.03	0.00	-0.02
Latin America	3.87	4.17	0.01	0.30	3.87	4.14	0.02	0.27	0.00	-0.02	0.00	-0.03
Middle East	1.64	1.56	-0.11	-0.07	1.64	1.56	-0.11	-0.07	0.00	0.00	0.00	0.00
Africa*	2.55	2.69	0.05	0.14	2.55	2.69	0.05	0.14	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.36**	**28.37**	**0.49**	**1.01**	**27.36**	**28.31**	**0.50**	**0.95**	**0.01**	**-0.06**	**0.01**	**-0.07**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.67**	**50.64**	**0.53**	**0.97**	**49.68**	**50.59**	**0.54**	**0.91**	**0.01**	**-0.05**	**0.01**	**-0.06**

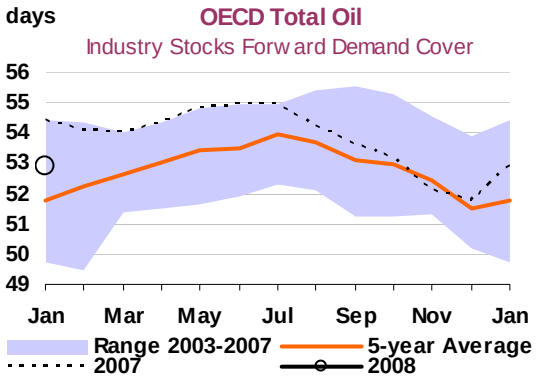
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

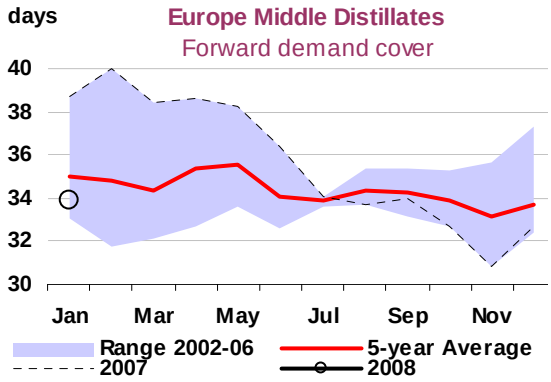
Lower baseline production from **India** and **Malaysia** results in forecast 2008 supply from each being cut by 10-15 kb/d. Trends in 2008 production from the two Asian nations diverge, with Indian output expected to slip by 15 kb/d to 800 kb/d. Malaysia on the other hand sees oil output break through the 800 kb/d mark, as the Kikeh field builds towards plateau 100 kb/d output by late 2008.

OECD STOCKS

Summary

- **OECD industry stocks built by 32.6 mb in January from an upwardly revised December**, to reach 2,617 mb. OECD crude inventories rose by 23.7 mb in January, led by a 14.3 mb build in the US alongside increases of 3-4 mb in Mexico, Japan and Korea. OECD product stocks rose by 5.6 mb in January. A 16.7 mb increase in US gasoline inventories almost offset the country's seasonal decline in 'other products' (of which propane for heating accounts for a significant proportion) while smaller builds were seen in European and Pacific distillates.
- **The December total for OECD industry stocks was revised up by 29.5 mb.** Japanese and US crude stocks were adjusted upwards by 10.8 mb and 5.6 mb respectively. Upward revisions of 9.9 mb to distillate stocks were seen in OECD Europe (spread across several countries), while December gasoline inventories were also 3.5 mb higher than previously reported in the US.
- **Preliminary February stocks data for US and Japan suggest a combined draw of 23.0 mb,** including drops of 9.5 mb and 8.0 mb in US distillates and Japanese kerosene respectively. This would leave OECD total stocks cover little changed from the 52.9 days at end-January and the revised figure of 51.7 for end-December, but of course this is highly preliminary and excludes European and other OECD countries. End-January total OECD oil stocks stand at or above the newly calibrated (2003-07) five-year averages in all regions, although this masks specific areas of particularly low cover, such as European distillates and Pacific gasoline.





OECD Inventory Position at End-January and Revisions to Preliminary Data

A 32.6 mb build in January OECD stocks on top of an upward revision of 29.5 mb to December levels left regional OECD total oil inventories almost uniformly in excess of seasonal norms. End-January OECD oil stocks at 2,617 mb were well above the newly calibrated (2003-07) five-year absolute average of 2,570 mb. In terms of forward demand, at 52.9 days, this also exceeded the 2003-07 end-January average of 51.8 days.

Preliminary Industry Stock Change in January 2008 and Fourth Quarter 2007

	January (preliminary) *(million barrels)*				January (preliminary) *(million barrels per day)*				Fourth Quarter 2007 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**18.0**	**-1.1**	**6.9**	**23.7**	**0.58**	**-0.04**	**0.22**	**0.77**	**-0.35**	**0.08**	**-0.01**	**-0.28**
Gasoline	17.4	3.1	0.9	21.5	0.56	0.10	0.03	0.69	0.17	0.10	0.01	0.27
Distillates	0.1	3.9	0.1	4.1	0.00	0.13	0.00	0.13	0.02	-0.13	-0.08	-0.19
Fuel Oil	-2.5	0.6	-1.0	-2.9	-0.08	0.02	-0.03	-0.09	0.04	-0.01	-0.05	-0.02
Other Products	-19.4	0.6	1.8	-17.0	-0.63	0.02	0.06	-0.55	-0.31	0.00	-0.11	-0.42
Total Products	**-4.4**	**8.2**	**1.9**	**5.6**	**-0.14**	**0.26**	**0.06**	**0.18**	**-0.09**	**-0.05**	**-0.23**	**-0.36**
Other Oils[1]	0.3	-0.9	3.8	3.2	0.01	-0.03	0.12	0.10	-0.24	-0.01	-0.03	-0.28
Total Oil	**13.8**	**6.2**	**12.5**	**32.6**	**0.45**	**0.20**	**0.40**	**1.05**	**-0.68**	**0.03**	**-0.26**	**-0.92**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

North American and European total stock positions at the end of January were 1.5 and 1.2 days above average forward demand cover respectively. Even OECD Pacific total oil stocks, which have been reported below seasonal ranges for several months, were back to average levels at the end of January in absolute and forward demand terms. February forward demand cover will be calculated based on demand for March, April and May – months characterised by lower product demand – and including only Japan and US data (based on preliminary February stocks data) show little change in days cover despite a decrease in absolute stock levels.

However, regional total oil stocks do not reflect product- or country-specific stock positions. While gasoline stocks increasingly bulge in OECD Europe and North America, they remain well below seasonal ranges in the Pacific, where residual fuel stocks are also unseasonably low. Distillate stock cover in Europe, at 33.8 days for end-January, was also below the five-year average of 35 days and soaring distillate cracks in February suggest increasing tightness.

Upward revisions to December OECD stock data were significant, totalling 29.5 mb. Crude stocks in Japan and the US were respectively revised up 10.8 mb and 5.6 mb. Widespread upward adjustments to December distillate stocks levels (France, Germany, Italy, UK all corrected up by between 1 and 2 mb) pushed European distillate revisions to +9.9 mb, alongside revisions of +2.7 mb to both Canadian and US distillate stocks. Gasoline stocks in North America and Europe were revised up by 3.4 mb and 3.9 mb respectively. These upward adjustments easily overshadowed the large downward revision, of 9.1 mb, to 'Other Oils' stocks in OECD North America.

Revisions versus 13 February 2008 Oil Market Report

(million barrels)

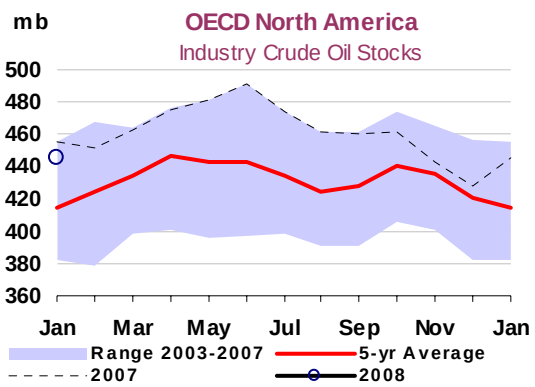
	North America		*Europe*		*Pacific*		*OECD*	
	Nov 07	Dec 07	Nov 07	Dec 07	Nov 07	Dec 07	Nov 07	Dec 07
Crude Oil	**4.3**	**7.2**	**-0.3**	**-1.5**	**0.7**	**10.1**	**4.7**	**15.8**
Gasoline	-0.1	3.4	-0.3	3.9	0.1	0.3	-0.3	7.6
Distillates	0.2	5.3	-1.6	9.9	0.1	1.2	-1.4	16.4
Residual Fuel Oil	0.0	0.3	-3.7	-2.7	0.0	0.3	-3.8	-2.0
Other Products	0.0	1.3	-1.1	0.6	0.1	-0.4	-1.0	1.6
Total Products	**0.1**	**10.4**	**-6.8**	**11.7**	**0.2**	**1.4**	**-6.5**	**23.5**
Other Oils[1]	0.5	-9.1	0.6	0.0	0.0	-0.8	1.2	-9.8
Total Oil	**4.9**	**8.5**	**-6.5**	**10.2**	**0.9**	**10.8**	**-0.6**	**29.5**

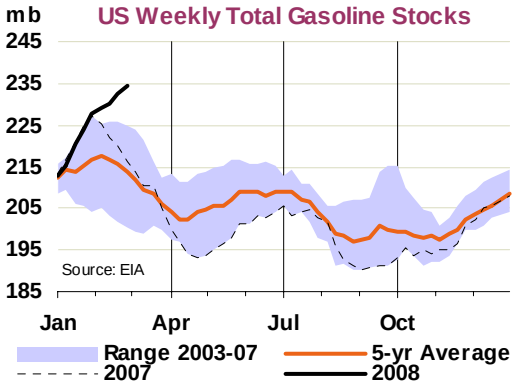
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD Industry Stock Changes in January 2008

OECD North America

Total oil stocks in OECD North America rose by 13.9 mb in January, of which 11 mb was in the US. Weekly US data reveal that crude imports rose by half a million barrels per day in January, coinciding with the arrival horizon of increased late-2007 OPEC long-haul exports (a time when Saudi Arabian formula prices to US (and Asia) were cut for December). Tanker data indicated higher arrivals of Nigerian crude into the US in January as well. In addition there was an average monthly decrease in refinery throughputs of over 1 mb/d (both for economic reasons and planned maintenance) leading January US crude stocks to rise by 14.3 mb. Preliminary weekly data indicate a further crude stock build of 6.5 mb in February. Mexican crude stocks increased by 3.7 mb in January, with exports down marginally following stormy weather in the Gulf , leaving total OECD North American crude inventories 18 mb higher.

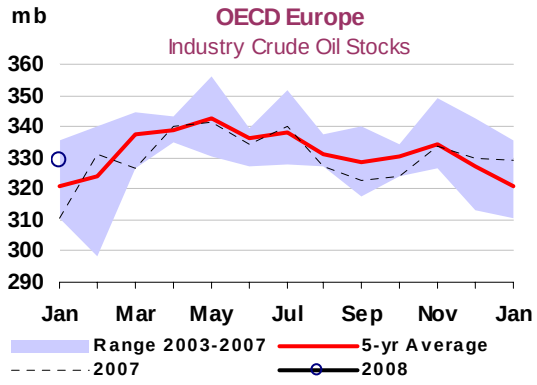


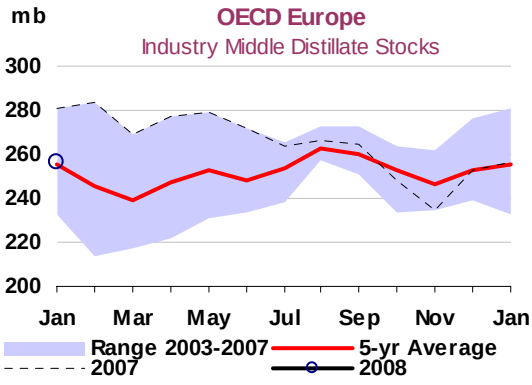


US gasoline stocks built seasonally in January, by 16.7 mb over the month, to reach 234.3 mb, the highest monthly closing stock level since January 1994. Weekly data indicate that US gasoline stocks rose even further in February. This may be a precursor to heavy March refining maintenance but is also a symptom of lower demand growth. This large gasoline build offset much of the 19.3 mb seasonal decrease in 'other products' stocks. Lower propane stocks are responsible for a large part of the latter. January heating-degree days were higher than normal in US regions where propane is used as a heating fuel (such as the Midwest and the US Gulf) and US weekly data indicated a sharper draw than normal in this fuel. Overall, total OECD North America product stocks fell by 4.4 mb in January.

OECD Europe

In OECD Europe, rising distillate and gasoline inventories boosted total regional oil stocks by 6.2 mb in January. Distillate stocks were up by 3.9 mb in total, with builds of up to 2 mb in each of Germany, Italy, Netherlands and the UK, easily offsetting a 1.8 mb draw in France (where demand was strong). High European diesel imports were reported in January from the US and Asia while temperatures were milder than usual, with heating-degree days below seasonal averages (except in Greece and Turkey). Gasoline stocks also rose in Germany and the Netherlands, by 1.3 mb and 0.8 mb respectively, as exports to the US became less economic. In total, OECD Europe product stocks were up 8.2 mb in January.

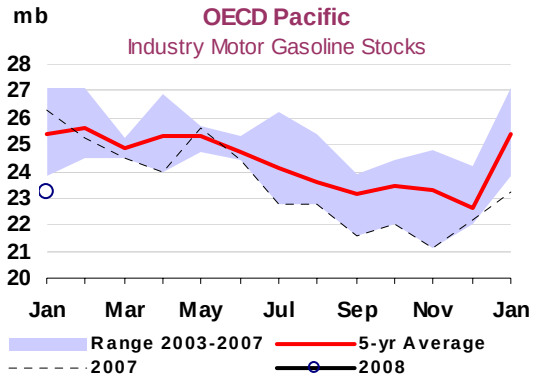


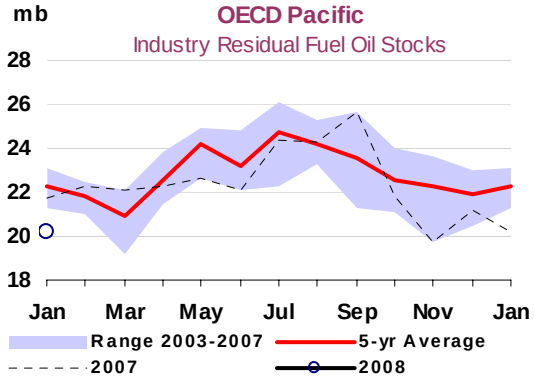


OECD European crude stocks fell by 1.1 mb in January, led down by a 2.2 mb monthly decrease in the UK possibly linked to North Sea outages. Preliminary February Euroilstock data were unavailable at the time of writing, but data covering independent storage in the ARA region showed February distillate stocks falling to the bottom of seasonal ranges while gasoline stocks hit historical highs. This may have reflected European trends as a whole with distillate cracks in February indicating extreme tightness and the likelihood that demand ran ahead of refinery production, following economic run cuts.

OECD Pacific

Total oil stocks in OECD Pacific countries rose by 12.5 mb in January including an 8.5 mb increase in Korea, split evenly between crude and product. Crude inventories in Korea and Japan built by 3.9 mb and 2.9 mb respectively. Preliminary Japanese data confirm that refinery throughputs fell by 90 kb/d in January, allowing crude stocks to build in conjunction with higher imports of Middle Eastern crude. A further potential fall of 130 kb/d was indicated for February throughputs, as economic run cuts continued.

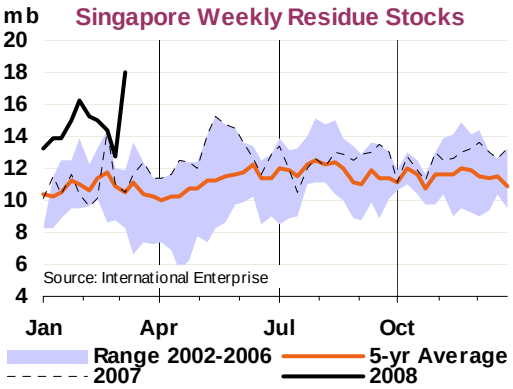


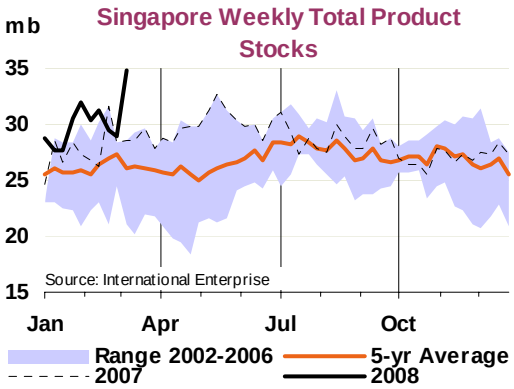


OECD Pacific product stocks rose by 1.9 mb in January. Regional builds of 1.8 mb and 0.9 mb in 'other products' and gasoline offset a 1 mb draw in residual fuel oil. Higher 'other products' stocks were observed in both Japan and Korea, while a Korean distillate stockbuild offset a corresponding draw in Japan. Residual fuel oil stocks in Japan were reported at 10.0 mb at end-January, at the bottom of seasonal ranges, and still pressured by stronger demand in the wake of the TEPCO nuclear shut-downs. Japanese weekly data indicate a large product draw, of 14.2 mb, in February, driven by an 8 mb decrease in kerosene stocks as a cold snap boosted demand for the fuel used for heating purposes.

Recent Developments in Singapore Stocks

Independently held product stocks in Singapore fell back within five-year ranges in February, according to International Enterprise, before a dramatic early March leap, probably related to new storage capacity. Decreases in fuel oil stocks easily overshadowed a build in distillate inventories. Fuel oil stocks fell from 16.2 mb in late January to finish the month at 12.8 mb. This marked a return to five-year seasonal ranges in this product, possibly related to increased residual fuel import demand in Northern Asia, including healthy Japanese fuel oil imports. Singaporean middle distillate stocks ended February near seasonal averages, at around 7.3 mb, having peaked at 8.6 mb mid-month. By end-February, light distillate stocks ended up 0.4 mb on the month, just above seasonal norms at 8.8 mb. The early-March leap in stocks related to new storage capacity.

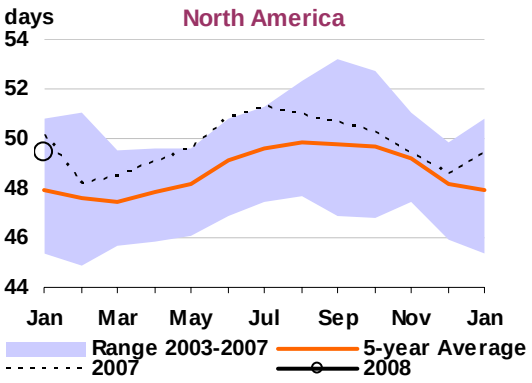


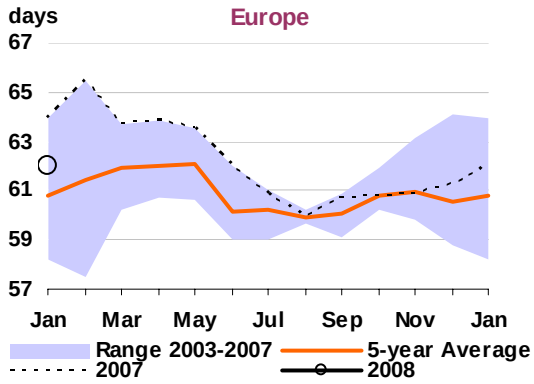


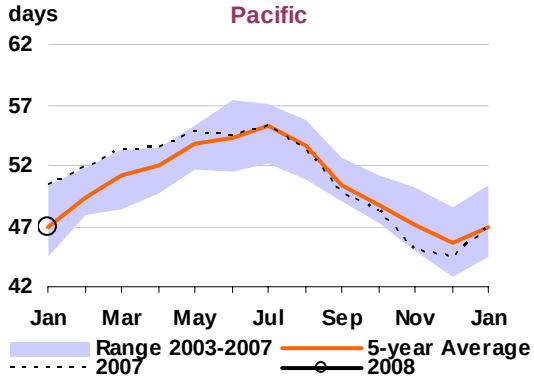
Regional OECD End-of-Month Industry Stocks

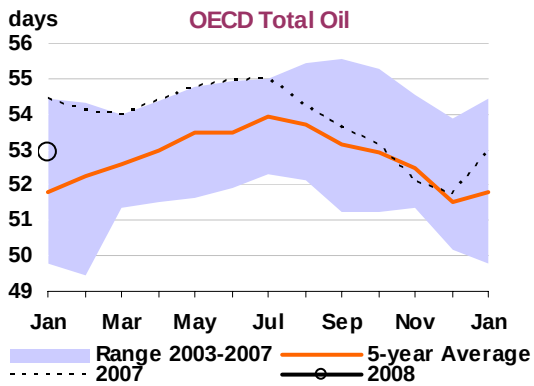
(in days of forward demand and millions barrels of total oil)

Days[1]

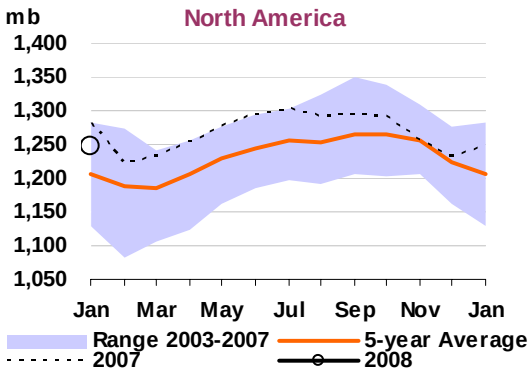


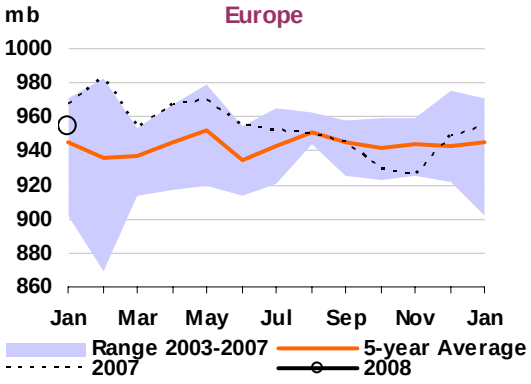


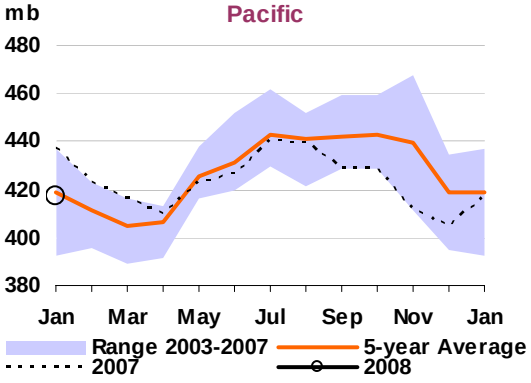


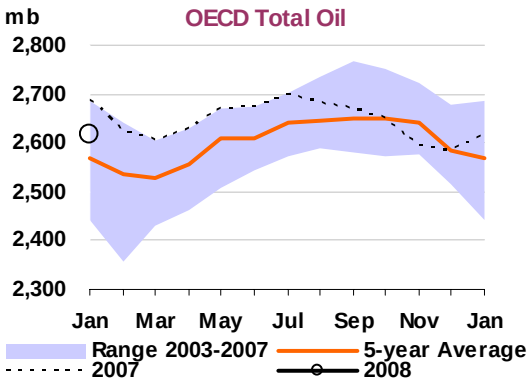


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

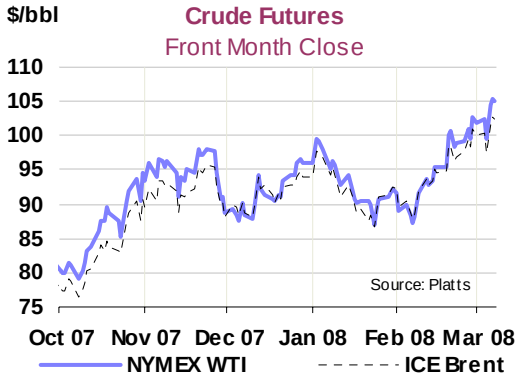
Summary

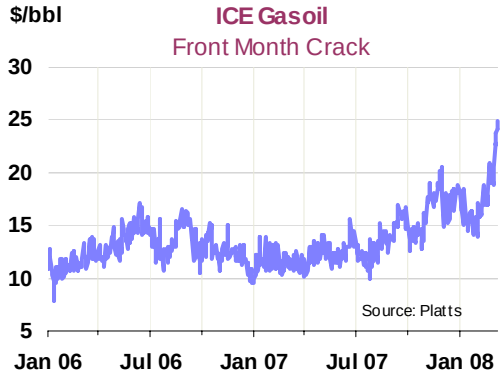
- **Oil prices again rose to new records above $100/bbl**, supported by strong distillate markets, rising geopolitical tensions and OPEC's apparent reluctance to reconsider official supply levels ahead of the summer. Oil tracked new highs for a range of commodities, while the US dollar sank to a low against the euro. Talk of a large flow of money into commodities is partially justified by an increase in open interest in oil contracts, but cumulative crude oil open interest remains below 2007 peaks.

- **Refined product prices were mixed**, with distillate crack spreads reaching new peaks in Europe on weather-related demand and tight supplies. Gasoline crack spreads took a steep downturn, sliding into negative territory in Northwest Europe on above-average US inventories and lower demand for European barrels. Fuel oil discounts to crude widened further.

- **Refining margins rose on average in February**, but remain relatively low in the US and Singapore. European margins picked up slightly, both for cracking and hydroskimming, tempting some refiners to reverse economic run cuts. But early-March margin calculations indicate continued weakness.

- **Middle East Gulf and West African freight rates rose** above normal seasonal ranges in February on an increase in dirty vessel demand. Record volumes of West African crude headed for China in February, while sailings from the Middle East Gulf, especially on westbound routes, reportedly increased. Caribbean Aframax rates were boosted by higher US Gulf Coast refinery throughputs.



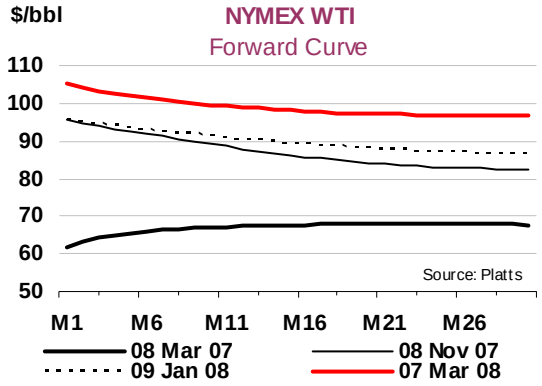


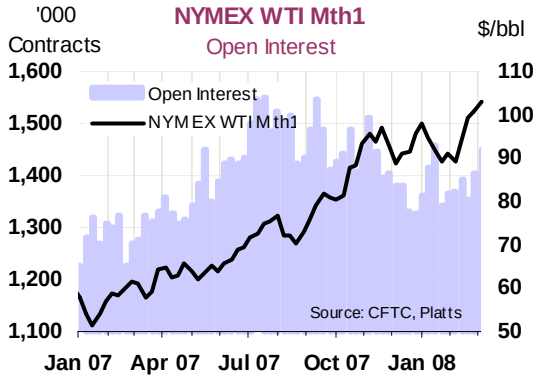
Overview

Oil prices continued to defy growing concern about the US and global economy and rose to new record levels on underlying fundamental strength. OPEC's 5 March decision to leave its production unchanged was unable to calm markets that reflect the need for a higher stock buffer due to increased geopolitical tensions and a rebuild of crude stocks ahead of peak summer demand. Cold weather and previous economic run cuts tightened the distillate market, especially in Europe, sending gasoil prices to new peaks. At the same time, refining margins in key regions remained low, despite an improvement in February, raising doubts about product stock replenishment.

Recent oil price increases would appear to be part of a wider rise in commodities, with gold, platinum, tin, soy and corn all surging to record highs. At the same time, the dollar declined to a new low against the euro. A widespread argument is that the prospect of a further decline in the dollar's value, combined with accelerating inflation, is encouraging a general investment flow into commodities. But the available data on this are – broadly speaking – inconclusive. NYMEX WTI Commitment of Traders data do show

an increase in non-commercials' net-long position, but only to levels already seen in January, and not to as high as those observed last summer. At the same time, total open interest in WTI has not increased substantially, again remaining lower than last year (the same is true for ICE Brent). A look at the WTI futures' forward curve shows a widening of near-month backwardation, while at the same time a rise in 2015 prices to over $100/bbl could suggest that market participants see fundamentals remaining tight for the foreseeable future.





In contrast to headlines about crude hitting new records, peaks for distillate futures received less attention, but contributed to the market's strength. A combination of low distillate stocks – at least in parts of Europe and Japan – cold weather and lower refinery runs due to weak margins tightened markets and boosted gasoil crack spreads. This was especially true in Europe, where the ICE Gasoil/Brent futures spread reached all-time highs. In the Mediterranean, unusually cold weather, lower Russian gasoil exports and to some extent the after-effects of the January change to a 0.1% maximum sulphur content all contributed to tightness. These developments were in sharp contrast to gasoline and fuel oil crack spreads, which declined.

Spot Crude Oil Prices and Differentials

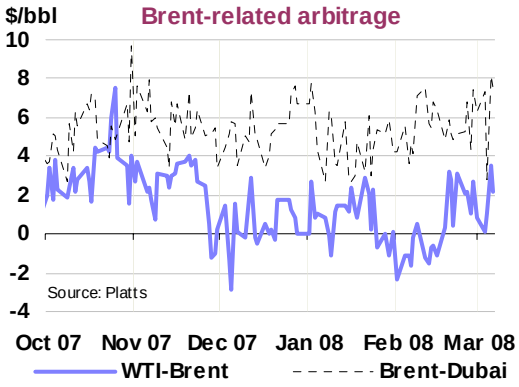
(monthly and weekly averages, $/bbl)

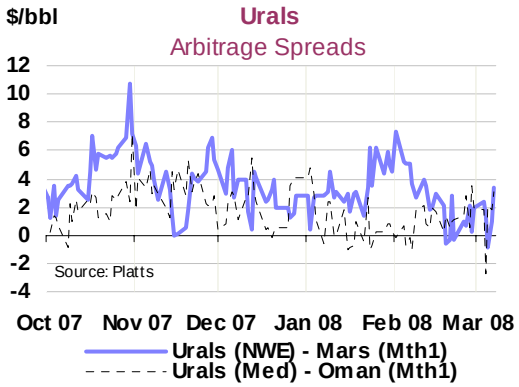
	Dec	Jan	Feb	Feb-Jan Avg Change	%	Week Commencing: 04 Feb	11 Feb	18 Feb	25 Feb	03 Mar
Crudes										
Dated Brent	90.97	92.00	95.04	3.04	3.3	89.80	95.16	96.78	99.15	102.04
Brent (Asia) Mth1 adjusted	90.95	92.18	95.03	2.85	3.1	89.52	93.38	96.87	98.82	100.57
WTI (Cushing) Mth1 adjusted	91.37	92.98	95.39	2.41	2.6	89.10	94.14	99.56	100.89	103.43
Urals (Mediterranean)	88.76	89.26	91.21	1.95	2.2	86.10	90.98	92.97	95.40	97.40
Dubai Mth1 adjusted	85.58	87.37	90.02	2.65	3.0	85.21	88.79	91.60	93.14	95.12
Tapis (Dated)	95.72	97.45	100.93	3.48	3.6	95.36	98.98	102.72	105.13	106.93
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	0.39	0.98	0.36	-0.62		-0.70	-1.02	2.78	1.74	1.39
Urals (Mediterranean)	-2.21	-2.74	-3.83	-1.09		-3.70	-4.18	-3.81	-3.75	-4.64
Dubai Mth1 adjusted - Dated Brent	-5.40	-4.63	-5.01	-0.38		-4.60	-6.36	-5.18	-6.01	-6.92
Tapis (Dated)	4.75	5.45	5.89	0.45		5.56	3.82	5.94	5.97	4.89
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.22	0.25	0.25	0.00		0.31	0.40	0.16	0.10	0.47
Forward WTI Cushing Mth1-Mth2 adj	0.08	0.34	0.11	-0.22		-0.05	-0.06	0.31	0.31	0.70

Source: Platts

While existing geopolitical issues have not improved – i.e. in the Middle East and Nigeria – some new hotspots made it into the headlines. Russia briefly curbed gas flows to Ukraine, again due to a payment dispute, but volumes transiting Ukraine to Central and Western Europe were not affected. Military activity on the Turkish-Iraqi border appears to have ceased for now, and in any case did not cause any disruption to oil flows. Armenia and Azerbaijan have seen a flare-up in tension, and historical differences remain unsettled. Lastly, a Colombian raid on a FARC guerrilla camp on its border to Ecuador saw strong

protests from the latter and Venezuela, both of whom Colombia accuses of aiding FARC. Venezuela and Ecuador had sent additional troops to their respective borders with Colombia, but diplomacy soon defused tensions, though a 60 kb/d Colombian crude pipeline was subsequently attacked, cutting supplies. Meanwhile, a landslide in Ecuador temporarily interrupted flows through the SOTE crude pipeline to the coast in early March, while a fire at Shell's Norfolk terminal cut gas supplies to the UK market.

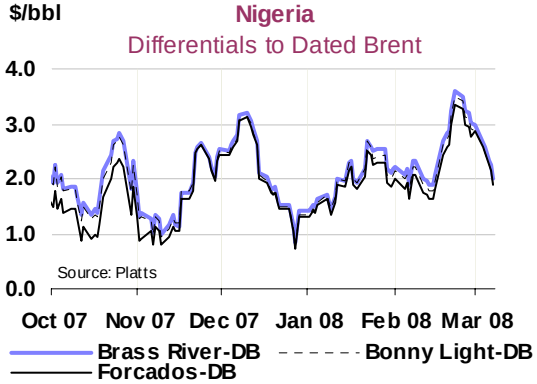


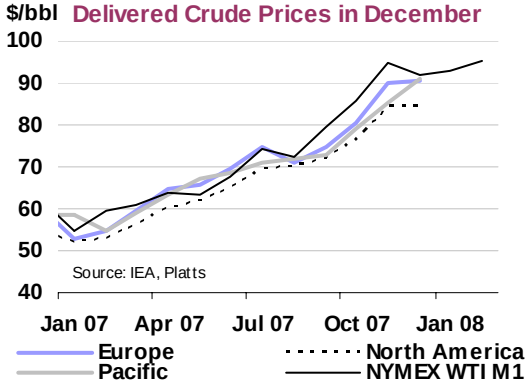


Spot Crude Oil Prices

Spot crude oil prices surged to new highs in February and early March, with Atlantic Basin sweets taking some strength from North Sea outages and competition for distillate-rich West African grades amid tightness in heating oil, jet fuel/kerosene and diesel markets, especially in Europe and Asia. Despite an overall crude stock build in the US, most of the increase took place on the US Gulf Coast, while stocks at Cushing, Oklahoma, fell in February. Meanwhile, spot WTI recovered to a premium over Brent from mid-February. At the same time, US Gulf Coast cracking margins for foreign crudes remained far lower than in Europe in February, despite improving, in theory discouraging crude shipments across the Atlantic.

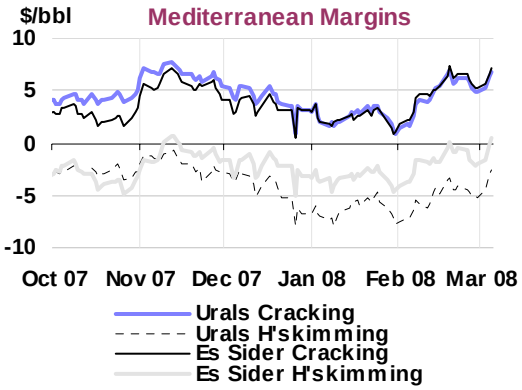
Meanwhile, Saudi official selling prices (OSPs) for crude sent to the US in April were raised which, in combination with already-weak refining margins, could curb volumes sent west. On the other hand, reduced refinery interest in Russian Urals in Europe – due to weak hydroskimming margins – saw the grade tumble to a discount to US sour grade Mars and widen the existing discount to Brent. This could encourage a higher flow of Russian barrels to the US. Saudi OSPs to Asia meanwhile were trimmed, a boon for refineries there that have been hit hard by weak margins. The Brent-Dubai spread widened slightly, but problems with Australian crude production caused a surge in regional marker Tapis over Brent, potentially serving to attract more Atlantic Basin crude barrels on the eastward journey.

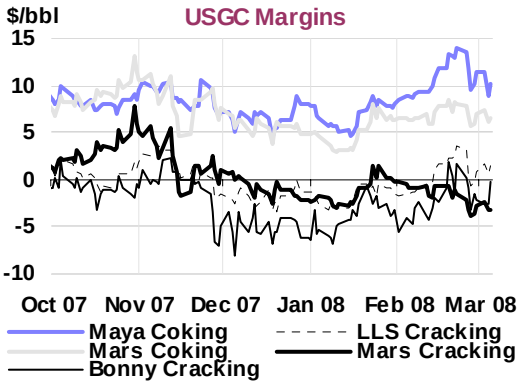




Refining Margins

Average February refining margins rose across the board and in all regions surveyed. Cracking and even hydroskimming margins in Europe improved to the extent that some refineries heard to have previously made economic run cuts were reportedly reversing their decision. Distillate cracks were clearly the driver, as in other markets, with spreads for diesel, heating oil and jet all rising strongly. Except for fuel oil, other cracks rose too on average. However, strong crude gains in early March – and corresponding dips in gasoline cracks, in particular – may reverse this situation.





In the US, West Coast margins increased quite strongly in February, on a pronounced improvement in average February gasoline cracks. But here too, some cracking margins remained negative. Gulf Coast cracking margins also mostly remained negative. Asian refining margins all remain weak. Korean and Japanese refiners will reportedly keep crude throughputs curtailed due to the weak margin environment.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Dec 07	Jan 08	Feb 08	Feb 08-Jan 08	06 Feb	13 Feb	20 Feb	27 Feb	05 Mar
NW Europe	Brent (Cracking)	3.79	1.90	3.43	1.52	1.02	2.62	4.63	5.03	3.92
	Urals (Cracking)	4.96	2.47	4.20	1.74	1.34	3.58	5.88	5.49	5.03
	Brent (Hydroskimming)	-1.68	-3.65	-3.05	0.60	-4.69	-3.39	-2.21	-2.00	-2.95
	Urals (Hydroskimming)	-2.99	-5.49	-4.91	0.57	-6.79	-5.32	-3.49	-4.27	-4.12
Mediterranean	Es Sider (Cracking)	3.34	2.37	4.95	2.58	2.04	4.63	6.03	6.24	5.94
	Urals (Cracking)	4.12	2.49	4.61	2.12	1.66	4.17	5.94	5.83	5.64
	Es Sider (Hydroskimming)	-2.38	-3.36	-1.74	1.61	-3.75	-1.64	-0.93	-1.06	-1.06
	Urals (Hydroskimming)	-4.51	-6.32	-5.21	1.10	-7.18	-5.56	-4.10	-4.53	-4.06
US Gulf Coast	Bonny (Cracking)	-4.98	-3.19	-1.58	1.61	-3.49	-2.32	0.05	-0.76	-0.92
	Brent (Cracking)	-4.98	-3.94	-2.16	1.77	-4.37	-3.31	-0.58	-0.71	-1.84
	LLS (Cracking)	-1.92	-1.77	0.40	2.17	-1.55	-0.74	1.78	1.76	0.87
	Mars (Cracking)	-0.97	-1.27	-1.49	-0.22	-0.50	-1.26	-0.92	-2.35	-3.04
	Mars (Coking)	5.59	4.93	6.90	1.96	6.39	6.36	7.66	7.27	6.55
	Maya (Coking)	6.63	6.81	10.76	3.95	8.53	9.38	12.21	12.35	10.35
US West Coast	ANS (Cracking)	2.65	-3.96	-0.20	3.77	0.52	-1.98	-0.87	1.20	0.70
	Kern (Cracking)	8.02	0.38	5.07	4.68	5.37	5.02	3.73	4.94	7.74
	Oman (Cracking)	-3.27	-7.24	-0.38	6.86	-3.46	-2.80	-0.21	2.63	2.91
	Kern (Coking)	13.78	8.95	16.93	7.98	15.75	15.66	17.84	18.16	15.83
Singapore	Dubai (Hydroskimming)	-2.97	-3.80	-3.74	0.06	-4.95	-4.44	-2.98	-2.81	-3.50
	Tapis (Hydroskimming)	-4.73	-6.14	-5.69	0.45	-6.71	-5.92	-5.11	-5.14	-5.65
	Dubai (Hydrocracking)	2.22	1.49	2.50	1.01	0.70	1.48	3.12	4.06	3.30
	Tapis (Hydrocracking)	-1.02	-2.66	-2.11	0.54	-3.51	-2.70	-1.43	-1.09	-1.94
China	Cabinda (Hydroskimming)	-6.23	-4.75	-4.86	-0.11	-4.04	-4.95	-5.09	-4.58	-5.45
	Daqing (Hydroskimming)	-7.98	-8.37	-6.98	1.40	-7.87	-6.94	-6.87	-6.67	-7.03
	Dubai (Hydroskimming)	-4.84	-4.91	-4.62	0.29	-5.85	-5.21	-3.86	-3.74	-4.47
	Daqing (Hydrocracking)	-2.40	-2.86	-1.44	1.42	-2.67	-1.87	-1.22	-0.58	-1.70
	Dubai (Hydrocracking)	0.26	0.34	1.62	1.27	-0.18	0.71	2.22	3.11	2.31

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

Spot Product Prices

Product prices were mixed in February and early March. As described above, a tight **distillate market**, especially in the Mediterranean and Asia, has arguably been a driver of crude prices. ICE Gasoil futures and physical gasoil crack spreads reached record highs in early March on a combination of cold weather and supply tightness in regional markets. Contributing to the supply shortage was the previous reduction in refinery crude runs (subsequently partly reversed), as hydroskimming plants had lowered throughputs due to weak refining margins. Europe's recent switch to a 0.1% maximum sulphur content in heating oil/gasoil may also be causing some supply difficulties, as not all markets have yet fully switched to the new specification. In addition, Russian gasoil exports to Europe and especially to the Mediterranean will mostly continue to have a sulphur content of 0.2%, requiring either further desulphurisation or blending with lower-sulphur material.

Spot Product Prices

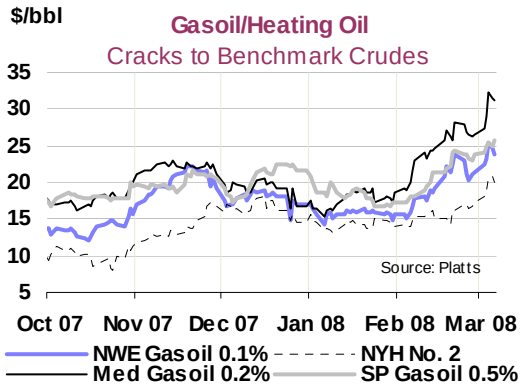
(monthly and weekly averages, $/bbl)

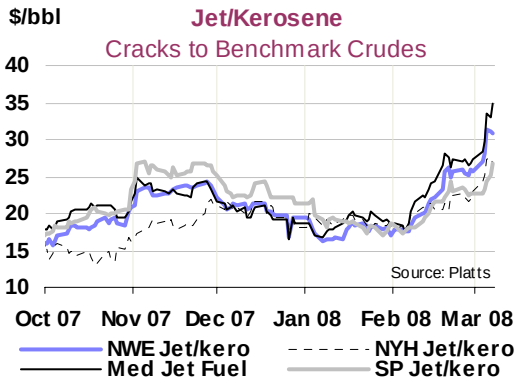
	Dec	Jan	Feb	Feb-Jan		Week Commencing:					Dec	Jan	Feb
				Change	%	04 Feb	11 Feb	18 Feb	25 Feb	03 Mar			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	95.74	95.83	100.33	4.50	4.7	92.76	100.30	104.81	104.80	103.84	4.77	3.83	5.29
Naphtha	92.60	91.43	92.04	0.60	0.7	86.93	91.80	94.89	95.35	95.10	1.63	-0.57	-3.00
Jet/Kerosene	111.42	109.62	117.30	7.68	7.0	107.92	116.25	121.89	124.77	131.68	20.44	17.62	22.27
ULSD	111.09	109.38	116.57	7.19	6.6	108.58	115.80	120.69	122.64	130.94	20.12	17.38	21.53
Gasoil .1%	108.66	107.83	114.37	6.54	6.1	106.01	113.59	118.89	120.47	126.02	17.69	15.83	19.34
LSFO 1%	78.16	77.79	76.22	-1.57	-2.0	72.61	76.85	78.09	77.96	80.21	-12.82	-14.21	-18.82
HSFO 3.5%	68.87	68.53	67.68	-0.85	-1.2	63.07	67.91	70.11	70.18	73.16	-22.10	-23.46	-27.35
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	95.02	95.61	99.04	3.44	3.6	92.57	99.45	102.46	103.04	101.18	6.26	6.35	7.84
Naphtha	91.39	91.19	91.95	0.76	0.8	86.78	91.81	94.89	95.15	94.72	2.63	1.93	0.74
Jet Aviation fuel	108.75	108.00	115.12	7.12	6.6	105.40	114.28	120.05	122.39	129.28	19.99	18.74	23.91
Gasoil .2%	107.88	106.87	115.47	8.59	8.0	106.66	115.11	119.57	122.25	127.63	19.12	17.61	24.26
LSFO 1%	76.02	75.94	75.01	-0.93	-1.2	71.22	75.67	76.96	76.84	79.02	-12.74	-13.32	-16.20
HSFO 3.5%	68.07	66.71	66.88	0.17	0.3	62.11	66.91	68.83	70.40	73.59	-20.69	-22.55	-24.33
New York Harbour, Barges											**Differential to WTI**		
Super Unleaded	101.10	101.98	104.00	2.02	2.0	96.93	102.43	109.98	109.31	110.97	9.73	9.00	8.60
Unleaded	97.34	97.99	100.09	2.10	2.1	93.12	99.29	106.06	104.41	104.53	5.98	5.01	4.70
Jet/Kerosene	111.68	111.92	116.21	4.29	3.8	108.14	115.12	121.30	123.17	129.60	20.32	18.94	20.81
No. 2 (Heating Oil)	107.80	107.29	110.94	3.65	3.4	103.59	109.75	115.06	117.77	123.11	16.44	14.31	15.55
LSFO 1%	72.52	74.39	70.64	-3.75	-5.0	67.67	70.54	72.54	72.48	72.83	-18.85	-18.59	-24.75
No. 6 3%	69.10	69.08	68.08	-1.00	-1.5	64.49	68.08	70.72	70.17	72.14	-22.26	-23.90	-27.32
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	98.38	100.51	105.07	4.57	4.5	98.56	102.24	107.69	110.32	108.59	12.80	13.14	15.05
Naphtha	92.24	93.13	95.07	1.95	2.1	89.94	93.32	97.63	97.82	97.80	6.66	5.76	5.05
Jet/Kerosene	108.31	106.18	111.10	4.93	4.6	102.81	108.95	114.39	116.06	119.55	22.73	18.81	21.08
Gasoil .5%	105.69	105.70	111.20	5.50	5.2	102.77	108.97	114.37	116.66	120.20	20.11	18.33	21.18
LSWR Cracked	78.03	78.78	82.07	3.29	4.2	77.49	80.99	83.37	85.30	88.54	-7.55	-8.59	-7.95
HSFO 180 CST	73.50	73.15	73.11	-0.05	-0.1	68.45	72.07	75.20	75.30	76.99	-12.08	-14.21	-16.92
HSFO 380 CST 4%	74.30	73.96	73.65	-0.31	-0.4	68.66	72.85	75.86	75.76	76.91	-11.28	-13.41	-16.37

Source: Platts

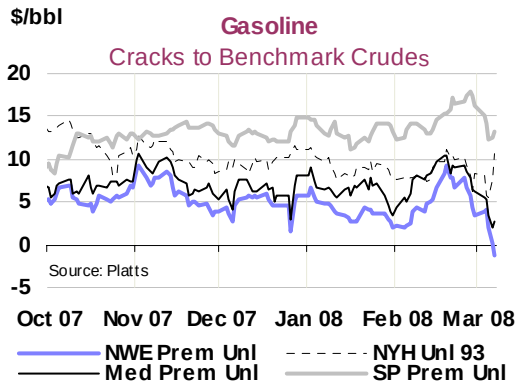
In Asia, distillate prices rose sharply in February, supported by a number of factors. Japanese kerosene stocks have fallen to the bottom of their five-year range on cold weather and higher exports. Regional demand may stem more from the jet fuel market, as China is reportedly buying 40% more fuel for April than for March. Japanese refineries are also among those who made sharp cuts in runs due to weak margins. East Asian distillates are also flowing to the US West Coast after arbitrage spreads improved since the beginning of the year. And lastly, even Iran is reportedly taking in more East Asian cargoes, as export flows from India have been curtailed due to issues with credit lines.

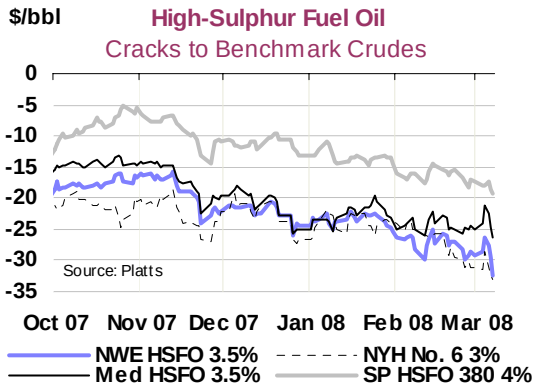
Gasoline cracks in contrast have fallen sharply since mid-February. US refiners in particular have been cranking out substantially more barrels than usual and domestic stocks have risen well above their five-year range. Typically, refiners build stocks ahead of the summer at this time of year, but the unusually high levels may indicate above-average seasonal maintenance ahead, together with weaker demand. In any case, high stocks and low US prices have caused a narrowing in the arbitrage spread to Europe, likely curbing flows across the Atlantic (and adding to pressure on European refiners to keep throughputs trimmed). Northwest European gasoline stocks also remain very high as a consequence, and in early March, the NWE gasoline crack dropped to below zero. Naphtha cracks plummeted too, as crackers shut for maintenance in Europe and Asia.





Fuel oil discounts to benchmark crudes widened in February and early March as stocks remained high in key markets. China has increased its buying somewhat since the end of the Lunar New Year holiday, but regionally, Singapore stocks remain at the top of their average range, and the flow of cargoes from the west (and elsewhere) shows no sign of abating. High Singapore stocks may however partly reflect the addition of new storage capacity, and demand for fuel oil is being helped by the high prices and strong regional demand for coal and LNG – with prices well above those observed in the Atlantic Basin.





End-User Product Prices in February

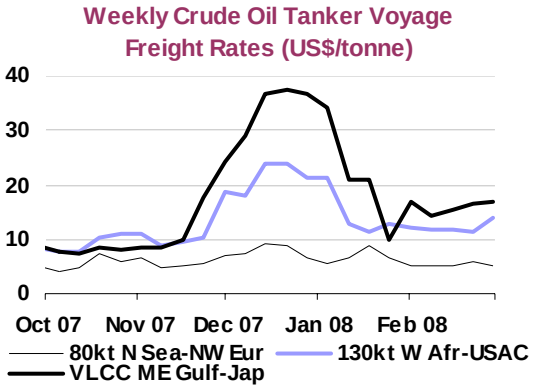
Compared with recent months, IEA consumers only experienced slight increases in petroleum product prices in February. Gasoline and diesel prices on average rose by 0.8% and 0.2% respectively in US dollars, ex-tax, with major gasoline price increases in Italy and Spain (4.6% and 4.4% respectively). Heating oil end-user prices in the countries surveyed were up by 1.2% on average. Low-sulphur fuel oil prices in Europe followed the regional trend and decreased on average by more than 3% in US dollars, ex-tax, with a major decrease in Spain (-8.9%). Consumers in Japan saw a slight increase of 0.7%. However, compared with February 2007, ex-tax retail prices increased on average by 55% in US dollars and by a lower 41% in national currencies due to the dollar's weakness.

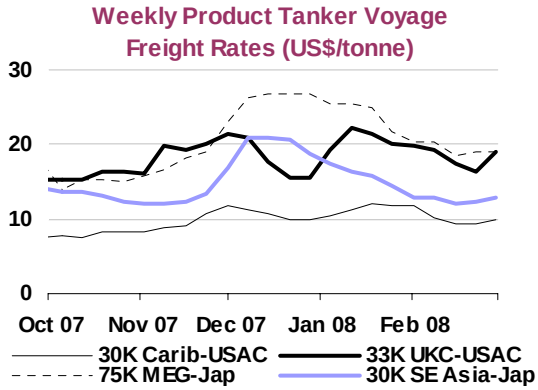
Freight

An increase in dirty vessel demand led a recovery in Middle East Gulf and West African freight rates in February. Record volumes of West African crude headed for China in February, while sailings from the Middle East Gulf, especially on westbound routes, reportedly increased. Poor weather led to delays in the Black Sea and Caribbean, undermining regional tonnage availability. Clean rates were flat in February despite higher demand for product imports from China.

Benchmark VLCC rates from the Middle East Gulf to Japan rose to $17/tonne at the end of February, from $10/tonne one month before. This brought rates above seasonal norms and reflected the upturn in demand for vessels in the Middle East Gulf trading on all routes. Spot chartering activity by Vela, Saudi Aramco's tanker chartering division, significantly increased in February according to reports. Furthermore, US refinery maintenance may have peaked in February, meaning demand for February-loading vessels (arriving in March), would coincide with the seasonal rebound in refinery runs.

West African dirty tanker rates rose well above seasonal averages in February, boosted by increased vessel demand for crude exports to China. Volumes loaded in West Africa and heading for China reportedly reached record highs of over 1 mb/d in February, as Chinese refiners maintained high throughputs in an attempt to assuage domestic product demand. VLCC rates on that route rose by around $8/tonne in February, to reach $30/tonne at end-month. West African Suezmax rates were also supported by this increase in vessel demand.





Poor weather in the Black Sea and fog in the Caribbean led to vessel delays in both regions in February. However, while Aframax rates surged in the Caribbean, on higher PADD 3 refinery throughputs, Mediterranean Aframax rates drifted, possibly related to lower Russian exports after export duty hikes. Black Sea to Mediterranean rates for 80,000 tonne cargoes fell from over $15/tonne in mid-February to $10/tonne by the end of the month.

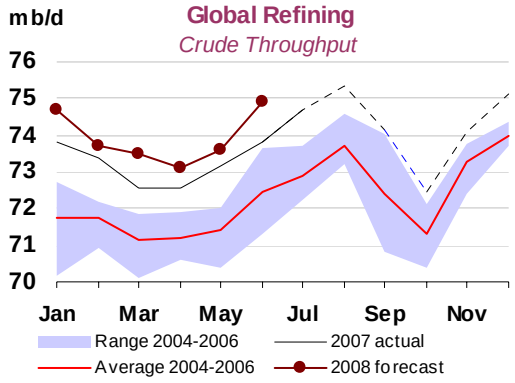
Asian clean tanker rates were relatively flat in February. Demand for product imports into China was extremely high and refinery outages in Australia increased regional competition for imports. However, additional clean vessels arriving in the region, combined with reported run cuts by some Japanese and Korean refiners, may have prevented significant upturns in clean rates. Having fallen earlier in the month, Atlantic clean rates did recover at the end of February, amid signs of improving economics for transatlantic trades to the US. UK Continent to US Atlantic 33,000 tonne rates rose by $2.50/tonne in the last week of February to finish the month near $19/tonne.

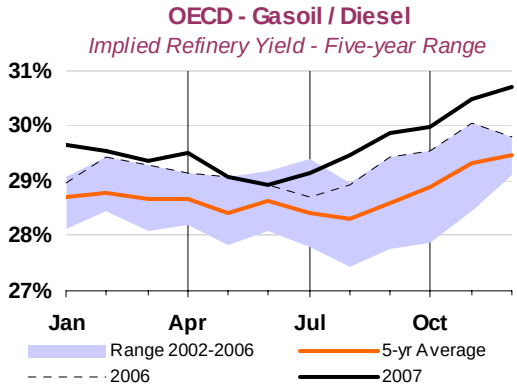
REFINING

Summary

- **Refinery crude throughputs remain under downward pressure** from poor economics, seasonal maintenance and operational problems. First-quarter global crude throughput is forecast to average 74.0 mb/d, with annual growth concentrated in non-OECD regions, while OECD crude runs are forecast to decline by 0.3 mb/d year-on-year. Second-quarter crude runs are forecast to average 73.9 mb/d as refiners increase throughput from the April low, ahead of peak gasoline demand in the summer.

- **Economic run cuts continue to hamper activity in Europe and the Pacific.** Run cuts are expected to increase in March in Japan and Korea, given record weakness in fuel oil cracks and apparent weakness in Japanese kerosene demand, but ease in Europe as higher gasoil cracks encourage some hydroskimming refineries to increase crude runs.





- **OECD crude throughput in January averaged 39.0 mb/d,** down 0.6 mb/d from December and 0.3 mb/d lower than the January 2007 level. Weakness in the US accounts for more than half the decline as refiners made an early start to maintenance work. Non-OECD throughput increased by 1.1 mb/d year-on-year to 35.7 mb/d.

- **OECD refinery yields continue to point to record high gasoil/diesel yields.** Increases in North America and Europe more than offset the drop in the Pacific, where operational problems at upgrading units limited distillate production.

Global Refinery Throughput

Global refinery crude throughput remained under downward pressure in February as weak economics undermined activity levels in several OECD regions. Strong gasoil cracks were insufficient to offset heavily negative fuel oil cracks and seasonally depressed gasoline cracks. In addition to the usual incidents and accidents, economic run cuts are estimated to have reduced OECD crude runs by 0.6 mb/d during the month. Furthermore, seasonal maintenance constrained crude runs in Europe and North America. Conversely, crude throughput in the Middle East and some parts of Asia continues to run ahead of expectations, despite poor margins for less complex refineries.

First-quarter global refinery crude throughput is projected to average 74.0 mb/d, 0.2 mb/d lower than estimated in last month's report. FSU, Chinese and Asian crude runs continue to account for the majority of the 0.7 mb/d year-on-year growth. Non-OECD crude runs are forecast to increase by 1.0 mb/d during the period while OECD crude runs are expected to decline by 0.3 mb/d year-on-year, driven by run cuts and heavy US maintenance. Second-quarter global crude runs are expected to recover from the early April low-point, averaging year-on-year growth of 0.7 mb/d.

Global Refinery Crude Throughput[1]

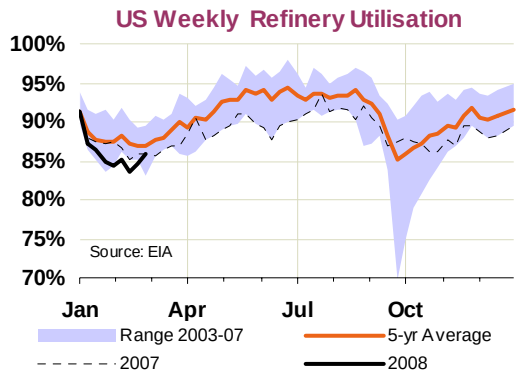
million barrels per day

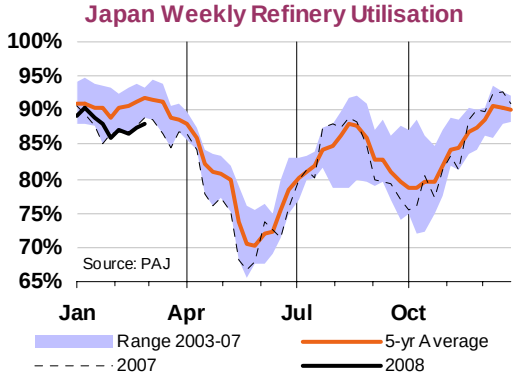
	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
OECD Crude Runs									
North America	17.8	18.0	18.3	18.0	17.6	17.7	18.0	18.5	18.6
Europe	13.3	13.3	13.8	13.6	13.4	13.3	12.9	13.0	13.6
Pacific	6.7	7.3	7.5	7.4	7.0	6.9	6.8	6.5	6.8
Total OECD	37.8	38.7	39.6	39.0	*38.0*	*37.9*	*37.6*	*38.0*	*39.0*
NON-OECD Crude Runs									
FSU	5.4	5.9	5.9	5.8	6.0	5.9	5.8	5.9	6.0
Europe	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8
China	6.5	6.7	6.9	6.9	7.0	6.8	6.6	6.5	6.7
Other Asia	8.1	8.3	8.2	8.5	8.4	8.4	8.3	8.2	8.2
Latin America	5.3	5.4	5.2	5.4	5.4	5.4	5.5	5.6	5.6
Middle East	6.1	6.0	6.2	5.9	5.9	5.9	6.1	6.1	6.2
Africa	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
Total Non-OECD	34.6	35.4	35.5	35.7	35.7	35.6	35.5	35.6	35.9
Total Crude Runs	*72.4*	*74.1*	*75.1*	*74.7*	*73.7*	*73.5*	*73.1*	73.6	*74.9*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

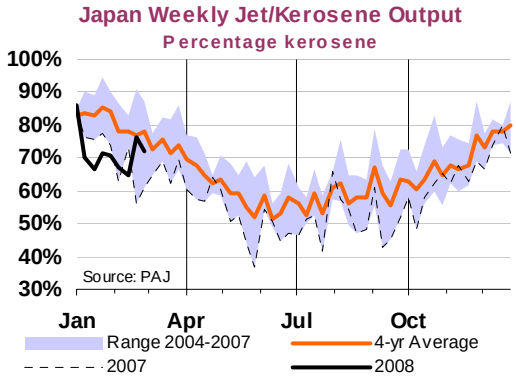
Refineries are caught between the continued strength in crude and middle distillate prices and the structural weakness in fuel oil prices. Fuel oil continues to face competition from cheaper alternative energy sources, such as coal and gas, for market share in power generation. Recent increases in the price of these other commodities may provide some relief for refiners, however the current record weakness in fuel oil cracks compared with crude will continue to weigh on those refiners who have not invested in sufficient upgrading capacity to minimise their fuel oil production. Some improvement in fuel oil cracks may result from the runs cuts reported for February and March, but this will not alter the structural discount fuel oil attracts.

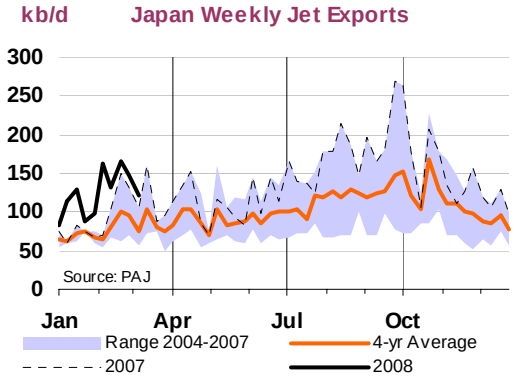
In the OECD, North American crude throughput is estimated to have reached its seasonal low-point in February as operational problems in Canada and the US added to a long list of planned shutdowns. March throughputs are expected to recover, as refiners look towards the seasonal uptick in gasoline demand over the course of the second quarter. However, the build in US gasoline stocks in recent weeks (to 14-year highs in absolute terms) raises the possibility of another bout of heavy maintenance before the end of the first quarter. Weekly data have shown a recovery in runs from the mid-February, 12-month low of 14.5 mb/d, but while this low level could be seen again, the full restart of Chevron's Pascagoula and Citgo's Lake Charles refineries, plus the imminent return of a 135 kb/d crude unit at Exxon Mobil's Baytown refinery and the final crude unit at BP's Texas City refinery should underpin Gulf Coast throughput in coming months.





OECD Pacific crude throughputs are under pressure from three factors during the first quarter. Operational problems at several refineries in **Australia** have cut throughputs and resulted in increased product imports from Singapore and elsewhere. Poor margins for less sophisticated refineries, driven by widening fuel oil discounts to crude, have resulted in continued run cuts in **Japan** and **Korea** in February and these are forecast to increase in March. Lastly, apparent weakness in January and early February Japanese kerosene demand may have caused refiners to reduce (relatively more profitable) domestic kerosene supplies and increase (relatively less profitable) jet fuel exports to the highest level since October. Further strengthening of the US West Coast arbitrage from Asia, may encourage further increase in jet exports in coming weeks. Japanese crude runs are expected to weaken further in March from February's level of 4.0 mb/d, as the start of seasonal maintenance adds to the economic run cuts





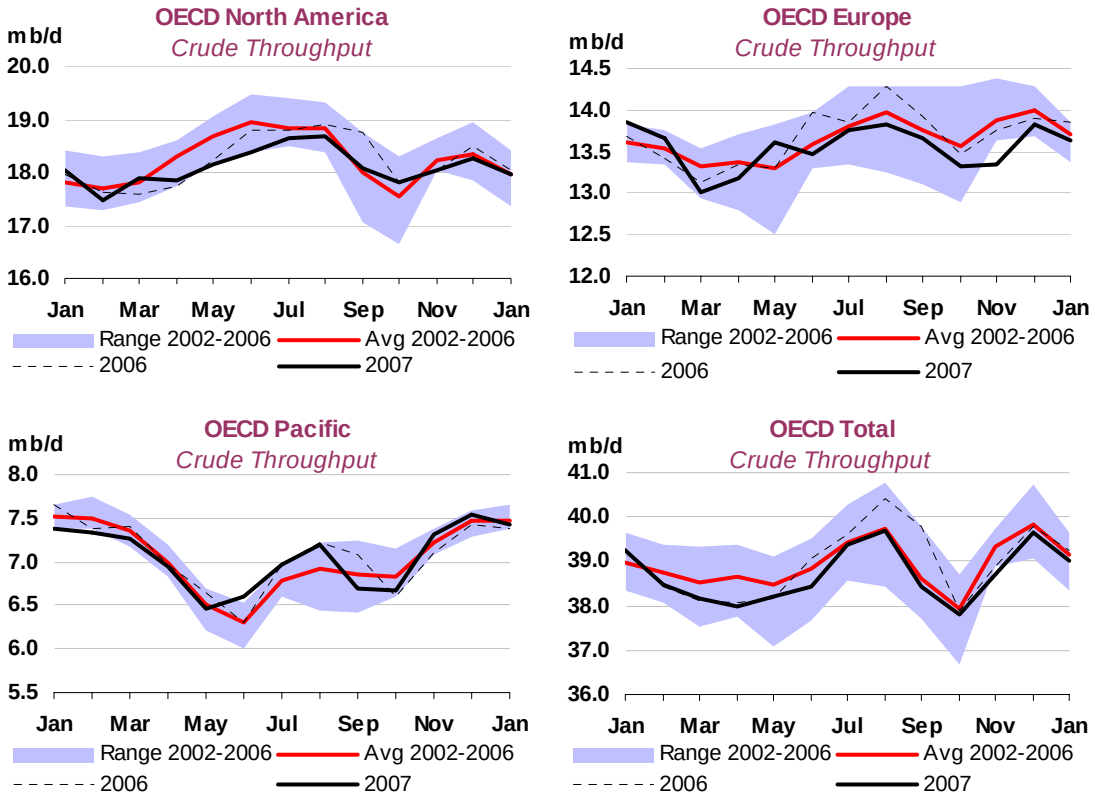
Korean crude runs are expected to have fallen in February and, driven by the historic lows that fuel oil cracks have reached in recent weeks, are forecast to decline further in March. Reported problems with upgrading capacity at some refineries could add to the weakness in crude runs. Furthermore, exports of fuel oil and gasoil are likely to be reduced as less complex refineries seek to minimise their production for export markets.

European crude throughput is expected to have fallen in February and again in March from January's level, as economic run cuts at hydroskimming refineries curtailed activity. This drop comes despite the record price, in both absolute terms and on a crack basis, for gasoil and ultra-low-sulphur diesel, which are now trading above the levels seen last November and December. The Mediterranean market is reported to be particularly tight. Here the combination of the switch to tighter sulphur specifications, the reduction of supplies from domestic refining capacity and reports of maintenance at some Russian refiners have coincided with a spike in demand following cold weather in Greece, Turkey, Russia and much of the East Mediterranean.

Chinese crude runs are forecast to average 6.9 mb/d during the first quarter, an increase of 0.5 mb/d year-on-year. Higher gasoil/diesel imports of around 170 kb/d in March should help to relieve the product shortages reported in recent months. However, the strong demand for diesel associated with agricultural activity in March may keep the pressure on refiners to maximise crude runs through to the end of the month. Second-quarter crude throughput is expected to decline slightly, to an average of 6.6 mb/d, due to maintenance, much of which has been deferred from the fourth quarter of last year, as refiners sought to meet strong demand for distillates. Ultimately, Chinese refiners will need to undertake maintenance work before operational reliability starts to have an impact on crude throughput. However, there remains the risk that continuing product market tightness in China could result in crude runs exceeding our forecast, if the government pressures state refineries to defer maintenance and continue supplying crude to independent refineries as recently reported. Crude runs are forecast to increase again during the third quarter, ahead of the summer Olympics in Beijing and following the start-up of Sinopec's new 200 kb/d Qingdao refinery late in the second quarter.

Elsewhere in Asia, **Indian** crude throughput reached a new record high in January of 3.2 mb/d, as Essar continued to start its upgrading units and expand crude throughput to 210 kb/d, a process that was completed in early March. Growth also came from Chennai Petroleum's Manali refinery, following maintenance, and near-record throughput at Reliance Industries' 660 kb/d Jamnagar refinery, where crude runs reached 760 kb/d. Indian crude throughput is forecast to plateau at around January's level, ahead of the start-up of Reliance's Petroleum's new 580 kb/d refinery at Jamnagar in the second half of the year.

Middle East crude runs were above expectations in January as scheduled work at the **UAE**'s Ruwais refinery started later than assumed. Preliminary data from **Iran** for January are higher than anticipated, suggesting that the work to expand a crude unit at the Bandar Abbas refinery started later than we had assumed. Furthermore, November and December data for **Saudi Arabia** were revised, to 1.6 and 1.8 mb/d respectively, following last month's surprisingly strong reported crude throughput of 2.1 mb/d, and November's weaker-than-expected 1.3 mb/d. January Saudi crude runs were weaker-than-forecast, suggesting that recent reports of operational problems at Ras Tanura may have started earlier in the year. Second-quarter crude runs are forecast to increase, with the completion of Iran's second crude expansion at Bandar Abbas, part of its strategy to raise domestic crude processing capacity and reduce gasoline imports.



Preliminary data for January for the **US** indicate that crude runs dropped by over 0.3 mb/d, to an average of 14.9 mb/d and declined further to 14.6 mb/d in February, on the back of a combination of maintenance, economic run cuts and unplanned outages. Several refineries are planning work on catalytic cracking units, which may temporarily depress crude runs but, on balance, US crude runs are forecast to rise slightly over the course of March, from the average February level. Perhaps the bigger impact will be felt on gasoline supplies, given US refiners' bias to maximise gasoline production from such units and may partly explain the record build in gasoline stocks. Furthermore, March and April are likely to see a significant amount of hydrotreating capacity undergoing maintenance (albeit only briefly for any individual unit) as catalysts are changed over having been *in-situ* for two years, following the move to 15 ppm sulphur in diesel in summer 2006. Over the balance of the second quarter, US runs are forecast to increase as refiners prepare for the peak in gasoline demand over the summer months.

Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Aug 07	Sep 07	Oct 07	Nov 07	Dec 07	Jan 08	*Dec 07*	*Jan 07*	Jan 08	Jan 07
OECD North America										
US[2]	15.68	15.22	14.93	15.14	15.19	14.86	-0.34	-0.11	85.16	86.02
Canada	1.86	1.74	1.62	1.65	1.85	1.85	0.00	0.05	91.70	89.32
Mexico	1.14	1.13	1.26	1.24	1.23	1.25	0.02	-0.02	81.17	71.96
Total	18.69	18.09	17.81	18.04	18.28	17.96	-0.32	-0.08	85.49	86.09
OECD Europe										
France	1.71	1.64	1.54	1.75	1.73	1.78	0.05	-0.01	90.85	91.57
Germany	2.14	2.30	2.24	2.21	2.31	2.26	-0.05	0.00	93.49	93.65
Italy	1.91	1.85	1.82	1.73	1.95	1.86	-0.09	-0.05	79.46	81.64
Netherlands	1.05	1.08	1.01	0.94	1.08	1.10	0.03	0.11	91.15	82.17
Spain	1.16	1.16	1.08	1.07	1.14	1.13	-0.01	-0.06	88.74	93.75
UK	1.67	1.57	1.62	1.55	1.52	1.48	-0.03	-0.11	78.61	84.28
Other OECD Europe	4.19	4.06	4.01	4.10	4.11	4.02	-0.09	-0.08	85.57	87.31
Total	13.84	13.67	13.33	13.34	13.83	13.63	-0.20	-0.21	86.39	87.73
OECD Pacific										
Japan	4.15	3.66	3.69	4.03	4.27	4.17	-0.09	0.04	89.21	88.26
Korea	2.31	2.35	2.30	2.58	2.57	2.53	-0.03	0.04	92.55	91.20
Other OECD Pacific	0.73	0.68	0.67	0.70	0.71	0.71	0.01	-0.05	88.65	94.47
Total	7.19	6.69	6.66	7.31	7.54	7.42	-0.12	0.03	90.27	89.85
OECD Total	39.72	38.44	37.80	38.69	39.64	39.00	-0.63	-0.26	86.68	87.35

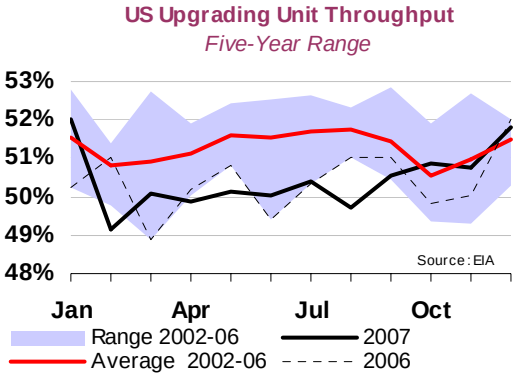
1 Expressed as a percentage, based on crude throughput and current operable refining capacity

2 US50

Provisional January data for the OECD show that crude runs fell to 39.0 mb/d, down 0.6 mb/d from December and 0.3 mb/d below the January 2007 level. As highlighted in last month's report the weak margin environment and an early start to maintenance in the US undermined activity levels. Japan and Korea were both marginally weaker than December, but stronger than January 2007 when warmer-than-normal weather resulted in economic run cuts for much of the first quarter.

OECD Refinery Yields

OECD gasoil/diesel yields increased again in December to fresh highs, driven by the restoration of hydrocracking capacity in Europe and the continued rise in US gasoil/diesel yields. Pacific gasoil/diesel yields declined, following problems with Korean upgrading equipment and lower Japanese distillate yields. The increase in the US perhaps reflects the increase in hydrocracker throughputs, while coking unit throughputs continue to languish below the five-year range and catalytic cracking throughput has only recently returned to the five-year average. Overall, upgrading unit feed rates (expressed as a percentage of total crude, NGL and feedstocks processed by refineries) have only returned to above five-year average levels in the fourth quarter.



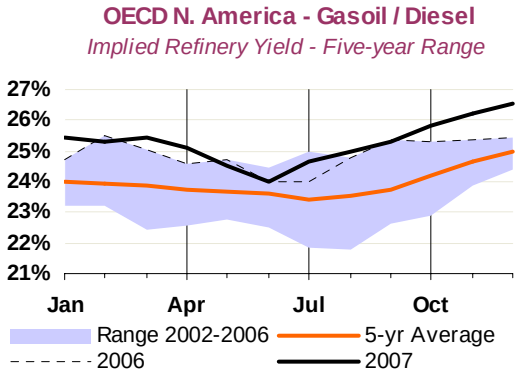


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.5	25.4	25.3	25.5	25.6	25.4
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	15.0	15.4	15.6	15.3	15.5	15.1	15.5	15.6	15.4
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.6	8.3	9.1	7.9	7.9	8.8	8.4
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	49.8	49.1	50.0	48.3	48.9	49.9	49.3
NON-OECD DEMAND																	
FSU	3.9	4.0	4.1	3.9	4.1	4.5	4.1	4.0	3.7	4.0	4.1	4.0	4.3	3.8	4.1	4.2	4.1
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.3	7.2	7.3	7.7	7.5	7.6	7.5	7.8	8.1	7.9	8.0	8.0
Other Asia	8.7	8.8	9.0	9.0	8.7	8.9	8.9	9.2	9.2	9.0	9.4	9.2	9.5	9.5	9.3	9.6	9.5
Latin America	4.9	5.1	5.1	5.3	5.4	5.4	5.3	5.3	5.5	5.7	5.6	5.5	5.5	5.7	5.9	5.9	5.7
Middle East	5.7	6.0	6.2	6.3	6.6	6.3	6.4	6.5	6.7	6.9	6.6	6.7	6.9	7.0	7.3	7.0	7.1
Africa	2.8	2.9	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	33.1	34.2	35.2	35.5	35.6	36.0	35.6	36.3	36.7	36.8	37.1	36.7	38.0	38.2	38.3	38.7	38.3
Total Demand[1]	82.5	83.9	85.6	83.6	84.6	85.9	84.9	86.0	84.9	85.5	86.9	85.8	88.0	86.4	87.2	88.6	87.5
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.3	14.1	14.0	14.3	14.2
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	5.0	4.8	4.5	4.3	4.6	4.5
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.7	19.8	19.8	19.4	19.1	19.7	19.5
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.8	12.8	12.8	12.9	13.0	13.3	13.6	13.2
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.8
Latin America	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.3	4.0	4.1	4.2	4.2	4.1
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.7	2.7	2.7	2.7	2.7
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	28.0	27.9	27.7	27.7	27.8	27.8	28.1	28.5	28.8	28.3
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.5	50.3	49.8	50.0	50.1	50.3	50.3	50.4	51.4	50.6
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	50.0	49.8	49.3	49.7	49.7	50.3	50.3	50.4	51.4	50.6
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.2	30.6	31.6	30.7					
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	5.0	5.0	5.2	5.6	5.2
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	35.0	35.4	36.4	35.5					
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.5	36.0	36.8	35.9					
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.6	85.2	85.2	86.5	85.6					
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-1.0	0.2	-0.9	0.8	-0.1	-0.9	-0.3					
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1					
Total	0.2	0.2	0.0	0.7	1.2	-0.9	0.3	-0.8	0.8	0.1	-0.9	-0.2					
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.1	-0.2	0.2	0.0					
Miscellaneous to balance[8]	0.7	0.6	-0.3	0.9	-0.4	1.1	0.3	0.1	-0.3	-0.2	0.3	0.0					
Total Stock Ch. & Misc	0.9	0.7	-0.2	1.5	1.2	-0.4	0.5	-0.5	0.3	-0.3	-0.4	-0.2					
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	29.0	30.0	28.2	28.9	29.7	29.2	30.8	29.8	30.9	32.0	30.9	32.7	31.2	31.6	31.5	31.8
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.9	29.5	30.7	32.2	30.8	32.9	31.3	31.8	31.7	31.9
"Call" incl. Angola & Ecuador[2]	29.5	30.8	32.0	30.0	30.9	31.6	31.1	31.3	30.3	31.4	32.3	31.3	32.7	31.2	31.6	31.5	31.8
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.3	31.7	30.9	30.5	32.8	31.5	31.4	30.0	31.2	32.5	31.3	32.9	31.3	31.8	31.7	31.9

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.3	-	-	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-0.2	-	-0.2	-0.1	-0.1	-0.2	-0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-0.3	-0.1	-0.5	-0.1	-	-0.2	-0.2
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-	0.1	-
Other Asia	-	-	0.1	0.1	0.1	0.1	0.1	-	-0.1	-0.2	-0.2	-0.1	-	-	-	-0.1	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	0.1	0.1	0.1	0.1	0.1	-	-0.1	-0.1	-0.1	-0.1	0.4	-	-	0.1	0.1
Total Demand	-	-	0.1	0.1	0.1	0.1	0.1	-	-0.1	-0.1	-0.4	-0.1	-0.1	-0.1	-	-0.1	-0.1
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.1	-0.1	-0.1	0.1	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.1	-0.1	-0.1	0.1	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-					
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-					
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-					
Total Supply	-	-	-	-	-	-	-	-	-	-	0.1	-					
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	0.1	0.2	0.1					
Government	-	-	-	-	-	-	-	-	-	-	0.1	-					
Total	-	-	-	-	-	-	-	-	-	0.1	0.3	0.1					
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-	-	-					
Miscellaneous to balance	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-	0.1	-	0.1	0.1					
Total Stock Ch. & Misc	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-	0.1	0.1	0.4	0.2					
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	0.1	0.1	0.1	0.1	0.1	-	-0.1	-0.1	-0.4	-0.1	-	-	0.1	-0.1	-
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	-	-0.1	-0.3	-0.1	-	-0.1	-	-0.2	-0.1

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.31	25.67	25.43	25.49	25.58	25.54	25.37	25.33	25.53	25.56	25.45
Europe	15.61	15.96	15.23	15.60	15.72	15.63	15.21	14.96	15.40	15.58	15.29	15.48	15.06	15.46	15.57	15.39
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.65	8.27	9.11	7.90	7.92	8.79	8.43
Total OECD	49.67	50.42	48.11	48.98	49.84	49.34	49.71	48.19	48.71	49.81	49.10	49.95	48.29	48.91	49.92	49.27
FSU	3.96	4.06	3.88	4.12	4.45	4.13	3.99	3.74	3.99	4.08	3.95	4.32	3.83	4.06	4.15	4.09
Europe	0.73	0.80	0.74	0.69	0.75	0.75	0.82	0.76	0.71	0.77	0.77	0.84	0.78	0.73	0.78	0.78
China	6.69	7.02	7.35	7.22	7.26	7.21	7.33	7.73	7.52	7.59	7.54	7.76	8.13	7.92	8.04	7.96
Other Asia	8.79	8.98	9.00	8.70	8.93	8.90	9.22	9.23	9.00	9.36	9.20	9.45	9.48	9.26	9.65	9.46
Latin America	5.10	5.13	5.28	5.39	5.36	5.29	5.34	5.52	5.66	5.65	5.54	5.53	5.72	5.87	5.86	5.75
Middle East	6.00	6.22	6.27	6.59	6.33	6.35	6.52	6.65	6.90	6.56	6.66	6.88	7.02	7.34	7.00	7.06
Africa	2.94	2.97	2.97	2.86	2.93	2.93	3.10	3.07	2.98	3.08	3.06	3.22	3.18	3.09	3.19	3.17
Total Non-OECD	34.21	35.18	35.48	35.57	36.02	35.57	36.32	36.70	36.76	37.07	36.72	38.00	38.15	38.27	38.67	38.27
World	83.88	85.61	83.59	84.56	85.85	84.90	86.03	84.90	85.47	86.88	85.82	87.96	86.44	87.18	88.59	87.54
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.55*	*20.59*	*20.77*	*20.69*	*20.65*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.85*	*7.69*	*7.87*	*8.01*	*7.86*	*8.02*	*7.72*	*7.89*	*7.96*	*7.90*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.61*	*4.64*	*4.70*	*5.27*	*5.05*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.39*	*2.16*	*2.10*	*2.38*	*2.26*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.07*	*2.09*	*2.01*	*2.11*	*2.07*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.34*	*2.28*	*2.38*	*2.38*	*2.34*	*2.36*	*2.30*	*2.39*	*2.38*	*2.36*
Brazil	*2.17*	*2.13*	*2.15*	*2.23*	*2.25*	*2.19*	*2.22*	*2.26*	*2.34*	*2.41*	*2.31*	*2.29*	*2.33*	*2.41*	*2.48*	*2.37*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.71*	*2.64*	*2.88*	*2.83*	*2.57*	*2.87*	*2.79*	*3.00*	*2.94*	*2.69*	*2.99*	*2.90*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.5	-0.7	1.8	1.5	-0.1	0.7	0.9	-1.2	-0.4	0.2	-0.1	-0.4
Europe	0.8	1.5	-0.2	-0.4	-0.5	0.1	-4.7	-1.8	-1.3	-0.9	-2.2	1.7	0.7	0.4	0.0	0.7
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	3.2	1.2	1.3	1.7	1.9
Total OECD	0.6	-0.7	-1.0	-0.6	-0.5	-0.7	-1.4	0.2	-0.6	-0.1	-0.5	0.5	0.2	0.4	0.2	0.3
FSU	1.5	2.2	0.4	4.5	10.1	4.4	-1.7	-3.6	-3.1	-8.4	-4.3	8.2	2.4	1.8	1.9	3.6
Europe	4.3	3.1	3.1	3.1	3.1	3.1	2.7	2.6	2.4	1.9	2.4	2.2	2.5	2.5	2.5	2.4
China	4.2	5.0	13.0	7.9	5.4	7.8	4.5	5.1	4.1	4.6	4.6	5.8	5.2	5.4	5.9	5.6
Other Asia	1.5	0.2	-0.1	1.9	3.1	1.2	2.7	2.6	3.4	4.8	3.4	2.5	2.7	2.9	3.1	2.8
Latin America	3.1	3.9	3.3	3.0	4.5	3.7	4.0	4.6	5.1	5.3	4.7	3.7	3.7	3.6	3.7	3.7
Middle East	4.9	6.7	6.6	5.6	4.6	5.8	4.7	6.1	4.7	3.6	4.8	5.6	5.6	6.4	6.7	6.1
Africa	6.1	-1.4	-0.9	-0.2	1.0	-0.4	4.3	3.6	4.3	5.0	4.3	3.7	3.6	3.5	3.6	3.6
Total Non-OECD	3.3	2.9	4.1	4.1	4.7	4.0	3.2	3.5	3.3	2.9	3.2	4.6	3.9	4.1	4.3	4.2
World	1.7	0.8	1.1	1.3	1.6	1.2	0.5	1.6	1.1	1.2	1.1	2.2	1.8	2.0	2.0	2.0
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.44	0.37	-0.04	0.18	0.24	-0.30	-0.10	0.04	-0.02	-0.10
Europe	0.12	0.24	-0.03	-0.06	-0.08	0.02	-0.74	-0.27	-0.20	-0.15	-0.34	0.26	0.10	0.06	0.00	0.11
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.28	0.09	0.10	0.15	0.16
Total OECD	0.32	-0.35	-0.48	-0.28	-0.24	-0.34	-0.72	0.08	-0.28	-0.03	-0.23	0.25	0.10	0.20	0.12	0.17
FSU	0.06	0.09	0.01	0.18	0.41	0.17	-0.07	-0.14	-0.13	-0.37	-0.18	0.33	0.09	0.07	0.08	0.14
Europe	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02
China	0.27	0.34	0.85	0.53	0.37	0.52	0.31	0.38	0.29	0.33	0.33	0.43	0.41	0.41	0.45	0.42
Other Asia	0.13	0.02	-0.01	0.16	0.26	0.11	0.25	0.24	0.30	0.43	0.30	0.23	0.25	0.26	0.29	0.26
Latin America	0.15	0.19	0.17	0.16	0.23	0.19	0.21	0.24	0.27	0.28	0.25	0.20	0.20	0.21	0.21	0.20
Middle East	0.28	0.39	0.39	0.35	0.28	0.35	0.29	0.38	0.31	0.23	0.30	0.37	0.37	0.44	0.44	0.40
Africa	0.17	-0.04	-0.03	-0.01	0.03	-0.01	0.13	0.11	0.12	0.15	0.13	0.12	0.11	0.10	0.11	0.11
Total Non-OECD	1.09	1.01	1.40	1.39	1.61	1.35	1.14	1.22	1.19	1.06	1.15	1.68	1.45	1.51	1.60	1.56
World	1.40	0.65	0.92	1.12	1.36	1.02	0.42	1.31	0.91	1.02	0.92	1.92	1.54	1.71	1.72	1.72
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.05	-0.02	-0.26	-0.02	0.04	0.04	-0.05
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	-0.04	-0.16	-0.09	-0.06	-0.21	-0.13
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.02	-0.03	-0.01	-0.01	-0.01	-0.01
Total OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.29	-0.08	-0.45	-0.12	-0.04	-0.17	-0.19
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.28	0.00	0.00	0.00	0.07
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.03	0.04	0.04	0.07	0.05
Other Asia	0.00	0.05	0.05	0.05	0.06	0.05	-0.01	-0.14	-0.16	-0.18	-0.12	0.04	-0.05	-0.04	-0.06	-0.03
Latin America	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	-0.01	-0.02	0.02	-0.01	0.01	0.01	0.01	0.05	0.02
Middle East	0.01	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.03	0.02
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	-0.01	-0.02	-0.01	-0.01	-0.01
Total Non-OECD	-0.02	0.09	0.09	0.11	0.11	0.10	0.04	-0.10	-0.10	-0.06	-0.06	0.36	0.00	0.02	0.09	0.12
World	-0.02	0.09	0.09	0.11	0.11	0.10	0.04	-0.10	-0.11	-0.35	-0.13	-0.09	-0.12	-0.01	-0.08	-0.08
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.01	0.10	0.10	0.12	0.13	0.11	-0.05	-0.18	-0.22	-0.46	-0.23	-0.13	-0.02	0.10	0.27	0.06

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	3Q07	4Q07	1Q08	2Q08	3Q08	Dec 07	Jan 08	Feb 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.42	8.78				8.81	8.86	8.81
Iran	3.91	3.98		3.95	4.04				3.94	4.05	3.93
Iraq	1.90	2.09		2.11	2.35				2.35	2.22	2.37
UAE	2.62	2.51		2.57	2.39				2.54	2.62	2.59
Kuwait	2.21	2.16		2.18	2.24				2.26	2.28	2.29
Neutral Zone	0.58	0.56		0.55	0.57				0.58	0.58	0.58
Qatar	0.82	0.80		0.80	0.80				0.82	0.85	0.83
Angola[6]		1.61		1.61	1.71				1.69	1.80	1.76
Nigeria	2.24	2.13		2.17	2.13				2.10	2.06	2.01
Libya	1.71	1.71		1.70	1.74				1.75	1.77	1.76
Algeria	1.35	1.36		1.36	1.39				1.40	1.40	1.40
Ecuador[6]									0.50	0.50	0.50
Venezuela	2.56	2.39		2.36	2.42				2.43	2.44	2.44
Indonesia	0.89	0.84		0.83	0.83				0.84	0.83	0.87
Total Crude Oil[6]	29.71	30.66		30.62	31.56				32.00	32.24	32.12
Total NGLs[1,6]	4.63	4.82	5.19	4.83	4.88	4.95	4.99	5.21	4.88	4.96	4.95
Total OPEC[6]	34.34	35.48		35.45	36.45				36.88	37.20	37.07
OPEC incl. Angola & Ecuador[6]	36.29	35.94		35.96	36.78				36.88	37.20	37.07
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.16	14.19	14.12	14.26	14.13	13.98	14.06	14.11	14.36
United States	7.34	7.48	7.45	7.39	7.52	7.45	7.52	7.36	7.56	7.45	7.40
Mexico	3.68	3.48	3.37	3.44	3.32	3.38	3.38	3.36	3.33	3.32	3.46
Canada	3.19	3.31	3.35	3.36	3.28	3.43	3.22	3.26	3.17	3.33	3.50
Europe	5.18	4.95	4.55	4.69	5.00	4.83	4.47	4.33	4.97	4.94	4.82
UK	1.66	1.66	1.48	1.49	1.70	1.63	1.47	1.33	1.69	1.66	1.65
Norway	2.78	2.56	2.36	2.48	2.58	2.48	2.28	2.29	2.54	2.56	2.44
Others	0.74	0.73	0.72	0.73	0.72	0.72	0.72	0.71	0.73	0.72	0.73
Pacific	0.58	0.62	0.78	0.64	0.63	0.70	0.78	0.79	0.59	0.68	0.70
Australia	0.53	0.54	0.66	0.55	0.52	0.59	0.66	0.67	0.48	0.57	0.58
Others	0.05	0.08	0.12	0.09	0.10	0.11	0.11	0.12	0.11	0.11	0.11
Total OECD	19.97	19.84	19.49	19.53	19.75	19.80	19.38	19.10	19.62	19.73	19.87
NON-OECD											
Former USSR	12.25	12.77	13.19	12.75	12.82	12.88	13.03	13.26	12.75	12.79	12.93
Russia	9.84	10.08	10.17	10.10	10.08	10.00	10.08	10.24	10.04	10.00	10.00
Others	2.40	2.69	3.02	2.65	2.73	2.88	2.96	3.02	2.71	2.79	2.93
Asia	6.39	6.41	6.61	6.34	6.41	6.54	6.59	6.61	6.32	6.52	6.54
China	3.67	3.73	3.83	3.70	3.68	3.82	3.83	3.83	3.60	3.80	3.82
Malaysia	0.75	0.76	0.80	0.76	0.79	0.78	0.80	0.82	0.80	0.78	0.78
India	0.79	0.81	0.80	0.81	0.81	0.81	0.80	0.80	0.80	0.81	0.81
Others	1.17	1.11	1.17	1.07	1.12	1.13	1.15	1.17	1.12	1.13	1.13
Europe	0.15	0.13	0.12	0.13	0.13	0.13	0.12	0.12	0.13	0.13	0.13
Latin America	4.39	4.33	4.14	4.38	4.20	4.04	4.15	4.20	3.95	4.01	4.02
Brazil	2.10	2.14	2.39	2.15	2.13	2.29	2.39	2.45	2.20	2.26	2.27
Argentina	0.77	0.76	0.75	0.76	0.75	0.75	0.75	0.75	0.76	0.75	0.75
Colombia	0.53	0.54	0.58	0.53	0.56	0.58	0.58	0.58	0.56	0.58	0.58
Ecuador[6]	0.54	0.50		0.51	0.50						
Others	0.45	0.39	0.42	0.43	0.26	0.42	0.42	0.42	0.43	0.42	0.43
Middle East[3]	1.74	1.64	1.56	1.63	1.60	1.58	1.57	1.56	1.59	1.59	1.58
Oman	0.75	0.71	0.69	0.71	0.70	0.70	0.69	0.69	0.70	0.70	0.70
Syria	0.42	0.39	0.37	0.39	0.38	0.38	0.37	0.36	0.38	0.38	0.38
Yemen	0.38	0.34	0.31	0.33	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Africa	3.91	2.55	2.69	2.52	2.58	2.66	2.69	2.71	2.60	2.66	2.66
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.63	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.24	0.23	0.23	0.24	0.24	0.24	0.23	0.23	0.24
Others	1.63	1.68	1.83	1.65	1.72	1.79	1.83	1.85	1.74	1.80	1.79
Total Non-OECD	28.82	27.83	28.31	27.74	27.73	27.82	28.15	28.46	27.34	27.70	27.86
Processing Gains[4]	2.04	2.07	2.13	2.10	2.11	2.11	2.10	2.14	2.11	2.11	2.11
Other Biofuels[5]	0.26	0.40	0.65	0.40	0.46	0.55	0.66	0.66	0.46	0.55	0.55
TOTAL NON-OPEC	51.09	50.14	50.59	49.77	50.04	50.28	50.29	50.37	49.52	50.09	50.40
Non-OPEC excl. Angola & Ecuador[6]	49.14	49.68	50.59	49.25	49.71	50.28	50.29	50.37	49.52	50.09	50.40
TOTAL SUPPLY	85.43	85.62		85.21	86.49				86.41	87.29	87.47

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Sep2007	Oct2007	Nov2007	Dec2007	Jan2008*	Jan2005	Jan2006	Jan2007	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	460.0	461.7	442.7	427.7	445.7	402.4	449.2	455.7	0.28	0.31	-0.34	-0.35
Motor Gasoline	227.4	225.2	230.4	242.8	260.2	251.8	253.0	256.5	-0.14	0.04	-0.07	0.17
Middle Distillate	206.0	206.0	205.6	207.8	208.0	198.0	221.9	210.5	-0.29	0.05	0.11	0.02
Residual Fuel Oil	44.5	47.5	46.7	47.8	45.3	48.8	49.3	50.9	-0.03	-0.03	0.00	0.04
Total Products[3]	669.3	663.6	655.9	661.2	656.8	654.1	686.0	688.1	-0.71	0.28	0.15	-0.09
Total[4]	1294.7	1290.3	1256.8	1231.8	1245.6	1194.9	1274.2	1283.3	-0.48	0.67	0.00	-0.68
Europe												
Crude	322.7	324.2	333.7	330.1	329.0	325.6	335.7	310.5	-0.18	0.09	-0.13	0.08
Motor Gasoline	102.0	102.6	105.3	111.0	114.2	124.9	118.8	117.5	-0.03	-0.08	-0.01	0.10
Middle Distillate	264.6	248.3	234.4	252.6	256.5	252.8	267.2	280.7	-0.08	0.03	-0.08	-0.13
Residual Fuel Oil	76.1	72.9	73.1	74.8	75.4	72.1	74.2	80.9	-0.01	-0.02	0.06	-0.01
Total Products[3]	548.8	528.5	517.2	544.6	552.8	554.2	561.2	583.3	-0.13	-0.10	0.05	-0.04
Total[4]	945.7	928.3	925.9	948.4	954.6	945.8	971.3	967.1	-0.24	0.01	-0.10	0.03
Pacific												
Crude	161.0	172.1	161.0	160.4	167.3	178.8	155.6	171.0	-0.01	-0.02	-0.10	-0.01
Motor Gasoline	21.6	22.0	21.1	22.3	23.2	27.1	24.9	26.3	0.03	0.00	-0.03	0.01
Middle Distillate	77.5	72.6	71.2	70.5	70.6	68.2	62.6	81.3	-0.14	0.08	0.10	-0.08
Residual Fuel Oil	25.6	21.8	19.7	21.2	20.2	22.3	21.3	21.7	-0.01	0.00	0.04	-0.05
Total Products[3]	195.7	186.0	177.6	174.6	176.5	186.5	169.3	191.5	-0.14	0.12	0.15	-0.23
Total[4]	429.0	429.1	411.5	404.7	417.2	435.5	392.7	436.7	-0.13	0.10	0.03	-0.26
Total OECD												
Crude	943.8	958.0	937.4	918.3	942.0	906.8	940.6	937.2	0.09	0.39	-0.57	-0.28
Motor Gasoline	350.9	349.8	356.8	376.1	397.5	403.8	396.7	400.3	-0.15	-0.04	-0.10	0.27
Middle Distillate	548.1	526.9	511.2	531.0	535.1	519.0	551.7	572.4	-0.51	0.16	0.14	-0.19
Residual Fuel Oil	146.1	142.1	139.5	143.9	140.9	143.1	144.8	153.5	-0.05	-0.05	0.10	-0.02
Total Products[3]	1413.8	1378.1	1350.6	1380.5	1386.1	1394.8	1416.5	1462.9	-0.97	0.30	0.34	-0.36
Total[4]	2669.5	2647.6	2594.2	2584.9	2617.5	2576.2	2638.2	2687.0	-0.86	0.79	-0.06	-0.92

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Sep2007	Oct2007	Nov2007	Dec2007	Jan2008*	Jan2005	Jan2006	Jan2007	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	692.8	694.1	695.5	696.9	698.7	679.7	683.5	688.6	0.00	0.02	0.03	0.05
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	177.4	180.6	182.3	184.6	184.6	165.4	169.5	174.4	-0.01	0.01	0.02	0.08
Products	246.5	237.0	234.7	237.7	237.7	209.5	235.9	235.9	0.05	-0.01	0.08	-0.09
Pacific												
Crude	385.1	385.0	385.1	385.1	385.1	384.5	380.0	384.6	0.01	0.00	0.00	0.00
Products	17.9	18.4	18.9	18.9	18.9	11.0	11.6	16.4	0.05	0.00	0.02	0.01
Total OECD												
Crude	1255.2	1259.7	1262.9	1266.6	1268.4	1229.6	1233.0	1247.6	0.00	0.03	0.05	0.12
Products	266.3	257.4	255.6	258.6	258.6	222.5	249.5	254.3	0.10	-0.01	0.10	-0.08
Total[4]	1522.5	1518.1	1519.4	1526.2	1528.0	1453.1	1483.4	1502.9	0.10	0.02	0.15	0.04

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End December 2006		End March 2007		End June 2007		End September 2007		End December 2007 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	180.1	77	182.5	80	189.7	80	203.1	85	200.0	-
Mexico	42.3	21	40.5	20	43.8	22	43.5	21	45.0	-
United States[4]	1721.5	83	1678.8	81	1731.0	84	1720.9	83	1663.6	-
Total[4]	1966.0	77	1923.9	76	1986.6	78	1989.5	78	1930.7	76
Pacific										
Australia	34.8	37	34.3	37	38.9	42	36.8	38	36.2	-
Japan	630.8	117	619.9	134	622.4	133	629.6	121	620.9	-
Korea	151.8	65	156.1	74	158.3	77	157.4	68	143.5	-
New Zealand	7.1	46	7.7	49	7.7	50	8.1	52	8.2	-
Total	824.6	93	818.0	105	827.3	106	831.9	96	808.7	89
Europe[5]										
Austria	21.8	78	24.0	81	21.1	72	22.0	75	23.3	-
Belgium	30.2	48	28.2	51	28.7	51	27.8	46	28.0	-
Czech Republic	19.7	101	20.2	92	20.5	95	19.5	98	20.2	-
Denmark	18.5	97	18.3	96	17.1	89	18.9	94	17.3	-
Finland	26.6	109	29.5	136	26.3	111	29.7	126	27.1	-
France	192.4	98	177.0	96	185.7	96	186.7	93	184.4	-
Germany	282.8	117	290.5	120	285.6	110	278.2	108	275.1	-
Greece	36.8	79	33.6	85	35.6	85	34.8	75	36.2	-
Hungary	16.6	108	18.1	107	16.0	94	17.1	98	15.4	-
Ireland	12.5	62	12.9	69	11.1	56	12.6	63	10.6	-
Italy	133.1	79	133.9	80	133.0	82	134.2	78	132.9	-
Luxembourg	1.0	16	0.9	15	0.9	15	0.9	15	0.7	-
Netherlands	118.6	138	117.7	137	120.6	133	116.2	127	122.5	-
Norway	35.1	156	20.2	78	23.5	91	24.2	88	29.1	-
Poland	41.5	89	43.9	90	50.0	90	50.9	94	58.2	-
Portugal	24.0	77	23.7	78	24.7	80	23.2	75	23.7	-
Slovak Republic	7.5	101	7.0	83	6.9	79	7.7	86	7.9	-
Spain	134.8	83	129.3	81	130.5	82	136.7	84	133.9	-
Sweden	33.8	94	35.6	99	32.1	90	31.5	87	31.3	-
Switzerland	38.1	150	38.7	173	38.5	157	38.1	132	35.9	-
Turkey	52.8	85	59.2	89	60.5	80	61.1	92	60.3	-
United Kingdom	108.5	60	105.8	59	100.8	58	98.5	57	97.6	-
Total	1386.6	92	1368.3	92	1369.6	89	1370.5	88	1371.7	89
Total OECD	4177.2	84	4110.1	86	4183.5	86	4192.0	84	4111.1	82
DAYS OF IEA Net Imports[6]	-	121	-	121	-	121	-	122	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End December 2007 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
4Q2004	3998	1450	2547	79	29	50
1Q2005	4005	1462	2543	82	30	52
2Q2005	4117	1494	2623	84	30	53
3Q2005	4132	1494	2638	83	30	53
4Q2005	4083	1487	2597	81	29	52
1Q2006	4084	1487	2597	85	31	54
2Q2006	4151	1493	2658	85	30	54
3Q2006	4262	1495	2767	86	30	56
4Q2006	4177	1499	2679	84	30	54
1Q2007	4110	1507	2603	86	31	54
2Q2007	4183	1509	2675	86	31	55
3Q2007	4192	1523	2669	84	31	54
4Q2007	4111	1526	2585	82	31	52

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 4Q2007 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	1Q07	2Q07	3Q07	4Q07	Oct 07	Nov 07	Dec 07	Year Earlier Dec 06	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.60	0.73	0.71	0.77	0.50	0.92	0.91	0.53	0.38
Europe	0.90	0.78	0.70	0.78	0.64	0.74	0.68	0.66	0.67	0.71	0.73	-0.02
Pacific	1.31	1.32	1.19	1.28	1.20	1.15	1.25	1.11	1.33	1.32	1.26	0.06
Saudi Medium												
North America	0.81	0.64	0.56	0.61	0.59	0.59	0.57	0.57	0.59	0.56	0.64	-0.08
Europe	0.16	0.14	0.05	0.10	0.10	0.02	0.04	0.06	0.02	0.04	0.08	-0.05
Pacific	0.26	0.35	0.34	0.32	0.31	0.31	0.38	0.33	0.34	0.47	0.31	0.16
Saudi Heavy												
North America	0.17	0.21	0.09	0.19	0.05	0.11	0.04	0.04	0.04	0.04	0.17	-0.13
Europe	0.23	0.18	0.11	0.14	0.16	0.11	0.09	0.11	0.06	0.11	0.11	-0.01
Pacific	0.25	0.23	0.20	0.23	0.18	0.20	0.23	0.25	0.22	0.21	0.23	-0.02
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.46	0.39	0.64	0.45	0.37	0.57	0.40	0.39	0.01
Europe	0.23	0.32	0.30	0.36	0.28	0.38	0.24	0.27	0.19	0.28	0.32	-0.04
Pacific	0.06	0.08	0.17	0.07	0.18	0.20	0.21	0.21	0.15	0.26	0.09	0.17
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.05	0.01	0.11	0.01	-	0.06	0.32	0.22	0.38	0.35	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.27	0.31	0.27	0.21	0.26	0.18	0.20	0.35	-0.15
Pacific	0.15	0.13	0.09	0.11	0.06	0.07	0.11	0.10	0.13	0.10	0.16	-0.06
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.60	0.62	0.60	0.47	0.50	0.47	0.43	0.57	-0.13
Pacific	0.62	0.56	0.64	0.61	0.63	0.56	0.73	0.62	0.78	0.80	0.60	0.20
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.57	0.71	0.75	0.85	0.80	1.09	0.65	0.51	0.15
Europe	0.04	0.11	0.08	0.11	0.07	0.09	0.05	0.02	0.05	0.10	0.11	-0.01
Pacific	-	-	0.01	-	-	-	0.02	0.07	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.72	0.70	0.76	0.67	0.71	0.59	0.71	0.78	-0.08
Europe	0.06	0.06	0.07	0.05	0.09	0.06	0.06	0.08	0.06	0.04	0.06	-0.02
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.15	1.19	1.25	1.24	1.07	1.90	0.78	1.02	-0.24
Europe	0.17	0.16	0.14	0.15	0.11	0.18	0.15	0.17	0.12	0.15	0.12	0.03
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.02	0.01	0.01	0.00	0.01	0.00	-	0.01	-
Europe	0.03	0.01	0.02	0.01	0.06	-	0.02	-	0.05	0.00	0.01	0.00
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.05	0.12	0.01	0.01	-	-	0.02	0.11	-0.09
Europe	1.77	1.68	1.86	1.54	1.97	1.90	1.73	1.71	1.67	1.80	1.59	0.21
Pacific	0.00	0.00	0.00	-	-	-	0.01	-	0.02	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.72	0.77	0.87	0.82	0.83	0.81	0.81	0.71	0.11
Europe	0.35	0.33	0.24	0.37	0.27	0.22	0.23	0.23	0.27	0.19	0.36	-0.17
Pacific	0.05	0.04	0.01	0.03	0.02	-	0.01	-	0.03	-	0.06	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.17	0.15	0.22	0.31	0.29	0.35	0.30	0.09	0.21
Europe	0.07	0.10	0.07	0.14	0.02	0.08	0.11	0.08	0.10	0.14	0.20	-0.06
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Oct-07	Nov-07	Dec-07	Year Earlier Dec-06	Year Earlier % change
Crude Oil												
North America	8457	8156	8105	8038	8151	8267	7962	7890	7914	8080	7464	8%
Europe	9792	9771	9767	9353	9738	10078	9892	9620	9866	10188	9783	4%
Pacific	6801	6813	6718	6953	6340	6576	7003	6777	6733	7490	6859	9%
Total OECD	25050	24740	24590	24344	24229	24921	24857	24286	24514	25758	24509	5%
LPG												
North America	18	14	27	16	14	38	41	35	50	37	38	-3%
Europe	248	265	275	287	282	241	291	303	276	293	260	12%
Pacific	527	579	557	565	588	502	572	576	493	643	503	28%
Total OECD	793	858	859	867	884	782	903	914	819	973	802	21%
Naphtha												
North America	115	62	39	33	31	33	60	87	75	20	73	-73%
Europe	273	312	267	271	223	280	295	314	274	297	284	4%
Pacific	746	754	794	838	812	768	758	787	785	705	815	-14%
Total OECD	1133	1128	1100	1141	1066	1081	1114	1187	1133	1021	1172	-13%
Gasoline[3]												
North America	1034	1142	1134	916	1362	1198	1057	1155	1105	912	906	1%
Europe	165	154	194	261	219	129	167	181	179	142	167	-15%
Pacific	102	97	71	76	83	56	71	83	63	67	120	-45%
Total OECD	1301	1393	1399	1254	1663	1383	1295	1420	1348	1120	1194	-6%
Jet & Kerosene												
North America	173	152	183	179	204	205	143	173	152	106	172	-39%
Europe	375	375	367	329	349	387	401	451	346	404	384	5%
Pacific	66	71	41	49	35	37	43	40	33	57	111	-49%
Total OECD	614	598	591	557	588	629	588	663	531	567	667	-15%
Gasoil/Diesel												
North America	143	172	128	130	142	142	100	117	75	106	103	3%
Europe	845	971	778	906	636	739	833	773	772	952	914	4%
Pacific	79	81	94	83	97	90	106	115	117	85	93	-8%
Total OECD	1067	1224	1000	1120	874	971	1038	1005	964	1143	1110	3%
Heavy Fuel Oil												
North America	527	340	323	362	323	286	321	272	384	309	246	26%
Europe	491	476	430	458	420	474	368	307	326	470	545	-14%
Pacific	85	92	91	79	97	92	95	128	81	76	70	8%
Total OECD	1102	908	843	898	840	852	784	707	790	855	861	-1%
Other Products												
North America	1024	1107	1052	1035	1209	1032	932	913	971	914	946	-3%
Europe	781	920	875	866	855	933	845	881	914	744	879	-15%
Pacific	248	243	251	256	207	262	280	243	266	330	247	34%
Total OECD	2052	2270	2178	2157	2271	2227	2057	2037	2151	1987	2072	-4%
Total Products												
North America	3034	2989	2886	2670	3285	2934	2654	2753	2812	2403	2483	-3%
Europe	3177	3473	3185	3377	2984	3183	3199	3208	3086	3301	3434	-4%
Pacific	1852	1918	1899	1947	1918	1808	1925	1972	1838	1963	1959	0%
Total OECD	8063	8380	7971	7994	8187	7925	7779	7932	7736	7667	7877	-3%
Total Oil												
North America	11490	11145	10991	10708	11436	11201	10616	10642	10726	10483	10352	1%
Europe	12969	13243	12953	12730	12722	13261	13091	12827	12952	13489	13217	2%
Pacific	8654	8731	8617	8900	8258	8384	8928	8749	8572	9452	8818	7%
Total OECD	33113	33120	32560	32338	32417	32846	32635	32219	32250	33425	32387	3%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

11 April 2008

HIGHLIGHTS

- **Crude futures** set new records above $110/bbl in early April, driven by tight distillate markets, strong non-OECD imports and a weaker dollar. Refining margins remain extremely volatile, reverting into positive territory in recent weeks following a large US gasoline stock draw, which has tightened regional supplies.

- **Global oil product demand** has been revised down by 310 kb/d in 2008 to 87.2 mb/d following the downgrading of global GDP prospects by the IMF, coupled with a change in FSU methodology and baseline data revisions. By the same token, 2007 demand is up by 140 kb/d over last month's report to 86.0 mb/d. As a result of these divergent shifts, demand growth in 2008 is now expected at almost 1.3 mb/d or 1.5% over 2007.

- **Global oil supply** fell by 100 kb/d in March to 87.3 mb/d, led by lower supplies last month from OPEC, the North Sea and non-OPEC Africa. Non-OPEC supply growth in 2008 is trimmed to 815 kb/d on a broad swathe of adjustments in the Americas, Africa and Europe.

- **OPEC crude supply** fell by 265 kb/d in March to 32.1 mb/d, on field maintenance in UAE, Nigeria and Venezuela. Pipeline/power outages highlighted ongoing risks to production in Iraq and Nigeria amid effective spare capacity of just 2.3 mb/d. Weaker economic growth cuts the 2008 call on OPEC by 0.3 mb/d to 31.6 mb/d.

- **OECD total industry stocks** fell by 48.9 mb in February, to 2,579 mb, offsetting a similar rise in January. The February draw leaves inventories At 53.3 days of forward demand. With preliminary data indicating a build of just 4.1 mb in March, OECD end-1Q08 stocks remain close to end-December levels.

- **Global refinery throughput** weakened in March, as poor margins curbed crude runs in all OECD regions. Estimated 1Q08 global throughput is unchanged at 74.0 mb/d. However, 2Q08 estimates have been cut by 0.2 mb/d to 73.7 mb/d, in line with weaker demand.

Next Issue: 13 May 2008

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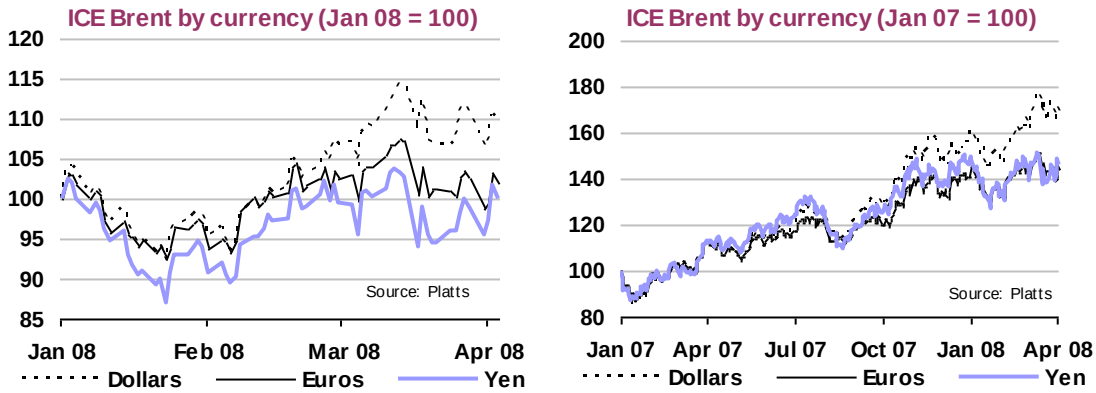
MARKET OVERVIEW

The latest GDP projections from the IMF suggest less robust oil demand growth in the coming months. With the multitude of variables currently at play in the oil market, is it a step too far to infer a weakening of prices?

Year-to-date investment fund inflows have, by some estimates, exceeded $30bn, but in recent weeks these flows have been particularly erratic. Falling open interest in NYMEX light sweet crude (WTI), and a similar trend in non-commercial net longs and derived estimates of index fund inflows raise questions as to the weight of money argument on recent price moves. The impact these flows have had in recent years also remains unclear. An IEA Expert Roundtable in March discussed the many aspects that feed the current oil price. There were vastly different views on the effects of money flows on the oil market. In the IEA's opinion, the limited information available makes it impossible to account meaningfully for the cross-market interactions that routinely take place between different futures exchanges and over-the-counter (OTC) markets. Further, what information there is fails to capture the true split between commercial and non-commercial activity.

However, while the weight of money debate remains open, there is an almost unanimous agreement among analysts that the oil price has recently been compensating for the weakness of the US dollar - indeed, stripping out the currency impact since 2007 shows a much closer fit between oil prices and global balances. But, aside from the weaker dollar, the latest rise in oil prices also coincides with record distillate cracks and strong demand from China and other non-OECD regions - with the market in reality perhaps even tighter due to non-OECD stock changes. This could explain why prices have not declined despite a backdrop of weakening US GDP and lower projected global economic growth.



Given the multitude of variables that form the oil market, the spot price inevitably has a narrow, short-term focus. The future, painted by the latest IMF economic forecast, depicts a deteriorating economic environment this year and next, and has largely contributed to a 460 kb/d reduction in 2008 oil demand *growth*, now seen at 1.3 mb/d. But while the global economy remains a dominant part of the landscape, the supply-side risks - stemming from above-ground and geopolitical issues - also remain critical. A spate of disruptions in recent weeks, pipeline sabotage in Nigeria and Iraq and a strike in Gabon bring these issues to the fore. Individually, none of these are particularly serious, but together they illustrate the potential for downside supply risks.

This report projects April and May oil balances tipping towards a supply surplus. If that sounds familiar, it should. Stocks rose throughout the first half of 2007, but that did not stop WTI rising from $60 to nearly $80/bbl at the same time – as the market correctly anticipated a tight second half of the year. That perhaps explains why, in the face of weakening economic growth, prices continue to remain high: there is concern that projected stockbuilds may not materialise, or may not be high enough to cushion against low spare capacity and geopolitical risks. Faced with evidence of rising stocks and easing distillate tightness, the mid-year situation may be different, but presently neither the data nor market spreads show that is a sure bet.

DEMAND

Summary

- **Global oil product demand** has been significantly revised for both 2007 and 2008. World demand is now estimated at 86.0 mb/d in 2007 (+1.3% or +1.1 mb/d over the previous year and +140 kb/d over last month's report). In 2008, demand is expected to reach 87.2 mb/d (+1.5% or +1.3 mb/d over 2007, and -310 kb/d compared with the last report). These revisions are due to a confluence of factors: firstly and most importantly, a significant downward adjustment to global GDP forecasts, notably in the US, based on the most recent IMF assessment; secondly, the introduction of a new FSU methodology, based on primary rather than apparent demand figures, which results in a higher base; and thirdly, baseline adjustments and revised data submissions.

- **OECD oil product demand** has been lowered by some 320 kb/d to 48.9 mb/d in 2008 (-0.3% or -0.2 mb/d over 2007). The changes result from the IMF's considerable adjustment of its US GDP forecast (from 1.5% to 0.5% in 2008) and from a large downward revision to US January data, which largely offset strong demand for heating and power generation fuels in Europe and the Pacific. Given the virtual stagnation of the US economy and the prevalence of historically high oil prices, US demand is expected to contract by as much as 2% in 2008, to 20.4 mb/d.

Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Americas	30.4	30.4	30.9	30.8	30.6	31.0	31.0	31.2	31.3	31.1	30.6	30.9	31.2	31.2	31.0
Asia/Pacific	25.3	24.2	23.8	24.9	24.5	25.4	24.9	24.4	25.6	25.1	26.4	25.5	25.0	26.4	25.8
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.4	16.0	16.3	15.8	16.1	16.3	16.1
FSU	4.0	3.9	4.1	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.2	4.3	4.2
Middle East	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.8	6.5	6.6	6.8	6.9	7.2	7.0	7.0
World	**85.6**	**83.6**	**84.6**	**85.6**	**84.9**	**86.1**	**85.1**	**85.6**	**87.1**	**86.0**	**87.3**	**86.3**	**86.9**	**88.4**	**87.2**
Annual Chg (%)	0.8	1.1	1.3	1.4	1.2	0.5	1.8	1.2	1.7	1.3	1.5	1.4	1.5	1.5	1.5
Annual Chg (mb/d)	0.7	0.9	1.1	1.2	1.0	0.5	1.5	1.0	1.5	1.1	1.3	1.2	1.3	1.3	1.3
Changes from last month's report (mb/d)	-0.01	0.00	0.04	-0.22	-0.05	0.04	0.17	0.12	0.25	0.14	-0.62	-0.17	-0.26	-0.20	-0.31

- **Non-OECD oil product demand** has been revised up by roughly 150 kb/d to 36.9 mb/d in 2007 (+3.8% or +1.4 mb/d over the previous year) but kept unchanged at 38.3 mb/d in 2008 (+3.9% or 1.4 mb/d). The 2007 revision was almost entirely related to the adoption of the new FSU methodology, which implied adjustments in all quarters. Meanwhile, in 2008, minor downward adjustments in Africa, China, Europe and the Middle East offset upward changes in the FSU, Latin America and Other Asia, due both to stronger than expected monthly submissions and alterations in baseline data.

Global Overview

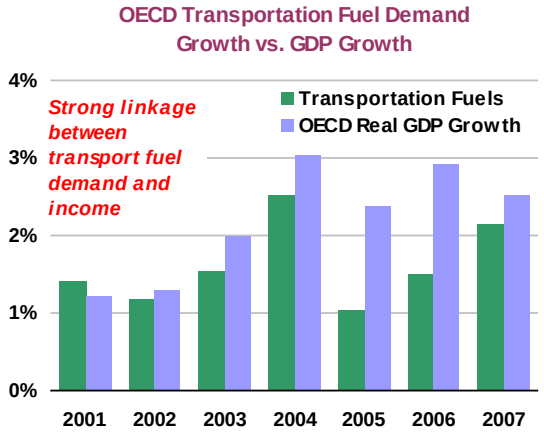
This month's report includes several key adjustments that have noticeably altered both 2007 oil demand levels and the 2008 forecast. Global oil product demand is now estimated at 86.0 mb/d in 2007 (a growth rate of +1.3% or +1.1 mb/d over the previous year) and is expected to reach 87.2 mb/d in 2008 (+1.5% or +1.3 mb/d over 2007). These new figures imply significant revisions versus last month's report, and result from several factors.

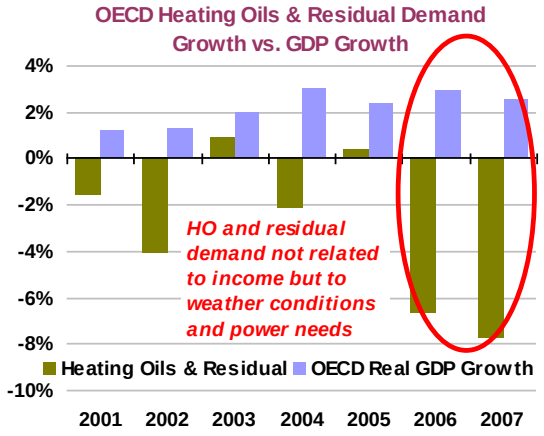
Revisions versus OMR dated 11 March 2008

	2007	2008
Total demand (kb/d)	+140	-310
Relative growth (percentage points)	+0.2	-0.5
Absolute growth (kb/d)	+190	-460

1. **GDP adjustments.** The IMF released the latest edition of its *World Economic Outlook* on 9 April, revising down its previous assessment of global economic growth – upon which this report's econometric demand model is based. This was particularly dramatic in the case of the US (growth in 2008 was cut from 1.5% to 0.5%), but most OECD countries were also adjusted down. More interestingly, although most emerging economies were also revised, such changes were somewhat less pronounced relative to their growth trends: some were slightly down, such as China (from 10.0% to 9.3%), while others were up, such as Brazil (from 4.5% to 4.8%). This suggests that the case for 'decoupling' has some merits (see text box below); for the first time, a sharp US economic downturn is not expected to cause such significant impact in key emerging countries as in the past.
2. **New FSU methodology.** As often highlighted in previous reports, estimating *apparent* FSU demand based on supply and trade data was sub-optimal, notably because of the volatility of trade figures, which often led to large revisions. We have been able, however, to finally obtain reliable *oil demand* data for several key FSU countries, notably Russia, and as such FSU demand has now become the sum of oil use among regional countries. Overall, this new and more detailed methodology indicates that FSU demand grew by 0.9% in 2007 (implying a +150 kb/d revision versus the previous report), and that it should further expand by 1.6% in 2008 (a +70 kb/d revision). This contrasts with implied demand data, which suggested a contraction in demand during 2007 despite buoyant GDP growth.
3. **Baseline adjustments and revised data submissions.** We are integrating new annual non-OECD demand figures for 2006 as they become available, in addition to systematically including revisions to previously submitted data. We have adjusted up both Latin America and Other Asia demand (collectively by +80 kb/d in 2007 and +120 kb/d in 2008), and more significantly, US demand in 1Q08 (-390 kb/d) given a massive revision to weekly estimates in January.

Weaker-than-expected economic growth has the greatest implications for global oil demand. There is the question of OECD demand growth, which has basically been sustained by North America in recent years. As oil prices began their relentless rise in 2004, many observers predicted a significant contraction in OECD oil demand – which did not materialise until late 2007. Such an assessment, however, ignored that OECD oil demand is essentially driven by transportation fuels. These are both highly price inelastic, notably in areas such as North America where public transportation alternatives are limited, and relatively stable in terms of consumption, reflecting the fact that developed economies are mature and that changes in income must be quite large to elicit significant variations in oil demand.

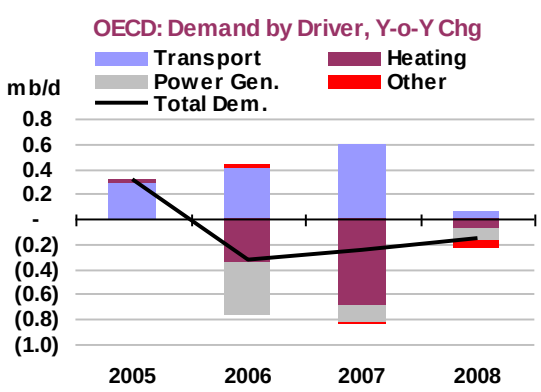


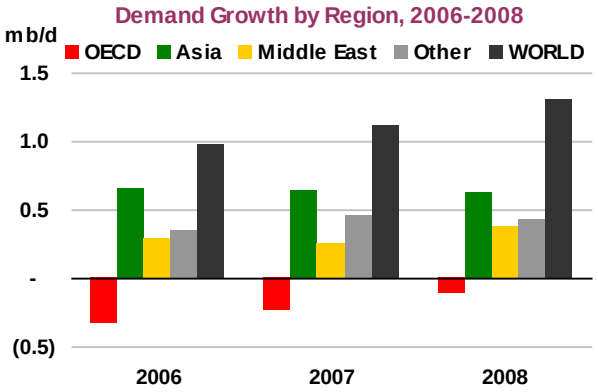


Short-term changes in OECD oil demand tend to reflect weather patterns and power generation needs, which can prompt very large swings in consumption levels. Indeed, the unusually mild winter temperatures observed in the past two years largely explain why OECD oil demand contracted slightly in both 2006 and 2007. In the medium term, by contrast, oil demand is clearly affected by income variations (there is usually a time lag between changes in income and oil demand). The US economic slowdown

began in mid-2007, and gasoline demand has finally started to contract. And yet this decline has been relatively moderate so far, considering that the economic outlook has worsened markedly. This is not to say, however, that a US downturn is inconsequential. As the latest revisions suggest, total oil demand has contracted by more than expected and should continue to fall in the months ahead, as consumers adapt their consumption patterns to the less benign economic circumstances.

Given the weight of US demand, we have adjusted down our 2008 prognosis for OECD North America by 270 kb/d. Elsewhere in the OECD, transportation fuels demand is essentially flat, reflecting the fact that economic conditions appear to be less bleak than in the US, but demand for other types of fuel remains strong. Indeed, oil demand in Europe and the Pacific has largely been supported by heating needs (late heating oil buying in Germany and a strong kerosene rebound in both Japan and Korea) and electricity requirements (residual and direct crude deliveries in Japan as a result of continued nuclear power plant outages). Overall, OECD oil product demand has been revised down by 320 kb/d, compared with the previous report, to 48.9 mb/d in 2008.





By contrast, oil consumption in two key non-OECD areas (the Middle East and Asia, which together account for over 80% of global oil demand growth) is likely to continue expanding apace, largely offsetting marginal declines in other non-OECD regions. In both areas, demand is driven by strong economic momentum and continued urbanisation, industrialisation and population growth, coupled with favourable end-user administered price regimes. This last point is particularly true in the Middle East, where high international oil prices have led to rising incomes (the IMF has actually revised up its GDP forecast for this region), not to mention the fact that energy prices there are among the lowest in the world.

Within Asia, China remains the single most important driver. In this country, the determinants of oil demand are more complex; oil use has indeed risen with income, but at a slightly slower pace. Although the difference can be partly explained by its relatively more efficient oil use, a key aspect behind this dichotomy is China's pricing policy. Capped end-user prices do indeed encourage demand, notably for transportation fuels, by shielding Chinese consumers from the vagaries of the international oil market. However, they also prompt widespread shortages whenever international prices rise sharply, since local refiners find that supplying the domestic market becomes unprofitable. In that sense, pent-up demand in China is arguably significant, only limited by supply constraints, which since last year have become a usual occurrence. Paradoxically, even if economic growth were to slow down slightly and/or if end-user prices were to be liberalised (the main constraint being further inflationary pressures), Chinese oil demand could potentially increase, if only supplies were sufficient to meet such a surge. In the meantime, we have only slightly adjusted down the country's demand in 2008 (-70 kb/d) to account for the 1Q08 weather disruptions and slightly lower economic growth projections, but an Olympics-driven upward revision cannot be discarded.

Decoupled Globalisation?

As the United States slips into a sharp economic slowdown, some observers predict that this will inevitably affect the rest of the world. The argument behind this view is that globalisation has synchronised the world's main economies via trade and financial flows. However, even though a US downturn will likely affect other countries, there is some evidence that the so-called 'decoupling' effect – understood as a more limited impact on developing economies than that observed in the past – is actually taking place. As such, the outlook of global economic activity and oil demand growth is brighter than commonly assumed – a conclusion that is tacitly shared by the IMF, whose 2008 global GDP growth forecast is still a relatively healthy 3.7%, despite the woes of the US economy.

Three key structural factors support the decoupling case: 1) emerging countries trade increasingly among themselves, rather than with developed economies; 2) domestic investment and demand, as opposed to net exports, have become the main driver of economic growth in the largest emerging economies; and 3) the price of commodities – a key export from developing economies – is no longer mainly sustained by demand from rich countries, but mostly by emerging ones, engineering in turn a boom among commodity exporters. China is the exemplary incarnation of these trends. Half of its exports go to other emerging countries, notably Brazil, India and Russia; its domestic consumption and investment (of which almost half is devoted to infrastructure and property) contribute to roughly 80% of nominal GDP growth; its domestic demand is boosted by productivity gains and growing wages; and its insatiable appetite for commodities, ranging from oil to coal and soy, has helped sustain price booms in other emerging (and a few developed) countries.

A protracted US recession is not yet on the horizon, according to the IMF forecast, which still sees low but nonetheless positive US growth in both 2008 and 2009, despite the continuing problems in the country's financial and housing sectors, the fall of the dollar, signs of weakening activity in manufacturing and services, and rising inflationary concerns. Yet the course of the global economy is arguably increasingly dependent upon Chinese developments. What is then the outlook for China's economy? As noted, China's export sector can arguably weather falling US demand, as long as demand elsewhere remains buoyant. This, in turn, is likely to have a supportive effect for other developing economies, particularly primary commodity producers (strong Chinese demand for commodities => higher income in exporting countries => growing demand for Chinese goods => further Chinese demand for commodities).

A bigger uncertainty concerns the Eurozone, which has become China's main trading partner and which is arguably more prone to be affected by a US slowdown, as the IMF predicts. Yet Europe may manage to hold its ground, as long as capital exports from Germany – which is the main engine of the European economy – remain relatively strong. Perhaps more crucially, as long as the yuan remains undervalued vis-à-vis the euro, China's exports to Europe should also remain reasonably buoyant. And even if exports to Europe were to fall dramatically, China's significant foreign currency reserves – resulting from its huge current account surpluses – gives it leeway to conduct a countercyclical fiscal policy if needed.

OECD

According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 0.8% year-on-year in February, with North American losses largely offsetting gains in Europe and the Pacific.

Total OECD Demand by Product
(million barrels per day)

	2006	2007	1Q07	2Q07	3Q07	4Q07	Nov 07	Dec 07	Jan 08*	Latest month vs. Dec 07	Latest month vs. Jan 07
LPG & Ethane	4.78	4.82	5.24	4.64	4.44	4.95	5.00	5.24	5.22	-0.01	-0.11
Naphtha	3.17	3.21	3.38	3.06	3.15	3.24	3.27	3.32	3.26	-0.06	-0.21
Motor Gasoline	14.86	14.90	14.44	15.06	15.28	14.81	14.81	14.74	14.01	-0.74	-0.04
Jet & Kerosene	4.16	4.11	4.35	3.90	3.96	4.22	4.22	4.31	4.36	0.05	-0.04
Gas/Diesel Oil	13.25	13.17	13.50	12.60	12.87	13.70	13.84	13.36	13.42	0.06	0.34
Residual Fuel Oil	4.04	3.93	4.19	3.87	3.76	3.90	3.99	3.90	4.08	0.19	-0.10
Other Products	5.08	4.98	4.58	5.03	5.24	5.05	5.16	4.82	4.70	-0.12	0.19
Total Products	**49.34**	**49.10**	**49.69**	**48.16**	**48.70**	**49.86**	**50.29**	**49.69**	**49.06**	**-0.63**	**0.03**

* Latest official OECD submissions (MOS)

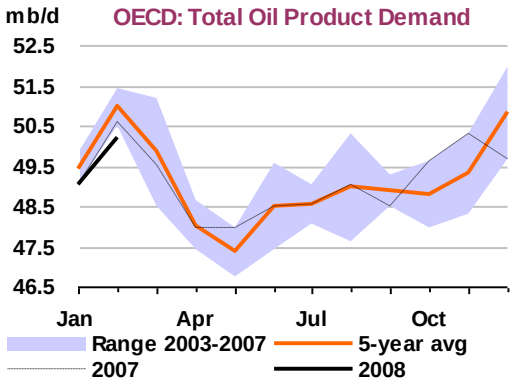
Oil product demand in OECD North America (which includes US Territories) plummeted by 4.1%, dragged down by the US; only gasoline posted marginal gains (+0.1%), given the resilience of Canadian and Mexican demand. In OECD Europe, demand growth (+1.7%) was as expected supported by a rebound of heating oil deliveries, notably in Germany, given somewhat colder weather. Continued strong demand for residual fuel oil and direct crude for power generation in Japan, together with higher deliveries of kerosene in both Japan and Korea following sharply colder temperatures, boosted demand in OECD Pacific (+4.5%).

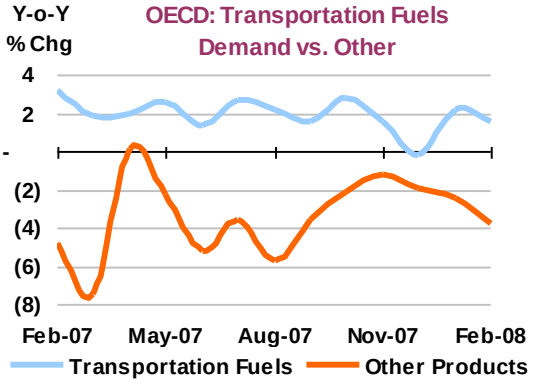
OECD Demand based on Adjusted Preliminary Submissions - February 2008

(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.53**	**0.1**	**1.89**	**-1.6**	**4.19**	**11.4**	**1.29**	**-34.3**	**1.07**	**-27.5**	**6.14**	**-6.16**	**25.11**	**-4.1**
US50	9.00	-0.6	1.66	-2.3	3.64	12.4	0.72	-46.8	0.57	-41.0	4.67	-7.9	20.28	-5.3
Canada	0.71	1.7	0.11	2.9	0.21	1.7	0.41	-9.6	0.16	2.3	0.84	0.9	2.43	-0.6
Mexico	0.76	6.5	0.08	8.2	0.29	7.8	0.13	7.8	0.25	-6.0	0.56	-1.6	2.07	2.8
OECD Europe	**2.32**	**-3.7**	**1.23**	**-0.4**	**4.25**	**3.2**	**2.37**	**13.6**	**1.73**	**-9.8**	**3.69**	**3.5**	**15.59**	**1.7**
Germany	0.45	-2.9	0.19	7.0	0.63	7.3	0.50	34.9	0.17	-11.0	0.62	8.3	2.56	8.3
United Kingdom	0.41	-3.5	0.36	-7.4	0.41	0.7	0.14	-2.0	0.08	-6.3	0.33	-0.4	1.74	-2.8
France	0.20	-3.0	0.14	2.1	0.68	5.4	0.38	6.4	0.10	-13.5	0.46	-4.7	1.97	0.8
Italy	0.27	-5.5	0.07	3.5	0.57	4.0	0.11	2.9	0.26	-30.8	0.38	1.8	1.66	-5.4
Spain	0.14	-5.9	0.11	2.7	0.54	2.1	0.30	17.1	0.21	-1.8	0.37	4.5	1.67	3.8
OECD Pacific	**1.53**	**-3.5**	**1.39**	**7.4**	**1.23**	**-3.4**	**0.63**	**-6.3**	**1.06**	**8.1**	**3.65**	**11.6**	**9.50**	**4.5**
Japan	0.96	-5.2	1.02	7.5	0.62	-5.9	0.51	-3.8	0.62	34.0	2.28	17.0	6.01	8.1
Korea	0.17	-2.6	0.25	10.3	0.26	-7.5	0.12	-15.5	0.40	-16.2	1.15	4.9	2.34	-2.0
Australia	0.35	0.3	0.10	1.8	0.32	5.2	0.00	-36.9	0.02	-3.8	0.20	-2.0	1.00	1.3
OECD Total	**14.38**	**-0.9**	**4.52**	**1.4**	**9.68**	**5.6**	**4.28**	**-9.1**	**3.86**	**-11.8**	**13.48**	**0.8**	**50.19**	**-0.8**

* Including US territories

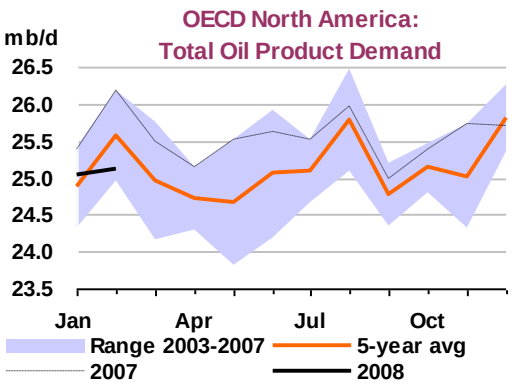


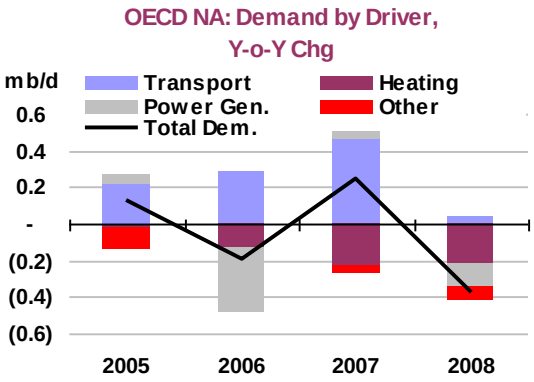


North America

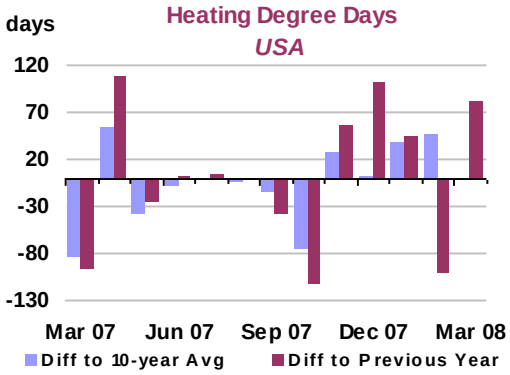
Preliminary data indicate that oil product demand in North America (including US Territories) contracted by 4.1% year-on-year in February, mostly as a result of a general weakness in all product categories in the US. Regional gasoline (+0.1%) and diesel (+11.4%) demand was largely supported by Canadian and Mexican needs. The contraction in deliveries was particularly marked in the case of high-sulphur gasoil (heating oil), which fell by 34.3% (although this is partly related to reclassification issues in the US, since low-sulphur non-road, locomotive and marine gasoil is now counted as diesel) and residual fuel, which plummeted by 27.5%. Given current trends, OECD North American demand is expected to average 25.2 mb/d in 2008 (-1.5% when compared with 2007).

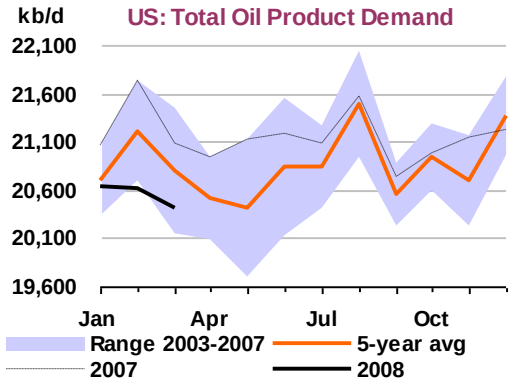
Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 5.3% year-on-year in February. The fall was related to weak demand across the key product categories (gasoline: -0.6%; jet fuel/kerosene: -2.3%, gasoil/diesel: -5.1%; residual fuel oil: -41.0%). To a large extent, this contraction – notably with respect to transportation fuels – reflects a deteriorated economic environment, as the country's marked economic slowdown is compounded by high oil prices.

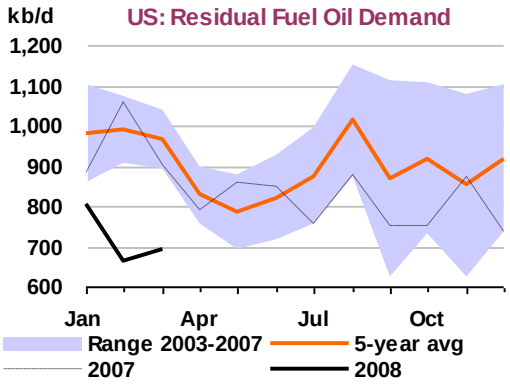




Even though these figures are in line with previous estimates, the significant downward revisions to January demand statistics (660 kb/d) were much larger than expected. Revisions are usual (given the inherent differences in the ways that the US Energy Information Administration collects monthly and weekly data), but they have rarely been so large. Although it could be tempting to attribute January's adjustment to worsening economic conditions, it should be noted that two-thirds come from changes to preliminary weekly estimates for oil products that are mostly related to heating and power needs (high-sulphur gasoil, residual fuel and 'other products', which together account for some 18% of US demand). By contrast, the adjustment to those products that are more sensitive to the level of economic activity (gasoline, jet fuel/kerosene and diesel, which account for 69% of US demand) was relatively limited (that is, relative to the size of US demand and compared with historical revisions). Overall, the revisions may suggest that interfuel substitution in favour of natural gas has been higher than expected, despite relatively cold weather (the number of US heating-degree days in January was both higher than the 10-year average and than in the same month of the previous year). This is particularly true for residual fuel oil, but in the case of propane and distillates it is likely related to a postponement of tank refilling due to high prices.

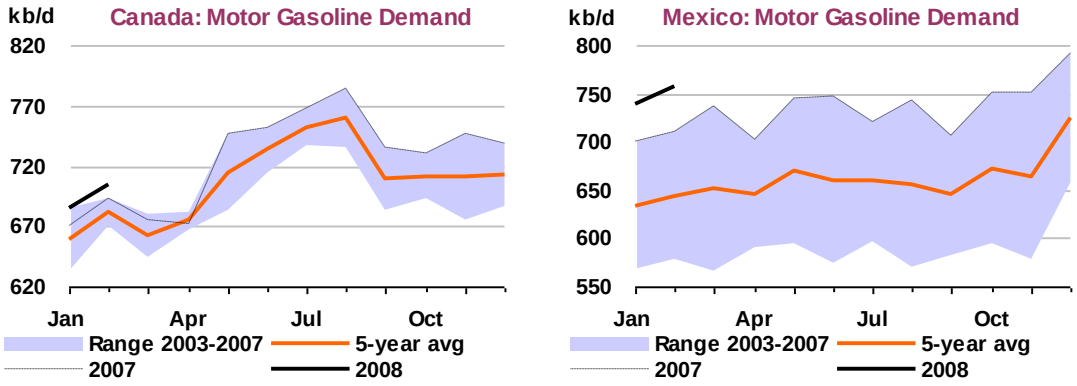






Nevertheless, as expectations that the credit crisis that erupted in mid-2007 risks becoming a prolonged slump take hold, US consumers have begun to adopt a more energy-conscious lifestyle. Consumers are acting on several fronts: 1) reducing discretionary driving (fewer random drives in the countryside and more walking to shops, according to a New York Times online survey); 2) increasing their usage of public transportation, notably in urban areas (according to the American Public Transit Association, mass transit

use increased by more than 2% in 2007, reaching the highest level in half a century); and 3) switching to more efficient vehicles (sales of large SUVs fell by some 25% year-on-year in early 2008, while those of the smallest cars jumped by almost 40%). Admittedly, the fall in pickup sales is partly related to the virtual halt of home construction activity. Nevertheless, the change in vehicle purchasing patterns, if sustained, will have far-reaching consequences in the medium to longer term. Given these developments, we anticipate that gasoline demand will decline in 2008 (-0.9%), for the first time since the mid-seventies. Total US oil product demand, meanwhile, is poised to contract by as much as 2% in 2008, to 20.4 mb/d.



By contrast, transportation fuels demand in **Canada** and **Mexico** continues to roar ahead. In Canada, both gasoline and diesel demand rose by an estimated 1.7% year-on-year in February, according to preliminary data. In Mexico, the rise was even more spectacular: +6.5% and +7.8%. These growth rates are the more remarkable considering that the US economy – the main market for both countries' exports, which account for a big share of their respective GDPs – has markedly slowed down. Arguably, as discussed earlier, the economic resilience of both Mexico and Canada is grounded in two key elements: strong internal demand and high earnings from commodity exports – notably energy. As such, the IMF still sees both countries growing three to four times faster than the US in 2008 – an unprecedented occurrence in the case of Mexico, where the strength of domestic demand is a relatively new feature. Nevertheless, the pace of oil demand growth is both countries will probably be somewhat slower than in recent years.

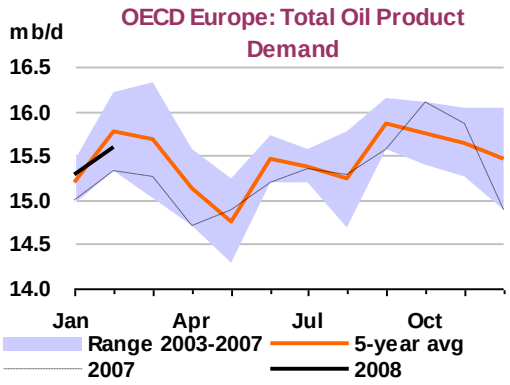
OECD North America Demand by Product
(million barrels per day)

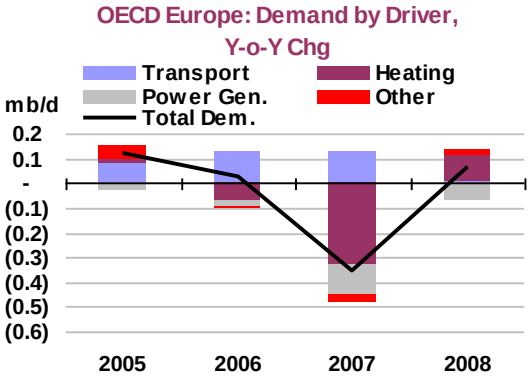
	2006	2007	1Q07	2Q07	3Q07	4Q07	Nov 07	Dec 07	Jan 08*	Latest month vs. Dec 07	Latest month vs. Jan 07
LPG & Ethane	2.87	2.92	3.24	2.75	2.70	2.99	3.02	3.18	3.21	0.03	-0.12
Naphtha	0.44	0.43	0.42	0.45	0.43	0.43	0.43	0.41	0.40	-0.01	-0.04
Motor Gasoline	10.72	10.85	10.53	10.94	11.07	10.85	10.85	10.85	10.34	-0.51	-0.02
Jet & Kerosene	1.91	1.90	1.88	1.89	1.91	1.91	1.93	1.88	1.82	-0.06	-0.07
Gas/Diesel Oil	5.17	5.27	5.48	5.13	5.13	5.34	5.33	5.37	5.29	-0.08	-0.02
Residual Fuel Oil	1.20	1.24	1.38	1.26	1.18	1.16	1.25	1.12	1.20	0.08	-0.12
Other Products	2.99	2.94	2.74	3.02	3.07	2.93	2.92	2.89	2.76	-0.13	0.04
Total Products	**25.31**	**25.55**	**25.67**	**25.43**	**25.49**	**25.60**	**25.73**	**25.71**	**25.03**	**-0.68**	**-0.35**

* Latest official OECD submissions (MOS)

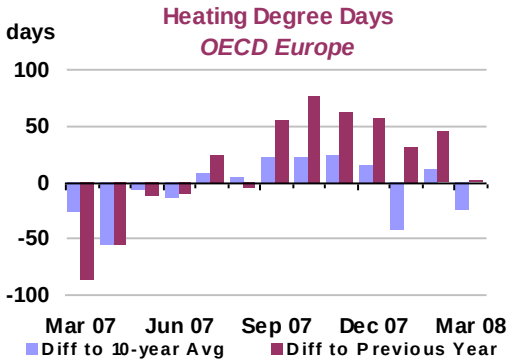
Europe

Preliminary inland delivery data show that European demand rose by 1.7% year-on-year to 15.6 mb/d in February. Across the continent, however, diverging trends emerged, with Germany growing by 8.3%, France remaining relatively flat at +0.8% and Italy and the UK contracting by 5.4% and 2.8%, respectively. Heating oil, in particular, grew strongly (+13.6%) in Europe as a whole, with German demand rebounding by 35%. Diesel demand remains surprisingly robust in the main economies, expanding by 3.2% despite a moderation in economic growth and high end-user prices. Residual fuel oil, meanwhile, was very weak (-9.8%), contracting in all main countries (France, Germany and Italy).

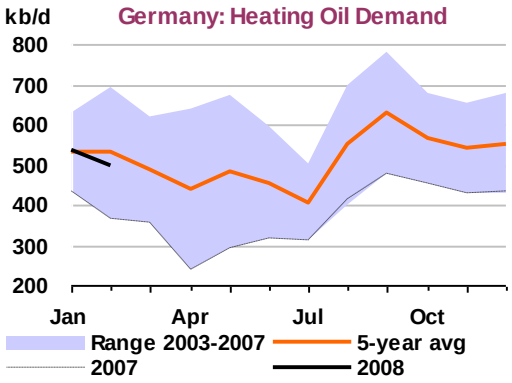


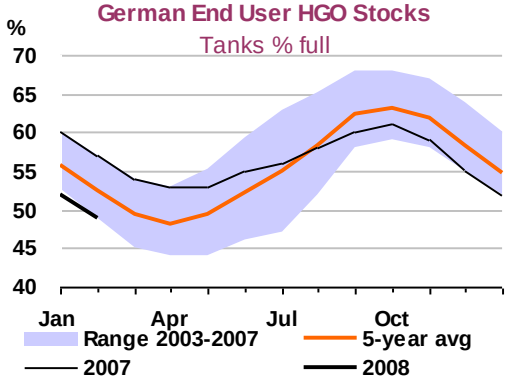


Despite February's poor weather (colder than last year and than the 10-year average), the rebound in demand was less strong than anticipated, leading to a downward revision of about 100 kb/d for the month. This suggests that continued high prices are starting to have a real effect on consumer behaviour. Moreover, the IMF's new economic projections have entailed further downward adjustments to our 2008 oil demand forecasts for several key countries. Although GDP growth in the Eurozone has been only revised down by 0.2% to 1.4%, this masks more substantial revisions. For example, GDP growth projections in Italy and Spain are sharply down (to 0.3% and 1.8%, respectively), those for France and Germany are minimally changed (1.4% each) and that for the UK is slightly up (1.6%). Coupled with weaker-than-expected January final data across most countries (with the major exception of Turkey, as discussed below), oil demand in 2008 has been revised down by 41 kb/d to 15.4 mb/d (+0.4% over 2007).



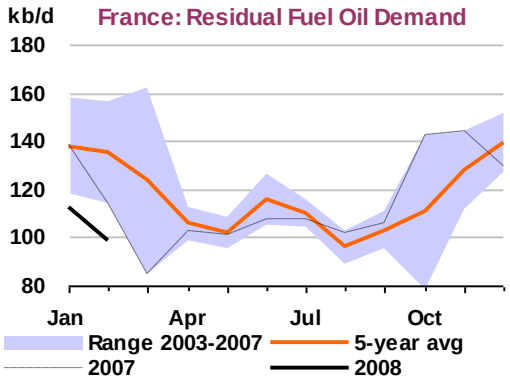
German demand has been adjusted down slightly in both 2007 and 2008, following revisions to the 2007 monthly submissions, as well as for January 2008 (demand for both diesel and heating oil was weaker than expected, leading to a downward adjustment of 50 kb/d for total gasoil). February preliminary data, however, was very much in line with our forecast (+8.3% on a yearly basis). Despite temperatures close to the 10-year average in both February and March, heating oil demand was below the historical average in February, suggesting a consumer response to high prices. Meanwhile, Germany's demand for transportation fuels (particularly diesel) continues to grow at a surprisingly fast pace. Total transportation demand (including motor gasoline, diesel and jet fuel) grew by 9.9% in January and 3.4% in February.

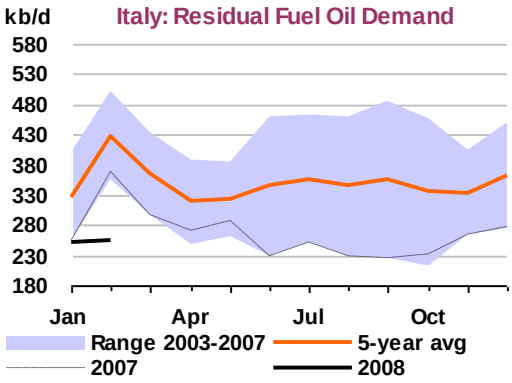




German end-user stocks of heating oil declined in line with seasonal trends in February, falling to 49% of capacity (from 52% by end-January). This represents a stock draw of about 200 kb/d, just slightly below the five-year average. Looking ahead, it remains to be seen whether German consumers will be comfortable with such a low level of stocks, given the increasing tightness in European distillate markets (and subsequent continued pressure on prices), or whether they will choose to resume filling their household tanks. In the latter case, the timing of such purchases would arguably have a significant impact on demand and prices.

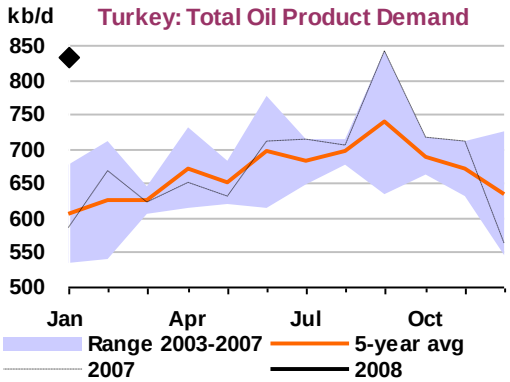
Final January data led to a downward adjustment of 106 kb/d in **French** oil demand, as heating oil, residual fuel oil and LPG turned out to be lower than expected given warmer-than-average temperatures. February preliminary data were also slightly weaker (-26 kb/d). Deliveries of residual fuel oil, in particular, declined by 13.5%, in contrast to the strong growth seen since late 2007. Indeed, higher use of natural gas for power generation largely explains why fuel oil deliveries to both industry and electricity plants declined (-10% and -27%, respectively). Meanwhile, transportation fuel demand grew by a robust 3.2%, (jet: +2.1%; diesel: +5.4%; gasoline: -3.0%), mirroring the German trend. Overall, oil demand has been cut by 25 kb/d in 2008 as a result of revised data and lower GDP growth expectations.





Italian demand fell by 5.4% year-on-year in February, according to preliminary data, mostly as a result of lower fuel oil deliveries (-30.8%) and despite higher electricity demand and lower hydro generation. As in France, natural gas made up the difference (total thermoelectric generation was up by 6% on a yearly basis). Meanwhile, all other product categories bar gasoline and naphtha posted gains, with diesel increasing by 4%, jet by 3.5% and heating oil by 2.9%. As with other countries, our 2008 demand forecast has been adjusted down slightly given lower Italian GPD growth figures.

January **Turkish** demand was revised up by 288 kb/d – an extraordinarily large annual increase (+42.5%). Motor gasoline is reported to have grown by 59.6%, gasoil by 62.6% (the diesel and heating oil breakdown is not available), fuel oil by 45.0%, LPG by 22.7% and 'other products' by 29.8%. Only naphtha demand was weaker (-28.2%). These figures, however, should be treated with caution: a new reporting system was put in place last January, and these very high growth rates could indeed be related to reporting errors. Moreover, oil demand in January 2007 was very weak, further inflating growth rates. It should be noted that December demand was also weak, suggesting that some deliveries may have been delayed until early this year.



Belgium's 4Q07 demand for residual fuel oil, gasoil and naphtha were revised up. Heating oil demand, in particular, recorded strong growth (+24.7% year-on-year) in December – for the first time since January 2007. Fuel oil growth (+20.7%) turned out also to be much stronger than expected, essentially given buoyant bunker demand (which accounts for 85% of total Belgian residual fuel oil demand and which rose by 16% in 2007); by contrast, the use of fuel oil for power generation declined by 13% as natural gas made further inroads. Finally, given persistent anomalies in submitted data for **Norway** (LPG) and **Iceland** (all product categories), we have decided to apply a six-month rolling average to reported figures. Indeed, Norway tends to report sharp fluctuations in LPG use (from virtually none to as much as 150 kb/d), while Iceland reports reflect port deliveries rather than end-user consumption. The rolling average smoothes the series and gives a better sense of actual demand for both countries.

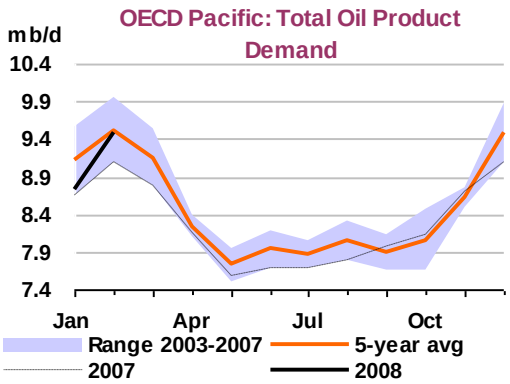
OECD Europe Demand by Product
(million barrels per day)

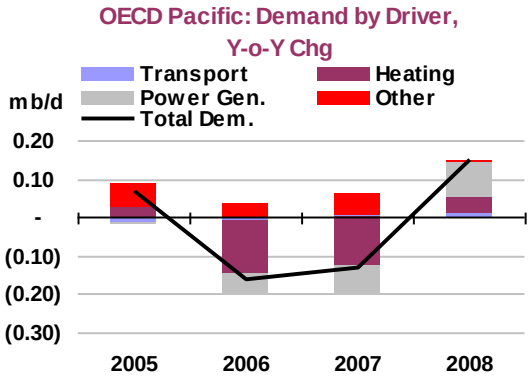
	2006	2007	1Q07	2Q07	3Q07	4Q07	Nov 07	Dec 07	Jan 08*	Latest month vs. Dec 07	Latest month vs. Jan 07
LPG & Ethane	1.00	0.97	1.03	0.97	0.88	1.00	1.04	1.03	1.07	0.04	0.05
Naphtha	1.12	1.12	1.21	1.05	1.08	1.14	1.13	1.16	1.11	-0.05	-0.13
Motor Gasoline	2.57	2.49	2.38	2.58	2.58	2.40	2.40	2.31	2.23	-0.08	-0.01
Jet & Kerosene	1.27	1.29	1.22	1.28	1.39	1.28	1.26	1.22	1.23	0.01	0.00
Gas/Diesel Oil	6.25	6.12	6.17	5.73	6.07	6.50	6.61	6.16	6.46	0.31	0.37
Residual Fuel Oil	1.86	1.74	1.83	1.71	1.68	1.74	1.77	1.72	1.76	0.04	-0.09
Other Products	1.57	1.55	1.35	1.60	1.69	1.54	1.66	1.28	1.42	0.13	0.10
Total Products	**15.63**	**15.28**	**15.19**	**14.93**	**15.39**	**15.61**	**15.86**	**14.88**	**15.28**	**0.41**	**0.28**

* Latest official OECD submissions (MOS)

Pacific

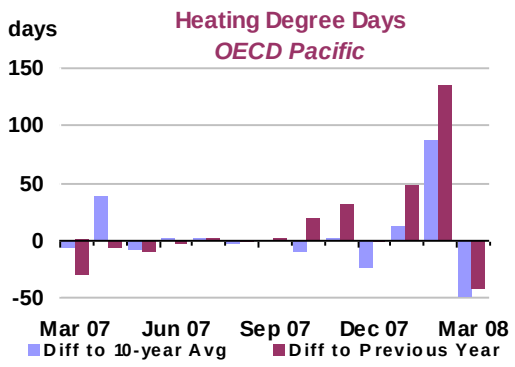
February preliminary data indicate that oil product demand in the Pacific jumped by 4.5% year-on-year. Demand was largely supported by strong consumption of jet fuel/kerosene for heating in both Japan and Korea, and by fuel oil and direct crude for power generation in Japan. Temperatures were indeed sharply colder in February (the number of heating degrees was 87 higher than the 10-year average and 135 higher than in the same month of the previous year). Given the boost provided by this cold spell, OECD Pacific oil demand is slightly revised up, when compared with last month's report, at 8.4 mb/d in 2008 (+1.8% on a yearly basis).

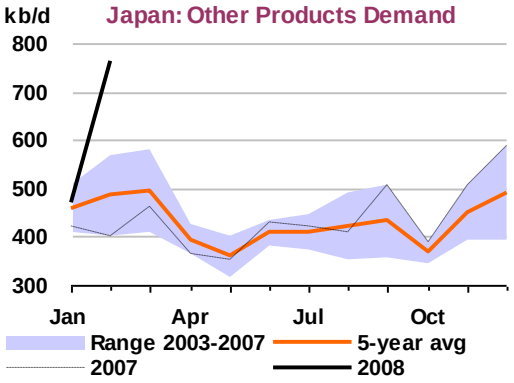




According to preliminary data, oil product demand in **Japan** – which accounts for about two-thirds of OECD Pacific's total – soared by 8.1% year-on-year in February, driven by much colder-than-normal temperatures. Jet fuel/kerosene demand (used as a heating fuel) rose by 7.5% year-on-year, while fuel oil and direct crude for power generation (included in 'other products', which rose by an unprecedented 89.3% on a yearly basis). This reflects the heavy toll of the nuclear power outages that have plagued the country since last year – the average utilisation rate of nuclear power generation stood at roughly 53% in March, against 71% in the same month of 2007. Given that Japan's largest nuclear power plant – Tepco's

Kashiwazaki-Kariwa – is poised to remain shut at least until March 2009, if not longer, oil demand is expected to reach 5.1 mb/d (+1.7%) in 2008, reversing the declining trend observed in the past years.

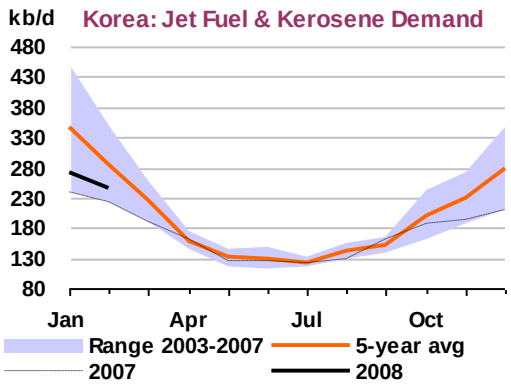




It should be noted, however, that this forecast does not yet take into account the effect of the removal of Japan's gasoline tax. The so-called Special Taxation Measure, which had been levied in response to the oil price shocks of the 1970s on a 'temporary' basis to fund a road-building programme, expired on 31 March. The opposition Democratic Party of Japan (DPJ), which holds a majority in the upper house of parliament, refused to vote in favour of what, until now, had been a customary two-year renewal, arguing that the proceeds have been spent wastefully by local and central government officials. As such, Japan's tax burden has shrunk from being the sixth-lowest among OECD countries to become the fourth-lowest, higher only than the taxes prevailing in Mexico, the US and New Zealand (in that order). In theory, were retailers to pass on the tax cut in its entirety, regular gasoline prices would fall by about 20%. In practice, at the time of writing, retail prices have fallen by about 12%.

At this point, given that there is no precedent for such a sharp drop in gasoline prices, it is highly difficult to forecast exactly how gasoline demand may evolve (it should also be noted that it will take at least two weeks to clear stocks that had been delivered to retailers at the tax-inclusive ex-refinery price). Indeed, it remains to be seen whether the tax removal, if not reversed, offsets the structural decline in Japanese gasoline demand. Some observers reckon that April's demand could be some 5-10% higher than previously expected. So far, there have been reports of long queues outside service stations. The real test, however, will take place in July and August – the peak of the country's summer driving season. Over the next few weeks, the outlook should be clearer and we may reassess our Japanese gasoline demand prognosis for 2008 if warranted.

In **Korea**, preliminary data indicate that total oil product demand contracted by 2.0% year-on-year in February. Although both LPG and jet fuel/kerosene demand jumped by 14.1% and 10.3%, respectively, on the back of freezing temperatures, this failed to offset losses in other product categories, notably naphtha (-3.8%), which accounts for over a third of total Korean demand. Meanwhile, the 2008 outlook remains largely unchanged at 2.2 mb/d in 2008 (+1.8% over 2007).



Only a few weeks after decreeing a 10% temporary reduction in oil product taxes, the new government of President Lee Myung-Bak decided to cut tariffs on imported oil products and petrochemicals. The move, intended to further reduce the burden of high prices, became effective on 1 April. Import tariffs on gasoline, kerosene, diesel and residual have fallen from 3% to 1%, while those on petrochemical products

have been cut from roughly 5% to 4%. By contrast, the tariffs on crude oil, LNG, LPG and naphtha remain unchanged. Crude import tariffs were reduced from 3% to 1% in early 2004; last January, meanwhile, the duties on the other products were also sharply reduced (LNG: from 3% to 1%; LPG: from 3% to 1.5%; naphtha: from 3% to none). However, some local players contest the effectiveness of the measure, at least for some products. Indeed, since July 2007, no gasoline has been imported into South Korea; the country's needs have been met by local refiners. Meanwhile, imports of kerosene, diesel and residual account for less than 1% of the total demand for these products. Only petrochemical demand is likely to rebound given cheaper imports.

OECD Pacific Demand by Product
(million barrels per day)

	2006	2007	1Q07	2Q07	3Q07	4Q07	Nov 07	Dec 07	Jan 08*	Latest month vs. Dec 07	Latest month vs. Jan 07
LPG & Ethane	0.92	0.93	0.97	0.92	0.86	0.95	0.94	1.02	0.94	-0.09	-0.04
Naphtha	1.60	1.65	1.75	1.57	1.63	1.67	1.71	1.76	1.76	0.00	-0.04
Motor Gasoline	1.57	1.57	1.53	1.54	1.63	1.57	1.55	1.57	1.43	-0.15	-0.01
Jet & Kerosene	0.98	0.91	1.25	0.73	0.65	1.03	1.03	1.21	1.31	0.09	0.03
Gas/Diesel Oil	1.83	1.78	1.85	1.75	1.67	1.86	1.90	1.83	1.67	-0.16	0.00
Residual Fuel Oil	0.98	0.94	0.99	0.89	0.90	0.99	0.97	1.05	1.12	0.07	0.11
Other Products	0.52	0.49	0.49	0.41	0.48	0.58	0.59	0.64	0.52	-0.12	0.05
Total Products	**8.40**	**8.27**	**8.83**	**7.80**	**7.81**	**8.64**	**8.70**	**9.10**	**8.74**	**-0.36**	**0.10**

* Latest official OECD submissions (MOS)

Non-OECD

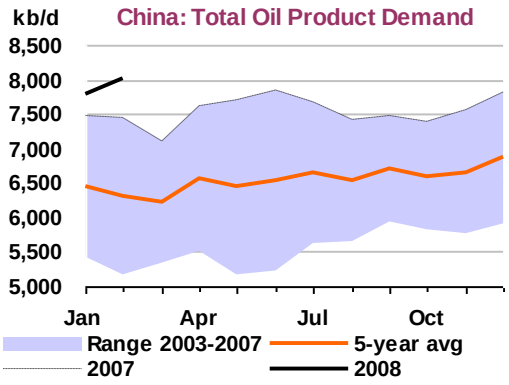
China

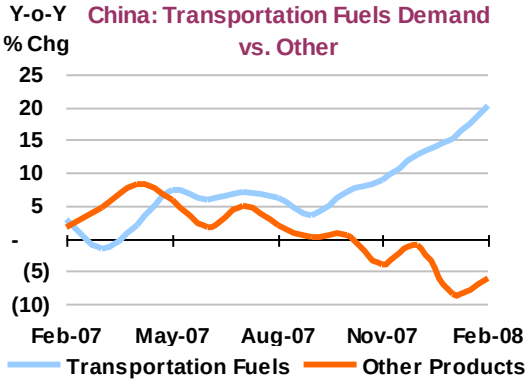
Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) rose by an estimated 7.8% year-on-year in February, a much higher pace than previously estimated (+5.3% in last month's report). Growth was sustained by significant gains in transportation fuels demand: gasoline rose by 22.8%, gasoil by 8.3% and jet fuel/kerosene by 3.5%. Meanwhile, January figures were revised down following the release of refining data for that month; as runs were some 150 kb/d lower than anticipated, apparent demand in January increased by about 4.2%, instead of a previous estimate of 6.1%.

These strong figures are indicative of the importance of the Lunar New Year holiday – which generally is the only opportunity for millions of migrant workers from the country's southern industrial heartland to return home for a few days – despite the severe weather conditions that wrought havoc to infrastructure and grounded travellers across the country from late January to mid-February. The surge in demand was met by higher refinery runs (+3.1% over January) and by steeper net imports of both crude (+359 kb/d versus the previous month) and products (+30 kb/d). Net gasoil imports reached yet another record high at 210 kb/d, and perhaps more significantly, net gasoline exports sharply fell for the second month in a row to about 10 kb/d – compared with roughly 100 kb/d on average during 2007. Given the prevailing high cracks for gasoline and gasoil, both PetroChina and Sinopec have reportedly applied for an exemption of the product import tax (although it remains to be seen whether the government will oblige, since it cut customs duty on gasoline, gasoil and jet fuel last January).

It is worth noting that runs by the larger independent refineries were slightly higher in February (about +2.9% month-on-month, according to our estimates), suggesting continued access to subsidised crude provided by state-owned Sinopec and PetroChina. By contrast, most 'teapot' refineries continue to be squeezed out of the market: residual fuel oil demand – their feedstock of choice – contracted by an estimated 6.8% year-on-year in February, for the seventh month in a row. Since mid-March, however, and despite higher refinery runs (the majors are reportedly running at full capacity, presumably because of strong government pressure), PetroChina and Sinopec have interrupted fuel deliveries to independent dealers and even to some of their own flagged outlets in several key eastern cities (Beijing, Tianjin and Shanghai). Since then, events have unfolded according an already well-honed script: a) gasoil shortages

and rationing at service stations have spread to other regions, notably northern and southern China; b) there have been renewed rumours of an impending hike in retail prices; c) officials have strenuously denied that end-user prices will be altered; and d) the oil majors have claimed that they are committed to supply the market and that shortages are variously due to refinery maintenance, stock rebuilding, transportation bottlenecks and hoarding by independent players.





China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	656	-33	-13	-4.6	-2.0
Naphtha	756	812	825	56	13	7.5	1.6
Motor Gasoline	1,221	1,257	1,349	36	92	2.9	7.3
Jet & Kerosene	259	280	302	20	23	7.8	8.1
Gas/Diesel Oil	2,415	2,576	2,832	161	256	6.7	9.9
Residual Fuel Oil	791	744	711	-48	-33	-6.0	-4.4
Other Products	1,068	1,204	1,218	136	14	12.7	1.2
Total Products	**7,213**	**7,542**	**7,893**	**329**	**352**	**4.6**	**4.7**

As in previous episodes, the structural roots of these recurrent crises – capped end-user prices – have barely been cited. As the gap between domestic and international prices widens, state-owned companies are tempted to cut their losses by reducing domestic deliveries (until forced by the government to meet domestic demand regardless of the cost), while independent refiners and dealers are encouraged to hoard supplies with the expectation of cashing in if retail prices are raised. (Interestingly, the government decided in the end to compensate Sinopec for its losses; the company has been granted a $1.74 billion subsidy covering 2007 and 1Q08.) More crucially, the shortages may probably worsen in the short term, as China is on the verge of entering its spring farming season, which generally signals a significant surge of gasoil demand (normally met by off-spec product from teapot refineries). Perhaps anticipating this unwelcome eventuality, the government is reportedly considering slashing the VAT on crude oil imports from the current 17% to as little as 4%, in order to provide some relief to the majors and boost independent production – a second-best option to the removal of retail price caps.

A Chinese Riddle: Where Will Oil Demand Head To In 2008?

Looking ahead, forecasting China's 2008 demand has become a particularly difficult and perilous exercise, as it will be subject to both bullish and bearish forces, at least until the third quarter.

1. The full consequences of the 1Q08 severe winter weather disruptions and power cuts are yet to be ascertained. As noted, February's strong preliminary data essentially offset January downward revisions, leaving quarterly estimates largely unchanged – but this may be reappraised as detailed February data are released (given the lunar New Year holidays, the average of January and February data generally provides a better idea of demand trends). In any case, as we have previously argued, further disruptions to coal supplies could well entail a surge of oil-fired power generation, particularly if the summer months are hot. At the moment, independent oil-fired power generators are reportedly operating at full capacity in the southern Guangdong province, which was severely affected by the weather emergency.
2. The renewed wave of gasoil shortages suggests that pent-up demand remains significant. As noted earlier, even if end-user prices were liberalised (an unlikely occurrence at this point), Chinese oil demand would probably rise sharply as long as supplies proved to be sufficient. In the meantime, domestic needs will likely continue to depend on a high level of imports, both of crude (particularly if the VAT is cut) and products (notably of diesel).
3. There is talk of closing down industrial sites around Beijing and Shenyang (the capital of the northern Liaoning province and a co-host city) a month ahead of the Olympics, which are scheduled to begin on 8 August, in order to improve air quality. This may happen in the case of small and medium factories with poor environmental standards, in addition to coal-fired cement factories west of Beijing, which generate much of the city's pollution. However, it is highly unlikely that local refiners will be shut down, given the country's product supply constraints, and coal-fired power generators – there are simply no alternatives to provide electricity to the capital, which will be crowded with tourists during a hot summer. (Most local refineries, though, are reportedly reasonably well equipped in terms of pollution controls; in that sense, the net reduction in pollution would be minimal if they were actually shut down.)
4. The Games themselves will lead to a surge of transportation fuels demand as tourists, spectators and athletes fly into the country and travel to the different venues and around China. Moreover, it remains to be seen whether the government will be successful in encouraging Beijing residents to leave their cars at home to prevent excessive congestion, as has been reported.
5. There is a significant degree of uncertainty regarding the country's economic activity. In the past, China has confounded critics by growing much faster than forecast by major institutions.

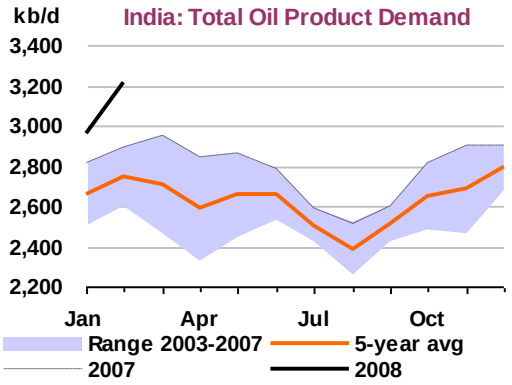
In the meantime, our 2008 forecast has been minimally revised down to 7.9 mb/d (+4.7% year-on-year), since 1Q08 demand could potentially be lower than expected given the weather emergencies, lower GDP projections and the current shortages. However, as the issues raised above become clearer, we may have to revisit this prognosis again, particularly for the second half of the year.

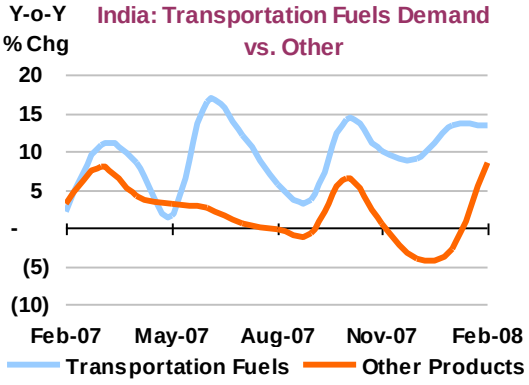
Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – soared by 10.9% year-on-year in February, the highest pace since November 2006. All product categories registered significant gains, but it should be noted that transportation fuels – gasoline, jet fuel/kerosene and gasoil sales – jumped collectively by 13.4% year-on-year, while the rest of the product demand matrix rose by 'only' 8.4%. As such, we have slightly revised up our 2008 forecast to 2.9 mb/d (+4.8%).

A major factor supporting the strength of Indian demand, aside from the country's buoyant economic growth (forecast by the IMF at +7.9% this year, only slightly down from previous assessments), is the policy of capping retail fuel prices far below international levels. In this sense, India follows China's footsteps – and the consequences are similar: a squeeze of the domestic refining and marketing sector, which has become increasingly unprofitable as international oil prices continue to rise. However, as opposed to China, India has big private players that are not compensated for their mounting domestic losses (only state-owned companies qualify). Last month's timid end-user price increases were seemingly

not enough: in late March Reliance Industries, one of the country's largest private holdings, announced it will shut down in April the 900 service stations it directly controls and instead focus entirely on exporting oil products (however, some other 500 Reliance-flagged outlets, independently-owned, will continue to be supplied if they choose to carry on with their business).





The government is thus facing a difficult dilemma. On the one hand, maintaining capped prices is likely to lead to further closures of private outlets (totalling some 2,500 before Reliance's shut-down announcement) and may also increase the annual subsidy bill (currently $2.3 billion), since state-owned companies will have to hike imports to avoid supply shortages. On the other hand, freeing prices would probably result in an inflationary spike and, ultimately, would be politically unpopular. Furthermore, given India's rising income from its large agricultural exports, providing subsidies on fuel and other inputs effectively stimulates overall growth.

Reassessing Former Soviet Union Demand

Following a careful and lengthy review of available oil product data sources for the fifteen countries – Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan – that are grouped under the 'Former Soviet Union' regional category (FSU), we have decided to implement a major methodological change in the way we estimate the region's demand. As of this report, FSU demand will be the sum of actual inland deliveries and end-user demand in each of these countries.

Until now, FSU apparent demand was defined as domestic crude production minus net exports of crude and oil products. However, this methodology often resulted in substantial demand swings, mostly because of large trade data revisions – but not for reasons intrinsically related to internal consumption patterns. Our FSU demand estimates for 2007, in particular, were counter-intuitive: given high export data, demand appeared to have sharply contracted while the region's economy expanded by 8.5% in that year, according to the IMF. A change in inventories could arguably explain such divergence; unfortunately, however, stock figures for the region are unavailable. Moreover, the use of aggregate regional trade data made it impossible to establish of a proper oil product and country breakdown, nor did it allow a meaningful analysis of regional trends.

Our new product- and country-based methodology draws from a variety of sources. First, we have revised our historical series according to the *Annual Statistics of Non-Member Countries*, 2007 edition (commonly referred to as the 'Green Book'), which includes annual data up until 2005, by country and product. This compilation is the result of extensive work undertaken by the IEA's Energy Statistics Division in cooperation with national administrations and statistical agencies across the region. It should be noted, though, that Green Book naphtha data for Russia has been adjusted in this report, as the country's statistics do not currently include petrochemical feedstocks. Second, for 2006 and beyond, we use data from consultancies, the *Joint Oil Data Initiative (JODI)* database, trade press and other market reports. For Russia, which accounts for 70% of total FSU demand, data are being provided by Petromarket Research Group Ltd, a Moscow-based consultancy.

Reassessing Former Soviet Union Demand (continued)

To sum up, we now have detailed product demand until February 2008 on a product-by-product basis for Azerbaijan, Latvia, Lithuania, and Russia. These countries account for roughly 75% of total estimated FSU demand. We may eventually add other countries to the pool: we are in the process of assessing the quality of monthly Estonian and Kazakh data, and we are conducting further research on Belarus and Ukraine. The change in methodology has resulted in historical and current revisions, as detailed in the table. As such, the region's total oil product demand is now estimated at 4.1 mb/d in 2007 (+0.9% year-on-year), and is expected to reach 4.2 mb/d in 2008 (+1.6%) on the back of strong Russian demand.

Former Soviet Union: Oil Product Demand (kb/d)*

	2001	2002	2003	2004	2005	2006	2007	2008
Former Soviet Union	**3,804**	**3,751**	**3,826**	**3,882**	**3,902**	**4,062**	**4,097**	**4,162**
Armenia	7	7	7	8	9	10	11	12
Azerbaijan	81	76	92	90	110	100	99	102
Belarus	145	146	147	146	147	155	160	164
Estonia	23	23	23	25	25	27	28	29
Georgia	13	13	13	13	17	19	21	23
Kazakhstan	179	196	187	187	199	211	220	228
Kyrgyzstan	9	8	10	12	13	14	15	16
Latvia	32	32	33	34	36	37	40	42
Lithuania	53	53	50	55	59	58	61	63
Moldova	11	12	13	14	14	15	16	17
Russia	2,732	2,662	2,700	2,754	2,742	2,870	2,867	2,893
Tajikistan	25	25	27	29	32	34	37	40
Turmenistan	81	83	95	91	93	96	98	101
Ukraine	278	284	282	284	291	300	308	315
Uzbekistan	134	130	147	138	114	115	116	117
Annual FSU Growth	**0.2%**	**-1.4%**	**2.0%**	**1.5%**	**0.5%**	**4.1%**	**0.9%**	**1.6%**
Revisions (kb/d)	51	208	152	(16)	(53)	(66)	147	70

** Sources: IEA's Annual Statistics of Non-Member Countries, JODI, Petromarket RG, IEA estimates*

Admittedly, there is still much work to be done regarding the coverage and quality of national oil statistics. Yet we believe that this methodological change will contribute to enhancing the understanding of this key region. After all, FSU demand accounts for almost 5% of global oil consumption – Russia alone is the fourth-largest oil consumer after the US, China and Japan.

SUPPLY

Summary

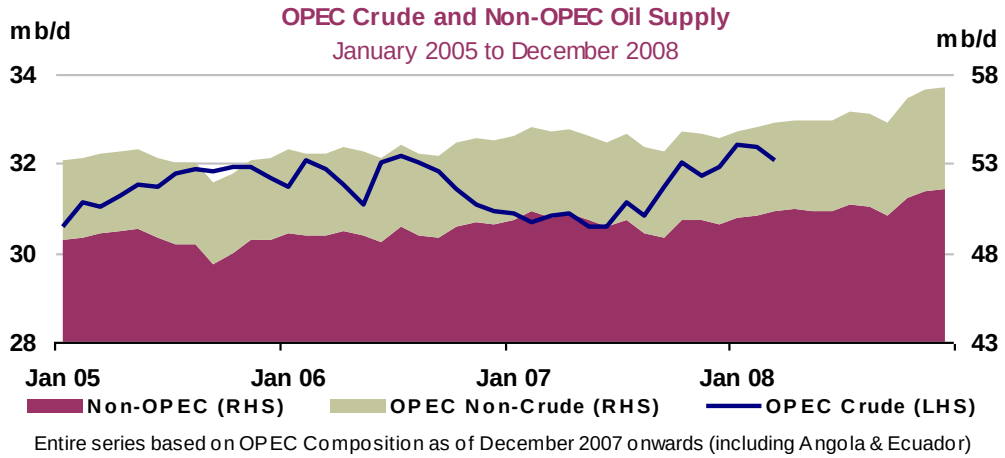
- **Global oil supply** is estimated to have fallen by 100 kb/d in March from February, to 87.3 mb/d. Month-on-month supplies from OPEC, the North Sea and Africa declined, with main increases from North America, China and Latin America. However, global supply growth has rebounded, rising in excess of 1 mb/d for 4Q07 and 1Q08, after three prievious quarters of near-static or declining supply.

- **Non-OPEC production** in March gained 165 kb/d to average 50.3 mb/d, after latest January and February data came in 0.2-0.3 mb/d below preliminary indications. Except for a temporary surge to 50.6 mb/d in July, non-OPEC production will remain constrained until the fourth quarter as seasonal outages and maintenance limit output. A sharp rise to 51.4 mb/d is expected for 4Q08 as field maintenance draws to a close and as new project start-ups, amounting to 1 mb/d in total, take effect.

- **Non-OPEC supply growth in 2008** is trimmed to 815 kb/d, nonetheless some 50% above 2006 and 2007 levels and the strongest since 2004. The FSU, Asia Pacific and biofuels drive 2008 growth, with more modest contributions also from Latin America and Africa. However, expectations for Sudan, Canada, Colombia, Mexico, Kazakhstan, the UK and Brazil are scaled back after weak recent performance. Project slippage remains a key uncertainty for 2008, notably given heavy post-June start-ups. OPEC gas liquids growth, incremental to non-OPEC levels, is revised up to 385 kb/d for a 2008 total of 5.2 mb/d.

- **OPEC crude supply in March** came to 32.1 mb/d, a drop of 265 kb/d from upwardly-revised February levels. February supply from Iraq, Angola and Nigeria was a combined 200 kb/d higher than earlier estimates. In March, Nigeria and Iraq saw supply hit by insurgent-related attacks, with UAE, Nigerian and Venezuelan supply also trimmed by maintenance. Higher Iranian supply is estimated to have provided a partial offset. Effective spare capacity on a wellhead basis came to 2.3 mb/d for March.

- **The call on OPEC crude and stock change** (including Angola and Ecuador) has been cut by 0.3 mb/d on average for 2008, with a new midpoint call of 31.6 mb/d. Revisions centre on substantial adjustments to OECD demand data following latest IMF economic forecasts. OPEC 1Q production of 32.3 mb/d came in close to the observed 1Q call, while the 2Q call drops seasonally by some 1.2 mb/d.



All world oil supply figures for March discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary March supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC crude supply in March averaged 32.1 mb/d, around 265 kb/d lower than upwardly-revised February levels. February supply from Iraq, Angola, UAE and Nigeria was a combined 260 kb/d higher than earlier estimates, with evidence of higher refinery throughputs in the case of Iraq and Nigeria (supply estimates comprise the sum of exports and local crude use for these two producers). In March however, both Nigeria and Iraq saw supply hit again by insurgent-related attacks, with the UAE, Nigerian and Venezuelan supply also trimmed by oil field and processing facility maintenance. Higher Iranian supply is estimated to have provided a partial offset in March. Effective OPEC spare capacity on a wellhead basis came to 2.3 mb/d last month, concentrated in Saudi Arabia and UAE.

OPEC officials in March stressed what they see as adequate crude supply, and reiterated their view that current high prices derive from dollar devaluation, refinery upgrading shortages and geopolitical risks. Ministers generally played down the likelihood of any formal meeting to discuss output policy at the International Energy Forum meeting in Rome on 20-22 April. The next ordinary OPEC Ministerial meeting is scheduled for 9 September in Vienna.

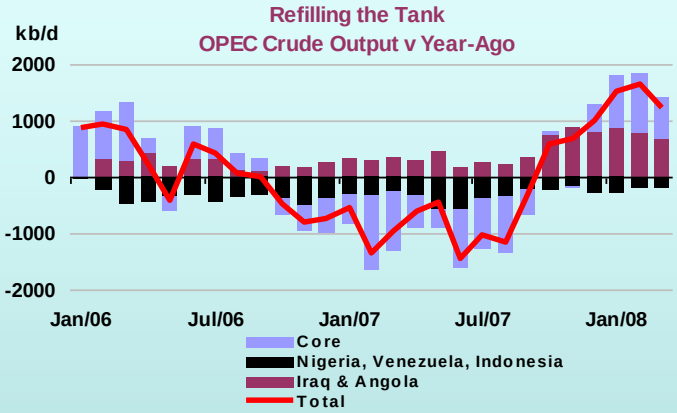
OPEC Crude Production[1]
(million barrels per day)

	Jan 2008 Supply	Feb 2008 Supply	Mar 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Mar 2008 Supply	Capacity end 2008	Current Target	Jan-Mar Supply vs. Current Target
Algeria	1.40	1.38	1.38	1.40	0.02	1.42	1.36	102%
Indonesia	0.83	0.87	0.87	0.88	0.01	0.84	0.87	99%
Iran	4.10	3.95	4.02	4.02	0.00	4.02	3.82	105%
Kuwait[3]	2.57	2.58	2.59	2.62	0.03	2.66	2.53	102%
Libya	1.77	1.76	1.76	1.82	0.06	1.84	1.71	103%
Nigeria[4]	2.06	2.06	1.95	2.47	0.52	2.49	2.16	94%
Qatar	0.85	0.83	0.83	0.90	0.07	0.98	0.83	101%
Saudi Arabia[3]	9.15	9.10	9.10	10.90	1.80	11.25	8.94	102%
UAE	2.67	2.66	2.52	2.85	0.34	2.85	2.57	102%
Venezuela[5]	2.44	2.41	2.32	2.50	0.19	2.40	2.47	97%
OPEC-10	**27.82**	**27.58**	**27.33**	**30.35**	**3.01**	**30.74**	**27.25**	**101%**
Angola[1]	1.80	1.82	1.83	1.83	0.00	2.12	1.90	95%
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52	96%
OPEC-12	**30.12**	**29.90**	**29.66**	**32.67**	**3.01**	**33.36**	**29.67**	**101%**
Iraq	2.30	2.45	2.43	2.45	0.03	2.42		
Total OPEC	**32.41**	**32.35**	**32.08**	**35.12**	**3.04**	**35.78**		
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.30)*			

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 445 kb/d in March.

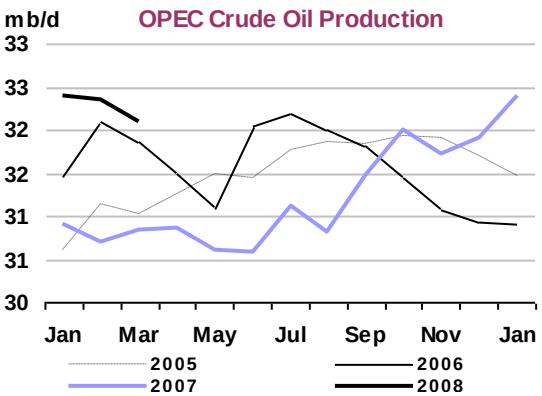
Refilling the Tank

Last November we differentiated OPEC production trends on the basis that key producers appeared set on a policy of drawing down stocks from the perceived inflated levels of 2006. We have extended the analysis now through to March 2008, plotting year-on-year growth in supply from different constituencies within OPEC (excluding Ecuador) to see if anything has changed. Key producers since November appear to have loosened the taps once again, allowing stock cover to rise. With producers now apparently targeting inventories rather than prices, actual OPEC 2Q output will provide clues as to OPEC's view of what constitute balanced stocks against a backdrop of rising demand and low spare capacity.

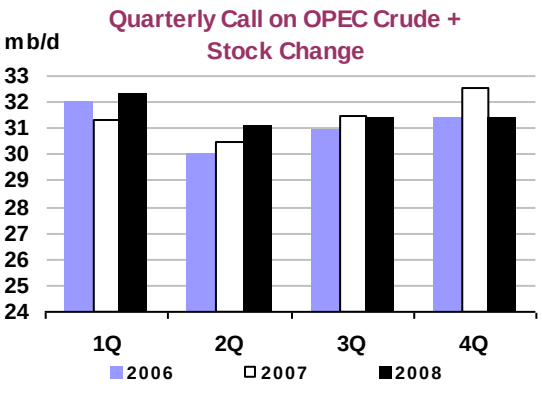


We previously noted sustained annual production growth from Iraq and Angola, something that has persisted through March, despite late-March's southern Iraqi export disruption. Mature field decline and unscheduled stoppages impede supply from Venezuela, Indonesia and Nigeria, with output persistently lagging year-earlier levels. This leaves a residual core of seven OPEC producers who, since November 2007, have been expanding supply versus late-2006/early-2007 levels. In reality, the Middle East Gulf states of Saudi Arabia, Kuwait, UAE and Qatar have acted as the real swing suppliers. With Atlantic Basin refinery maintenance drawing to a close, and marker crude prices remaining above $105/bbl, the core has so far been disinclined to announce any official curb on crude supplies. Seasonal demand down-turn in 2Q may highlight differences between official pronouncements and actual output.

Iran's output in March, based on exports and local crude runs, is assessed up by 70 kb/d at 4.02 mb/d. This is based on higher domestic refinery crude use, with exports stable at some 2.46 mb/d. Modest upward adjustment accrues to February's initial supply estimate, centred on revised data for crude imports via the Caspian port of Neka. With absolute February refinery throughput estimates unchanged, lower Neka imports automatically suggests that throughput of domestically-produced crude was correspondingly higher. Our assessment of Iranian crude production capacity is revised up by 40 kb/d to take account of a number of small field developments entering service in late 2007 and early 2008.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Our original estimate for February **Angolan** supply was revised up by 60 kb/d to 1.82 mb/d based on latest available production data, with March output estimated largely unchanged. Sonangol expects production to attain 2.0 mb/d in the final quarter of 2008 and for this level to be maintained until 2014, reinforcing our own projection for stable Angolan capacity through 2012, as contained in the last *MTOMR*.

Venezuelan crude supply for March at 2.32 mb/d is 90 kb/d below a downward-revised February. As noted last month, the Petrocedeno heavy oil upgrader went offline for maintenance in late-February, and is not expected to be back online until later in April. Ongoing Atlantic Basin refinery maintenance is likely to have worked against sales of un-upgraded Orinoco heavy oil during the stoppage.

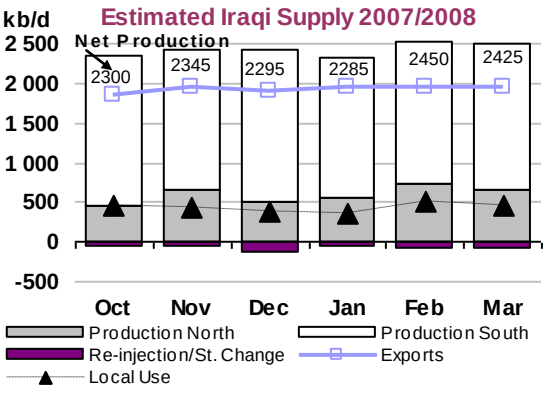
State PDVSA and ENI of Italy signed an agreement in March to develop and upgrade 300 kb/d of heavy Orinoco crude at the Junin 5 block. Pilot production of 30 kb/d could start in 2010, with commissioning of the full project by 2014. The agreement came prior to the country's national assembly passing proposals for a new windfall profits tax for oil producers. Current tax take for foreign companies operating in Venezuela is estimated at over 80%. PDVSA also succeeded in overturning by appeal a UK court freeze on $12 billion of its assets, in a dispute with ExxonMobil over the former Cerro Negro heavy oil project.

Saudi Arabia's supply in March is estimated unchanged at 9.1 mb/d. Reports emerged that full 500 kb/d crude output from the Khursaniyah project would now be deferred to late in 2008, although initial production is scheduled for April or May. Early crude output will be constrained to avoid gas flaring, as delays affect the project's gas processing facilities rather than wellhead units. We have revised up our Saudi crude capacity estimate to 10.9 mb/d to capture initial Khursaniyah volumes, but have deferred attainment of 11.3 mb/d to 4Q08 in line with the expected new plateau date for Khursaniyah.

Output from the **UAE** appears to have slipped from upward-revised February levels, averaging 2.52 mb/d in March, 140 kb/d below the previous month's total. Extended maintenance at gas processing facilities connected to the onshore Murban field is believed to underpin the March drop.

Nigerian production in March is estimated at 1.95 mb/d, 110 kb/d lower than February. The deepwater Bonga field was offline for two weeks for maintenance and there were also reports of production shortfalls affecting the Forcados and Qua Iboe export streams. Pipeline fires affecting supplies to both the Port Harcourt refinery and the Bonny export terminal in late March/early-April were not believed to have materially affected production or exports, but are symptomatic of the constant background level of industry disruption. March and April scheduled crude exports show successive declines from February, partly on production outages, but also due to the restart of the long-idled Warri and Kaduna refineries.

Intensifying conflict in southern Iraq resulted on 26 and 27 March in damage to two pipelines feeding the Fao storage terminal and, indirectly, the Basrah and Khor Al-Amaya export facilities. The earlier attack caused a fire which shut in some 100 kb/d of production from the Buzargan, Majnoon and Bin Umar fields. However, by 3 April, the affected production was being reinstated. A combination of a separate attack on a larger pipeline from Zubair to Fao and power outages saw exports from southern ports briefly halved to 0.8 mb/d, although average liftings from Basrah and Khor al-Amaya in March are estimated at 1.62 mb/d, up from 1.54 mb/d in February.

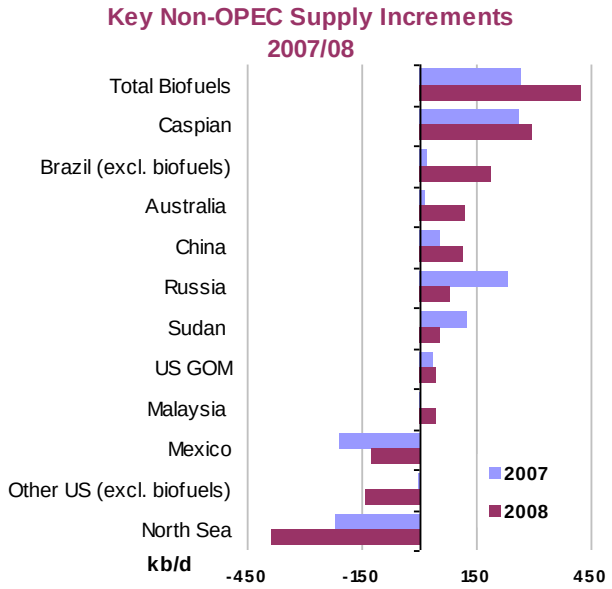


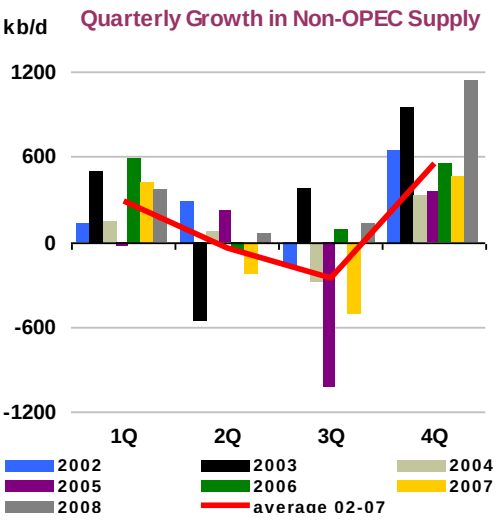
Liftings from Ceyhan in Turkey however were assessed off by 70 kb/d in March, at 325 kb/d. Total exports averaged 1.96 mb/d compared with 1.95 mb/d in February. Domestic crude consumption by refineries and for power generation is now estimated at a higher 0.51 mb/d in February, but this may have eased to 0.47 mb/d in March. Total supply levels of 2.45 mb/d and 2.43 mb/d respectively are the highest since February 2003.

Non-OPEC Overview

Non-OPEC March production is estimated at 50.3 mb/d, a gain of 165 kb/d from February. Monthly growth came from the USA, Mexico, the Caspian republics, China and Brazil. All told however the non-OPEC 2008 forecast has been cut by 85 kb/d this month to 50.5 mb/d, as Canada, Mexico, Colombia, Kazakhstan and Sudan all see downward adjustments of around 20 kb/d or more. Slippage is concentrated in the first half of the year, and is offset in part by upward revisions for the USA, Norway, China and Syria.

Non-OPEC growth averages some 815 kb/d in 2008, after 545 kb/d in 2007, representing a potential resurgence in growth to the highest non-OPEC level since 2004. The FSU (+395 kb/d), Asia Pacific region (+365 kb/d), global biofuels (+425 kb/d) and Brazil (+190 kb/d excluding ethanol) are key drivers for 2008. Non-OPEC supply could level off at 50.1-50.3 mb/d for the next two quarters as seasonal production outages in the northern hemisphere offset new production build-up from a number of sources. Sharp growth is expected in 4Q08 as maintenance eases and new project start-ups totalling around 1.0 mb/d in the second half of the year take effect.





While 4Q typically shows the strongest quarterly supply growth, this year looks exceptional, based on the 'business as usual' assumptions underpinning the forecast. A seasonal rise of nearly 1 mb/d is nearly double the seasonal average of 550 kb/d, and a level last seen in 2003, when recent constraints in the upstream operating environment were less intense. Extended maintenance and outages, stronger-than-expected decline and project slippage could all undermine this expected 4Q supply rebound. Last month we discussed the issue of non-OPEC decline rates for mature fields, recently averaging a surprisingly constant 7-8% per year after stripping out non reservoir-related issues. There is little reason to expect that industry-wide decline rates will accelerate in 2008, as drilling tightness begins to ease and with company spending continuing to increase. So the biggest threats to the 4Q rebound in non-OPEC supply, and 2008 growth overall, are new project slippage and heavier-than-expected unscheduled field outages. For now we retain our methodology of netting 0.4 mb/d off OECD supply to account for unscheduled field shut-ins. Time will tell whether this remains a realistic level of adjustment.

We also avoid the temptation to arbitrarily slip all new project start-up dates in the face of service, fabrication, drilling and construction bottlenecks, preferring to work on a project-specific, balance-of-probabilities basis. However, with recent weeks seeing further examples of project slippage affecting Saudi Arabia, Kuwait, the US GOM, UK, Philippines and Sudan, the bunching of new project starts in 2H08 renders this year's forecast prone to further revision. For example, if December's expected 970 kb/d of new production which derives from project starts in the second half of the year were all to suffer start-

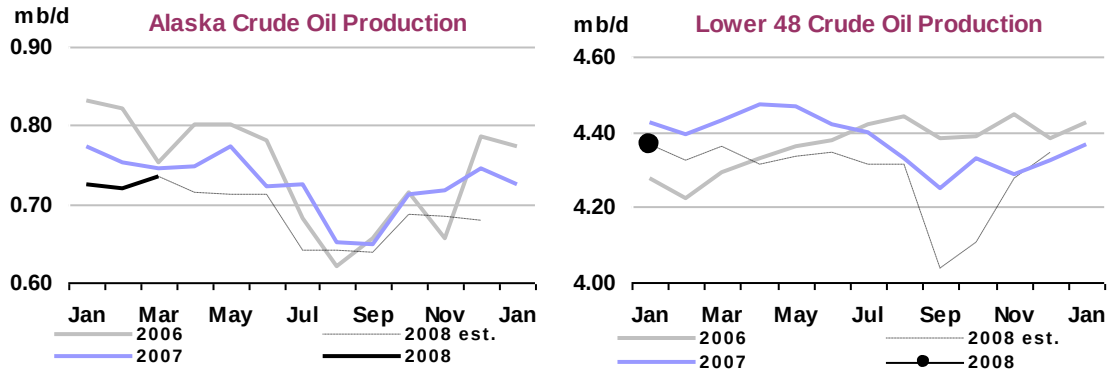
up delays of six months (an unlikely eventuality), then some 285 kb/d would have to be deducted from our 2008 non-OPEC supply estimate of 50.5 mb/d. Moreover, this would also transform modest 3Q quarter-on-quarter supply growth into 200 kb/d contraction, and halve 4Q growth to 0.6 mb/d. The scale of forecast uncertainty deriving from potential project slippage is therefore substantial, although what was lost from 2008 in such a scenario might be made up, wholly or partly, in 2009.

Longer-term production trends will also be driven by the investment environment being put in place today by host governments. This month's report itemises a mixed bag of developments in this regard. Marginal tax changes in the UK and in Russia have received cautious welcome from producers and financial analysts, although Russia is seen as having much further to go if upstream investment is ever to recover to early-decade levels. In Kazakhstan, a new export tax from May this year could hit state producer KazMunaiGaz hardest, as major ongoing foreign investments appear to be exempt. Canada has addressed its GHG emission reduction commitments by proposing mandatory carbon capture and storage for all new oil sands projects entering service in 2012 and beyond. Although this will undoubtedly raise costs, capital allowances and carbon trading schemes will likely cushion the impact.

OECD

North America

US – March Alaska actual, others estimated: The forecast for US oil production in 2008 is revised up by 60 kb/d to 7.51 mb/d, comprising 5.0 mb/d of crude, 1.8 mb/d of NGL and 0.7 mb/d of other oils (including ethanol). The static overall production level versus 2007 sees mature field declines from Alaska and onshore lower-48 offsetting growth from Gulf of Mexico (GOM) crude, from NGLs and ethanol. Data for January came in 115 kb/d higher than expected, while preliminary indications for February and March were respectively 105 kb/d and 85 kb/d above expectations. Ethanol (see below) and lower-48 crude production are the main causes of the 2008 upgrade. We have noted before that investment in enhanced recovery at older or marginal fields onshore US may be one of the few volumetric signs of what has been, so far, laggard price elasticity on the supply side.



GOM production is seen rising by 50 kb/d in 2008, to 1.38 mb/d. This is some 25 kb/d lower than last month's forecast, in part due to lower baseline supply suggested by January-March aggregate US production data. However, we have also pushed back start-up at Chevron's 45 kb/d Blind Faith project from April into May. Reports that BHP's Neptune production facility, previously expected to start in April, has been hit by structural problems have caused us to remove the 50 kb/d project from our 2008 forecast entirely. Subsequent reports have variously estimated start-up at 2Q08 and 2009, and we have erred on the side of caution by pushing Neptune into our 2009 forecast.

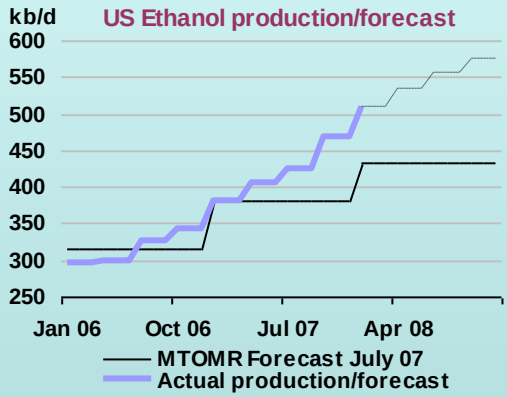
Ethanol Leads Where Conventional Oil Lags

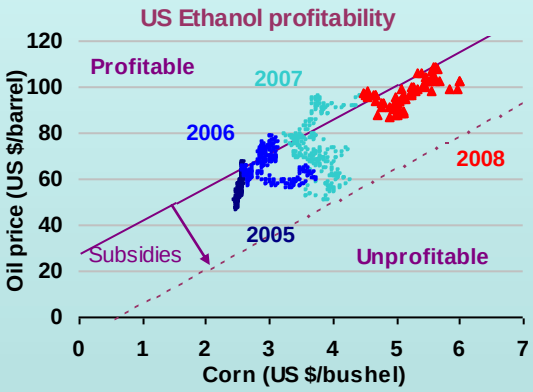
Monthly data from the EIA show US ethanol production consistently surging ahead of our expectations. This comes despite increasingly vocal criticism of the role the increased use of maize (corn) feedstock is having on global food prices, as well as a growing question mark over ethanol's supposed capacity to curb CO_2 emissions.

Prompted by incoming data, this report has been gradually nudging up the total US oxygenates production figure each month. Therefore, this month's 45 kb/d upward revision of 2008 US output (40 kb/d of which is ethanol) may not seem substantial. But compared with the July 2007 *MTOMR*, when biofuels were last assessed in depth, this is a more impressive 115 kb/d upward revision to 2008 production, after a 40 kb/d revision for 2007. For the year as a whole, US ethanol production grows by 125 kb/d to total 545 kb/d.

What are the reasons behind this rapid and unanticipated growth? Detailed analysis shows firstly that installed US ethanol capacity has been growing faster than expected. A reappraisal of individual production facilities shows that several plants have come online faster than assumed last year and there are several new plants on the horizon. In addition, the industry is beginning to see a degree of consolidation, with plants – especially those operated by larger enterprises – becoming bigger. As a result, we have also been prompted to revise our 2008 capacity figure up by over 80 kb/d (to around 660 kb/d).

In addition, our forecast is based on the assumption that the economics of ethanol production, including subsidies, remain broadly profitable in 2008. Following a bumper US corn crop and high oil prices, at the very least US plants should be able to run at 2007's 82% utilisation rate (considerably higher than many biodiesel production plants in parts of Europe). Lastly, in December 2007 the US finally passed into law a new and ambitious renewable fuels mandate, which calls for an approximate five-fold production increase in the next 15 years (though not all of this is to be corn-based ethanol). Coupled with a subsidy of currently around ¢50/gallon, this clearly keeps investment in ethanol production capacity attractive.

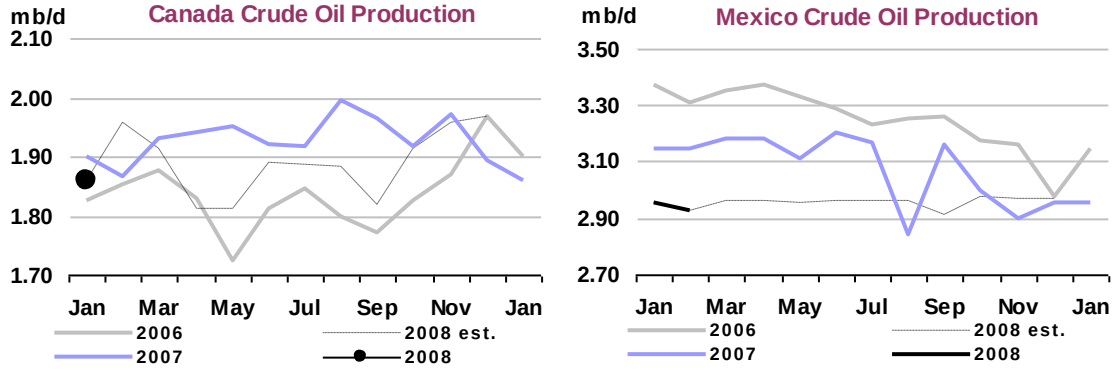




The July 2008 edition of the *Medium-Term Oil Market Report* will review other sources of biofuels supply, which may not benefit from the same specific circumstances as US producers – bar Brazil, which continues to have substantial economic, climatic and infrastructural advantages over all other biofuels producers. At 1.1 mb/d in 2007, or 1.3% of total global oil supply, biofuels may remain marginal in absolute terms. But, despite all the current bad press, they represent one of the most significant components of 2008 non-OPEC supply growth, on a par with expected conventional oil growth from individual countries such as Azerbaijan, Brazil, Australia and China.

Canada – Newfoundland and synthetics February, others January: Forecast Canadian oil output for 2008 is trimmed by 35 kb/d to 3.31 mb/d, largely flat compared with 2007. Downward revisions affect 1Q08 Albertan synthetic crude production (excluded from the graphic below) and offshore East Coast production. These are partly offset by upwardly-revised Alberta bitumen supply, where our earlier projections looked low in comparison to latest project assessments and local forecasts.

We have trimmed expected output from Syncrude Canada's mining/upgrading project in line with the company's own expectations following outages on freezing weather early in the year. Production from this unit is now seen averaging 295 kb/d in 2008 from 285 kb/d last year, out of total mined syncrude supply this year of 705 kb/d. In a similar vein but on the other side of the country, early April saw a brief ice-related outage at Husky's offshore Newfoundland White Rose project, but output for the month is unlikely to be materially affected. Husky is proceeding with satellite developments at White Rose that will sustain output into the next decade.



Mexico – February actual: February proved another disappointing month for Mexican production, slipping by 25 kb/d from January levels. Exports remained stuck at the sub-1.5 mb/d levels evident since November, although seasonal loading difficulties in part explain this. We have trimmed 20 kb/d from last month's 2008 production forecast, giving a revised crude output projection of 2.95 mb/d, compared with the 3.08 mb/d achieved in 2007. Natural gas liquids output is assumed steady at 395 kb/d. Rising supplies from the Ku-Maloob-Zaap complex partly offset near-20% decline from the Cantarell field.

Mexico's congress is studying proposals from President Felipe Calderon which would establish service contracts for upstream activities, but stop well short of any form of direct equity participation. Fiscal reforms could liberate some $4-$5 billion of extra export revenue for Pemex, with variable tax rates being introduced for oil and gas fields. The measures fall well short of the degree of liberalisation some analysts see as necessary if Mexico is to halt production decline.

Canadian Oil Sands Face CCS Mandates

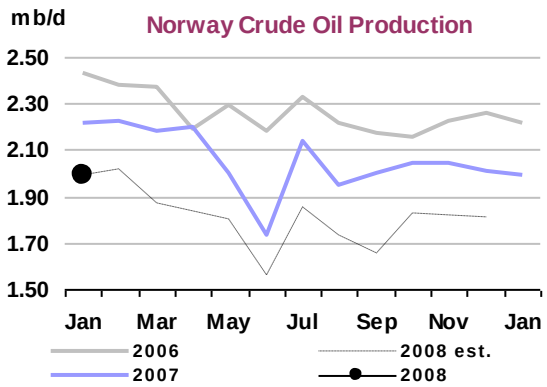
Canada's Federal Government has proposed new rules requiring oil sands and coal-fired power plants entering service after 2011 to include CO_2 capture and storage equipment. Three tiers of remediation are proposed, part of Canada's commitment to reduce greenhouse gas emissions by 20% by 2020. Existing plants and those starting up before 2012 will face less onerous limits so long as emissions can be reduced by 18% versus 2006 levels by 2010 and by 2% per year thereafter. Post-2011 plants will have until 2018 to install CCS, with the possibility of buying carbon credits or investing in a technology fund in the interim. Investments in CCS may be fully offset against tax in the period to 2017.

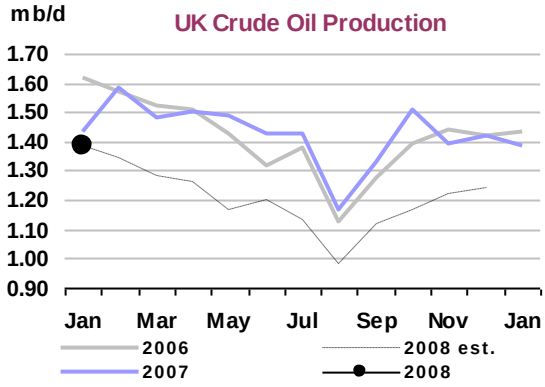
The proposals come on top of earlier plans for increased royalty rates to be introduced from 2009. Neither proposal on its own is seen by analysts as being sufficient to derail currently planned projects. However, a combination of fiscal take and environmental investment mandates, if accompanied by lower oil prices, could make a difference to expected production levels. Our MTOMR from July 2007 envisaged total Canadian oil supply growing by a healthy 3.5% per year through 2012. Canada's National Energy Board (NEB) reference scenario was for more buoyant growth of nearer 5% per year through 2015. NEB's scenario for tighter environmental regulation and weaker post-2010 prices was seen slowing supply growth to just 1.6% per year.

North Sea

Norway – January actual, February provisional: An upgrade to expected 1Q08 performance for Norway adds 10 kb/d to the 2008 forecast. 1Q production is revised up by 30 kb/d as a combination of output data for January/February and loading schedules thereafter point to higher supplies from the Statfjord/Gullfaks and Oseberg/Troll systems. Our forecast now shows Norwegian liquids production declining by 190 kb/d in 2008 to 2.37 mb/d, although NGL and condensate volumes within this total rise by some 55 kb/d. Output from Norway has declined by some 0.2 mb/d in each of the past three years.

Trade unions have called off a strike that was due to begin on 2 April, which would potentially have affected 20% of Norway's service sector employees. Mid-March saw the renewed shut-down of the Snohvit gas and condensate field after renewed technical problems with the gas liquefaction plant. Early phase condensate production from Snohvit could reach 20 kb/d, although output has yet to attain 5 kb/d after teething problems. In the longer term, independent producer Detnor has submitted a redevelopment plan for the Froy field which was closed in 2001, having earlier attained peak production of 35 kb/d.



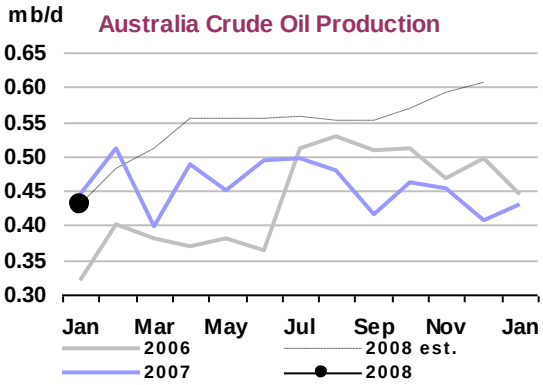


UK – January actual: December/January data came in close to preliminary estimates, leaving the 2008 total oil forecast little changed at 1.47 mb/d, and offshore crude at 1.21 mb/d. Like Norway, the UK faces decline of some 200 kb/d in 2008, having temporarily stabilised output in 2007 at 1.66 mb/d. Last year's prop for UK output, the newly-started Buzzard field, contributes again in 2008, adding some 45 kb/d with a full year of plateau output. But with only this and the Tweedsmuir project likely to add in excess of 20 kb/d incremental supply in 2008, mature field decline again predominates.

Producing companies broadly welcomed a series of fiscal measures announced in March's government Budget statement. Reforms affected Petroleum Revenue Tax, capital allowances for older assets and the treatment of de-commissioning costs. However, the industry has said it still wishes to see the government address what it believes to be excessive tax take from new projects.

Pacific

Australia – January actual: January data came in 75 kb/d below this report's expectation, at 495 kb/d for total oil production. Output suffered a stronger-than-anticipated impact from early-year mechanical and weather outages. Partial recovery to 600 kb/d is estimated for February, although electrical pump repairs kept the 25 kb/d Mutineer-Exeter field offline from early-February until the last week of March. Late March also saw re-start at the Woolybutt field, which had been closed for three months after unscheduled maintenance was followed by weather delays. New



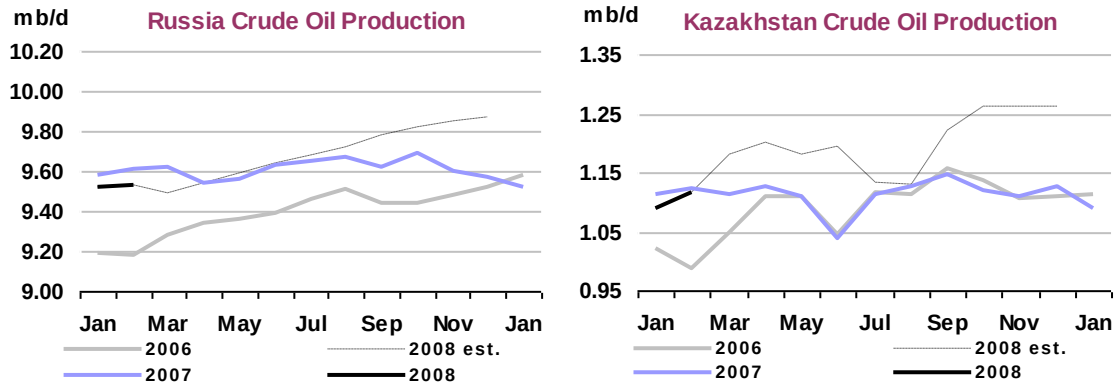
production from the Puffin and Stybarrow fields is expected to underpin growth of 85 kb/d in 2008 Australian crude production, augmented by gas liquids.

Neighbouring **New Zealand** is also likely to see growth of some 35 kb/d in offshore production this year from the Tui and Maari fields, taking total liquids supply to 85 kb/d in 2008 from 45 kb/d in 2007.

Former Soviet Union (FSU)

Russia – February actual, March provisional: First-quarter Russian supply dropped below year-ago levels for the first time this decade, averaging 10.0 mb/d, some 90 kb/d below 1Q07. However, caution needs to be applied before extrapolating this trend. Mild weather in 1Q07 may have distorted growth patterns by minimising habitual, temperature-related seasonal production shut-ins.

Secondly, tentative steps have been taken in fiscal reform, raising the production tax threshold from $9/bbl to $15/bbl, albeit only from 2009. However, this is widely seen as a first, modest step, with more potentially to come later in 2008. Thirdly, one of the key drags on 2008 supply, an expected drop in output from the Sakhalin 1 project to around 170 kb/d, has yet to materialise. 1Q production from Sakhalin 1 has been around 220 kb/d, close to the 2007 average. While we have factored in a drop in supply to 170 kb/d for 2H08, government drilling restrictions may be having less impact than field partners suggested late in 2007. Nonetheless, Russian oil production in 2008 is forecast to show growth of only 0.8% (80 kb/d), compared with an average 2.5% in the last three years and double-digit growth earlier in the decade.



Kazakhstan – February actual: Early 2008 data for Kazakhstan show robust output from the Tengiz and Karachaganak fields, but lower-than expected crude supplies elsewhere. Lower production from smaller producers is carried through the forecast for 2008, resulting in a net 15 kb/d downward adjustment to projected supply, to an average 1.46 mb/d this year from 1.38 mb/d in 2007. The net downward adjustment for total production is moderated by stronger first-half output now for the Tengiz field.

That said, we retain a cautious outlook regarding Tengiz expansion in 2008, given ongoing delays in expanding the CPC pipeline. Operator TCO expects Tengiz capacity to reach 540 kb/d late in 2008, although we have assumed production attains only 420 kb/d in 4Q, for an annual average of 355 kb/d. If recent export diversification continues (with the possibility for initial volumes to be moved via the BTC pipeline as early as this year currently being discussed), a subsequent upgrade to our Tengiz forecast is possible. Russian opposition to CPC expansion however is likely to prove a longer-term constraint on both Tengiz and the long-delayed Kashagan field. Failure to commence work on CPC expansion before autumn 2008, when approval for the project's feasibility study expires, would likely entail further delays.

Further questions over Kazakh supply have been raised following the Energy Ministry's announcement that it will introduce a new crude export duty of $109/tonne (nearly $15/bbl) from May 2008. Although the key Tengiz, Karachaganak and Kashagan projects will reportedly be exempt, the proposals could affect up to 40% of 2008 production, notably that of state-owned KazMunaiGaz. Some analysts have seen the new tax as a parallel of Russia's attempts to boost domestic crude refining at exports'expense.

Azerbaijan – February actual: Forecast 2008 Azeri oil production remains at just below 1.1 mb/d, despite a downgrade for April supply based on lower scheduled BTC pipeline export volumes. Overall, production continues the 200 kb/d annual growth trend seen in 2006 and 2007. The BP-operated ACG complex underpins 2008 growth, augmented by higher expected condensate volumes from the Shah Deniz project. BP has also reported that it aims to boost BTC pipeline capacity by 20% to 1.2 mb/d by the end of 2008 through the use of drag reduction agents. Later phase expansion to around 1.5 mb/d may be implemented by 2012/2013.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

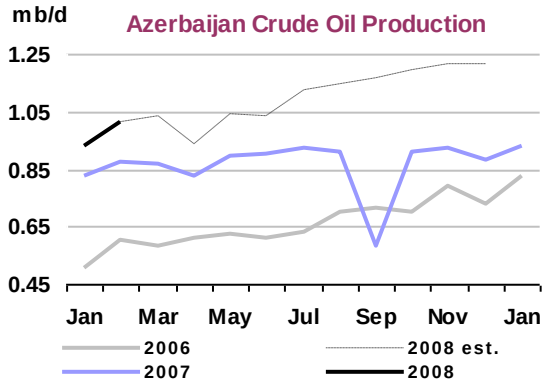
	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Dec 07	Jan 08	Feb 08	Latest month vs. Jan 08	Latest month vs. Feb 07
Crude											
Black Sea	2.22	2.18	2.30	2.23	2.09	2.10	2.02	1.94	1.92	-0.02	-0.48
Baltic	1.55	1.59	1.58	1.60	1.58	1.61	1.66	1.55	1.44	-0.11	-0.15
Arctic/FarEast	0.15	0.32	0.29	0.30	0.38	0.31	0.29	0.24	0.29	0.04	-0.02
BTC	0.00	0.55	0.43	0.58	0.57	0.61	0.64	0.62	0.64	0.02	0.16
Crude Seaborne	4.07	4.63	4.60	4.70	4.61	4.62	4.61	4.36	4.29	-0.07	-0.49
Druzhba Pipeline	1.20	1.13	1.17	1.13	1.08	1.13	1.12	1.16	1.10	-0.05	-0.15
Other Routes	0.38	0.44	0.47	0.46	0.40	0.43	0.42	0.43	0.45	0.02	0.01
Total Crude Exports	5.64	6.20	6.23	6.29	6.09	6.18	6.15	5.94	5.84	-0.11	-0.63
Of Which: Transneft	4.22	4.27	4.33	4.31	4.19	4.23	4.18	4.06	3.95	-0.12	-0.49
Products											
Fuel oil	0.95	1.10	1.04	1.15	1.13	1.08	1.14	1.05	1.16	0.11	0.11
Gasoil	0.95	0.95	0.94	0.88	1.01	0.96	1.04	1.02	1.11	0.09	0.12
Other Products	0.61	0.60	0.59	0.69	0.57	0.56	0.58	0.58	0.60	0.03	-0.01
Total Product	2.51	2.65	2.57	2.73	2.71	2.60	2.75	2.64	2.87	0.23	0.22
Total Exports	8.16	8.85	8.80	9.02	8.80	8.78	8.90	8.58	8.71	0.12	-0.41
Imports	0.04	0.04	0.02	0.04	0.05	0.03	0.03	0.04	0.03	-0.01	0.02
Net Exports	8.12	8.82	8.78	8.98	8.76	8.74	8.88	8.54	8.67	0.13	-0.43

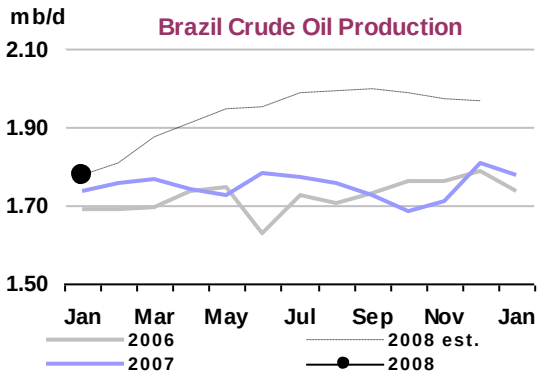
Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

FSU net oil exports rose by 130 kb/d in February, as a significant monthly rise in product exports overshadowed a drop in crude exports. Product exports rose by 235 kb/d in February, from a downwardly-revised January, including monthly increases of 114 kb/d and 92 kb/d in fuel oil and gasoil exports respectively. Record-high distillate prices in Europe provided an incentive for FSU refiners to maximise gasoil exports.

As expected, February FSU crude exports were down by 110 kb/d on the month, to 5.84 mb/d, the lowest seen since late 2006. Export volumes via Transneft fell by 120 kb/d on average, 90 kb/d of which was the reduction in flows to Germany implemented by Lukoil (which extra transits to Hungary and the Czech Republic were unable to offset). Maintenance on the pipeline to Primorsk reduced exports of Russian crude via this route by 110 kb/d. Further disincentive derived from a 20% increase in Russian crude export duties from 1 February.

FSU net exports in March are expected to have risen by up to 100 kb/d as Primorsk volumes recovered, although Caspian CPC and BTC exports collectively are likely to have stabilised. Lower Caspian April volumes may pressure overall FSU exports this month.





Other Non-OPEC

Brazil – January actual: We have moderated forecast 2008 Brazilian production in line with both lower actual January data and state company Petrobras' own latest expectations of around 2.0 mb/d of crude for the year. Oil production growth is nonetheless seen accelerating to 190 kb/d in 2008 plus around 50 kb/d for ethanol production, taking total ethanol output to some 360 kb/d. Oil increments centre on output from the Roncador and Golfino projects which started-up in late-2007, as well as a number of smaller 2008 developments. Foreign company participation offshore Brazil is likely to grow, with existing production from Shell's Bijupira Salema field likely to be augmented by new production in 2008 from Devon Energy, and later by StatoilHydro and Chevron.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.16	0.06	-0.10	14.27	14.17	0.06	-0.09	0.00	0.01	0.00	0.01
Europe	4.95	4.55	-0.23	-0.40	4.95	4.56	-0.23	-0.39	0.00	0.01	0.00	0.01
Pacific	0.62	0.78	0.04	0.16	0.62	0.78	0.04	0.16	0.00	0.00	0.00	0.00
Total OECD	**19.84**	**19.49**	**-0.14**	**-0.35**	**19.84**	**19.52**	**-0.14**	**-0.32**	**0.00**	**0.03**	**0.00**	**0.03**
Former USSR	12.77	13.19	0.52	0.42	12.77	13.16	0.52	0.40	0.00	-0.02	0.00	-0.02
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.83	0.05	0.11	3.73	3.85	0.05	0.12	0.00	0.01	0.00	0.01
Other Asia	2.68	2.77	-0.03	0.09	2.68	2.77	-0.03	0.09	0.00	-0.01	0.00	-0.01
Latin America	3.87	4.14	0.02	0.27	3.87	4.10	0.02	0.24	0.00	-0.04	0.00	-0.04
Middle East	1.64	1.56	-0.11	-0.07	1.64	1.58	-0.10	-0.07	0.01	0.01	0.01	0.01
Africa*	2.55	2.69	0.05	0.14	2.55	2.62	0.05	0.07	0.00	-0.07	0.00	-0.07
Total Non-OECD*	**27.36**	**28.31**	**0.50**	**0.95**	**27.37**	**28.20**	**0.50**	**0.83**	**0.01**	**-0.11**	**0.01**	**-0.12**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.68**	**50.59**	**0.54**	**0.91**	**49.69**	**50.50**	**0.55**	**0.82**	**0.01**	**-0.09**	**0.01**	**-0.09**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

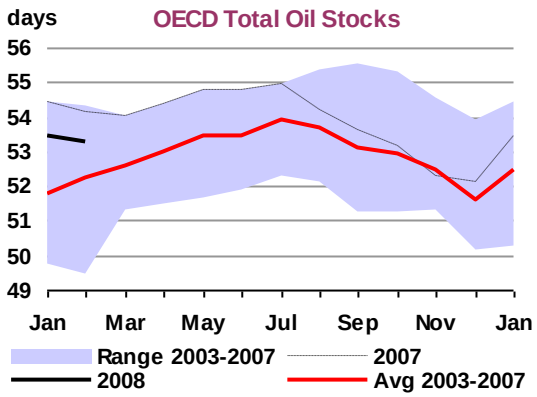
Revisions to other non-OPEC estimates begin with **Sudan**, where we have deferred expansion above current 200 kb/d output levels at Blocks 3 and 7 from 2Q08 to 2009 after comments from government sources. Last month's upward revision to **Colombian** 2008 production has been reversed, but not because of any downgrading of expectations for continued JV production growth. Rather, with our baseline forecast having converged with actual production levels for some months now, we have removed a +20 kb/d adjustment factor previously included to account for an earlier tendency to understate total Colombian supply. **Philippines** production estimates are adjusted down by 15 kb/d in 2H08 to account for the slippage of start-up at the Calauit field into 2009 or 2010. Philippines supply will nonetheless benefit from imminent start-up at the 17 kb/d Galoc field.

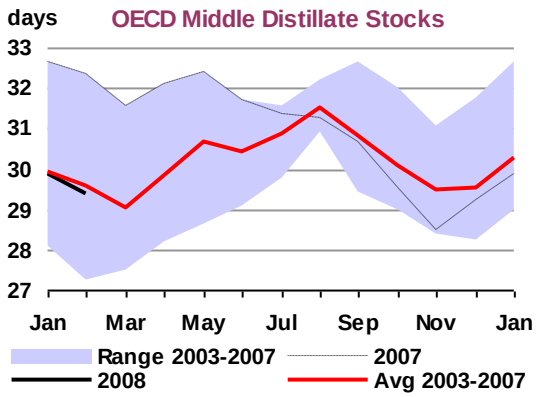
On a more positive note, recent reports on **Syrian** crude and condensate production for calendar 2007 add 6 kb/d to the 2007 estimate and 14 kb/d to the 2008 forecast. Total oil production, still on a declining trend, therefore averages 400 kb/d in 2007 and 380 kb/d in 2008, compared with 420 kb/d in 2006.

OECD STOCKS

Summary

- **OECD total industry stocks fell by 48.9 mb in February, to 2,579 mb.** A counter-seasonal draw of 9.1 mb in OECD crude inventories accompanied a 42.8 mb product draw which was more in line with normal winter trends. 'Other oils' stocks built by 3.0 mb. The crude draw occurred in OECD Europe, where German crude stocks decreased by 4.4 mb following a halt in pipeline supplies from Lukoil in Russia, and in the OECD Pacific, on lower crude imports to Japan and Korea.
- **Total OECD industry product stocks drew by 42.8 mb in February**. A shallower-than-normal decrease of 2.7 mb in European distillate stocks was countered by a very steep 12.1 mb draw in the OECD Pacific, on lower refinery throughputs. Draws in OECD North American distillates and 'other products' were more in line with winter expectations at 13.0 mb and 10.3 mb respectively, although a 6.1 mb counter-seasonal build in motor gasoline inventories moderated the regional product draw.
- **January OECD oil stocks were revised up by 10.3 mb and now total 2,628 mb**. Revisions were largest in US 'other products', adjusted up by 8.8 mb, while Canadian crude stocks were revised up by 7.2 mb and Japanese and the Netherlands' crude stocks were revised down. The total January OECD stock build now measures 48.7 mb, almost exactly offsetting the total draw in February, suggesting that the 1Q08 OECD stock change relies entirely on March trends. Preliminary March data for US, Japan and EU-16 indicates a 4.1 mb stock build.
- **End-February OECD forward demand cover is calculated to be 53.3 days**, a slight drop from the upwardly-revised 53.4 days for end-January. OECD total stocks remain above the 2003-07 average in terms of absolute levels and forward demand cover. Regionally, the above-average stocks position for most products in OECD North America and Europe contrasts with historically low crude and motor gasoline stocks and tight distillate cover in the OECD Pacific.





OECD Inventory Position at End-February and Revisions to Preliminary Data

A 48.9 mb draw in February took total OECD industry stocks to 2,579 mb. This is almost 45 mb above the 2003-07 average, but around 48 mb below last February's closing stock level. In a month when forward demand cover usually rises, it was reduced to 53.3 days, down 0.1 days from the upwardly-adjusted end-January figure. Still, it remains well above the five-year average of 52.2 days.

The OECD Pacific region saw the most notable changes in stock levels in February, led by significant drops in crude and middle distillates. Economic refinery run cuts dented product stocks in a very cold February, while a drop in crude imports was large enough to reduce crude inventories as well. Total industry stocks for the OECD Pacific are now at their lowest level on record in absolute terms, at 385.1 mb. In terms of forward demand cover, they are below the five-year range for crude oil, motor gasoline, 'other

products' and near the bottom of ranges for middle distillates. Elsewhere, OECD Europe crude cover (in terms of forward throughput) dropped from above the 2003-07 range at end-January to near the five-year average of 24.1 days in February, following a counter-seasonal crude draw largely prompted by a halt in supplies from Lukoil to Germany. Also counter-seasonal was the 0.6 day improvement in forward cover for European distillates, up to 34.3 days, which helped keep total OECD Europe forward cover above the five-year average, at 62.3 days. OECD North American total forward demand cover is near the top of the five-year range, at 50.2 days, and is above average in all products except the 'other products' category.

Preliminary Industry Stock Change in February 2008 and Fourth Quarter 2007

	February (preliminary) *(million barrels)*				February (preliminary) *(million barrels per day)*				Fourth Quarter 2007 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**9.7**	**-9.1**	**-9.8**	**-9.1**	**0.34**	**-0.31**	**-0.34**	**-0.31**	**-0.33**	**0.08**	**-0.01**	**-0.25**
Gasoline	6.1	-1.2	-0.2	4.7	0.21	-0.04	-0.01	0.16	0.18	0.06	0.01	0.25
Distillates	-13.0	-2.7	-12.1	-27.9	-0.45	-0.09	-0.42	-0.96	0.02	-0.18	-0.08	-0.23
Fuel Oil	-0.5	-3.2	-0.7	-4.4	-0.02	-0.11	-0.03	-0.15	0.03	-0.07	-0.05	-0.09
Other Products	-10.3	-1.3	-3.6	-15.3	-0.36	-0.05	-0.12	-0.53	-0.31	0.01	-0.11	-0.42
Total Products	**-17.7**	**-8.5**	**-16.6**	**-42.8**	**-0.61**	**-0.29**	**-0.57**	**-1.47**	**-0.07**	**-0.18**	**-0.23**	**-0.48**
Other Oils[1]	5.6	-0.9	-1.8	3.0	0.19	-0.03	-0.06	0.10	-0.24	-0.02	-0.03	-0.28
Total Oil	**-2.3**	**-18.4**	**-28.2**	**-48.9**	**-0.08**	**-0.63**	**-0.97**	**-1.69**	**-0.63**	**-0.12**	**-0.27**	**-1.02**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Upward revisions to OECD industry oil stocks for January totalled 10.3 mb. The main adjustments were in US 'other products' stocks, increased by 8.8 mb, while Canadian crude stocks were revised up by 7.2 mb. In partial offset, Japanese and Netherlands end-January crude stocks were revised down by 4.4 mb and 4.3 mb respectively. The overall January OECD stock build now measures 48.7 mb, almost exactly matching the magnitude of the total draw in February, implying that the first quarter OECD stock changes is now entirely contingent on trends in March OECD stocks (revisions notwithstanding). Preliminary weekly US and Japanese data plus monthly Euroilstock data show a combined stock build of 4.1 mb in March. This included a 17.4 mb draw in US products, overwhelmingly gasoline and distillates, which was more than offset by builds of 12.4 mb and 7.3 mb in US and European crude stocks, plus an unexpected 2.1 mb rise in European products. Japanese stocks only fell by 0.2 mb, all in products.

Revisions versus 11 March 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Dec 07	Jan 08	Dec 07	Jan 08	Dec 07	Jan 08	Dec 07	Jan 08
Crude Oil	**2.4**	**3.2**	**-1.2**	**2.5**	**-0.5**	**-2.4**	**0.7**	**3.3**
Gasoline	1.5	1.9	-1.1	2.9	0.0	-0.4	0.4	4.4
Distillates	0.5	-2.2	-3.0	-2.1	0.0	-1.4	-2.5	-5.7
Residual Fuel Oil	-0.5	2.0	-2.6	0.3	0.0	-0.2	-3.1	2.1
Other Products	0.2	10.1	0.3	1.9	0.0	0.0	0.6	11.9
Total Products	**1.7**	**11.8**	**-6.4**	**2.9**	**0.0**	**-2.0**	**-4.6**	**12.7**
Other Oils[1]	-0.9	-4.7	-1.0	-1.6	0.0	0.5	-1.9	-5.8
Total Oil	**3.2**	**10.4**	**-8.5**	**3.8**	**-0.5**	**-3.9**	**-5.8**	**10.3**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

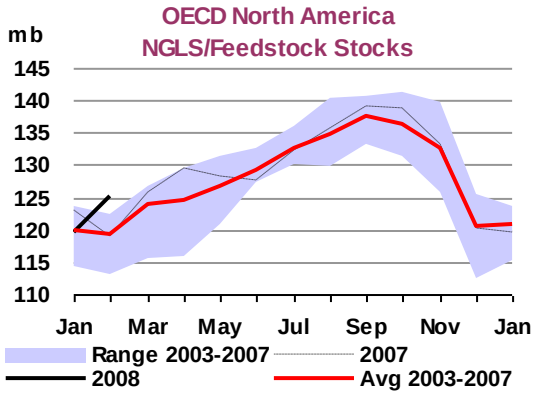
OECD Industry Stock Changes in February 2008

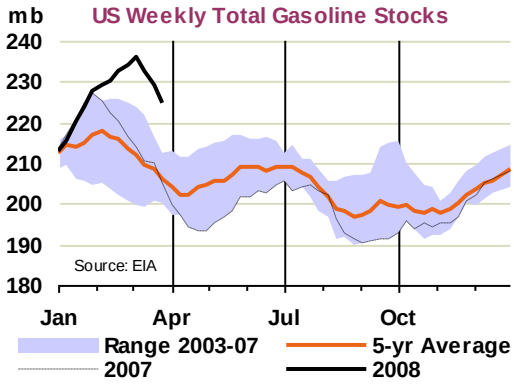
OECD North America

OECD North America stocks only fell by 2.3 mb in February, to 1,254 mb, despite a 17.7 mb draw in products stocks. US refinery throughputs were very low in the first half of February as refiners faced unplanned outages, a low margin environment and spring maintenance. Still, the February US crude stockbuild of 6.3 mb was no larger than seasonal norms, as US crude imports also slowed in February after the high levels seen in January. However, US 'other oils' stocks rose counter-seasonally, by 5.6 mb, in February. A clear decrease in 'other oils' supplied was reflected by US weekly data in February, suggesting that demand for NGLs and other gas liquids, for example in the petrochemical sector,

weakened. Meanwhile, port closures at Dos Bocas and Coatzacoalcos restricted crude exports, prompting a 3.4 mb increase in Mexican crude stocks in February, leaving them at their highest ever level, of 26.4 mb.

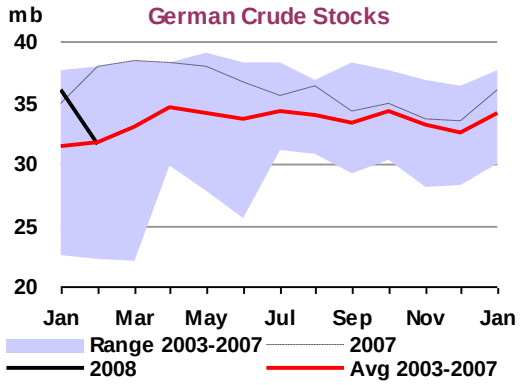
Builds in crude, 'other oils' and US motor gasoline stocks almost completely offset the typical winter draws in distillates, residuals and 'other products' in OECD North America. US 'other products' stocks decreased by 11.2 mb in February, slightly ahead of February norms. Demand in this category is linked to LPG use for heating in certain regions of the US, and heating degree days have generally been above 10-year averages in the first quarter of 2008. Absolute and forward demand cover for US 'other products' is now near the bottom of the five-year range. North American middle distillate stocks decreased by 13.0 mb in February, matching seasonal trends, while a 1.4 mb draw took Mexican middle distillates stocks to the bottom of the five-year range, amid strong demand. US motor gasoline stocks rose again in February, this time by 7.0 mb, the fourth consecutive monthly rise but the first of these to directionally differ from seasonal expectations. Whether this build was due to muted demand or an earlier-than-normal start to spring refinery maintenance is not yet clear. However, weekly US data in March has revealed extremely low refinery throughputs already eroding much of this gasoline inventory surplus.

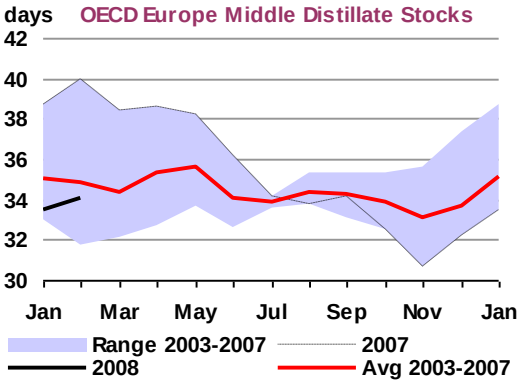




OECD Europe

Total oil stocks in OECD European countries fell by 18.4 mb in February, closing at 940 mb. A surprise decrease of 9.1 mb in regional crude oil inventories overshadowed news of a surprisingly shallow February draw in middle distillates. Crude stocks fell most notably in Germany, where a drop of 4.4 mb was prompted by the interruption of supplies of Lukoil's Russian crude arriving via the Druzhba pipeline. French crude stocks also fell by 1.9 mb in February, while the Netherlands' crude stocks rose by 1.5 mb.



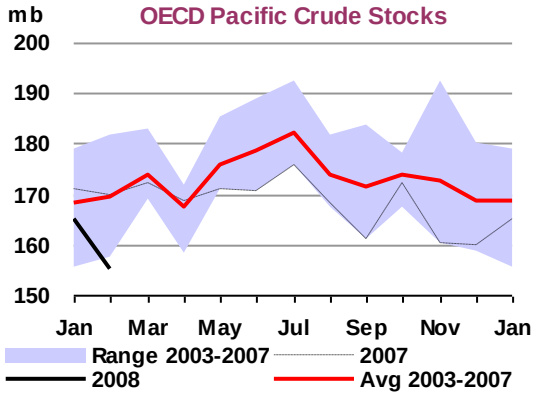


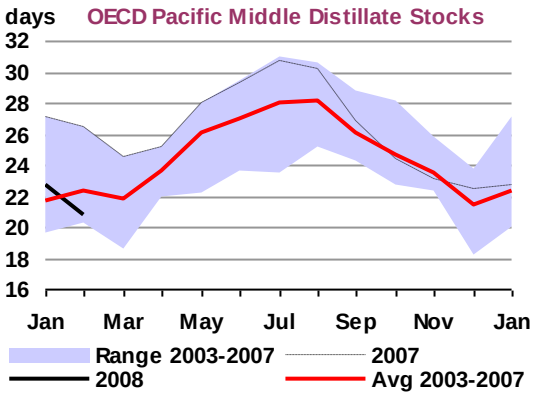
Middle distillate inventories decreased by 2.7 mb in OECD Europe, a shallower drop than is normally seen in February. This actually led to a rise in forward demand cover (with the draw slighter than the spring dip in demand) from 33.7 days at end-January, near the bottom of the five-year range, to 34.3 days

one month later. German and French distillate stocks actually rose counter-seasonally in February, by 3.0 mb and 0.8 mb respectively. This is surprising, given that European distillate cracks rose to over $25/bbl in February. Also, weekly independent storage levels in the ARA region indicated that middle distillates fell below 9 mb in late-February, nearing three-year seasonal lows, before a late-March rebound to just below average levels of 9.4 mb. Still, there was a large monthly increase in FSU gasoil exports in February and distillate demand came in marginally below expectations. Otherwise, OECD Europe residual fuel oil stocks fell by 3.2 mb in February, including a 1.9 mb decline in the Netherlands, contributing to the total monthly draw in OECD European products of 8.5 mb.

OECD Pacific

OECD Pacific total oil stocks decreased by 28.2 mb in February, to 385 mb. This was a very large decrease compared with previous years, taking absolute levels and forward cover below the five-year range. A crude draw of 9.8 mb, of which 6.2 mb was in Japan, was highly counter-seasonal. METI data showed that Japan imported 4.4 mb/d of crude in February, 300 kb/d less than January. Also, demand for direct-burn crude rose to 350 kb/d in February, up 120 kb/d on the month, as nuclear outages persist. Korean crude stocks fell (atypically) by 3.6 mb, as monthly crude imports reportedly sunk by 350 kb/d to 2.35 mb/d, their lowest level since April 2007. The fall in crude imports overshadowed a 150 kb/d drop in refinery runs amid economic run cuts and a Caltex hydrocracker outage. While OECD Pacific crude demand cover (in terms of days of forward crude throughputs) usually rises by 1.2 days at this time of year, it fell by 0.9 days to 22.4 days and is now below the five-year range.





Lower refinery runs and a very cold February contributed to draws in Japanese and Korean middle distillates stocks by 10.7 mb and 1.4 mb in February, respectively. Heating degree days in February were around 20% below 10-year averages in these countries, which drove up demand for regional heating fuel, kerosene. These significant draws took regional forward demand cover for distillates close to the bottom of the five-year range and pushed absolute levels below range. The 3.6 mb regional drop in 'other products' stocks was driven overwhelmingly by Japan. Total OECD Pacific product inventories fell by 16.6 mb in February. As well as in the crude category, forward demand cover at end-February was below the five-year range for total products, at 19 days, and significantly short of the five-year average of 20.7 days.

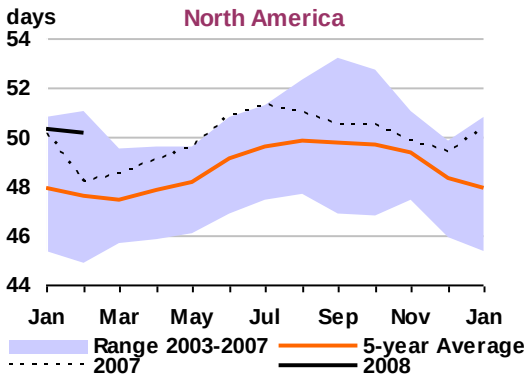
Recent Developments in Singapore Stocks

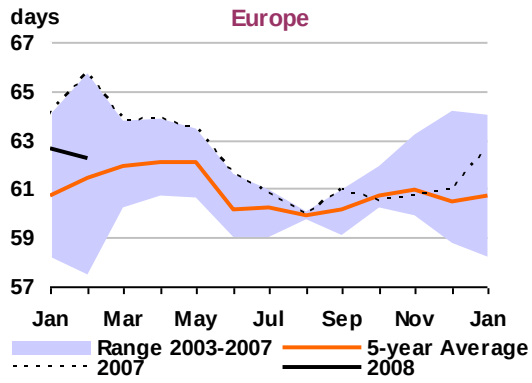
Weekly data showing independent stock levels in Singapore once again showed hikes in light distillate and residual fuel oil stocks related to storage capacity additions in March. Averaging 7-9 mb over the last five years, independent stocks of light distillates in Singapore surged to 11 mb in late March. At the same time, fuel oil stocks approached 22 mb, compared with five-year averages of 10-12 mb. Independent storage capacity additions at Singapore are expected to top 25 mb in 2008, according to reports. Middle distillate stocks remained within historical ranges, however, and were close to five-year averages in early April, at 7.7 mb.

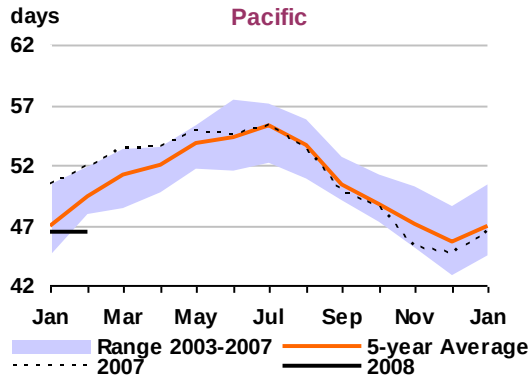
Regional OECD End-of-Month Industry Stocks

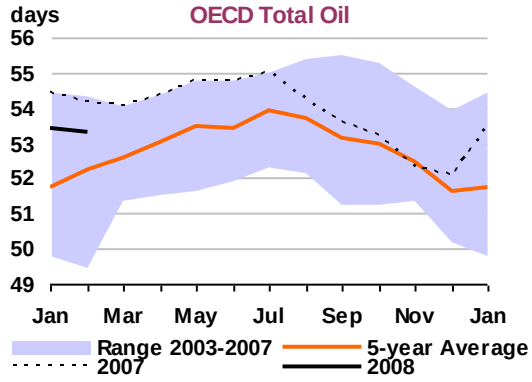
(in days of forward demand and millions barrels of total oil)

Days[1]

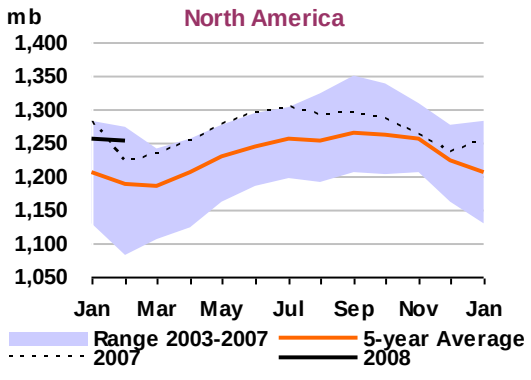


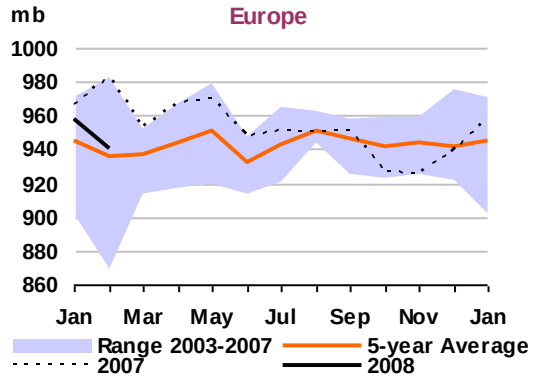


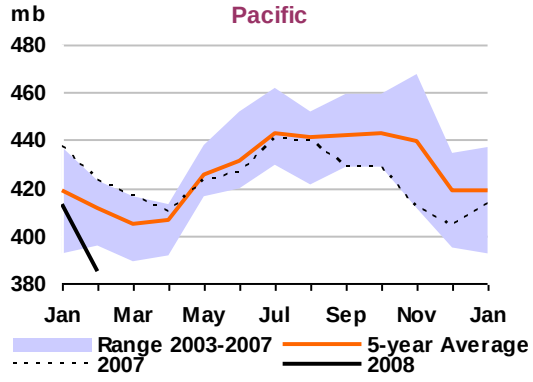


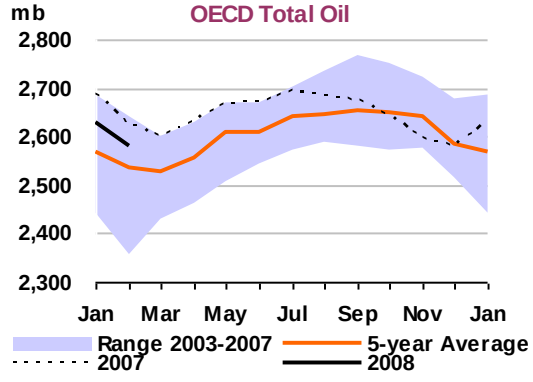


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

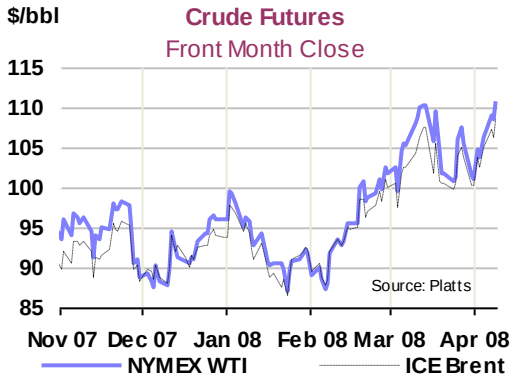
Summary

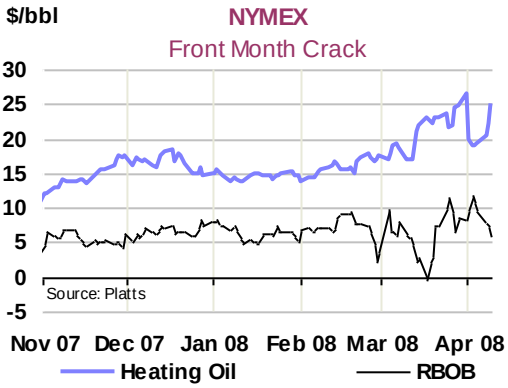
- **Crude prices surged to new record highs around $110/bbl in early April** due to a strong refined product market, a weaker dollar, a flare-up of tension in southern Iraq and OPEC producers' continuing reluctance to add crude to the market. Prices had previously dipped on a steady stream of bearish economic data from the US and indications of resulting demand weakness.

- **Surging product cracks were probably a greater market driver than crude in March and early April**, buoyed by lower OECD product stocks, below-average refinery runs and sustained tightness in global distillate markets. Gasoline cracks recovered in late March as the market tightened following a dip in yields after refineries tried to maximise distillate output, leading to a draw in US stocks.

- **Refinery margins mostly increased** on gasoline's recovery and strong distillate cracks. Brent and Es Sider hydroskimming margins in Europe even edged their way towards positive territory. The greatest gains month-on-month were in Singapore, albeit from the lowest base. US margins were mixed, being more dependent upon gasoline cracks, which despite their recovery remain well below those of distillates.

- **Dirty tanker rates rose in the second half of March** as vessel fundamentals tightened on rising long-haul tanker demand, following increases in both eastbound West African trades and westbound volumes leaving the Middle East Gulf. Clean rates were almost flat on high Asian vessel availability and low US gasoline imports.



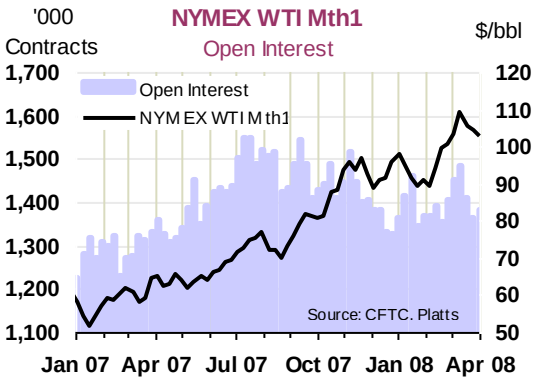


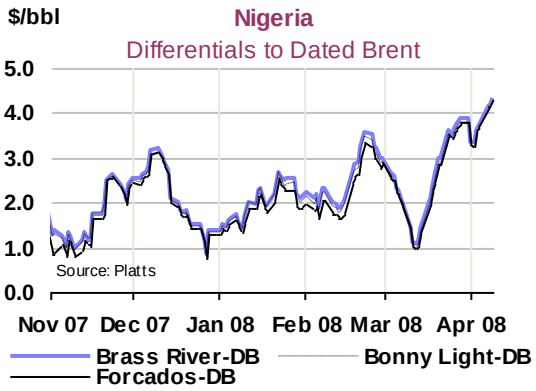
Overview

Crude futures trended down in the second half of March, dragged down by further signs of weakness in the US economy. But a disruption to exports due to fighting in southern Iraq, as well as renewed strength in refined product markets helped push back crude prices to new record highs in early April. In particular, gasoline cracks regained strength due to lower US stocks, apparent secondary restocking and the switch to harder-to-make summer specifications. Gasoline's strength, together with sustained high distillate cracks, pushed up refining margins from lows in late January/early February.

The Bear Stearns problems in mid-March triggered a steep sell-off as stock markets tumbled, with the NYMEX RBOB crack briefly turning negative for the first time ever. Disappointing jobs and other data emanating from the US, as well as Fed Chairman Ben Bernanke's admission that the US could see negative GDP growth in the first half of this year, pressured oil prices, though this was somewhat offset by a further weakening of the dollar. But the Fed also cut interest rates further in mid-March, adding to a fiscal stimulus package which, together with a weaker dollar, could have an impact on economic growth in the second half of the year.

Resilient oil prices in the face of prevailing macroeconomic uncertainty leave analysts two explanations: fundamental strength or pressure from fund flows. The weight of anecdotal evidence of heavy fund flows is important, but recent trends in open interest and a reduction in non-commercial longs (the net position has halved since early March) suggest other factors are at play. Certainly credit problems have been reducing available finance for producers or traders who want to hedge, and as they are predominantly short, this could have an upward impact on prices. From a fundamental perspective, we have seen little change in 1Q08 nominal stock levels since their fall in the second half of last year; China has been stepping up imports of crude and products; the distillate upgrading spread has seen an unprecedented widening; and traders remain confident that OPEC will step in to reduce production should prices fall – thought by some to be effectively providing a 'free' call option for speculators and a 'free' put option for producers.





With global seasonal refinery maintenance peaking in April (OECD maintenance culminated in March), tighter refined products have driven markets. Crack spreads for all products bar high-sulphur fuel oil have risen since mid-March, boosting refining margins, which had previously been very weak. Notably, gasoline improved sharply, with RBOB futures even hitting an all-time high in early April. US refinery utilisation fell to its lowest since after Hurricane Katrina hit in 2005, partly as a response to the weak margin environment, but also on unexpected outages. The distillate market remains supported by strong global demand and regional tightness – China has again seen product shortages in some provinces – while structurally, the world faces a distillate crunch.

Lastly, geopolitics served to underpin prices once again, as the battle for Basra resulted in pipeline outages, which briefly cut southern Iraqi crude exports. Month-on-month, Iraqi exports actually rose in March, and the situation in Basra and elsewhere appears to have calmed down, but the worry remains that the previously smooth flows to the southern ports may become less secure. A pipeline was set ablaze in Nigeria, where the tension in the Niger Delta continues to smoulder, but this did not lead to lower exports either. An oil workers' strike in Gabon was eventually resolved, but temporarily shut-in as much as 80-90 kb/d of crude production.

Spot Crude Oil Prices

The spot crude market was influenced by the renewed interest in gasoline-rich grades for the **US** market, while elsewhere, crudes with a high distillate cut were more sought after. Light sweet Nigerian crudes saw premia to Dated Brent rise to over $4/bbl since a low point in mid-March, also taking some strength from political tensions. WTI increased its margin over Dated Brent, but on a net product worth basis, domestic sweets such as LLS looked more attractive, thus likely curbing transatlantic flows of North Sea grades. Weak fuel oil margins pulled down medium sour Gulf Coast grades, such as Mars and Poseidon, which saw their discounts to WTI widen.

West African crudes were popular in **Asia** too, with a record 1.6 mb/d fixed to travel east for April. Of this, some 1.2 mb/d were reportedly heading for China, by far the largest volume it has ever imported

from that region and some 370 kb/d up from March. In China's case, its need is mainly for distillate-rich grades to compensate for a domestic shortfall, which has also caused record-high gasoil imports in recent months. Reportedly, the Qingdao refinery, which is due to start up this month, was planning to initially run on light sweet crudes before changing its diet to heavier, more sulphur-rich barrels.

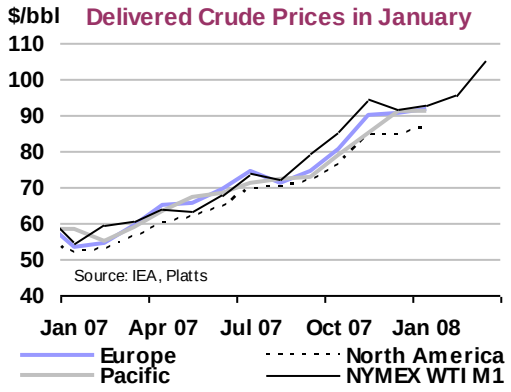
Spot Crude Oil Prices and Differentials

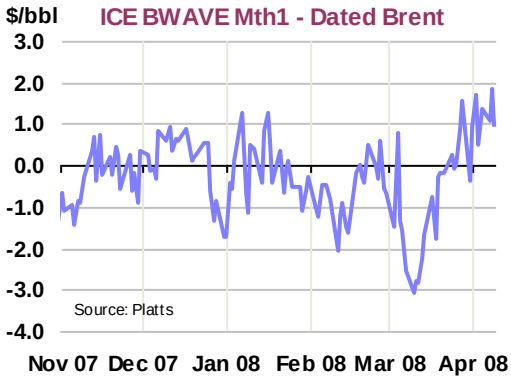
(monthly and weekly averages, $/bbl)

	Jan	Feb	Mar	Mar-Feb Avg Change	%	Week Commencing: 10 Mar	17 Mar	24 Mar	31 Mar	07 Apr
Crudes										
Dated Brent	92.00	95.04	103.66	8.63	9.1	107.88	102.97	101.83	101.20	105.49
Brent (Asia) Mth1 adjusted	92.18	95.03	103.06	8.03	8.5	105.16	104.38	102.22	102.26	105.21
WTI (Cushing) Mth1 adjusted	92.98	95.39	105.45	10.06	10.5	109.44	105.51	104.21	103.50	109.10
Urals (Mediterranean)	89.26	91.21	99.01	7.80	8.6	102.30	97.61	98.30	97.73	102.15
Dubai Mth1 adjusted	87.37	90.02	96.76	6.74	7.5	97.92	97.84	96.24	96.13	98.80
Tapis (Dated)	97.45	100.93	109.11	8.18	8.1	110.73	110.00	108.62	109.58	112.79
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	0.98	0.36	1.79	1.43		1.56	2.54	2.39	2.31	3.61
Urals (Mediterranean)	-2.74	-3.83	-4.66	-0.83		-5.58	-5.36	-3.53	-3.47	-3.33
Dubai Mth1 adjusted - Dated Brent	-4.63	-5.01	-6.91	-1.89		-9.96	-5.13	-5.59	-5.06	-6.69
Tapis (Dated)	5.45	5.89	5.45	-0.45		2.85	7.03	6.79	8.38	7.31
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.25	0.25	0.58	0.33		0.93	0.59	0.38	0.22	0.07
Forward WTI Cushing Mth1-Mth2 adj	0.34	0.11	0.91	0.79		1.27	1.30	0.52	0.51	0.54

Source: Platts

In **Europe**, refining margins indicated a growing advantage for complex plants to run medium sour Urals and its discount to Dated Brent narrowed sharply in both the Northwest European and Mediterranean markets. Urals also benefited from the strong surge of ICE BWAVE versus Dated Brent since mid-March, implying a disadvantage to those Mideast Gulf grades which compete with Urals in the Mediterranean and are priced off the former. As a consequence, Saudi Arabia reacted by cutting official selling prices (OSPs) in early April (the same applies to OSPs to the US, where Gulf Coast sour benchmark Mars is showing weakness).





Refining Margins

Refining margins mostly improved in March and early April as gasoline recovered, but chiefly as distillates showed sustained strength. Month-on-month, the greatest increase was in Singapore, but from the lowest base. European cracking margins also improved significantly, especially for Urals, and early April even saw Brent and Es Sider hydroskimming edging towards positive territory. In the US, margins were mixed, with the West Coast largely seeing downturns on greater relative gasoline weakness. On the Gulf Coast, coking and some cracking margins improved on better RBOB margins.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Jan 08	Feb 08	Mar 08	Mar 08-Feb 08	05 Mar	12 Mar	19 Mar	26 Mar	02 Apr
NW Europe	Brent (Cracking)	1.90	3.42	3.76	0.34	3.91	2.86	1.98	4.43	6.70
	Urals (Cracking)	2.47	4.19	5.41	1.21	5.02	4.50	4.53	6.21	7.16
	Brent (Hydroskimming)	-3.65	-3.06	-3.15	-0.09	-2.96	-4.43	-4.37	-2.40	-0.68
	Urals (Hydroskimming)	-5.49	-4.92	-4.21	0.71	-4.13	-5.37	-4.69	-3.43	-3.21
Mediterranean	Es Sider (Cracking)	2.37	4.94	5.56	0.62	5.93	5.27	5.40	4.99	7.10
	Urals (Cracking)	2.49	4.60	6.35	1.75	5.63	5.30	6.38	7.21	7.12
	Es Sider (Hydroskimming)	-3.36	-1.75	-1.84	-0.09	-1.06	-2.49	-1.62	-2.53	-0.50
	Urals (Hydroskimming)	-6.32	-5.22	-3.97	1.25	-4.06	-5.32	-3.94	-3.05	-3.48
US Gulf Coast	Bonny (Cracking)	-3.19	-1.58	-0.18	1.40	-0.92	-0.45	-0.82	0.86	1.90
	Brent (Cracking)	-3.94	-2.16	-2.19	-0.02	-1.84	-3.22	-3.87	-0.47	0.97
	LLS (Cracking)	-1.77	0.40	1.98	1.57	0.87	1.17	0.46	3.81	4.41
	Mars (Cracking)	-1.27	-1.49	-2.59	-1.10	-3.04	-4.17	-4.45	0.40	-0.56
	Mars (Coking)	4.93	6.90	8.35	1.46	6.58	6.99	6.96	11.10	11.01
	Maya (Coking)	6.81	10.76	11.72	0.96	10.42	11.06	10.55	13.67	14.12
US West Coast	ANS (Cracking)	-3.96	-0.20	-0.42	-0.22	0.70	-0.64	-2.61	1.23	0.87
	Kern (Cracking)	0.38	5.07	3.85	-1.22	7.74	5.49	0.88	4.76	2.99
	Oman (Cracking)	-7.24	-0.38	2.01	2.40	2.91	4.42	-0.35	2.10	3.02
	Kern (Coking)	8.95	16.93	13.78	-3.16	15.83	13.39	8.18	17.59	18.36
Singapore	Dubai (Hydroskimming)	-3.80	-3.74	-2.36	1.38	-3.50	-2.44	-2.57	-1.96	-1.25
	Tapis (Hydroskimming)	-6.14	-5.69	-4.57	1.12	-5.65	-5.14	-4.91	-3.53	-3.85
	Dubai (Hydrocracking)	1.49	2.50	5.02	2.51	3.30	5.01	5.11	5.19	6.34
	Tapis (Hydrocracking)	-2.66	-2.11	-0.78	1.34	-1.94	-1.21	-0.90	-0.07	-0.12
China	Cabinda (Hydroskimming)	-4.75	-4.86	-4.22	0.64	-5.45	-6.26	-3.66	-3.22	-2.00
	Daqing (Hydroskimming)	-8.37	-6.98	-5.76	1.21	-7.03	-7.42	-6.60	-3.55	-2.72
	Dubai (Hydroskimming)	-4.91	-4.62	-3.19	1.43	-4.46	-3.10	-3.28	-2.91	-2.22
	Daqing (Hydrocracking)	-2.86	-1.44	-1.10	0.33	-1.70	-2.14	-2.00	0.31	1.76
	Dubai (Hydrocracking)	0.34	1.62	4.17	2.55	2.31	4.35	4.37	4.20	5.34

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

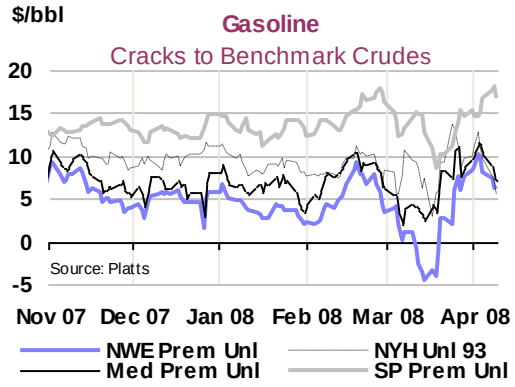
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.
Sources: IEA, Purvin & Gertz Inc.

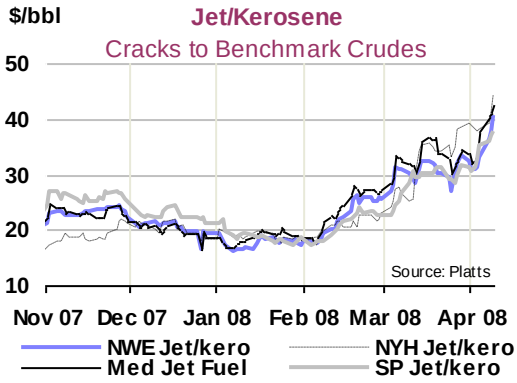
Spot Product Prices

As flagged above, the biggest refined product story was **gasoline**, which improved strongly relative to crude (albeit from a very low base), and saw the greatest percentage change since mid-March. Unseasonably low OECD refinery throughputs in February and March – partly as a result of economic run cuts – resulted in general product tightness. Above-average US gasoline stocks have consequently fallen more sharply than usual from an early-March peak. In Japan, the suspension of a highway-construction tax on road transport fuels appears to be causing increased consumer purchases in April, though the tax reportedly might be reinstituted at the end of the month. Meanwhile, China – until recently a net gasoline exporter – imported around 40 kb/d in March, adding some tightness to the Asia-Pacific market.

But **middle distillates** crack spreads saw the greatest gains in absolute terms, in most cases rising to record-high premia over benchmark crudes. Jet fuel cracks remain highest, but diesel and heating oil are close behind. Rather than any particular regional issue, the global market remains structurally tight, exacerbated by recent low refinery throughputs. Europe, which is short distillate, saw lower imports from the US and elsewhere, as cargoes were diverted to Latin America, South Africa and the Middle East, and Amsterdam-Rotterdam-Antwerp (ARA) gasoil stocks remain below average. In Asia, China again imported a high 150 kb/d of gasoil in March to cover shortages, while diesel sales in Japan were reportedly up in early April due to the road tax reduction (though mild weather meant lower kerosene

sales). Meanwhile, Indonesia will reportedly import 5.8 mb of gasoil in May, 1 mb more than in May last year. Lastly, S-Oil's Onsan refinery outage in South Korea meant lower regional supplies.





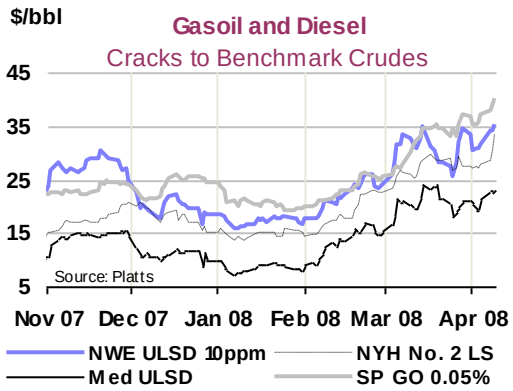
Fuel oil discounts to crude remained low by historical standards, but narrowed again after record-wide differentials in mid-March. Low-sulphur fuel oil picked up generally, and low-sulphur waxy residue (LSWR), predominantly used as boiler fuel by Japanese power utilities, saw its discount narrow to within $2.25/bbl versus Dubai – its strongest position since October 2005 on increased Japanese use. Overall, Japanese utilities are expected to use 50% more fuel oil and direct crude burn in the coming financial year (totalling around 400 kb/d), as nuclear power plants remain offline pending repair work and security verification. High-sulphur crack spreads were relatively unchanged on the month.

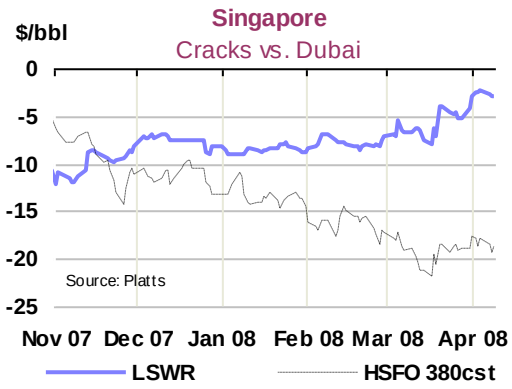
Spot Product Prices

(monthly and weekly averages, $/bbl)

	Jan	Feb	Mar	Mar-Feb		Week Commencing:					Jan	Feb	Mar
				Change	%	10 Mar	17 Mar	24 Mar	31 Mar	07 Apr			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	95.83	100.33	105.44	5.12	5.1	105.76	101.44	109.06	110.22	112.75	3.83	5.29	1.78
Naphtha	91.43	92.04	95.55	3.51	3.8	97.46	93.42	95.69	94.88	98.18	-0.57	-3.00	-8.12
Jet/Kerosene	109.62	117.30	134.38	17.08	14.6	138.04	134.51	132.86	132.95	141.80	17.62	22.27	30.72
ULSD 10ppm	109.25	116.92	134.66	17.74	15.2	140.30	132.71	132.29	132.57	139.64	17.25	21.88	31.00
Gasoil .1%	107.83	114.37	127.80	13.43	11.7	130.97	127.16	126.41	126.13	133.74	15.83	19.34	24.14
LSFO 1%	77.79	76.22	80.81	4.60	6.0	80.32	80.66	81.97	82.45	88.92	-14.21	-18.82	-22.85
HSFO 3.5%	68.53	67.68	73.29	5.61	8.3	73.64	72.63	73.68	73.15	76.93	-23.46	-27.35	-30.37
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	95.61	99.04	104.83	5.78	5.8	105.77	103.12	108.46	108.35	110.84	6.35	7.84	5.82
Naphtha	91.19	91.95	95.34	3.40	3.7	97.28	93.21	95.64	94.97	98.35	1.93	0.74	-3.66
Jet Aviation fuel	108.00	115.12	132.08	16.97	14.7	134.84	133.39	131.09	131.87	142.86	18.74	23.91	33.07
Gasoil .2%	106.87	115.47	128.94	13.48	11.7	132.78	128.07	126.55	125.70	132.44	17.61	24.26	29.94
LSFO 1%	75.94	75.01	80.17	5.16	6.9	79.62	80.72	81.42	81.67	85.43	-13.32	-16.20	-18.84
HSFO 3.5%	66.71	66.88	73.90	7.02	10.5	73.47	73.87	74.69	73.66	77.01	-22.55	-24.33	-25.11
New York Harbour, Barges											**Differential to WTI**		
Super Unleaded	101.98	104.00	113.89	9.89	9.5	117.65	111.40	115.49	114.37	116.70	9.00	8.60	8.43
Unleaded	97.99	100.09	104.28	4.19	4.2	107.49	100.74	104.70	105.21	109.61	5.01	4.70	-1.17
Jet/Kerosene	111.92	116.21	137.35	21.14	18.2	139.38	140.18	140.13	141.89	148.23	18.94	20.81	31.90
No. 2 (Heating Oil)	107.29	110.94	128.67	17.73	16.0	130.01	130.94	131.26	127.13	131.64	14.31	15.55	23.22
LSFO 1%	74.39	70.64	72.62	1.98	2.8	72.67	71.85	72.96	74.45	78.40	-18.59	-24.75	-32.83
No. 6 3%	69.08	68.08	72.77	4.69	6.9	73.41	72.86	72.82	72.32	74.90	-23.90	-27.32	-32.69
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	100.51	105.07	109.78	4.71	4.5	112.32	107.43	109.74	111.39	116.36	13.14	15.05	13.03
Naphtha	93.13	95.07	97.61	2.53	2.7	98.88	96.39	96.91	97.88	99.81	5.76	5.05	0.85
Jet/Kerosene	106.18	111.10	125.37	14.26	12.8	127.55	128.53	125.83	128.27	134.92	18.81	21.08	28.61
Gasoil .5%	105.70	111.20	126.19	14.99	13.5	127.54	129.55	127.31	127.78	132.44	18.33	21.18	29.43
LSWR Cracked	78.78	82.07	90.72	8.64	10.5	91.19	91.46	91.34	93.25	96.05	-8.59	-7.95	-6.04
HSFO 180 CST	73.15	73.11	77.46	4.36	6.0	77.35	77.62	77.53	78.86	81.60	-14.21	-16.92	-19.29
HSFO 380 CST 4%	73.96	73.65	77.44	3.79	5.1	77.63	77.76	77.32	77.92	80.31	-13.41	-16.37	-19.32

Source: Platts





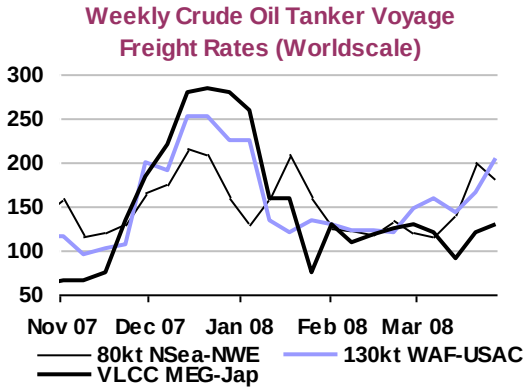
End-User Product Prices in March

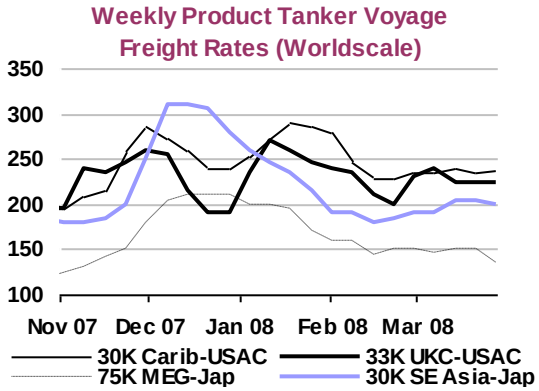
End-user product prices *denominated in US dollars*, ex-tax, increased on average by around 10% in IEA countries surveyed in March. However the depreciation of the US dollar accounted for a large part of this increase as the euro and the yen rose by almost 5% and 6%, respectively vis-à-vis the dollar in March. Diesel and gasoline ex-tax prices in *national currencies* rose on average by 8.8% and 4.3% respectively. US consumers experienced a significant jump of 16.6% in the price of automotive diesel and 7.8% in the price of gasoline, in contrast to Japan where the end-user prices of diesel as well as gasoline remained unchanged in March 2008, expressed in yen. In Canada, the diesel price in domestic currency also grew sharply by 13.5% in March. In Europe, heating oil prices rose by 8% and low-sulphur fuel oil prices rose by 3.3%, both in euros, ex-tax.

Freight

Dirty tanker rates rose in the second half of March, most notably in the Mediterranean, North Sea and Atlantic basin. Vessel fundamentals tightened on rising long-haul tanker demand, following increases in both eastbound West African trades and westbound volumes leaving the Middle East Gulf. Rates reportedly corrected downwards in early April, however, as vessel supply increased in these areas. Clean rates were almost flat in March on high Asian vessel availability and low US gasoline imports.

Demand for crude tankers in the Atlantic basin rose in March, supported by record-high purchasing of West African crude by Far Eastern refiners in March and April. Chinese refiners reportedly bought 38 West African cargoes for loading in April (equivalent to 1.2 mb/d, the highest volume ever), compared with 30 for March. US refiners may have also been looking to spot charter extra vessels of gasoline-rich West African crude during recent periods of maintenance. Suezmax rates from West Africa to the US Atlantic coast increased from $21/tonne at the end of February to over $29/tonne in the last week of March, although early-April reports suggest that rates subsequently softened as vessel supply increased.





Vessel fundamentals were also extremely tight in the Mediterranean in March. Tanker supply was impeded by minor transit delays in the Turkish Straits, and competition for tonnage was fierce. With limited ballasting from the Mediterranean, North Sea vessel availability was also reduced as a result. Benchmark Aframax charter rates for North Sea to North Europe peaked at $12.64/tonne in late-March, having started the month nearer $7/tonne.

VLCC rates in the Middle East Gulf were firmer in late-March, rising from a mid-March low of $16/tonne to finish the month over $23/tonne on the benchmark route to Japan. Tanker movement reports suggested that westbound volumes from the Gulf rose significantly in March, possibly as a result of lower formula prices for all Saudi grades heading to the US. Swings to longer-haul western destinations translate into aggregate increases in tanker demand which support all rates in the region. Higher vessel supply reportedly led a downward correction to rates in early April. Reports in March of the first VLCC being sold for scrap since 2004 were the first signs that scrapping economics may have become more favourable than conversion (for example into dry bulk carriers). A new phase of deletions could eat into the large growth in fleet capacity foreseen in the medium term and add long-term support to freight rates.

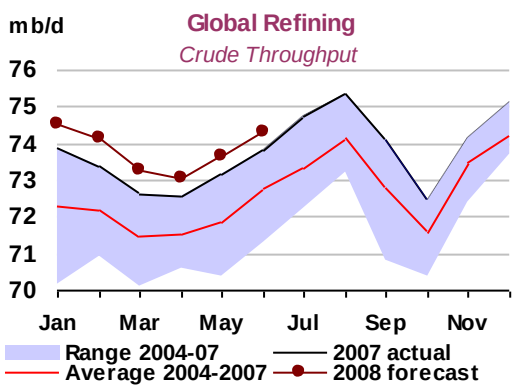
Clean tanker rates were almost flat in March. Demand for product imports remains high in China, but the notable March rise in light distillate stocks seen in independent storage in Singapore may have been indicative of an influx of clean vessels into the region. With US gasoline imports below average throughout March, 33,000-tonne clean tanker rates dropped nearly $2/tonne in March to finish at just over $25/tonne.

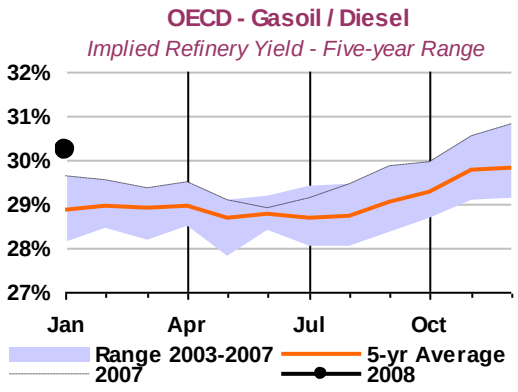
REFINING

Summary

- **Global refinery throughput weakened in March,** as poor margins curbed crude runs in all OECD regions. Estimated 1Q08 global throughput is unchanged at 74.0 mb/d, as stronger-than-expected February crude runs were offset by weaker January and March throughput estimates. Crude throughputs in 2Q08 are forecast to average 73.7 mb/d, 0.2 mb/d lower than last month's report.

- **OECD crude throughput averaged 38.4 mb/d in 1Q08, 0.1 mb/d higher than estimated last month.** Upward revisions to January and February data more than offset the weaker-than-forecast March US throughput. OECD throughput in 2Q08 is pegged at 38.1 mb/d, 0.1 mb/d lower than last month's projection as the lower demand forecasts are partly offset by reduced maintenance assumptions.





- **OECD gasoil/diesel yields declined slightly in January from December levels,** but remain well above the five-year range. Weaker jet/kerosene yields in January in the OECD Pacific and North America, were the corollary of the stronger gasoil/diesel yields. In Europe fuel oil yields suffered as recently commissioned upgrading capacity returned to full service, increasing light product yields. Similarly fuel oil yields slipped below the five-year range in North America, driven by declines across-the-board, most noticeably in Mexico.

- **Chinese state oil companies continue to operate refineries close to capacity** to meet strong demand growth and are increasingly relying on product imports to address shortages. At current oil prices, 2008 will see a deterioration in refining economics compared with last year, without further action by government to raise prices or reduce import costs.

Global Refinery Throughput

Refining activity remained weak in OECD regions during March, compared with seasonal norms, as the poor margin environment continued to deter refiners from maximising crude runs. North American refineries were particularly hard-hit, but reports suggest that economic run cuts affected crude runs in OECD Europe and the Pacific and in some non-OECD Asia countries.

2Q08 global crude throughput forecasts have been revised down, reflecting a mixture of lower demand forecasts and higher maintenance estimates in some regions (notably China and the FSU). The quicker-than-expected recovery in Nigerian crude runs, following the re-start of two mothballed refineries, and a reassessment of Japanese maintenance plans in 2Q08 partly offset these downward adjustments to our forecasts.

In the US, refiners cited the combination of unplanned outages and economic run cuts, brought on by poor gasoline cracks and high gasoline stocks, for much of the slowdown in crude runs. However it is noteworthy that the build in gasoline stocks, which reached 15-year highs in February, also reflected preparations by refiners to cut throughputs in March because of planned maintenance. Crude run cuts in the US (and elsewhere) restrict not only gasoline production, but also middle distillate supplies, at a time when diesel, gasoil and jet fuel cracks are at, or near, record levels. Hence the move by some US refiners to limit catalytic cracking throughputs, which will have a greater impact on gasoline supplies than middle distillates.

Furthermore, the increased volume of ethanol blending in the US (see *Ethanol Leads Where Conventional Oil Lags*) would also appear to be have exerted downward pressure on margins in recent weeks. However, the switch to lower-volatility summer specification gasoline will reduce the range of gasoline components available to refiners to produce gasoline blend stock for use with ethanol. Consequently, US gasoline yields will seasonally come under pressure as fuel volatility constraints tighten the US domestic gasoline pool. Ultimately this could, in turn, support margins over the summer months and lead to increased imports of low volatility gasoline blending components.

Global Refinery Crude Throughput[1]

million barrels per day

	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
OECD Crude Runs									
North America	17.8	18.1	18.3	18.0	17.7	*17.4*	*17.6*	*18.1*	*18.2*
Europe	13.3	13.3	13.9	13.7	13.5	*13.3*	*13.1*	*13.3*	*13.4*
Pacific	6.7	7.3	7.5	7.4	7.2	*6.9*	*7.1*	*6.7*	*6.8*
Total OECD	37.8	38.8	39.8	39.1	*38.3*	*37.7*	*37.8*	*38.1*	*38.3*
NON-OECD Crude Runs									
FSU	5.4	5.9	*5.9*	*5.8*	*6.0*	*5.8*	*5.6*	*5.9*	*6.0*
Europe	0.8	0.8	*0.8*	*0.8*	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.5	6.7	*6.9*	*6.7*	*6.9*	*6.8*	*6.5*	*6.4*	*6.7*
Other Asia	8.1	8.3	*8.2*	*8.4*	*8.5*	*8.3*	*8.2*	*8.2*	*8.2*
Latin America	5.3	5.4	*5.2*	*5.4*	*5.4*	*5.3*	*5.5*	*5.6*	*5.6*
Middle East	6.1	6.0	*6.1*	*5.9*	*6.0*	*6.1*	*6.1*	*6.1*	*6.2*
Africa	2.4	2.4	*2.4*	*2.5*	*2.4*	*2.5*	*2.5*	*2.5*	*2.5*
Total Non-OECD	34.7	35.4	*35.4*	*35.4*	*35.8*	*35.6*	*35.2*	*35.6*	*36.0*
Total Crude Runs	*72.5*	*74.2*	*75.1*	*74.5*	*74.1*	*73.3*	*73.0*	*73.7*	*74.3*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

The poor state of hydroskimming refinery margins, estimated in this report to have averaged -$4/bbl on a full-cost basis for Urals crude in Europe during March, kept the pressure on less complex refiners to minimise crude throughputs. At this level even marginal economics do not support incremental crude runs by hydroskimming refineries. Offsetting weak gasoline (and a heavily negative fuel oil) crack has been the continued strength in middle distillate cracks. These have been supported by the continued strength of demand for diesel and the tighter sulphur specifications for heating oil in Europe. The recovery in gasoline cracks in late March and early April further bolstered already strong complex refining margins, suggesting that cracking refineries in Europe and Asia will maximise runs where possible.

1Q08 global refinery crude throughput is largely unchanged from last month's report, at 74.0 mb/d. The weaker-than-forecast US crude throughput in March is offset by increased Middle Eastern and OECD Pacific crude throughputs in February. OECD crude runs are expected to decline by 0.3 mb/d year-on-year, driven by economic run cuts and heavy US maintenance. Non-OECD crude runs are forecast to register an annual increase of 1.0 mb/d during 1Q08, largely driven by China (+0.4 mb/d) and other Asia (+0.3 mb/d).

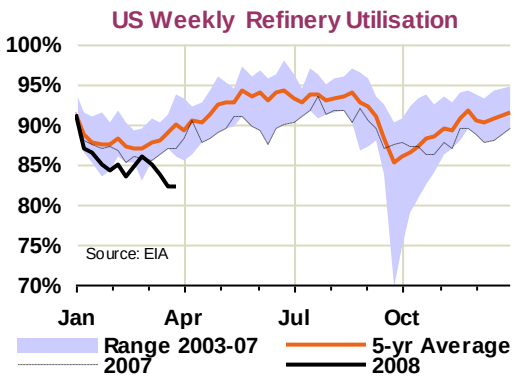
2Q08 global refinery crude runs are forecast to average 73.7 mb/d, 0.2 mb/d lower than estimated in last month's report. Year-on-year growth is trimmed to 0.5 mb/d, half the level of the first quarter, on the back of the lower demand estimates for North America and upwardly revised maintenance estimates for the US and China. The impact of these adjustments is partially offset by lower maintenance estimates for Japan and the faster-than-expected ramp-up in Nigerian refinery throughput.

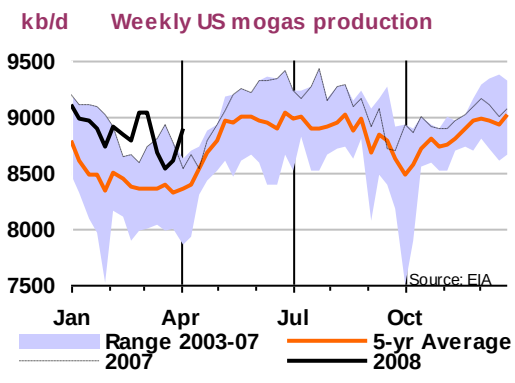
Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Sep 07	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	*Jan 08*	*Feb 07*	Feb 08	Feb 07
OECD North America										
US[2]	15.22	14.93	15.14	15.19	14.80	14.63	-0.17	0.20	83.84	82.94
Canada	1.74	1.62	1.72	1.85	1.97	1.85	-0.12	0.08	91.74	87.98
Mexico	1.13	1.26	1.24	1.23	1.25	1.18	-0.07	-0.08	76.65	71.96
Total	18.09	17.81	18.10	18.27	18.02	17.66	-0.36	0.19	84.07	83.34
OECD Europe										
France	1.64	1.54	1.75	1.73	1.78	1.62	-0.16	-0.09	82.83	87.34
Germany	2.30	2.24	2.21	2.31	2.26	2.20	-0.05	-0.10	91.07	95.37
Italy	1.85	1.82	1.73	1.95	1.87	1.88	0.01	-0.05	80.36	82.57
Netherlands	1.08	1.02	0.94	1.08	1.00	0.94	-0.06	-0.03	77.16	79.92
Spain	1.16	1.08	1.07	1.14	1.20	1.21	0.01	0.06	94.86	89.94
UK	1.57	1.62	1.55	1.52	1.48	1.52	0.03	0.10	80.45	75.16
Other OECD Europe	4.06	4.01	4.10	4.22	4.07	4.12	0.05	-0.08	87.70	89.35
Total	13.67	13.33	13.34	13.94	13.65	13.48	-0.17	-0.19	85.43	86.64
OECD Pacific										
Japan	3.66	3.69	4.03	4.27	4.13	4.08	-0.06	-0.03	87.17	87.81
Korea	2.35	2.30	2.58	2.57	2.53	2.37	-0.16	-0.15	86.56	91.95
Other OECD Pacific	0.68	0.67	0.70	0.71	0.77	0.72	-0.05	0.02	89.08	87.20
Total	6.69	6.66	7.31	7.54	7.43	7.16	-0.27	-0.16	87.16	89.13
OECD Total	38.44	37.81	38.75	39.75	39.10	38.30	-0.80	-0.16	85.11	85.56

1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50

OECD North American crude throughput has been revised down by 0.3 mb/d for March as weekly data for the US, showed that percentage utilisation rates hovered in the low 80's for much of the month. US refiners trimmed crude throughput progressively through the first half of March, reaching a low of 14.1 mb/d for the week ending 21 March, the lowest weekly level of throughputs since March 2006. Downtime at upgrading units, both planned and unplanned, and the poor economics for cracking refineries until late in the month left refiners with little reason to return units quickly from shutdown, with economic run cuts accounting for up to 400 kb/d of the reduction in crude runs. Comments by Valero indicated that by mid-March, 255 kb/d of its cracking capacity was offline, of which we estimate around 150 kb/d was planned



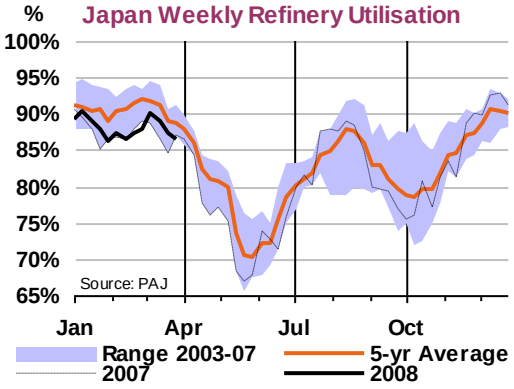


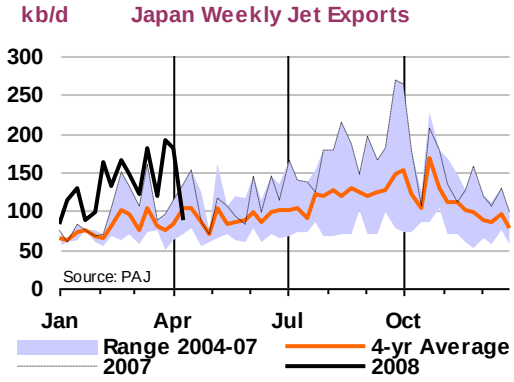
Operational problems eased in Canada with both ExxonMobil and Shell refineries completing repairs which have hampered product supply in recent weeks. Gulf and West Coast throughputs held up above February lows, while Midwest throughputs fell mid-month to their lowest level in nearly four years. East Coast March crude runs revisited the four-year lows seen in mid-February.

2Q08 North American crude throughput forecast has been reduced by an average of 0.4 mb/d, to 18 mb/d, which is 0.2 mb/d below year-ago levels and reflects the weaker demand outlook, and small adjustments to the forecast levels of planned maintenance. Maintenance on coking units is expected to increase in April with Valero, Chevron, and CITGO, amongst others, undertaking work to improve reliability, energy efficiency or expand coking capacity. Regional crude runs are forecast to reach 18.2 mb/d by June as US throughputs recover to 15.3 mb/d.

1Q08 OECD Pacific crude runs have been revised up following higher-than-expected Australian crude throughput. Despite the widely reported operational problems at several refineries, provisional data suggest that Australian refineries averaged 0.6 mb/d in February, slightly ahead of our 0.5 mb/d estimate. January crude throughput was also stronger than last month's provisional data indicated. Run cuts remained a constraint during March at Japanese and Korean refineries, although the tight distillate market in Asia eased the impact of weaker gasoline and fuel oil cracks. This may have allowed refiners to raise runs in late March, ahead of planned seasonal maintenance in the second-quarter.

The unplanned shutdown of S-Oil's 520 kb/d Onsan refinery in late March has further tightened regional distillate markets and should support margins over the coming weeks, following its declaration of force majeure on over 50 kb/d of April gasoil exports. Also contributing to the higher 1Q08 estimate, weekly Japanese data for March suggest that crude runs averaged around 4.1 mb/d slightly ahead of our forecast of 4.0 mb/d.

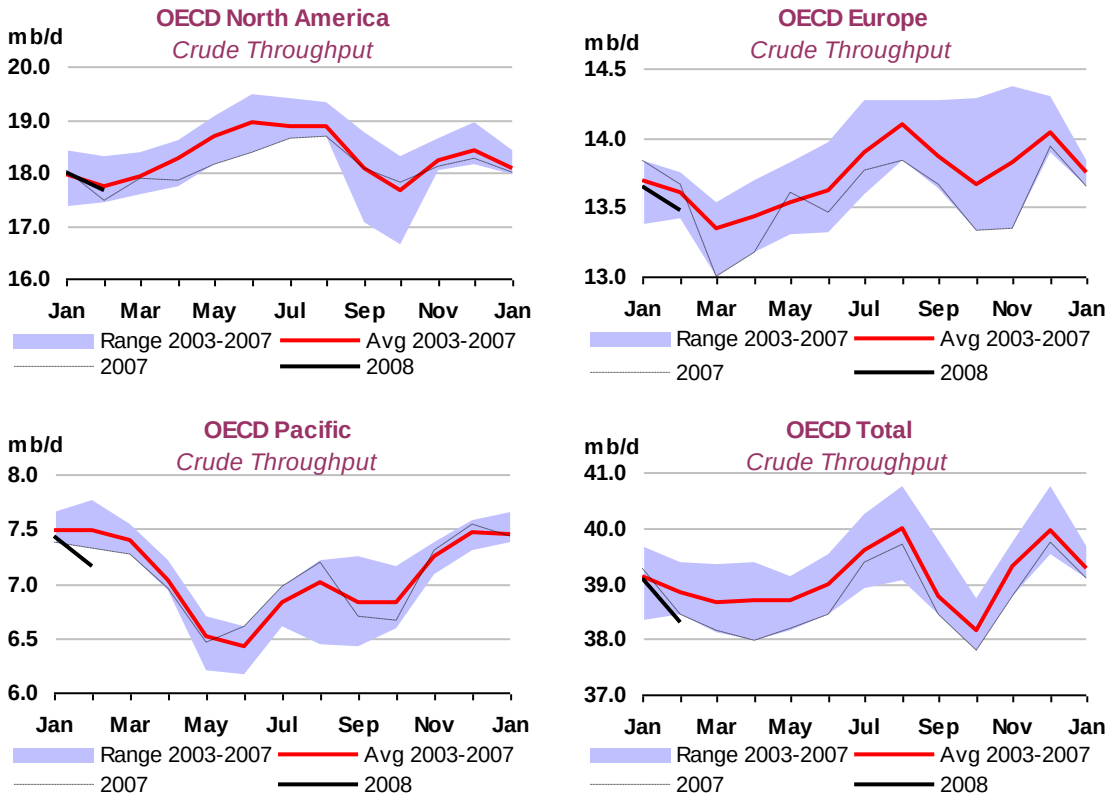




2Q08 OECD Pacific throughputs are forecast to average 6.9 mb/d, up 0.2 mb/d from last month's report, following reduced maintenance assumptions for April and May in Korea and Japan and despite the continued operational problems at S-Oil's refinery into early April. 2Q08 Korean maintenance is now expected to peak in June and we have lowered our crude throughput estimates for the month accordingly. Furthermore, Nippon Oil has reported it will increase processing of crude on behalf of PetroChina by 40% to 70 kb/d, for the business year commencing April 2008, from 50 kb/d in the previous business year. This is but one of the many indications of the changing nature of the Japanese refining industry, which includes:

- The continued rise in jet fuel exports;
- the fast-approaching industry consolidation and rationalisation and;
- the entry of new operators (such as the purchase by Petrobras of the Okinawa refinery).

European crude throughput fell in February to 13.5 mb/d, according to preliminary data, as run cuts and maintenance reduced activity levels. Estimated March crude throughputs have been revised slightly higher, following a reappraisal of maintenance during the month. We have carried forward this assumption of lower maintenance through April and May, raising average 2Q08 forecast crude runs by 0.1 mb/d to 13.3 mb/d. The strength in European distillate markets, highlighted last month, has increased following a fire at the residue hydrocracker at Neste's Porvoo refinery, with reports suggesting it may be out of service until late May.



The improvement in European distillate cracks (to record levels) also reflects the low gasoil stocks in the ARA and French markets and could allow some refiners who previously reduced throughputs to raise them again to meet the need for incremental distillate supplies in the region. German refinery crude throughput remains steady at around 2.2 mb/d in March, despite ongoing supply problems for some refineries connected to the Druzhba pipeline. Currently, there appears to be ample availability of seaborne Urals cargoes to offset the shortfall, while refineries on the southern leg of the pipeline are also reported to be well supplied.

Chinese crude runs in January and February were 0.1 mb/d below our estimates, at 6.8 mb/d. Some refiners suggest this was the result of the cold weather seen in late January and early February, which disrupted operations. Consequently, we have revised down our 1Q08 forecast to 6.8 mb/d, which represents growth of 0.4 mb/d on the previous year.

Chinese 2Q08 forecasts have been similarly reduced by 0.1 mb/d to 6.6 mb/d following upward revisions to our forecast for maintenance during the quarter. 2Q08 growth will turn negative in the face of the expected maintenance programme, which we estimate to average 0.2 mb/d. Consequently we expect that it is likely to necessitate increased imports of gasoil, jet and gasoline over the coming months. However, it remains possible that government pressure will reduce actual maintenance during this period if recent product shortages worsen.

Asian crude throughput forecasts are largely unchanged for the first half of the year. Indian crude runs slipped slightly in February from January's record level, while reports indicate that CPC implemented run cuts at its 500 kb/d refinery in Chinese Taipei because of weak margins.

The Burden of Maintaining Supply in China's Regulated Market

Despite the many protests by Chinese refiners that they are suffering from the impact of controlled product prices, the results for China's largest refiner Sinopec suggest that conditions are not all that dire. Sinopec reported a full-year loss in refining of $1.5bn. Against this loss the government is reported to have paid about $1.7bn in subsidies. In 2007 Sinopec refined 1.1 billion barrels of oil, suggesting the average loss was around $1.3/bbl. Over the same time period complex refineries in liberalised markets have seen margins average from $4-11/bbl, suggesting that the lost profits are in the order of $5-12bn. However, much of the loss occurred in the fourth-quarter 4Q07, suggesting the loss was around $5/bbl. Given the development of crude prices over 1Q08 the refining operating losses for 1Q08 could increase to $3bn.

However, not all refiners have benefited from such government largesse. Many independent and teapot refineries have stopped processing crude and fuel oil because of unfavourable economics. The product shortages that have re-emerged in recent weeks are partially a result of the lack of supplies by these marginal units. Although the Chinese government has long sought the closure of such small-scale capacity, it is ironic that lower fuel oil imports are effective being replaced with stronger diesel imports, adding to distillate market tightness. State oil companies have provided subsidised feedstock and crude to independent refiners, or alternatively have guaranteed the purchase of refined products at price levels that are high enough to encourage incremental crude runs. However, this is also reported to be part of a wider move to consolidate the refining sector, with some suggestions that CNOOC, in particular, is looking to increase its refining assets to balance its upstream portfolio. Given the poor economics that some independent refiners face, the opportunity to combine their business with a larger partner may seem an attractive proposition, especially if the buyer effectively controls the access to crude supply.

The product shortages that have re-emerged in recent weeks are raising the prospect of continued, and most likely, increased product imports over the course of 2Q08 and in the run up to the Olympics. Unsurprisingly, the two state refiners are pushing for an extension of the suspension of VAT on product imports beyond the end-April deadline for its expiry. To fulfil the mandate to maintain inland supply some state refiners have resorted to blending petrochemical feedstock, such as toluene, into the gasoline pool to meet demand. Within a liberalised market place this can be an expensive process (last seen in the US just after the rapid switch to ethanol blending to offset the increased volatility of the ethanol) but in a market where gasoline, gasoil and jet/kerosene prices are regulated, while petrochemical feedstock prices are not, this represents a significant mark-down in value and signals a strong commitment to boost supplies where necessary.

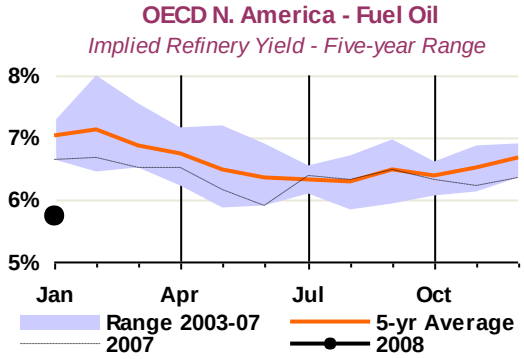
If current world oil prices are maintained and the government resists pressure to further increase the regulated domestic prices because of inflationary pressures, then Sinopec's 2008 refining operating loss could exceed $14bln. This is far in excess of the levels seen in previous years, and a significant increase in the subsidy faced by the Chinese government.

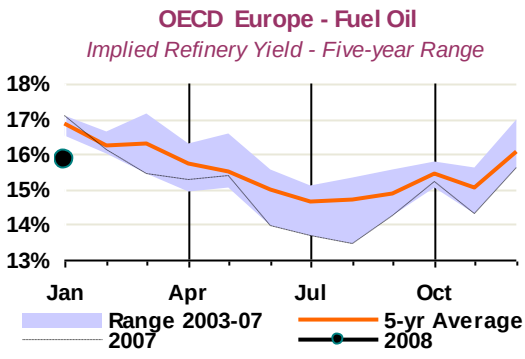
Middle East crude runs continue to exceed our forecasts, as Iran and Iraq reported stronger-than-expected results for February. Iranian data shows runs slightly higher at 1.7 mb/d, as planned maintenance work at the Bandar Abbas refinery slipped into April from January/February. Similarly, Iraqi data puts domestic crude runs at almost 0.5 mb/d, ahead of our 0.4 mb/d estimate. Consequently, we have carried forward the stronger crude throughputs to March, which results in a 0.1 mb/d increase in the 1Q08 estimates.

African throughput forecasts are revised higher for much of 1H08, following the quicker-than-expected re-start of the two mothballed Nigerian refineries. The re-start of the Warri and Kaduna refineries follows two years spent idle after sabotage shut the crude lines supplying them. With the phased re-start in January and February of the pipelines, crude processing has again commenced and is thought to have averaged 120 kb/d in February, rising to 230 kb/d in March. The fire in late March on the line supplying the 210 kb/d Port Harcourt refinery has reduced our estimate for April crude throughput, but overall 2Q08 throughputs are revised up by 0.1 mb/d, although further disruption could re-emerge if social unrest flares up again.

OECD Refinery Yields

OECD gasoil/diesel yields remained above the five-year range in January, but declined slightly when compared with December levels in all three regions. In the Pacific problems with Caltex's residue hydrocracker reduced Korean gasoil/diesel yields and simultaneously raised fuel oil yields, while in Japan the switch away from gasoil to kerosene appeared the main driver. European gasoil yields were only marginally weaker when compared with December, but up 1.2 percentage points on an annual basis to 37.7%. Lower yields in the UK, Hungary, France, Denmark and Finland, due to a combination of maintenance, and unplanned outages, were offset by higher yields in Spain, Sweden and Portugal.





Fuel oil yields were significantly weaker in North America and Europe, compared with previous year levels, reflecting the exceptionally weak fuel oil cracks. However, North American data may be subject to upward revision in coming months, as Mexican fuel oil yields appear too far below the five-year-range. OECD Pacific fuel oil yields were not as weak as January 2007, reflecting the impact of the operational problems in Korea, and possibly the increased demand for fuel from Japanese utilities.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.5	25.0	25.1	25.3	25.3	25.2
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	14.9	15.4	15.6	15.3	15.4	15.0	15.4	15.5	15.3
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.6	8.3	9.1	7.9	7.9	8.8	8.4
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	49.9	49.1	49.5	48.0	48.6	49.6	48.9
NON-OECD DEMAND																	
FSU	3.9	3.9	4.0	3.9	4.1	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.2	4.3	4.2
Europe	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.3	7.2	7.3	7.7	7.5	7.6	7.5	7.7	8.1	7.8	7.9	7.9
Other Asia	8.7	8.8	9.0	9.0	8.7	9.0	8.9	9.2	9.3	9.0	9.4	9.2	9.5	9.6	9.3	9.6	9.5
Latin America	5.0	5.1	5.1	5.3	5.4	5.4	5.3	5.4	5.6	5.7	5.7	5.6	5.6	5.8	5.9	5.9	5.8
Middle East	5.7	6.0	6.2	6.3	6.6	6.3	6.3	6.5	6.6	6.8	6.5	6.6	6.8	6.9	7.2	7.0	7.0
Africa	2.8	2.9	3.0	3.0	2.9	2.9	2.9	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	33.1	34.2	35.2	35.5	35.6	35.8	35.5	36.4	36.9	36.9	37.3	36.9	37.8	38.2	38.3	38.8	38.3
Total Demand[1]	82.5	83.9	85.6	83.6	84.6	85.6	84.9	86.1	85.1	85.6	87.1	86.0	87.3	86.3	86.9	88.4	87.2
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.2	14.1	14.0	14.4	14.2
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.5	4.3	4.6	4.6
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.7	19.8	19.8	19.4	19.1	19.8	19.5
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.8	12.8	12.8	12.9	13.0	13.2	13.5	13.2
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.9	3.9	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8
Latin America	4.1	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.3	4.0	4.1	4.2	4.1	4.1
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	28.0	27.9	27.7	27.7	27.8	27.7	28.1	28.4	28.7	28.2
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.5	50.3	49.8	50.1	50.2	50.1	50.2	50.3	51.4	50.5
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	50.0	49.8	49.3	49.7	49.7	50.1	50.2	50.3	51.4	50.5
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.2	30.6	31.6	30.7	32.3				
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.6	5.2
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	35.0	35.4	36.4	35.5	37.2				
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.5	36.0	36.8	35.9	37.2				
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.6	85.2	85.2	86.5	85.6	87.3				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-1.0	0.2	-0.9	0.7	0.1	-1.0	-0.3					
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1					
Total	0.2	0.2	0.0	0.7	1.2	-0.9	0.3	-0.8	0.7	0.2	-1.0	-0.2					
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.1	-0.2	0.2	0.0					
Miscellaneous to balance[8]	0.7	0.6	-0.3	0.9	-0.4	1.3	0.4	0.1	-0.4	-0.4	0.1	-0.2					
Total Stock Ch. & Misc	0.9	0.8	-0.2	1.5	1.1	-0.2	0.6	-0.5	0.2	-0.4	-0.6	-0.3	0.0				
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	29.0	30.0	28.2	28.9	29.4	29.1	30.8	30.0	31.0	32.2	31.0	32.3	31.1	31.4	31.4	31.5
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.9	29.6	30.6	32.3	30.8	32.4	31.2	31.5	31.5	31.6
"Call" incl. Angola & Ecuador[2]	29.5	30.8	32.0	30.0	30.9	31.4	31.1	31.3	30.5	31.5	32.5	31.5	32.3	31.1	31.4	31.4	31.5
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.3	31.7	30.9	30.5	32.7	31.5	31.4	30.1	31.1	32.6	31.3	32.4	31.2	31.5	31.5	31.6

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.4	-0.2	-0.3	-0.3	-0.3
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	0.1	-	-0.5	-0.2	-0.3	-0.3	-0.3
NON-OECD DEMAND																	
FSU	-	-0.1	-	-	-	-0.2	-0.1	0.1	0.2	0.2	0.2	0.1	-0.2	0.1	0.2	0.2	0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1
Other Asia	-	-	-	-	-	-	-	-	0.1	-	-	-	0.1	0.1	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1	0.1
Middle East	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-	-0.1
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-0.2	-0.1	0.1	0.2	0.1	0.2	0.1	-0.2	0.1	-	0.1	-
Total Demand	-	-	-	-	-	-0.2	-	-	0.2	0.1	0.2	0.1	-0.6	-0.2	-0.3	-0.2	-0.3
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.1	-0.1	-	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.1	-0.1	-	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-					
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-					
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-					
Total Supply	-	-	-	-	-	-	-	-	-	-	-	-					
STOCK CHANGES AND MISCELLANEOUS REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-0.1	0.1	-0.1	-					
Government	-	-	-	-	-	-	-	-	-	-	-	-					
Total	-	-	-	-	-	-	-	-	-0.1	0.1	-0.1	-					
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-	-	-					
Miscellaneous to balance	-	-	-	-	-	0.2	-	-	-0.1	-0.2	-0.2	-0.1					
Total Stock Ch. & Misc	-	-	-	-	-	0.2	-	-	-0.2	-0.1	-0.3	-0.1					
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-0.2	-	-	0.2	0.1	0.2	0.1	-0.4	-0.1	-0.2	-0.2	-0.2
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	0.1	-0.1	0.1	-	-0.5	-0.1	-0.3	-0.2	-0.3

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.31	25.67	25.43	25.49	25.60	25.55	25.00	25.13	25.27	25.31	25.18
Europe	15.61	15.97	15.24	15.60	15.73	15.63	15.19	14.93	15.39	15.61	15.28	15.42	15.02	15.41	15.53	15.35
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.64	8.27	9.07	7.90	7.92	8.79	8.42
Total OECD	49.67	50.43	48.12	48.99	49.84	49.34	49.69	48.16	48.70	49.86	49.10	49.50	48.05	48.60	49.63	48.94
FSU	3.90	4.03	3.85	4.14	4.22	4.06	4.08	3.89	4.16	4.26	4.10	4.11	3.96	4.24	4.34	4.16
Europe	0.73	0.79	0.74	0.69	0.74	0.74	0.81	0.75	0.70	0.75	0.75	0.83	0.77	0.72	0.77	0.77
China	6.69	7.02	7.35	7.22	7.26	7.21	7.33	7.73	7.52	7.59	7.54	7.74	8.05	7.84	7.94	7.89
Other Asia	8.79	9.01	9.02	8.72	8.95	8.92	9.22	9.34	9.03	9.37	9.24	9.55	9.58	9.28	9.63	9.51
Latin America	5.11	5.14	5.29	5.40	5.38	5.30	5.38	5.55	5.69	5.69	5.58	5.63	5.78	5.93	5.93	5.82
Middle East	6.04	6.20	6.26	6.57	6.32	6.34	6.47	6.58	6.80	6.51	6.59	6.79	6.89	7.23	6.95	6.97
Africa	2.95	2.97	2.96	2.86	2.93	2.93	3.09	3.07	2.98	3.10	3.06	3.20	3.18	3.08	3.21	3.17
Total Non-OECD	34.21	35.17	35.47	35.61	35.79	35.51	36.38	36.91	36.89	37.27	36.86	37.84	38.22	38.31	38.77	38.29
World	83.88	85.60	83.59	84.59	85.64	84.86	86.07	85.07	85.59	87.13	85.97	87.34	86.27	86.91	88.39	87.23
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.16*	*20.39*	*20.51*	*20.44*	*20.38*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.84*	*7.68*	*7.86*	*8.00*	*7.85*	*7.87*	*7.66*	*7.85*	*7.89*	*7.82*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.62*	*4.64*	*4.70*	*5.27*	*5.06*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.35*	*2.16*	*2.10*	*2.38*	*2.25*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.08*	*2.09*	*2.01*	*2.11*	*2.07*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.34*	*2.28*	*2.38*	*2.40*	*2.35*	*2.38*	*2.29*	*2.39*	*2.38*	*2.36*
Brazil	*2.17*	*2.13*	*2.15*	*2.23*	*2.25*	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.34*	*2.36*	*2.44*	*2.52*	*2.42*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.71*	*2.64*	*2.89*	*2.83*	*2.57*	*2.87*	*2.79*	*3.08*	*2.94*	*2.69*	*2.99*	*2.92*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.6	-0.7	1.8	1.5	-0.1	0.8	1.0	-2.6	-1.2	-0.9	-1.2	-1.5
Europe	0.8	1.5	-0.3	-0.3	-0.2	0.2	-4.9	-2.1	-1.3	-0.8	-2.3	1.5	0.6	0.1	-0.5	0.4
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	2.8	1.3	1.3	1.7	1.8
Total OECD	0.6	-0.7	-1.0	-0.5	-0.4	-0.7	-1.5	0.1	-0.6	0.0	-0.5	-0.4	-0.2	-0.2	-0.5	-0.3
FSU	0.5	5.2	1.8	3.9	5.5	4.1	1.2	0.9	0.4	1.0	0.9	0.7	1.8	1.9	1.8	1.6
Europe	4.4	1.6	1.6	1.6	1.6	1.6	2.2	2.1	2.1	1.6	2.0	1.8	2.1	2.1	2.1	2.1
China	4.2	5.0	13.0	7.9	5.4	7.8	4.5	5.1	4.1	4.6	4.6	5.6	4.2	4.3	4.6	4.7
Other Asia	1.5	0.6	0.1	2.1	3.3	1.5	2.3	3.6	3.6	4.7	3.5	3.5	2.6	2.7	2.7	2.9
Latin America	3.1	3.9	3.4	3.1	4.6	3.7	4.5	5.0	5.4	5.8	5.2	4.6	4.2	4.1	4.2	4.3
Middle East	5.5	5.6	5.4	4.8	4.0	4.9	4.4	5.1	3.5	3.0	4.0	5.0	4.8	6.3	6.8	5.7
Africa	6.0	-1.6	-1.1	-0.4	0.8	-0.5	4.1	3.7	4.3	5.8	4.5	3.6	3.5	3.4	3.5	3.5
Total Non-OECD	3.3	3.2	4.1	3.9	4.0	3.8	3.5	4.1	3.6	4.1	3.8	4.0	3.5	3.9	4.0	3.9
World	1.7	0.8	1.1	1.3	1.4	1.2	0.5	1.8	1.2	1.7	1.3	1.5	1.4	1.5	1.5	1.5
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.44	0.37	-0.04	0.20	0.24	-0.67	-0.31	-0.22	-0.30	-0.37
Europe	0.12	0.24	-0.04	-0.05	-0.03	0.03	-0.77	-0.32	-0.21	-0.12	-0.35	0.23	0.10	0.02	-0.08	0.07
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.25	0.10	0.10	0.15	0.15
Total OECD	0.31	-0.35	-0.49	-0.27	-0.19	-0.32	-0.75	0.04	-0.28	0.01	-0.24	-0.19	-0.11	-0.10	-0.23	-0.16
FSU	0.02	0.20	0.07	0.15	0.22	0.16	0.05	0.04	0.02	0.04	0.04	0.03	0.07	0.08	0.08	0.06
Europe	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
China	0.27	0.34	0.85	0.53	0.37	0.52	0.31	0.38	0.29	0.33	0.33	0.41	0.33	0.32	0.35	0.35
Other Asia	0.13	0.05	0.01	0.18	0.28	0.13	0.21	0.32	0.31	0.42	0.32	0.33	0.24	0.25	0.26	0.27
Latin America	0.15	0.19	0.17	0.16	0.23	0.19	0.23	0.26	0.29	0.31	0.28	0.25	0.23	0.24	0.24	0.24
Middle East	0.32	0.33	0.32	0.30	0.24	0.30	0.27	0.32	0.23	0.19	0.25	0.32	0.32	0.43	0.44	0.38
Africa	0.17	-0.05	-0.03	-0.01	0.02	-0.02	0.12	0.11	0.12	0.17	0.13	0.11	0.11	0.10	0.11	0.11
Total Non-OECD	1.09	1.07	1.39	1.33	1.39	1.30	1.22	1.44	1.28	1.48	1.35	1.46	1.31	1.43	1.50	1.42
World	1.40	0.72	0.90	1.06	1.19	0.97	0.47	1.48	1.00	1.49	1.11	1.27	1.20	1.32	1.27	1.27
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	-0.37	-0.20	-0.26	-0.25	-0.27
Europe	0.00	0.01	0.01	0.00	0.01	0.01	-0.02	-0.03	-0.01	0.03	-0.01	-0.05	-0.04	-0.05	-0.04	-0.05
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	0.00	0.00	0.00	-0.01
Total OECD	0.00	0.01	0.01	0.00	0.01	0.01	-0.02	-0.03	-0.01	0.05	0.00	-0.45	-0.24	-0.31	-0.30	-0.32
FSU	-0.05	-0.03	-0.02	0.02	-0.23	-0.07	0.08	0.15	0.17	0.18	0.15	-0.21	0.13	0.18	0.19	0.07
Europe	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.08	-0.08	-0.10	-0.07
Other Asia	0.00	0.04	0.02	0.02	0.02	0.03	0.00	0.11	0.04	0.02	0.04	0.10	0.10	0.02	-0.02	0.05
Latin America	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.03	0.03	0.04	0.04	0.09	0.06	0.06	0.07	0.07
Middle East	0.04	-0.02	-0.01	-0.01	-0.02	-0.02	-0.04	-0.08	-0.10	-0.05	-0.07	-0.09	-0.13	-0.11	-0.05	-0.10
Africa	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.02	0.00	-0.01	0.00	0.00	0.02	0.00
Total Non-OECD	0.00	-0.02	-0.01	0.04	-0.22	-0.05	0.06	0.20	0.13	0.20	0.15	-0.16	0.07	0.05	0.10	0.01
World	0.00	-0.01	0.00	0.04	-0.22	-0.05	0.04	0.17	0.12	0.25	0.14	-0.62	-0.17	-0.26	-0.20	-0.31
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.07	-0.02	-0.05	-0.17	-0.04	0.05	0.17	0.08	0.47	0.19	-0.65	-0.35	-0.38	-0.45	-0.46

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	4Q07	1Q08	2Q08	3Q08	4Q08	Jan 08	Feb 08	Mar 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.78	8.83				8.86	8.81	8.81
Iran	3.91	3.98		4.04	4.02				4.10	3.95	4.02
Iraq	1.90	2.09		2.33	2.39				2.29	2.45	2.43
UAE	2.62	2.52		2.40	2.61				2.67	2.65	2.52
Kuwait	2.21	2.16		2.24	2.29				2.28	2.29	2.31
Neutral Zone	0.58	0.56		0.57	0.58				0.58	0.58	0.58
Qatar	0.82	0.80		0.80	0.84				0.85	0.83	0.83
Angola[6]		1.61		1.71	1.81				1.80	1.82	1.82
Nigeria	2.24	2.13		2.14	2.02				2.06	2.06	1.95
Libya	1.71	1.71		1.74	1.76				1.77	1.76	1.76
Algeria	1.35	1.36		1.38	1.39				1.40	1.38	1.38
Ecuador[6]					0.50				0.50	0.50	0.50
Venezuela	2.56	2.39		2.42	2.39				2.44	2.41	2.32
Indonesia	0.89	0.84		0.83	0.85				0.83	0.87	0.87
Total Crude Oil[6]	29.71	30.66		31.55	32.28				32.40	32.35	32.08
Total NGLs[1,6]	4.63	4.82	5.20	4.88	4.95	5.01	5.23	5.63	4.95	4.95	4.95
Total OPEC[6]	34.34	35.48		36.44	37.22				37.35	37.30	37.03
OPEC incl. Angola & Ecuador[6]	36.29	35.95		36.77	37.22				37.35	37.30	37.03
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.17	14.12	14.21	14.08	14.01	14.38	14.14	14.18	14.31
United States	7.34	7.48	7.51	7.52	7.55	7.54	7.42	7.51	7.57	7.51	7.58
Mexico	3.68	3.48	3.35	3.32	3.32	3.36	3.35	3.38	3.32	3.30	3.35
Canada	3.19	3.31	3.31	3.28	3.33	3.19	3.24	3.49	3.25	3.37	3.38
Europe	5.18	4.95	4.56	5.00	4.86	4.48	4.33	4.57	4.94	4.90	4.74
UK	1.66	1.66	1.47	1.70	1.62	1.46	1.32	1.47	1.65	1.63	1.57
Norway	2.78	2.56	2.37	2.58	2.51	2.28	2.29	2.39	2.54	2.55	2.44
Others	0.74	0.73	0.73	0.72	0.73	0.73	0.72	0.72	0.74	0.72	0.74
Pacific	0.58	0.62	0.78	0.63	0.69	0.79	0.80	0.85	0.61	0.71	0.75
Australia	0.53	0.54	0.66	0.52	0.58	0.68	0.68	0.71	0.50	0.60	0.63
Others	0.05	0.08	0.12	0.10	0.12	0.12	0.12	0.14	0.12	0.12	0.12
Total OECD	19.97	19.84	19.52	19.75	19.76	19.36	19.14	19.81	19.69	19.79	19.80
NON-OECD											
Former USSR	12.25	12.77	13.16	12.82	12.87	13.03	13.24	13.52	12.76	12.91	12.95
Russia	9.84	10.08	10.16	10.08	9.99	10.07	10.22	10.34	10.00	10.01	9.97
Others	2.40	2.69	3.01	2.73	2.88	2.95	3.02	3.17	2.76	2.90	2.97
Asia	6.39	6.41	6.61	6.41	6.51	6.61	6.63	6.71	6.47	6.47	6.58
China	3.67	3.73	3.85	3.68	3.79	3.86	3.85	3.87	3.77	3.75	3.86
Malaysia	0.75	0.76	0.80	0.79	0.78	0.80	0.82	0.82	0.78	0.77	0.78
India	0.79	0.81	0.80	0.81	0.81	0.80	0.80	0.80	0.81	0.81	0.81
Others	1.17	1.11	1.16	1.12	1.13	1.14	1.16	1.22	1.12	1.13	1.13
Europe	0.15	0.13	0.12	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.13
Latin America	4.39	4.33	4.10	4.20	3.99	4.11	4.16	4.14	3.95	3.99	4.04
Brazil	2.10	2.14	2.38	2.13	2.27	2.39	2.44	2.43	2.23	2.26	2.32
Argentina	0.77	0.76	0.75	0.75	0.75	0.75	0.75	0.74	0.75	0.75	0.75
Colombia	0.53	0.54	0.55	0.56	0.55	0.56	0.55	0.55	0.56	0.56	0.54
Ecuador[6]	0.54	0.50		0.50							
Others	0.45	0.39	0.42	0.26	0.42	0.42	0.42	0.42	0.42	0.42	0.43
Middle East[3]	1.74	1.64	1.58	1.61	1.60	1.58	1.57	1.56	1.60	1.60	1.59
Oman	0.75	0.71	0.69	0.70	0.70	0.69	0.69	0.69	0.70	0.70	0.70
Syria	0.42	0.40	0.38	0.39	0.39	0.38	0.38	0.37	0.39	0.39	0.39
Yemen	0.38	0.34	0.31	0.32	0.32	0.32	0.32	0.31	0.32	0.32	0.31
Africa	3.91	2.55	2.62	2.58	2.60	2.61	2.64	2.63	2.61	2.61	2.57
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.62	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.23	0.23	0.22	0.23	0.24	0.24	0.23	0.24	0.21
Others	1.63	1.68	1.76	1.72	1.74	1.75	1.78	1.77	1.75	1.74	1.74
Total Non-OECD	28.82	27.83	28.20	27.74	27.69	28.07	28.36	28.68	27.53	27.69	27.84
Processing Gains[4]	2.04	2.07	2.13	2.11	2.11	2.10	2.14	2.17	2.11	2.11	2.11
Other Biofuels[5]	0.26	0.40	0.65	0.46	0.55	0.66	0.66	0.75	0.55	0.55	0.55
TOTAL NON-OPEC	51.09	50.15	50.50	50.05	50.11	50.18	50.31	51.41	49.88	50.14	50.31
Non-OPEC excl. Angola & Ecuador[6]	49.14	49.69	50.50	49.72	50.11	50.18	50.31	51.41	49.88	50.14	50.31
TOTAL SUPPLY	85.43	85.63		86.49	87.33				87.23	87.44	87.34

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Oct2007	Nov2007	Dec2007	Jan2008	Feb2008*	Feb2005	Feb2006	Feb2007	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	460.2	446.9	430.1	448.9	458.6	424.5	468.3	451.2	0.29	0.31	-0.34	-0.33
Motor Gasoline	225.0	231.1	244.3	262.1	268.2	260.4	254.3	242.5	-0.14	0.04	-0.07	0.18
Middle Distillate	206.0	206.1	208.3	205.8	192.8	190.7	213.9	191.0	-0.29	0.05	0.11	0.02
Residual Fuel Oil	47.4	46.4	47.3	47.3	46.9	50.1	50.5	44.4	-0.03	-0.03	0.00	0.03
Total Products[3]	663.4	656.5	662.9	668.6	650.9	655.9	671.1	636.6	-0.71	0.28	0.15	-0.07
Total[4]	1285.8	1260.5	1235.0	1256.0	1253.7	1215.6	1274.9	1221.6	-0.50	0.67	-0.01	-0.63
Europe												
Crude	322.4	331.9	329.0	331.5	322.5	330.2	340.4	330.9	-0.19	0.09	-0.13	0.08
Motor Gasoline	103.1	105.7	110.0	117.0	115.8	128.1	119.7	115.3	-0.04	-0.10	0.05	0.06
Middle Distillate	248.4	234.5	249.6	254.4	251.7	238.3	261.3	283.5	-0.08	0.02	-0.05	-0.18
Residual Fuel Oil	72.9	73.1	72.2	75.7	72.5	70.0	70.9	74.3	-0.01	-0.04	0.11	-0.07
Total Products[3]	529.1	517.9	538.3	555.8	547.3	540.1	553.4	577.2	-0.13	-0.15	0.17	-0.18
Total[4]	927.0	924.9	939.9	958.5	940.1	938.7	970.5	982.3	-0.26	-0.04	0.03	-0.12
Pacific												
Crude	172.1	160.5	159.9	165.0	155.1	168.4	157.6	169.9	-0.01	-0.02	-0.10	-0.01
Motor Gasoline	22.0	21.1	22.3	22.8	22.6	27.1	24.9	25.2	0.03	0.00	-0.03	0.01
Middle Distillate	72.6	71.3	70.5	69.2	57.1	58.2	63.7	71.3	-0.14	0.08	0.10	-0.08
Residual Fuel Oil	21.8	19.7	21.2	20.0	19.3	21.6	21.0	22.3	-0.01	0.00	0.04	-0.05
Total Products[3]	186.0	177.6	174.7	174.5	157.8	171.3	171.8	179.4	-0.14	0.12	0.15	-0.23
Total[4]	429.1	411.0	404.2	413.3	385.1	407.0	395.6	422.7	-0.13	0.10	0.03	-0.27
Total OECD												
Crude	954.7	939.3	919.0	945.3	936.2	923.1	966.2	952.0	0.08	0.38	-0.57	-0.25
Motor Gasoline	350.2	357.9	376.5	401.9	406.6	415.6	398.9	382.9	-0.15	-0.06	-0.05	0.25
Middle Distillate	527.0	511.8	528.4	529.4	501.5	487.1	538.9	545.8	-0.52	0.15	0.17	-0.23
Residual Fuel Oil	142.1	139.3	140.8	143.0	138.7	141.7	142.3	141.0	-0.05	-0.07	0.15	-0.09
Total Products[3]	1378.4	1352.0	1375.8	1398.8	1356.1	1367.2	1396.3	1393.2	-0.98	0.25	0.47	-0.48
Total[4]	2641.9	2596.4	2579.1	2627.7	2578.8	2561.2	2641.0	2626.6	-0.89	0.73	0.05	-1.02

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Oct2007	Nov2007	Dec2007	Jan2008	Feb2008*	Feb2005	Feb2006	Feb2007	1Q2007	2Q2007	3Q2007	4Q2007
North America												
Crude	694.1	695.5	696.9	698.4	698.8	682.0	684.8	688.6	0.00	0.02	0.03	0.05
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	180.6	182.3	184.6	184.2	184.2	164.0	170.2	173.7	-0.01	0.01	0.02	0.08
Products	237.0	234.7	237.9	239.1	239.1	211.5	235.2	237.6	0.05	-0.01	0.08	-0.09
Pacific												
Crude	385.0	385.1	385.1	385.1	385.1	384.5	380.0	385.8	0.01	0.00	0.00	0.00
Products	18.4	18.9	18.9	18.9	18.9	11.0	11.3	16.4	0.05	0.00	0.02	0.01
Total OECD												
Crude	1259.7	1262.9	1266.6	1267.6	1268.0	1230.5	1234.9	1248.1	0.00	0.03	0.05	0.12
Products	257.4	255.6	258.8	260.0	260.0	224.5	248.5	256.0	0.10	-0.01	0.10	-0.08
Total[4]	1518.1	1519.4	1526.4	1529.3	1529.7	1456.0	1484.5	1505.1	0.10	0.02	0.15	0.04

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End December 2006		End March 2007		End June 2007		End September 2007		End December 2007 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	181.4	78	182.5	80	189.7	80	201.4	84	203.3	-
Mexico	42.3	21	40.5	20	43.8	22	43.5	21	45.0	-
United States[4]	1721.5	83	1678.8	81	1731.0	84	1720.9	83	1663.6	-
Total[4]	1967.3	77	1923.9	76	1986.6	78	1987.9	78	1933.9	77
Pacific										
Australia	34.8	37	34.3	37	38.9	42	36.8	38	35.6	-
Japan	630.8	117	619.9	134	622.4	133	629.6	121	620.9	-
Korea	151.8	65	156.1	74	158.3	77	157.4	68	143.5	-
New Zealand	7.1	46	7.7	49	7.7	50	8.1	52	8.2	-
Total	824.6	93	818.0	105	827.3	106	831.9	96	808.2	89
Europe[5]										
Austria	21.8	78	24.0	81	21.1	72	22.0	75	22.1	-
Belgium	30.2	48	28.2	51	28.7	51	27.8	45	26.1	-
Czech Republic	19.7	101	20.2	92	20.5	95	19.5	98	20.2	-
Denmark	18.5	97	18.3	96	17.1	89	18.9	94	17.1	-
Finland	26.6	109	29.5	136	26.3	111	29.7	126	27.1	-
France	192.4	98	177.0	96	185.7	96	186.7	93	184.4	-
Germany	282.8	117	289.1	120	283.5	110	276.5	107	274.6	-
Greece	36.8	79	33.6	85	35.6	85	34.8	74	37.4	-
Hungary	16.6	108	18.1	107	16.0	94	17.1	98	15.4	-
Ireland	12.5	62	12.9	69	11.1	56	12.6	63	10.6	-
Italy	133.1	79	133.9	80	133.0	82	134.2	78	132.9	-
Luxembourg	1.0	16	0.9	15	0.9	15	0.9	15	0.7	-
Netherlands	118.6	138	117.7	137	115.9	128	122.9	134	116.6	-
Norway	35.1	156	20.2	78	23.5	91	24.2	88	29.1	-
Poland	41.5	89	43.9	90	50.0	90	50.9	94	58.2	-
Portugal	24.0	77	23.7	78	24.7	80	23.2	75	23.7	-
Slovak Republic	7.5	101	7.0	83	6.9	79	7.7	86	7.9	-
Spain	134.8	83	129.3	81	130.5	82	136.7	84	133.9	-
Sweden	33.8	94	35.6	99	32.1	90	31.5	87	31.3	-
Switzerland	38.1	150	38.7	173	38.5	157	38.1	132	35.9	-
Turkey	52.8	85	59.2	89	60.5	80	61.1	92	60.3	-
United Kingdom	108.5	60	105.8	59	100.8	58	98.5	57	97.7	-
Total	1386.6	92	1366.9	92	1362.8	89	1375.5	88	1363.3	88
Total OECD	4178.5	84	4108.7	86	4176.7	86	4195.4	84	4105.5	83
DAYS OF IEA Net Imports[6]	-	121	-	120	-	121	-	121	-	121

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End December 2007 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
4Q2004	3998	1450	2547	79	29	50
1Q2005	4005	1462	2543	82	30	52
2Q2005	4117	1494	2623	84	30	53
3Q2005	4132	1494	2638	83	30	53
4Q2005	4083	1487	2597	81	29	52
1Q2006	4084	1487	2597	85	31	54
2Q2006	4151	1493	2658	85	30	54
3Q2006	4262	1495	2767	86	30	56
4Q2006	4179	1499	2680	84	30	54
1Q2007	4109	1507	2602	86	31	54
2Q2007	4177	1509	2668	86	31	55
3Q2007	4195	1523	2673	84	31	54
4Q2007	4105	1526	2579	83	31	52

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 4Q2007 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	1Q07	2Q07	3Q07	4Q07	Nov 07	Dec 07	Jan 08	Year Earlier Jan 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.68	0.73	0.71	0.77	0.92	0.91	0.79	0.71	0.08
Europe	0.90	0.78	0.70	0.72	0.64	0.74	0.68	0.67	0.71	0.70	0.77	-0.07
Pacific	1.31	1.32	1.19	1.17	1.20	1.15	1.25	1.33	1.32	1.30	1.07	0.23
Saudi Medium												
North America	0.81	0.64	0.56	0.47	0.59	0.59	0.57	0.59	0.56	0.53	0.65	-0.12
Europe	0.16	0.14	0.05	0.05	0.10	0.02	0.04	0.02	0.04	0.06	0.08	-0.02
Pacific	0.26	0.35	0.34	0.34	0.31	0.31	0.38	0.34	0.47	0.35	0.28	0.06
Saudi Heavy												
North America	0.17	0.21	0.09	0.15	0.05	0.11	0.04	0.04	0.04	0.10	0.21	-0.11
Europe	0.23	0.18	0.11	0.09	0.16	0.11	0.09	0.06	0.11	0.05	0.12	-0.08
Pacific	0.25	0.23	0.20	0.20	0.18	0.20	0.23	0.22	0.21	0.25	0.20	0.05
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.51	0.39	0.64	0.45	0.57	0.40	0.52	0.59	-0.07
Europe	0.23	0.32	0.30	0.29	0.28	0.38	0.24	0.19	0.28	0.17	0.29	-0.13
Pacific	0.06	0.08	0.17	0.11	0.18	0.20	0.21	0.15	0.26	0.14	0.06	0.08
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.05	0.01	0.11	0.04	-	0.06	0.32	0.38	0.35	0.26	0.03	0.23
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.31	0.27	0.21	0.18	0.20	0.24	0.34	-0.10
Pacific	0.15	0.13	0.09	0.12	0.06	0.07	0.11	0.13	0.10	0.14	0.11	0.03
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.55	0.62	0.60	0.47	0.47	0.43	0.48	0.58	-0.10
Pacific	0.62	0.56	0.64	0.66	0.63	0.56	0.73	0.78	0.80	0.77	0.59	0.18
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.68	0.71	0.75	0.85	1.09	0.65	0.78	0.72	0.06
Europe	0.04	0.11	0.08	0.09	0.07	0.09	0.05	0.05	0.10	0.06	0.08	-0.02
Pacific	-	-	0.01	-	-	-	0.02	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.55	0.70	0.76	0.67	0.59	0.71	0.59	0.48	0.10
Europe	0.06	0.06	0.07	0.06	0.09	0.06	0.06	0.06	0.04	0.06	0.07	0.00
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.19	1.25	1.24	1.90	0.78	1.03	1.20	-0.18
Europe	0.17	0.16	0.14	0.14	0.11	0.18	0.15	0.12	0.15	0.13	0.14	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.02	0.01	0.01	0.00	0.00	-	0.01	0.03	-0.02
Europe	0.03	0.01	0.02	0.01	0.06	-	0.02	0.05	0.00	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.11	0.12	0.01	0.01	-	0.02	0.02	0.08	-0.05
Europe	1.77	1.68	1.86	1.85	1.97	1.90	1.73	1.67	1.80	1.95	1.75	0.19
Pacific	0.00	0.00	0.00	0.00	-	-	0.01	0.02	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.95	0.77	0.87	0.82	0.81	0.81	0.76	1.02	-0.26
Europe	0.35	0.33	0.24	0.23	0.27	0.22	0.23	0.27	0.19	0.41	0.27	0.15
Pacific	0.05	0.04	0.01	0.02	0.02	-	0.01	0.03	-	-	0.03	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.24	0.15	0.22	0.31	0.35	0.30	0.37	0.16	0.21
Europe	0.07	0.10	0.07	0.06	0.02	0.08	0.11	0.10	0.14	0.04	0.02	0.02
Pacific	0.01	0.00	0.01	0.02	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Nov-07	Dec-07	Jan-08	Year Earlier Jan-07	Year Earlier % change
Crude Oil												
North America	8457	8163	8106	8038	8151	8267	7969	7912	8104	8364	7918	6%
Europe	9792	9771	9773	9353	9738	10062	9929	9805	10357	10064	9323	8%
Pacific	6801	6813	6718	6953	6340	6576	7003	6733	7490	7273	6968	4%
Total OECD	25050	24747	24597	24344	24229	24905	24901	24451	25950	25700	24544	5%
LPG												
North America	18	14	27	16	14	38	41	50	37	37	17	120%
Europe	248	265	276	287	282	244	291	276	294	347	284	22%
Pacific	527	579	557	565	588	502	572	493	643	613	606	1%
Total OECD	793	858	860	867	884	785	903	820	974	997	907	10%
Naphtha												
North America	115	64	39	33	31	33	60	75	20	22	44	-49%
Europe	273	312	266	271	223	279	290	257	297	228	349	-35%
Pacific	746	754	794	838	812	768	758	785	705	812	794	2%
Total OECD	1133	1129	1099	1141	1066	1080	1108	1117	1022	1063	1187	-10%
Gasoline[3]												
North America	1034	1142	1132	916	1362	1198	1048	1087	905	865	919	-6%
Europe	165	154	204	261	219	156	181	224	141	128	291	-56%
Pacific	102	97	72	76	83	56	71	63	67	96	73	32%
Total OECD	1301	1393	1407	1254	1663	1410	1301	1374	1113	1090	1282	-15%
Jet & Kerosene												
North America	173	155	183	179	204	205	143	152	103	135	132	2%
Europe	375	375	367	329	349	386	401	348	404	331	271	22%
Pacific	66	71	41	49	35	37	43	33	57	43	86	-50%
Total OECD	614	602	590	557	588	628	587	533	564	509	489	4%
Gasoil/Diesel												
North America	143	172	132	130	142	142	116	90	140	140	126	11%
Europe	845	971	776	906	635	740	822	734	955	970	976	-1%
Pacific	79	81	94	83	97	90	106	117	87	85	76	12%
Total OECD	1067	1225	1002	1120	874	972	1044	940	1182	1195	1177	2%
Heavy Fuel Oil												
North America	527	340	323	362	323	286	320	384	306	423	353	20%
Europe	491	476	434	458	420	457	400	427	460	459	467	-2%
Pacific	85	92	92	79	97	92	101	81	93	136	83	64%
Total OECD	1102	908	848	898	840	835	821	892	859	1018	903	13%
Other Products												
North America	1024	1111	1052	1035	1209	1032	932	971	914	1187	1074	11%
Europe	781	920	871	866	856	927	835	906	721	714	985	-28%
Pacific	248	243	252	256	207	262	282	266	336	352	247	42%
Total OECD	2052	2273	2174	2157	2272	2221	2049	2143	1971	2252	2306	-2%
Total Products												
North America	3034	2999	2887	2670	3285	2934	2660	2808	2425	2810	2664	5%
Europe	3177	3473	3192	3377	2985	3190	3219	3172	3271	3176	3623	-12%
Pacific	1852	1918	1901	1947	1918	1808	1934	1838	1988	2138	1965	9%
Total OECD	8063	8389	7981	7994	8188	7931	7813	7818	7685	8124	8251	-2%
Total Oil												
North America	11490	11162	10994	10708	11436	11201	10629	10721	10529	11173	10916	2%
Europe	12969	13243	12965	12730	12723	13252	13148	12977	13628	13240	12946	2%
Pacific	8654	8731	8619	8900	8258	8384	8937	8572	9478	9411	8934	5%
Total OECD	33113	33136	32578	32338	32417	32836	32714	32270	33634	33824	32795	3%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

13 May 2008

HIGHLIGHTS

- **NYMEX Light Sweet Crude futures** were double levels of a year ago in early May, topping $126/bbl as strong demand from Asia and tight distillate markets pushed prices higher. Sentiment was further underpinned by crude outages, particularly in Nigeria and the North Sea. Refining margins rose in April, but remain volatile.

- **Global oil product demand** has been lowered for both 2007 and 2008, to 85.8 mb/d and 86.8 mb/d respectively. Slower economic growth, high prices and 2006 baseline adjustments suggest that OECD oil demand will contract for the third successive year in 2008. Non-OECD demand growth in 2008, led by China and the Middle East, remains strong at 3.7% or 1.4 mb/d, leaving growth for the world as a whole at 1.2% (+1.0 mb/d).

- **April global oil supply** fell by 400 kb/d month-on-month to 86.8 mb/d, pulled lower by North Sea outages, lower FSU output and weaker OPEC supplies. Although 1Q08 non-OPEC supply (ex-Angola and Ecuador) was unchanged from a year ago, OPEC supply stood 1.7 mb/d higher. Non-OPEC output growth in 2008 is now seen averaging 680 kb/d, compared with 550 kb/d in 2007.

- **OPEC April crude supply** averaged 31.9 mb/d, 255 kb/d below March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.9 mb/d. Effective OPEC spare capacity stands at 2.3 mb/d on paper, although refinery outages, crude quality and high prices mean much of this oil would be difficult to market under current conditions.

- **End-March OECD industry stocks** dipped by 1.3 mb. Together with a 19.0 mb downward revision to distillate stocks in February, this draws 1Q08 stocks by 18.7 mb or 0.2 mb/d - slightly less than the 0.4 mb/d five-year average draw. Stock cover was broadly unchanged in March at 53.3 days.

- **April global refinery crude throughput** 72.8 mb/d is seen as a seasonal trough, with output stifled by poor economics and maintenance. Runs should rise through the second quarter to meet driving season demand, however recent improvements in Atlantic Basin gasoline supply are expected to keep margins volatile.

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MARKET OVERVIEW: DO WE NEED MORE OIL?

With oil prices reaching $125/bbl, calls for more oil are getting louder. But do we really need more oil? To answer this, we need to look at the current balances, forecasting risks and some of the market perceptions that may have been driving the oil price.

First, we need to step back from the detail and simply define that, in our opinion, this is a bull market driven primarily by demand potential outstripping slow supply growth – notably non-OPEC. With no slack in the system, prices have had to rise to choke off demand growth and bring the market into balance.

This report sees further downward adjustments to demand, and they may not be the last. Despite an aggressive cut last month in our US demand forecast, further downward revisions are needed this month. Official March European data are also exceptionally weak. We are currently treating this as a symptom of an early Easter together with price and weather distortions, but if it extends into April, we may have to trim demand further.

Other downside pressures may also emerge. Faced with the realisation that high prices may be with us for some time, several countries, such as Indonesia, are reassessing the budgetary reality of sustaining oil price subsidies. It will not be easy to unwind them (many countries are wary of civil unrest, and may therefore try to cushion low-income earners with other payments), but when such shifts do come, they could cause temporary downward shocks to demand.

It is, however, unlikely that there will be any short-term shift in the demand picture for China and the Middle East, the two key growth regions. China has recently entrenched its subsidy regime by deciding to compensate Sinopec and PetroChina's losses with monthly payments, and there are again question markets over data. In the Middle East, there is increased discussion of the need for energy efficiency, but with higher oil prices more than compensating for higher domestic subsidy payments, an imminent slowdown in demand is unlikely.

On balance, though, despite continued strength in China and the Middle East, it would seem that the risks to demand remain on the downside. While consumers may be adjusting to high oil prices, the full impact of current high oil prices in excess of $120/bbl, if sustained, has yet to be factored into either behaviour or forecasts.

Looking at the other side of the equation, supply-side risks extend beyond ongoing project slippage and the approaching Hurricane season. In particular, rising food prices have put biofuels policies under scrutiny. While it seems unlikely that biofuel targets will be reversed in the near future, it is sobering to realise the amount of oil that would be need to replace them. Just offsetting the biodiesel and ethanol added to the US and European markets since 2005 would require around 1 mb/d of additional crude oil supplies to be processed.

The most recent data and estimates suggest that the oil market should have been in surplus for the past two months and should remain in that position for the rest of 2008 - as long as OPEC maintains output at current levels. From an OECD stock position such an outcome is not yet visible. Most likely, the restocking is taking place in non-OECD countries, where there are little data, while OECD refiners are adjusting for weak demand and seasonal 2Q maintenance through lower imports. So do we need more oil?

Consumer countries are calling for more OPEC oil to ease prices. They are right – it would. More crude would prompt a more rapid crude stock build and would improve refining margins, allowing more distillates to be produced. On the other hand, OPEC is saying that the market is well supplied, and that stocks should build. The issue here, as we have been arguing for the past 18 months, is one of stock levels

and timing. The market can only express its demand for higher stocks in a supply-constrained market through higher prices. And if some players are determined to build stocks they have to do so in competition with those who need the crude to meet current demand – therefore creating a competitive upward spiral in prices. To the list of upward pressures we should also add perceptions.

By setting output at a level that should allow stocks to rebuild throughout the second and third quarters and indicating it would only address the level of stocks in September (when the economic impact of the financial crisis would be more apparent) OPEC was probably hoping to send a signal of stability and confidence to the market. Instead, the market saw a completely different message: producers were comfortable with prices above $100/bbl and they would not react quickly to replenish stocks or adjust output should demand prove unexpectedly robust.

There is also the perception of a *ratchet effect* from higher prices. OPEC may, with the exception of Saudi Arabia, have only a limited ability to raise output, but every member has the ability to cut output. Therefore, the perception is that with spare capacity at low levels, OPEC can support a higher level of prices. If traders feel OPEC is signalling it is comfortable with $100/bbl, then fundamentals are appraised from that new base. OPEC's silence as we neared $120/bbl raised perceptions of an even higher floor.

OPEC's focus on stocks as a barometer of adequate supply reinforces this perception. Basic economics would argue that if prices move higher than the equilibrium level where supply equals demand, then there should be a tendency for stocks to rise. By cutting supplies to reduce stock levels, a higher equilibrium price is achieved, further reinforcing the *ratchet effect*. These are, however, just perceptions. They could change easily, particularly if stocks build rapidly.

There are some early signs of changing market conditions. Brent and WTI forward spreads are close to contango, implying that that either stocks are building or that storage is being booked to take crude. Reports of a large build in floating storage for Iranian crude have also emerged in recent weeks. This may give the market greater confidence that a 'normal' 2Q stock build is underway. But even if we can see this process beginning, the truth is that due to the lack of weekly stock data outside of the US and Japan, any second-quarter OECD stockbuild will not be fully apparent until mid-July. In addition, given the magnitude of recent OECD revisions, end-June inventory levels will not be known accurately until September.

The key question is how to halt the upward spiral in prices. Clear evidence of a seasonal stockbuild would help. OPEC could kick-start the process by giving at least a clear indication that it will rapidly provide more oil if stocks do not build in the very near future. An even more powerful signal would be to provide more oil now. To the extent that current prices also embody an element of concern over future supplies, an ongoing commitment to investment would also help.

DEMAND

Summary

- **Global oil product demand** has been adjusted down for both 2007 and 2008. World demand is now estimated at 85.8 mb/d in 2007 (+1.3% or +1.1 mb/d over the previous year and 150 kb/d below last month's report). In 2008, demand is expected to average 86.8 mb/d (+1.2% or +1.0 mb/d over 2007, and -390 kb/d compared with our last report). These revisions are due to significant adjustments to preliminary OECD data in 1Q08, and to 2006 baseline changes in non-OECD countries, which were carried forward.

- **OECD oil product demand** has remained largely unchanged in 2007, but has been lowered by almost 190 kb/d to 48.8 mb/d in 2008 (-0.7% or -0.3 mb/d on an annual basis). The changes result from large downward revisions to preliminary data in 1Q08. Oil product demand in OECD North America turned out to be much weaker than expected, providing further evidence of the effects of the economic slowdown and high prices. In OECD Europe, both diesel and residual fuel deliveries were also much lower than anticipated across the continent. In OECD Pacific, a larger-than-expected contraction in Japanese gasoline offset continued strong demand for residual fuel oil and direct crude for power generation.

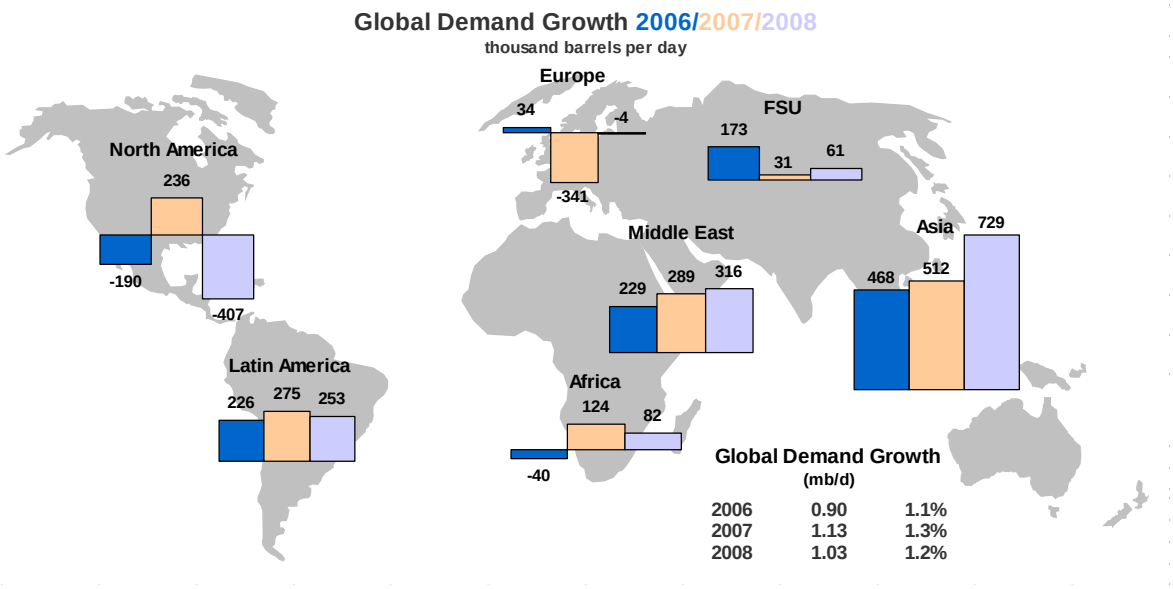
Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	2.9	2.9	2.8	2.9	2.9	3.0	3.0	2.9	3.1	3.0	3.1	3.1	3.0	3.2	3.1
Americas	30.4	30.4	31.0	30.8	30.6	31.1	31.0	31.2	31.3	31.1	30.5	30.9	31.2	31.3	31.0
Asia/Pacific	25.2	24.1	23.7	24.9	24.5	25.3	24.8	24.3	25.6	25.0	26.2	25.5	25.0	26.3	25.7
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.4	16.0	16.0	15.7	16.1	16.2	16.0
FSU	4.0	3.9	4.2	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Middle East	6.1	6.1	6.4	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
World	**85.4**	**83.4**	**84.4**	**85.5**	**84.7**	**85.9**	**84.9**	**85.4**	**87.0**	**85.8**	**86.6**	**86.0**	**86.6**	**88.1**	**86.8**
Annual Chg (%)	0.8	1.0	1.2	1.4	1.1	0.6	1.8	1.2	1.7	1.3	0.8	1.3	1.4	1.3	1.2
Annual Chg (mb/d)	0.6	0.8	1.0	1.2	0.9	0.5	1.5	1.0	1.5	1.1	0.7	1.1	1.2	1.1	1.0
Changes from last month's report (mb/d)	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.16	-0.15	-0.15	-0.70	-0.27	-0.27	-0.30	-0.39

- **Non-OECD oil product demand** has been revised down by roughly 140 kb/d to 36.7 mb/d in 2007 (+3.9% or +1.4 mb/d over the previous year) and by about 200 kb/d to 38.1 mb/d in 2008 (+3.7% or 1.4 mb/d). The changes are essentially related to 2006 baseline reappraisals across all continents, suggesting that many small, oil-importing countries have been more affected by rising oil prices than previously thought. This also highlights data-quality issues, notably in Africa, Asia and the Middle East. Nevertheless, oil demand growth in key emerging markets is expected to remain strong and generally supportive of resilient oil demand globally.

- **China has adopted several measures to ensure that the domestic market is well supplied in the run-up to the Olympic Games.** Beijing is seeking to avoid a repeat of the politically embarrassing oil product shortages that have beset the country since 2H07. Although end-user prices will remain capped given inflationary concerns, the government will subsidise, on a monthly basis, state-owned PetroChina and Sinopec for their downstream losses. In addition, it will refund the value-added tax (17%) levied on gasoline and gasoil imports during 2Q08. Finally, it has ordered wholesalers to hold stocks equivalent to at least 15 days of last year's sales, starting on 1 May.



OECD

According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 2.8% year-on-year in March, with losses in North America, Europe and the Pacific. Oil product demand in **OECD North America** (which includes US Territories) fell by 3.1% driven by the ongoing US economic slowdown; all product categories posted losses. In **OECD Europe**, demand fell by 2.3%, largely because of lower diesel deliveries in key consuming countries and residual fuel oil weakness across the continent. In **OECD Pacific**, a larger-than-expected contraction in Japanese gasoline offset continued strong demand for residual fuel oil and direct crude use for power generation, with overall demand declining by 2.8%.

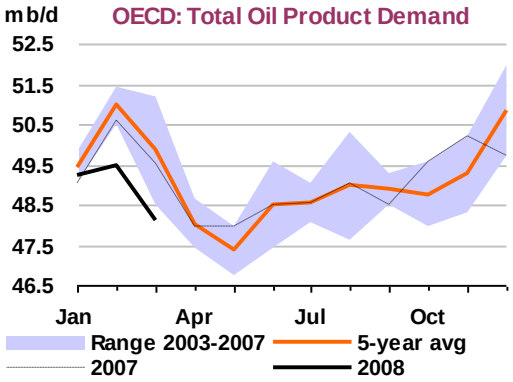
OECD Demand based on Adjusted Preliminary Submissions - March 2008
(million barrels per day)

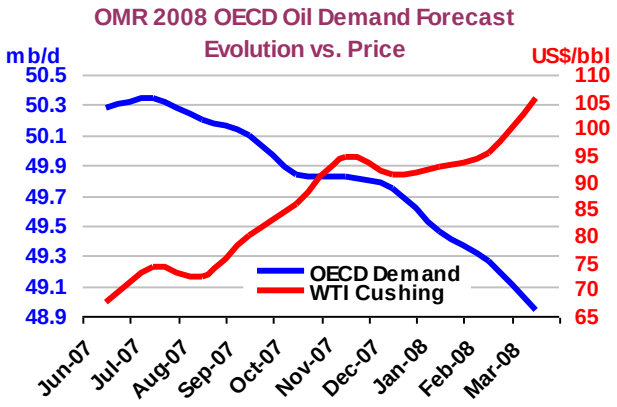
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.58**	**-1.1**	**1.83**	**-0.3**	**4.03**	**2.7**	**1.24**	**-17.4**	**1.10**	**-17.5**	**5.90**	**-4.55**	**24.68**	**-3.1**
US50	9.05	-1.5	1.58	-1.3	3.47	3.3	0.72	-25.8	0.59	-23.8	4.51	-4.4	19.92	-3.3
Canada	0.68	0.9	0.12	8.4	0.21	1.4	0.36	-2.5	0.15	2.6	0.80	0.9	2.33	0.9
Mexico	0.75	1.2	0.07	5.8	0.28	-2.3	0.12	-2.3	0.23	-19.1	0.52	-13.6	1.96	-6.3
OECD Europe	**2.37**	**-5.1**	**1.24**	**3.2**	**4.14**	**-3.0**	**1.93**	**-1.1**	**1.67**	**-3.2**	**3.55**	**-1.7**	**14.91**	**-2.3**
Germany	0.47	-8.1	0.19	3.6	0.60	-4.0	0.40	12.8	0.18	-4.4	0.55	-8.8	2.40	-3.1
United Kingdom	0.42	-4.0	0.35	5.4	0.46	0.7	0.14	-1.9	0.07	-3.8	0.36	4.6	1.80	0.8
France	0.19	-13.9	0.15	1.0	0.64	-6.3	0.31	-9.8	0.09	10.8	0.43	-2.7	1.81	-5.7
Italy	0.26	-9.7	0.08	-2.3	0.53	-4.5	0.09	-6.2	0.24	-18.7	0.41	4.2	1.61	-5.8
Spain	0.15	-8.7	0.12	9.8	0.50	-10.0	0.23	-13.5	0.21	-0.4	0.37	-0.7	1.56	-5.8
OECD Pacific	**1.43**	**-9.8**	**0.97**	**-16.4**	**1.23**	**-5.7**	**0.58**	**-7.2**	**1.01**	**3.3**	**3.31**	**6.0**	**8.53**	**-2.8**
Japan	0.88	-13.9	0.66	-21.9	0.59	-10.3	0.43	-11.8	0.60	25.1	2.03	6.0	5.19	-4.0
Korea	0.16	-0.7	0.18	-6.5	0.29	-4.2	0.14	10.5	0.39	-17.5	1.10	7.0	2.26	-1.0
Australia	0.32	-3.8	0.11	7.9	0.30	1.4	0.00	-46.0	0.02	-20.0	0.17	-3.1	0.92	-1.3
OECD Total	**14.37**	**-2.7**	**4.05**	**-3.8**	**9.40**	**-1.0**	**3.75**	**-8.0**	**3.78**	**-6.4**	**12.77**	**-1.2**	**48.12**	**-2.8**

* Including US territories

Moreover, February data were revised down significantly in all three regions. OECD demand thus fell by 2.2% year-on-year. As a result, 1Q08 has been lowered by roughly 570 kb/d, thus weighing on the 2008 prognosis, now estimated at 48.8 mb/d in 2008 (-0.7% or -0.3 mb/d over 2007, and 190 kb/d lower than in our last report). That would signal the third consecutive annual decline in OECD demand since 2005. Prices have played a role, but whereas in 2006 and 2007 demand weakness was accentuated by mild weather and interfuel substitution, in 2008 it will be mostly due to stagnating growth in transportation fuels consumption, notably in North America – further evidence of the double squeeze of the ongoing economic slowdown and rising oil prices. In fact, changing economic conditions in general, and the rise in

prices in particular, are strongly correlated to forecasting revisions in the OECD. When we first issued our 2008 prognosis in July 2007 (with May data), average oil prices were below $49/bbl, and major institutions were anticipating that US GDP growth would be as high as +2.8% in 2008. Ten months later, prices have more than doubled, and the IMF's prediction for US economic growth has been drastically cut to only 0.5%.





Total OECD Demand by Product

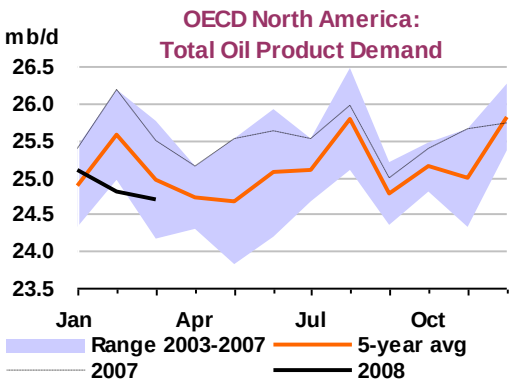
(million barrels per day)

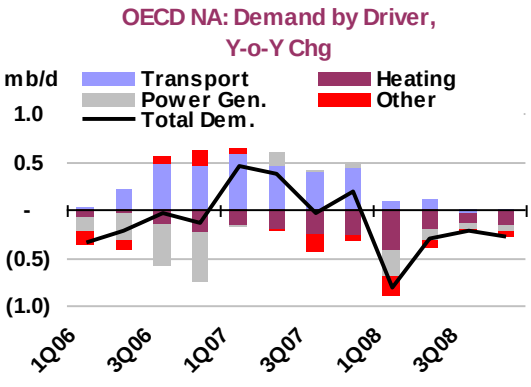
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	4.78	4.81	5.24	4.64	4.44	4.93	5.27	5.29	5.37	0.08	-0.13
Naphtha	3.17	3.21	3.38	3.06	3.15	3.24	3.33	3.26	3.26	0.00	-0.17
Motor Gasoline	14.86	14.90	14.44	15.06	15.28	14.81	14.75	14.01	14.24	0.23	-0.28
Jet & Kerosene	4.16	4.11	4.35	3.90	3.96	4.22	4.31	4.36	4.50	0.15	0.05
Gas/Diesel Oil	13.25	13.17	13.50	12.60	12.87	13.69	13.35	13.48	13.79	0.32	-0.08
Residual Fuel Oil	4.04	3.93	4.19	3.87	3.76	3.89	3.88	4.07	3.74	-0.34	-0.64
Other Products	5.08	4.97	4.58	5.03	5.23	5.04	4.81	4.74	4.58	-0.17	0.13
Total Products	**49.34**	**49.09**	**49.68**	**48.16**	**48.69**	**49.82**	**49.70**	**49.22**	**49.48**	**0.27**	**-1.12**

* Latest official OECD submissions (MOS)

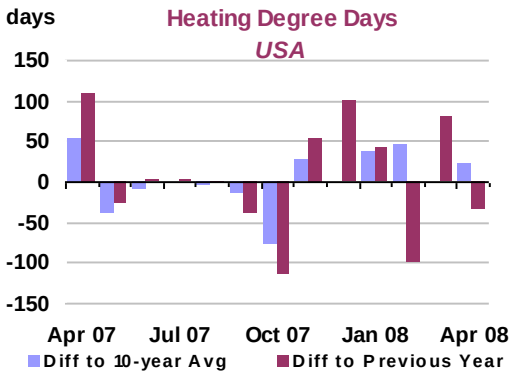
North America

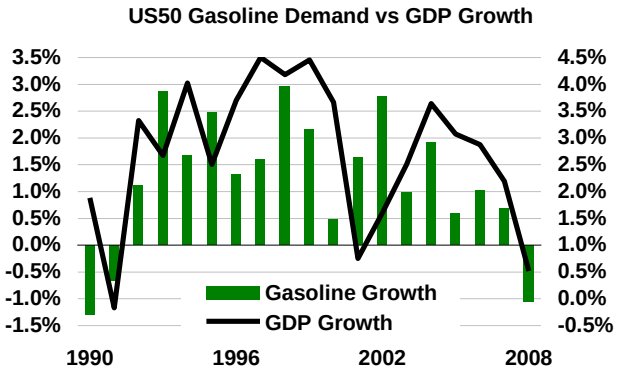
According to preliminary data, oil product demand in North America (including US Territories) contracted by 3.1% year-on-year in March, essentially because of a general weakness in all product categories in the US. The contraction in regional deliveries was particularly large in the case of naphtha (-27.4%), high-sulphur (heating oil) gasoil (-17.4%, although this is related to reclassification issues in the US, since low-sulphur, non-road locomotive and marine gasoil is now counted as diesel) and residual fuel (-17.5%). As such, OECD North America demand is expected to average 25.1 mb/d in 2008 (-1.6% compared with 2007). Notably, given the economic slowdown in the US, growth in transportation fuels demand no longer offsets demand declines prompted by mild weather and interfuel substitution.



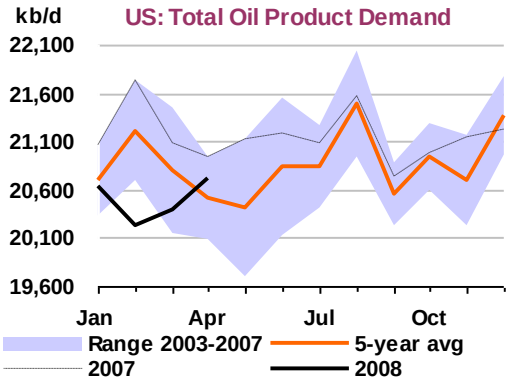


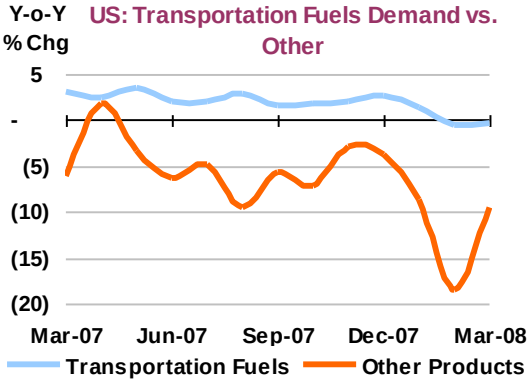
Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 3.3% year-on-year in March. The fall was due to weak demand across all product categories. This provides further evidence that the US economic slowdown, compounded by ever-higher oil prices, is taking a toll on demand, as gasoline and jet fuel/kerosene use, which is highly sensitive to economic conditions, shrank for the fourth consecutive month. (Diesel remains relatively strong, but this is partly related to reclassification issues, as noted above.) However, weather patterns and interfuel substitution also played a role: on the one hand, March was only slightly colder than last year and in line with the historical average; on the other hand, natural gas continued to be cheaper than residual fuel oil.





As if these gloomy data were not enough, for the second month in a row the US Energy Information Administration made a large downward adjustment to preliminary figures, with February demand cut by about 750 kb/d. Our own revision, however, was only 360 kb/d, as this report attempts to pre-empt EIA's changes. Unlike last month (when revisions concerned oil products related to heating and power needs), this time the adjustment can be essentially attributed to worsening economic conditions, since it has been mostly applied to transportation fuels (70% of US demand in February), which are strongly correlated to economic activity. As such, US oil demand is poised to contract by as much as 2.1% to 20.4 mb/d in 2008, with gasoline decreasing by about 1.0%, in line previous economic downturns.





High oil prices have become a key theme in the US political debate. For example, several weeks ago a convoy of some 350 trucks, buses and cars held a honking rally in front of the Capitol in Washington, DC, calling on Congress to cap gasoline, diesel and heating oil prices at $2 per gallon. (Regular unleaded gasoline, currently at about $3.4/gallon, is 20% more expensive than last year, while diesel, at around $4.0/gallon, is 42% higher.) Several representatives have responded with a number of proposals – such as setting up anti-price-gouging legislation, imposing a windfall tax on oil company earnings or preventing the government from filling the Strategic Petroleum Reserve – but without much consensus so far. The White House, meanwhile, has repeatedly expressed concern while warning that there is no easy fix to

high prices and urging Congress to promote domestic oil production and improve energy efficiency. The presidential nomination candidates, for their part, have either urged OPEC to produce more oil, or have endorsed a proposal to remove the federal gasoline tax (¢18.4/gallon) during the forthcoming summer's driving season. Yet as long as international oil prices remain above $120/bbl, lowering domestic retail prices without significant subsidies will be difficult. This conclusion seems to have been reached by some carmakers: Chrysler has just launched its 'Let's Refuel America' campaign, whereby the company will subsidise eligible new vehicles during three years (customers will receive a card entitling them to purchase gasoline at a capped price of $2.99 per gallon).

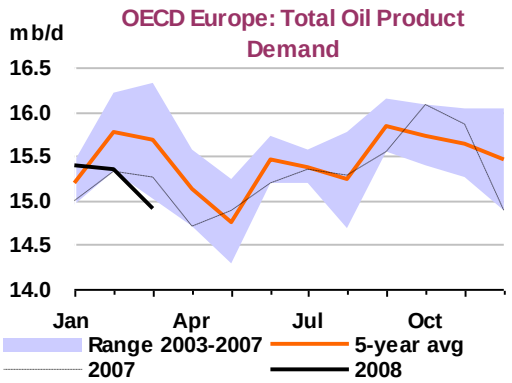
OECD North America Demand by Product
(million barrels per day)

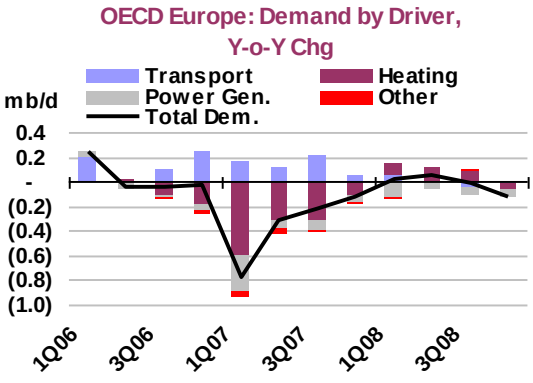
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	2.87	2.91	3.24	2.75	2.70	2.97	3.22	3.24	3.23	-0.01	-0.23
Naphtha	0.44	0.43	0.42	0.45	0.43	0.43	0.41	0.40	0.38	-0.02	-0.04
Motor Gasoline	10.72	10.85	10.53	10.94	11.07	10.85	10.85	10.35	10.39	0.05	-0.14
Jet & Kerosene	1.91	1.90	1.88	1.89	1.91	1.91	1.88	1.83	1.86	0.03	-0.06
Gas/Diesel Oil	5.17	5.27	5.48	5.13	5.13	5.34	5.36	5.30	5.38	0.09	-0.34
Residual Fuel Oil	1.20	1.24	1.38	1.26	1.18	1.16	1.11	1.20	1.06	-0.13	-0.42
Other Products	2.99	2.94	2.74	3.02	3.07	2.93	2.88	2.78	2.48	-0.30	-0.18
Total Products	**25.31**	**25.54**	**25.66**	**25.43**	**25.49**	**25.58**	**25.72**	**25.09**	**24.79**	**-0.30**	**-1.40**

* Latest official OECD submissions (MOS)

Europe

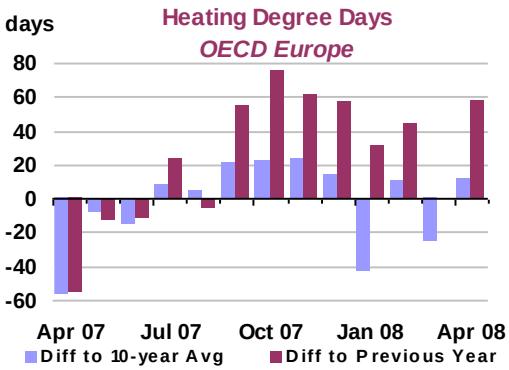
Preliminary inland delivery data for March were much weaker than anticipated, leading to a downward adjustment of 500 kb/d compared with our previous forecast. Total European deliveries contracted by 2.3%, with all product categories, bar jet kerosene, posting losses. Demand in the major continental economies – France, Germany, Italy and Spain – was very weak indeed, contracting by 5.7%, 3.1%, 5.8% and 5.8%, respectively. This was partly related to the fact that the Easter holidays fell in March this year rather than in April, thus reducing the number of working days (by 1 or 2, depending on the country) and shifting business and industrial demand to the following month. The effects of this timing issue will become clearer as official March data and preliminary April figures are released next month (in previous years, when Easter also fell in March, the impact had been less pronounced, suggesting that other factors had influenced demand). The weather arguably also played a role: the number of heating degree days in March was below the 10-year average, but on a par with last year. April, by contrast, was colder than normal in most European countries; as such, heating demand may have rebounded.



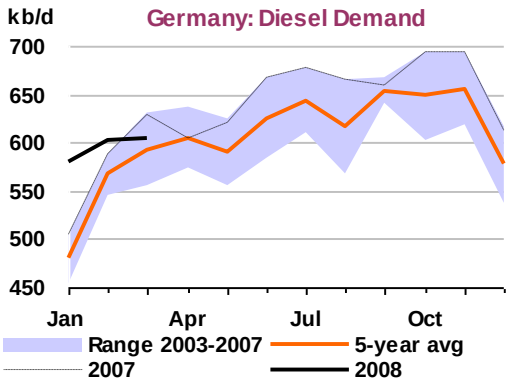


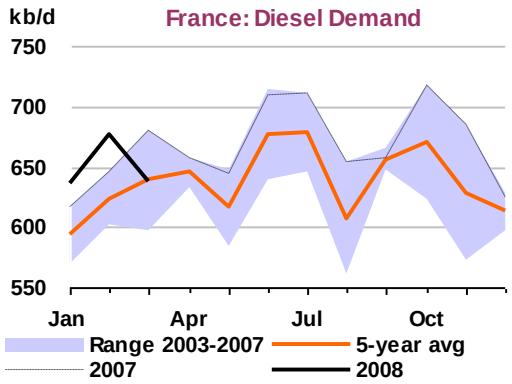
February figures, meanwhile, were revised down by 240 kb/d (largely because of Turkish data: demand plummeted by 17% month-on-month, after soaring by 42% in January). January demand, by contrast, was adjusted upwards by about 100 kb/d following revisions to official French data. Overall, 1Q08 demand is 215 kb/d lower than last month's report, at 15.21 mb/d; for the year as whole, demand is expected to average 15.3 mb/d (-0.1% compared with 2007).

European consumers are to a certain extent shielded from the rise in oil prices due to the weak dollar and high tax rates, but higher prices are nonetheless weighing on demand. In fact, retail prices have increased by 20% on average since we published our original 2008 forecast. In the five largest European markets (France, Germany, Italy, Spain and the UK) retail diesel prices (in national currencies and including taxes) were some 20% higher in both March and April when compared with the previous year. In the case of gasoline, heating oil and low-sulphur industrial fuel oil, end-user prices were respectively some 15%, 35% and 45% higher in March. Moreover, prices further increased in April and in early May. As such, a forthcoming round of end-user refilling of heating oil tanks may be deferred if prices remain high. Instead, consumers will probably continue to minimise purchases as much as possible, as has been the case since 2007.



German demand remained well below its five-year range in March, falling by 3.1% year-on-year. While deliveries for all products were weak, the decline in diesel (-4.0%) is noteworthy: until then diesel demand had been resilient to high prices, growing by 5.3 % on average since the beginning of 2007. Gasoline deliveries, meanwhile, contracted by 8.1% (much higher than the 4.6% average decline observed since January 2007), while 'other products' fell by 8.1%. Only jet kerosene and heating oil posted positive growth, increasing by 3.6% and 12.8%, respectively. Consumer heating oil stocks followed their normal seasonal trend, falling by 195 kb/d to 46% of capacity by end-March. Stocks are now 3% below end-February and 9% below March 2007.

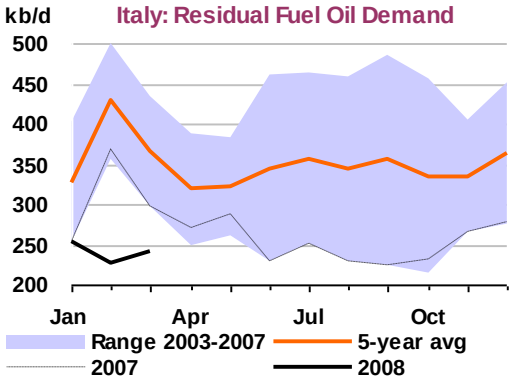


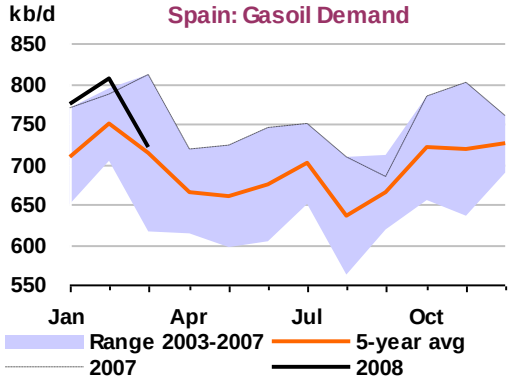


Inland deliveries in **France** fell by 5.7% year-on-year in March, led by a 13.9% decline in gasoline deliveries, a 6.3% decline in diesel and a 9.8% fall in heating oil deliveries. We expect the weakness to be partly reversed in April, due both to the effect of Easter and colder weather. Meanwhile, **Italian** deliveries fell by 5.8% in March as demand for all product categories (bar 'other products') declined. Transportation fuels contracted by 5.9%, the strongest decline since April 2006 (-11.4%). Fuel oil demand, in particular, remains exceptionally weak (-19%, following February's -39%). Although this weakness is partly due to a 2.7% decline in electricity demand, the fact that hydro electric power production fell by 1.1% suggests that interfuel substitution in favour of natural gas continues apace.

According to preliminary figures, oil demand in **Spain** shrank by 5.8% year-on-year in March. This figure, though, is partly explained by the fact that demand was exceptionally strong in the same month of last year. Gasoil and gasoline were particularly weak, falling by 11.1% and 8.7%, respectively. Jet fuel/kerosene, by contrast, was 9.8% higher, possibly due to increased holiday travel in March. Finally, **UK** demand is expected to have remained unchanged in March (preliminary data was not available at the time of writing). February data, however, were revised up by 68 kb/d, largely because of surprisingly

strong growth in diesel demand (+12.1%). We have adjusted down slightly our prognoses of LPG and naphtha demand for April and May as a result of the strike at the Grangemouth refinery and its petrochemical complex (where ethane, propane and some light distillates are used as feedstock to produce ethylene).





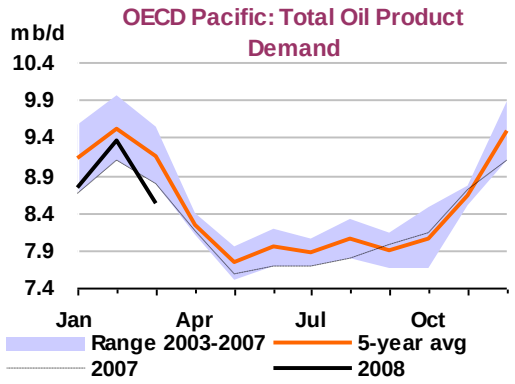
OECD Europe Demand by Product
(million barrels per day)

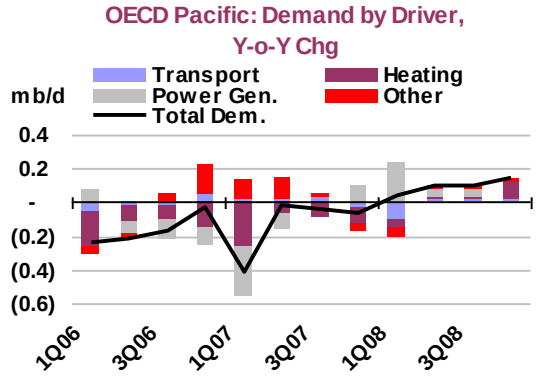
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	1.00	0.97	1.03	0.97	0.89	1.00	1.03	1.11	1.09	-0.01	0.06
Naphtha	1.12	1.12	1.21	1.05	1.08	1.14	1.16	1.11	1.17	0.07	-0.06
Motor Gasoline	2.57	2.49	2.38	2.58	2.58	2.40	2.32	2.24	2.31	0.07	-0.10
Jet & Kerosene	1.27	1.29	1.22	1.28	1.39	1.28	1.22	1.23	1.23	0.01	0.00
Gas/Diesel Oil	6.25	6.12	6.17	5.73	6.07	6.50	6.16	6.51	6.54	0.02	0.33
Residual Fuel Oil	1.86	1.74	1.83	1.71	1.68	1.74	1.71	1.76	1.65	-0.11	-0.27
Other Products	1.57	1.54	1.35	1.60	1.69	1.54	1.29	1.44	1.35	-0.09	0.05
Total Products	**15.63**	**15.28**	**15.19**	**14.93**	**15.39**	**15.60**	**14.88**	**15.39**	**15.34**	**-0.04**	**0.02**

* Latest official OECD submissions (MOS)

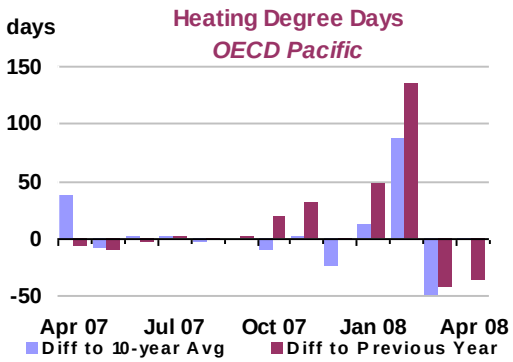
Pacific

Preliminary data show that oil product demand in the Pacific contracted by 2.8% year-on-year in March. Weak transportation fuels demand in all countries bar Australia and shrinking deliveries of kerosene for heating in both Japan and Korea as a result of much warmer temperatures (both compared with last year and with the 10-year average) offset the continued and very strong growth in fuel oil and direct crude use for power generation in Japan. Given these data, OECD Pacific oil demand has been revised down slightly to 8.4 mb/d in 2008 (+1.2% on a yearly basis).



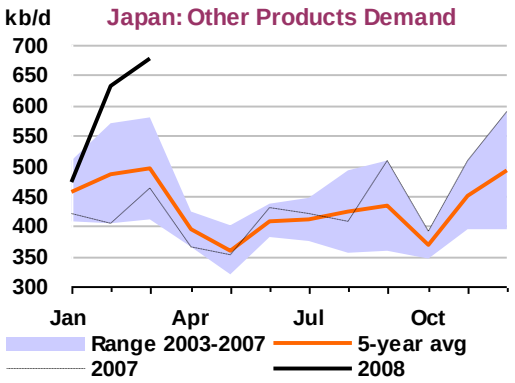


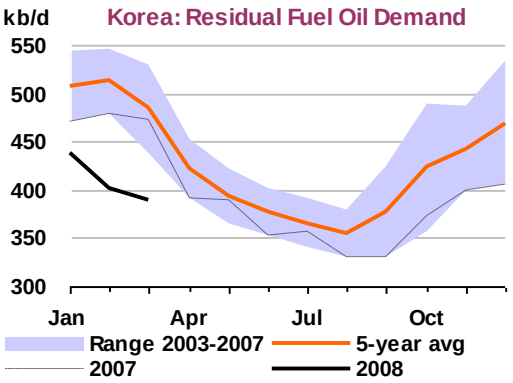
According to preliminary data, oil product demand in **Japan** (two-thirds of OECD Pacific total) fell by 4.0% year-on-year in March. Mild temperatures, which depressed demand for heating (jet fuel/kerosene plummeted by 21.9%), and an unexpected large contraction in gasoline deliveries (-13.9%) offset continued demand for fuel oil (+25.1%) and direct crude for power generation (included in 'other products', which rose by 46.6%). Oil demand is thus expected to reach 5.0 mb/d (+0.9%) in 2008, but the declining trend observed in the past several years should resume in 2009 if the nuclear outages are resolved.



The removal of the transportation fuel tax in April (the Special Taxation Measure, levied on deliveries from Japanese refineries following the oil price shocks of the 1970s in order to fund a road-building programme) was short-lived. The opposition Democratic Party of Japan (DPJ), which holds a majority in parliament's upper house, had refused to renew the tax, which expired on 31 March, on the grounds that its proceeds have been wasted. The government, facing both a significant fiscal shortfall of as much as 1% of Japan's GDP and discontent within the ruling Liberal Democratic Party (LDP) from the construction lobby, used its two-thirds majority in the lower house on 30 April to force through the reinstatement of the tax, effective immediately (this is only the second time in the past 50 years that the government had used its so-called 'super-majority').

Following the reinstatement of the tax, Japan's average retail gasoline price jumped by about 17% to ¥153/litre, thus ending the month-long fuel tax holiday (prices had fallen by 15% on average). Lower prices may have increased gasoline demand slightly (preliminary data for April will not be available until next month) and may explain why gasoline deliveries were so weak in March. Given that the expiry of the bill had been largely anticipated, Japanese retailers possibly delayed purchase. However, the reinstatement of the tax just ahead of the Golden Week holiday is likely to have softened demand – indeed, retail prices have almost reached the all-time high level of ¥155/litre recorded in early December 2007 – and thus resume the structural decline in gasoline consumption.





In **Korea**, preliminary data indicate that total oil product deliveries fell by 1.0% year-on-year in March. The strong performance of LPG (+7.4%) and naphtha deliveries (+6.5%, accounting for over a third of total Korean demand), failed to offset the weather-induced decline in jet fuel/kerosene demand (-6.5%) and the increasing use of LNG instead of residual fuel (-17.5%) for power generation. Still, the 2008 demand outlook remains largely unchanged at 2.2 mb/d in 2008 (+1.5% over 2007).

OECD Pacific Demand by Product
(million barrels per day)

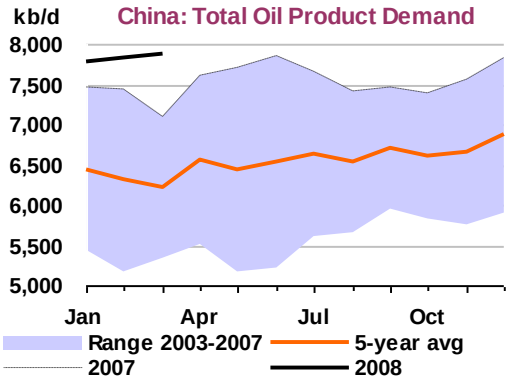
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	0.92	0.93	0.97	0.92	0.86	0.95	1.02	0.94	1.04	0.11	0.04
Naphtha	1.60	1.65	1.75	1.57	1.63	1.67	1.76	1.76	1.71	-0.05	-0.08
Motor Gasoline	1.57	1.57	1.53	1.54	1.63	1.57	1.57	1.43	1.54	0.11	-0.04
Jet & Kerosene	0.98	0.91	1.25	0.73	0.65	1.03	1.21	1.31	1.41	0.11	0.11
Gas/Diesel Oil	1.83	1.78	1.85	1.75	1.67	1.86	1.83	1.67	1.87	0.20	-0.08
Residual Fuel Oil	0.98	0.94	0.99	0.89	0.90	0.99	1.05	1.12	1.03	-0.09	0.05
Other Products	0.52	0.49	0.49	0.41	0.48	0.58	0.64	0.52	0.74	0.22	0.26
Total Products	**8.40**	**8.27**	**8.83**	**7.80**	**7.81**	**8.64**	**9.10**	**8.74**	**9.35**	**0.61**	**0.26**

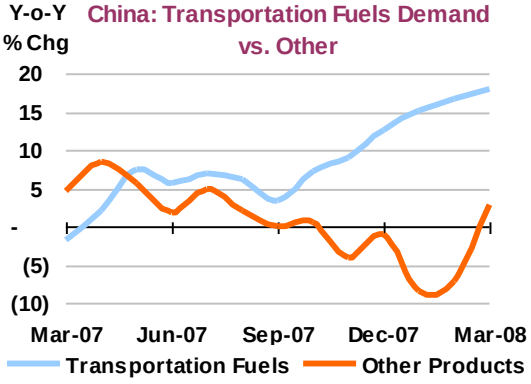
* Latest official OECD submissions (MOS)

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 11.0% year-on-year in March. This rise was mostly related to a rebound in transportation fuels demand (suggesting that the issue of product shortages is being gradually addressed): gasoline rose by 23.9%, gasoil by 15.7% and jet fuel/kerosene by 14.5%. In addition, demand has been supported by reconstruction work following the devastating snowstorms of early 2008. Moreover, although residual fuel oil demand – the feedstock of choice for 'teapot' refineries – remains relatively weak (-1.3% versus March 2007), it is in a much better state when compared with the past six months (average year-on-year decline over the previous seven months: -13%). This is not surprising, as the country has begun a new agricultural cycle, which requires significant volumes of low-quality gasoil, normally supplied by independent refiners.





The surge in demand – which matches a stronger-than-expected GDP growth rate for 1Q08 (+10.6%, almost a full percentage point above most expectations) – was essentially met by imports, since overall refinery runs were down by 1.4% from February. (However, runs by 'teapot' refineries – China's swing producers – rose by about +2.6% month-on-month, according to our estimates, thus confirming reports of continued access to subsidised feedstock provided by state-owned PetroChina and Sinopec, notably in eastern China.) Net imports of both crude and products were significantly higher (+382 kb/d and +130 kb/d, respectively, versus the previous month). Half of the increase in net product imports was related to gasoil (+37% over February) and residual fuel oil (+11%).

Given the strong 1Q08 preliminary figures, the 2008 prognosis has been revised up slightly, to 7.9 mb/d (+4.9% over 2007). However, as discussed extensively in last month's report, the forecast is bound to change over the next few months, as a clearer picture emerges regarding economic growth, the effects of the destructive snowstorms of early 2008, the Olympics and oil-fired power generation requirements. The latter point is a key source of uncertainty: some observers argue that the main reason behind the recent

coal supply shortages and ensuing power blackouts is the lack of transportation capacity, especially in railways, which is obliging coal producers to hold larger-than-normal stocks. If so, this issue will only be solved in the medium term (the government intends to construct additional railways in the country's 13 most important coal-producing regions by 2020). Therefore, new shortages could potentially emerge: some officials anticipate a 10 GW shortfall this summer, notably in southern China, which could add some 30-40 kb/d to gasoil and fuel oil demand in order to feed small backup generators. Alternatively, coal trucking could increase – but that would also boost gasoil demand.

Yet China's power sector also faces distorted financial incentives, which mirror developments in its oil industry: capped end-user prices amid rising fuel (coal) prices, which in the end result in lower generation rates. If widespread blackouts (and a spike in gasoil and residual use) are to be averted this summer, the government may need to consider similar measures (see 'No More Shortages?' below) – that is, explicit subsidies to coal and power producers and import tax breaks on coal. The total cost of energy subsidies, though, could then become enormous. Alternatively, it could also suspend its widely proclaimed commitment to 'greener' and 'safer' energy policies by allowing small coalmines and power generators to continue operating, instead of shutting them down.

No More Shortages?

Adamant that the domestic oil product market must be well supplied ahead of the Olympic Games, but reluctant to liberalise end-user prices given the threat of further inflation (currently at almost 9%), China's government has adopted a new series of measures to deal with potential shortages.

First, in late April it decided to make explicit an ad hoc subsidy policy aimed at state-owned PetroChina and Sinopec, which will be reimbursed on a monthly basis for their downstream losses (effective April 1). Indeed, uncertainty over subsidies as the gap between domestic and international prices kept on widening has arguably contributed to the intermittent gasoline and gasoil shortages that have plagued the country since last year. Partial compensation was eventually granted to Sinopec only (by virtue of being the largest refiner) for 2006 and 2007, but only after much speculation on whether that would happen at all. By institutionalising subsidies, the government hopes that the state-owned giants will have enough incentives to adequately supply the market (it is unclear, though, whether the monthly subsidy will fully cover PetroChina and Sinopec's losses).

How costly is this move likely to be? Considering that the spread between domestic and international crude prices is currently about $30/bbl, and that China's oil demand stands at roughly 7.9 mb/d, the gross subsidy would be around $87 billion per year – about 2.2% of GDP and roughly 10% of the government's fiscal revenues. The net subsidy, though, would be much lower: given that roughly 52% of the country's crude requirements come from domestic sources, the total cost would fall to some $45 billion, equivalent to 1.1% of GDP and 5.2% of budgetary income – expensive but still relatively affordable, provided that international prices do not increase much further. However, this rough calculation assumes that all products face similar price caps, which is not the case (naphtha and petrochemical feedstocks, for example, trade at market prices). Therefore, the net cost could be even lower.

Second, the government announced it will refund the value-added tax (17%) levied on gasoline and gasoil imports during 2Q08. This refund will cover up to 3.5 million tonnes of fuel imports by PetroChina and Sinopec over that period. It should also allow both companies to carry out maintenance work in several refineries – scheduled 4Q07 outages had been delayed as a result of government pressure – and rebuild stocks (the lack of inventory data, however, makes it difficult to gauge the extent of such a rebuild). Some observers reckon that a similar VAT exemption regarding crude imports will be announced soon.

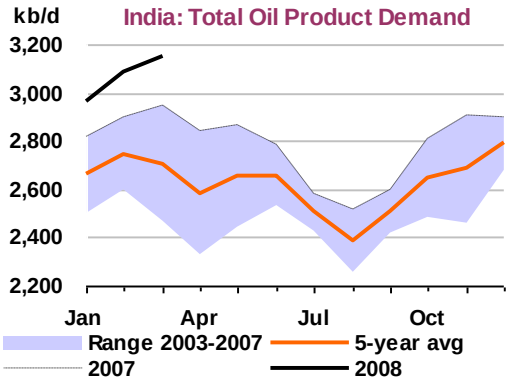
Third, the government has ordered wholesalers to hold stocks equivalent to at least 15 days of sales in the same period of the previous year, starting on 1 May. This measure, though, is more problematic. It presupposes that, contrary to what has happened in recent months, supplies from state-owned refiners will be sufficient to meet the requirements of both their affiliated service stations and of independent wholesalers and retailers. If that were not the case, independents would be the first to be squeezed – again – and forced to run down their stocks. However, it is unclear whether there will be sanctions if the 15-day target is not met – for Chinese independents, a minimum stock holding level only creates expensive extra demand without much additional benefit except in the case of an emergency.

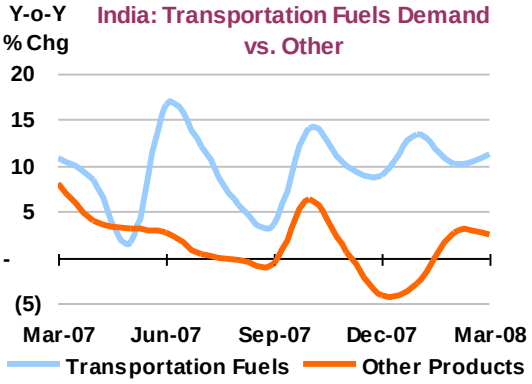
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	657	-33	-12	-4.6	-1.9
Naphtha	756	812	824	56	12	7.5	1.5
Motor Gasoline	1,221	1,257	1,368	36	111	2.9	8.8
Jet & Kerosene	259	280	303	20	24	7.8	8.5
Gas/Diesel Oil	2,415	2,576	2,833	161	257	6.7	10.0
Residual Fuel Oil	791	744	716	-48	-28	-6.0	-3.8
Other Products	1,068	1,204	1,214	136	10	12.7	0.8
Total Products	**7,213**	**7,542**	**7,914**	**329**	**373**	**4.6**	**4.9**

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – jumped by 6.9% year-on-year in March. As usual, transportation fuels – gasoline, jet fuel/kerosene and gasoil sales – have been the main contributors to demand growth, rising collectively by roughly 12.0% year-on-year. Although February data were revised down slightly, our 2008 forecast remains largely unchanged at 2.9 mb/d (+4.8% over 2007).

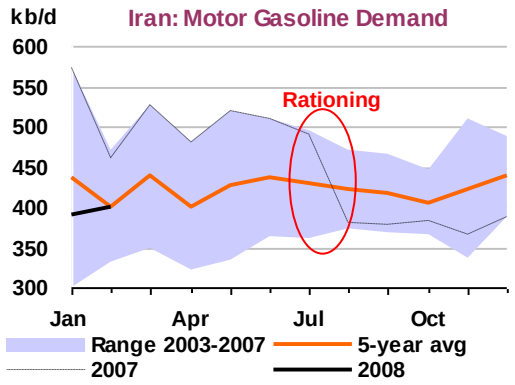


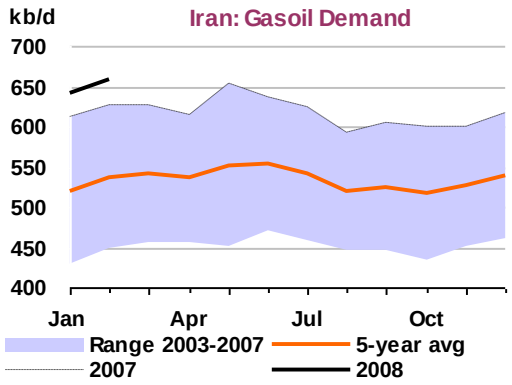


One effect of India's end-user price caps – in addition to runaway oil demand, mounting government expenditures and the heavy financial losses incurred by refiners and retailers – is oil product adulteration. Anecdotal evidence suggests that the practice of diluting gasoline or diesel with kerosene – mostly used by the country's 600 million poor as cooking fuel – is becoming increasingly widespread. That is not surprising given the current spread between administered prices: kerosene is sold at Rs 9 per litre, compared with gasoline (Rs 44 per litre) or diesel (Rs 36 per litre). Profits can thus be significant, even though adulterated fuel (usually sold in small kiosks) is some 10% cheaper than legal supply. Although in 2006 the government decreed that a blue dye should be mixed with kerosene in order to track adulteration, as much as 50% of kerosene production is diverted for illegal blending, according to local estimates.

The subsidy policy is in effect financing a massive transfer of wealth to the growing black market. In the year to 31 March, India spent $19 billion in fuel subsidies – with $4.8 billion devoted to kerosene. Moreover, since kerosene, unlike gasoline or diesel, is not taxed, adulteration also implies a loss of tax revenues (as much as $4 billion per year, according to some observers). Furthermore, the consequences of adulteration are not only financial. The efficiency of vehicles using the 'off-spec' fuel is impaired (eventually, the engine is severely damaged). Perhaps more importantly, it is the source of significant air pollution: Indian kerosene contains as much as 2,000 ppm of sulphur – around six times higher than diesel in major cities (350 ppm).

According to preliminary data, oil product demand in **Iran** rose by 3.7% year-on-year in February. As in most countries in the region, demand is largely underpinned by transportation needs. With the exception of gasoline (demand contracted by 13.4% compared with February 2007), gasoil demand remains buoyant (+5.3% on a yearly basis). The reduction in gasoline consumption was the result of last year's rationing scheme, which also contributed to stem outbound smuggling (by the same token, this means that gasoline demand in neighbouring countries probably increased). Power generation requirements have also played a key role with regards to the country's oil demand strength, in line with the country's natural gas shortages: residual fuel oil demand soared by +23.0% year-on-year – the ninth consecutive month of double-digit growth. Overall, Iranian oil demand is expected to average 1.8 mb/d in 2008 (+2.0% over 2007). It should be noted that this year's relatively subdued growth rate, at least compared with the recent past (demand expanded by +8.9% in 2006 and by +5.9% in 2007), is largely related to the fall in gasoline demand in 2H07. Whereas gasoline accounted for some 27% of total oil product consumption in 2006-2007, its share is expected to diminish to about 22% of the total in 2008, and demand should grow by around 5% per year from 2009 (compared with over 10% in pre-rationing years).



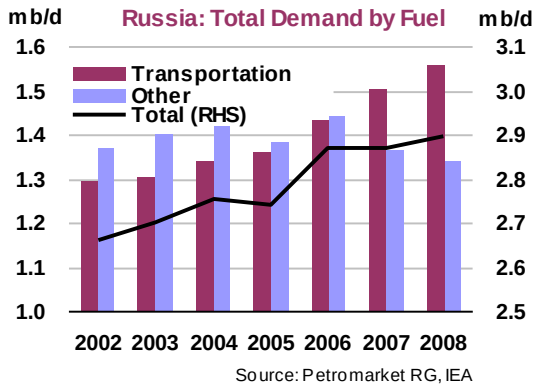


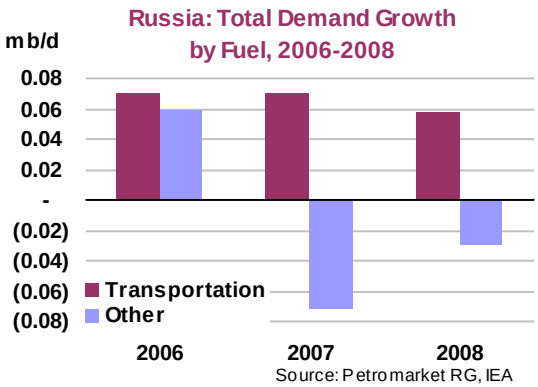
In early March, after several months of dithering and as Iranians prepared to celebrate their New Year holidays, the government finally set a price for gasoline volumes above the rationing quota (120 litres per month). The new price has been set at 4,000 rials (44¢) per litre – about four times higher than subsidised gasoline but largely in line with black market prices. Demand, however, is unlikely to change much; for the vast majority of the population the new price is unaffordable anyway. Moreover, the black market arguably reflected already the equilibrium price: since August 2007, gasoline demand has remained largely stable at roughly 380 kb/d on average (compared with around 500 kb/d in 1H07). Nevertheless, domestic production (250 kb/d) remains insufficient to meet Iran's requirements. As such, the country will need to continue importing gasoline potentially until 2012, when several planned refinery upgrades are completed.

Having more or less tamed runaway gasoline demand, the government is now setting its sights on gasoil, which accounts for the lion's share of demand (35%) and whose consumption has also markedly risen over the past two years (+9.4% in 2006 and +13.7% in 2007). The growth in gasoil demand is related to several factors: capped prices, smuggling out of Iran, and interfuel substitution away from gasoline following the introduction of rationing in mid-2007. The government is reportedly aiming at introducing a diesel rationing scheme by late May, and has begun distributing smart cards. Formal quotas, though, are yet to be announced. Indeed, the government is treading carefully: as opposed to gasoline, which is consumed by a relatively small sector of the population, gasoil permeates most spheres of economic activity. Gasoil is not only widely used in the industrial and agricultural sectors, but it also largely fuels the country's truck fleet; as such, disrupting gasoil supplies could have far-reaching effects in terms of economic growth and inflation.

Last month's introduction of a new methodology for assessing FSU oil demand – from a calculation based on supply and net crude and product exports to the tracking of actual deliveries – is providing new levels of insight. In particular, it allows a better understanding of **Russia**, which is by far the largest contributor to regional demand and the world's fourth largest consumer.

Russian oil product demand has been growing by 1.0% on average over the last decade, reaching 2.9 mb/d in 2007. More recently, however, overall demand has remained relatively flat given diverging trends among the different oil products. On the one hand, growth in transportation fuels demand remains robust, mirroring the country's economic performance (GDP grew by 8.1% in 2007, according to the IMF, and 7.2% on average over the past 5 years). This strong economic expansion has promoted the emergence of a growing middle class eager to purchase cars. Indeed, the Russian automotive market has become one of the fastest growing in the world. Car registrations, dominated by gasoline-fuelled vehicles, increased by 63% in 2007 to around 2.5 million units, according to oil & gas consultancy PFC Energy. The European Bank for Reconstruction and Development (EBRD) expects Russia's car fleet to surpass Germany's (currently the largest in Europe) as early as 2012.





On the other hand, the consumption of other products, particularly high-sulphur fuel oil, has steadily diminished over the last decade. Fuel oil use has structurally declined – from 639 kb/d in 1997 to 335 kb/d in 2007 – due to energy efficiency improvements and natural gas substitution. Cold weather conditions in 2006 and the need to sustain gas exports to Europe (which have consequently reduced domestic gas supplies) briefly interrupted this trend (that year fuel oil demand rebounded by 16.1%). However, the subsequent mild winter of 2007 reversed the picture again, with fuel oil demand declining by 20.8%. In the final analysis, the fuel oil outlook will depend to a large degree on domestic investment, natural gas pricing policies and tax regimes. Indeed, following the recent decision to liberalise domestic natural gas prices by 2011 (which will result in a 30% annual increase in household and industrial-sector prices over the next four years), fuel oil could become once again the fuel of choice for industrial users and power generation needs.

Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	265	281	294	16	13	6.0	4.6
Naphtha	105	96	91	-9	-5	-9.0	-4.9
Motor Gasoline	650	682	706	32	25	4.9	3.6
Jet & Kerosene	229	233	241	4	8	1.7	3.4
Gas/Diesel Oil	552	585	610	33	25	6.0	4.2
Residual Fuel Oil	424	335	306	-88	-29	-20.8	-8.7
Other Products	645	654	646	10	-8	1.5	-1.3
Total Products	**2,870**	**2,867**	**2,895**	**-3**	**28**	**-0.1**	**1.0**

Source: Petromarket RG

Dealing with High Prices

As oil prices continue their seemingly unstoppable rise, many non-OECD are scrambling for solutions. High prices are indeed causing severe problems, since most emerging economies have some type of administered price regime and are understandably reluctant, for economic, political and social reasons, to let domestic oil product prices increase sharply. At the same time, maintaining price controls is leading to severe distortions and mounting costs for public purses. The following examples provide an illustration of the challenges faced by key Asian countries.

In **Chinese Taipei**, there is speculation on whether the administration of president-elect Ma Ying-jeou, which will take charge on 20 May, will remove price controls, which were imposed in November 2007. As a result of the price freeze, state-owned CPC Corporation is expected to lose about NT$70 billion ($2.3 billion) this year (it lost $200 million in January alone). According to some observers, the company could go bankrupt in two years if price controls are not lifted.

Diesel subsidies were reintroduced in mid-March in **Thailand**, with a view to reducing retail prices by about 3%, and could be increased if oil prices continue to rise and even be extended to the public transport and industrial sectors. But instead of directly paying oil companies the difference between ex-refinery prices and retail prices (as in a previous subsidy scheme), refiners will be allowed to cut their contributions to the oil fund and to the energy conservation fund. Prior to the move, the government had leaned heavily on state-owned PTT PCL and its Bangchak Petroleum affiliate, which have a combined market share of more than 30%, to delay raising end-user prices. In addition, it is actively encouraging motorists and truckers to switch to compressed natural gas (CNG).

In **Indonesia**, the government is under increasing pressure to reduce its onerous subsidies on gasoline, diesel, and kerosene, which are estimated to reach $12 billion in 2008. The government, however, is reluctant to raise prices as this would have damaging economic effects, both in terms of growth and inflation. Meanwhile, its efforts to reduce consumption and promote the use of alternative fuels have not been particularly successful (largely because conventional fuels are among the cheapest in the region). Nevertheless, the government has become bolder. Following Iran's step, it has begun issuing smart cards and should announce quotas on fuel purchases by next June; volumes above the limit would be sold either at market prices or at a much higher levels. Some rumours suggest that retail prices will indeed be increased by as much as 30% (the last increase was in October 2005). The news of potential hikes is already causing unrest: in early May, students and police clashed in eastern Indonesia during a protest against the government's plan.

Following several weeks of uncertainty, the new **Malaysian** government has finally decided it will maintain existing fuel price caps. It has seemingly concluded that the political costs of lifting subsidies would be too high – actually, the small price increases of the past months were one of the reasons for the ruling party's poor showing in the recent parliamentary elections. However, the government hopes to target subsidies more effectively.

In **Vietnam**, the government has frozen oil product prices until June, in a bid to stem rising inflation. The government will abolish import taxes and help importers of gasoil, kerosene and fuel oil cover their mounting losses. Gasoline importers, by contrast, will not be compensated, since gasoline prices have been nominally deregulated since mid- 2007. In practice, though, gasoline importers still need government approval when setting end-user prices and are *de facto* restrained from changing their prices too often.

SUPPLY

Summary

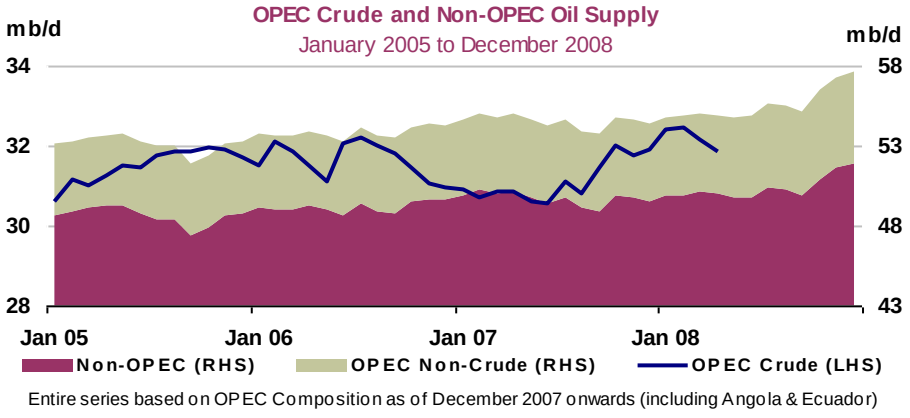
- **Global oil supply** fell by 400 kb/d in April versus March, averaging 86.8 mb/d. Scheduled and unscheduled North Sea outages, lower FSU output and weaker OPEC supply (deriving from Nigerian stoppages) were together responsible for April's reduction. However, annual supply recovery recommenced in 4Q07, after three quarters of weak-to-negative growth and 1Q08 growth of 1.7 mb/d was the strongest since early 2005. This derived from recovering OPEC supply, with non-OPEC production largely static compared with last year.

- **Non-OPEC April production** fell by 135 kb/d from March to 50.0 mb/d, with preliminary data coming in 200-250 kb/d below earlier expectations for February through April. Weaker-than-expected February Australian data were followed in March and April by widespread downward revisions among non-OECD producers, notably the FSU. Non-OPEC supply should remain unchanged, close to 50 mb/d, through 3Q, before a sharp uptick to 51.5 mb/d in 4Q, with new project start-ups and returns from scheduled maintenance. Overall, non-OPEC 2008 supply is revised down by 140 kb/d to 50.4 mb/d.

- **Annual non-OPEC supply growth in 2008** averages 680 kb/d, compared with 550 kb/d in 2007. Increases from OECD and non-OECD Asia, the FSU and Latin America offset declines from Europe, North America and the Middle East. Biofuels contributes 425 kb/d to 2008 non-OPEC growth, compared with 270 kb/d in 2007, taking global biofuels supply past 1.5 mb/d in the process. OPEC condensate and gas liquids supply, not included in non-OPEC totals, reaches 5.2 mb/d this year, up from 4.8 mb/d in 2007.

- **OPEC April crude supply** averaged 31.9 mb/d, 255 kb/d below upwardly revised March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.9 mb/d from 2.0 mb/d in March. Weaker Iranian April exports saw supply fall 95 kb/d to 3.9 mb/d, while lower Basrah exports cut Iraqi supply by 70 kb/d to 2.3 mb/d. Effective OPEC spare capacity stands at 2.3 mb/d, although refinery outages, crude quality and high prices mean that much of this would currently be difficult to market.

- **The call on OPEC crude and stock change** is trimmed by 100-200 kb/d for 2006 and 2007 after downward non-OECD demand revisions. For 2008 as a whole, weaker demand outstrips lower non-OPEC supply and lowers the 'call' into a 31.3-31.6 mb/d range. Relative to the April report, the 'call' is effectively flattened running through 2008, with demand adjustments outstripping those on the supply side and curbing the call in 1Q, 3Q and 4Q, but supply outages raising the 2Q 'call' to 31.2-31.5 mb/d.



All world oil supply figures for April discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Kazakhstan, and Russia are supported by preliminary April supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC April crude supply averaged 31.9 mb/d, 255 kb/d below an upward-revised March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.86 mb/d, from an upward-adjusted 2.0 mb/d in March. More limited Nigerian outages have persisted well into early May. Weaker Iranian April exports saw supply fall 95 kb/d to 3.93 mb/d, although actual production may have remained higher with significant volumes reportedly going into floating storage. Lower exports from the southern port of Basrah cut Iraqi supply by 70 kb/d to 2.34 mb/d. Otherwise, production trended modestly downward, except for the UAE, where earlier maintenance-related outages were likely reversed.

Effective OPEC spare capacity on a wellhead basis is believed to be around 2.3 mb/d, with again Saudi Arabia and the UAE holding the bulk of this. Recent OPEC pronouncements suggesting 3 mb/d-plus would appear either to be including disruption-induced Iraqi and Nigerian notional spare capacity or perhaps a more optimistic take on output from Saudi Arabia's recently activated Khursaniyah project than our own information suggests. Even this report's 2.3 mb/d for OPEC spare represents physically producible oil, rather than readily marketable spare capacity, bearing in mind the constraints of crude quality, available refining capacity and, until recently at least, producer pricing policy.

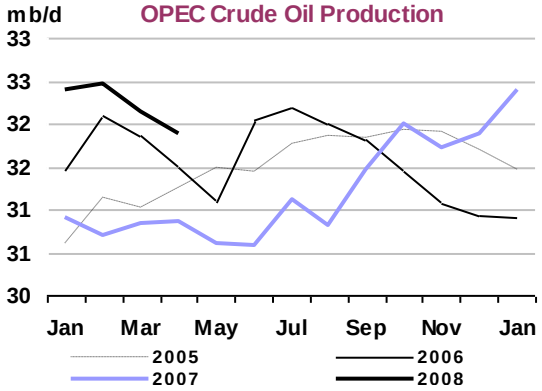
OPEC Crude Production[1]
(million barrels per day)

	Feb 2008 Supply	Mar 2008 Supply	Apr 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Apr 2008 Supply	Capacity end 2008	Current Target
Algeria	1.38	1.39	1.38	1.40	0.02	1.42	1.36
Indonesia	0.87	0.87	0.86	0.88	0.02	0.84	0.87
Iran	3.95	4.02	3.93	4.02	0.09	4.02	3.82
Kuwait[3]	2.58	2.59	2.59	2.62	0.03	2.66	2.53
Libya	1.76	1.76	1.76	1.80	0.04	1.84	1.71
Nigeria[4]	2.10	2.01	1.86	2.47	0.62	2.49	2.16
Qatar	0.85	0.84	0.83	0.90	0.07	0.98	0.83
Saudi Arabia[3]	9.16	9.09	9.05	10.90	1.85	11.25	8.94
UAE	2.66	2.54	2.65	2.88	0.23	2.85	2.57
Venezuela[5]	2.41	2.35	2.32	2.50	0.18	2.40	2.47
OPEC-10	**27.70**	**27.45**	**27.22**	**30.35**	**3.13**	**30.74**	**27.25**
Angola[1]	1.82	1.78	1.82	1.82	0.00	2.12	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**30.02**	**29.72**	**29.54**	**32.67**	**3.13**	**33.36**	**29.67**
Iraq	2.45	2.41	2.34	2.45	0.12	2.42	
Total OPEC	**32.47**	**32.13**	**31.87**	**35.12**	**3.25**	**35.78**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.32)*		

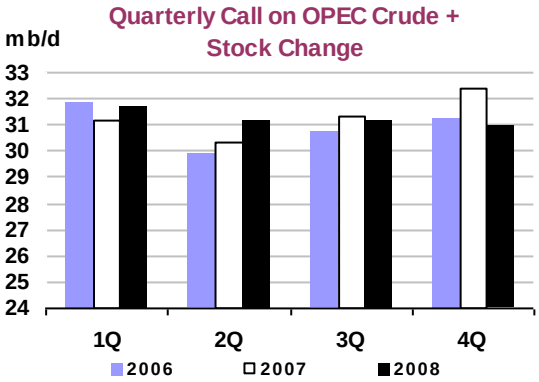
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 440 kb/d in April.

OPEC representatives appear to have dismissed the idea that releasing more crude to the market would affect runaway crude prices, currently skirting $125/bbl for marker grades. While acknowledging that adjustments to the prevailing 29.7 mb/d target are possible before the next scheduled meeting in September, the cartel has stated that comfortable OECD stocks and refinery downtime render this unnecessary for now. Although current OECD inventory is close to seasonal averages, concerns nonetheless remain over what is in store going forward in 2008 if crude supply disruptions of the type seen in April recur while refinery runs are at higher prevailing levels. Potential future supply and the apparent 'stickiness' of spare capacity are as much a concern as current physical output. Moreover, OPEC's 'adequate oil' thesis may in retrospect be seen to have had shaky foundations if suggestions of higher non-OECD demand and stock requirements are borne out.

OPEC's September meeting may again address issues of membership, this time after recent reports that Indonesia is considering leaving the organisation. Press reports suggest the impetus behind the move may come from the country's President, citing the incompatibility of Indonesia's importer status and desire for lower prices with OPEC membership.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

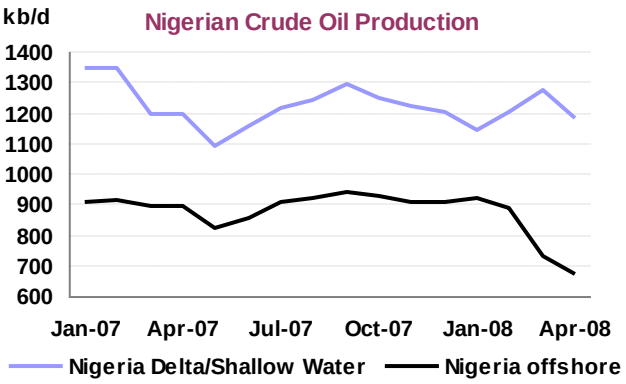
A combination of strike action and further pipeline sabotage cut **Nigerian** April supply by 150 kb/d to 1.86 mb/d, from an upward-adjusted 2.0 mb/d in March. The relatively modest month-on-month decline however disguises the fact that crude output fell by an estimated 1.0 mb/d, to around 1.18 mb/d, between the middle and end of the month. Total capacity shut-in, from a prevailing background level of some 550 kb/d, reached nearly 1.4 mb/d late in April. Firstly, on 21 April Shell declared *force majeure* on all Bonny Light exports for April and May after pipeline attacks forced the shut-in of at least 170 kb/d (unconfirmed reports from Niger Delta rebel group MEND suggested a further 350 kb/d was later closed, although company and government sources strenuously denied this).

Greater impact still derived from separate and widening industrial action at the ExxonMobil-operated Qua Iboe terminal from 24 April. The Pengassan white collar union warned on 10 April of strikes if ExxonMobil did not rescind proposed job cuts at the terminal. There is a long history in the Nigerian hydrocarbon sector of threatened strike action which tends to be resolved before extensive production or export outages materialise. In this case however, contract workers downed tools on 21 April and were joined by Pengassan workers three days later. This escalated to a complete shut-down of ExxonMobil's upstream operations in Nigeria comprising:

- Some 370 kb/d of Qua Iboe output;
- 185 kb/d at the offshore Erha facility;
- 170 kb/d from the Yoho field and;
- Around 60 kb/d of condensate production at the Oso field.

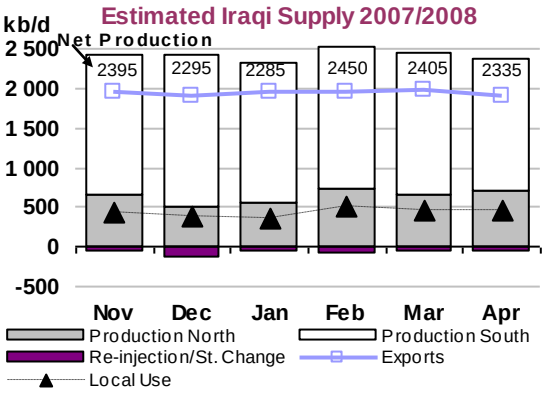
With perhaps unfortunate timing, Total's 125 kb/d Amenam field also went down for maintenance late in the month, although the impact of this on Nigerian monthly supplies was lessened by the return to full operations during late April after earlier maintenance of Shell's 200 kb/d deepwater Bonga field. Just to complete a busy month for barrel counters, Eni also lost between 10-50 kb/d of Brass River production on 12 April after sabotage at the Beniboye flow station.

Fortunately, ExxonMobil and Pengassan reached a deal on 1 May to end the strike, albeit salary negotiations remain ongoing. By 6 May the company announced that production had regained pre-strike levels and the following day *force majeure* on exports was lifted. The restart of Total's Amenam facility also occurred on 8 May. However, despite these output restorations, and reports of rising Forcados crude supplies after shut-ins in place since 2006, an estimated 0.5 mb/d of Nigerian crude production capacity remains off-line. Shell is still grappling with pipeline outages, after a fifth attack in recent weeks on pipeline infrastructure on 3 May shut a further 30 kb/d in southern Bayelsa state. Moreover, Shell is also pursuing restructuring plans which could lead to significant redundancies, raising the prospect of further strike action. Eni's Brass River production is assumed still to be affected and ExxonMobil's salary negotiations could prove protracted. While the situation on the ground remains fluid, with production outages ebbing and flowing, we see little reason for now to change our working assumption that some 0.5 mb/d of Nigerian capacity remains offline for the foreseeable future.



Iranian April supply is estimated at 3.93 mb/d, some 95 kb/d lower than March. This is based in part on lower export sailings during the month. This however does not incorporate reports that Iran has chartered upwards of 10 VLCCs, holding some 20 mb of crude, for floating storage. The implication here is that wellhead output, as distinct from our measure of supply (domestic crude use plus exports), could have been running at higher levels in recent months. These stored volumes, if confirmed, will only show up as 'exports' once vessels leave the vicinity of Kharg Island with specific destinations. All other things being equal, Iranian *supply* could therefore rise accordingly in the months to come. Floating storage requirements have provided strong support for dirty tanker rates, reportedly being prompted by maintenance at Asian and European refineries which has curbed demand for heavy/sour Iranian barrels.

Our estimates for **Iraqi** supply (exports plus domestic refinery use in refineries and power plants) show a 70 kb/d drop in April to 2.34 mb/d. Northern exports are assessed some 70 kb/d higher at 415 kb/d, while southern liftings were down 135 kb/d at 1.46 mb/d. Northbound pipeline flows appeared relatively steady in April, in excess of 400 kb/d. Some 10 kb/d of cross-border deliveries to Syria made up an April export total of 1.89 mb/d, 70 kb/d below March levels. All southern liftings in April came from Basrah, with no liftings from the smaller southern port of Khor al-Amaya. Late-March disruption to southern oil operations seems to have been short-lived, with a ceasefire in force since 30 March apparently well observed. Previously shuttered production at the Bazargan, Majnoon and Bin Umar fields was fully restored by mid-April after pipeline remediation and bypass work was completed.



Meanwhile, Oil Minister Shahristani has set a target for output of 2.9 mb/d by end-2008. This hinges on acceptance by international companies of technical service agreements at selected existing fields to boost capacity by a combined 500 kb/d in the short term. However, there are reports of antipathy towards the deals by the IOCs due to their short-term nature and, for their part, the companies' attention may now be shifting instead towards Iraq's first post-war licence round which the government wants to issue in May.

Mid-April saw reports that Kurdish authorities and those in Baghdad were close to agreement on upstream oil contracts, the status of the disputed northern city of Kirkuk and a national role for Kurdish Peshmerga fighters. However, enthusiasm seemed to dim as the month progressed, leaving uncertainty over Kurdish plans to ship appreciable volumes of crude (up to 275 kb/d were mentioned, albeit with no time frame) via the main northbound export route. Two fields for which deals have been signed by the Kurdish authorities and international companies are Tawke and Taq Taq. The former has capacity of 90 kb/d but is currently producing sub-10 kb/d with exports reportedly limited to trucked supplies to Iran. Taq Taq could begin output near 10 kb/d later in 2008, but may have the potential for around 200 kb/d.

April **Saudi Arabian** supply is estimated marginally lower than March, at 9.05 mb/d, and in line with early-April comments on prevailing production from sources within the Kingdom itself. However, it will be interesting to note whether apparent Saudi supply remains suppressed in the next few months, given:

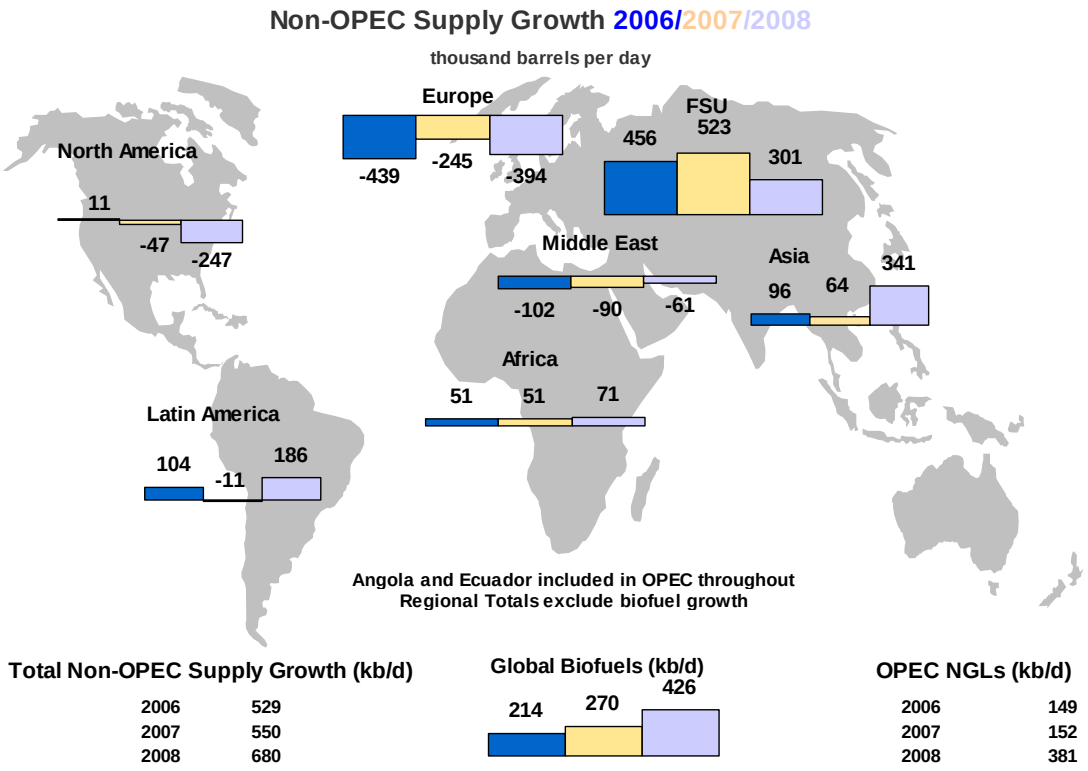
- Start-up in April of initial production from the three-field Khursaniyah project, with eventual capacity of 500 kb/d of Arab Light crude, but which is likely to produce significantly less initially until gas-processing facilities are completed;
- Indications that Asian and European term exports will remain at full contract levels in May;
- Widening price discounts for Arab Heavy to all destinations, and for lighter, sweeter grades into the Atlantic Basin over the past couple of months;
- The traditional seasonal 2Q divergence between weaker oil product demand on the one hand, but stronger refinery throughputs on the other and;
- Not least, record-high - and rising - marker crude prices.

We adjusted up our Saudi capacity estimate last month to 10.9 mb/d, but will wait until unambiguous evidence of higher operating rates becomes available before assuming full 500 kb/d output from Khursaniyah. Meanwhile, much was made during April of some nuanced comments from Oil Minister al-Naimi that he foresaw little need for capacity to be raised in the near future beyond the planned 12.5 mb/d level due in place for 2010. This came after reports that King Abdullah had previously told Aramco to effectively 'sit' on some new oil discoveries, to leave their exploitation for future generations. These comments were read by some as flagging an unwillingness or inability on the part of Saudi Arabia to expand capacity further, or even potentially to reach 12.5 mb/d in the first instance. However, in all fairness, the Kingdom has never explicitly discussed plans to go beyond 12.5 mb/d, so to infer retrenchment on the basis of recent remarks would appear excessive. However, although the 12.5 mb/d limit was discussed in the context of 'demand uncertainty', our view is that, even under weaker US economic assumptions, medium-term demand for OPEC crude is only likely to increase.

We have trimmed the assessment of installed **Libyan** production capacity to 1.8 mb/d from 1.84 mb/d on reports that an outage caused by a drilling-induced pipeline leak at the 40 kb/d offshore al-Jurf field could see production there remain offline for two to three months.

Non-OPEC Overview

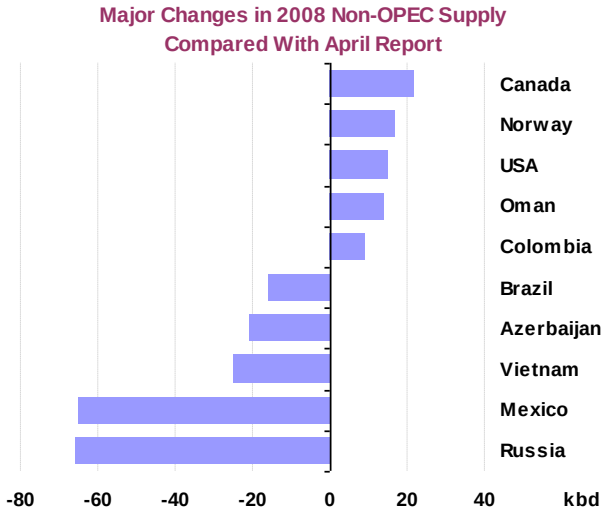
Non-OPEC production in April fell by 135 kb/d from March to 49.96 mb/d. Preliminary data show output running some 200-250 kb/d below earlier expectations for the February through April period. In this month's report, total non-OPEC 2008 supply has been revised down by 140 kb/d to 50.36 mb/d. Weaker-than-expected February Australian data were followed in March and April by widespread downward



revisions among non-OECD producers, notably the FSU, with Russia, Azerbaijan and Kazakhstan all seeing lower than anticipated out-turn production. As mentioned in previous issues, we expect that non-OPEC supply will remain largely unchanged at close to 50 mb/d through 3Q, before a sharp uptick to 51.5 mb/d in 4Q, based on a bunching of new project start-ups in the second half of the year and the return of existing fields from summer/autumn maintenance.

Annual non-OPEC supply growth in 2008 now averages 680 kb/d, compared with 550 kb/d in 2007. Increases from OECD and non-OECD Asia, the FSU and Latin America are expected to offset declines from Europe, North America and the Middle East.

Within the non-OPEC total, biofuels growth reaches 425 kb/d in 2008, compared with 270 kb/d in 2007, in the process taking global biofuels supply through the 1.5 mb/d mark. OPEC condensate and gas liquids supply, not included in non-OPEC totals, reaches 5.2 mb/d this year, up from 4.8 mb/d in 2007.



Whatever Happened to Ceteris Paribus?

Our headline 0.7 mb/d non-OPEC growth for 2008 depends on resurgent supply in the second half of the year, when growth rises in excess of 1.0 mb/d. Weak non-OPEC performance for most of the period since mid-2007 has tended to mask the fact that 1.0 mb/d-plus non-OPEC growth last occurred as recently as the 3Q06 to 2Q07 period. That was fuelled by North America, the FSU, China and biofuels, with these areas also likely to be prominent in 2H08 growth, augmented by Australasia and southeast Asia, plus Congo, the Ivory Coast and Sudan in Africa.

Of course none of these increments can be taken for granted. Resource depletion and decline rates represent an ever-present drag on supply although, perhaps surprisingly, our recent analysis of decline rates in the past decade (see pages 23-24 of report dated 11 March 2008,) did not suggest this was the key risk factor for our forecasts, as adjusted non-OPEC levels for 2000-2007 appeared remarkably stable and since we were already employing rates at or above these observed levels in our forecast. Rather, a bottleneck-strewn investment environment and ageing production infrastructure look the most likely possible impediments to achieving headline expected growth.

Since July 2007 the forecast has included a 410 kb/d field reliability adjustment, based on the historical tendency for mature infrastructure to suffer unscheduled operational outages. It is too early to say whether this adjustment is sufficiently robust, although recent months' data from the USA and Norway have actually come in close to our estimates with the downward adjustment removed. Notwithstanding, facility break-downs are often overlooked by analysts examining non-OPEC underperformance, although others such as Matt Simmons have highlighted the need for a comprehensive audit of existing upstream infrastructure, suggesting that between $50 trillion and $100 trillion might need to be spent industry-wide remedying 20 years of maintenance underinvestment.

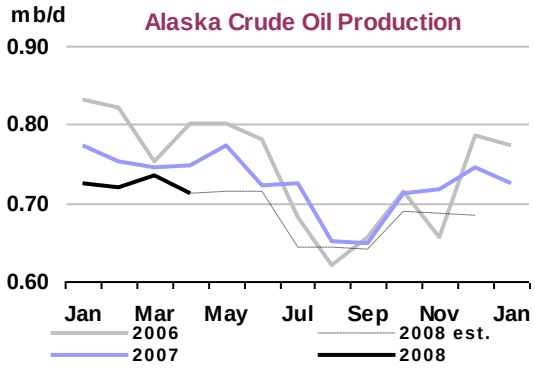
Further outages which we cannot hope to capture in advance in our forecasts have been highlighted in the March-May period. Some 900 kb/d of production capacity has recently suffered downtime in the UK Forties system (600 kb/d), Canada (130 kb/d), Colombia (95 kb/d), Argentina (65 kb/d), Peru (15 kb/d) and Australia (5-10 kb/d) due to a combination of strikes, weather and rebel attacks. By definition, the unexpected is not included in normalised supply forecasts, leaving them prone to downward adjustment when *force majeure*-type events materialise.

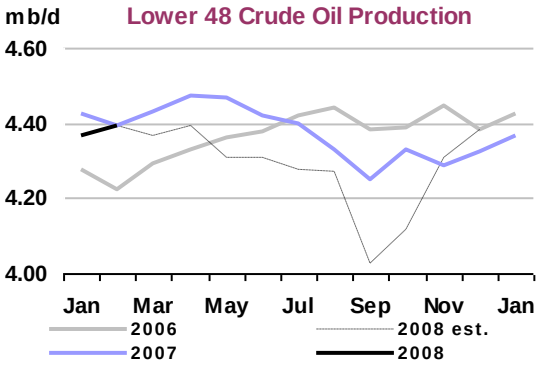
Finally, as noted previously, new project deferrals remain a key downside risk. We estimated last month that, were we to employ an extreme, blanket, six month delay assumption for all new 2H08 projects, this would remove 0.3 mb/d from the 2008 non-OPEC forecast. As if to echo that analysis, this month we have had to adjust timings by anywhere between several weeks to six months-plus for some 700 kb/d of new non-OPEC capacity, albeit the net impact on 2008 supply is only a very small fraction of this volume. Projects affected include Neptune and Blind Faith (US GOM), Ettrick (UK), Sakhalin-2 and Khylchuyuskoye (Russia), Bunga Pakma (Vietnam and Malaysia) and slower-than-expected production build from the P-52 and P-54 FPSOs in Brazil. Forecasting on a bottom-up basis requires an 'all other things being equal' proviso, but does beg the question when that state of affairs last prevailed.

OECD

North America

US – April Alaska actual, others estimated: Another upward revision accrues to the US 2008 forecast this month, with 15 kb/d added for 2008 as a whole, taking total output to 7.5 mb/d (5.0 mb/d crude oil), representing growth of 45 kb/d versus 2007. Aggregate data through February, and weekly indications for March and April, tended to over-turn our assumed field reliability adjustment for those months (which nets some 125 kb/d off forecast output based on observed historical unplanned outages). However, it would be premature to alter this adjustment on the basis of only one full month's, and two partial months', worth of data and we retain this level of contingency for May-December 2008 until consolidated 2007 data become available. February NGL and petroleum additives production also came in a collective 85 kb/d above expectation. However, weaker preliminary March and April NGL production numbers lead us to retain our 2008 forecast at 1.81 mb/d, 35 kb/d above 2007. Similarly, we resist an upgrade of forecast additives volumes on the strength of a single month's data, particularly as the revision this month does not accrue to ethanol. Ethanol production nonetheless rises by 125 kb/d to 545 kb/d in 2008, after 105 kb/d growth in 2007.

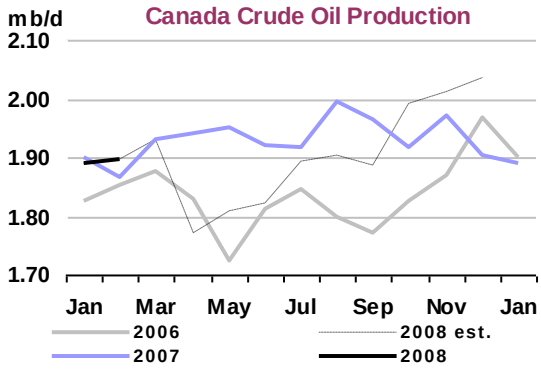


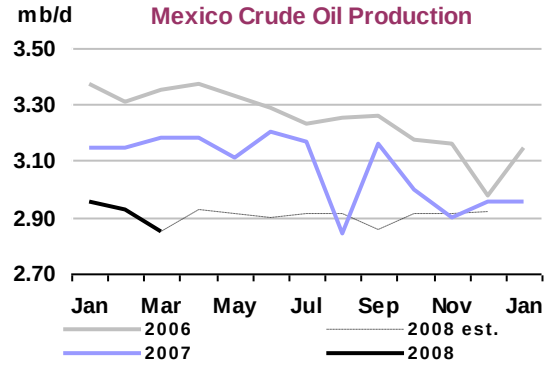


Gulf of Mexico (GOM) production is seen gaining 50 kb/d in 2008 to 1.39 mb/d, a level not seen since 2004. However, delays continue to plague new field start-ups in the deepwater GOM, with Blind Faith again pushed back, this time to autumn 2008 from May. However, there are suggestions that production ramp-up towards 45 kb/d capacity could be quicker than we had originally anticipated. Our removal of the 50 kb/d Neptune project from 2008 projections now appears premature. Structural anomalies on the project's tension leg platform just prior to commissioning had led to reports of an indefinite delay, but operator BHP now says it expects start-up in late June. We include initial Neptune volumes in our forecast from July. Project costs on Neptune are now $1.2 billion, 40% higher than at approval in 2005.

Canada – Newfoundland March, others February: Total Canadian oil production in 2008 is seen rising by 20 kb/d to 3.34 mb/d, having gained some 130 kb/d in both 2006 and 2007. Continued Alberta bitumen and synthetic crude growth offsets declining conventional crude output and gas liquids. Notably, supplies from offshore east coast Hibernia, Terra Nova and White Rose fields are seen levelling off at a collective 375 kb/d. The 140 kb/d White Rose field suffered occasional April outages because of ice floes.

The Canadian forecast for 2008 has been revised up by 20 kb/d overall, again due to oil sands developments. Reports from CNRL now suggest the 110 kb/d Horizon synthetic crude project, due online late in 3Q, could attain some 85% of target capacity by end-year, markedly higher than our preliminary estimates, leading to a modest upgrade there. Otherwise, the main shift in the Canadian forecast derives from adjustments in maintenance schedules for the Suncor and Terra Nova projects, which now appear both less protracted and concentrated earlier in the year. All told, 1H08 supply is trimmed by 50 kb/d, while second-half estimates are raised 95 kb/d.





Mexico – March actual: Mexico matches Russia as source of the main downward supply adjustments in this month's report. A total of 65 kb/d (48 kb/d of crude and 17 kb/d of NGL) is trimmed from 2008 forecast supply. March crude production came in a sizeable 113 kb/d below forecast at 2.85 mb/d, and NGL 23 kb/d lower at 367 kb/d. Output from the ageing Cantarell field stood a full 25% lower in 1Q08 than in 1Q07, a level of decline we now sustain in our 2008 forecast. It is unclear whether 1Q production

levels may have been artificially low because of remedial work at the field, but we would prefer to err on the side of caution until this becomes clear from actual 2Q production. The story for Mexican crude in 2008 therefore remains one of sustained Cantarell decline, partly offset by rising output from the deepwater Ku-Maloob-Zaap complex. National crude production is seen matching last year's 175 kb/d decline, to average 2.9 mb/d.

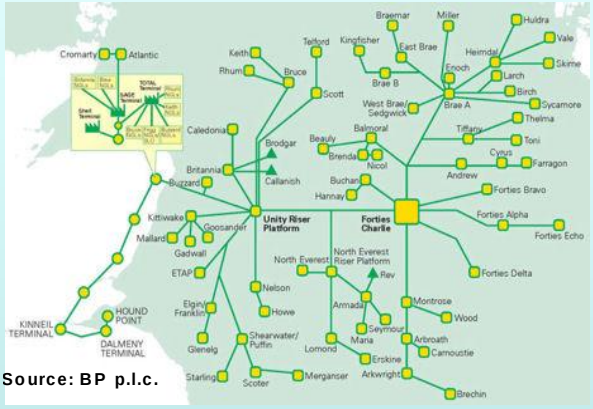
The modest energy sector reforms proposed by President Calderon, widely seen as necessary to reverse production decline, already appear stalled, with no vote now scheduled in parliament before late summer. However, separate proposals may be forthcoming that could lessen state oil company Pemex's fiscal obligations, potentially providing at least some scope for incremental E&P investment.

North Sea

Brief UK Forties System Shutdown in April

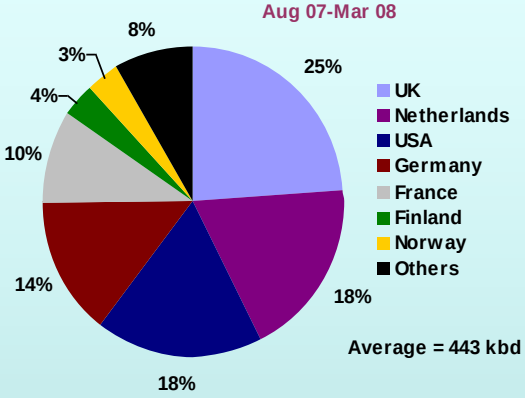
Market nerves were further frayed in April by a combination of outages affecting both Nigerian and UK crude supplies. At their peak, these incidents removed some 1.7 mb/d of motor fuel-rich crude and condensate supplies from the world market. Fortunately, industrial action underpinning outages in both countries proved short-lived, lasting only a matter of days. However, the incidents illustrated the vulnerability of a system operating with such thin margins of spare capacity and indeed with spare capacity overwhelmingly concentrated in heavier, sourer barrels.

Forties Pipeline System



Source: BP p.l.c.

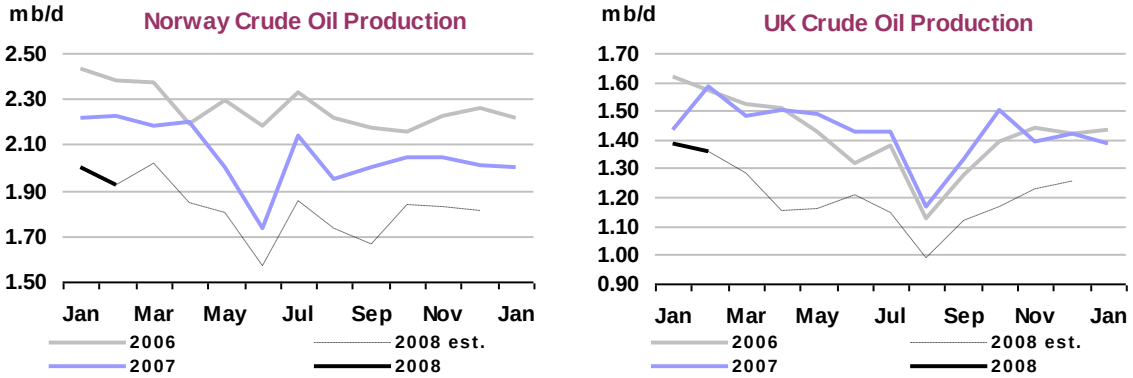
Tanker Liftings from Hound Point, UK, Aug 07-Mar 08



The shut-down of the UK's Forties Pipeline System (FPS), which normally handles 600-700 kb/d of crude and gas liquids, derived from strike action (centred on a dispute over pension contributions) on 27-28 April at the 195 kb/d Grangemouth refinery on the Firth of Forth in eastern Scotland. Despite having been sold to the Ineos petrochemical group in 2005, Grangemouth remains integrated with the BP-operated FPS to the extent that the refinery provides steam and power to the nearby Kinneil crude-processing facility. Kinneil takes unstabilised crude from FPS, generating stabilised crude and NGLs which are then destined either for the Grangemouth refinery, or in the case of crude, to the nearby 4 mb Dalmeny tank farm and onward for export via the Hound Point marine terminal. Forties crude (42°API, 0.25% sulphur) trades on a spot basis, commonly in 600 kb cargoes, with exports in the past six months orientated towards the UK, the Netherlands, USA and Germany. In the event, Kinneil operations and Forties supplies began to be scaled back on 26 April, being entirely shut-in for the duration of the Grangemouth outage, before being restored on a gradual basis from early morning 29th April. The impact of any further strike action at Grangemouth on Forties crude supplies will depend on the continued availability of utilities for Kinneil.

Norway – February actual, March provisional: February field-specific production data came in some 65 kb/d below preliminary estimates, with crude oil at 1.92 mb/d and gas liquids at 563 kb/d (this report reclassifies as condensate some crude volumes reported in headline Norwegian official data). Preliminary

March numbers however stand 155 kb/d above our earlier forecast, which included a field-reliability adjustment of similar magnitude. While the adjustment is retained for forecast months, the 2008 Norwegian forecast is nonetheless revised up by 15 kb/d, to 1.82 mb/d of crude and 560 kb/d of gas liquids. However the components show divergent trends, with crude declining in excess of 200 kb/d versus 2007, as in the past three years, but NGL and condensate rising by 65 kb/d – the strongest growth since 2003. Condensates from the Snohvit and Ormen Lange gas projects underpin this NGL growth.



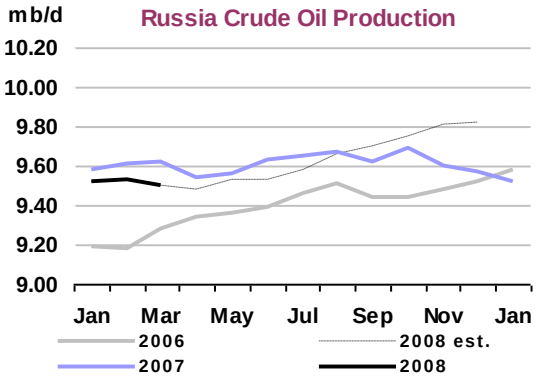
Several small field and satellite developments have started up in recent weeks, including those at the Vigdis, Gullfaks and Oseberg fields. After last month's announcement of planned reactivation for the 35 kb/d Froy field, StatoilHydro has now received government approval for development of the Morvin field's 63 mb of recoverable oil, with initial production in 2010 tied back to existing Åsgard facilities.

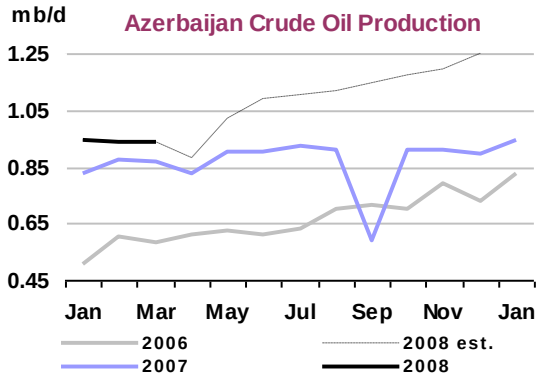
Former Soviet Union (FSU)

Russia – March actual, April provisional: A fourth consecutive month of weak Russian output in April leads to a 65 kb/d downward revision to our 2008 forecast. First-quarter weakness was potentially explainable with colder winter weather in early 2008 versus 2007, but continuing decline in April leads us to scale back our forecast for the year as a whole. We now see total oil production remaining flat in 2008 at 10.1 mb/d, after increases in excess of 200 kb/d in the past three years and near-double-digit growth earlier in the decade.

In addition to a lower baseline (April data were some 90 kb/d below our expectation), last month also saw reports of further new project delays. The start of the 2008 production season at the Sakhalin-2 project offshore Russia's Far East has reportedly been deferred, with export cargoes of Vityaz crude not available until late July. Moreover, questions have arisen over the pace at which expanded, year-round production (due to commence later in 2008) will ramp up to target 150-170 kb/d levels from normal summer levels closer to 80 kb/d. Furthermore, press reports suggest that start-up at Lukoil's 150 kb/d project at South Khylchuskoye in Timan Pechora may be deferred to the autumn from an earlier June target.

The production slow-down is however beginning to attract growing government attention, with suggestions from the Energy Ministry and most recently from former President, and now Prime Minister, Putin that fiscal reforms are urgently needed. Favoured state producers Gazprom and Rosneft have also been lobbying for an easing of the combined mineral extraction and export tax burden. Finance Ministry proposals for 2009 envisage raising the tax floor from $9/bbl to $15/bbl but would make scant inroads into a combined production and export tax level that stands at some 75% at $100/bbl crude prices. However, the investment environment comprises more than tax rates, and issues like tightening access to offshore and 'strategic' reserves and reports of state-sponsored moves to buy up Russian partners in the TNK-BP joint venture may continue to deter foreign oil company involvement until greater clarity emerges.

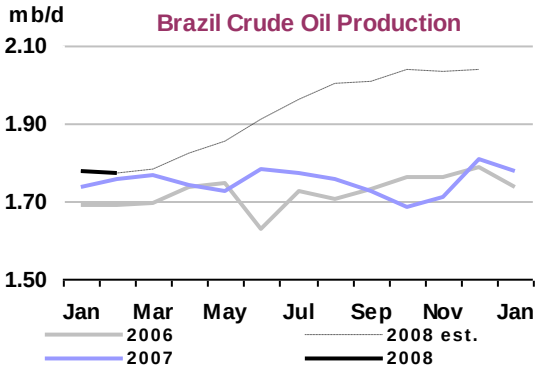


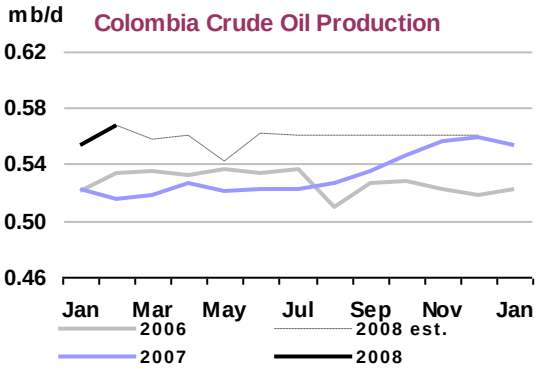


Azerbaijan – March actual: April saw start-up at the latest phase of the Azeri-Chirag-Guneshli complex of offshore fields, with initial volumes coming from the 320 kb/d Guneshli deep project. Although 1Q08 Azeri production has been trimmed by 50 kb/d to 945 kb/d, build-up at ACG should allow total Azeri production to average 1.07 mb/d in 2008, a gain of 205 kb/d versus 2007. May ACG volumes are expected to rebound after April maintenance, with flows through the Baku-Tbilisi-Ceyhan pipeline likely to exceed 800 kb/d. The BTC pipeline is likely to see a 20% capacity expansion to 1.2 mb/d by end 2008, to accommodate not only rising ACG output, but also extra output from Kazakhstan's Tengiz field, which had originally been destined for transit via the long-delayed expansion of the CPC pipeline to Russia's port of Novorossiysk. Other expanding Azeri export options include the imminent reopening of the 100 kb/d link between Baku and Supsa on Georgia's Black Sea coast and the new port nearby at Kulevi, which will be operated by Azeri state company Socar, designed to handle up to 200 kb/d of crude.

Other Non-OPEC

Brazil – February actual: Forecast 2008 Brazilian crude output is trimmed by 15 kb/d to 1.95 mb/d, nonetheless increasing by an impressive 195 kb/d from 2007. Output from the deepwater Campos Basin appears to have levelled off at some 1.44 mb/d in recent months, in part because of slower-than-expected build-up from new facilities such as P-52 and P-54 in the Roncador field. However rising supplies from these two 150 kb/d fields, plus increments at Marlim Leste, Golfino and Polvo could take Campos output to some 1.74 mb/d by end-year. Brazilian ethanol supply is also seen rising by 50 kb/d in 2008 to 360 kb/d.





The authorities in Brazil have reiterated the immense potential of the Santos Basin pre-salt carbonate formation. This was the site of the earlier Tupi discovery, now deemed to have a production potential of some 0.5-1.0 mb/d from the middle of the next decade. A representative from state regulator ANP appeared to suggest that the neighbouring Carioca block could contain up to 33 billion barrels, although it seems more likely that this highly preliminary number could refer to the entire Santos pre-salt area. In addition, operator Petrobras has stressed that no reliable reserve estimates will be forthcoming for Carioca until drilling is completed in a couple of months. Despite ambiguity between resource/reserve

classification and the geographical extent of the recent pronouncements, there is little doubt that the Santos Basin should prove a hugely significant source of incremental supply for Brazil in the next decade.

Colombia – February actual: Despite a spate of bomb attacks on the Cano Limon pipeline in March and again in May (the latest having temporarily shuttered 95 kb/d of output), Colombia appears to have turned around five years of production decline, with output having stabilised at around 530 kb/d in 2006 and 2007. There is the potential for modest growth to some 560 kb/d in 2008, with production having already attained this level in 4Q07 and so far in 1Q08. Unlike several other South American producers, Colombia has been actively seeking foreign direct upstream investment, although an influx of foreign capital might be jeopardised were the security situation to worsen.

Revisions to Other Non-OPEC Estimates

Total non-OPEC 2008 supply is revised down by 140 kb/d, with reductions focussed on five key producers namely Russia, Mexico, Vietnam, Azerbaijan and Brazil. Significant upward adjustments, which nonetheless lag those on the down-side, are restricted to Canada, Norway, the USA, Oman and Colombia. Among those not already discussed above, **Vietnamese** production for 2008 is trimmed by 25 kb/d to 355 kb/d, in part due to lower baseline supply early in 2008, and partly by pushing back Bunga Pakma condensate start-up (shared with Malaysia) into late 2008. On the positive side, **Oman's** production is revised higher for 2H07 and early 2008 by some 20 kb/d, albeit total output still expected to decline by some 15 kb/d this year to 705 kb/d.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

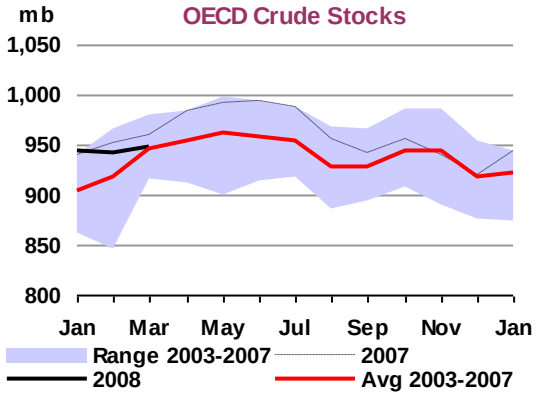
	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.17	0.06	-0.09	14.27	14.14	0.06	-0.12	0.00	-0.03	0.00	-0.03
Europe	4.95	4.56	-0.23	-0.39	4.95	4.57	-0.23	-0.38	0.00	0.01	0.00	0.01
Pacific	0.62	0.78	0.04	0.16	0.62	0.78	0.04	0.16	0.00	0.00	0.00	0.00
Total OECD	**19.84**	**19.52**	**-0.14**	**-0.32**	**19.84**	**19.50**	**-0.13**	**-0.34**	**0.00**	**-0.02**	**0.00**	**-0.02**
Former USSR	12.77	13.16	0.52	0.40	12.77	13.07	0.52	0.30	0.00	-0.09	0.00	-0.10
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.85	0.05	0.12	3.73	3.84	0.05	0.11	0.00	0.00	0.00	0.00
Other Asia	2.68	2.77	-0.03	0.09	2.68	2.74	-0.03	0.07	0.00	-0.02	0.00	-0.02
Latin America	3.87	4.10	0.02	0.24	3.85	4.09	0.01	0.24	-0.01	-0.01	-0.01	0.00
Middle East	1.64	1.58	-0.10	-0.07	1.65	1.59	-0.09	-0.06	0.01	0.01	0.01	0.01
Africa*	2.55	2.62	0.05	0.07	2.55	2.62	0.05	0.07	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.37**	**28.20**	**0.50**	**0.83**	**27.37**	**28.08**	**0.50**	**0.72**	**0.00**	**-0.12**	**0.00**	**-0.11**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.69**	**50.50**	**0.55**	**0.82**	**49.68**	**50.36**	**0.55**	**0.68**	**0.00**	**-0.14**	**0.00**	**-0.14**

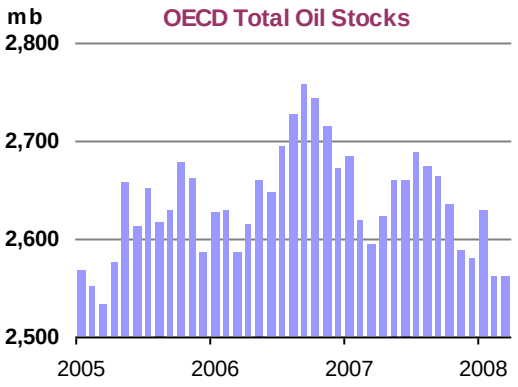
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

OECD STOCKS

Summary

- **End-March OECD industry stocks** of 2,561 mb were little changed from February (1.3 mb lower). However, closing February stocks were revised down by a significant 16.6 mb, primarily due to a 19.0 mb downward correction in distillate inventories. Although this revision leaves end-March stocks 68.5 mb below January, the overall OECD first quarter stock draw is a modest 18.7 mb or 0.2 mb/d - slightly below the five-year average 1Q draw of 0.4 mb/d. Still, preliminary data for April show only a marginal 1.9 mb build in US and Japanese stocks while anecdotal evidence suggests stocks may have recently drawn in non-OECD regions.
- **OECD total products stocks** fell by 8.1 mb in March. Product builds of 4.0 mb in Europe and 5.7 mb in the Pacific are consistent with reports of milder weather and weaker demand, but only partly countered a 17.8 mb gasoline- and distillate-led decrease in North American product inventories prompted by refinery maintenance.
- A 6.8 mb build in **OECD crude and 'other oils' inventories** almost offset the draw in product stocks. This slim March increase was limited by a 4.5 mb drop in crude inventories in Mexico, where production was weaker than expected, and a 4.9 mb fall in Korea as crude imports failed to rise in line with refinery runs.
- **End-March OECD stock cover** is now equal to 53.3 days of forward demand. This marks a drop of 0.1 days from end-February levels instead of the usual March increase, although it is 0.9 days above the five-year seasonal average. OECD crude cover (in terms of forward throughputs) was 1.6 days above the five-year average in January but is now only 0.6 days above the March average of 24.4 days. OECD North American distillate forward demand cover slipped below average in February and March.





OECD Inventory Position at End-March and Revisions to Preliminary Data

The 16.6 mb downward revision to end-February OECD stocks was more significant than the marginal 1.3 mb March stock draw reported this month. February's corrections centred on a 19.0 mb downward adjustment to distillate stocks, of which 11.6 mb occurred in France as better data were received. Suspicions that distillate markets, especially in Europe, were tighter than last month's stock numbers implied were initially raised following low throughputs, high distillate cracks and falling ARA middle distillates inventories. Indeed, downward distillate stock revisions of 1-3 mb were also seen for each of USA, Canada, Germany, Italy, the Netherlands and the UK alongside newly reported February distillate draws of at least 0.5 mb in each of Denmark, Finland, Ireland, Poland, Sweden and Turkey. Preliminary data show OECD distillate forward demand cover improving in Europe and the Pacific in March, apparently due to weaker demand, but sliding in North America. Middle distillates remain the major market concern in terms of OECD product stock cover.

Another major revision to February's closing stocks was an upward correction of 7.6 mb to Japanese crude inventories. Although this kept OECD Pacific within five-year seasonal ranges for February, preliminary March data show an 8.0 mb regional drop to another historical low. This time, however, the draw includes 4.9 mb in Korea which is supported by reports of higher crude runs coinciding with flat crude imports by Korean refiners. Elsewhere, a 4.5 mb March draw in Mexican crude stocks was probably the result of weaker domestic production. For the OECD as a whole, crude inventory builds were below seasonal norms in March and excess crude cover fell noticeably. Absolute OECD crude stocks have now fallen back to the five-year average.

Revisions versus 11 April 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Jan 08	Feb 08	Jan 08	Feb 08	Jan 08	Feb 08	Jan 08	Feb 08
Crude Oil	**-0.4**	**-1.8**	**-1.9**	**-0.5**	**0.9**	**7.4**	**-1.4**	**5.1**
Gasoline	-0.3	-5.2	3.8	5.1	0.0	0.4	3.5	0.3
Distillates	-0.3	-4.3	-2.8	-15.6	0.0	0.8	-3.0	-19.0
Residual Fuel Oil	0.3	0.1	3.5	5.2	0.0	-0.1	3.8	5.2
Other Products	0.2	2.6	0.7	-1.4	0.0	0.3	0.8	1.4
Total Products	**-0.1**	**-6.8**	**5.2**	**-6.8**	**0.0**	**1.5**	**5.1**	**-12.1**
Other Oils[1]	-1.2	-9.5	-0.8	0.3	0.0	-0.5	-2.1	-9.7
Total Oil	**-1.8**	**-18.1**	**2.5**	**-7.0**	**1.0**	**8.4**	**1.6**	**-16.6**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Looking forward, March is generally the seasonal low in OECD stocks. For markets clearly concerned about the adequacy of supplies, the preliminary 1.9 mb stock build for April for the US and Japan is not enough to convince the market that a significant improvement in cover is underway. This report's balances imply a surplus in March and April, but it would appear that for this to be the case, restocking must have taken place in non-OECD regions (see 'Tightness Elsewhere'). Clearly, a lack of weekly data in Europe and the paucity of stock information for non-OECD countries limit market transparency and contributes to market overshoots.

Preliminary Industry Stock Change in March 2008 and First Quarter 2008

	March (preliminary) *(million barrels)*				March (preliminary) *(million barrels per day)*				First Quarter 2008 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**6.5**	**8.1**	**-8.0**	**6.6**	**0.21**	**0.26**	**-0.26**	**0.21**	**0.34**	**0.03**	**-0.06**	**0.31**
Gasoline	-11.3	-1.5	3.5	-9.3	-0.36	-0.05	0.11	-0.30	0.08	0.06	0.05	0.18
Distillates	-9.4	5.2	-0.6	-4.9	-0.30	0.17	-0.02	-0.16	-0.32	0.01	-0.14	-0.46
Fuel Oil	3.9	1.2	0.8	5.9	0.13	0.04	0.03	0.19	0.04	0.04	-0.02	0.07
Other Products	-1.0	-0.9	2.1	0.2	-0.03	-0.03	0.07	0.01	-0.20	-0.03	0.01	-0.22
Total Products	**-17.8**	**4.0**	**5.7**	**-8.1**	**-0.58**	**0.13**	**0.18**	**-0.26**	**-0.41**	**0.08**	**-0.11**	**-0.43**
Other Oils[1]	1.5	-0.9	-0.4	0.2	0.05	-0.03	-0.01	0.01	-0.05	-0.04	0.02	-0.08
Total Oil	**-9.9**	**11.3**	**-2.7**	**-1.3**	**-0.32**	**0.36**	**-0.09**	**-0.04**	**-0.12**	**0.07**	**-0.15**	**-0.21**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

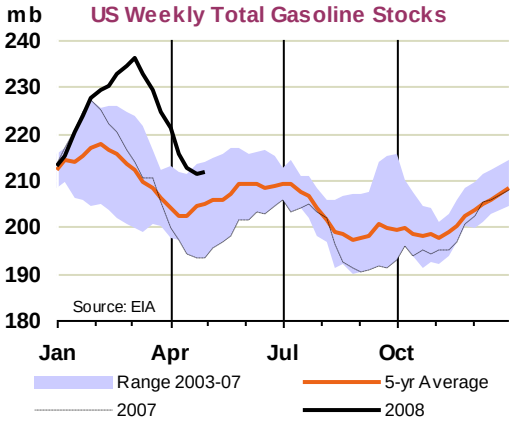
OECD Industry Stock Changes in March 2008

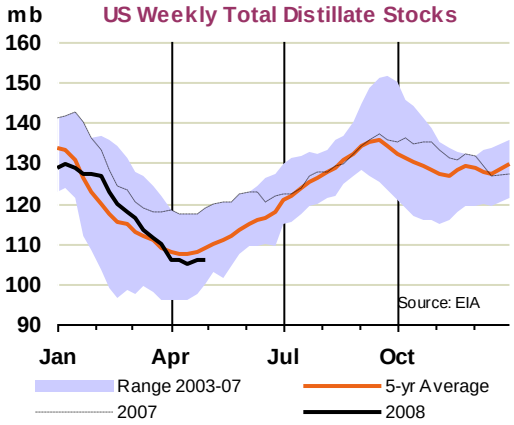
OECD North America

Total oil stocks in OECD North America declined by 9.9 mb in March as a 17.8 mb decrease in products overshadowed an 8 mb build in crude and 'other oils'. Of the total product draw, 19.8 mb occurred in the US, as very low refinery activity (due to maintenance and unplanned outages) outweighed the effects of anaemic demand growth reported in the transport sector due to high pump prices and lower economic prospects. Preliminary data show a sharp draw of 11.8 mb in March US gasoline stocks, centred in the North East, followed by a further draw in April, taking stocks back from abnormally inflated levels to within the five-year seasonal range. A 10.8 mb decline in US middle distillate inventories in March was also caused by low refinery throughputs, although weekly data indicate that levels should stabilise in

April. In Mexico, product stocks increased by 2.0 mb, including 1.4 mb in middle distillates and 0.5 mb in gasoline, as refinery throughputs recovered by 90 kb/d, presumably after maintenance.

US crude stocks increased by 11.0 mb in March following a drop in refinery runs to below 14.2 mb/d, according to EIA weekly data. Mexican crude stocks fell by 4.5 mb in March as domestic production came in lower than expected.

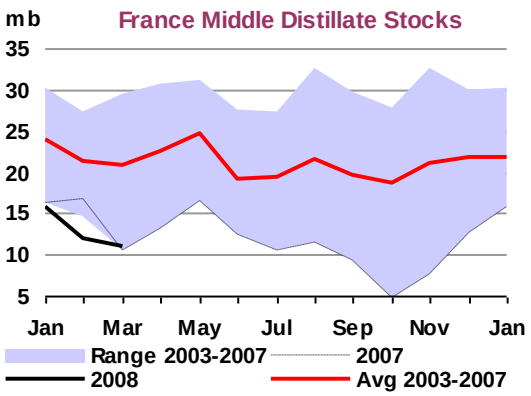


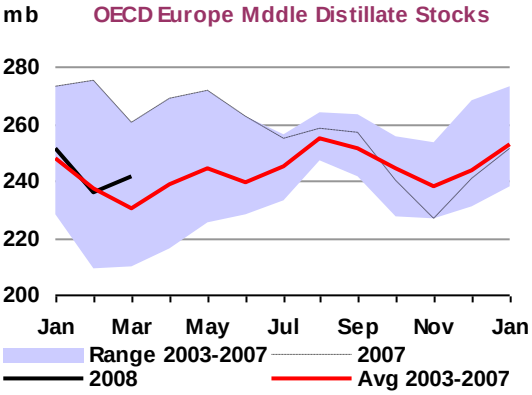


OECD Europe

Total OECD Europe inventories rose by 11.3 mb in March following increases of 8.1 mb and 4.0 mb in crude and product stocks respectively. 'Other oils' stocks made up the difference, falling by 0.9 mb on the month.

The unusual March European product build was led by distillates and motor gasoline. European distillate inventories rebounded by 5.2 mb in March, after revisions to preliminary data now reveal the February draw to have totalled 15.6 mb. The tight European distillate market had already cast some doubt on the original report of rising French distillate stocks in February and it comes as little surprise to see they are now observed to have fallen by 3.8 mb and 1.1 mb in February and March respectively. However, while the European distillate market remains tight, the counter-seasonal rebound in regional March distillate stocks, which included unusual builds of 2.3 mb in the Netherlands (if confirmed), 1.5 mb in the UK and 0.4 mb in Italy, was related to lower heating demand and higher refinery throughputs. European Heating Degree Days were 25 days below the 10-year average in March (although equal to last year's warm spring levels). At the same time, European throughputs increased by 90 kb/d. ARA independent gasoil stocks also rose in mid-March, suggesting that there may have been extra volumes of distillate imports arriving either from FSU or the Atlantic basin.





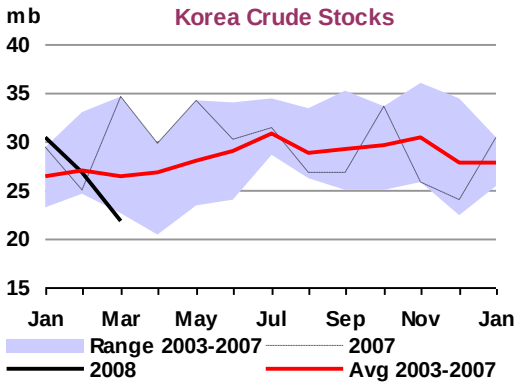
Motor gasoline stocks in Europe decreased by 1.5 mb in March, much less than the usual seasonal draw. Unfavourable economics limited arbitrage exports to other regions (especially the US) allowing higher refinery runs to sustain inflated European inventories. Netherlands' gasoline stocks apparently rose by 0.4 mb, to reach historic highs. OECD Europe gasoline stocks were revised 5.1 mb higher for end-February and, along with total product stocks for the region, are well above seasonal norms.

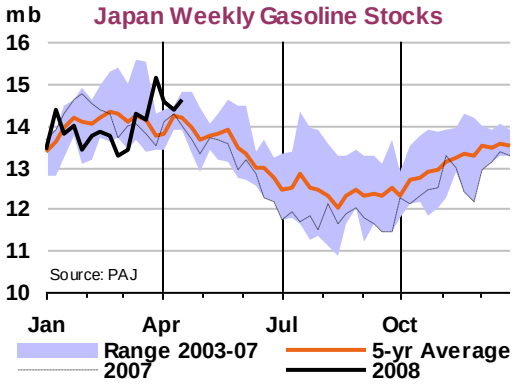
Crude stock builds of 6.7 mb in the Netherlands, 2.3 mb in France and 1.5 mb in Germany boosted OECD Europe regional inventories in March, if confirmed. End-March OECD Europe crude inventory levels of 330 mb lag the five-year average in absolute terms, although they remain higher than levels of a year ago.

OECD Pacific

OECD Pacific crude stocks dropped by 8 mb in March, led by a 4.9 mb decrease in Korean crude inventories as crude imports were flat on the month while refinery throughputs rose. Japanese and Australian crude stocks both drifted lower by 1.6 mb on higher refinery activity.

Mild March temperatures in Asia allowed regional product stocks to build earlier than usual, as heating demand drifted below seasonal norms. With 50 fewer Japanese heating degrees days than the 10-year average in March, a distillate stock build of 0.7 mb suggested that the seasonal winter trough in distillate stocks may have occurred in February, rather than the usual March. At the same time, OECD Pacific refinery throughputs rebounded by 70 kb/d. Weak demand prompted Japanese gasoline stocks to increase by 2.3 mb in March ahead of the (temporary) suspension of a special road fuel tax which may have prompted demand-led April draws. Korean distillates stocks fell by 1.5 mb, not helped by the unplanned closure of S-Oil's 520 kb/d Onsan refinery in late March. A reduction in March gasoil and jet export volumes by Korea's top five refiners limited the stock draw to near-seasonal levels.





Australia and New Zealand product stocks also look extremely tight so far this year, possibly related to refinery problems (as observed in Australia) or higher demand to mitigate extreme drought conditions. In both countries, motor gasoline and middle distillate stocks were at the bottom or below five-year seasonal ranges at end-February, although Australian product stocks did recover from alarmingly low January levels.

Recent Developments in Singapore Stocks

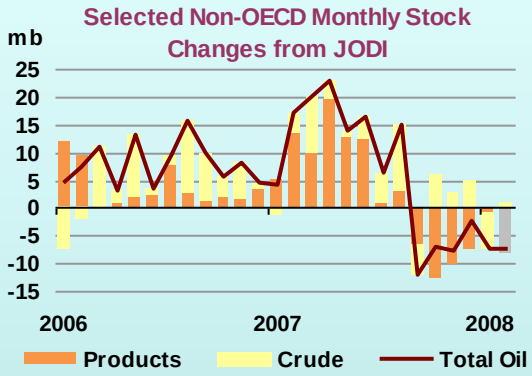
Independent stocks held in Singapore fell in April, led by a 1.1 mb draw in light products. Light product stocks fell from a historically high level of 11.0 mb in the first week of April to 8.0 mb three weeks later before recovering to 9.5 mb at end-month. Firm Asian product import demand, especially from China, may have eroded stocks in the first part of the month. However, reports of physical traders such as Glencore and Vitol sending European naphtha cargoes to Asia, plus news of an Italian gasoline cargo arriving in Singapore, underlined the decidedly eastbound direction of product arbitrages in recent weeks. The arrival of a batch of such cargoes may have led to the sharp uptick in light product stocks

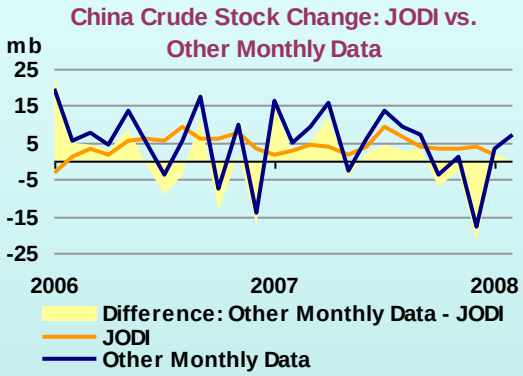
near the end of the month. Meanwhile, independent middle distillate stocks in the area rose by 0.5 mb in April, possibly boosted by higher regional product exports following a recovery in refinery throughputs in Japan and Korea. Fuel oil stocks fell over 3.0 mb on the month amid sustained high demand especially for power generation, but remain well above average.

Tightness Elsewhere

The rise in oil prices by over $40 since 1 August 2007 can only be partly explained by trends in OECD industry stocks in the second half of last year. While there is tightness in certain products and in certain regions, total OECD stocks remain above five-year averages in absolute and forward demand terms. Demand data suggest that much of the market strength was due to the pull of crude and products towards key non-OECD countries. It is therefore worth exploring outside the OECD for any indications that markets have tightened significantly beyond seasonal norms.

While data from the Joint Oil Data Initiative (JODI) has clear limitations, it is one of the only sources we have for non-OECD stock changes. Of the top 11 non-OECD consumers (excluding major producers), we have recent (Jan/Feb) JODI stock change data for China, Chinese Taipei, Thailand, Philippines and South Africa. Plotting these data in the left-hand graph below shows clear signs of stock draws in these countries, on aggregate, in 2H07 and, tentatively, in early 2008 as well. Less-recent data (and therefore not plotted) for important consumers Argentina and Brazil also reflect stocks draws in 2H07, on aggregate.





Selected Consumers: China, Chinese Taipei, Thailand, Philippines and South Africa.
February total preliminary as China data not yet available

Of course, this omits key non-OECD consumer stocks elsewhere, such as in India. Furthermore, we have doubts about the validity of stock changes reported by China. Firstly, detailed monthly data from other sources suggest that JODI may be understating stock changes. Using official sources for China's refinery runs, crude production and net crude imports we can derive an implied Chinese crude stock change which sometimes differs considerably from JODI data (see right-hand graph above).

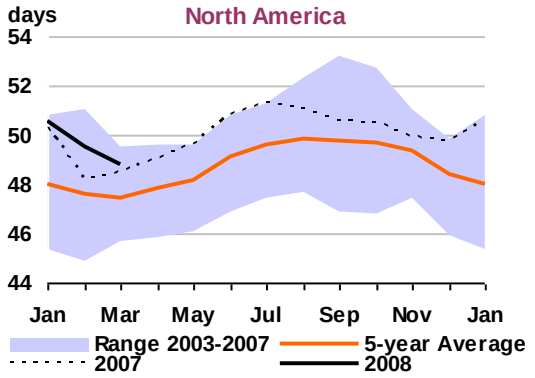
Also, a large cumulative Chinese product stockbuild was apparent from reported stock changes in the first half of 2007, yet, in the second half of that year widespread regional product shortages were reported after only a modest reported downtrend in stocks. This once more leads to the suspicion that demand is understated by official numbers and that the country is running on lean stocks

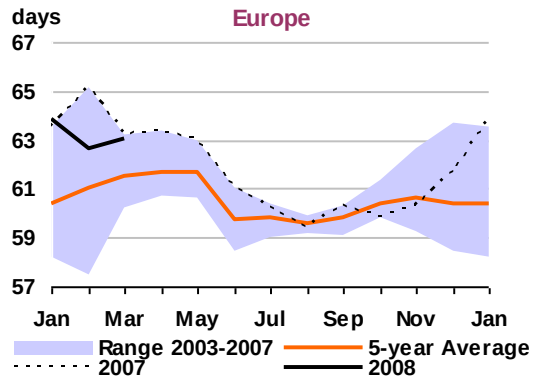
However sketchy, the data that we do have suggest that non-OECD stocks drew in key consumer countries in the second half of last year. Further, we suspect that the desire to 'rebuild inventories at any cost' over the past few months, due to the fear of even higher prices and for supply security reasons, may have increased competition for oil (and therefore bolstered demand and increased price pressures) this year.

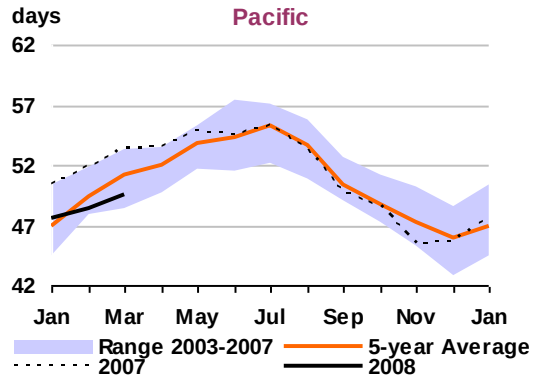
Regional OECD End-of-Month Industry Stocks

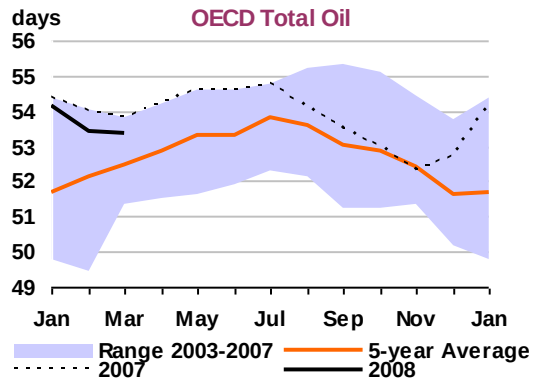
(in days of forward demand and millions barrels of total oil)

Days[1]

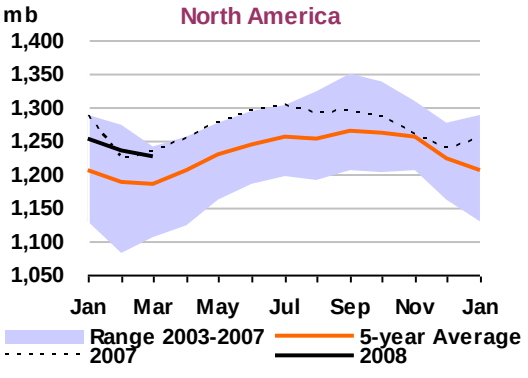


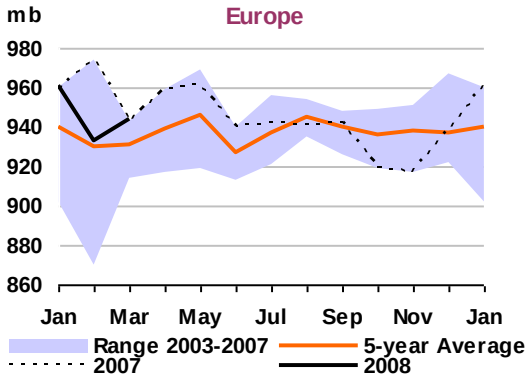


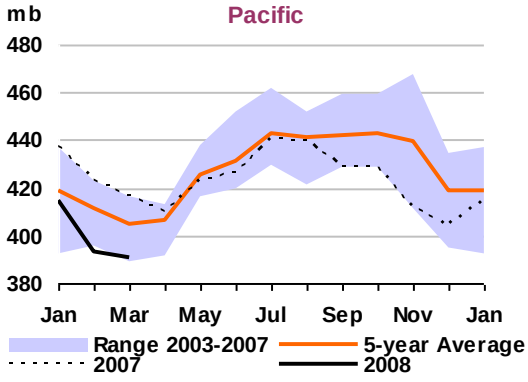


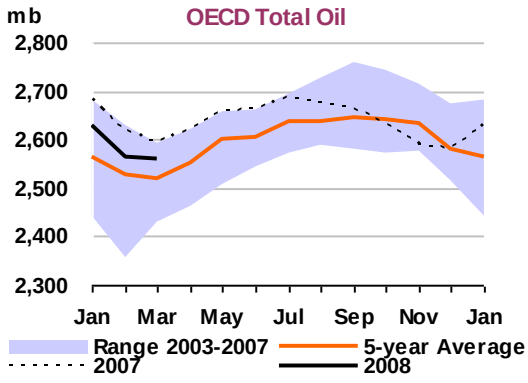


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

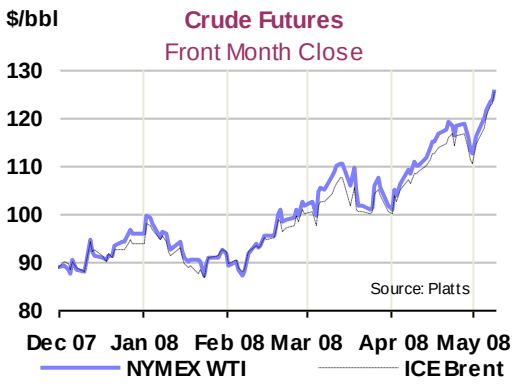
- **Oil prices reached new record highs** around $126/bbl in early May, double levels of a year ago, following robust demand from Asia, together with ongoing global diesel tightness and little sign that the normal second quarter stock build is underway. Crude outages in Nigeria and the North Sea and geopolitical headlines served as a reminder of the limited flexibility in the *system.*

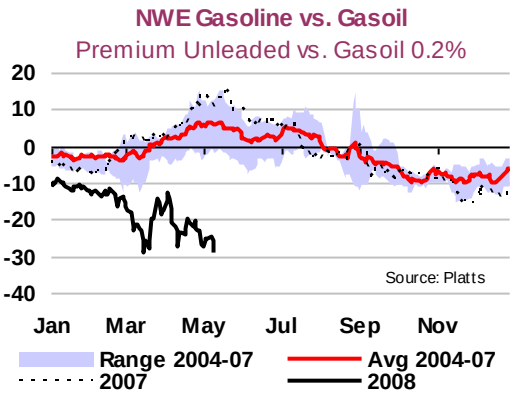
- **Light sweet crudes surged** on the Atlantic Basin outages and strong Chinese buying, with Nigerian grades achieving record premia to Dated Brent. North Sea crude prices themselves got a boost, surging as Forties production was shut in. In contrast, heavier, sourer crudes are being pressured by weak fuel oil differentials and upgrading unit maintenance.

- **Refining margins gained in April** as distillate crack spreads strengthened and gasoline recovered somewhat. Record-wide fuel oil discounts to crude are however keeping a lid on margins, which dipped again in early May as crude prices shot up.

- **Refined product markets were dominated by distillates**, which are maintaining a counter-seasonal premium to gasoline on global tightness. Continued road transport growth and gasoil use to cover regional power shortages were competing with constrained global supply caused by below-average refinery runs. Gasoline prices remain muted due to weakness in the predominant US market, while fuel oil weakened further.

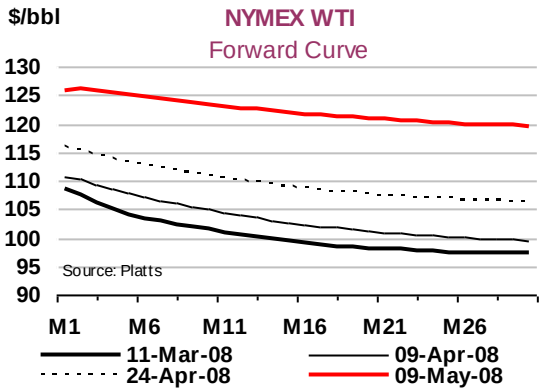
- **Firm long-haul tanker demand boosted VLCC rates** to unseasonable highs in the Atlantic basin and Middle East Gulf. Reports emerged that Iranian floating storage also dented vessel availability. Suezmax and Aframax rates experienced more short-lived surges, with Mediterranean traffic complicated by a strike at Marseille port. Higher transatlantic gasoline flows to the US pushed Atlantic basin clean rates to six-month highs by end-April.

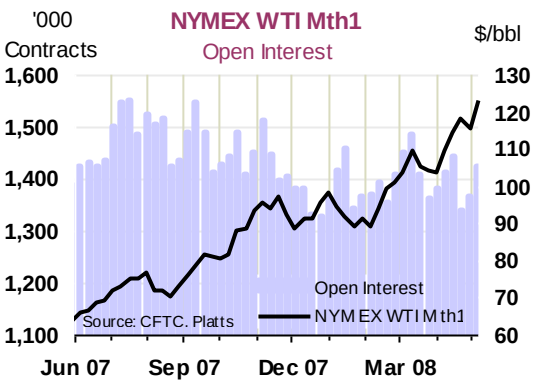




Overview

Yet again, oil prices set new records in April and early May, with benchmark crude futures crossing $126/bbl, double levels of a year ago. Crude supply constraints were highlighted by strikes shutting in output in the North Sea and Nigeria, while geopolitical headlines reminded markets that key producing areas remain potentially unstable. Meanwhile, product demand was sustained by growth in key non-OECD countries (offsetting US weakness), while unbalanced refined product markets are restraining OECD refinery throughputs. Middle distillate prices remain a key market driver, supported by road diesel use and regional power shortages.





Atlantic Basin crude supply was curtailed by around 300 kb/d in April, after strikes briefly shut in around 800 kb/d of ExxonMobil's Nigerian output, and the closure of Scotland's Grangemouth refinery forced the concurrent suspension of North Sea Forties production. Both were well-flagged and short-lived, lessening the impact on oil markets. But nonetheless they were a worrisome reminder of the potential for unplanned shut-ins. Insurgent attacks in Nigeria also forced the shut-in of a further 170 kb/d of Shell's Bonny Light production, after a pipeline was ruptured. Elsewhere, a bombing cut the flow through Colombia's Caño Limon pipeline, and a strike halted some Argentinean crude output. Some 45 kb/d of Libyan production was shut in for technical reasons.

Despite refiners' insistence that they have no difficulty sourcing crude *per se*, these shut-ins add to the perception that markets will continue to remain constrained in the short, medium and long term. OPEC's apparent unwillingness to seriously consider a production hike in the face of ever-higher oil prices and Saudi statements about reluctance to increase production capacity beyond the flagged 12.5 mb/d to be reached in 2010 tend to support this view. Besides the run-up in spot prices, futures prices even at the far end of the curve recently topped $110/bbl. Contributing to bullish market sentiment, although only reflecting a few analysts' views, investment bank Goldman Sachs noted the potential for a 'super-spike' in oil prices, which could see them reach $150-200/bbl by the end of this year.

Spot Crude Oil Prices and Differentials

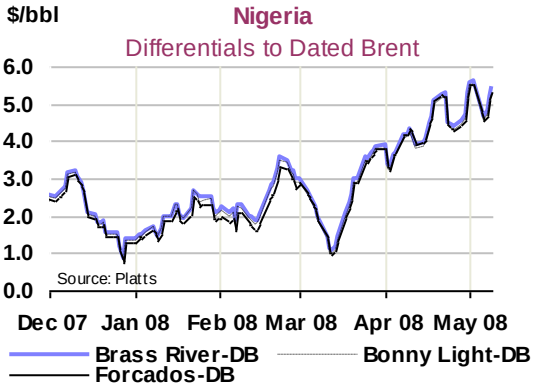
(monthly and weekly averages, $/bbl)

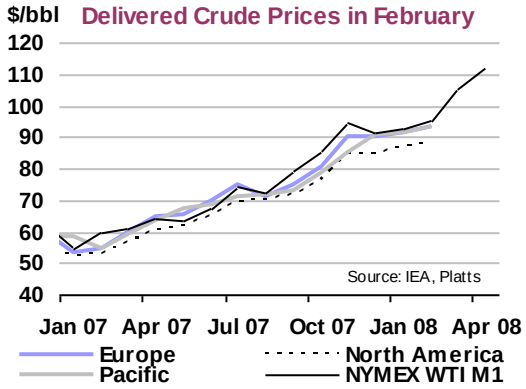
	Feb	Mar	Apr	Apr-Mar Avg Change	%	Week Commencing: 07 Apr	14 Apr	21 Apr	28 Apr	05 May
Crudes										
Dated Brent	95.04	103.66	108.97	5.31	5.1	106.33	110.22	114.35	111.76	119.65
Brent (Asia) Mth1 adjusted	95.03	103.06	109.93	6.87	6.7	107.22	111.14	114.52	114.25	119.94
WTI (Cushing) Mth1 adjusted	95.39	105.45	112.63	7.18	6.8	109.75	114.41	118.68	115.35	123.01
Urals (Mediterranean)	91.21	99.01	105.74	6.74	6.8	103.31	107.63	111.08	107.97	115.93
Dubai Mth1 adjusted	90.02	96.76	103.41	6.66	6.9	100.61	104.40	108.26	107.58	114.53
Tapis (Dated)	100.93	109.11	116.55	7.44	6.8	114.04	117.43	121.01	120.06	124.99
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	0.36	1.79	3.66	1.87		3.42	4.19	4.33	3.59	3.36
Urals (Mediterranean)	-3.83	-4.66	-3.23	1.43		-3.02	-2.60	-3.27	-3.79	-3.73
Dubai Mth1 adjusted - Dated Brent	-5.01	-6.91	-5.56	1.35		-5.72	-5.82	-6.09	-4.18	-5.12
Tapis (Dated)	5.89	5.45	7.58	2.13		7.71	7.20	6.66	8.30	5.33
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.25	0.58	0.03	-0.54		0.07	0.01	-0.06	0.02	-0.13
Forward WTI Cushing Mth1-Mth2 adj	0.11	0.91	0.71	-0.20		0.57	0.52	1.12	0.74	0.27

Source: Platts

Product markets also supported the rise in oil prices. Distillate crack spreads remain several times as strong as those of gasoline, contributing to an April rise in refining margins. Despite weakening oil demand in the OECD, diesel demand remains strong for agricultural, transport and regional power

generation needs (a number of non-OECD countries such as China, South Africa and Chile were hit with unexpected emergency power needs). April temperatures were below normal in Europe, perhaps contributing to some late-season heating oil demand. European distillate supplies were also hit by the shut-ins at the UK's Grangemouth and Pembroke refineries. Despite a recent modest recovery, gasoline's premium remains contra-seasonally weak relative to crude which, coupled with the widening discount of fuel oil to crude, is crimping refinery runs, especially in the gasoline-oriented US market.





Petroleum markets also picked up on some indications of an improvement in the US economy. Despite a downward revision to oil demand related to high prices and general economic malaise, expectations are that the effects of the financial stimulus package will soon be felt by consumers. The dollar has rallied relative to the euro and other currencies, and the lack of a proportionate response in the oil price suggests that the recent period of strong apparent inverse correlation between the two may be near an end. Other commodities also remain high, with copper and corn, to name but two, reaching new heights. Lastly, despite anecdotal evidence of a general increase in commodity index funds since the beginning of the year, CFTC data show little growth in open interest in WTI, while non-commercials' net position remained steady over the past month. Recent reports have suggested that a large part of the increase in commodity money under management has derived from capital gains due to high commodity returns, rather than an influx of new money.

Spot Crude Oil Prices

Crude prices increased, taking strength from the Atlantic Basin outages, geopolitical headlines and refiner buying ahead of the return from global peak maintenance in April. Nigerian **light sweet crudes** reached record premia over $5/bbl to Dated Brent on production shut-ins. US refiners are perhaps slightly less keen than usual to source West African crudes, given lower gasoline needs, though this could change as the summer driving season starts at the end of May. But any slack from US buyers appears to have been taken up by Asian refiners, with record volumes again heading east. Anticipation of the Forties shut-in briefly narrowed Dated Brent's discount to US WTI, and Forties itself strengthened versus neighbouring North Sea grades, but neither shift lasted long. Brent and WTI are now close to parity, despite the end to the Forties problem.

Medium and heavy sour crudes in contrast are suffering from fuel oil's continued downward slide and unseasonably strong US refinery maintenance. Given persistently weak gasoline cracks, US cracking refineries in particular are keeping some of their units offline or throttled back. Further, Iran's reported chartering of as many as ten VLCCs for offshore crude storage suggests regional difficulties in marketing heavy grades of crude. This is not uncommon during peak refinery maintenance but does suggest a reluctance to price the crude at a level which would clear production. In the US, popular West Coast heavy crudes such as Kern River or Mexican Maya have seen their discounts to WTI widen.

Refining Margins

Refining margins mostly improved in April on the back of a partial recovery in gasoline and continued strength in distillates. However, we remain in a two-tier market: full conversion refineries and those with a bias to producing distillates are seeing strong profits, while those with a gasoline bias, or of a simple configuration, are being pressured by the ongoing weakening in fuel oil and naphtha cracks. Furthermore, running gasoline reforming units at lower levels can trim hydrogen output, which is generally used for distillate desulphurisation, thus exacerbating the distillate dilemma.

Selected Refining Margins in Major Refining Centres

($/bbl)

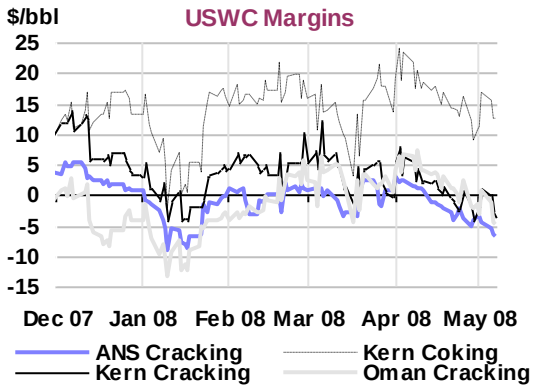
		Monthly Average			Change	Average for week ending:				
		Feb 08	Mar 08	Apr 08	Apr 08-Mar 08	09 Apr	16 Apr	23 Apr	30 Apr	07 May
NW Europe	Brent (Cracking)	3.55	4.33	6.59	2.27	7.55	6.03	5.88	6.44	4.26
	Urals (Cracking)	4.32	5.93	7.04	1.11	7.54	6.85	6.22	6.98	4.63
	Brent (Hydroskimming)	-2.95	-2.68	-0.75	1.93	0.47	-0.82	-1.78	-1.27	-2.90
	Urals (Hydroskimming)	-4.82	-3.77	-3.78	-0.02	-2.67	-3.33	-5.21	-4.66	-6.57
Mediterranean	Es Sider (Cracking)	4.94	5.55	6.68	1.13	7.84	5.38	5.26	7.65	4.83
	Urals (Cracking)	4.60	6.34	6.92	0.58	7.80	6.43	5.85	7.32	4.96
	Es Sider (Hydroskimming)	-1.75	-1.84	-1.11	0.74	0.40	-1.70	-2.96	-0.97	-3.01
	Urals (Hydroskimming)	-5.22	-3.97	-4.97	-1.00	-3.17	-5.27	-6.74	-5.57	-7.37
US Gulf Coast	Bonny (Cracking)	-1.52	-0.12	1.71	1.82	2.75	2.83	1.26	-1.24	-0.51
	Brent (Cracking)	-2.10	-2.12	1.33	3.46	2.21	2.21	1.05	-1.12	0.15
	LLS (Cracking)	0.47	2.04	3.51	1.46	4.73	4.14	2.48	1.75	1.58
	Mars (Cracking)	-1.43	-2.53	-0.91	1.62	0.03	0.11	-2.21	-2.27	-3.36
	Mars (Coking)	6.97	8.43	11.43	3.00	12.08	12.49	10.56	10.13	8.73
	Maya (Coking)	10.85	11.82	15.42	3.61	14.56	15.35	16.43	15.27	14.34
US West Coast	ANS (Cracking)	-0.10	-0.32	-1.03	-0.71	1.63	-0.50	-2.89	-3.85	-5.32
	Kern (Cracking)	5.16	3.94	1.48	-2.47	4.45	2.03	-0.60	-2.07	-1.43
	Oman (Cracking)	-0.29	2.10	2.64	0.53	5.61	3.59	1.21	-0.86	-2.65
	Kern (Coking)	17.07	13.92	16.69	2.77	20.39	17.49	14.75	12.15	13.73
Singapore	Dubai (Hydroskimming)	-3.71	-2.33	-1.40	0.93	0.51	-0.15	-2.58	-3.56	-5.68
	Tapis (Hydroskimming)	-5.67	-4.55	-2.73	1.82	-2.54	-2.01	-2.66	-3.33	-3.37
	Dubai (Hydrocracking)	2.55	5.06	7.11	2.04	8.55	8.28	6.53	5.36	2.81
	Tapis (Hydrocracking)	-2.07	-0.74	1.13	1.87	1.29	1.90	1.40	0.45	-0.10
China	Cabinda (Hydroskimming)	-4.84	-4.20	-1.24	2.97	-0.59	-0.31	-2.09	-2.19	-2.90
	Daqing (Hydroskimming)	-6.95	-5.74	-1.02	4.72	-0.68	-0.70	-1.35	-1.23	-2.62
	Dubai (Hydroskimming)	-4.59	-3.16	-2.25	0.91	-0.08	-0.81	-3.52	-4.72	-6.98
	Daqing (Hydrocracking)	-1.40	-1.07	3.37	4.44	4.09	3.70	3.05	2.84	0.77
	Dubai (Hydrocracking)	1.66	4.21	6.27	2.06	7.97	7.63	5.61	4.22	1.52

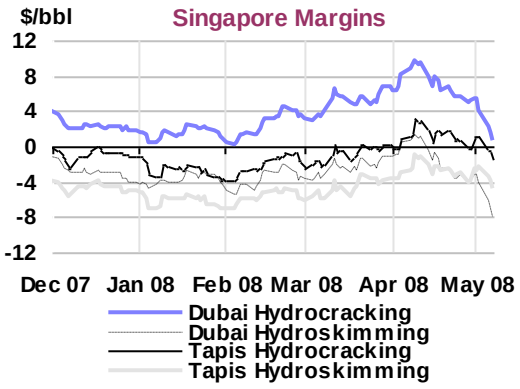
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

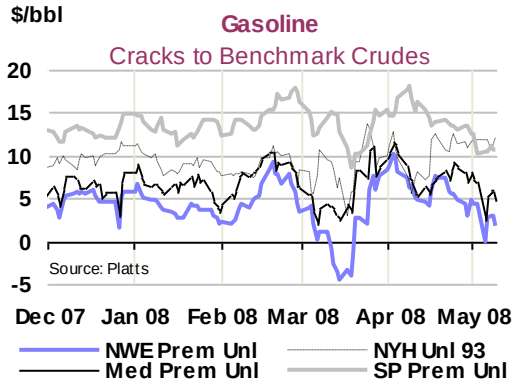
European cracking margins remain among the strongest in the three regions surveyed. In Northwest Europe and the Mediterranean, both Brent and Urals/Es Sider cracking margins rose to nearly $7/bbl in April, but trended down in early May on crude's strong rise. Hydroskimming margins improved slightly, but remain negative. US margins saw the greatest gains in April, as gasoline cracks finally improved somewhat, but this was tempered by exceptionally wide high-sulphur fuel oil discounts to crude. Nevertheless, cracking margins on the Gulf Coast remain relatively low and actually weakened on the West Coast. Singapore margins improved, again helped by stronger distillates, here due to jet/kerosene. In addition, LSWR's strength due to its popularity with utilities is adding support.

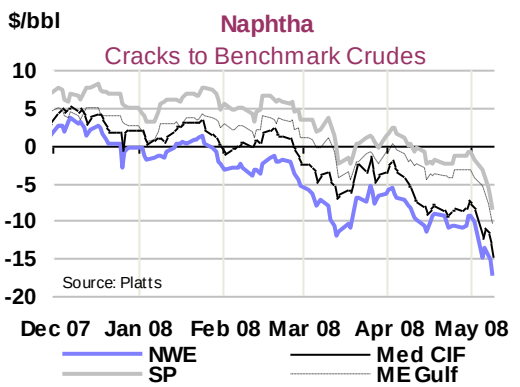




Spot Product Prices

On average, **gasoline** crack spreads increased in April, but remain far below usual levels for this time of the year and were trending downwards in early May. US gasoline demand is weaker than usual on indications of lower discretionary driving and higher sales of smaller, more fuel-efficient cars – both direct effects of higher prices. Furthermore, higher volumes of ethanol blended into the gasoline pool continue to reduce the need for oil-based gasoline blending components. The onset of the driving season – traditionally at the end of May – could however change this situation. Meanwhile, Japanese gasoline (and diesel) consumption saw a brief spurt in April due to the temporary suspension of fuel taxes, though this should prove a one-off. Relatively speaking, European gasoline crack spreads remain among the lowest, reflecting the need to clear the regional surplus across the Atlantic. Naphtha cracks declined further, as strong Asian petrochemical plant maintenance coincided with higher Indian exports.

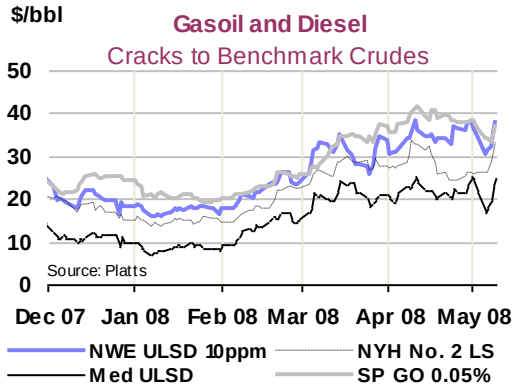


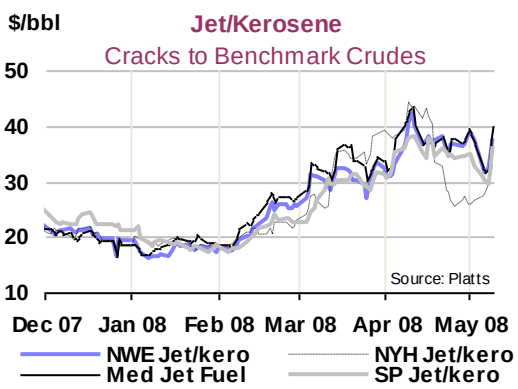


Distillates also rose in April, with crack spreads unusually high for all products. Globally and regionally, markets remain tight. Structurally-short Europe was hit by the impact of the Grangemouth and Pembroke refinery shut-ins, as well as continued work on Porvoo's hydrocracker. Some US cargoes are crossing the Atlantic to make up for the shortfall, but with US refineries running at below-average throughputs, not much can be spared. In addition, disrupted coal and gas supplies have seen additional gasoil use for power generation in Chile, China and South Africa, competing for distillate cargoes from the US and Asia-Pacific. China alone is expected to import around 150 kb/d in May, and given localised refined product and power shortages, sustained strong purchases can be expected ahead of the Olympic Games in August.

Fuel oil weakened further, again showing record discounts to crude except for LSWR, which has narrowed to near parity with Dubai. The need to discount to compete with alternative fuels is becoming increasingly apparent, despite low refinery runs. Lower Chinese imports and increased storage capacity have kept Singapore stocks high, while the lack of opportunity to send volumes eastward has also seen

inventory pile up in independent ARA storage. Meanwhile, in the US and Europe, both high and low-sulphur fuel oil reached record-wide discounts to benchmark crudes.





Spot Product Prices

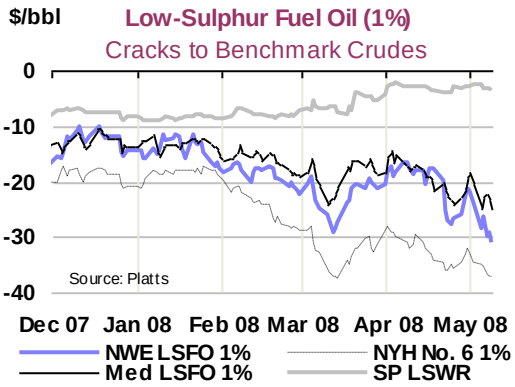
(monthly and weekly averages, $/bbl)

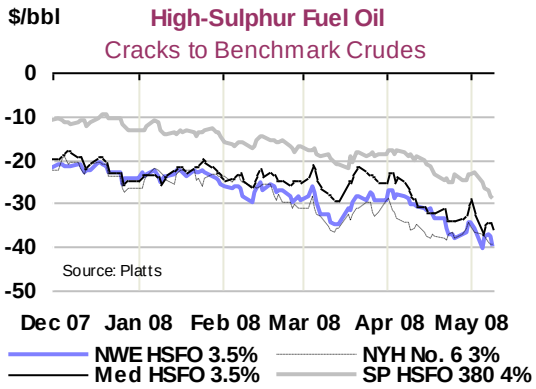
	Feb	Mar	Apr	Apr-Mar *Change*	Apr-Mar %	Week Commencing: 07 Apr	14 Apr	21 Apr	28 Apr	05 May	Feb	Mar	Apr
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	100.33	105.44	115.22	9.77	9.3	112.32	116.10	120.17	115.93	123.04	5.29	1.78	6.25
Naphtha	92.04	95.55	99.79	4.25	4.4	97.71	100.09	103.94	101.58	105.27	-3.00	-8.12	-9.18
Jet/Kerosene	117.30	134.38	145.46	11.08	8.2	145.78	147.50	150.66	149.18	154.64	22.27	30.72	36.49
ULSD 10ppm	109.25	116.92	134.66	17.74	15.2	140.30	132.71	132.29	132.57	141.92	14.22	13.25	25.69
Gasoil .1%	114.37	127.80	137.87	10.07	7.9	136.32	139.72	143.30	143.63	152.74	19.34	24.14	28.90
LSFO 1%	76.22	80.81	88.58	7.77	9.6	88.83	91.90	89.09	88.69	91.37	-18.82	-22.85	-20.39
HSFO 3.5%	67.68	73.29	76.73	3.43	4.7	76.60	78.28	77.99	76.09	82.41	-27.35	-30.37	-32.24
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	99.04	104.83	113.71	8.89	8.5	110.07	114.33	119.38	115.38	122.02	7.84	5.82	7.97
Naphtha	91.95	95.34	98.87	3.52	3.7	97.57	98.87	102.09	100.03	104.08	0.74	-3.66	-6.88
Jet Aviation fuel	115.12	132.08	143.37	11.29	8.5	144.98	144.45	147.86	145.88	152.13	23.91	33.07	37.62
Gasoil .2%	115.47	128.94	136.66	7.72	6.0	134.93	138.28	142.36	142.12	151.11	24.26	29.94	30.91
LSFO 1%	75.01	80.17	86.57	6.41	8.0	86.01	88.04	88.63	87.59	93.16	-16.20	-18.84	-19.17
HSFO 3.5%	66.88	73.90	75.87	1.97	2.7	75.38	75.78	77.69	76.38	81.69	-24.33	-25.11	-29.87
New York Harbour, Barges											**Differential to WTI**		
Super Unleaded	104.00	113.89	122.71	8.82	7.7	116.78	124.67	130.02	126.85	134.51	8.60	8.43	10.07
Unleaded	100.09	104.28	115.55	11.26	10.8	110.62	118.03	122.48	119.22	126.57	4.70	-1.17	2.91
Jet/Kerosene	116.21	137.35	148.31	10.96	8.0	152.04	154.39	146.92	141.73	152.74	20.81	31.90	35.68
No. 2 (Heating Oil)	110.94	128.67	135.35	6.68	5.2	135.24	138.22	138.96	134.73	144.72	15.55	23.22	22.72
LSFO 1%	70.64	72.62	80.31	7.69	10.6	78.77	81.71	83.34	81.96	86.70	-24.75	-32.83	-32.32
No. 6 3%	68.08	72.77	76.93	4.16	5.7	74.59	76.94	80.93	79.46	84.46	-27.32	-32.69	-35.71
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	105.07	109.78	118.08	8.30	7.6	117.33	118.63	121.76	119.99	125.16	15.05	13.03	14.67
Naphtha	95.07	97.61	102.61	5.01	5.1	100.62	102.38	106.01	106.17	108.85	5.05	0.85	-0.80
Jet/Kerosene	111.10	125.37	138.58	13.21	10.5	137.93	140.16	143.23	141.71	146.40	21.08	28.61	35.17
Gasoil .5%	111.20	126.19	138.34	12.15	9.6	136.45	140.43	144.14	141.90	146.37	21.18	29.43	34.92
LSWR Cracked	82.07	90.72	100.30	9.59	10.6	97.77	101.16	104.46	104.73	111.35	-7.95	-6.04	-3.11
HSFO 180 CST	73.11	77.46	84.00	6.54	8.4	82.99	84.65	86.34	87.31	90.97	-16.92	-19.29	-19.41
HSFO 380 CST 4%	73.65	77.44	81.92	4.48	5.8	81.37	82.64	83.68	83.66	87.27	-16.37	-19.32	-21.49

Source: Platts

End-User Product Prices in April

End-user product prices in surveyed IEA countries on average rose 3.6% in US dollars, ex-tax, in April, excepting Japan. There, the suspension of road transport fuel taxes at the end of March caused a sharp drop of 24% in gasoline and 15.6% for diesel respectively. However fuel prices have since risen again as the government reinstituted the tax to its previous levels starting from 1st May. Compared with March 2008 gasoline and diesel prices in other IEA countries rose by 3.2% and 4.1%, respectively, while heating oil and low-sulphur fuel oil retail prices gained 3.5% each, all in US dollars, ex-tax.

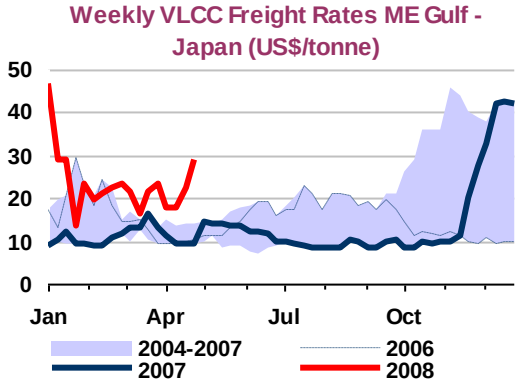


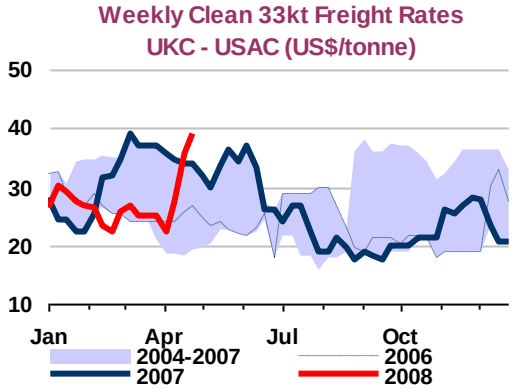


Freight

Charter rates rose across most of the tanker sector in April and are now unseasonably high. VLCC rates finished the month at their highest levels since early January, with the largest increases seen in the Atlantic basin. However, tight vessel fundamentals pushed up Middle East Gulf rates as well amid increased long-haul demand and reports of Iranian booking of VLCCs as floating storage. Suezmax and Aframax rates experienced more short-lived surges, with Mediterranean traffic complicated by a strike at the port of Marseille. Separate strike action in Grangemouth temporarily boosted clean tanker demand in Northwest Europe, while reported higher transatlantic gasoline flows to the US pushed Atlantic basin clean rates to six-month highs by end-April.

Trade data recently confirmed Angola as China's largest crude supplier in 1Q08 and reports suggest that purchasing of West Africa crude by Chinese refiners was also strong for April loading. The passing of US and European peak spring refinery maintenance supported westbound crude purchasing from the Middle East Gulf in recent weeks and US-bound VLCC charters have reportedly been much higher in April than March. Higher long-haul tanker demand tightened VLCC fundamentals acutely in the Atlantic basin, but also in the Middle East Gulf. In addition, the National Iranian Tanker Company (NITC) has reportedly chartered up to ten VLCCs for use as floating storage, as it did two summers ago, further eroding regional vessel supply. Benchmark 250 kmt rates from the latter region to Japan rose from under $18/tonne early in April to almost $29/tonne at end-month. Slow-steaming to minimise ever-spiralling bunker costs is probably still acting as a drag on tanker supply.





Suezmax freight rates may have also found support from post-maintenance buying of distillate-rich West African crude by US refiners. One million-barrel rates from West Africa to the US Gulf topped $42/tonne in late April, up from below $30/tonne three weeks earlier, before easing to $35/tonne as the month ended. Aframax rates were also firm in late April, with intra-Mediterranean rates rising from under $7/tonne at the start of April to a mid-month peak of over $16/tonne. A strike by dock workers at Marseille port in

France dented regional tanker availability as many vessels were left stranded offshore in the Mediterranean, unable to unload. Rates eased at the end of April, although problems at Marseille have not yet been resolved.

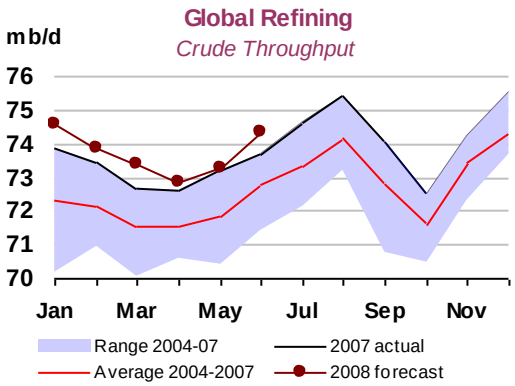
Clean tanker rates in the Atlantic basin were boosted by a growing economic incentive to export out of Europe plus a strike-related demand surge for clean tankers around the UK. A rising premium of NYH gasoline to Rotterdam, amid falling US gasoline stocks, suggested more economic transatlantic gasoline flows to the US (and possibly Mexico, given its soaring import demand). This coincided with some prolific clean tanker chartering by West African refiners to bring in gasoline. A strike at the Grangemouth refinery added a short-term boost to demand for clean tankers in the North Sea as efforts were made to redistribute clean product supplies around the UK. Meanwhile, reported increases in west-to-east arbitrage flows of naphtha may have also reduced clean vessel availability in 'West of Suez' markets. Intra-regional 25 kmt clean rates in Northwest Europe rose above $16/tonne by the end of April, from around $11/tonne mid-month. By contrast, Asian clean tanker rates drifted slightly lower over the month, with incoming clean tonnage maintaining plentiful vessel supply in the region over recent weeks.

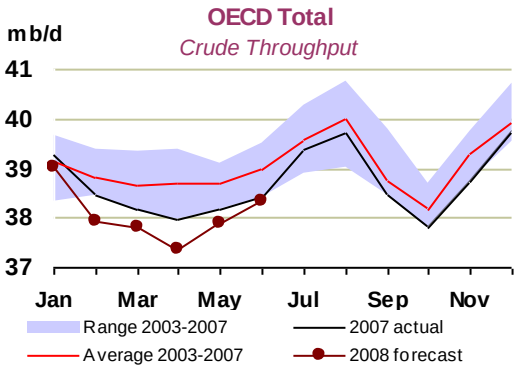
REFINING

Summary

- **Global refinery throughput reached its seasonal trough in April at 72.8 mb/d.** Weak OECD runs and a slowdown in some non-OECD regions contributed to the normal seasonal inflexion point. 2Q08 crude throughputs are forecast to average 73.5 mb/d, 0.2 mb/d lower than last month's report, on weaker estimated runs in the OECD Pacific.

- **OECD crude throughput averaged 38.2 mb/d in 1Q08, 0.1 mb/d lower than estimated last month.** Downward revision to European February provisional data more than offset stronger-than-forecast March Korean runs. OECD throughput in 2Q08 is pegged at 37.9 mb/d, 0.2 mb/d lower than last month's projection on the back of a lower demand forecast and weaker OECD Pacific April crude runs.





- **2Q08 non-OECD crude runs remain 0.7 mb/d above levels of a year ago.** Growth is now seen as more biased towards the FSU, Africa and the Middle East. Chinese throughput growth will be reduced by heavy scheduled maintenance in May, but the start of Sinopec's 200 kb/d Qingdao refinery in June should help restore growth in crude runs in the third quarter.

- **Recent weakness in gasoline cracks reflects the expected move towards a gasoline surplus in the Atlantic Basin.** Weak demand growth in the US, the increase in ethanol production and rising volumes available for export from Europe are testing refiners' ability to reallocate displaced blending components to other production streams. Ultimately investment in raising middle distillate yields may prove to be the answer. However, the impact of maintenance and unplanned shutdowns on US gasoline stocks suggests, at least in the short term, they will reach a seasonal low point in June at just above 200 mb.

Global Refinery Throughput

Global refining activity levels should rise in May to 73.3 mb/d, from the seasonal low-point of 72.8 mb/d reached in April. OECD crude runs for May remain below the five-year range, while non–OECD regions continue to post year-on-year growth of around 0.3 mb/d. Low US refinery utilisation rate remains a primary driver of the year-on-year decline in the OECD. Activity levels in the US should pick up over the course of May, but a recovery remains dependent on margin levels and the strength in gasoline cracks.

Non-OECD crude throughput of 35.5 mb/d in April is about 0.9 mb/d above April 2007 levels. However, growth drops to 0.4 mb/d in May, as a result of heavy maintenance in China, much of it delayed from late last year. Chinese product imports are expected to remain high, with poor utilisation rates in the independent refining sector and among teapot refineries, despite renewed offers by the state oil companies of subsidised crude for some independent refiners.

Arguably the lack of demand from Chinese teapots for straight-run fuel oil over the past six months has contributed to the weakness in sour crude differentials as some refiners, most notably Japanese, utilise excess fuel oil supplies as an alternative to buying heavy sour crudes to optimise the selection of feedstock. This in part may explain why some heavy Middle East crudes are moving into floating storage, rather than being exported to refiners.

2Q08 OECD crude throughput is forecast to remain below the five-year range; although the rehabilitation of several US refineries suffering from long-term outages and the dip in planned maintenance should propel US crude runs to year-on-year growth during the third quarter. OECD Europe crude runs are forecast to recover from the April trough, although some uncertainty remains over the exact timing of planned maintenance, particularly in the Mediterranean, which could lead us to revise forecasts in coming months.

1Q08 global crude throughputs are unchanged from last month at 74.0 mb/d, with higher OECD Pacific and FSU throughputs in March offsetting the downward revision to February OECD Europe and March Asian crude runs. **2Q08** global crude throughput forecasts are 0.2 mb/d weaker, with upward revisions to FSU and African forecasts, offset more than offset by lower OECD estimates. The changes reflect a mix of short-term and structural changes to our estimates. Year-on-year growth for the second quarter is forecast to average 0.3 mb/d, with growth in non-OECD regions of +0.7 mb/d partly offset by the -0.3 mb/d decline in the OECD.

Global Refinery Crude Throughput[1]

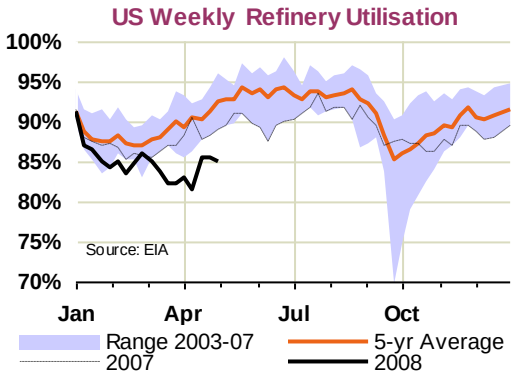
million barrels per day

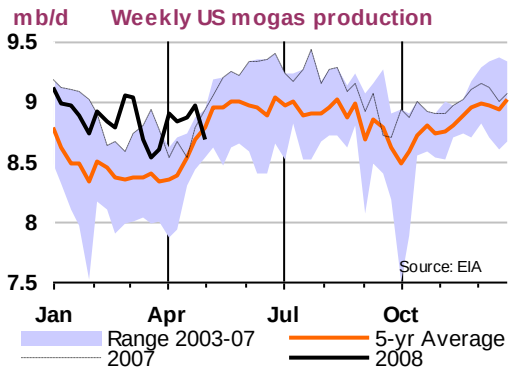
	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
OECD Crude Runs									
North America	17.8	18.1	18.3	17.9	17.6	*17.4*	*17.5*	*18.0*	*18.2*
Europe	13.3	13.3	13.9	13.7	13.1	*13.2*	*13.1*	*13.2*	*13.6*
Pacific	6.7	7.3	7.5	7.4	7.1	*7.2*	*6.7*	*6.7*	*6.6*
Total OECD	37.8	38.7	39.7	39.0	*37.9*	*37.8*	*37.4*	*37.9*	*38.3*
NON-OECD Crude Runs									
FSU	5.4	5.9	*5.9*	*5.7*	*6.0*	*6.0*	*5.9*	*5.9*	*6.1*
Europe	0.8	0.8	*0.8*	*0.8*	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.5	6.7	*6.9*	*6.7*	*6.9*	*6.8*	*6.6*	*6.3*	*6.7*
Other Asia	8.1	8.3	*8.2*	*8.4*	*8.4*	*8.0*	*8.1*	*8.2*	*8.1*
Latin America	5.3	5.4	*5.5*	*5.5*	*5.3*	*5.3*	*5.4*	*5.6*	*5.6*
Middle East	6.1	6.0	*6.1*	*5.9*	*6.2*	*6.1*	*6.1*	*6.0*	*6.2*
Africa	2.4	2.4	*2.4*	*2.5*	*2.5*	*2.5*	*2.6*	*2.6*	*2.6*
Total Non-OECD	34.7	35.5	*35.8*	*35.6*	*36.0*	*35.6*	*35.5*	*35.4*	*36.0*
Total Crude Runs	72.5	74.2	*75.5*	*74.6*	*73.9*	*73.4*	*72.8*	*73.3*	*74.4*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

OECD North American crude throughput forecasts are broadly unchanged from last month. The return to service of Canadian refineries following operational problems and the approaching peak in gasoline demand, albeit against a backdrop of weak overall growth, should underpin the region's forecast increase in runs over the course of the second quarter.

US refinery utilisation rates continue to lag the five-year range, as maintenance, and to some extent weak margins, undermine activity levels. Crude runs, currently around 14.6 mb/d, are forecast to increase by nearly 0.5 mb/d during May and increase further during June and July, but this is subject to an improvement in gasoline cracks, which remain poor by historical standards. The completion of work at West Coast refineries operated by ConocoPhillips, Tesoro and BP should raise regional runs back to levels consistent with the five-year range, from the recent 12-month low seen in late April.





Similarly, on the Gulf Coast runs are expected to continue to recover from the two-year low seen in early April, as work is completed at Shell, Chevron, ExxonMobil, Valero and BP refineries. East Coast crude runs remain well below the five-year range, driven by the usual array of planned and unplanned maintenance, but also the relative lack of coking capacity and higher reliance on relatively expensive light, sweet crudes, which have seen differentials widen on the back of supply disruptions. Comments by Valero suggest some ongoing economic run cuts remain in place, but if so, to a much lesser extent than was the case late in the first quarter. Moreover, discretionary cuts could be further reduced, pending the anticipated seasonal strengthening in the gasoline crack.

Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	*Feb 08*	*Mar 07*	Mar 08	Mar 07
OECD North America										
US[2]	14.93	15.14	15.19	14.80	14.63	14.34	-0.29	-0.50	82.18	85.31
Canada	1.62	1.72	1.83	1.89	1.83	1.76	-0.08	-0.05	87.06	89.77
Mexico	1.26	1.24	1.23	1.25	1.18	1.27	0.09	0.04	82.77	71.96
Total	17.81	18.10	18.26	17.94	17.64	17.37	-0.27	-0.52	82.69	85.36
OECD Europe										
France	1.54	1.75	1.73	1.78	1.62	1.47	-0.15	-0.03	75.13	76.83
Germany	2.24	2.21	2.31	2.26	2.20	2.34	0.14	0.14	96.98	91.26
Italy	1.82	1.73	1.95	1.87	1.78	1.80	0.03	-0.10	77.21	81.66
Netherlands	1.02	0.94	1.08	1.00	1.01	1.03	0.01	0.14	84.59	72.93
Spain	1.08	1.07	1.14	1.20	1.14	1.15	0.01	-0.02	90.59	92.23
UK	1.62	1.55	1.52	1.48	1.40	1.50	0.10	0.00	79.23	79.21
Other OECD Europe	4.00	4.09	4.23	4.07	3.98	3.93	-0.05	0.09	83.68	81.76
Total	13.32	13.33	13.94	13.65	13.13	13.22	0.09	0.21	83.79	82.45
OECD Pacific										
Japan	3.69	4.03	4.27	4.13	4.15	4.10	-0.05	0.06	87.67	86.40
Korea	2.30	2.58	2.57	2.53	2.37	2.40	0.04	-0.08	87.85	90.69
Other OECD Pacific	0.67	0.70	0.71	0.77	0.63	0.71	0.08	-0.04	88.29	92.72
Total	6.66	7.31	7.54	7.43	7.15	7.21	0.07	-0.05	87.79	88.45
OECD Total	37.80	38.74	39.74	39.02	37.92	37.80	-0.11	-0.36	84.01	84.90

1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50

1Q08 OECD Pacific crude runs have been revised up by 0.1 mb/d, following higher-than-expected Korean and Australian crude throughput in March. Korean crude runs were 0.2 mb/d ahead of forecast at 2.4 mb/d, despite reports of economic run cuts and operational outages during the month. Australian February crude throughput has been revised down by 0.1 mb/d to 0.5 mb/d, in line with our original forecast, following provisional data suggesting runs averaged 0.6 mb/d, despite several operational problems being reported during the month.

US Gasoline Supply: Don't Blame it on the Moonshine

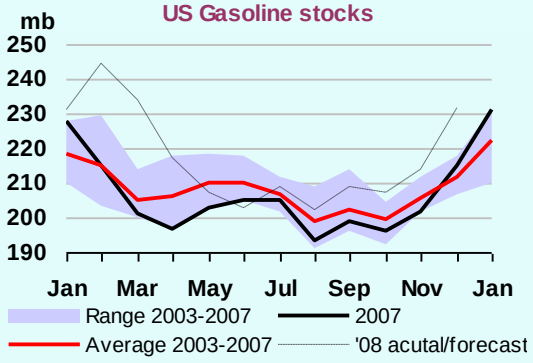
US refineries have emerged from a traumatic first quarter. The bedrock of US refining profitability, the gasoline crack, has weakened in recent months to levels not seen since 1999, when crude oil was $12/bbl. What has caused the collapse in gasoline cracks from $30/bbl 12 months ago to $3/bbl now? Looking at the factors that have pressured gasoline margins three aspects are apparent.

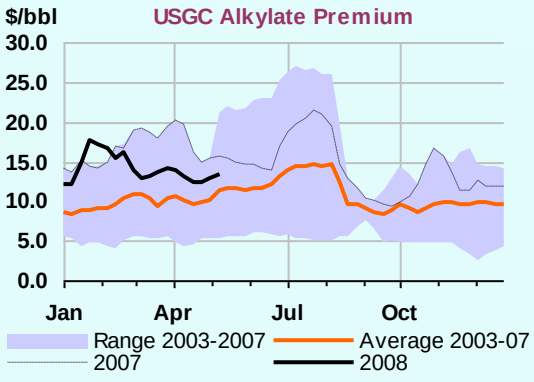
- Firstly, weakness has emerged within US demand, currently estimated at around 1% down against last year, which is perhaps not overly surprising, given the average US retail price is in excess of $3.60/gallon in early May.
- Secondly, ethanol blending is offering refiners and blenders a cheap source of additional volumes to incorporate into the gasoline pool, despite the constraints it places on the use of other blending components. Typically, refiners can find alternative uses for any displaced components, e.g. sending light naphtha to petrochemical feedstock streams, and heavy components to the kerosene pool, etc.. However, the incremental 130 kb/d of ethanol production in the US achieved over the last 12 months may have strained refiners' ability to react that quickly. In the year to date, there appears to be no strong premium attached to low volatility blending components such as alkylate, as evident in previous summers, despite the widespread reports of FCC downtime, suggesting refiners are adapting.
- Lastly, European crude runs, although weak compared with 2007 levels, have not compensated for the 4% decline seen in European gasoline demand so far this year, suggesting there is the potential for European refineries to have increased exports to the US.

This last point was highlighted in last year's *Medium-Term Oil Market Report*. The Atlantic basin is expected to undergo an easing of gasoline supply tightness, starting in 2007/2008. While arbitrage dynamics are never easy to forecast, it seems reasonable that European refiners will continue to export barrels to the US (subject to any quality constraints) for as long as the US provides the highest netback vis-à-vis other destinations. When the saturation point is reached the marginal European refinery will continue to offer barrels into the US until such time as the netback is sufficiently degraded to make the alternative export destinations more attractive. Economics are further improved by the ability of US refiners to backhaul diesel to Europe. Once this new equilibrium is reached the downward pressure on gasoline cracks will fluctuate based on a number of factors including; voluntary run cuts, unplanned refinery outages and the emergence of other markets, e.g. China, as net gasoline importers.

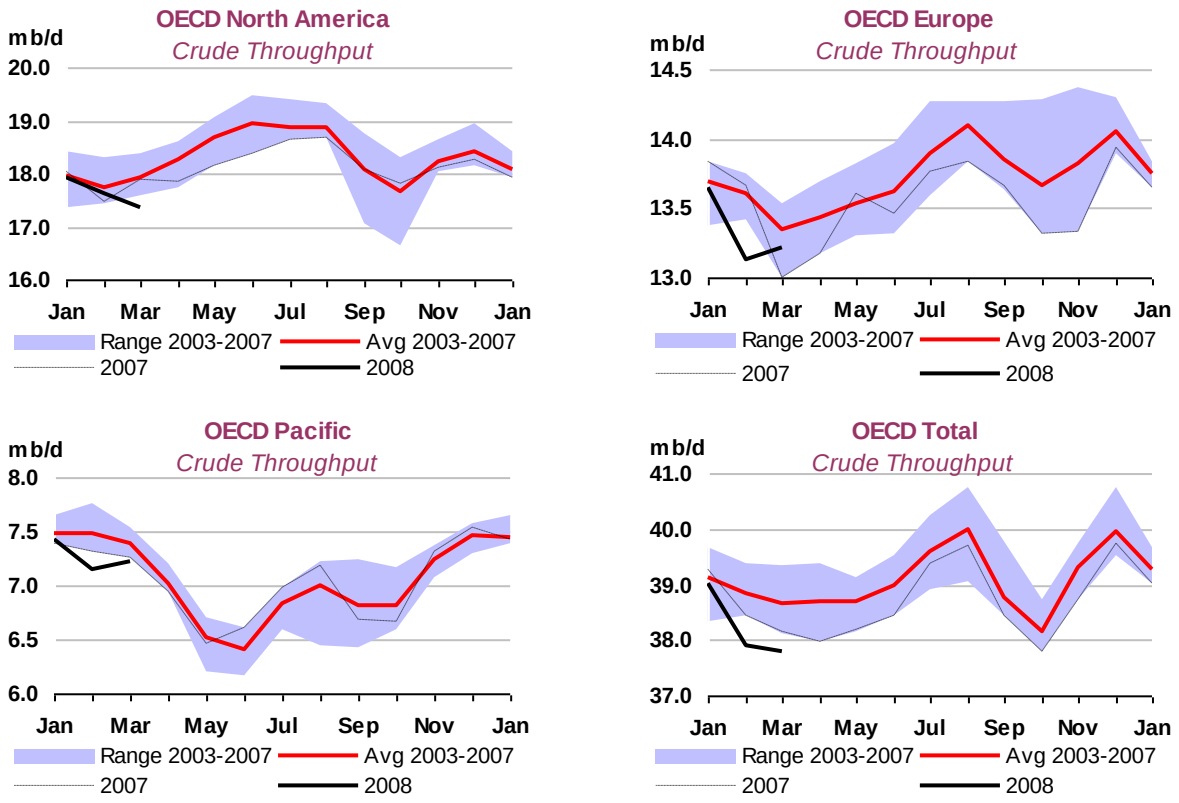
Consequently, the weakness in gasoline cracks that has emerged over the past six months may be part of a structural shift in gasoline markets, as European refiners adjust to a saturated market. Additionally, the alternative demand centres for lower quality European gasoline in recent years, namely Nigeria and Iran, have both taken steps to reduce their import needs – with varying success. However, both countries are likely to be less dependent on gasoline imports from European refineries, than they were 6-12 months ago.

Looking forward to the summer, we expect to see US gasoline inventories trough in June at just over 200 mb, before rebuilding to above the five-year range by the start of the fourth quarter. However, this assumes that margins recover sufficiently to avoid further voluntary run cuts, particularly of FCC capacity, given its high yield of gasoline. This is by no means certain within an Atlantic Basin refining system which appears to be moving structurally long of gasoline. US refineries are responding to the structural shifts underway by raising gasoil/diesel yields. Comments by Valero suggest that steps such as changing catalyst composition and further investment in hardware could raise distillate yields for its own network of refineries towards 30%, and possibly beyond, from the current level of around 25%.





2Q08 OECD Pacific throughputs are forecast to average 6.7 mb/d, 0.2 mb/d lower than last month's report, following the greater-than-forecast impact of problems at Korean refineries and lower-than-forecast Japanese crude runs during April. May Korean runs are estimated to rebound to an average of 2.3 mb/d, with a corresponding boost to product exports following the cancellations of exports seen in April. However, overall crude runs will continue to decline during the course of the second quarter, as planned maintenance work at Japanese and Korean refineries intensifies. Australian refineries continue to report operational issues, which have tightened diesel supplies and forced additional imports to meet demand requirements. Consequently, 2Q08 Australian runs may be subject to further downward revision in the coming months.



European crude throughput in March averaged 13.2 mb/d, slightly below last month's estimate. Furthermore, February's provisional data were revised downward by 0.4 mb/d to 13.1 mb/d, largely as a result of lower runs in the UK, Turkey and Italy. Consequently, 1Q08 crude runs are revised down by 0.2 mb/d to an average of 13.3 mb/d, which is in line with the average for 2Q08. Crude runs are forecast to increase over the course of the quarter as refinery maintenance in the UK, Germany, the Netherlands and Italy is completed. The strike action at Ineos's Grangemouth refinery, plus problems at Chevron's Pembroke refinery have cut April and May UK estimates by around 0.1 mb/d, and lowered forecast runs in May to possibly their lowest level since 2001.

Chinese crude runs in March were 6.8 mb/d, in line with our estimate. Crude runs are estimated to have fallen to 6.6 mb/d in April and to 6.3 mb/d in May following a fire at Sinopec's 200 kb/d Maoming refinery and the start of planned maintenance, some of which was deferred from late 2007 following the onset of product shortages in some regions. The maintenance works will reduce annual growth to almost zero in April and push it negative in May, which would be the first time in five years that runs have declined year-on-year. June runs are forecast to rebound to 6.7 mb/d with the reported start of commercial operations at Sinopec's 200 kb/d Qingdao refinery, where trial runs are understood to have been ongoing since April.

1Q08 and 2Q08 Other Asian crude throughput forecasts are revised down by 0.1 mb/d on the back of weaker-than-estimated crude runs in Indonesia and Chinese Taipei in February, which we now expect to continue through March and April. The restart in April of a 100 kb/d crude unit at CPC's Kaohsiung refinery, following a fire last October, was reported to be initially only at 60% utilisation because of poor margins. However, the recent strengthening of distillate cracks may allow for higher rates during the second quarter. **Indian** crude runs in March of 3.2 mb/d were in line with our forecast and are projected to decline to an average of 3.0 mb/d during the second quarter, due to maintenance at several refineries. Crude throughput should recover in July if reports of the start of trial crude runs at Reliance's 580 kb/d Jamnagar refinery are accurate, possibly ahead of a commercial start date of as early as September.

Russian crude runs were 0.3 mb/d ahead of our forecasts in March, despite widely reported maintenance at several refineries. Consequently, we have revised up our April forecast by 0.2 mb/d to reflect the month-on-month change in estimated offline capacity. Elsewhere, we have adjusted our forecast for crude throughput in Colombia (+50 kb/d) and Peru (-40 kb/d) following a review of historical trends. Similarly Libyan and Algerian crude runs have been revised up by 36 kb/d and 30 kb/d respectively following a reappraisal of sustained crude throughput levels.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.5	24.9	25.1	25.3	25.3	25.1
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	14.9	15.4	15.6	15.3	15.2	15.0	15.4	15.5	15.3
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.6	8.3	8.9	7.9	7.9	8.8	8.4
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	49.8	49.1	48.9	48.0	48.5	49.6	48.8
NON-OECD DEMAND																	
FSU	3.9	3.9	4.0	3.9	4.2	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Europe	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.3	7.2	7.3	7.7	7.5	7.6	7.5	7.8	8.1	7.8	7.9	7.9
Other Asia	8.7	8.8	8.9	9.0	8.6	8.9	8.9	9.2	9.3	9.0	9.3	9.2	9.5	9.5	9.2	9.6	9.4
Latin America	5.0	5.1	5.2	5.3	5.4	5.4	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.8	6.0	6.0	5.9
Middle East	5.7	6.0	6.1	6.1	6.4	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
Africa	2.8	2.9	2.9	2.9	2.8	2.9	2.9	3.0	3.0	2.9	3.1	3.0	3.1	3.1	3.0	3.2	3.1
Total Non-OECD	33.1	34.1	35.0	35.3	35.4	35.7	35.3	36.2	36.8	36.7	37.2	36.7	37.7	38.0	38.1	38.5	38.1
Total Demand[1]	82.5	83.8	85.4	83.4	84.4	85.5	84.7	85.9	84.9	85.4	87.0	85.8	86.6	86.0	86.6	88.1	86.8
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.2	14.0	14.0	14.4	14.1
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.5	4.3	4.6	4.6
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.8	19.8	19.7	19.2	19.2	19.9	19.5
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	13.1	13.5	13.1
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.9	3.9	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.7
Latin America	4.1	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.3	4.2	4.3	4.0	4.0	4.2	4.2	4.1
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	28.0	27.9	27.7	27.7	27.8	27.6	27.9	28.2	28.7	28.1
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.5	50.3	49.8	50.1	50.1	50.0	49.8	50.2	51.5	50.4
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	50.0	49.8	49.2	49.7	49.7	50.0	49.8	50.2	51.5	50.4
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.2	30.6	31.5	30.7	32.3				
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.6	5.2
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	35.0	35.4	36.4	35.5	37.3				
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.5	36.0	36.8	35.9	37.3				
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.6	85.2	85.2	86.5	85.6	87.2				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-0.9	0.2	-0.9	0.7	0.0	-0.9	-0.3	-0.2				
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0				
Total	0.2	0.2	0.0	0.8	1.2	-0.9	0.3	-0.8	0.7	0.2	-0.9	-0.2	-0.2				
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.2	-0.2	0.2	0.0	0.3				
Miscellaneous to balance[8]	0.7	0.7	-0.1	1.0	-0.2	1.5	0.5	0.2	-0.2	-0.2	0.2	0.0	0.4				
Total Stock Ch. & Misc	0.9	0.8	0.0	1.7	1.3	-0.1	0.7	-0.3	0.3	-0.2	-0.5	-0.2	0.6				
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	28.9	29.9	28.0	28.8	29.3	29.0	30.7	29.8	30.8	32.0	30.8	31.7	31.2	31.2	31.0	31.3
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.9	29.6	30.6	32.2	30.8	32.2	31.5	31.5	31.3	31.6
"Call" incl. Angola & Ecuador[2]	29.5	30.7	31.8	29.9	30.7	31.3	30.9	31.2	30.4	31.4	32.4	31.3	31.7	31.2	31.2	31.0	31.3
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.4	31.7	30.9	30.5	32.7	31.5	31.4	30.1	31.1	32.5	31.3	32.2	31.5	31.5	31.3	31.6

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	-	-0.1	-0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	-	-	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.6	-	-0.1	-0.1	-0.2
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Other Asia	-	-	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1	-	-0.1	-	-0.1	-0.1	-0.1	-0.1
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-	-0.1
Total Non-OECD	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Total Demand	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.2	-0.7	-0.3	-0.3	-0.3	-0.4
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	0.1	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.1	0.1	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.1	0.1	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
Total Supply	-	-	-	-	-	-	-	-	-	-	-	-	-0.1				
STOCK CHANGES AND MISCELLANEOUS REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	0.1	-					
Government	-	-	-	-	-	-	-	-	-	-	-	-					
Total	-	-	-	-	-	-	-	-	-	-	0.1	-					
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	0.1	-	-	-	-					
Miscellaneous to balance	-	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	-	0.1					
Total Stock Ch. & Misc	-	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.6				
Memo items:																	
Call on OPEC crude + Stock ch.	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.5	0.1	-0.2	-0.4	-0.2
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-0.1	0.1	-	-0.1	-	-0.2	0.3	0.1	-0.2	-

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.31	25.66	25.43	25.49	25.58	25.54	24.86	25.13	25.26	25.29	25.13
Europe	15.61	15.97	15.24	15.60	15.73	15.63	15.19	14.93	15.39	15.60	15.28	15.21	14.97	15.37	15.47	15.26
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.64	8.27	8.86	7.90	7.91	8.79	8.37
Total OECD	49.67	50.43	48.12	48.99	49.84	49.34	49.68	48.16	48.69	49.82	49.09	48.93	48.00	48.55	49.55	48.76
FSU	3.91	4.05	3.87	4.16	4.24	4.08	4.09	3.91	4.18	4.27	4.11	4.11	3.98	4.25	4.35	4.17
Europe	0.73	0.79	0.74	0.69	0.74	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.77	0.71	0.77	0.77
China	6.69	7.02	7.35	7.22	7.26	7.21	7.33	7.73	7.52	7.59	7.54	7.83	8.05	7.84	7.94	7.91
Other Asia	8.76	8.95	8.96	8.65	8.92	8.87	9.17	9.28	8.97	9.32	9.19	9.50	9.51	9.21	9.56	9.45
Latin America	5.10	5.17	5.31	5.43	5.40	5.33	5.40	5.57	5.72	5.71	5.60	5.67	5.82	5.98	5.96	5.86
Middle East	5.99	6.08	6.14	6.45	6.20	6.22	6.39	6.49	6.72	6.43	6.51	6.66	6.76	7.08	6.79	6.82
Africa	2.94	2.93	2.93	2.82	2.89	2.89	3.04	3.03	2.94	3.07	3.02	3.11	3.11	3.02	3.16	3.10
Total Non-OECD	34.12	34.99	35.30	35.42	35.66	35.34	36.23	36.76	36.74	37.16	36.72	37.71	38.00	38.09	38.54	38.09
World	83.78	85.43	83.42	84.41	85.50	84.69	85.92	84.92	85.43	86.98	85.81	86.64	86.00	86.64	88.09	86.84
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.04*	*20.40*	*20.51*	*20.45*	*20.35*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.84*	*7.68*	*7.86*	*8.00*	*7.85*	*7.80*	*7.65*	*7.84*	*7.88*	*7.80*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.45*	*4.64*	*4.70*	*5.27*	*5.02*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.32*	*2.16*	*2.10*	*2.38*	*2.24*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.02*	*2.09*	*2.01*	*2.10*	*2.05*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.33*	*2.28*	*2.38*	*2.37*	*2.34*	*2.41*	*2.29*	*2.38*	*2.36*	*2.36*
Brazil	*2.17*	*2.13*	*2.15*	*2.23*	*2.24*	*2.19*	*2.22*	*2.26*	*2.34*	*2.41*	*2.31*	*2.35*	*2.36*	*2.44*	*2.51*	*2.42*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.71*	*2.64*	*2.89*	*2.83*	*2.57*	*2.87*	*2.79*	*3.07*	*2.94*	*2.69*	*2.99*	*2.92*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.6	-0.7	1.7	1.5	-0.1	0.7	0.9	-3.1	-1.2	-0.9	-1.1	-1.6
Europe	0.8	1.5	-0.3	-0.3	-0.2	0.2	-4.9	-2.1	-1.4	-0.8	-2.3	0.1	0.3	-0.1	-0.8	-0.1
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	0.4	1.2	1.3	1.7	1.2
Total OECD	0.6	-0.7	-1.0	-0.5	-0.4	-0.7	-1.5	0.1	-0.6	0.0	-0.5	-1.5	-0.3	-0.3	-0.5	-0.7
FSU	0.5	5.5	2.1	4.2	5.8	4.4	1.1	0.9	0.3	0.8	0.8	0.5	1.8	1.8	1.8	1.5
Europe	4.5	1.5	1.5	1.5	1.5	1.5	2.2	2.1	2.1	1.6	2.0	1.7	2.1	2.1	2.0	2.0
China	4.2	5.0	13.0	7.9	5.4	7.8	4.5	5.1	4.1	4.6	4.6	6.8	4.2	4.3	4.6	4.9
Other Asia	1.1	0.3	-0.2	1.7	3.3	1.3	2.4	3.6	3.8	4.5	3.6	3.6	2.5	2.7	2.6	2.8
Latin America	2.8	4.6	4.1	3.8	5.3	4.4	4.5	4.9	5.4	5.8	5.2	4.9	4.4	4.5	4.4	4.5
Middle East	5.2	4.5	4.3	3.6	2.9	3.8	5.1	5.8	4.1	3.7	4.7	4.2	4.1	5.4	5.7	4.9
Africa	5.7	-2.4	-1.9	-1.2	0.0	-1.4	3.7	3.3	3.9	6.2	4.3	2.3	2.8	2.8	2.9	2.7
Total Non-OECD	3.0	2.9	3.9	3.6	3.9	3.6	3.5	4.1	3.7	4.2	3.9	4.1	3.4	3.7	3.7	3.7
World	1.6	0.8	1.0	1.2	1.4	1.1	0.6	1.8	1.2	1.7	1.3	0.8	1.3	1.4	1.3	1.2
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.44	0.37	-0.04	0.17	0.24	-0.81	-0.30	-0.23	-0.29	-0.41
Europe	0.12	0.24	-0.04	-0.05	-0.03	0.03	-0.77	-0.32	-0.21	-0.13	-0.36	0.02	0.05	-0.01	-0.13	-0.02
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.04	0.10	0.10	0.14	0.10
Total OECD	0.31	-0.35	-0.49	-0.27	-0.19	-0.32	-0.75	0.04	-0.29	-0.02	-0.25	-0.75	-0.16	-0.15	-0.27	-0.33
FSU	0.02	0.21	0.08	0.17	0.23	0.17	0.05	0.03	0.01	0.03	0.03	0.02	0.07	0.08	0.08	0.06
Europe	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01
China	0.27	0.34	0.85	0.53	0.37	0.52	0.31	0.38	0.29	0.33	0.33	0.50	0.32	0.32	0.35	0.37
Other Asia	0.10	0.03	-0.02	0.14	0.29	0.11	0.22	0.32	0.33	0.40	0.32	0.33	0.23	0.24	0.24	0.26
Latin America	0.14	0.23	0.21	0.20	0.27	0.23	0.23	0.26	0.29	0.31	0.28	0.27	0.24	0.26	0.25	0.25
Middle East	0.30	0.26	0.25	0.23	0.17	0.23	0.31	0.35	0.27	0.23	0.29	0.27	0.27	0.36	0.36	0.32
Africa	0.16	-0.07	-0.06	-0.03	0.00	-0.04	0.11	0.10	0.11	0.18	0.12	0.07	0.08	0.08	0.09	0.08
Total Non-OECD	1.01	1.00	1.32	1.24	1.35	1.23	1.24	1.46	1.31	1.50	1.38	1.48	1.24	1.36	1.38	1.36
World	1.32	0.65	0.83	0.97	1.15	0.90	0.49	1.50	1.02	1.48	1.13	0.72	1.08	1.21	1.11	1.03
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.01	-0.15	0.00	-0.01	-0.02	-0.04
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.21	-0.05	-0.04	-0.06	-0.09
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.21	0.00	0.00	0.00	-0.05
Total OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.03	-0.01	-0.57	-0.05	-0.05	-0.08	-0.19
FSU	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.02
Other Asia	-0.04	-0.06	-0.06	-0.07	-0.03	-0.06	-0.06	-0.06	-0.06	-0.05	-0.06	-0.05	-0.07	-0.07	-0.07	-0.06
Latin America	-0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.04	0.04	0.05	0.04	0.04
Middle East	-0.05	-0.12	-0.12	-0.12	-0.12	-0.12	-0.08	-0.08	-0.08	-0.08	-0.08	-0.13	-0.13	-0.15	-0.16	-0.14
Africa	-0.01	-0.04	-0.04	-0.03	-0.04	-0.04	-0.05	-0.05	-0.05	-0.03	-0.04	-0.09	-0.07	-0.07	-0.05	-0.07
Total Non-OECD	-0.10	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.15	-0.12	-0.14	-0.13	-0.22	-0.22	-0.23	-0.20
World	-0.10	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.16	-0.15	-0.15	-0.70	-0.27	-0.27	-0.30	-0.39
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.08	-0.07	-0.07	-0.09	-0.04	-0.07	0.02	0.02	0.03	-0.01	0.02	-0.55	-0.12	-0.12	-0.16	-0.23

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	4Q07	1Q08	2Q08	3Q08	4Q08	Feb 08	Mar 08	Apr 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.78	8.84				8.87	8.80	8.77
Iran	3.91	3.98		4.04	4.02				3.95	4.02	3.93
Iraq	1.90	2.09		2.33	2.38				2.45	2.41	2.34
UAE	2.62	2.52		2.40	2.62				2.66	2.54	2.65
Kuwait	2.21	2.16		2.24	2.29				2.29	2.31	2.31
Neutral Zone	0.58	0.56		0.57	0.58				0.58	0.58	0.57
Qatar	0.82	0.80		0.80	0.85				0.85	0.84	0.83
Angola[6]		1.61		1.71	1.80				1.82	1.77	1.82
Nigeria	2.24	2.13		2.14	2.05				2.10	2.01	1.86
Libya	1.71	1.71		1.74	1.76				1.76	1.76	1.76
Algeria	1.35	1.36		1.38	1.39				1.38	1.39	1.38
Ecuador[6]					0.50				0.50	0.50	0.50
Venezuela	2.56	2.39		2.42	2.40				2.41	2.35	2.32
Indonesia	0.89	0.84		0.83	0.85				0.87	0.87	0.86
Total Crude Oil[6]	29.71	30.66		31.55	32.33				32.47	32.13	31.87
Total NGLs[1,6]	4.63	4.82	5.20	4.88	4.94	4.98	5.23	5.63	4.95	4.94	4.92
Total OPEC[6]	34.34	35.48		36.43	37.27				37.42	37.06	36.80
OPEC incl. Angola & Ecuador[6]	36.29	35.94		36.76	37.27				37.42	37.06	36.80
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.14	14.13	14.18	13.96	14.03	14.42	14.21	14.20	14.20
United States	7.34	7.48	7.52	7.52	7.60	7.54	7.40	7.54	7.66	7.59	7.60
Mexico	3.68	3.48	3.29	3.32	3.28	3.29	3.28	3.31	3.30	3.21	3.31
Canada	3.19	3.32	3.34	3.29	3.30	3.12	3.35	3.57	3.26	3.39	3.29
Europe	5.18	4.95	4.57	5.00	4.88	4.46	4.35	4.59	4.82	4.89	4.55
UK	1.66	1.66	1.46	1.70	1.61	1.43	1.33	1.48	1.61	1.57	1.41
Norway	2.78	2.56	2.38	2.58	2.54	2.30	2.30	2.40	2.48	2.59	2.41
Others	0.74	0.73	0.72	0.72	0.73	0.73	0.72	0.71	0.72	0.72	0.73
Pacific	0.58	0.62	0.78	0.63	0.66	0.79	0.80	0.89	0.60	0.76	0.80
Australia	0.53	0.54	0.66	0.52	0.55	0.67	0.68	0.74	0.49	0.65	0.69
Others	0.05	0.08	0.12	0.10	0.11	0.11	0.12	0.14	0.11	0.12	0.12
Total OECD	19.97	19.84	19.50	19.75	19.72	19.20	19.17	19.89	19.64	19.85	19.56
NON-OECD											
Former USSR	12.25	12.77	13.07	12.82	12.81	12.91	13.10	13.45	12.83	12.84	12.71
Russia	9.84	10.08	10.09	10.08	10.00	9.98	10.12	10.26	10.01	9.98	9.93
Others	2.40	2.69	2.98	2.74	2.81	2.92	2.98	3.19	2.81	2.86	2.78
Asia	6.39	6.41	6.59	6.40	6.45	6.59	6.61	6.70	6.47	6.44	6.59
China	3.67	3.73	3.84	3.68	3.76	3.87	3.86	3.88	3.75	3.77	3.88
Malaysia	0.75	0.76	0.80	0.79	0.78	0.80	0.82	0.83	0.77	0.78	0.80
India	0.79	0.81	0.81	0.81	0.81	0.81	0.81	0.80	0.81	0.81	0.81
Others	1.17	1.11	1.13	1.12	1.10	1.11	1.12	1.20	1.14	1.08	1.11
Europe	0.15	0.13	0.12	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.12
Latin America	4.38	4.32	4.09	4.19	3.96	4.02	4.17	4.21	3.97	3.96	4.01
Brazil	2.10	2.14	2.37	2.13	2.23	2.31	2.44	2.49	2.22	2.23	2.27
Argentina	0.77	0.75	0.75	0.74	0.75	0.73	0.75	0.75	0.76	0.76	0.75
Colombia	0.53	0.54	0.56	0.56	0.56	0.56	0.56	0.56	0.57	0.56	0.56
Ecuador[6]	0.54	0.50		0.50							
Others	0.45	0.39	0.42	0.26	0.42	0.42	0.42	0.41	0.42	0.41	0.42
Middle East[3]	1.74	1.65	1.59	1.63	1.63	1.60	1.58	1.56	1.62	1.65	1.60
Oman	0.75	0.72	0.71	0.72	0.73	0.71	0.70	0.68	0.72	0.76	0.71
Syria	0.42	0.40	0.38	0.39	0.39	0.38	0.38	0.37	0.39	0.39	0.38
Yemen	0.38	0.34	0.31	0.32	0.32	0.32	0.32	0.31	0.32	0.31	0.32
Africa	3.91	2.55	2.62	2.58	2.60	2.61	2.64	2.63	2.61	2.57	2.60
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.62	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.23	0.23	0.22	0.23	0.24	0.24	0.24	0.21	0.22
Others	1.63	1.68	1.76	1.72	1.74	1.75	1.78	1.77	1.74	1.74	1.75
Total Non-OECD	28.81	27.83	28.08	27.75	27.57	27.85	28.22	28.68	27.62	27.59	27.64
Processing Gains[4]	2.04	2.07	2.13	2.11	2.11	2.10	2.14	2.17	2.11	2.11	2.10
Other Biofuels[5]	0.26	0.40	0.65	0.46	0.55	0.66	0.66	0.75	0.55	0.55	0.66
TOTAL NON-OPEC	51.08	50.15	50.36	50.06	49.96	49.82	50.19	51.48	49.91	50.09	49.96
Non-OPEC excl. Angola & Ecuador[6]	49.13	49.68	50.36	49.73	49.96	49.82	50.19	51.48	49.91	50.09	49.96
TOTAL SUPPLY	85.42	85.63		86.49	87.23				87.33	87.16	86.76

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2007	Dec2007	Jan2008	Feb2008	Mar2008*	Mar2005	Mar2006	Mar2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	446.8	432.7	448.4	456.8	463.2	433.7	463.7	462.5	0.31	-0.34	-0.30	0.34
Motor Gasoline	231.1	244.3	261.8	263.0	251.7	246.7	241.4	230.0	0.04	-0.07	0.18	0.08
Middle Distillate	206.1	208.3	205.5	188.5	179.0	176.1	195.1	190.7	0.05	0.11	0.02	-0.32
Residual Fuel Oil	46.4	47.3	47.6	47.0	50.9	49.0	49.7	47.2	-0.03	0.00	0.03	0.04
Total Products[3]	656.5	663.3	668.4	644.2	626.3	629.0	635.3	630.7	0.28	0.15	-0.07	-0.41
Total[4]	1259.4	1236.8	1254.2	1235.6	1225.7	1201.5	1240.2	1233.3	0.67	-0.01	-0.61	-0.12
Europe												
Crude	331.9	327.5	329.6	322.0	330.2	343.5	344.7	325.3	0.09	-0.13	0.07	0.03
Motor Gasoline	105.7	114.3	120.8	120.9	119.4	119.6	110.3	109.1	-0.10	0.05	0.11	0.06
Middle Distillate	226.7	240.6	251.6	236.1	241.2	233.9	235.2	260.5	0.02	-0.06	-0.18	0.01
Residual Fuel Oil	73.1	75.1	79.2	77.7	79.0	68.5	69.3	72.4	-0.04	0.11	-0.04	0.04
Total Products[3]	510.1	537.2	561.0	540.5	544.5	527.2	516.4	544.5	-0.15	0.16	-0.10	0.08
Total[4]	917.1	938.5	960.9	933.1	944.4	942.3	936.8	943.2	-0.04	0.02	-0.03	0.07
Pacific												
Crude	160.5	159.9	165.9	162.6	154.5	169.0	170.7	172.4	-0.02	-0.10	-0.01	-0.06
Motor Gasoline	21.1	22.3	22.8	23.0	26.5	25.2	24.6	24.5	0.00	-0.03	0.01	0.05
Middle Distillate	71.3	70.4	69.2	57.9	57.3	48.8	60.6	60.9	0.08	0.10	-0.08	-0.14
Residual Fuel Oil	19.7	21.4	20.0	19.2	20.0	21.2	19.2	22.1	0.00	0.04	-0.05	-0.02
Total Products[3]	177.6	174.8	174.5	159.3	165.0	154.9	168.3	171.1	0.12	0.15	-0.23	-0.11
Total[4]	411.0	404.3	414.3	393.5	390.8	389.5	408.5	416.5	0.10	0.03	-0.27	-0.15
Total OECD												
Crude	939.2	920.1	944.0	941.3	947.9	946.2	979.1	960.1	0.38	-0.57	-0.24	0.31
Motor Gasoline	357.8	380.8	405.4	406.9	397.6	391.5	376.2	363.5	-0.06	-0.05	0.30	0.18
Middle Distillate	504.0	519.4	526.4	482.5	477.6	458.8	490.9	512.1	0.15	0.16	-0.23	-0.46
Residual Fuel Oil	139.3	143.8	146.8	143.9	149.8	138.7	138.2	141.7	-0.07	0.15	-0.06	0.07
Total Products[3]	1344.2	1375.3	1403.9	1344.0	1335.8	1311.1	1320.0	1346.4	0.25	0.46	-0.39	-0.43
Total[4]	2587.4	2579.6	2629.4	2562.2	2560.9	2533.2	2585.4	2593.0	0.74	0.04	-0.91	-0.21

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2007	Dec2007	Jan2008	Feb2008	Mar2008*	Mar2005	Mar2006	Mar2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	695.5	696.9	698.4	698.8	700.2	688.2	686.1	688.6	0.02	0.03	0.05	0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	182.3	184.6	184.2	184.9	184.9	163.8	170.2	174.3	0.01	0.02	0.08	0.00
Products	232.4	235.6	236.3	236.5	236.5	211.7	236.0	239.9	-0.04	0.08	-0.09	0.01
Pacific												
Crude	385.1	385.1	385.1	385.0	385.0	384.5	380.4	385.1	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.0	11.4	16.4	0.00	0.02	0.01	0.00
Total OECD												
Crude	1262.9	1266.6	1267.6	1268.7	1270.1	1236.5	1236.7	1248.0	0.03	0.05	0.12	0.04
Products	253.3	256.5	257.2	257.4	257.4	224.8	249.4	258.3	-0.04	0.10	-0.08	0.01
Total[4]	1517.1	1524.1	1526.5	1527.1	1528.5	1462.2	1487.1	1507.2	-0.01	0.15	0.04	0.05

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End March 2007		End June 2007		End September 2007		End December 2007		End March 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	182.5	80	189.7	80	201.4	85	205.1	-	-	-
Mexico	40.5	20	43.8	22	43.5	21	45.0	-	-	-
United States[4]	1678.8	81	1731.0	84	1720.9	83	1663.6	-	-	-
Total[4]	1923.9	76	1986.6	78	1987.9	78	1935.8	78	1927.9	77
Pacific										
Australia	34.3	37	38.9	42	36.8	38	35.6	-	-	-
Japan	619.9	134	622.4	133	629.6	121	621.0	-	-	-
Korea	156.1	74	158.3	77	157.4	68	143.5	-	-	-
New Zealand	7.7	49	7.7	50	8.1	52	8.2	-	-	-
Total	818.0	105	827.3	106	831.9	96	808.3	91	794.7	101
Europe[5]										
Austria	24.0	81	21.1	74	22.1	76	22.1	-	-	-
Belgium	28.2	51	28.7	51	27.8	45	26.1	-	-	-
Czech Republic	20.2	92	20.5	95	19.5	98	20.2	-	-	-
Denmark	18.3	96	17.1	89	18.9	94	17.1	-	-	-
Finland	29.5	136	26.3	111	29.7	126	27.1	-	-	-
France	166.1	90	174.5	91	175.3	87	179.9	-	-	-
Germany	289.1	120	283.5	110	276.5	107	274.6	-	-	-
Greece	33.6	85	35.6	85	34.8	74	37.4	-	-	-
Hungary	18.1	107	16.0	94	17.1	98	15.4	-	-	-
Ireland	12.9	69	11.1	56	12.6	63	10.6	-	-	-
Italy	133.9	80	133.0	82	134.2	78	132.9	-	-	-
Luxembourg	0.9	15	0.9	15	0.9	15	0.7	-	-	-
Netherlands	117.7	137	115.9	128	122.9	134	116.6	-	-	-
Norway	20.2	78	21.2	83	21.9	80	26.8	-	-	-
Poland	43.9	90	50.0	90	50.9	94	58.2	-	-	-
Portugal	23.7	78	24.7	80	23.2	75	23.7	-	-	-
Slovak Republic	7.0	83	6.9	79	7.7	86	7.9	-	-	-
Spain	129.3	81	130.5	82	136.7	84	133.9	-	-	-
Sweden	38.0	105	35.2	99	33.6	93	34.5	-	-	-
Switzerland	38.7	173	38.5	157	38.1	132	35.9	-	-	-
Turkey	59.2	89	60.5	80	61.1	92	60.3	-	-	-
United Kingdom	105.8	59	100.8	58	98.5	57	97.7	-	-	-
Total	1358.3	91	1352.5	88	1364.1	88	1359.6	89	1366.7	91
Total OECD	4100.2	85	4166.3	86	4184.0	84	4103.7	84	4089.3	85
DAYS OF IEA Net Imports[6]	-	120	-	121	-	121	-	121	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End December 2007 and March 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
1Q2005	3995	1462	2533	82	30	52
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2628	82	30	52
4Q2005	4073	1487	2586	81	29	51
1Q2006	4072	1487	2585	85	31	54
2Q2006	4141	1493	2648	85	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4171	1499	2672	84	30	54
1Q2007	4100	1507	2593	85	31	54
2Q2007	4166	1506	2660	86	31	55
3Q2007	4184	1520	2664	84	31	54
4Q2007	4104	1524	2580	84	31	53
1Q2008	4089	1528	2561	85	32	53

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 4Q2007 and 1Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08	Year Earlier Feb 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.68	0.73	0.71	0.78	0.91	0.79	0.78	0.69	0.09
Europe	0.90	0.78	0.70	0.72	0.64	0.74	0.68	0.71	0.70	0.55	0.60	-0.05
Pacific	1.31	1.32	1.19	1.17	1.20	1.15	1.25	1.32	1.30	1.30	1.21	0.08
Saudi Medium												
North America	0.81	0.64	0.56	0.47	0.59	0.59	0.57	0.56	0.53	0.58	0.47	0.10
Europe	0.16	0.14	0.05	0.05	0.10	0.02	0.04	0.04	0.06	0.06	0.03	0.03
Pacific	0.26	0.35	0.34	0.34	0.31	0.31	0.38	0.47	0.35	0.43	0.38	0.05
Saudi Heavy												
North America	0.17	0.21	0.09	0.15	0.05	0.11	0.04	0.04	0.10	0.04	0.21	-0.18
Europe	0.23	0.18	0.11	0.09	0.16	0.11	0.09	0.11	0.05	0.02	0.09	-0.07
Pacific	0.25	0.23	0.20	0.20	0.18	0.20	0.23	0.21	0.25	0.21	0.22	-0.01
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.51	0.39	0.64	0.45	0.40	0.58	0.91	0.41	0.50
Europe	0.23	0.32	0.30	0.29	0.28	0.38	0.24	0.28	0.17	0.17	0.39	-0.22
Pacific	0.06	0.08	0.17	0.11	0.18	0.20	0.21	0.26	0.14	0.19	0.15	0.03
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.05	0.01	0.11	0.04	-	0.06	0.32	0.35	0.26	0.18	0.11	0.07
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.31	0.27	0.21	0.20	0.24	0.25	0.39	-0.14
Pacific	0.15	0.13	0.09	0.12	0.06	0.07	0.11	0.10	0.14	0.10	0.09	0.00
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.55	0.62	0.60	0.47	0.43	0.48	0.35	0.58	-0.23
Pacific	0.62	0.56	0.64	0.66	0.63	0.56	0.73	0.80	0.77	0.60	0.60	0.00
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.68	0.71	0.75	0.86	0.69	0.79	0.69	0.64	0.06
Europe	0.04	0.11	0.08	0.09	0.07	0.09	0.05	0.10	0.06	0.04	0.14	-0.10
Pacific	-	-	0.01	-	-	-	0.02	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.55	0.70	0.76	0.68	0.73	0.59	0.60	0.69	-0.09
Europe	0.06	0.06	0.07	0.06	0.09	0.06	0.06	0.04	0.06	0.06	0.06	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.19	1.25	1.24	0.78	1.03	1.02	1.15	-0.12
Europe	0.17	0.16	0.14	0.14	0.11	0.18	0.15	0.15	0.13	0.19	0.14	0.05
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.02	0.01	0.01	0.00	-	0.01	0.07	0.03	0.04
Europe	0.03	0.01	0.02	0.01	0.06	-	0.02	0.00	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.11	0.12	0.01	0.01	0.02	0.02	-	0.08	-
Europe	1.77	1.68	1.86	1.85	1.97	1.90	1.73	1.80	1.95	1.77	2.10	-0.33
Pacific	0.00	0.00	0.00	0.00	-	-	0.01	-	-	-	0.01	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.95	0.77	0.87	0.82	0.81	0.76	0.91	0.98	-0.07
Europe	0.35	0.33	0.24	0.23	0.27	0.22	0.23	0.19	0.41	0.16	0.26	-0.10
Pacific	0.05	0.04	0.01	0.02	0.02	-	0.01	-	-	-	0.03	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.24	0.15	0.22	0.31	0.30	0.37	0.23	0.22	0.01
Europe	0.07	0.10	0.07	0.06	0.02	0.08	0.11	0.14	0.04	0.05	0.11	-0.06
Pacific	0.01	0.00	0.01	0.02	-	-	-	-	-	-	0.03	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Dec-07	Jan-08	Feb-08	Year Earlier Feb-07	Year Earlier % change
Crude Oil												
North America	8457	8163	8117	8082	8151	8267	7968	8101	8364	8095	6775	19%
Europe	9792	9771	9771	9353	9738	10059	9924	10348	10079	9288	10005	-7%
Pacific	6801	6813	6718	6953	6340	6576	7003	7490	7279	7021	6955	1%
Total OECD	25050	24747	24606	24388	24229	24902	24895	25939	25721	24404	24298	0%
LPG												
North America	18	14	27	16	14	38	41	37	37	31	10	197%
Europe	248	265	276	287	282	244	291	293	347	321	332	-3%
Pacific	527	579	557	565	588	502	572	643	613	592	448	32%
Total OECD	793	858	860	867	884	785	903	974	997	944	790	19%
Naphtha												
North America	115	64	39	33	31	33	60	20	22	40	40	-1%
Europe	273	312	266	271	223	279	289	297	233	215	230	-6%
Pacific	746	754	794	838	812	768	758	705	812	769	909	-15%
Total OECD	1133	1129	1099	1141	1066	1080	1108	1022	1068	1024	1179	-13%
Gasoline[3]												
North America	1034	1142	1132	916	1362	1198	1048	905	870	897	862	4%
Europe	165	154	204	261	219	156	181	140	127	243	181	34%
Pacific	102	97	72	76	83	56	71	67	95	119	88	35%
Total OECD	1301	1393	1407	1254	1663	1410	1301	1113	1092	1258	1131	11%
Jet & Kerosene												
North America	173	155	183	179	204	205	143	103	139	95	192	-51%
Europe	375	375	367	329	349	386	401	404	345	318	361	-12%
Pacific	66	71	41	49	35	37	43	57	43	46	39	19%
Total OECD	614	602	590	557	588	628	587	564	528	459	592	-22%
Gasoil/Diesel												
North America	143	172	132	130	142	142	116	140	142	123	101	21%
Europe	845	971	776	906	635	740	822	957	957	836	940	-11%
Pacific	79	81	94	83	97	90	106	87	85	128	80	59%
Total OECD	1067	1225	1002	1120	874	972	1044	1183	1185	1087	1122	-3%
Heavy Fuel Oil												
North America	527	340	323	362	323	286	320	306	423	303	275	10%
Europe	491	476	434	458	420	457	400	460	457	462	477	-3%
Pacific	85	92	92	79	97	92	101	93	136	141	78	80%
Total OECD	1102	908	848	898	840	835	821	859	1016	905	830	9%
Other Products												
North America	1024	1111	1052	1035	1209	1032	932	914	1187	1031	911	13%
Europe	781	920	870	866	856	924	832	722	733	695	818	-15%
Pacific	248	243	252	256	207	262	282	336	352	249	205	22%
Total OECD	2053	2273	2173	2157	2272	2218	2046	1972	2271	1975	1933	2%
Total Products												
North America	3034	2999	2887	2670	3285	2934	2660	2425	2821	2519	2392	5%
Europe	3177	3473	3191	3377	2985	3187	3216	3273	3199	3090	3340	-7%
Pacific	1852	1918	1901	1947	1918	1808	1934	1988	2137	2043	1846	11%
Total OECD	8063	8389	7980	7994	8188	7929	7810	7686	8157	7652	7578	1%
Total Oil												
North America	11490	11162	11005	10753	11436	11201	10628	10526	11184	10614	9730	9%
Europe	12970	13243	12962	12730	12723	13246	13140	13621	13278	12378	13345	-7%
Pacific	8654	8731	8619	8900	8258	8384	8937	9478	9416	9064	8801	3%
Total OECD	33113	33136	32585	32383	32417	32831	32705	33625	33878	32056	31876	1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (*OMR), *Medium-Term Oil Market Report (MTOMR) Report and Annual Statistical Supplement* (current issue of the statistical supplement dated 10 August 2007), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2008 Platts - a division of McGraw-Hill Inc.).

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OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

10 June 2008

HIGHLIGHTS

- **Prices surged to almost $140/bbl** on 6 June following comments by an Israeli official that an attack on Iranian nuclear facilities was "inevitable" and came against a tight supply background with no clear sign of the usual second-quarter crude oil stockbuild. The rally wiped out three weeks of retrenchment as distillate premia eased and non-OECD price subsidies were cut.

- **Global oil product demand is expected to average 86.8 mb/d** in 2008, 80 kb/d below last month's estimate, following the reduction of price subsidies in several non-OECD countries. Global growth is cut even more steeply by 230 kb/d to +0.9% or +800 kb/d when historical upward revisions to 2006 and 2007 data are factored in.

- **Global oil supply rebounded by 490 kb/d in May** to average 86.6 mb/d, lifted by higher OPEC crude supply. The rise however comes after extensive downward revisions to 1Q08 non-OPEC production and lower biofuels and NGLs for the rest of this year. Despite this, a recovery in non-OPEC output is forecast for the second half of 2008.

- **OPEC May crude supply averaged 32.3 mb/d**, 395 kb/d above April, on higher output from Saudi Arabia, Nigeria, Angola and with Iraqi output at a six-year high. Higher output and field commissioning delays push effective spare capacity below 2 mb/d. The call on OPEC crude and stock change in 2008 is revised up 300 kb/d to 31.6 mb/d.

- **OECD oil stocks fell 8.1 mb in April to 2,562 mb**, in stark contrast to the typical build. An 11 mb draw in US gasoline stocks removed the large 1Q08 surplus while crude and distillate cover tightened in Europe and North America. Total oil cover remains above average at 53.4 days.

- **Global refinery throughput increased by 0.2 mb/d in May** to 73.3 mb/d, as strong US, Russian and Middle Eastern crude runs more than offset the decline in Chinese and European throughputs. Non-OECD regions could also drive 3Q08 global crude throughputs to 75.7 mb/d, 2.1 mb/d higher than 2Q08 and 1.0 mb/d higher than 3Q07.

Next Issue: 10 July 2008

INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

The IEA is Seeking to Recruit a Head of the Oil Industry and Markets Division

The International Energy Agency (IEA) is seeking a dynamic and experienced energy expert to serve as the Editor of the IEA ***Oil Market Report*** as well as leading its Oil Industry and Markets Division. He or she will supervise and co-ordinate the IEA's work on the monitoring of and reporting on oil industry and market developments.

Major responsibilities include:

- Plan, lead and co-ordinate the preparation of the IEA's monthly ***Oil Market Report***, annual ***Medium-Term Oil Market Report*** and Annual Statistical Supplement, the presentation of results for the Governing Board and the Standing Group on the Oil Market (SOM), and follow up with media, governments and the oil industry.
- Plan and organise meetings of the Standing Group on the Oil Market, and advise governments on recent trends in the global oil market and medium-term developments, particularly highlighting policy-related issues and recommending appropriate action.
- Supervise the work of professional and support staff and consultants.
- Develop and maintain close contacts with government officials on important policy developments, as well as with oil companies and consultants.
- Co-operate with other Divisions in the IEA on, inter alia, oil industry aspects of their work, country reviews, the development of long-range energy outlooks and environmental issues.
- Provide market information and expertise during oil emergencies and support and participate in exercises related to maintaining emergency response capabilities.

The ideal candidate will possess:

- An advanced university degree in economics, science, engineering, or a related discipline.
- Ten to fifteen years' experience in the international oil industry with experience in the field of oil and energy policy. Specific areas of expertise include any or all of the following: oil production, refining and distribution, oil trade, oil stock policy or product quality issues.
- Strong analytical, communication and interpersonal skills, political sensitivity and ability to establish and maintain effective working relations with senior government and industry officials.
- Proven ability in team-building as well as in planning, co-ordinating and supervising team work. Strong achievement orientation and personal initiative, as well as the ability to work under pressure, often to tight deadlines.
- An excellent level of oral and written communication skills and excellent drafting ability in English; working knowledge of French and other languages would be an advantage.

The IEA operates as an autonomous agency within the Organisation for Economic Co-operation and Development (OECD).

For the full vacancy notice and on-line application form, visit **www.oecd.org** and click on *Job Vacancies*, *Job Reference No. **2736 - Head of Division - Oil Industry and Markets***). On-line applications (in English or French) from nationals of OECD Member countries should include a CV and covering letter and should be submitted by no later than **Friday 20 June 2008**.

The OECD is an equal opportunity employer and encourages applications from all qualified candidates.

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MARKET OVERVIEW: SUPPLY PUSH - DEMAND PULL

Oil has surged to almost $140/bbl following comments by an Israeli minister that an attack on Iran is "inevitable" if Iran maintains its enrichment programme, firmly bringing Middle East politics back into the price formation process after a considerable hiatus. Of course, speculators have been involved in this price jump, but given the subject matter it is probably better defined as being risk management rather than speculation. Although discussions will focus on whether or not a supply disruption is a likely outcome, from a market perspective, there is also another supply response to consider: an IEA strategic stock release. Given that OPEC countries are running close to flat out, the market can take comfort that the IEA is watching developments very closely and is prepared to act quickly if necessary.

But $140/bbl is not just about geopolitical risks – the supply situation remains tight. This report revises down combined non-OPEC plus OPEC NGL supply growth for the year to just 770 kb/d, with most of the growth taking place in the second half of the year. On top of that, with higher OPEC supply this month and delays to the Saudi Khursaniyah project, OPEC spare capacity fell below 2 mb/d in May for the first time since 3Q06. Projecting forward current supplies implies a 350 kb/d global stockbuild in the second quarter, but this would still be considerably smaller than the 900 kb/d seasonal norm seen in the OECD alone. But come the third and fourth quarters, our projections show an unusual fall in the call on OPEC as non-OPEC supplies increase. So with the market starting to focus on deliveries for July and beyond, should we expect an easing of the current tight balance?

Third-quarter supply growth comes from a number of areas. Signs that Canadian upgrader maintenance is concentrated in the first half of this year effectively boost 3Q supply growth. More output is expected from Lukoil and the Sakhalin 2 project in Russia and small additions are seen from Brazil. However, there *are* risks. Maintenance problems can occur and the hurricane season hits its peak in the third and fourth quarters. We have an allowance in there of 340 kb/d for peak-month storm disruptions, but cannot ever hope to fully offset the seasonal risks.

This report further lowers demand *growth* for 2008 to under 1 mb/d, at 800 kb/d, following the decision by several non-OECD countries to reduce subsidies in the face of record oil prices. There has, however, been little change to absolute demand following historical revisions to non-OECD countries that lift the 2006 baseline. But could demand be weaker?

Every day there are reports about the impact of high oil prices. Airlines are cutting flights. Consumers are rushing to buy more efficient vehicles and car manufacturers are slowing SUV production (as long as SUVs are being produced, they will be discounted to clear in the market place). Public transport volumes are increasing and vehicle-miles travelled are falling, with supporting evidence from toll receipts. Consumers are protesting and politicians' statements reflect that mood. Changes are happening in the OECD, but they will take time to filter through. However, there are very few signs of slowing demand in non-OECD countries where GDP growth is far more significant than price in determining demand.

In reality, these abnormally high prices are largely explained by fundamentals. Supply growth so far this year has been poor and higher prices are needed to choke off demand to balance the market (and if so, then absolutely the worst response is to subsidise prices more, or in the case of the OECD, to cut taxes). If the supply shortfall is in diesel, which is indeed the case, then more targeted technology is also needed in the refining system. This is a case of supply and demand pulling in opposite directions to push prices higher. Balances may ease slightly this summer, but it is unlikely that this will prove to be the end to current market tensions. However, the IEA will seek to provide more answers in early July in its next *Medium-Term Oil Market Report* - examining in detail supply, demand, refining and biofuel projections though to 2013 and the *World Energy Outlook* in November through to 2030.

DEMAND

Summary

- **Global oil product demand** is expected to average 86.8 mb/d in 2008, -80 kb/d below last month's estimate but with annual growth falling to +0.9% or +0.8 mb/d following upward revisions to 2006 and 2007 data. These revisions are driven by a combination of 2006 baseline adjustments in non-OECD countries, downward revisions to preliminary 1Q08 OECD data, and slightly lower projected growth in Asia following adjustments to administered prices.

- **OECD oil product demand** has remained largely unchanged in 2007, but has been lowered by almost 130 kb/d to 48.6 mb/d in 2008 (-0.9% or -0.4 mb/d over 2007). The revisions result mostly from adjustments to preliminary data in 1Q08. In OECD Europe, the 1Q08 weakness in oil product demand was partly related to the fact that Easter (when demand normally rises) occurred in April this year, rather than in March. In OECD Pacific, 1Q08 demand was somewhat distorted by Japan's political tussle over the gasoline tax, which depressed gasoline demand in March (but boosted it in April). However, Japanese demand for residual fuel oil and direct crude for power generation remained strong given the continued woes of the country's nuclear sector. In OECD North America, 1Q08 demand was much weaker than expected as a result of the economic slowdown and high prices.

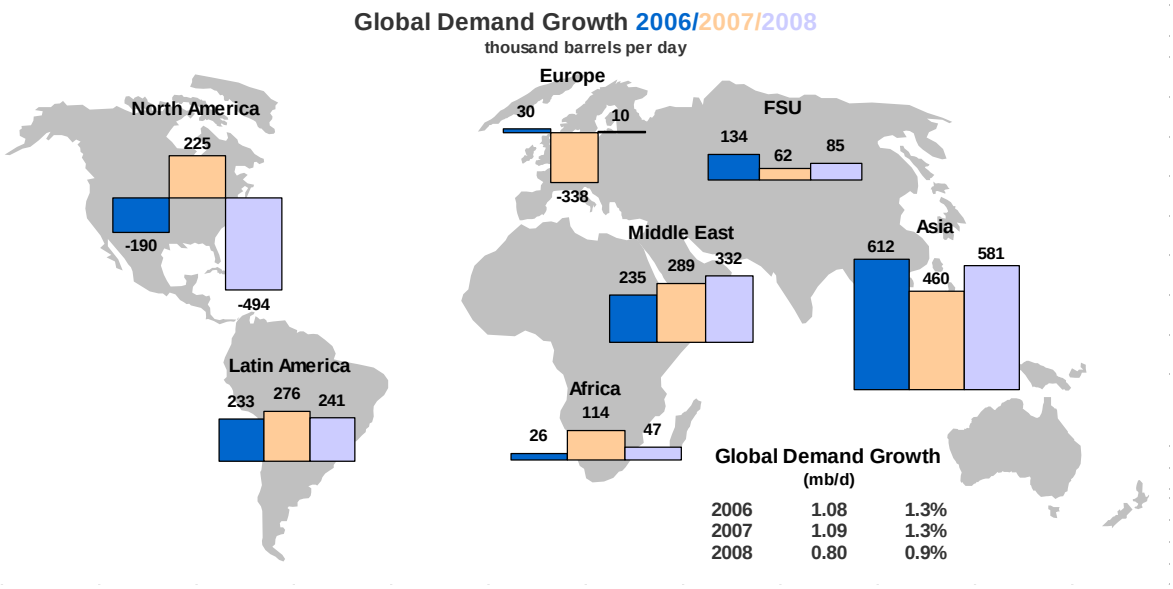
Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	3.0	3.0	2.9	3.0	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.0	3.2	3.1
Americas	30.4	30.4	31.0	30.8	30.6	31.1	31.0	31.2	31.3	31.1	30.4	30.9	31.1	31.1	30.9
Asia/Pacific	25.4	24.3	23.9	25.0	24.6	25.4	24.9	24.4	25.7	25.1	26.3	25.4	24.9	26.2	25.7
Europe	16.7	16.0	16.3	16.4	16.4	16.0	15.7	16.1	16.4	16.0	16.0	15.9	16.1	16.2	16.0
FSU	4.0	3.8	4.1	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Middle East	6.1	6.1	6.5	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
World	**85.6**	**83.6**	**84.6**	**85.7**	**84.9**	**86.1**	**85.1**	**85.6**	**87.1**	**86.0**	**86.6**	**86.1**	**86.5**	**87.9**	**86.8**
Annual Chg (%)	1.0	1.2	1.4	1.5	1.3	0.5	1.8	1.2	1.7	1.3	0.6	1.2	1.0	1.0	0.9
Annual Chg (mb/d)	0.8	1.0	1.2	1.3	1.1	0.4	1.5	1.0	1.4	1.1	0.5	1.0	0.9	0.8	0.8
Changes from last OMR (mb/d)	0.19	0.19	0.21	0.17	0.19	0.15	0.16	0.17	0.14	0.15	-0.04	0.06	-0.18	-0.14	-0.08

- **Non-OECD oil product demand** has been revised up by roughly 160 kb/d to 36.9 mb/d in 2007 (+3.8% or +1.3 mb/d over the previous year) and by about 50 kb/d to 38.1 mb/d in 2008 (+3.4% or 1.2 mb/d). Although the changes are related to final 2006 baseline reappraisals across all regions, they were essentially driven by India, suggesting oil demand in that country has been stronger than previously thought. Yet these revisions were only partially carried through to 2008, given the fact that several Asian countries – India, Indonesia, Malaysia, Sri Lanka and Taiwan – have implemented adjustments to their administered price regimes, which should slightly tame oil demand growth in that region. The lull in oil demand growth, however, may only be temporary as strong economic growth remains the key driving force. Moreover, in China and the Middle East the prospects of a substantial modification of subsidy schemes look remote.

- **The current oil price rally could impinge upon growth prospects** if sustained over time, even though the global economy is more resilient – the 'oil burden' (oil expenditures relative to GDP), albeit rising, has not yet reached its early 1980s peak, while the world's oil intensity has markedly decreased. Globally, the high oil price is contributing to inflationary pressures. In the OECD, it may postpone the recovery of the US economy, while in some non-OECD countries the cost of imported oil and/or subsidies is becoming unbearable. However, whether high prices destroy demand on a large scale will depend mostly on whether China and the Middle East, which account for almost three-quarters of global oil demand growth, substantially modify their administered price regimes. In the OECD, meanwhile, oil demand is already falling.



OECD

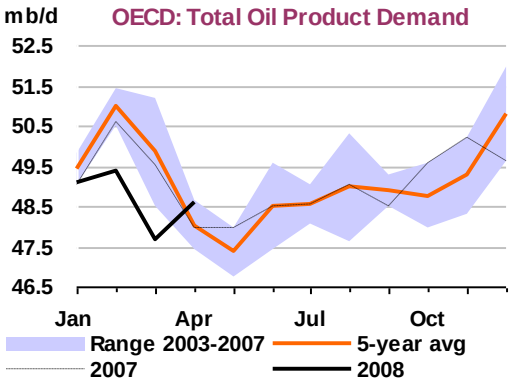
According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) rose by 1.3% year-on-year in April, with gains in Europe and the Pacific offsetting losses in North America. In **OECD Europe**, demand jumped by 4.8%, largely because Easter holidays boosted distillate deliveries and as temperatures returned to normal. In **OECD Pacific**, demand rose by 0.7%, as Japanese gasoline demand surged given the temporary abolition of the gasoline tax, while demand for residual fuel oil and direct crude for power generation remained strong. Oil product demand in **OECD North America** (which includes US Territories) fell by 0.6%, weighed down by the economic slowdown and ever higher oil prices.

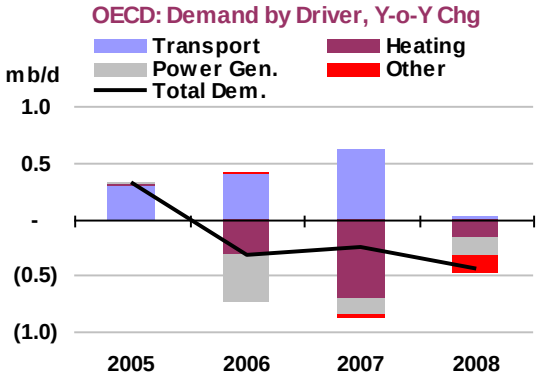
OECD Demand based on Adjusted Preliminary Submissions - April 2008
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.75**	**0.5**	**1.84**	**-3.2**	**4.20**	**10.3**	**1.02**	**-23.1**	**1.16**	**-2.8**	**6.02**	**-3.15**	**24.99**	**-0.6**
US50	9.24	-0.2	1.62	-3.9	3.68	10.4	0.57	-35.6	0.70	-3.1	4.63	-3.3	20.43	-1.1
Canada	0.68	0.7	0.12	3.6	0.17	0.8	0.30	-3.7	0.11	1.2	0.83	0.6	2.20	0.2
Mexico	0.77	9.5	0.07	0.0	0.30	17.6	0.13	17.6	0.28	-4.6	0.52	-7.9	2.07	3.7
OECD Europe	**2.47**	**-3.4**	**1.26**	**2.8**	**4.39**	**7.3**	**1.89**	**23.7**	**1.70**	**0.4**	**3.69**	**2.5**	**15.40**	**4.8**
Germany	0.48	-8.2	0.19	2.2	0.67	11.6	0.43	80.8	0.15	-7.2	0.62	6.7	2.55	10.9
United Kingdom	0.42	-5.1	0.34	1.9	0.45	5.1	0.15	0.6	0.09	1.7	0.31	-5.8	1.76	-0.7
France	0.22	-7.7	0.15	4.5	0.70	6.6	0.34	44.1	0.11	6.3	0.48	1.4	2.00	8.1
Italy	0.27	-4.9	0.08	1.5	0.57	8.1	0.08	9.9	0.28	5.1	0.40	1.5	1.69	3.5
Spain	0.15	-4.9	0.13	0.6	0.53	5.0	0.22	5.0	0.21	-0.4	0.38	-1.9	1.62	1.3
OECD Pacific	**1.74**	**12.0**	**0.77**	**-11.5**	**1.28**	**3.3**	**0.49**	**-11.3**	**0.92**	**2.4**	**3.00**	**-1.0**	**8.20**	**0.7**
Japan	1.18	17.3	0.50	-15.1	0.63	4.0	0.36	-12.7	0.58	19.8	1.78	0.7	5.04	3.4
Korea	0.18	6.8	0.15	-7.5	0.30	0.9	0.12	-7.1	0.32	-18.7	1.03	-4.0	2.09	-5.6
Australia	0.32	0.0	0.10	1.4	0.29	4.6	0.00	-34.1	0.02	-6.3	0.18	1.4	0.91	1.7
OECD Total	**14.95**	**1.0**	**3.87**	**-3.2**	**9.87**	**8.0**	**3.40**	**-0.1**	**3.79**	**-0.1**	**12.71**	**-1.1**	**48.60**	**1.3**

* Including US territories

Furthermore, March data were revised down in all three regions, more significantly in Europe. As a result, 1Q08 has been lowered by 210 kb/d, thus impacting the 2008 forecast. OECD demand is now seen averaging 48.6 mb/d in 2008 (-0.9% or -450 kb/d over 2007, and 130 kb/d lower than estimated in last month's report).





Total OECD Demand by Product

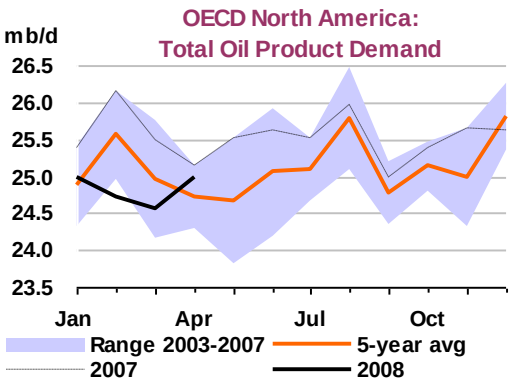
(million barrels per day)

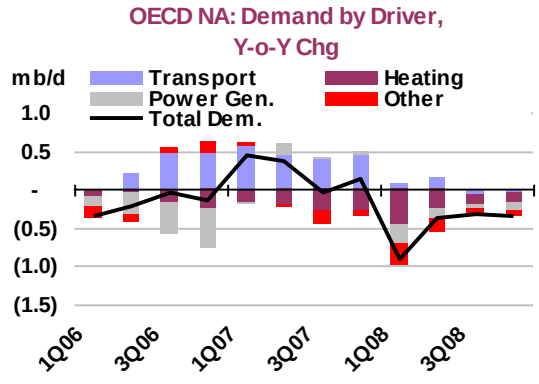
	2007	2008	2Q07	3Q07	4Q07	1Q08	Jan 08	Feb 08	Mar 08*	Latest month vs. Feb 08	Latest month vs. Mar 07
LPG & Ethane	4.80	4.72	4.64	4.44	4.90	5.13	5.18	5.28	4.93	-0.35	0.01
Naphtha	3.21	3.11	3.06	3.15	3.24	3.21	3.26	3.26	3.10	-0.16	-0.15
Motor Gasoline	14.90	14.73	15.06	15.28	14.81	14.19	14.01	14.24	14.31	0.07	-0.46
Jet & Kerosene	4.11	4.14	3.90	3.96	4.22	4.31	4.36	4.50	4.08	-0.43	-0.13
Gas/Diesel Oil	13.17	13.20	12.60	12.87	13.69	13.40	13.48	13.80	12.95	-0.84	-0.62
Residual Fuel Oil	3.92	3.72	3.87	3.76	3.89	3.84	4.08	3.74	3.69	-0.04	-0.34
Other Products	4.97	5.01	5.03	5.23	5.04	4.64	4.73	4.58	4.62	0.05	-0.13
Total Products	**49.08**	**48.63**	**48.16**	**48.69**	**49.79**	**48.71**	**49.10**	**49.40**	**47.69**	**-1.71**	**-1.83**

* Latest official OECD submissions (MOS)

North America

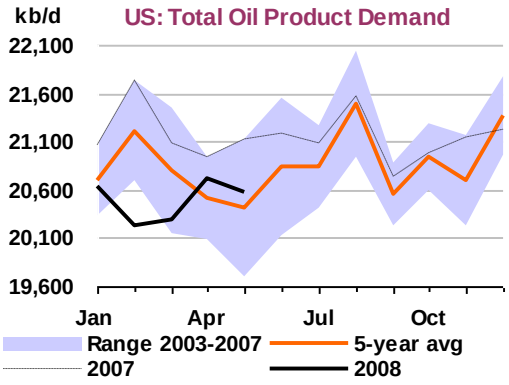
According to preliminary April data, oil product demand in North America (including US Territories) contracted by 0.6% year-on-year, given the continued weakness in most product categories in the US. The contraction in regional deliveries was steep in the case of high-sulphur (heating oil) gasoil (-23.1%, although this is related to reclassification issues in the US, since low-sulphur non-road, locomotive and marine gasoil is now counted as diesel) and naphtha (-22.2%). As such, OECD North America demand is expected to average 25.0 mb/d in 2008 (-1.9% when compared with 2007). Given the economic slowdown in the US and the continued rise in international oil prices, transportation fuels demand is expected to decline in 2H08, thus adding to the bleak demand picture.

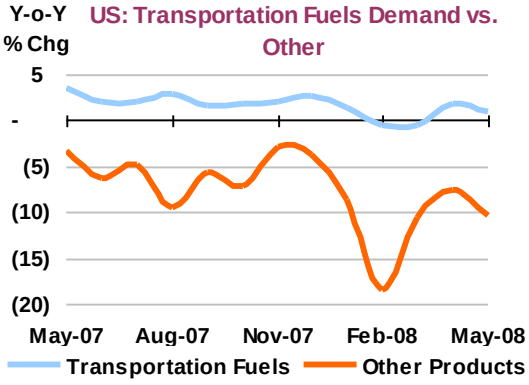




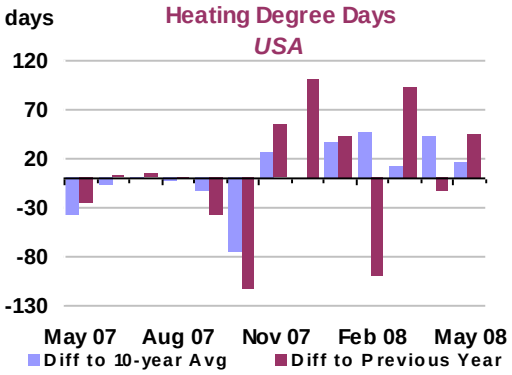
Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 1.1% year-on-year in April and by 2.7% in May. All product categories bar LPG and gasoil registered losses in both months. Demand for gasoline and jet fuel/kerosene use, which are highly sensitive to economic conditions and, increasingly, to price, shrank for the sixth consecutive month. Although temperatures were somewhat colder (both compared to last year and to the

historical average), the overall demand contraction is clearly related to the ongoing economic slowdown amid ever higher oil prices. In light of these figures, US oil demand is expected to fall by about 2.5% to 20.3 mb/d in 2008.





More interestingly, even if economic conditions were to improve sharply, it is unlikely that US demand – largely driven by transportation fuels, notably gasoline – would rebound sharply. Indeed, the US seems to be entering a 'post-Hummer' period – the gradual switch away from SUVs and light trucks to smaller, more efficient vehicles, largely prompted by the perception that oil prices will remain high for the foreseeable future. As such, the US could be following the consumption patterns observed in Europe and Japan, namely stagnating demand for transportation fuels as a result of steady efficiency gains. Although pickup sales may strengthen as the economy rebounds (given their use as commercial vehicles), the overall fleet is poised to become more efficient over the next decades – and even more so if more stringent legislation regarding fuel efficiency and emissions were to be approved in the next few years.



Anecdotal data seem to support this hypothesis. In April, almost one in five vehicles sold was 'compact' or 'subcompact' (a decade ago, when SUVs were at their peak, only one in every eight vehicles was small). By the same token, sales of four-cylinder engines surpassed six-cylinder models for the first time ever. Moreover, SUV sales were 25% lower in January-April when compared with the same period last year. More symbolically, in early June General Motors announced the gradual closure over the next two years of four North American plants specialising in SUVs and light trucks production as domestic sales continue to plummet (-27.5% in May). The car manufacturer also hinted that it may sell its Hummer brand – the embodiment *par excellence* of large, gas-guzzler SUVs – and confirmed that it will launch its Volt electric car in 2010.

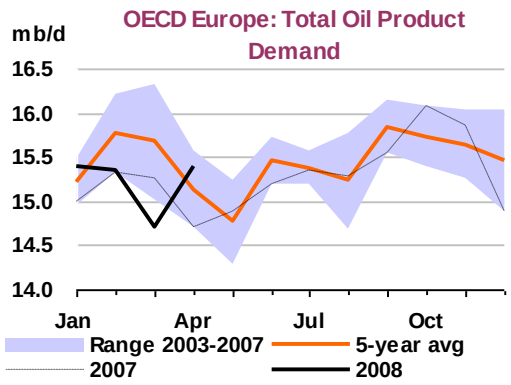
OECD North America Demand by Product
(million barrels per day)

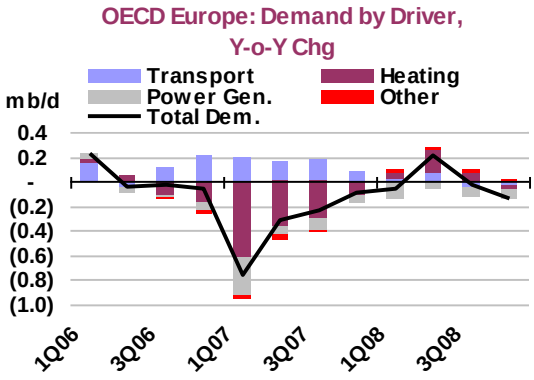
	2007	2008	2Q07	3Q07	4Q07	1Q08	Jan 08	Feb 08	Mar 08*	Latest month vs. Feb 08	Latest month vs. Mar 07
LPG & Ethane	2.90	2.84	2.75	2.70	2.94	3.07	3.14	3.15	2.94	-0.21	-0.02
Naphtha	0.43	0.36	0.45	0.43	0.43	0.37	0.40	0.38	0.35	-0.03	-0.05
Motor Gasoline	10.85	10.78	10.94	11.07	10.85	10.45	10.35	10.39	10.61	0.22	-0.09
Jet & Kerosene	1.90	1.88	1.89	1.91	1.91	1.84	1.83	1.86	1.84	-0.01	0.00
Gas/Diesel Oil	5.27	5.18	5.13	5.13	5.34	5.29	5.29	5.39	5.21	-0.18	-0.22
Residual Fuel Oil	1.24	1.11	1.26	1.18	1.15	1.12	1.20	1.06	1.10	0.03	-0.24
Other Products	2.94	2.89	3.02	3.07	2.93	2.60	2.77	2.48	2.53	0.05	-0.30
Total Products	**25.53**	**25.04**	**25.43**	**25.49**	**25.54**	**24.75**	**24.98**	**24.71**	**24.57**	**-0.14**	**-0.91**

* Latest official OECD submissions (MOS)

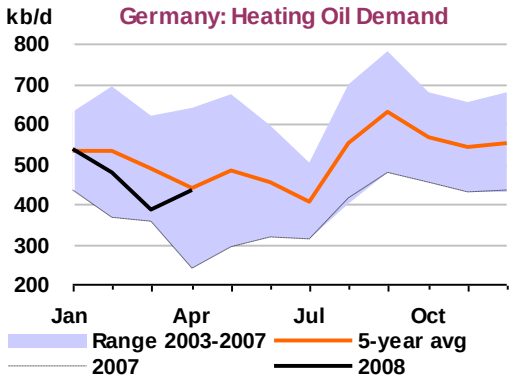
Europe

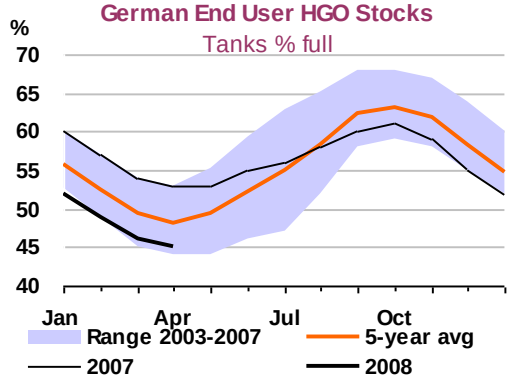
According to preliminary inland delivery data, European oil product demand in April rose by 4.8% year-on-year. This was 504 kb/d above our previous estimate, as demand in the largest countries turned out to be much higher than expected (+150 kb/d in both France and Germany, +60 kb/d in Poland and +50 kb/d in Italy). Over two-thirds of this adjustment was related to middle distillates (diesel was up by 150 kb/d and heating oil by 200 kb/d), confirming anecdotal evidence of a tight physical distillate market that pushed distillate cracks to record highs. Moreover, April temperatures were much colder than last year and slightly below the 10-year average. By contrast, March estimates were revised down by 205 kb/d following the submission of official oil statistics. As such, 1Q08 European oil demand is now estimated at 15.1 mb/d, 0.4% lower than the already weak 1Q07. It should be noted, though, that this year Easter fell in April rather than in March, thus shifting some demand to 2Q08, which has been revised up by 164 kb/d to 15.1 mb/d or +1.4% over 2Q07.





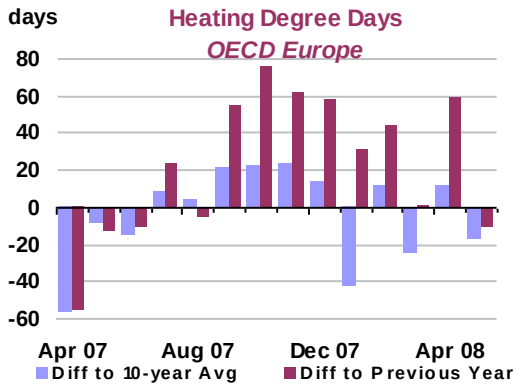
Inland deliveries in **Germany** were particularly strong in April, posting a 10.9% annual increase, albeit from a low 2007 base. Diesel and heating oil deliveries recorded the largest gains, growing by 11.6% and 80.8%, respectively, while gasoline and fuel oil continued to contract in line with earlier trends. Heating oil demand, in particular, was back at its five-year average level for the first time since January (and before that, since October 2006). Nevertheless, heating oil consumer stocks continued to slide to record lows, averaging 45% of capacity by the end of April, from 46% a month earlier and 53% a year before. Consumers are expected to start filling their tanks during the summer months, as demand weakens and prices drop, but the exact timing of the purchases depends on price developments. As in recent years, this could have a large impact on the market since German demand represents more than 20% of Europe's heating oil market.



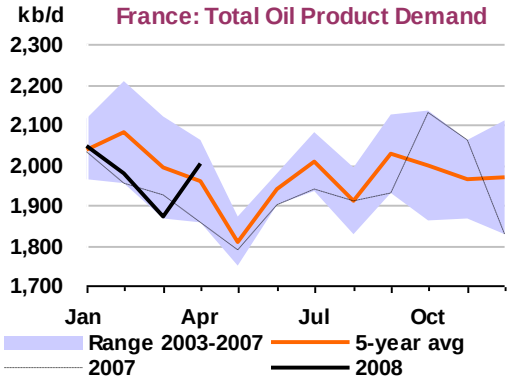


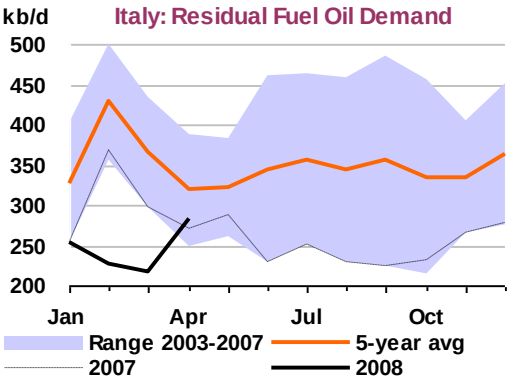
Demand in **France** grew by 8.1% year-on-year in April, with all products registering gains (with the exception of gasoline, which contracted by 7.7%). As in Germany, demand for middle distillates increased

due to Easter. Deliveries of heating oil were 44% higher last year, at the upper end of their five-year range, as temperatures were slightly colder than the 10-year norm, while diesel and jet kerosene posted gains of 6.6% and 4.5%, respectively. Interestingly, despite loud and widespread public protests against ever higher fuel prices from fishermen, farmers and truckers, diesel demand has held up surprisingly well in the first four months of this year (+2.3% over the same period in 2007). Industrial fuel oil deliveries, meanwhile, were 6.7% higher than last year, in line with stronger economic activity (the industrial production index was up 2.1% in 1Q08).

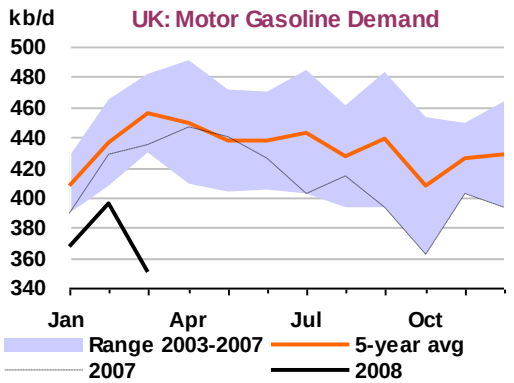


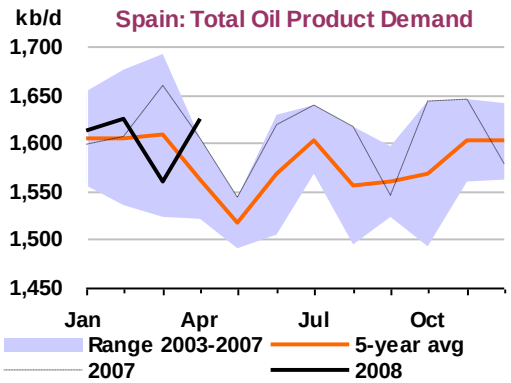
In **Italy**, demand rose by 3.5% year-on-year in April, pulled up by diesel (+8.1%) and heating oil (+9.9%) demand. Residual fuel oil demand rose by 5.1%, supported by higher domestic power generation needs. According to Terna, the Italian electricity grid operator, Italian electricity demand increased by 3.4% on a yearly basis in April and by 0.6% over March. Domestic generation jumped by 8.5%, as net imports fell by 23%.





Demand for transportation fuels in the **UK** was much lower than expected in March (the last month for which data are available), leading to a downward revision of some 120 kb/d; gasoline demand contracted by 19.6% year-on-year, while diesel consumption fell by 8.4%. Overall, total demand was down by 6.2% in March and by 4.2% in 1Q08. Demand for all products bar LPG should rebound in April (LPG weakness is likely related to the shutdown of the Grangemouth petrochemical plant). Finally, **Spanish** demand rebounded in April (+1.3% year-on-year) due to higher gasoil demand (+5.0%). By contrast, demand in March was particularly weak (-6.0%), dragged down by gasoline (-8.5%), diesel (-9.3%) and heating oil (-15.1%), due to warmer-than-normal weather.





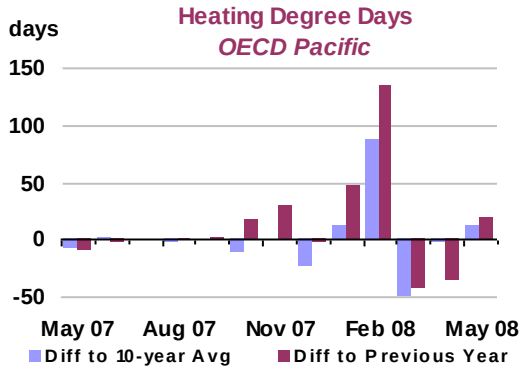
OECD Europe Demand by Product
(million barrels per day)

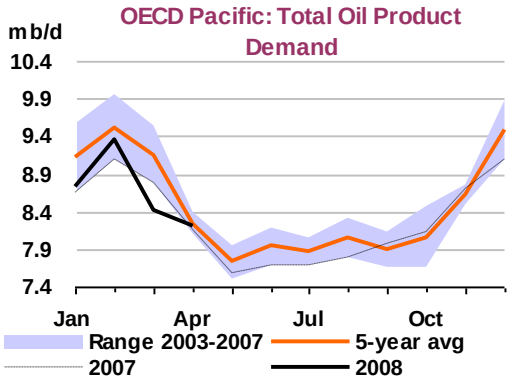
	2007	2008	2Q07	3Q07	4Q07	1Q08	Jan 08	Feb 08	Mar 08*	Latest month vs. Feb 08	Latest month vs. Mar 07
LPG & Ethane	0.97	0.98	0.97	0.89	1.00	1.08	1.11	1.09	1.04	-0.05	0.02
Naphtha	1.12	1.11	1.05	1.08	1.14	1.14	1.11	1.17	1.13	-0.04	-0.05
Motor Gasoline	2.49	2.39	2.58	2.58	2.40	2.27	2.24	2.31	2.27	-0.04	-0.23
Jet & Kerosene	1.29	1.31	1.28	1.39	1.28	1.24	1.23	1.23	1.24	0.01	0.04
Gas/Diesel Oil	6.12	6.26	5.73	6.07	6.50	6.32	6.51	6.54	5.93	-0.60	-0.29
Residual Fuel Oil	1.74	1.65	1.71	1.68	1.74	1.68	1.76	1.65	1.63	-0.02	-0.10
Other Products	1.54	1.57	1.60	1.69	1.54	1.42	1.44	1.35	1.46	0.10	0.04
Total Products	**15.28**	**15.28**	**14.93**	**15.39**	**15.60**	**15.14**	**15.39**	**15.34**	**14.70**	**-0.64**	**-0.56**

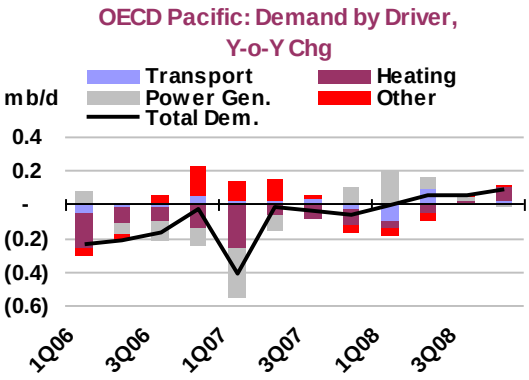
* Latest official OECD submissions (MOS)

Pacific

Preliminary data for April indicate that oil product demand in the Pacific rose by 0.7% year-on-year. As expected, the rise was largely driven by Japan, where gasoline demand soared following the temporary abolition of the gasoline tax, coupled with growth in fuel oil and direct crude use for power generation. Given downward revisions to 1Q08 data, OECD Pacific oil demand is marginally adjusted down to 8.3 mb/d in 2008 (+0.6% on a yearly basis).

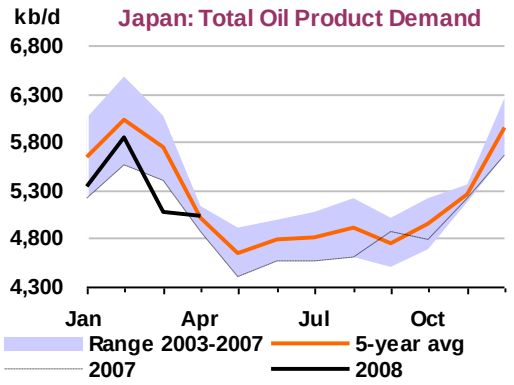


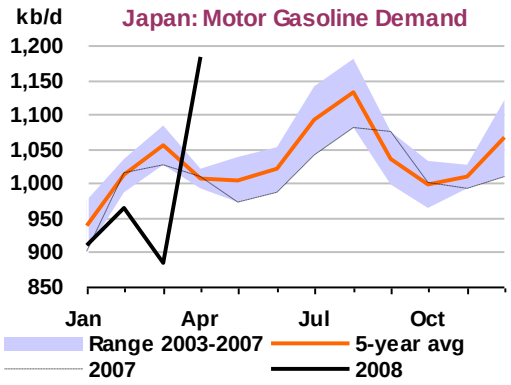




According to preliminary data, oil product demand in **Japan** – which accounts for about two-thirds of OECD Pacific's total – rose by 3.4% year-on-year in April. Although relatively mild temperatures depressed demand for heating (jet fuel/kerosene shrank by 15.1%), overall demand was supported by a sharp increase in gasoline deliveries (+17.3%) a result of the temporary abolition of the gasoline tax in late March, and by continued demand for fuel oil (+19.8%) and direct crude for power generation (included in 'other products', which rose by 38.6%). Oil demand is thus expected to reach 5.0 mb/d (+0.4%) in 2008.

However, the structural decline observed in the past several years should resume. On the one hand, the reinstatement of the gasoline tax suggests that gasoline demand should resume its downward trend in 2008, for the fourth year in a row. On the other hand, if the nuclear outages are solved in 2009, oil-fired power generation should contract significantly. In addition, kerosene should also fall as Japanese consumers switch in greater numbers to electricity for heating purposes.





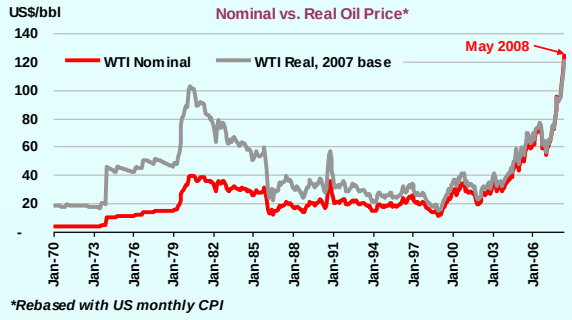
OECD Pacific Demand by Product
(million barrels per day)

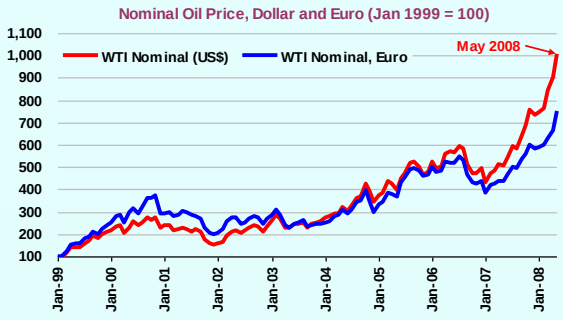
	2007	2008	2Q07	3Q07	4Q07	1Q08	Jan 08	Feb 08	Mar 08*	Latest month vs. Feb 08	Latest month vs. Mar 07
LPG & Ethane	0.93	0.90	0.92	0.86	0.95	0.98	0.94	1.04	0.95	-0.09	0.01
Naphtha	1.65	1.64	1.57	1.63	1.67	1.70	1.76	1.71	1.62	-0.09	-0.05
Motor Gasoline	1.57	1.56	1.54	1.63	1.57	1.47	1.43	1.54	1.44	-0.11	-0.15
Jet & Kerosene	0.91	0.95	0.73	0.65	1.03	1.23	1.31	1.41	0.99	-0.42	-0.17
Gas/Diesel Oil	1.78	1.76	1.75	1.67	1.86	1.78	1.67	1.87	1.81	-0.06	-0.12
Residual Fuel Oil	0.94	0.96	0.89	0.90	0.99	1.04	1.12	1.02	0.97	-0.06	-0.01
Other Products	0.49	0.54	0.41	0.48	0.58	0.63	0.52	0.74	0.63	-0.11	0.12
Total Products	**8.27**	**8.32**	**7.80**	**7.81**	**8.64**	**8.82**	**8.74**	**9.34**	**8.42**	**-0.93**	**-0.36**

* Latest official OECD submissions (MOS)

Towards Widespread Demand Destruction?

Over the past month, oil prices have reached record highs, both in nominal and real terms. In May, spot WTI averaged about $125/bbl – roughly $23/bbl more than the previous inflation-adjusted peak observed in April 1980. (Admittedly, since there was not a well-established global crude oil spot market in the early 1980s, the choice of both WTI and the US monthly consumer price index from the US Bureau of Labour Statistics as a deflator is somewhat arbitrary, but it is arguably a reasonable and well-known proxy of the average market price of oil.) In Europe, although the price rise has been tempered by exchange rate appreciation since 2003, prices have also reached record highs.

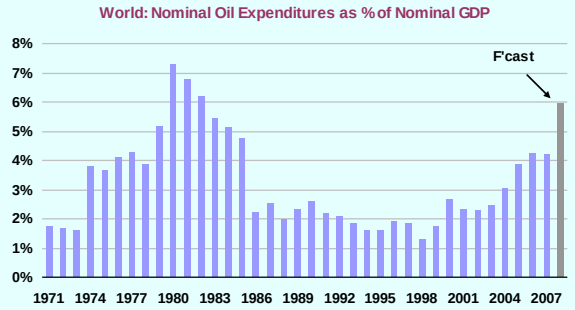


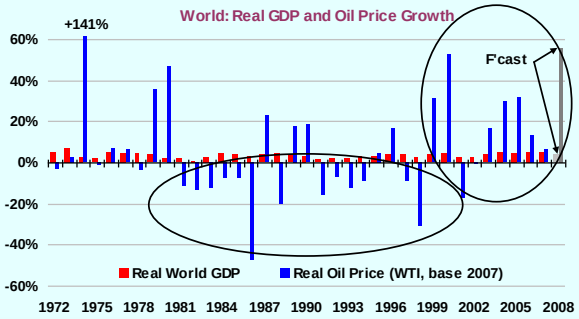


In the light of previous oil shocks, does the current, steady rise of oil prices augur badly upon global economic growth and overall oil demand? Although high prices are undoubtedly having an effect, this needs to be qualified. A starting point is the question of how expensive has oil really become.

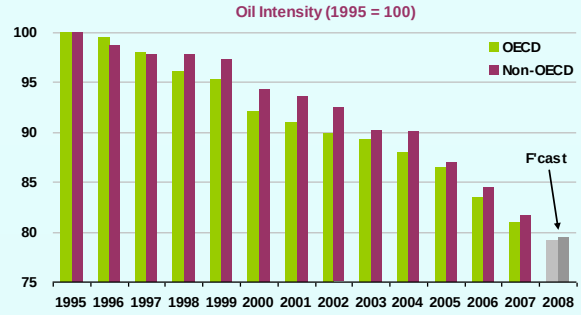
- Global oil expenditures as a share of global GDP (a proxy for the cost of importing oil) remain lower than in the 1980s. The so-called *oil burden* stood at around 4.2% in 2007, compared with over 7.3% in 1980. It may sharply increase to as much as 6.0% in 2008 (assuming that prices remain at current levels for the rest of the year and based upon the IMF's most recent economic forecasts), but it would still be lower than in 1980. Stripping out of this calculation the GDP of both the FSU and the Middle East – which, given their status of net oil exporters, do not pay international market prices for domestically consumed oil – leads to very similar results (6.8% in 1980, 3.9% in 2007 and 5.6% projected in 2008).

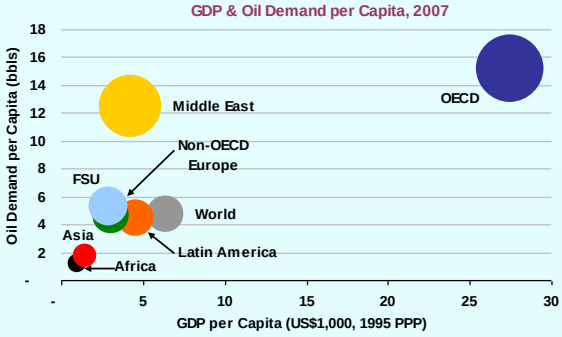
Towards Widespread Demand Destruction? (continued)





- The reason why the oil burden has not reached the levels recorded in the early 1980s is due to the fact that real global GDP grew at a faster pace than real oil prices during most of the 1980s and 1990s, with the exception of a few odd years. As such, income gains more than offset price variations. Since the late 1990s, however, the opposite has occurred: real oil prices have risen much more rapidly than global economic activity.
- Oil intensity (the volume of oil required to produce a unit of GDP) halved from roughly 1.3 b/d per $1M (2007 base) in the early 1970s to less than 0.6 b/d per $1M today as the global economy became more oil-efficient. This improvement, however, has been more marked in OECD countries; most non-OECD economies, particularly in the Middle East, have a much higher intensity despite their lower GDP per capita, compared with the 'mature' demand patterns observed in the developed world (in purchasing power parity terms). This is partly due to the fact that many non-OECD countries are at (or reaching) the stage, in terms of GDP per capita, where oil demand typically accelerates, and also to the shift of heavy industry to these countries.





At first glance, therefore, it would appear that the global economy is less vulnerable than in the recent past, even though oil prices have reached historically high levels. Yet to conclude that the current oil price rally is harmless would be misleading. Indeed, current oil prices will arguably have damaging and long-lasting economic consequences.

- In the OECD, high prices are fostering inflation, and more crucially, stoking inflationary expectations just as the world's largest economy – the US – is facing growing concerns regarding the effects of the unfolding housing and credit turmoil. This complicates the task of central banks and creates serious distortions among advanced economies. For example, the Federal Reserve has sought to stave off the threat of a sharp economic slowdown by significantly loosening monetary policy over the past few months. By contrast, the European Central Bank continues to focus on inflation, thus keeping its high interest rates. The end result has been a dramatic exchange rate movement: the much weaker dollar is contributing to feed US inflation, while the stronger euro may choke off growth in Europe. More importantly, although it seems unlikely at this point that sustained high oil prices will trigger a recession across the OECD, they may delay the recovery of the US economy well beyond 2010.
- In most non-OECD countries, meanwhile, high oil prices are becoming unbearable and are also fuelling inflation. On the one hand, the cost of imported oil is becoming prohibitive. Only a few oil-importing countries have to a certain extent been able to cushion the price rise: those that export other, higher-priced commodities or that have seen their exchange rates appreciate (several central and western African currencies, for example, are indexed to the euro). But for the vast majority – generally the poorest countries – higher oil prices will in effect have a dramatic effect upon income and development levels. On the other hand, many countries where end-user prices are capped or subsidised are being obliged to make significant adjustments to their price regimes as these become unaffordable, with all the economic, political and social consequences that this entails.

Towards Widespread Demand Destruction? (continued)

Will high prices destroy oil demand on a large scale? Here again, the answer must be qualified. In those regions where consumers are largely exposed to international oil prices – namely OECD countries and most of the world's poorest nations – oil demand is already stagnating or even falling, according to available data. In particular, as noted in this report, demand in the US – the traditional driver of oil demand growth in the OECD – is poised to contract markedly in 2008 as a result of the double squeeze provided by the slowing economy and higher prices. In the short term, discretionary driving is likely to contract further, while the use of public transportation (whenever it is available) should continue to increase. More significantly, in the medium to long term, as consumers realise that high prices are not due to temporary spikes and are therefore bound to remain at high levels, the structure of the vehicle fleet will arguably change gradually in favour of smaller cars and away from SUVs and light trucks. Such a trend would be further compounded by more stringent federal mandates on fuel efficiency and by the adoption of diesel-fuelled passenger cars, unthinkable in the recent past but now gaining attention given technological advances.

As such, short-term oil demand *growth* is now expected to come only from countries where GDP growth is poised to remain strong and where consumers are shielded from the vagaries of the international oil market by virtue of administered price regimes – essentially oil producing countries (in the Middle East, plus Nigeria and Venezuela), China and several large Latin American countries (namely Argentina and Mexico, and to a lesser extent Colombia and Chile). Buoyant economic performance, combined with end-user subsidies, are indeed feeding a 'demand shock' – as opposed to the supply shock of the 1970s and 1980s – which largely explains why oil prices remain firm. The question is then whether this group of countries will eventually abandon or adjust capped prices, and whether this will have an effect upon economic growth and ultimately upon oil demand. Even though it is highly difficult to predict policy changes, this report is based on the following assumptions:

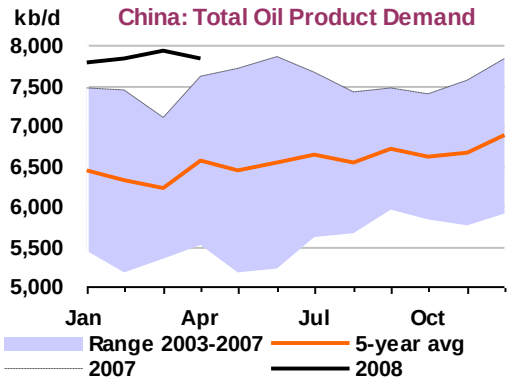
- Oil-exporting countries will not alter their price regimes in the short term, as they can arguably afford subsidies. This includes Middle Eastern countries, Nigeria, Venezuela and Mexico. Moreover, as OPEC countries feature the world's cheapest fuel prices (in Venezuela, for example, gasoline costs ¢5/litre), demand growth will continue to be particularly buoyant there. The only exception is Iran, which has successfully reduced gasoline consumption through a rationing scheme, and may now extend that policy to gasoil use.
- Other countries will probably only make token adjustments, given domestic considerations that prevent more fundamental changes. For many governments, inflation is a key concern; in addition, each country features specific deterring conditions – for example, the Olympics in China or mounting social tensions in Argentina. However, only China has arguably the financial might to sustain subsidies, and could thus be able delay any price adjustment even if international prices continue to rise. By contrast, the Indian case is illustrative of the limits of administered regimes: the government was unable to further postpone a retail price increase – the cost of subsidies was simply becoming too high – and capped prices threatened financial hardship for state-owned companies.
- A retail price adjustment in China would have to be very large in order to effectively curb domestic, and more generally, Asian oil demand growth. Despite all the hype generated by the recent adjustments of administered price regimes in the region, only a large price adjustment in China has the potential to significantly alter the demand picture. As long as economic activity – the primary driver of oil demand growth – remains strong, oil demand will shrug off moderate price hikes and will continue to be buoyant. Moreover, oil demand growth in China could even accelerate if a retail price hike improved the supply picture: the continued fuel shortages that have beset the country since 2007 suggest that pent-up demand remains considerable.

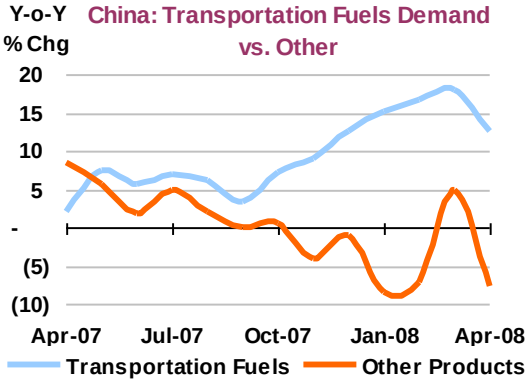
Ultimately, while some of the effects of high oil prices upon inflation, consumer spending and growth are plain to see, the interactions are actually very complex. The IEA will be conducting further in-depth study on these issues in the months ahead and will publish more insights in the forthcoming *World Energy Outlook 2008*.

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 2.9% year-on-year in April. This relatively modest rise (compared with +11.9% in March) was mostly related to greater-than-expected weakness in residual fuel oil demand – the feedstock of choice for 'teapot' refineries – which contracted by 21.0%. Demand for transportation fuels, by contrast, was actually stronger than previously thought, with gasoline soaring by 20.8%, gasoil by 8.2% and jet fuel/kerosene by 16.0%. As in recent months, demand growth has continued to be met by strong oil product imports (+105 kb/d versus the previous month), as refinery maintenance curbed runs by 2.7% from March. Chinese demand is now expected to average almost 8.0 mb/d (+5.5% over 2007), slightly higher than estimated in our last report, on the assumption of reconstruction work following May's damaging earthquake in Sichuan.





Despite the array of measures decreed by the government last month, anecdotal evidence suggests that fuel shortages, notably of gasoil, have not only failed to recede but also probably worsened in several provinces. Yunnan, Guizhou, Guangdong and Fujian have reportedly been the worst hit (Sichuan's earthquake may be to blame in the case of neighbouring Guizhou and Yunnan, but less so regarding Guangdong and Fujian). Assuming that state-owned companies have no reason to shun the domestic market since they are now subsidised on a monthly basis, there are two plausible explanations for this state of affairs. One is that the government may be more interested in building stocks of crude and oil products ahead of the Olympics than meeting current pent-up demand. This would be supported by the strong import figures. From this perspective, shortages would vanish once the Olympics begin and the world's attention is focused on China, which would be eager to prove it is a modern nation where markets are well supplied.

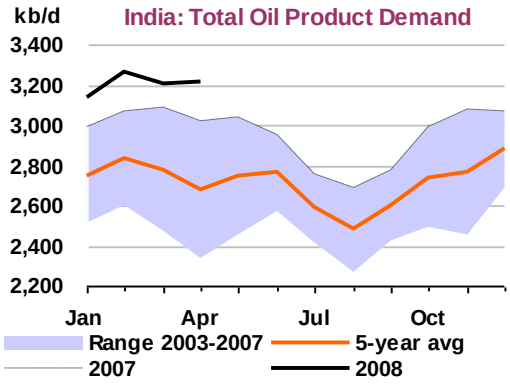
Alternatively, state-owned PetroChina and Sinopec may be only building minimal stocks, if at all, and are stretching their capabilities as much as possible to meet domestic demand (which they claim to be doing). As such, logistical bottlenecks and localised supply disruptions would be the main culprits of the current wave of shortages. Indeed, many independent refineries (which overall represent at least some 12% of total refinery production) have reportedly shut down or are operating at very low capacity, given the mismatch between domestic and international prices. This would mean that the state-owned giants must not only supply their regular customers but also other sectors such as farmers or fishermen, who normally use off-spec. products from independent refineries. In this case, oil product stocks could actually be falling, as some reports have suggested. Consequently, it is not impossible that our apparent demand numbers, even though they are significantly higher than official Chinese demand numbers from the Joint Oil Data Initiative (JODI), may understate actual demand growth.

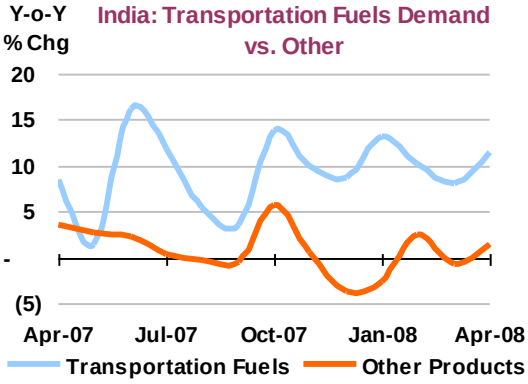
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	651	-33	-18	-4.6	-2.6
Naphtha	756	812	826	56	14	7.5	1.8
Motor Gasoline	1,221	1,257	1,414	36	157	2.9	12.5
Jet & Kerosene	259	280	307	20	28	7.8	10.0
Gas/Diesel Oil	2,415	2,576	2,845	161	269	6.7	10.4
Residual Fuel Oil	791	744	694	-48	-50	-6.0	-6.8
Other Products	1,068	1,204	1,217	136	13	12.7	1.1
Total Products	**7,213**	**7,542**	**7,954**	**329**	**413**	**4.6**	**5.5**

Other Non-OECD

According to Indian preliminary data, oil product sales – a proxy of demand – soared by 6.5% year-on-year in April. Transportation fuels – gasoline, jet fuel/kerosene and gasoil sales – have once again been the main contributors to demand growth, rising collectively by roughly 11.5% year-on-year. It should be noted that the baseline has been sharply revised up following the submission of 2006 data. Total demand was thus some 170 kb/d higher than expected, growing by +9.5% in 2006 and +5.1% in 2007 (to 2.8 mb/d and 3.0 mb/d, respectively). In 2008, demand is poised to average almost 3.1 mb/d (+3.9% over 2007, slightly down versus our last report).





This forecast attempts to account for the effects of the retail fuel price rise decreed by the government in early June (+11% for gasoline, +9.5% for gasoil and 17% for LPG). The Finance Minister had argued in favour of the hike on the basis that, at current international oil prices, state-owned companies could well face a liquidity crisis in only a few months. Yet the increase was reflective of a political compromise – some government members had pushed for a much higher increase, in the order of 16-22%. India's government has thus emulated China's (which raised end-user prices on gasoline and gasoil by 9% last November), hoping to a) curb runaway demand, and b) bring fiscal relief to both the country's federal budget and to state-owned companies. However, there are reasons to doubt that the price hike will prompt significant changes in both areas.

On the basis of India's estimated price elasticity (-0.4), transportation fuel demand should fall by about 4% as a result of the price rise. Yet the income elasticity is almost twice as high (+0.7); in other words, demand has been driven primarily by income growth, rather than by artificially low prices. In fact, gasoline is now *more* expensive in India than in the US, for example, yet Indian income per capita is significantly lower. As long as India's buoyant economic expansion continues, the price hike will at best slow down the pace of demand growth, rather than trigger a fall in absolute terms. A significant portion of Indian motorists – those belonging to the country's emerging middle classes, who are supporting the brisk expansion of the automotive market – will arguably be able to absorb the increase. For poorer drivers, meanwhile, gasoil adulteration – a serious problem in India – will continue to be the backup

solution, since the price of kerosene has been left untouched. It should also be noted that gasoline demand, at roughly 280 kb/d (prior to the hike) is dwarfed by gasoil demand (1.1 mb/d).

Another issue is whether the price hike will help to reduce the gap between domestic retail prices and the cost of *imported* crude and products, which are heavily taxed. Although retail prices are now roughly in line with international levels, the cost faced by refiners is much higher. Although changes in customs duties – abolished for crude oil and reduced from 7.5% to 2.5% in the case of oil products – and a small cut in excise taxes will contribute to reduce the gap, the government's subsidy burden and the financial losses incurred by state-owned companies are not poised to recede to more manageable levels. According to the government's own estimates, the so-called 'under-recoveries' (losses) of state-owned companies should diminish by about 25% to some $115 million per day (that is, over $40 billion per year) – hardly a dramatic improvement. The government intends to issue another set of sovereign 'oil bonds' (used to partially compensate the state-owned oil companies), but this will just shuffle the burden around, rather than further curbing it. The government has bought some time, but the spectre of a liquidity crisis hitting state-owned companies – and widespread shortages – will cast an ominous shadow upon India's downstream sector as long as international oil prices remain high. In fact, one large company – Indian Oil Company (IOC) – is reportedly considering mortgaging part of its assets in order to avert a cash crunch.

As part of our ongoing assessment of FSU demand, **Russian** naphtha demand has been revised up following the submission of official data for this product (for the first time ever) and the reappraisal of the 'other products' category. The new data suggest that some naphtha volumes – primarily used by the petrochemical industry – had been incorrectly reported in the latter category. Overall demand, however, remains largely unchanged, seen averaging 2.9 mb/d in 2008 (+2.1% over 2007). Naphtha is now estimated at 238 kb/d, almost three times as high as our previous assessment. By the same token, 'other products' are revised down by some 150 kb/d to 497 kb/d.

Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	**2007**	**2008**	**2007**	**2008**	**2007**	**2008**
LPG & Ethane	291	304	324	14	20	4.7	6.5
Naphtha	260	243	238	-17	-5	-6.4	-2.0
Motor Gasoline	652	683	709	31	26	4.7	3.9
Jet & Kerosene	231	234	243	3	9	1.3	3.7
Gas/Diesel Oil	552	586	608	33	22	6.0	3.8
Residual Fuel Oil	360	303	284	-56	-19	-15.6	-6.3
Other Products	482	490	497	7	8	1.5	1.6
Total Products	**2,828**	**2,843**	**2,904**	**15**	**61**	**0.5**	**2.1**

Source: Petromarket RG, IEA

Dealing with High Prices: A Sequel

Following on last month's discussion on how non-OECD countries are dealing with ever higher oil prices, we provide an update on the most recent developments. These vary greatly from one country to the next. In general terms, several Asian countries – with the exception of Thailand – have indeed decided to bite the bullet and increase domestic prices in a seemingly domino-like fashion. By contrast, most Latin American countries – with the exception of Brazil – are actually reinforcing subsidies.

Asia

- **Bangladesh**. State-run Bangladesh Petroleum Corporation proposed a 37-80% hike in fuel prices. A government decision is expected soon.
- **India**. As discussed extensively above, the government upped retail fuel prices on 4 June (+11% for gasoline, +9.5% for gasoil and 17% for LPG). The price hike, however, is contentious: the opposition, and more prominently, the government's nominal Communist allies are intent on fuelling discontent and have called for street protests and strikes (the rural poor, most affected by inflation, form the majority of the electorate). Inflation is already running at almost 8%, the highest rate in over three years, and could increase by as much as one percentage point following the price increase.
- **Indonesia**. Despite a wave of protests across the archipelago, the government announced a sharp fuel price increase. From 24 May, gasoline rose by 33%, and gasoil by 28%. The move was bold, given the country's history of price-related social unrest, but was probably unavoidable as the weight of subsidies ballooned (the government now expects to save some $3.7 billion). Attempting to cushion the blow, however, the administration will transfer some $1.5 billion in cash to the poorest Indonesians (19 million households).
- **Malaysia**. Despite having announced last month that fuel price caps would be maintained, the government backtracked and implemented a very steep price increase on 4 June. Gasoline prices rose by 41%, while gasoil prices soared by 63%. Before the move, the government had imposed a ban on gasoline sales to foreign vehicles within 50 km of the country's border with Thailand and Singapore. This, however, was unlikely to tame the soaring cost of subsidies (the sales ban was indeed lifted following the price hike). At almost 5% of GDP, Malaysia's budget deficit was becoming unpalatable; subsidies accounted for around one-third of the budget. To cushion the blow, the government will hand out cash to motorcyclists and small car owners. More interestingly, the government appears to have concluded that since any hike would entail a political cost, it was better to implement a significant change. This echoes developments in Indonesia, but contrasts sharply with the much more timid increases in other Asian countries, notably India. It should be noted that, before the hike, Indonesia and Malaysia featured the cheapest fuel prices in the region.
- **Sri Lanka**. Retail prices of gasoline and gasoil rose by 31% and 38%, respectively, on 25 May.
- **Taiwan**. The new administration partially removed the price controls that had been imposed in November 2007. From 1 June, the price of gasoline and diesel rose by 13% and 16%, respectively. The increase was less steep than previously indicated (around 20%), suggesting that the newly government has been forced to acknowledge widespread public opposition and concerns upon inflationary pressures, already compounded by rising food prices, and upon economic growth prospects. Moreover, the government will subsidise public transport providers and taxi drivers, as well as fishermen and farmers. Nevertheless, starting in July, fuel prices will be adjusted monthly under a floating price mechanism.
- **Thailand**. Following the reintroduction of subsidies in mid-March to moderate the impact of high prices on consumers, the government has asked several refiners to absorb the full impact of a further price adjustment decreed in 26 May (the gasoil ex-refinery price was lowered by ¢9/litre), on the grounds that refining margins have been strong. The targeted refiners, all affiliates of PTT (Thaioil, PTT Aromatics and Refining, IRPC, and Bangchak Petroleum), produce the equivalent of 65% of total gasoil demand. The lower-priced gasoil will be sold exclusively to private bus operators in Bangkok, fishermen and farmers (collectively some 8% of demand); all other users will continue to pay market prices.

Dealing with High Prices: A Sequel (continued)

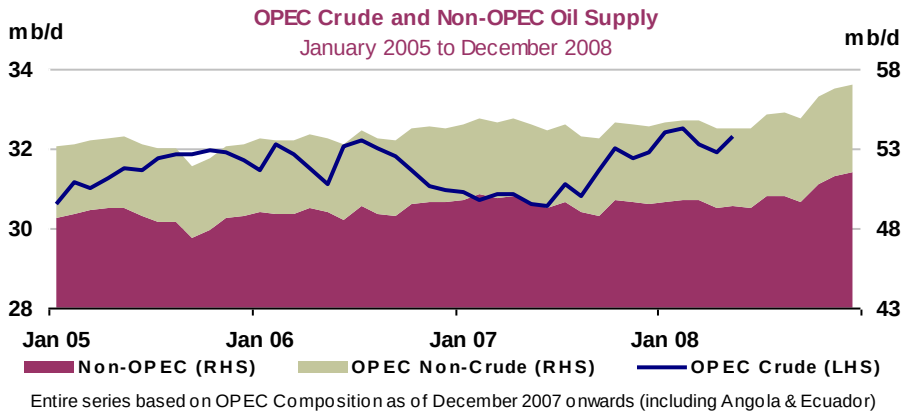
Latin America

- **Brazil**. In early May, state-owned Petrobras, which controls 98% of the country's refining sector, announced an ex-refinery price increase for both gasoline (+10%) and gasoil (+15%) for the first time since 2005, in a bid to stem mounting downstream losses. Although prices are technically liberalised (the domestic market was deregulated in January 2002), the government has pressured the state-owned company to maintain low prices. Concerned about inflationary pressures, the government lowered gasoline excise taxes in order to maintain pump prices constant. In the case of gasoil, though, the tax reduction was marginal, and retail prices rose by about 9%. It should be noted that Brazil's flex-fuel vehicle fleet has also contributed to keep gasoline prices relatively low– drivers can simply switch to cheaper ethanol if gasoline becomes more expensive. In fact, ethanol consumption surpassed gasoline demand for the first time ever in April.
- **Chile**. In early June, the government added $1 billion to the country's Fuel Price Stabilisation Fund, which is intended to cushion price fluctuations. With such a move, the government hopes to engineer a price fall of around 10%. In order to prompt truckers to end a nationwide strike that seriously disrupted the country's for several days, the government has also agreed to cut the excise tax on diesel by 80% from 1 July 2008 to 30 June 2009.
- **Colombia**. The government postponed plans to eliminate fuel subsidies over 2009-2010 in an effort to keep inflation under control. However, in order to reduce the fiscal impact, upstream oil companies operating in the country will be required to provide an additional 'contribution' (yet to be defined). Nonetheless, the government is set to remove subsidies for gasoline and diesel in June 2010 and December 2011, respectively (a year later than originally intended). As opposed to most other countries, state-owned Ecopetrol does not sell refined products directly to consumers; as such, the government absorbs the losses resulting from sales at below-market prices.
- Finally, three countries stand as unwilling to remove their administered price regimes: **Argentina**, **Mexico** and **Venezuela**. Argentina is struggling with recurrent shortages, as private companies are reluctant to supply the domestic market, despite heavy-handed pressure from the government, which is struggling to cap inflation (officially at around 8%, although most independent observers reckon it is as high as 25%). Meanwhile, Mexico and Venezuela can afford to maintain subsidies given their status as oil exporters. The cost, however, is high: about 2% of GDP in Mexico (around $19 billion, mostly because the country is forced to import large volumes of oil products, notably gasoline) and perhaps as much as 7% of GDP in Venezuela (the country does not publish precise figures on this).

SUPPLY

Summary

- **Global oil supply** rebounded by 490 kb/d in May to average 86.6 mb/d after extensive downward revisions to 1Q non-OPEC production. May's increase was driven by higher OPEC crude supply and an assumed recovery in both FSU and Chinese output. OPEC continues to dominate global supply growth, as non-OPEC production has languished at or below levels of a year ago for the past three quarters. Nonetheless, strong recovery from non-OPEC is expected in the second half of 2008.
- **May non-OPEC production** rose 95 kb/d versus April to 49.3 mb/d. Increases from Russia, the Caspian and China countered lower Canadian and North Sea output. Downward revisions for other biofuels, Africa and Australia cut 225 kb/d from 1Q08 supply, with 325 kb/d removed for 2008 overall, after a 100 kb/d downward revision for 2007. Non-OPEC supply averages 49.3 mb/d in 2Q, potentially rising to 51.2 mb/d by end-year as seasonal outages end, and assuming new projects start-up on schedule.
- **Non-OPEC supply growth in 2008** now averages 455 kb/d (close to 2006/2007 levels), and is concentrated towards end-year. The FSU, Brazil, Australasia, biofuels, the US GOM and Canadian oil sands are key contributors, while Mexico, the North Sea, other onshore North America and the Middle East see continued decline. An incremental 325 kb/d is expected from OPEC NGL in 2008, to 5.1 mb/d.



- **OPEC May crude supply** averaged 32.3 mb/d, a gain of 395 kb/d versus April. Increases were widespread, with Saudi Arabia, Iraq, Nigeria and Angola prominent. Pipeline outages and marketing constraints continued to curb Nigerian and Iranian supplies respectively. Iraqi output hit a six and a half year high at 2.5 mb/d, as Basrah exports increased further. Saudi Arabia signalled its intent to boost supplies in response to higher refiner demand.
- **OPEC effective spare capacity** dipped below 2 mb/d for the first time since 3Q06. Delays in commissioning new upstream capacity, plus higher physical output, were responsible for the tighter level of upstream flexibility. However, OPEC producers should add a net 600 kb/d to capacity by end-2008, reaching 35.6 mb/d on the strength of additions from Saudi Arabia, Nigeria, Angola and Algeria. Further increase could come from Iraq depending on contract and security issues.
- **The call on OPEC crude and stock change** is raised by 0.2-0.3 mb/d for 2006 and 2007 on higher assessed non-OECD demand. The reduction applied to 2008 demand lags that applied to non-OPEC and OPEC NGL output, leading to a 0.3 mb/d upward revision to the 2008 'call'. Averaging 31.9 mb/d for 2Q08, the 'call' then drops to 31.4 mb/d, as non-OPEC supply growth rebounds. But further non-OPEC capacity slippage would correspondingly raise the 'call' in the second half of the year.

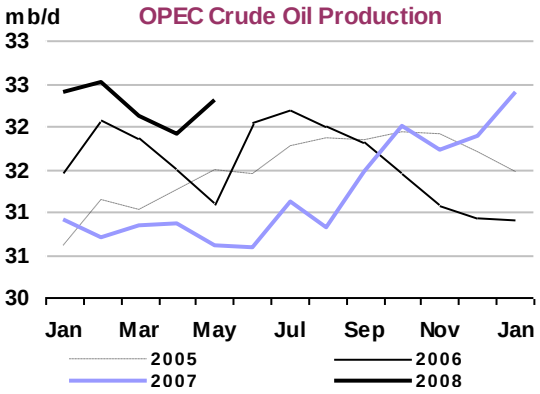
All world oil supply figures for May discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary May supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

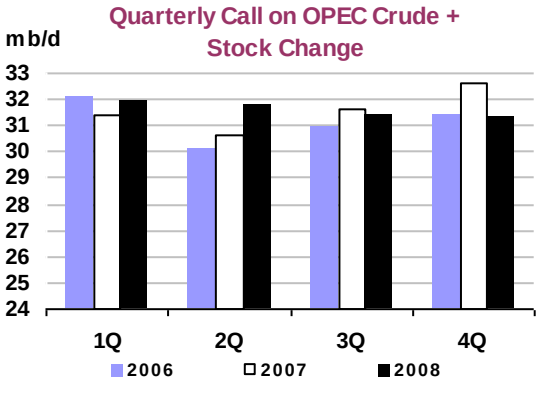
OPEC

OPEC May crude supply averaged 32.3 mb/d, a gain of 395 kb/d versus April. April's output estimate was revised up marginally, largely due to a higher assessment for April Iraqi exports. Increases in May were widespread, with Saudi Arabia, Iraq, Nigeria and Angola prominent amongst those seeing higher supply. However, pipeline outages and limited markets for heavy, sour crude continued to constrain Nigerian and Iranian supply respectively. Iraqi supply hit a six and a half year high at 2.5 mb/d, as Basrah exports increased and northern exports via Turkey were sustained. Saudi Arabia reportedly began raising output around 10 May, signalling its intention to boost supplies by as much as 300 kb/d by June in the face of higher refiner demand. But delays in commissioning new upstream capacity (not least in Saudi Arabia), allied to higher physical output, pushed our estimate of effective OPEC spare capacity below 2 mb/d for the first time since 3Q06.

June OPEC supplies may increase further, subject to both higher expectations for Saudi output and Iraqi exports being realised. Moreover, June is expected to see the partial release of substantial crude volumes held in floating storage off Iran. Conflicting reports in May suggested that between 15 and 30 million barrels has been stored aboard VLCCs anchored near Kharg Island. In contrast, loading schedules suggest that Nigerian supply could remain constrained in June.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Saudi Arabian supply is estimated to have increased by some 150 kb/d in May to average 9.2 mb/d. Saudi Oil Minister Ali al-Naimi announced in mid-May that the Kingdom would boost output by 300 kb/d to around 9.45 mb/d by June to meet higher demand. Reportedly, incremental output will come from the Ghawar and Safaniyah fields, producing Arab Light and Arab Heavy crude respectively. Despite seasonally rising eastbound volumes, Asian buyers have reportedly been showing some resistance to what they see as over-priced lighter Saudi barrels, so it will be interesting to see how formula prices evolve in coming months.

OPEC Capacity Growth Revisited

Current installed OPEC crude production capacity is assessed at just shy of 35 mb/d. This is based on oil that could theoretically be produced at the wellhead within 30 days and sustained at that level for 90 days. No account is taken of constraints of quality, transportation (except for Iraq and Nigeria) or pricing which, from time to time, can render marketable spare capacity lower than these levels. However, prevailing physical limitations on gas flaring and other technical issues are accounted for, with the result that our numbers aim to represent sustainable output potential, rather than short-term surge capacity.

Capacity estimates are updated periodically, taking account of latest reliable estimates of field capability after allowing for assumed decline rates. Just as for non-OPEC estimates, new field start-ups are factored in based on latest information on start-up date and the likely rate of ramp-up towards capacity. The vagaries of OPEC output policy play no role in shaping capacity estimates unless they are deemed to be acting to defer investment in new capacity. The uncertainties over these assumptions, and the secrecy surrounding field operational details among many producers, mean that our capacity estimates may lack precision. But they hopefully provide a valuable snapshot of prevailing upstream supply flexibility.

OPEC Crude Production[1]
(million barrels per day)

	Mar 2008 Supply	Apr 2008 Supply	May 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs May 2008 Supply	Capacity end 2008	Current Target
Algeria	1.39	1.38	1.38	1.40	0.02	1.45	1.36
Indonesia	0.87	0.86	0.86	0.86	0.00	0.85	0.87
Iran	4.02	3.90	3.87	4.02	0.15	3.93	3.82
Kuwait[3]	2.59	2.60	2.63	2.63	0.00	2.65	2.53
Libya	1.76	1.75	1.73	1.80	0.07	1.81	1.71
Nigeria[4]	2.01	1.84	1.90	2.47	0.58	2.67	2.16
Qatar	0.84	0.83	0.85	0.93	0.08	0.96	0.83
Saudi Arabia[3]	9.09	9.06	9.20	10.65	1.45	10.95	8.94
UAE	2.54	2.65	2.66	2.85	0.19	2.87	2.57
Venezuela[5]	2.35	2.32	2.36	2.50	0.14	2.40	2.47
OPEC-10	**27.45**	**27.19**	**27.43**	**30.10**	**2.67**	**30.54**	**27.25**
Angola[1]	1.77	1.83	1.88	1.88	0.00	2.05	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**29.72**	**29.52**	**29.81**	**32.47**	**2.67**	**33.09**	**29.67**
Iraq	2.41	2.40	2.50	2.50	0.00	2.50	
Total OPEC	**32.12**	**31.91**	**32.30**	**34.97**	**2.67**	**35.59**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*1.95)*		

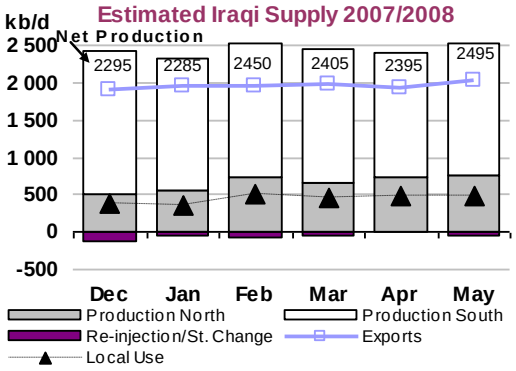
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 510 kb/d in May.

As we note above, OPEC effective spare capacity (excluding Iraq, Indonesia, Nigeria and Venezuela which face ongoing security, operational or investment issues) has now slipped below 2 mb/d. This is one element among many driving high crude prices, as market players digest the implications of such minimal room for manoeuvre in the face of the geopolitical risks hanging over several major producers.

We see OPEC crude capacity increasing by the end of 2008 by some 600 kb/d on a net basis (after netting off capacity lost to decline), to reach 35.6 mb/d from a current 35.0 mb/d. Saudi Arabia and Nigeria both add 200-300 kb/d on a net basis as the delayed AFK (Khursaniyah) project and Agbami field enter service. This assumes no further commissioning delays for gas processing equipment for Khursaniyah and the avoidance of a recently mooted strike affecting the Agbami project. Angola gains a net 170 kb/d to reach 2.05 mb/d crude capacity. New supplies materialise from the summer onwards from the Saxi and Batuque (Kizomba C), and Gimboa fields, while further increase comes from the already-producing Rosa field. Enhanced oil recovery work could boost Algerian capacity by a net 50 kb/d. Prospects also look greater than for some considerable time for Iraq to boost production capacity, potentially by up to 500 kb/d, although in this assessment we have held Iraqi capacity flat through 2008 at 2.5 mb/d.

Higher capacity is always welcome, but may in reality provide limited comfort for a jittery oil market. Spare capacity of 2.5-3.0 mb/d is better than 2 mb/d, but still represents less than 4% of global demand. Our last review in late 2007 foresaw end-2008 capacity reaching a higher 35.8 mb/d. OPEC NOCs face the same bottlenecks in raw materials, labour and service capacity, and cost inflation as their IOC counterparts. Project slippage could derail even these now more modest expansions, and keep markets tight. Finally, does the impetus for OPEC producers to install new capacity remain as strong as when plans were formulated three to five years ago? With increased revenue needs and a rising tide of resource conservation sentiment, some producers may be questioning the rationale for tampering with the tight spare capacity-high price mechanism at all.

Contrary to earlier reports, it now appears that the Abu Hadriya-Fadhili-Khursaniyah project (also known as AFK, or Khursaniyah) did not in fact begin producing in April, and will remain idle until the second half of 2008. Originally due to enter service at end-2007, Khursaniyah has been delayed by problems with gas-processing facilities. We have removed previously assumed initial volumes from Saudi capacity as a result, taking our current assessment of capacity back down to 10.65 mb/d (excluding Bahrain's share of Abu Safah crude and also Saudi condensates). As a working assumption, we have pushed Khursaniyah start-up back to 3Q08, building to capacity 500 kb/d output by 2Q09 (although Aramco suggested prior to the latest gas-processing issues that that ramp-up could be quite rapid).



Iraqi crude supply (exports plus use in refineries and power plants) is assessed up by 100 kb/d in May to 2.5 mb/d. This, together with May exports of 2.02 mb/d, was a post-war record. April supply was revised up by 60 kb/d from 2.34 mb/d to 2.40 mb/d on higher Kirkuk exports from Ceyhan and domestic crude use (which averaged 440 kb/d and 480 kb/d respectively). While both Ceyhan exports and local use are estimated at similar levels for May, southern exports from Basrah and Khor al-Amaya came in some 100 kb/d higher than in April, at 1.57 mb/d.

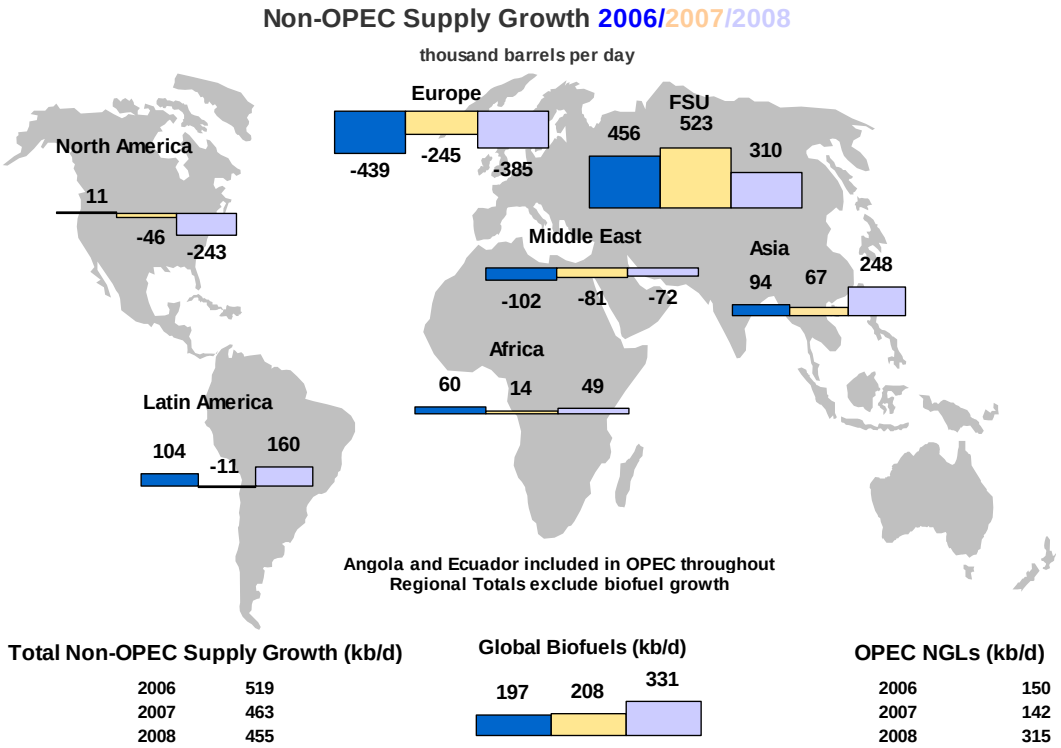
Iraq's Oil Minister said that, subject to a continued disruption-free flow of crude by pipeline to Ceyhan, national exports could attain another post-war record in June, at 2.2 mb/d. Kirkuk exports themselves are targeted at 600 kb/d in June. With plans in hand to repair the strategic north-south pipeline and products distribution network, the scene may be set for Iraq to be able to boost supply capacity. This report has long assessed that hitherto an inability to boost supply beyond 2.0 mb/d was due mainly to power supply, export and refining capacity limitations, ahead of reservoir or wellhead issues. Regular output close to headline 2.5 mb/d capacity now looks a more realistic prospect, and indeed our base case assumption is that this capacity level is sustained through 2008. However, if the security situation stabilises and pipeline links are reinstated, the prospect of adding up to 500 kb/d to crude capacity in fairly short order, through recently discussed technical service agreements, begins to look more viable.

Nigerian May supply is assessed up by 55 kb/d from April at 1.9 mb/d. Renewed attacks affecting Shell's Bonny pipeline network kept an earlier *force majeure* on exports in force. However, this was believed offset by higher supplies of Forcados crude and from ExxonMobil's Qua Iboe, Erha and Yoho fields after last month's strike action was settled. Nonetheless, export loading schedules suggest Nigerian supply will likely remain constrained in June, before potentially rising in excess of 2.0 mb/d again in July (security and industrial action permitting). In this context, a threat by oil union Pengassan to halt Chevron's Nigerian operations, amounting to at least 300 kb/d, in a dispute over welfare and recruitment issues, will be watched carefully. Nearly 600 kb/d of Nigerian capacity is now shut-in due to Niger Delta unrest.

Non-OPEC Overview

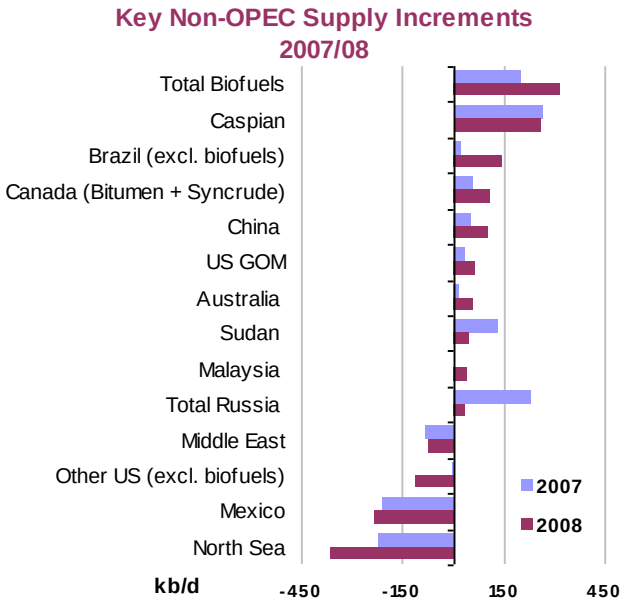
May non-OPEC oil output is assessed at 49.3 mb/d, an increase of 95 kb/d from downward-adjusted April levels. However, the non-OPEC baseline is revised downwards quite extensively, with 2007 and 2008 output now estimated at 49.6 mb/d and 50.0 mb/d respectively. Annual totals have been revised down by 100 kb/d and 325 kb/d compared to last month's report. Downward adjustments to conventional oil production this month are focused in Australia, Mexico, non-OECD Asia, Brazil and the Ivory Coast.

However, biofuel supply outside of Brazil and the US accounts for 70 kb/d (70%) of the 2007 supply revision and 160 kb/d (50%) of 2008's adjustment. An annual overview of European and Asian biofuel capacity developments in particular, conducted ahead of the forthcoming *Medium-Term Oil Market Report*,



reveals a more uncertain picture concerning crop economics, government targets and mandates, with consequent new capacity slippage. Nonetheless, aggregate world biofuels growth in 2008 still attains +330 kb/d, taking total global biofuels supply close to 1.4 mb/d for the year, underpinned by strong US and Brazilian ethanol growth (these elements are included in total US and Brazilian oil output estimates, unlike 'other' biofuels, which are listed as an aggregated line item in our global oil supply/demand balance – Table 1). World biofuels production growth in 2007 is thought to have amounted to some 210 kb/d.

All told, non-OPEC annual supply growth now looks likely to average close to 0.5 mb/d in 2008, akin to 2006 and 2007 levels. The buoyant growth evident early in 2007, allied to outages, mature field decline and project slippage seen this year, pushes the first half of 2008 into contraction. However, with the bulk of this year's expected 4.1 mb/d of new non-OPEC capacity start-ups likely to enter service beyond mid-year, the late 2008 and early 2009 supply trend is expected to be strong as production from these new projects builds towards design capacity. Canada, Russia and Brazil are seen likely to push production higher in 3Q compared to early in the year under the impact of new project start-ups and planned outages which are orientated more to the first half of the year than has been evident in previous years. Historically, the fourth quarter tends to see a production rebound as autumn outages recede, and with the predominance of 2008 new start-ups later in the year, that trend is exaggerated. Geographically, the US GOM, Canadian oil sands, Asian and Australasian crude and condensates, Azerbaijan and Brazil are the main drivers of growth in 2008. Conversely, Mexico, other North America, North Sea and non-OPEC Middle East supplies are expected to fall most sharply.



Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.14	0.06	-0.12	14.27	14.14	0.06	-0.12	0.00	0.00	0.00	0.00
Europe	4.95	4.57	-0.23	-0.38	4.95	4.58	-0.23	-0.37	0.00	0.01	0.00	0.01
Pacific	0.62	0.78	0.04	0.16	0.63	0.73	0.05	0.10	0.00	-0.05	0.00	-0.06
Total OECD	**19.84**	**19.50**	**-0.13**	**-0.34**	**19.84**	**19.45**	**-0.13**	**-0.40**	**0.00**	**-0.05**	**0.00**	**-0.05**
Former USSR	12.77	13.07	0.52	0.30	12.77	13.08	0.52	0.31	0.00	0.01	0.00	0.01
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.84	0.05	0.11	3.73	3.83	0.05	0.10	0.00	-0.01	0.00	-0.01
Other Asia	2.68	2.74	-0.03	0.07	2.67	2.71	-0.03	0.04	0.00	-0.03	0.00	-0.03
Latin America	3.85	4.09	0.01	0.24	3.85	4.07	0.01	0.21	0.00	-0.03	0.00	-0.03
Middle East	1.65	1.59	-0.09	-0.06	1.66	1.59	-0.08	-0.07	0.01	0.00	0.01	-0.01
Africa*	2.55	2.62	0.05	0.07	2.51	2.56	0.02	0.05	-0.04	-0.06	-0.04	-0.02
Total Non-OECD*	**27.37**	**28.08**	**0.50**	**0.72**	**27.33**	**27.96**	**0.47**	**0.63**	**-0.03**	**-0.12**	**-0.03**	**-0.08**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.33	0.49	0.08	0.16	-0.07	-0.16	-0.06	-0.09
Total Non-OPEC*	**49.68**	**50.36**	**0.55**	**0.68**	**49.58**	**50.04**	**0.46**	**0.46**	**-0.10**	**-0.33**	**-0.09**	**-0.23**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

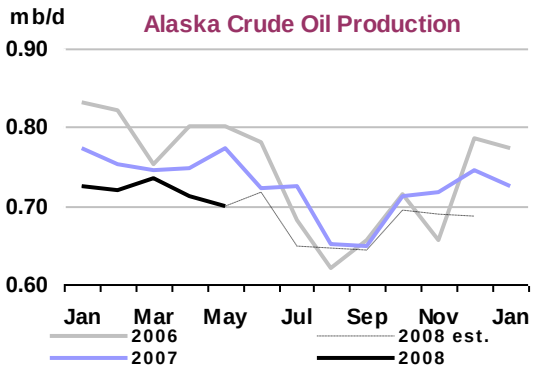
OPEC gas liquids supply (over and above non-OPEC production) is seen reaching 5.1 mb/d this year, from 4.8 mb/d in 2007. Qatar, Saudi Arabia, Kuwait and the UAE are largely responsible for this year's increment in NGL and condensate, although here too project slippage has cut some 65 kb/d from our earlier assessment for likely 2008 production. Accelerating growth is also likely to be seen from this source of supply in 2009.

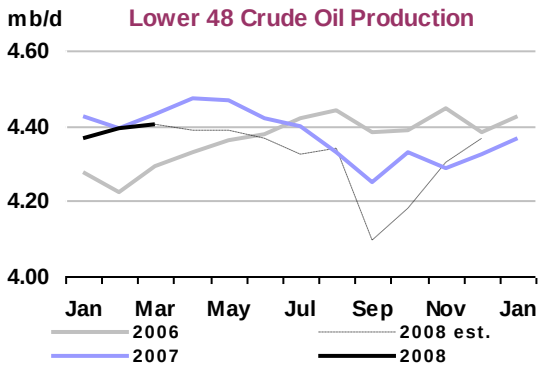
OECD

North America

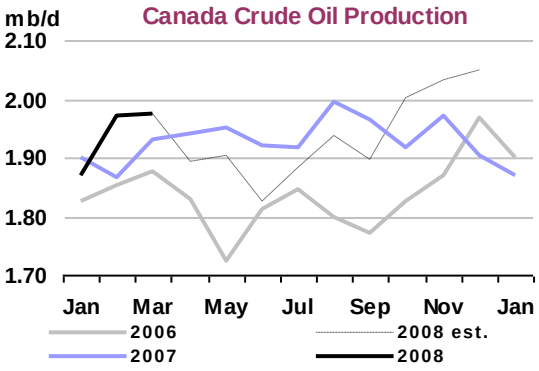
US – May Alaska actual, others estimated: March data for US crude production came in some 40 kb/d higher than expected at 5.14 mb/d. NGL and oxygenate/refinery additive supplies were also a combined 100 kb/d higher than expected at 2.6 mb/d. While slightly higher GOM and US lower 48 production levels are carried through the forecast, the NGL and oxygenates levels for 2008 are held largely unchanged. Data for Alaska in May highlighted another disappointing month, with crude supply of some 700 kb/d down by 10 kb/d from April and around 75 kb/d below May 2007. An early-month power outage affecting Prudhoe Bay lay behind the weaker-than-expected output.

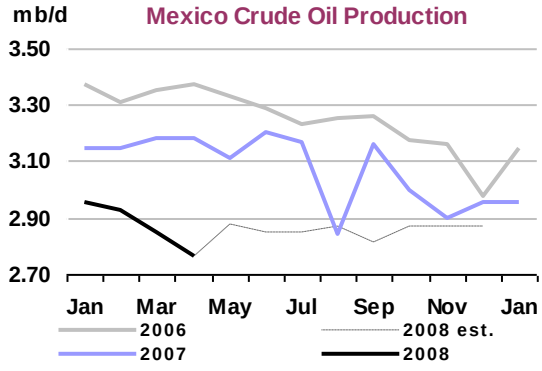
Total US oil production in 2008 is now forecast at 7.55 mb/d, a rise of 80 kb/d versus 2007 but only around half of 2007's observed growth. Ethanol supply grows by 120 kb/d to 540 kb/d, with NGL expected to gain 40 kb/d to 1.82 mb/d. Federal offshore GOM supply gains 65 kb/d to attain 1.4 mb/d, with contributions from the Atlantis, Genghis Khan, Neptune, Typhoon, Mirage and Thunder Horse projects. Collectively however, crude production elsewhere in the US could fall by as much as 150 kb/d, offsetting in part the above increases, even though there is anecdotal evidence that higher prices may be helping to stem decline in some mature producing areas.





Canada – Newfoundland April, others March: Total Canadian oil production in 2008 is expected to grow by a modest 30 kb/d, to average 3.35 mb/d. That follows two years of growth in excess of 100 kb/d in 2006 and 2007. Conventional crude supply averages 1.94 mb/d, with the balance shared equally between synthetic crude from mined bitumen and NGLs. In-situ bitumen and heavy oil production (which we categorise as the 'conventional' slice of Albertan oilsands output) is the main source of growth this year, adding 70 kb/d to 2007's level and reaching 615 kb/d. Growth in 2009 may shift more towards mined synthetic crude once again, notably with an anticipated full year's output from the CNRL Horizon project. The Horizon project is now expected online in 3Q08, likely attaining 85% of its 110 kb/d capacity by end-year and capacity operating levels early in 2009.



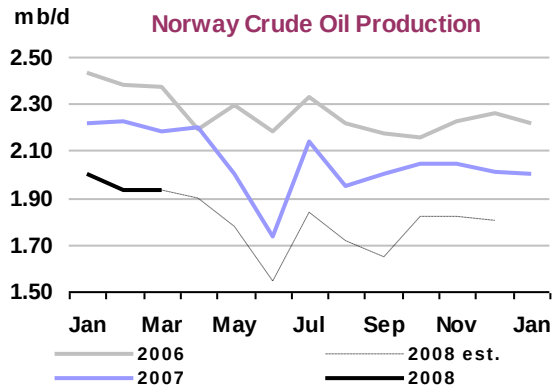


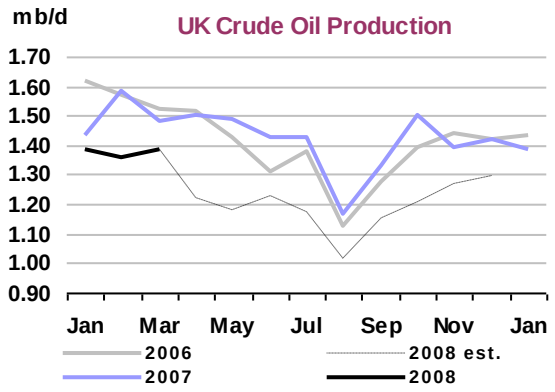
Mexico – April actual: Pemex officials have acknowledged that their earlier prognoses for attaining 3.0 mb/d of crude production in 2008 are unlikely to be realised. Revised estimates now stand at 2.9 mb/d for the year, which we still see as somewhat optimistic. Our own 2008 forecast now stands at 2.86 mb/d, after April production came in a weighty 160 kb/d below previous expectations, at 2.77 mb/d. Reports suggest that some of the heavy decline in baseload Cantarell production in early 2008 has been due to a damaged pipeline, holding out the prospect for some recovery in months to come. Nonetheless, we are assuming a weighty 25% decline from Cantarell this year in our forecast in the absence of any unexpected surge in spending to curb such inflated recent decline levels. Rising deepwater Ku-Maloob-Zaap production only partially counteracts Cantarell's fall, and Mexican oil output slips by over 200 kb/d for the second year running in our forecast.

April crude exports fell by nearly 200 kb/d to 1.44 mb/d, although the impact of this was likely cushioned by North American refinery outages. Late May also saw renewed port closures due to bad weather, holding out the prospect that exports may have again come in below potential. NGL April output of 370 kb/d was also marginally below our forecast.

North Sea

Norway – March actual, April provisional: While March data show liquids production (crude oil, NGL and condensate) running some 70 kb/d below our forecast, preliminary April data stand at around 30 kb/d above our earlier estimate. Crude output under our estimation (whereby some light production categorised as crude in national statistics is reallocated to condensate in our own) came in at around 1.94 mb/d and 1.9 mb/d in March and April respectively. A combination of an oil leak at the Statfjord field and seasonal maintenance outages potentially pushed crude down to 1.78 mb/d in May, and a maintenance-induced low point for production is expected to be reached in June, when we forecast crude output of 1.54 mb/d. All told, we see Norwegian production averaging 1.81 mb/d of crude and 565 kb/d of gas liquids in 2008, for a total of 2.37 mb/d, largely unchanged from last month's forecast. A trend of near-0.2 mb/d decline therefore continues for the fourth year in succession. Indeed the government has just issued a downward-revised oil production forecast with its most recent budget, at 2.4 mb/d compared to an earlier 2.5 mb/d.



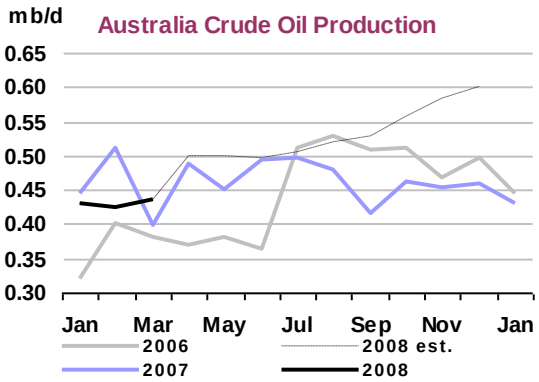


UK – March actual: While still on a declining trend, UK oil production estimates are revised modestly higher for 2008 this month, to the tune of some 20 kb/d. April loading schedules point to lower spring maintenance than we had been assuming. Nonetheless, we do expect UK production to dip to 1.4 mb/d in 2Q08 and towards 1.3 mb/d in the third quarter under the impact of maintenance-related outages, before regaining levels closer to 1.5 mb/d late in the year. UK offshore crude output is now seen averaging 1.24 mb/d in 2008, some 195 kb/d lower than in 2007. Natural gas liquids (217 kb/d) and onshore crude oil (24 kb/d) take total expected UK output this year to 1.48 mb/d.

UK production has declined by 150-200 kb/d in six of the past eight years, with 2007 proving an exception as ramp-up from Nexen's 200 kb/d Buzzard field offset mature field decline. This year sees a number of smaller scale start-ups, including Jura (which started condensate output in May), Starling, Brodgar and Callanish, Perth, Chestnut and Ettrick, but collectively these are insufficient to maintain overall production levels. There are concerns that a growing role for smaller operators in the North Sea, allied to a tighter credit market, may impede marginal and satellite field developments. The UK government has responded by saying it plans to exempt marginal assets in existing oil blocks from Petroleum Revenue Tax. Industry representatives are seeking wider-ranging fiscal reform to help sustain investment against a backdrop of rising costs. UKCS operating costs were reported to have increased from $2/boe in 2006 to $12/boe in 2007, with a prospect that they could remain at inflated levels through the end of the decade.

Pacific

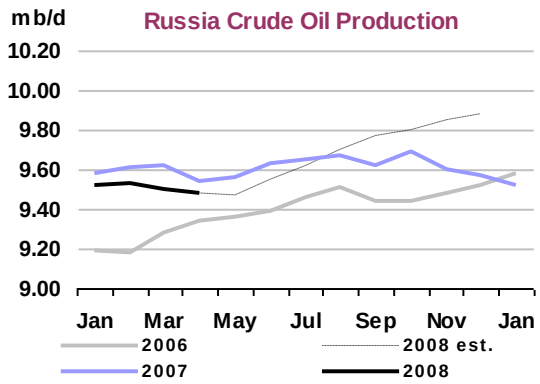
Australia – March actual: Extended and unplanned field outages kept March Australian oil production below 500 kb/d for the third month running, with prevailing crude output in 1Q08 of around 430 kb/d and 65 kb/d of NGL. This is around 50 kb/d below both 1Q and 4Q07 levels. April and May are likely to have seen some recovery in production, to levels closer to 600 kb/d, as among others, the Mutineer-Exeter field in the offshore Carnarvon Basin returned to more normal service. That said, we have nonetheless curbed our forecast for Australian 2008 production by around 50 kb/d, with lower prevailing output levels of Carnarvon Basin crude and condensate and NGL supply generally underpinning the revision. However, we do still see Australian oil production enjoying something of a temporary surge (which could last into 2009/2010), rising by 60 kb/d in 2008 versus 2007, to average 610 kb/d. New field start-ups including Stybarrow (already online), Vincent, Angel and Skua underpin the increase.

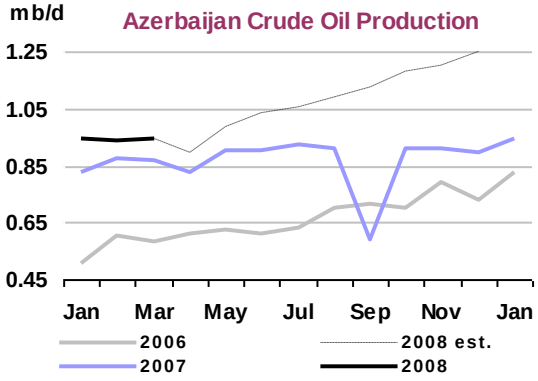


Former Soviet Union (FSU)

Russia – April actual, May provisional: May Russian oil production of 9.95 mb/d (including 9.47 mb/d of crude oil) showed year-on-year decline for the fifth straight month, albeit rising modestly compared to April. We retain a forecast showing Russian production largely flat in 2008 at 10.1 mb/d, with Rosneft and to a much lesser extent Lukoil showing growth, but offset by a weakening trend amongst most other producers. Output from Production Sharing Agreements (a key source of 2006/2007 growth) is largely static, as higher and potentially year-round production from Sakhalin 2 counteracts an expected decline from Sakhalin 1. Other 2008 increments come from the Vankor, Salym and South Khylchuskoye projects.

May saw further official pronouncements suggesting extra tax breaks could be forthcoming to reinvigorate production growth. One company source suggested that a raise in the mineral extraction tax threshold to some $45/bbl would be needed to reverse recent production declines. Current plans will see the threshold lifted from $9/bbl to $15/bbl in early 2009, and the President has suggested 2010 will see further tax reductions. The Deputy Industry and Energy Minister said in early June that older oilfields might even be made exempt from mineral extraction tax altogether.





Azerbaijan – March actual; Kazakhstan – April actual: In the face of stagnating Russian production, the two key Caspian producers pick up the FSU growth baton in 2008. A combined increase of 260 kb/d this year takes Azerbaijan's production to 1.06 mb/d, and that of Kazakhstan to 1.45 mb/d. Azerbaijan sees the lion's share of the increase as output from the Azeri-Chirag-Guneshli complex of fields builds towards 1.0 mb/d by end-year. Operator BP is reportedly trying to persuade the Azeri government to extend the ACG Production Sharing Agreement which is due to expire in 2024. The company has said that enhanced recovery could boost proven reserves at ACG to nine billion bbls from a current five, potentially extending plateau production of 1.0 mb/d through until 2019 from a currently envisaged estimate of 2013.

In Kazakhstan, efforts centre on diversifying export routes, with uncertainty still surrounding expansion of the CPC pipeline. CPC expansion was previously believed indispensable to accommodate higher volumes from the 500 kb/d Tengiz project and new oil from the giant Kashagan field. Now Tengiz operator Chevron has signed a deal with the Kazakh government to join a project to build a pipeline from Iskene in western Kazakhstan to Kuryk on the Caspian coast. This would eventually allow up to 1.1 mb/d of Kazakh crude from Tengiz and Kashagan to access the Baku-Tbilisi-Ceyhan pipeline, potentially obviating total reliance on exports via CPC and Russia. Bottlenecks on CPC and railroad exports are seen potentially limiting increases in Kazakhstan's production in 2008.

Preliminary April data show **net FSU oil exports** of 8.7 mb/d. This represents a decrease of 110 kb/d compared to March and is 390 kb/d below April 2007. A significant monthly drop of 180 kb/d in fuel oil exports led down total FSU product exports by 290 kb/d. This overshadowed an average increase of 170 kb/d in crude exports. Although shipments from the Caspian nations were down, a 180 kb/d rebound in volumes via Russia's northerly Primorsk drove a total rise of 290 kb/d through the Transneft pipeline network. The rise in crude exports has been attributed to refinery maintenance in Russia, which also reduced product exports. Lower Azeri production in April prompted a 70 kb/d dip in BTC exports.

FSU Net Exports of Crude & Petroleum Products
(million barrels per day)

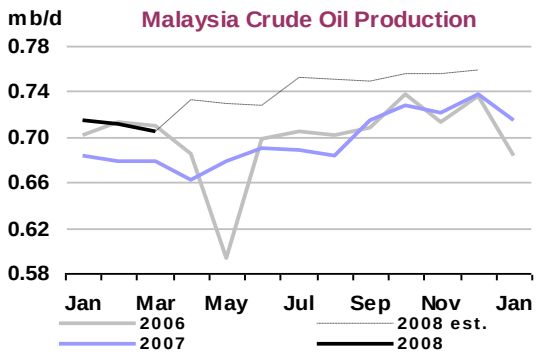
	2006	2007	2Q2007	3Q2007	4Q2007	1Q2008	Feb 08	Mar 08	Apr 08	Latest month vs. Mar 08	Latest month vs. Apr 07
Crude											
Black Sea	2.22	2.18	2.23	2.09	2.10	1.96	1.88	2.06	2.14	0.07	-0.18
Baltic	1.55	1.59	1.60	1.58	1.61	1.40	1.29	1.37	1.55	0.18	-0.24
Arctic/FarEast	0.15	0.32	0.30	0.38	0.31	0.27	0.29	0.27	0.28	0.01	-0.01
BTC	0.00	0.55	0.58	0.57	0.61	0.70	0.83	0.65	0.57	-0.07	0.13
Crude Seaborne	4.07	4.63	4.70	4.61	4.62	4.33	4.29	4.35	4.54	0.19	-0.30
Druzhba Pipeline	1.20	1.13	1.13	1.08	1.13	1.14	1.10	1.15	1.12	-0.03	-0.03
Other Routes	0.38	0.44	0.46	0.40	0.43	0.42	0.42	0.42	0.43	0.01	-0.05
Total Crude Exports	5.64	6.20	6.29	6.09	6.18	5.89	5.81	5.92	6.09	0.17	-0.38
Of Which: Transneft	4.22	4.27	4.31	4.19	4.23	3.96	3.85	3.97	4.25	0.29	-0.31
Products											
Fuel oil	0.95	1.10	1.15	1.13	1.08	1.16	1.26	1.19	1.01	-0.18	-0.12
Gasoil	0.95	0.95	0.88	1.01	0.96	1.06	1.10	1.05	1.02	-0.04	0.19
Other Products	0.61	0.60	0.69	0.57	0.56	0.64	0.67	0.67	0.59	-0.08	-0.07
Total Product	2.51	2.65	2.73	2.71	2.60	2.86	3.03	2.91	2.61	-0.29	0.00
Total Exports	8.16	8.85	9.02	8.80	8.78	8.75	8.84	8.83	8.71	-0.12	-0.38
Imports	0.04	0.04	0.04	0.05	0.03	0.05	0.04	0.06	0.05	-0.01	0.01
Net Exports	8.12	8.82	8.98	8.76	8.74	8.70	8.80	8.77	8.66	-0.11	-0.39

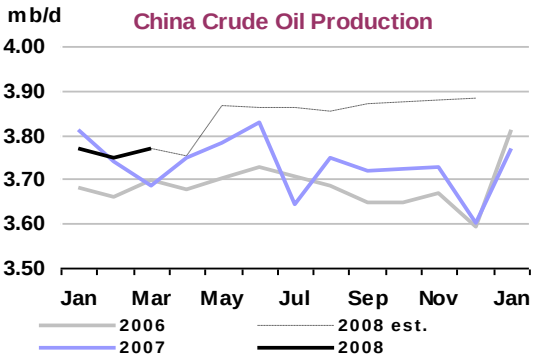
Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

FSU net oil exports likely rose in May. Loading schedules suggest that FSU crude exports via Transneft increased alongside higher Caspian volumes and a rebound in product cargoes. This should precede lower FSU exports in June coinciding with a rise in Russian crude export duty of 16%.

Other Non-OPEC

Malaysia – March actual: March crude and condensate production from Malaysia of just over 700 kb/d stood 60 kb/d below 2004 peak levels. However, production is expected to increase by some 6% (40 kb/d kb/d) in 2008 to average 735 kb/d. Around 45 kb/d of NGL and 15 kb/d of gas-to-liquids output from Shell's Bintulu facility make up total expected 2008 oil production of nearly 800 kb/d. The increase this year comes from Murphy's deepwater Kikeh field, which began output in August 2007, and which should attain plateau 120 kb/d production in 2009. State company Petronas suggests that deepwater areas could contain some 8 billion bbls of reserves, with a second deepwater project, Gumusut-Kakap, due to produce up to 150 kb/d by early next decade.





China – April actual: Chinese production in April of 3.75 mb/d came in below expectation. Nonetheless, 2008 is expected to see a continuation of the steady 50-100 kb/d annual growth evident for most of the present decade. As such China has been a consistent contributor to non-OPEC growth, albeit supply growth is dwarfed by annual demand increases of the order of 300 kb/d in recent years. Production growth this year centres on offshore increments at the Penglai, Lufeng and Bozhong fields, but also at the northern onshore Changqing field. PetroChina aims for the field to overtake Shengli as the country's second largest oil and gas producer within two years. Oil output at Changqing has risen by 135% since 2001, averaging 243 kb/d last year. Our forecast has Changqing rising further to 266 kb/d in 2008.

OECD STOCKS

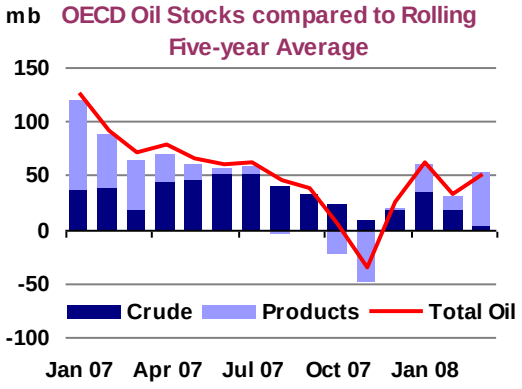
Summary

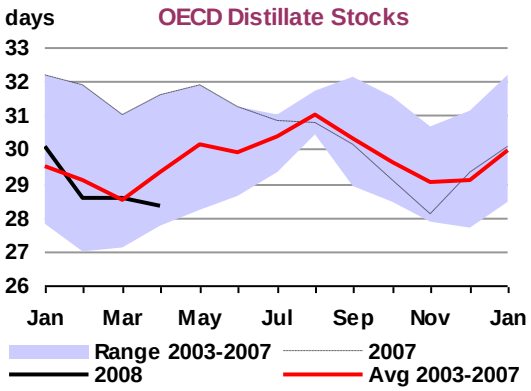
- **OECD oil stocks fell counter-seasonally in April, by 8.1 mb, ending at 2,562 mb.** The five-year average April build is around 30 mb. Decreases of 4.8 mb and 11 mb in OECD North America and Europe were partially offset by a rebound of 7.7 mb in the OECD Pacific from extreme lows. Upward March revisions, centred in European products, lessen the first-quarter OECD draw to 0.1 mb/d.

- **A 4.4 mb April draw took European crude inventories below their five-year range**. North American crude stocks built by a seasonally meagre 1.3 mb, dented by 6.1 mb drop in Mexico. However, a 7.6 mb build in Japan helped OECD Pacific crude stock levels to recover from recent historical lows.

- **A steep 11 mb draw reduced US motor gasoline stocks to average levels by end-April**, removing the massive overhang which emerged in the first quarter. Declining distillate stocks in Europe (down 7.1 mb on strong demand and refinery outages) and North America (off by 2.6 mb) reduced cover to the bottom of the five-year range in both regions. A temporary exemption in a Japanese road tax prompted a demand-led gasoline stock draw of 2.4 mb in April.

- **OECD stock cover remains above average, at 53.4 days of forward demand, despite the April draws.** Preliminary US and Japanese data indicate a 7.3 mb stockbuild in May, far less than usual, with US crude stocks potentially falling by a substantial 17.2 mb. However, a lower OECD demand outlook means that this unseasonably slight stockbuild would only reduce cover by 0.1 days in May.





OECD Inventory Position at End-April and Revisions to Preliminary Data

The 8.1 mb April draw in OECD stocks marked a counter-seasonal start to the second quarter, a time when stocks normally build. A sharp decrease of 11 mb in US motor gasoline stocks dominated the stock draw and served to remove the massive 1Q overhang that had been built ahead of heavy seasonal maintenance. The draw leaves US gasoline stocks near the five-year average. Perhaps more significant though were some notable counter-seasonal draws in crude and distillate stocks in April, contributing to the sharp rise in prices at that time.

European crude inventories fell below the five-year range in April. At the same time, a drop in Mexican crude stocks (probably related to production problems) coincided with US crude inventories falling further behind their five-year average. Preliminary data for the US suggest an unseasonal crude draw of 17.2 mb in May to well below the five-year average. The latter may be a sign of destocking for economic reasons. If it wasn't for high crude inventories being reported by the Canadians (possibly a structural trend associated with the Canadian upstream), OECD North American crude stocks would be regarded as

extremely tight by historical standards. OECD Pacific crude stocks recovered in April, with a sharp 7.6 mb build in Japan marking a recovery from the below-average levels seen for over a year.

Distillate stocks, in terms of forward demand cover, are now at the bottom of the five-year range in North America and Europe. April draws in France and the UK, amid strong demand and refinery outages, prompted a regional decrease of 7.1 mb and reduced forward demand cover to 32.4 days or 1.7 days below average. US distillate stocks lag the seasonal average and, relative to rising demand, represent an historically thin level of forward cover of 25.5 days. This is 0.9 days below the 2003-07 end-April average.

Despite these specific areas of tightness, aggregate OECD oil stock cover remains just above the five-year average at 53.4 days (of forward demand) at end-April. Preliminary US and Japanese data indicate only a 7.3 mb build in May, a month when OECD stocks typically build by 50 mb. Yet, even incorporating this, forward demand cover is only set to fall by 0.1 days. This can be partly explained by a higher March base as well as recent downward revisions to OECD demand. However, it is also clear that the headline OECD total oil stock and stock cover figures do not tell the whole story, with tightness in certain key product categories offset by higher cover in others (see 'Dissecting the Surplus').

Preliminary Industry Stock Change in April 2008 and First Quarter 2008

	April (preliminary)								First Quarter 2008			
	(million barrels)				*(million barrels per day)*				*(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**1.3**	**-4.4**	**6.6**	**3.5**	**0.04**	**-0.15**	**0.22**	**0.12**	**0.35**	**0.02**	**-0.05**	**0.33**
Gasoline	-11.0	1.6	-2.6	-12.0	-0.37	0.05	-0.09	-0.40	0.07	0.07	0.05	0.19
Distillates	-2.6	-7.1	1.3	-8.3	-0.09	-0.24	0.04	-0.28	-0.33	0.04	-0.15	-0.43
Fuel Oil	-0.8	-0.3	1.6	0.4	-0.03	-0.01	0.05	0.01	0.00	0.07	-0.01	0.06
Other Products	10.4	0.1	0.1	10.6	0.35	0.00	0.00	0.35	-0.19	0.01	0.00	-0.18
Total Products	**-4.1**	**-5.7**	**0.5**	**-9.3**	**-0.14**	**-0.19**	**0.02**	**-0.31**	**-0.45**	**0.19**	**-0.11**	**-0.37**
Other Oils[1]	-2.1	-0.9	0.6	-2.3	-0.07	-0.03	0.02	-0.08	-0.05	-0.03	0.01	-0.07
Total Oil	**-4.8**	**-11.0**	**7.7**	**-8.1**	**-0.16**	**-0.37**	**0.26**	**-0.27**	**-0.15**	**0.18**	**-0.14**	**-0.11**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Upward revisions to March OECD stocks totalled 9.5 mb. European product inventories were reassessed at 10 mb higher than reported last month, including a correction of +3.4 mb in middle distillates (with France and Italy corrected around 2 mb higher each). OECD North American fuel oil stocks were the other significant revision, adjusted down by 3.1 mb. Despite a 6.1 mb downward revision to February crude stocks, March revisions have left the first-quarter OECD stock draw even smaller than reported last month, at 0.1 mb/d, and further above the five-year average 1Q draw of 0.4 mb/d.

Revisions versus 13 May 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Feb 08	Mar 08	Feb 08	Mar 08	Feb 08	Mar 08	Feb 08	Mar 08
Crude Oil	**-2.5**	**1.7**	**-3.6**	**-0.7**	**0.0**	**1.1**	**-6.1**	**2.1**
Gasoline	0.1	-1.1	0.4	1.3	0.0	-0.1	0.5	0.1
Distillates	0.8	-0.8	-0.3	3.4	0.1	-0.2	0.6	2.5
Residual Fuel Oil	0.0	-3.1	-0.1	2.4	0.0	0.1	0.0	-0.6
Other Products	0.0	1.2	-0.5	2.8	0.0	-0.3	-0.5	3.7
Total Products	**0.9**	**-3.8**	**-0.5**	**10.0**	**0.1**	**-0.4**	**0.5**	**5.8**
Other Oils[1]	2.1	0.6	-0.3	1.3	0.0	-0.3	1.8	1.6
Total Oil	**0.6**	**-1.5**	**-4.4**	**10.6**	**0.1**	**0.4**	**-3.7**	**9.5**

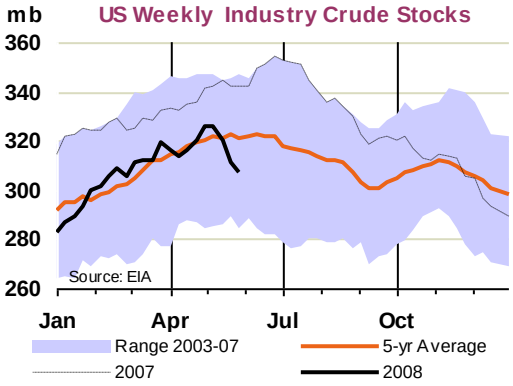
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

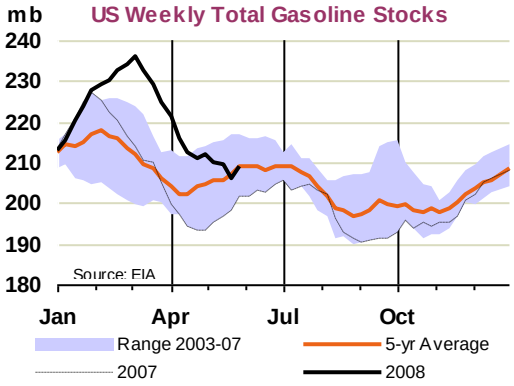
OECD Industry Stock Changes in April 2008

OECD North America

OECD North American industry stocks fell by 4.8 mb in April, a month when they usually build by around 20 mb. Regional crude stocks only rose by 1.3 mb which was well short of the 10 mb-plus rise

normally observed in April. Production problems in Mexico, centred on the Cantarell field, were apparently behind a 6.1 mb decline in crude inventories. This almost entirely offset a 7.4 mb increase in April US crude inventories which was also short of seasonal norms. The US build might have been larger, given the substantial lag in refinery crude throughputs to the five-year range, were it not for below-average crude imports in early April (notably from Mexico). Preliminary weekly data suggest that US stocks are set to decrease by over 17 mb in May, a significant counter-seasonal trend which could indicate deliberate destocking as a means to release capital in the current environment of high oil prices. Canada continues to report very high crude stock levels, most recently for March. Accelerating a very long-term rising trend, Canadian crude inventories have risen by almost 15 mb, to nearly 120 mb, since last summer. This is not a seasonal trend and may relate to increase operational stocks needed in association with growing synthetic crude production.



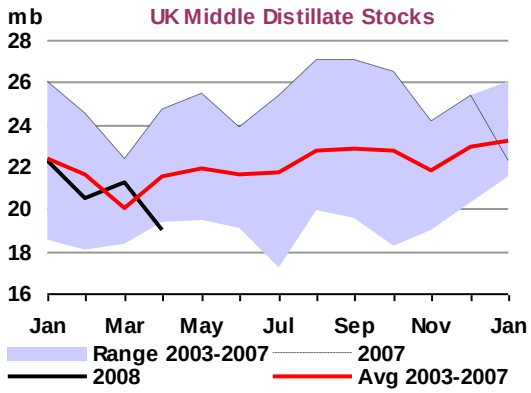


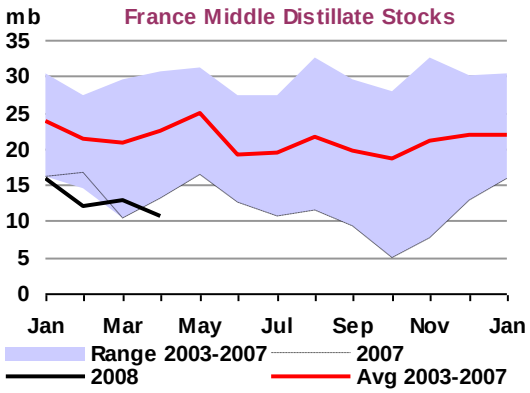
Regional product inventories also bucked seasonal trends in April, posting a 4.1 mb decrease on aggregate. A steep draw of 11 mb in US motor gasoline stocks, a result of heavy spring refinery maintenance and unplanned outages, cancelled out the seasonal rebuild of propane stocks (included in the 10.4 mb increase in US 'other products'). Moderate middle distillate draws of just over 1 mb were also observed in US and Mexico respectively. US stocks of gas liquids decreased by 2.1 mb.

OECD Europe

OECD European crude and product stocks also fell counter-seasonally in April. The headline stock draw was seen in middle distillate inventories, which fell by 7.1 mb. Respective distillate declines of 2.4 mb and 2.3 mb in France and the UK were the result of disrupted refinery production (due to strike action at Fos-sur-mer and Grangemouth plants) amid apparently firm demand. New York Harbour diesel prices were level with those in Rotterdam in early April before rising to a $10/bbl premium in the second half of the month, discouraging transatlantic diesel trade flows to Europe. Strong gasoil demand was also probably instrumental in April drops in the Netherlands', German and Italian distillate inventories of 1.5 mb, 0.8 mb and 0.8 mb respectively. Independently held gasoil stocks in the ARA region registered a decline in mid-May to their lowest point since 2Q2004 before rebounding in early June. In other products, gasoline stocks rose by 1.6 mb, including a 1.6 mb increase in France.

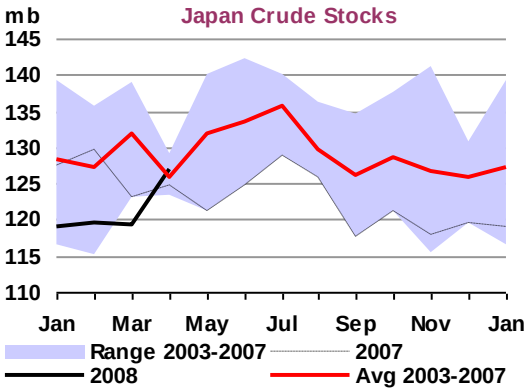
The European April crude draw totalled 4.4 mb, dragged down by a 7.4 mb decrease in the Netherlands. French crude stocks also fell by 2.4 mb in April in line with a rebound in refinery throughputs of 0.2 mb/d. By contrast, German, Italian and UK crude stocks each built by between 1.5 mb and 3 mb, with the German increase attributable to a drop of 0.2 mb/d in refinery crude runs. The only countries currently with crude stocks above the five-year average are Ireland, the Netherlands, Poland, Slovakia and Switzerland. Of these, the largest surplus is in Poland, where stocks structurally rose in 2007 in accordance with the scheduled building of stocks to meet IEA/EU emergency requirements.

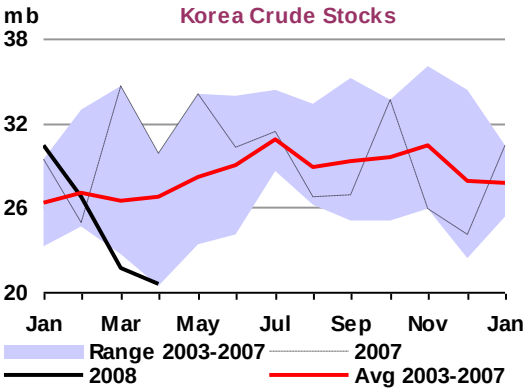




OECD Pacific

A 7.6 mb hike in Japanese crude stocks led a regional total oil stockbuild of 7.7 mb in April. The increase in Japanese crude inventories was prompted by a reduction in crude throughputs in the run-up to peak maintenance but also helped by higher imports (up 0.15 mb/d to 4.55 mb/d), notably from Saudi Arabia and United Arab Emirates. If confirmed, the hike brought Japanese crude inventories back in line with five-year seasonal averages, after 13 months below average. Korean crude imports, by contrast, decreased by almost 0.1 mb/d (to 2.25 mb/d) according to reports. This contributed to a Korean crude stock draw of 1.1 mb reflected by preliminary April data, despite refinery throughputs sinking by 130 kb/d to 2.3 mb/d. The changes in Japan and Korea led a regional April rise of 6.6 mb, bringing crude oil inventories back within the five-year range after the March low. This trough was lowered further by a 1.6 mb monthly drop reported in Australian crude stocks (to well below seasonal norms).





OECD Pacific product stocks rose by 0.5 mb in April. A 2.4 mb draw in Japanese motor gasoline stocks, was related to a demand spike caused by a temporary suspension of a special road fuel tax (with widespread reports of long queues at service stations). However, rising distillate and residual fuel oil stocks, especially in Korea where product exports were reduced in April, pushed Pacific product stock changes into positive territory. With Korean heating degree days significantly lower than the 10-year average in March and April, lower heating demand may have contributed to increases in these fuel categories.

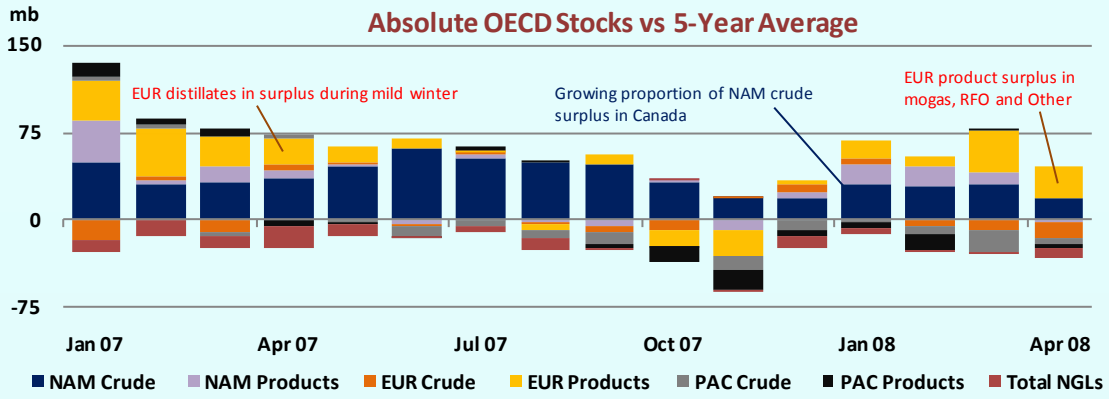
Recent Developments in Singapore Stocks

Independent middle and light distillates stocks in Singapore rose above five-year ranges in May. Middle distillate inventories reached 9.8 mb in early June, having increased by 1.6 mb in May. Smaller rises in light distillates and residues pushed total products stocks up by 2.3 mb in total.

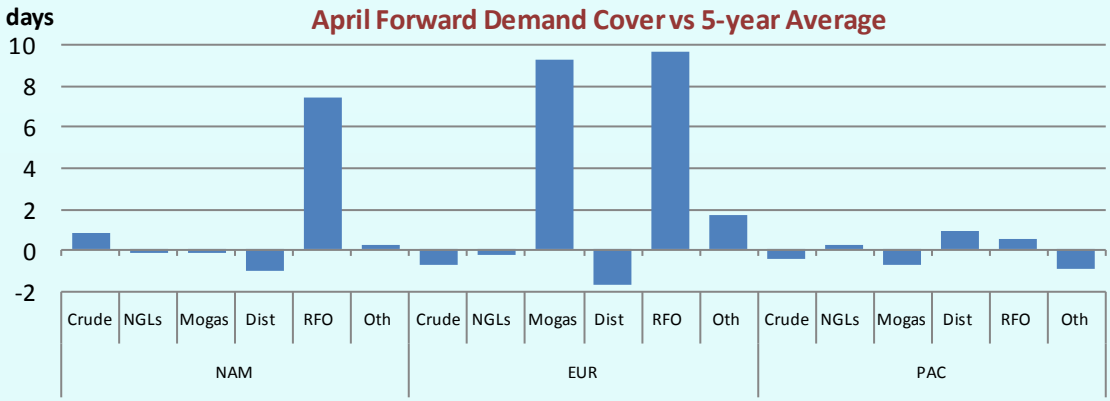
Dissecting the Surplus

Comparing OECD total oil stocks and stock cover to the most recent five-year average allows an at-a-glance measure of the OECD stock buffer against a consistent yardstick. However, this comparison is not without problems, most notably a glossing over of regional- and product-specific stock trends.

With the exception of November 2007, OECD total oil stocks have trended above the five-year average since October 2004. OECD total stock cover has exceeded the five-year average since September 2005. If we dissect the absolute surplus in total oil stocks in April to the five-year average, we can see that the only product categories in surplus are North American crude stocks and European product stocks (see chart). Within the former category only Canadian crude stocks are now in surplus. For European products, it appears that the excess gasoline, residual fuel oil and 'other products' produced by refiners in their attempt to meet middle distillate demand, are now making up the surplus in European product stocks. This reflects the problem currently facing European refiners, namely that product yields are out of line with product demand growth patterns, causing a structural long in gasoline and fuel oil and a shortage of distillates in the region. There were also increases in Polish crude and Turkish product stocks in 2007 related to meeting IEA/EU emergency requirements. These structural stockbuilds inflated European totals for these products, implying that stocks would be even tighter without them. Dissecting the OECD stock surplus in this way suggests that oil stocks are indeed tight in key areas, namely distillates and crude, but this fact is lost in the country/product aggregation and its comparison with the five-year average.



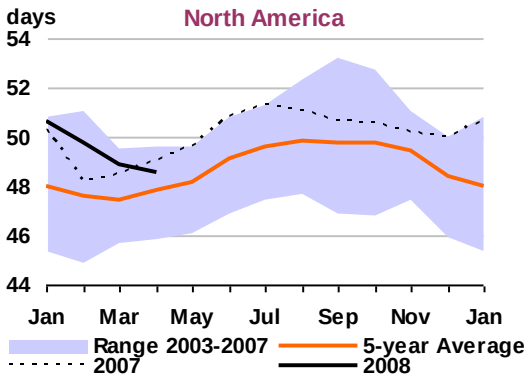
A look at forward demand cover for individual products displays a similar picture. Very high levels of forward demand cover in North American and European fuel oil stocks, alongside European gasoline, are potentially inflating regional total cover in April. Again, the OECD total oil cover disguises the tightness in crude and distillate cover which has pushed prices to such high levels in recent months.

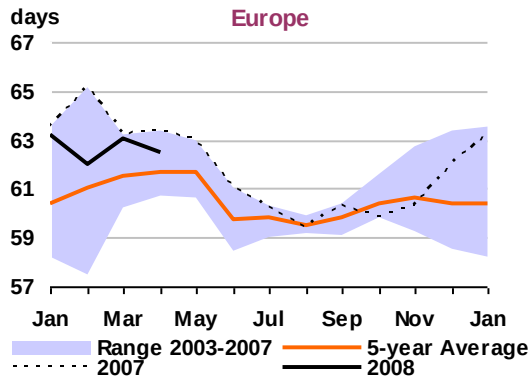


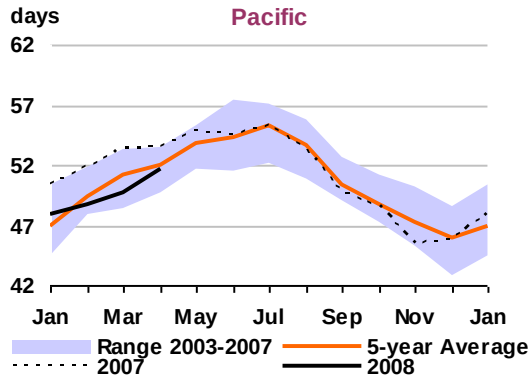
Regional OECD End-of-Month Industry Stocks

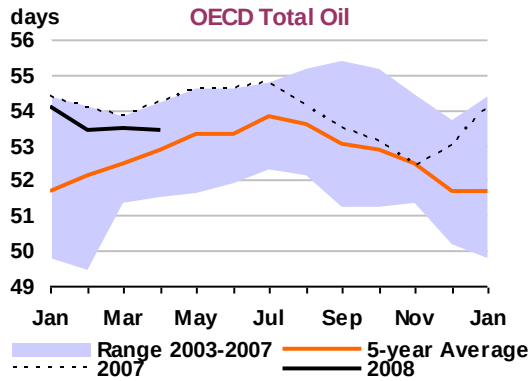
(in days of forward demand and millions barrels of total oil)

Days[1]

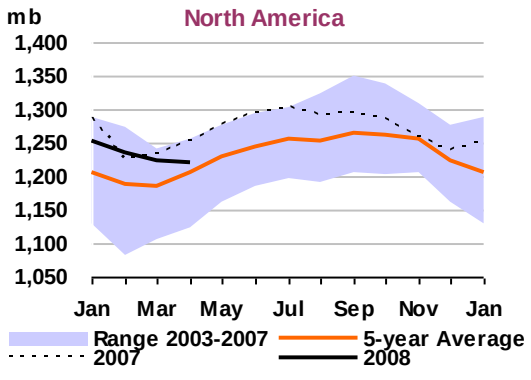


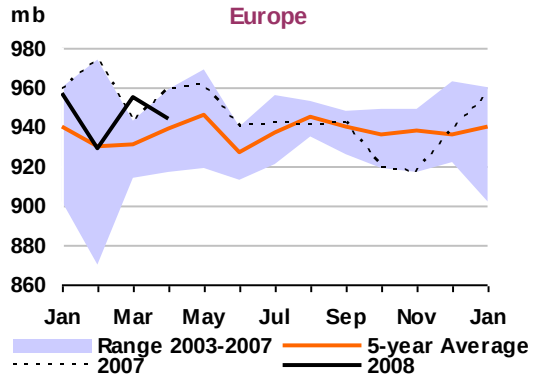


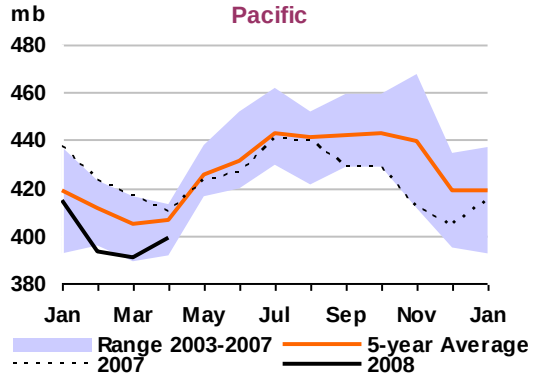


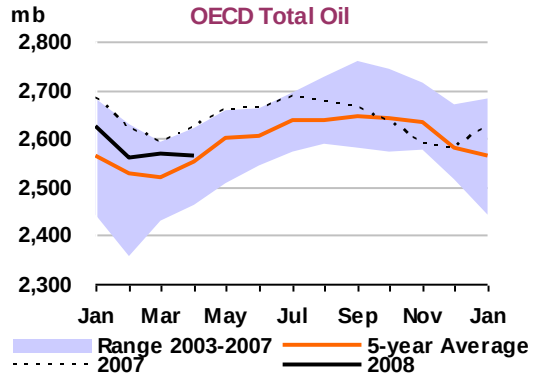


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

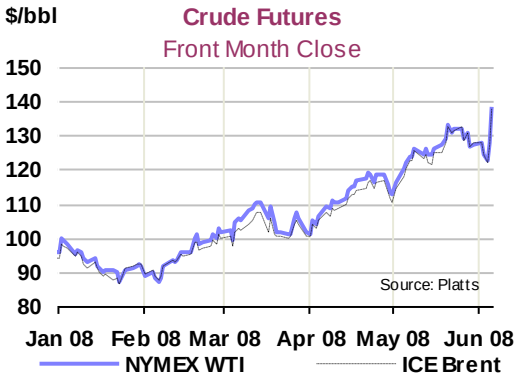
Summary

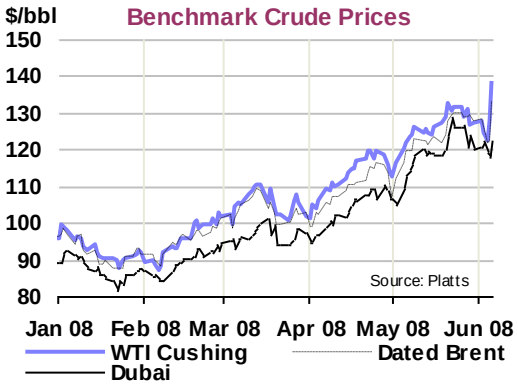
- **Crude futures spiked at just under $140/bbl** on 6 June on Israeli statements regarding Iran. Prices had previously slid from a 22 May peak of $135 to around $122/bbl, but overall remain high and volatile, driven by strong fundamentals, especially for distillates, and tight effective spare capacity.

- **Refined product markets remain out of kilter**, with gasoline crack spreads to crude untypically weak and fuel oil still suffering from a global glut. Distillates in contrast remain strong on healthy global demand and structural shortness in Europe and parts of Asia.

- **Refining margins mostly fell in May** given the above-mentioned product imbalance. Gasoline-driven US cracking margins were mostly negative in May, unusual at the start of the summer driving season. In contrast, European Brent and Urals cracking margins remain healthy due to diesel's strength.

- **Dirty tanker rates in the Middle East Gulf and West Africa were pushed to extreme highs** in May, with Iranian floating storage a major constraint on VLCC supply, while firm long-haul demand was boosted by increased Saudi exports. Clean tanker rates in East of Suez markets rose in May and remained firm in the Atlantic.





Overview

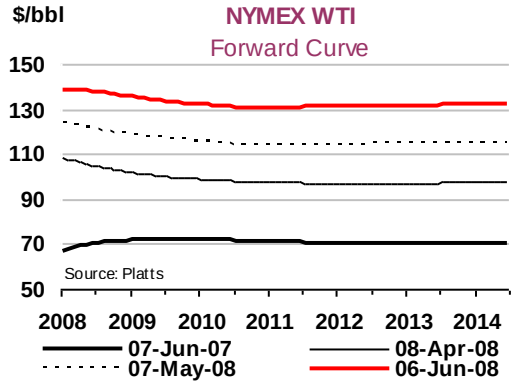
On 6 June, crude prices surged to record heights near $140/bbl on Israeli sabre rattling over alleged Iranian uranium enrichment. On 22 May, crude futures had already topped $135 as the market balance remained tight, especially for distillates, before sliding down to around $122 in early June on the perception that rises in government-set (subsidised) retail prices in Asia would curb demand growth.

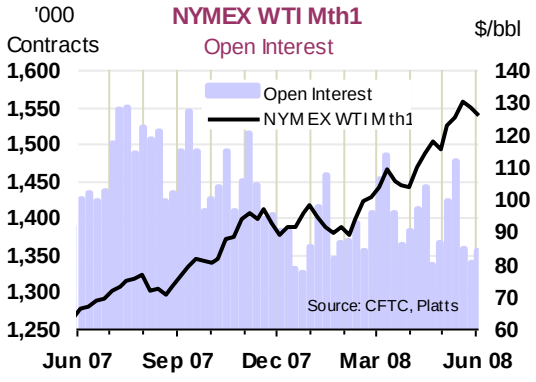
Global market fundamentals showed continued tightness, with constrained supplies and robust non-OECD demand growth. Saudi Arabia made headlines when it announced a 300 kb/d rise in crude exports in early May, but this implies tightened effective spare capacity in the light of a further-delayed start-up to its major Khursaniyah project. At the same time, the season's first tropical storm hit the Caribbean just in time for the US summer driving season, forcing Mexican ports to close and reminding markets that forecasts are for higher-than-usual hurricane activity this summer. In India, an explosion at an offshore oil field shut-in some 40 kb/d, while US legislators forced a halt to SPR filling, freeing around 70 kb/d of crude for the market.

On the demand side, while government-mandated retail price rises in several Asian countries are likely to tame demand growth to an extent, pricing policy currently looks unlikely to change in the world's growth centres China and the Middle East, ensuring that consumption will remain robust there. India, Indonesia, Malaysia and others announced hikes in government-set retail prices due to ballooning subsidy bills.

Elsewhere, while US gasoline demand growth is slowing due to high prices and growing ethanol production, diesel demand in Europe and elsewhere is surging.

Distillate crack spreads remain unseasonably high versus gasoline in all regions, reflecting a tight market. Restarts at the Grangemouth refinery in Scotland and the hydrocracker at Porvoo's refinery in Finland should in theory take some heat out of the constrained European market. News reports also indicate continued supply shortages in China. Gasoline cracks showed signs of recovery in May as the US summer driving season started, but gasoline and fuel oil's relative weakness is still keeping refinery cracking margins low, at least in the US.





First Brent and later WTI forward curves shifted into near-term contangos from around mid-May as evidence of slightly looser crude supply pressured near-month contracts, even as expectations of longer-term crude tightness lifted up longer-term contracts. Several well-known investment banks raised price forecasts for the rest of the year, underpinning the widespread impression markets will remain tight for the foreseeable future. CFTC Commitment of Traders data showed retreating open interest since mid-May.

Spot Crude Oil Prices and Differentials

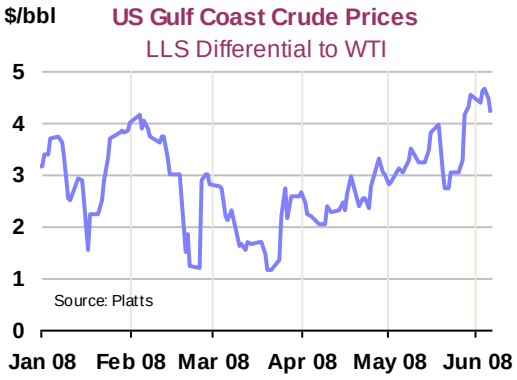
(monthly and weekly averages, $/bbl)

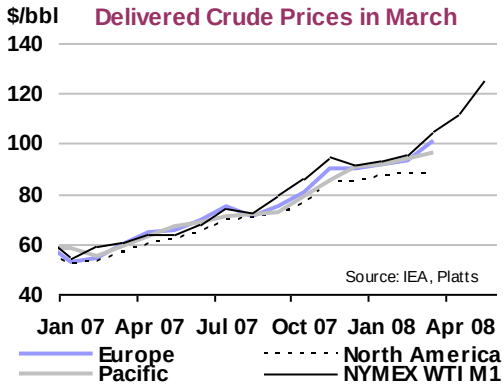
	Mar	Apr	May	May-Apr Avg Change	%	Week Commencing: 05 May	12 May	19 May	26 May	02 Jun
Crudes										
Dated Brent	103.66	108.97	122.73	13.75	12.6	119.65	122.42	126.50	128.78	126.43
Brent (Asia) Mth1 adjusted	103.06	109.93	124.03	14.10	12.8	119.94	122.42	128.32	129.00	125.98
WTI (Cushing) Mth1 adjusted	105.45	112.63	125.38	12.75	11.3	123.01	124.94	130.10	128.47	128.15
Urals (Mediterranean)	99.01	105.74	118.78	13.04	12.3	115.93	118.28	122.84	124.21	121.33
Dubai Mth1 adjusted	96.76	103.41	119.50	16.08	15.6	114.53	119.09	124.80	123.55	120.50
Tapis (Dated)	109.11	116.55	131.15	14.60	12.5	124.99	129.45	137.26	137.25	133.30
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	1.79	3.66	2.66	-1.01		3.36	2.52	3.60	-0.31	1.72
Urals (Mediterranean)	-4.66	-3.23	-3.94	-0.71		-3.73	-4.13	-3.67	-4.58	-5.10
Dubai Mth1 adjusted - Dated Brent	-6.91	-5.56	-3.23	2.33		-5.12	-3.33	-1.71	-5.23	-5.93
Tapis (Dated)	5.45	7.58	8.43	0.85		5.33	7.04	10.76	8.47	6.88
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.58	0.03	-0.60	-0.64		-0.13	-1.04	-1.30	-0.15	-0.40
Forward WTI Cushing Mth1-Mth2 adj	0.91	0.71	0.08	-0.62		0.27	0.19	-0.29	-0.10	-0.32

Source: Platts

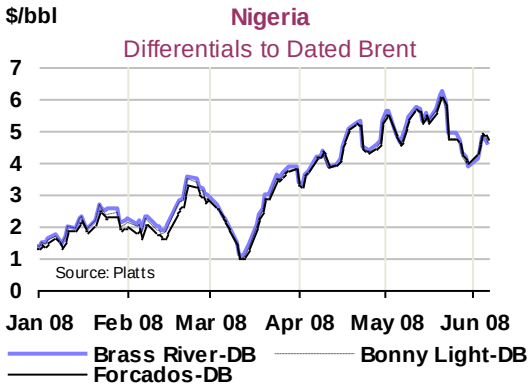
Spot Crude Oil Prices

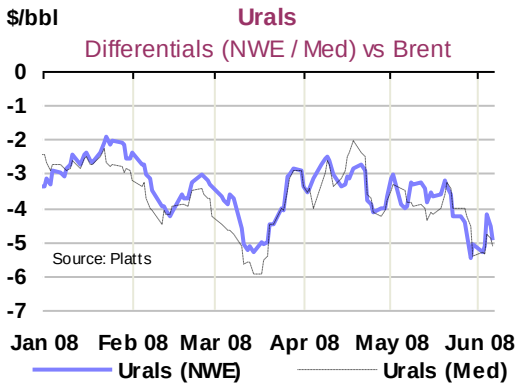
Crude prices strengthened as refineries ramped up throughputs for the summer. Given diesel's strength, distillate-rich crudes were sought after. In the **US** market, LLS rose to a premium of around $4.50/bbl over WTI, though the latter was also pressured by rising crude stocks at the US delivery point of Cushing, Oklahoma. High transatlantic freight rates also curbed US interest in Nigerian and other West African crudes. Domestic US sour grades such as Mars narrowed their discounts to WTI, but again, this was rather due to the latter's easing, as Mars cracking margins remained heavily negative.





In **Europe**, Dated Brent remained strong on healthy cracking margins in NWE and the Med. Brent strengthened against WTI over the course of May, eventually rising to a premium at the end of the month, though this has subsequently reversed again. But in early June other light sweet crudes such as Azeri Light, Bonny and Tapis saw premia to Brent rising as gasoline cracks picked up. Medium sour Urals maintained a wide discount to Brent on weak fuel oil cracks and growing Iraqi Kirkuk exports.





In **Asia**, where refiners are set to come out of peak seasonal maintenance and diesel demand remains very high, again distillate-rich grades were on the rise. Abu Dhabi's Murban shot up to a healthy premium to Dated Brent while Dubai and Oman wavered. Heavier sour crudes were under even more pressure. Press reports, backed up by shipping data, indicated that, in May, Iran was storing an estimated 15-30 mb of crude in tankers offshore Kharg Island, though some of this may now be flowing out of the Middle East. Strong buying of West African and other Atlantic Basin grades continued to be seen, with Indian IOC for example boosting its July-delivery imports to the highest volume this year, around 375 kb/d.

Refining Margins

Refining margins were mostly down in May, month-on-month, as gasoline cracks fell on average, despite rising from their early month lows. As to be expected, this is hitting US refiners harder than others, given its higher relative gasoline use, and US cracking margins were mostly negative. US West Coast cracking margins fell particularly sharply as gasoline cracks hovered around $20/bbl – only half the spread for distillates. Fuel oil discounts to crude also widened. Singapore margins were mixed, as fuel oil's weakness kept Dubai's margins well below those of Tapis. In Europe, margins were little changed, with cracking margins remaining far higher than elsewhere on distillates' strength.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Mar 08	Apr 08	May 08	May 08-Apr 08	07 May	14 May	21 May	28 May	04 Jun
NW Europe	Brent (Cracking)	4.33	6.59	6.55	-0.04	4.26	6.40	8.26	7.48	6.24
	Urals (Cracking)	5.93	7.04	7.18	0.14	4.63	6.64	8.70	8.72	7.12
	Brent (Hydroskimming)	-2.68	-0.75	-1.61	-0.86	-2.90	-1.80	-0.06	-1.12	-2.61
	Urals (Hydroskimming)	-3.77	-3.78	-5.19	-1.41	-6.57	-5.62	-3.91	-4.17	-6.30
Mediterranean	Es Sider (Cracking)	5.55	6.68	8.33	1.65	4.83	7.68	10.27	10.17	10.10
	Urals (Cracking)	6.34	6.92	7.75	0.84	4.96	7.38	9.44	9.35	8.15
	Es Sider (Hydroskimming)	-1.84	-1.11	-0.69	0.42	-3.01	-1.21	0.91	0.54	0.37
	Urals (Hydroskimming)	-3.97	-4.97	-5.88	-0.91	-7.37	-6.22	-4.40	-4.93	-6.60
US Gulf Coast	Bonny (Cracking)	-0.12	1.71	-0.15	-1.86	-0.51	0.54	0.83	-0.19	-2.52
	Brent (Cracking)	-2.12	1.33	0.56	-0.77	0.15	1.39	2.50	-0.28	-2.15
	LLS (Cracking)	2.04	3.51	4.02	0.52	1.58	3.70	4.77	6.00	4.23
	Mars (Cracking)	-2.53	-0.91	-4.29	-3.38	-3.36	-4.81	-4.57	-4.80	-3.18
	Mars (Coking)	8.43	11.43	9.73	-1.70	8.73	9.61	10.04	9.90	11.55
	Maya (Coking)	11.82	15.42	15.94	0.51	14.34	16.74	16.52	15.86	16.66
US West Coast	ANS (Cracking)	-0.32	-1.03	-3.22	-2.19	-5.32	-6.14	-4.06	-0.07	5.08
	Kern (Cracking)	3.94	1.48	-1.82	-3.30	-1.43	-4.77	-2.63	-0.25	5.15
	Oman (Cracking)	2.10	2.64	-3.05	-5.69	-2.65	-6.23	-3.56	-1.72	3.00
	Kern (Coking)	13.92	16.69	16.54	-0.14	13.73	11.39	16.62	21.19	25.93
Singapore	Dubai (Hydroskimming)	-2.33	-1.40	-4.45	-3.05	-5.68	-6.50	-3.60	-2.40	-4.08
	Tapis (Hydroskimming)	-4.55	-2.73	-1.87	0.86	-3.37	-1.50	-0.98	-1.14	-2.36
	Dubai (Hydrocracking)	5.06	7.11	5.29	-1.81	2.81	3.49	6.41	7.91	6.33
	Tapis (Hydrocracking)	-0.74	1.13	2.24	1.11	-0.10	2.38	3.58	3.50	1.89
China	Cabinda (Hydroskimming)	-4.20	-1.24	-1.99	-0.75	-2.90	-1.13	-3.47	-0.16	-1.39
	Daqing (Hydroskimming)	-5.74	-1.02	-2.23	-1.21	-2.62	-2.04	-2.37	-1.85	-1.54
	Dubai (Hydroskimming)	-3.16	-2.25	-5.87	-3.61	-6.98	-8.03	-5.11	-3.79	-5.28
	Daqing (Hydrocracking)	-1.07	3.37	1.78	-1.59	0.77	1.69	2.05	2.43	3.05
	Dubai (Hydrocracking)	4.21	6.27	3.88	-2.39	1.52	1.97	4.88	6.51	5.16

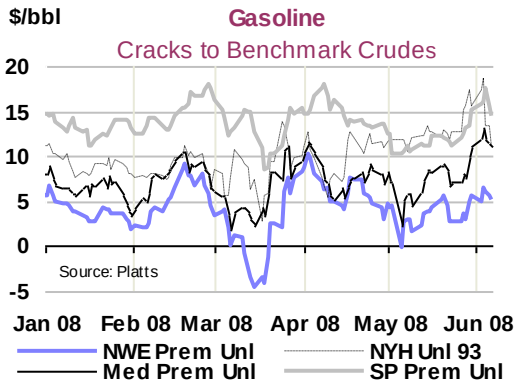
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

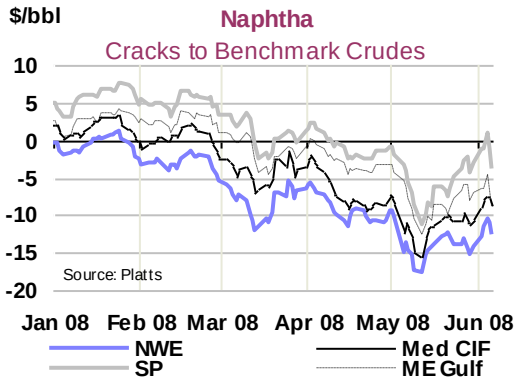
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

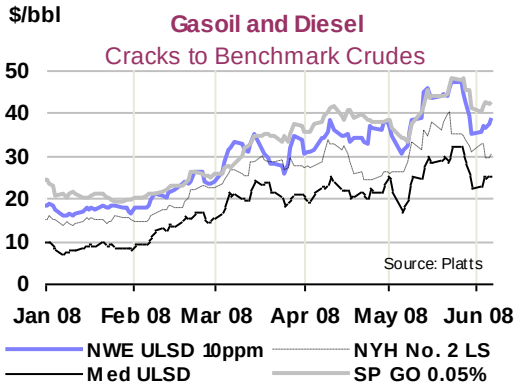
Spot Product Prices

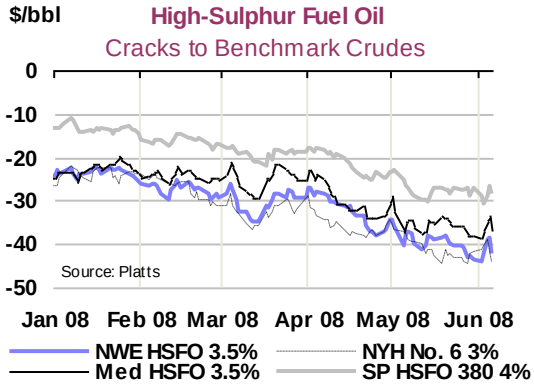
Gasoline crack spreads began to pick up in May and early June as the summer driving season (in the northern hemisphere) started. Nonetheless, they remain well below their usual levels for this time of year, largely due to demand weakness in the US, exacerbated by growing volumes of ethanol blended into the pool. On average however, May gasoline crack spreads were actually down, weakening refining margins. Naphtha cracks also picked up, but remain negative, with the exception of Singapore, where they inched into positive territory in early June.





Distillate crack spreads on average gained ground in May, remaining a significant driving force behind strong oil prices. Globally, supply remains tight, though the situation may be easing somewhat after the restart of several key refineries in Europe and following US refiners' steady hike in distillate yields. Europe continues to draw in cargoes from around the world, with around 380,000 tonnes reportedly booked to load in June from the US and another 530,000 tonnes from Asia. In Asia itself, China reportedly imported around 145 kb/d of diesel in May and plans to bring in nearly 160 kb/d in June, as regional product shortages remain, stockbuilding ahead of the Olympics reportedly continues and as continued coal shortages require more diesel generator use. Some cooling in demand for the region may yet come from big importers such as Indonesia, which have recently raised government-set fuel prices.





Fuel oil discounts to crude remained wide in May, though were narrowing slightly in early June. Some support may however begin to come from electricity use for summer cooling, especially in the Middle East, where the season has begun with hot temperatures and natural gas is, in some countries, in short supply. Chinese demand – a key factor – remains lacklustre and is reflected in high Singapore stocks in independent storage. Two million tonnes are due to arrive in Asia from the west, slightly lower than average volumes so far this year.

End-User Product Prices in May

End-user product prices on average increased by 8.1% in May in surveyed IEA countries – in US dollars, ex-tax – again hitting record levels. Gasoline prices on average rose by 7.5%, but were even higher in the US and Canada, where prices jumped by 11.8% and 12.3%, respectively. Diesel prices on average rose by 8.6%, with the highest increases observed in European countries at around 10%, in US dollars, ex-tax. US drivers are now paying just under $1/litre for gasoline and Europeans around $2.20/litre for diesel (both *with* tax). Heating oil retail prices on average rose by 10% and low-sulphur fuel oil prices increased by 5.5% in May 2008. Compared to May 2007, retail prices are now approximately 60% higher than a year ago – ex-tax.

Spot Product Prices

(monthly and weekly averages, $/bbl)

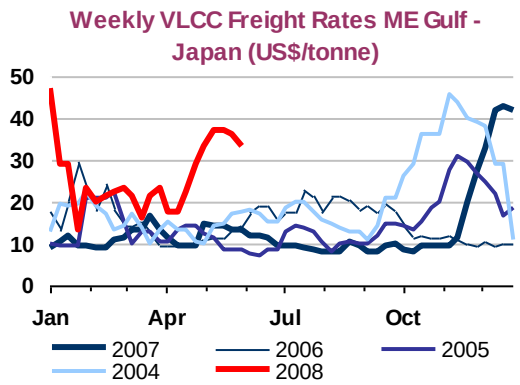
	Mar	Apr	May	May-Apr Change	May-Apr %	Week Commencing: 05 May	12 May	19 May	26 May	02 Jun	Mar	Apr	May
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	105.44	115.22	126.79	11.57	10.0	123.04	125.98	130.69	133.09	132.07	1.78	6.25	4.07
Naphtha	95.55	99.79	109.15	9.35	9.4	105.27	107.26	113.57	114.56	114.83	-8.12	-9.18	-13.58
Jet/Kerosene	134.38	145.46	164.40	18.94	13.0	154.64	165.00	173.75	170.11	163.24	30.72	36.49	41.67
ULSD 10ppm	134.66	143.45	163.67	20.23	14.1	154.84	165.88	171.49	169.15	163.40	31.00	34.47	40.95
Gasoil .1%	127.80	137.87	158.88	21.01	15.2	152.74	159.39	166.39	163.59	157.80	24.14	28.90	36.16
LSFO 1%	80.81	88.58	93.94	5.36	6.0	91.37	92.99	97.94	96.19	98.84	-22.85	-20.39	-28.79
HSFO 3.5%	73.29	76.73	83.75	7.02	9.1	82.41	82.96	87.37	86.13	85.27	-30.37	-32.24	-38.98
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	104.83	113.71	126.63	12.91	11.4	122.02	126.05	130.81	133.41	133.14	5.82	7.97	7.84
Naphtha	95.34	98.87	108.00	9.13	9.2	104.08	106.27	112.57	113.22	113.38	-3.66	-6.88	-10.79
Jet Aviation fuel	132.08	143.37	160.28	16.91	11.8	152.13	161.68	167.89	165.39	158.81	33.07	37.62	41.50
Gasoil .2%	128.94	136.66	157.40	20.74	15.2	151.11	158.79	164.22	161.85	156.54	29.94	30.91	38.61
LSFO 1%	80.17	86.57	95.13	8.56	9.9	93.16	94.22	98.25	98.49	98.49	-18.84	-19.17	-23.65
HSFO 3.5%	73.90	75.87	83.89	8.02	10.6	81.69	82.53	88.25	86.59	85.21	-25.11	-29.87	-34.89
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	113.89	122.71	138.22	15.51	12.6	134.51	137.54	142.49	144.38	142.89	8.43	10.07	12.84
Unleaded	104.28	115.55	130.09	14.54	12.6	126.57	128.88	134.76	136.01	135.73	-1.17	2.91	4.71
Jet/Kerosene	137.35	148.31	158.45	10.14	6.8	152.74	159.55	167.04	162.40	159.64	31.90	35.68	33.07
No. 2 (Heating Oil)	128.67	135.35	151.66	16.31	12.1	144.72	152.64	160.79	157.07	155.23	23.22	22.72	26.28
LSFO 1%	72.62	80.31	89.70	9.39	11.7	86.70	87.76	94.32	94.56	96.60	-32.83	-32.32	-35.68
No. 6 3%	72.77	76.93	84.50	7.58	9.8	84.46	83.40	87.35	85.44	86.81	-32.69	-35.71	-40.88
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	109.78	118.08	131.13	13.05	11.1	125.16	130.45	136.44	136.75	136.41	13.03	14.67	11.64
Naphtha	97.61	102.61	113.69	11.08	10.8	108.85	110.22	118.47	120.33	119.23	0.85	-0.80	-5.80
Jet/Kerosene	125.37	138.58	159.58	21.00	15.2	146.40	160.91	169.10	168.22	159.78	28.61	35.17	40.08
Gasoil .5%	126.19	138.34	158.62	20.29	14.7	146.37	159.51	168.13	166.52	159.46	29.43	34.92	39.13
LSWR Cracked	90.72	100.30	115.18	14.88	14.8	111.35	114.34	119.36	119.08	116.13	-6.04	-3.11	-4.32
HSFO 180 CST	77.46	84.00	94.35	10.35	12.3	90.97	92.75	98.98	97.30	92.89	-19.29	-19.41	-25.15
HSFO 380 CST 4%	77.44	81.92	91.85	9.93	12.1	87.27	90.04	97.16	95.94	91.82	-19.32	-21.49	-27.65

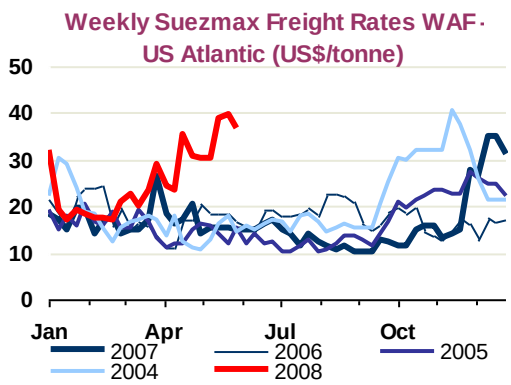
Source: Platts

Freight

Tight vessel fundamentals pushed dirty tanker rates in the Middle East Gulf and West Africa to extreme highs in May. With Iranian floating storage a major constraint on VLCC supply, sustained firm long-haul demand including increased Saudi exports lifted May rates to levels not seen since late 2004, excepting the end-2007 spike. Shipping delays reduced vessel supply in the Caribbean, boosting regional Aframax rates. Clean tanker rates in East of Suez markets rose in May.

According to the Saudi Arabian oil ministry, Saudi exports increased from 10 May and reports emerged that spot chartering by Vela, Saudi Aramco's shipping arm, was higher in May. Middle East Gulf VLCC rates on benchmark routes to Japan rose to a peak of $37/tonne by mid-May. Slow-steaming to save on growing bunker costs (now at around $580/tonne in Singapore) continues to act as a drag on tanker supply. Tanker movement reports suggest that eastbound sailings (to China especially, according to





reports) from the Middle East Gulf rose in May at the expense of westbound volumes. If confirmed, this might explain an easing in VLCC rates later in the month, as a greater proportion of shorter eastbound routes reduces aggregate tanker demand.

VLCC and Suezmax freight rates leaving West Africa rose to even higher historical levels in May, reaching over $39/tonne on the 130 kmt WAF-US Atlantic coast trade. West African light, sweet grades which have a high yield of light distillates have been in particular demand given the recent tightness in the diesel sector, with Bonny Light reaching a premium of $6/bbl over Brent prices in May. Low VLCC availability may have also prompted cargo-splitting into Suezmaxes as well, spreading market strength across vessel sectors. Still, while the higher freight costs may have added an extra $2/bbl-plus to US Gulf Coast refiners' delivered crude costs, their impact on refining margins has been overshadowed by the absolute volatility in physical crude and product prices. Elsewhere, port delays due to bad weather have reportedly disrupted tanker traffic in the Caribbean, with export terminals closing in some cases. The resultant drag on vessel availability boosted Aframax rates from $10/tonne in early May to around $24/tonne by the end of the month.

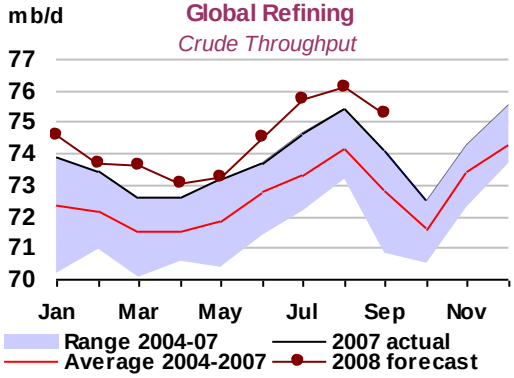
Clean tanker rates for large vessels exporting naphtha from the Middle East Gulf to Japan increased by $17/tonne in May to end the month at $41/tonne. This is well above seasonal norms and coincides with the advance of Asian refinery maintenance and high product demand, particularly from China. Transatlantic clean freight rates remained firm in May at around $36/tonne.

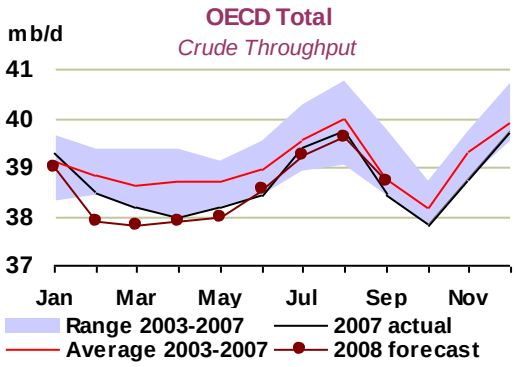
REFINING

Summary

- **Global refinery throughput increased by 0.2 mb/d in May to 73.3 mb/d.** A strong recovery in US crude runs was overshadowed by weakness in the OECD Europe and Pacific regions. Non-OECD crude throughput similarly increased during the month as higher Russian and Middle Eastern runs are estimated to have more than offset a decline in Chinese throughputs.

- **3Q08 global crude throughput is forecast to average 75.7 mb/d,** 2.1 mb/d higher than 2Q08 and 1.0 mb/d higher than 3Q07. Year-on-year growth is entirely based in the non-OECD regions. Crude runs are forecast to peak in August at a record-high 76.1 mb/d, before the start of autumn refinery maintenance in September weighs on throughput levels.





- **OECD 2Q08 crude throughput is projected to average 38.1 mb/d,** 0.2 mb/d higher than assessed last month, as higher-than-expected April European and May US data boost the quarterly average. Furthermore, upward revisions for US throughputs have been carried through to June and July. Overall though, as refining activity remains constrained by weak hydroskimming margins, 3Q08 OECD crude runs are forecast broadly in line with last year's average at 39.2 mb/d, but are still 1.1 mb/d above 2Q08.

- **2Q08 non-OECD crude runs are forecast to average 35.5 mb/d,** 0.1 mb/d lower than estimated in last month's report, but remain 0.5 mb/d above levels of a year ago. Year-on-year growth accelerates during the third quarter, to an average of 1.0 mb/d, driven by China, Other Asia and Africa. Chinese throughput growth will recover from the heavy refinery maintenance in May and should receive a further boost with the start of Sinopec's 200 kb/d Qingdao refinery in late May. Further upside in 3Q08 is possible if the 580 kb/d Reliance Jamnagar refinery starts commercial operations ahead of our assumed 4Q08 start date.

Global Refinery Throughput

Global crude throughput levels should increase in June to 74.5 mb/d, from May's 73.3 mb/d, driven by stronger US crude runs. However, weakness in refining margins remains critical to the activity level seen in many regions, as do planned (and unplanned) maintenance shutdowns. Nevertheless, Atlantic Basin runs have recovered over the course of the second quarter and should continue to strengthen into the third quarter as refiners gear up for the peak gasoline demand season in the Atlantic Basin.

Elsewhere, the completion of maintenance work in China and Russia should increase the demand for crude in coming months. Refiners remain caught between the markedly different product cracks which have continued to diverge in recent weeks. While distillate production remains tremendously profitable, gasoline cracks remain subdued and fuel oil cracks have reached record lows against benchmark crudes. Consequently, refiners are forced to seek ways to maximise distillate production at the expense of fuel oil and, more recently, gasoline.

Global crude throughputs for 2Q08 are estimated at 73.6 mb/d, 0.1 mb/d higher than in last month's report, following better-than-forecast US crude throughput in May (which we have carried forward into June and July) and higher than estimated OECD Europe April crude runs. 3Q08 **global crude throughputs** are forecast to average 75.7 mb/d, some 1.0 mb/d higher than the comparable period in 2007 and 2.1 mb/d higher than 2Q08. Year-on-year growth is driven by China, Africa and Other Asia. Crude runs are forecast to peak in August at 76.1 mb/d, before the start of seasonal autumn refinery maintenance in September reduce crude throughput to an estimated 75.3 mb/d. The forecast does not include any crude processing at Reliance Petroleum's 580 kb/d Jamnagar refinery, which we assume will be commissioned in 4Q08, so further upside to our forecasts is possible.

OECD 3Q08 crude throughput is forecast to remain weak compared to the five-year range, reflecting the forecast 0.4 mb/d contraction in 2008 OECD demand and a weaker margin environment. Utilisation rates could also be affected by more protracted maintenance. Discussions with US refiners indicate that the weaker refinery economics are having an impact on the speed with which operational problems are resolved. Where previously refiners would endeavour to resolve process issues as soon as possible, through the use of additional outside contractors, additional overtime and third party resources, management are taking a more sanguine view of the available solutions. Consequently, the downtime from any particular problem has in some instances increased since last year. While a strengthening of margins could shorten downtimes, in the US at least, weakening gasoline demand, rising ethanol blending and strong gasoline imports make such a scenario appear remote.

Global Refinery Crude Throughput[1]

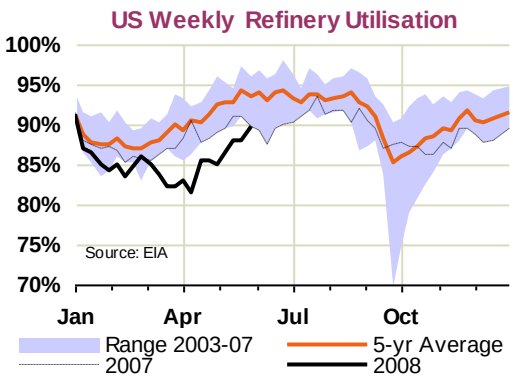
million barrels per day

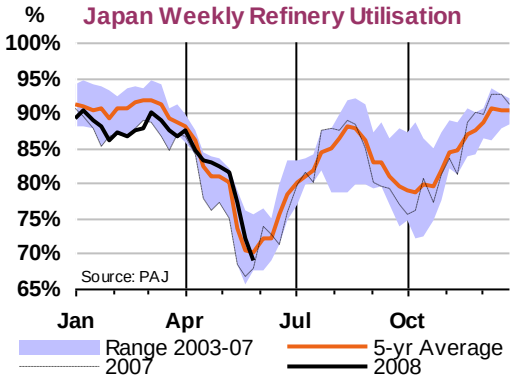
	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08
OECD Crude Runs									
North America	17.9	17.6	17.3	17.6	*18.2*	*18.5*	*18.7*	*18.6*	*18.3*
Europe	13.7	13.1	13.3	13.4	*13.1*	*13.6*	*13.8*	*13.9*	*13.6*
Pacific	7.4	7.1	7.3	6.9	*6.6*	*6.4*	*6.7*	*7.0*	*6.8*
Total OECD	39.0	37.9	37.8	37.9	*38.0*	*38.5*	*39.3*	*39.6*	*38.7*
NON-OECD Crude Runs									
FSU	5.7	6.0	*6.0*	*5.7*	*5.9*	*6.1*	*6.0*	*6.1*	*6.1*
Europe	0.8	0.7	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	6.9	*6.8*	*6.7*	*6.4*	*6.8*	*6.8*	*6.7*	*6.8*
Other Asia	8.4	8.2	*8.2*	*8.2*	*8.2*	*8.0*	*8.4*	*8.4*	*8.4*
Latin America	5.5	5.3	*5.4*	*5.5*	*5.4*	*5.6*	*5.6*	*5.6*	*5.6*
Middle East	5.9	6.1	*6.0*	*6.0*	*6.1*	*6.2*	*6.1*	*6.2*	*6.2*
Africa	2.5	2.5	*2.5*	*2.3*	*2.5*	*2.6*	*2.6*	*2.6*	*2.6*
Total Non-OECD	35.5	35.8	*35.8*	*35.2*	*35.3*	*36.0*	*36.5*	*36.5*	*36.6*
Total Crude Runs	74.6	73.7	*73.6*	*73.0*	*73.3*	*74.5*	*75.7*	*76.1*	*75.3*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

The OECD North American 2Q08 crude throughput forecast is revised up by 0.2 mb/d, largely on the back of the higher-than-forecast US crude runs in May. 3Q08 crude runs are forecast to average 18.5 mb/d, an increase of 0.1 mb/d from 3Q07, reflecting the offsetting impacts of the return to service of BP's Texas City and Whiting refineries, and the weaker margin environment.

US refinery crude throughput averaged 15.2 mb/d in May, according to provisional weekly data, some 0.1 mb/d ahead of our expectations. Crude runs increased by more than 0.2 mb/d in the Midwest, and Gulf and West Coasts, as refineries completed planned maintenance and unplanned outages were resolved. Further crude throughput increases are anticipated during June and July, particularly given the apparent dearth of planned refinery maintenance in the coming weeks. US crude runs are forecast to peak at 15.8 mb/d in August, slightly ahead of the 3Q07 level.





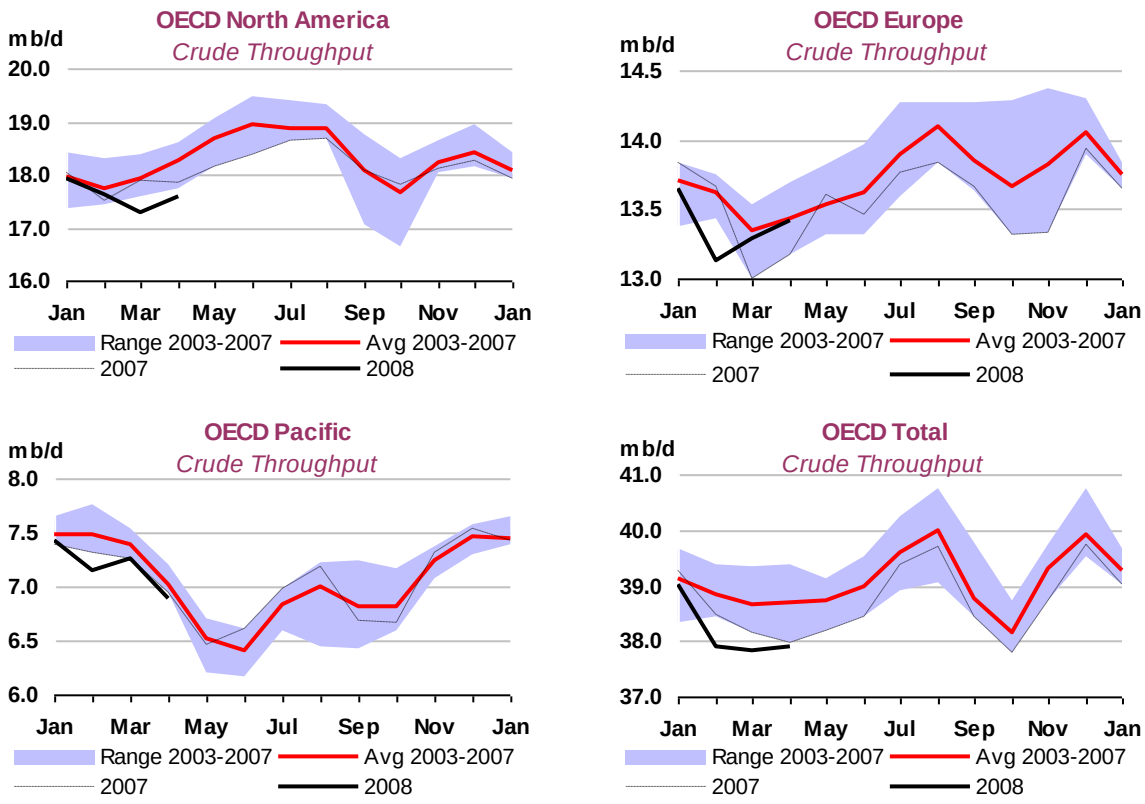
The 2Q08 OECD Pacific throughput forecast is unchanged at 6.7 mb/d, despite provisional data for April indicating that runs were 0.2 mb/d higher than estimated. Weekly data for Japan suggest that May runs were some 0.1 mb/d lower than forecast in last month's report, and upwardly revised maintenance for Japan in June similarly lowers our forecast for the month. Crude runs at the end of May were reported at 3.4 mb/d, suggesting that the peak in maintenance activity is imminent. Korean refiners are not expected to see peak maintenance activity until July, delaying the recovery of regional crude runs until August. Crude runs at Australian refineries have been revised down for March and were weaker than forecast for April, in line with reports of problems with hydrotreating capacity.

Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	*Mar 08*	*Apr 07*	Apr 08	Apr 07
OECD North America										
US[2]	15.14	15.19	14.80	14.63	14.36	14.59	0.23	-0.45	83.60	86.17
Canada	1.72	1.83	1.88	1.83	1.69	1.75	0.06	0.16	86.55	78.63
Mexico	1.24	1.23	1.25	1.18	1.24	1.26	0.03	0.02	81.91	71.96
Total	18.10	18.26	17.93	17.64	17.29	17.59	0.31	-0.27	83.76	85.03
OECD Europe										
France	1.75	1.73	1.78	1.62	1.47	1.70	0.23	0.11	86.83	81.08
Germany	2.21	2.31	2.26	2.20	2.35	2.19	-0.16	0.00	90.65	90.78
Italy	1.73	1.95	1.87	1.78	1.81	1.86	0.05	0.03	79.78	78.48
Netherlands	0.94	1.08	1.00	1.01	1.03	1.06	0.04	0.06	87.81	82.97
Spain	1.07	1.14	1.20	1.14	1.11	1.14	0.03	-0.08	89.79	95.88
UK	1.55	1.52	1.48	1.40	1.51	1.58	0.07	-0.02	83.58	84.63
Other OECD Europe	4.09	4.23	4.07	3.98	4.01	3.88	-0.13	0.14	82.60	79.51
Total	13.33	13.94	13.65	13.13	13.28	13.41	0.13	0.25	85.04	83.48
OECD Pacific										
Japan	4.03	4.27	4.13	4.15	4.18	3.91	-0.27	0.02	83.51	83.02
Korea	2.58	2.57	2.53	2.37	2.40	2.28	-0.13	-0.09	83.24	86.55
Other OECD Pacific	0.70	0.71	0.77	0.63	0.67	0.70	0.03	0.01	87.33	86.55
Total	7.31	7.54	7.43	7.15	7.25	6.89	-0.36	-0.06	83.80	84.54
OECD Total	38.74	39.74	39.01	37.92	37.82	37.90	0.08	-0.09	84.22	84.40

1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50

OECD Europe crude throughput in April averaged 13.4 mb/d, 0.3 mb/d above forecast, almost entirely due to higher-than-anticipated Italian crude throughput (+0.4 mb/d vs. forecast). Our assumption of heavy Italian planned maintenance in April appears misplaced. Work may have been delayed to take advantage of the strong distillate cracks available, and may therefore occur later in the quarter, although strength in diesel cracks during May could push refiners to delay work until the autumn. May crude runs are estimated to have dipped to 13.1 mb/d, following work at several German refineries and the delayed restart of INEOS's Grangemouth refinery following the late-April strike and subsequent hydrocracker fire.



Furthermore, reports indicate that in addition to the normal routine maintenance that occurs at European refineries during the spring some refiners have already started to upgrade hydrotreating capacity in preparation for the 10 ppm sulphur gasoline and diesel limits from 1 January 2009. We had assumed that most refiners would undertake the necessary work in autumn 2008, but the fact that some refiners have already started may reflect tightness in engineering contractor markets. **OECD Europe 3Q08** crude throughput is currently forecast to average 13.8 mb/d, 0.4 mb/d above second-quarter levels and 0.1 mb/d above 3Q07 levels.

Chinese April crude runs were 6.7 mb/d, 0.1 mb/d ahead of forecast. Reports of ongoing product shortages would appear to keep the pressure on state oil companies to maximise crude runs in the coming months. However, the poor refinery economics, due to domestic price regulation of transport fuels, will require heavy financial subsidies from the Chinese central government, in order to balance state oil company cash flows. Furthermore, to bolster product supply and offset the shortfall from poorly utilised teapot refineries additional imports of gasoil to meet domestic needs are likely. Despite all of the above, several refiners are reported to have carried out maintenance during May, leading us to project a 0.2 mb/d dip in estimated May crude runs to 6.4 mb/d. The start of commercial runs at Sinopec's Qingdao refinery was announced in late May, at 120 kb/d, equivalent to 60% capacity utilisation. It is expected to remain at this level over the course of June and the third quarter. These additional crude runs and the return to service of refineries from maintenance should restore Chinese crude runs to an average of 6.8 mb/d during June and 3Q08.

African crude throughput forecasts for 2Q08 are revised down by 0.1 mb/d on the back of much weaker-than-estimated crude runs in Libya in April (-0.2 mb/d), presumably following maintenance at the Ras Lanuf refinery, and planned maintenance at Sudan's Khartoum refinery during much of the quarter. Similarly, **2Q08 FSU** crude throughput is reduced by 0.1 mb/d, following much weaker **Russian** crude throughput data for April. It appears that the heavy maintenance we had assumed would be taking place in March was largely seen in April.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.5	25.5	24.8	25.0	25.2	25.2	25.0
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	14.9	15.4	15.6	15.3	15.1	15.1	15.4	15.5	15.3
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.6	8.3	8.8	7.9	7.9	8.7	8.3
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	49.8	49.1	48.7	48.0	48.4	49.4	48.6
NON-OECD DEMAND																	
FSU	3.9	3.9	4.0	3.8	4.1	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Europe	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.3	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.1	7.9	8.0	8.0
Other Asia	8.7	8.8	9.1	9.1	8.8	9.1	9.0	9.3	9.4	9.1	9.4	9.3	9.6	9.5	9.1	9.4	9.4
Latin America	5.0	5.1	5.2	5.3	5.4	5.4	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.8	6.0	6.0	5.9
Middle East	5.7	6.0	6.1	6.1	6.5	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
Africa	2.8	2.9	3.0	3.0	2.9	3.0	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.0	3.2	3.1
Total Non-OECD	33.1	34.1	35.2	35.5	35.6	35.9	35.5	36.4	36.9	36.9	37.3	36.9	37.9	38.0	38.1	38.6	38.1
Total Demand[1]	82.5	83.8	85.6	83.6	84.6	85.7	84.9	86.1	85.1	85.6	87.1	86.0	86.6	86.1	86.5	87.9	86.8
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.2	13.9	14.1	14.4	14.1
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.5	4.3	4.6	4.6
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.7
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.8	19.8	19.7	19.1	19.1	19.9	19.4
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	13.1	13.5	13.1
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.9	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.7
Latin America	4.1	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.1	4.2	4.1
Middle East	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6
Total Non-OECD	27.1	28.0	28.5	28.6	28.9	29.2	28.8	27.9	27.8	27.7	27.7	27.8	27.5	27.6	28.1	28.6	28.0
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.5
Total Non-OPEC[5]	50.3	50.4	50.9	50.8	51.0	51.5	51.1	50.4	50.2	49.7	49.9	50.0	49.7	49.3	49.9	51.2	50.0
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	49.9	49.7	49.1	49.6	49.6	49.7	49.3	49.9	51.2	50.0
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.2	30.6	31.5	30.7	32.3				
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.4	5.1
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	34.9	35.4	36.4	35.5	37.3				
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.5	35.9	36.8	35.9	37.3				
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.5	85.1	85.1	86.4	85.5	87.0				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-1.0	0.2	-0.8	0.7	0.0	-0.9	-0.2	-0.1				
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1				
Total	0.2	0.2	0.0	0.8	1.2	-0.9	0.3	-0.8	0.7	0.2	-0.9	-0.2	0.0				
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.2	-0.2	0.2	0.0	0.3				
Miscellaneous to balance[8]	0.7	0.7	-0.4	0.8	-0.4	1.3	0.3	-0.1	-0.5	-0.5	-0.1	-0.3	0.1				
Total Stock Ch. & Misc	0.9	0.8	-0.2	1.5	1.1	-0.2	0.5	-0.6	0.0	-0.5	-0.8	-0.4	0.4				
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	28.9	30.1	28.2	29.0	29.5	29.2	30.9	30.1	31.1	32.3	31.1	31.9	31.8	31.4	31.3	31.6
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.8	29.6	30.6	32.2	30.8	32.1	31.9	31.5	31.4	31.7
"Call" incl. Angola & Ecuador[2]	29.6	30.7	32.1	30.1	31.0	31.4	31.1	31.4	30.6	31.6	32.6	31.6	31.9	31.8	31.4	31.3	31.6
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.4	31.7	30.9	30.5	32.8	31.5	31.3	30.1	31.1	32.5	31.3	32.1	31.9	31.5	31.4	31.7

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	0.2	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	-0.2	-0.2	-0.1
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
Other Asia	-	-	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	-	-0.1	-0.1	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-	-	-
Total Non-OECD	-	-	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-	0.1
Total Demand	-	-	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	-	0.1	-0.2	-0.1	-0.1
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-0.1	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Total Non-OPEC	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.5	-0.3	-0.3	-0.3
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.5	-0.3	-0.3	-0.3
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	-				
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-				
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total Supply	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2				
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
Government	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-	-	-	-				
Miscellaneous to balance	-	-	-0.2	-0.2	-0.2	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3				
Total Stock Ch. & Misc	-	-	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.2				
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.6	0.2	0.3	0.3
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	0.4	-0.1	0.1	0.1

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.31	25.66	25.43	25.49	25.54	25.53	24.75	25.05	25.16	25.19	25.04
Europe	15.61	15.96	15.24	15.62	15.70	15.63	15.19	14.93	15.39	15.60	15.28	15.14	15.14	15.36	15.47	15.28
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.64	8.27	8.82	7.86	7.86	8.73	8.32
Total OECD	49.67	50.42	48.12	49.00	49.81	49.34	49.68	48.16	48.69	49.79	49.08	48.71	48.04	48.38	49.39	48.63
FSU	3.92	4.02	3.85	4.14	4.22	4.06	4.10	3.91	4.18	4.28	4.12	4.10	4.01	4.29	4.41	4.20
Europe	0.73	0.79	0.73	0.68	0.74	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.76	0.76
China	6.69	7.02	7.35	7.22	7.26	7.21	7.33	7.73	7.52	7.59	7.54	7.85	8.06	7.91	8.00	7.95
Other Asia	8.77	9.11	9.11	8.80	9.08	9.02	9.26	9.38	9.08	9.43	9.29	9.61	9.49	9.08	9.45	9.41
Latin America	5.10	5.17	5.32	5.43	5.41	5.33	5.41	5.58	5.73	5.72	5.61	5.66	5.82	5.97	5.96	5.85
Middle East	5.99	6.09	6.14	6.45	6.20	6.22	6.40	6.50	6.72	6.43	6.51	6.70	6.76	7.10	6.81	6.84
Africa	2.93	2.99	2.99	2.89	2.96	2.96	3.09	3.08	2.99	3.12	3.07	3.14	3.12	3.03	3.17	3.12
Total Non-OECD	34.13	35.19	35.49	35.62	35.86	35.54	36.39	36.92	36.90	37.33	36.89	37.88	38.02	38.08	38.56	38.14
World	83.80	85.61	83.61	84.62	85.67	84.88	86.06	85.08	85.60	87.12	85.97	86.60	86.06	86.46	87.95	86.77
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.00*	*20.32*	*20.43*	*20.37*	*20.28*
Euro4	*8.22*	*8.48*	*7.94*	*8.16*	*8.15*	*8.18*	*7.85*	*7.68*	*7.86*	*8.00*	*7.85*	*7.76*	*7.78*	*7.84*	*7.88*	*7.82*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.41*	*4.67*	*4.67*	*5.23*	*4.99*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.32*	*2.10*	*2.09*	*2.37*	*2.22*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.02*	*2.10*	*2.00*	*2.09*	*2.05*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.33*	*2.28*	*2.38*	*2.34*	*2.33*	*2.34*	*2.28*	*2.38*	*2.35*	*2.34*
Brazil	*2.17*	*2.13*	*2.15*	*2.23*	*2.24*	*2.19*	*2.22*	*2.26*	*2.34*	*2.41*	*2.31*	*2.35*	*2.35*	*2.43*	*2.50*	*2.41*
India	*2.57*	*2.88*	*2.84*	*2.65*	*2.88*	*2.81*	*3.05*	*3.00*	*2.74*	*3.04*	*2.96*	*3.20*	*3.14*	*2.83*	*3.14*	*3.07*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.6	-0.7	1.7	1.5	-0.1	0.6	0.9	-3.5	-1.5	-1.3	-1.4	-1.9
Europe	0.8	1.5	-0.3	-0.2	-0.4	0.1	-4.8	-2.1	-1.5	-0.6	-2.2	-0.4	1.4	-0.2	-0.9	0.0
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	0.0	0.7	0.6	1.0	0.6
Total OECD	0.6	-0.7	-1.0	-0.5	-0.4	-0.7	-1.5	0.1	-0.6	0.0	-0.5	-1.9	-0.2	-0.7	-0.8	-0.9
FSU	0.7	4.5	1.1	3.3	4.9	3.4	1.9	1.7	1.0	1.5	1.5	0.2	2.6	2.5	2.9	2.1
Europe	4.4	1.0	1.0	1.0	1.0	1.0	1.8	1.7	1.7	1.3	1.6	1.4	1.7	1.7	1.7	1.6
China	4.2	5.0	13.0	7.9	5.4	7.8	4.5	5.1	4.1	4.6	4.6	7.1	4.3	5.2	5.4	5.5
Other Asia	0.8	1.9	1.4	3.4	5.0	2.9	1.7	3.0	3.2	3.9	2.9	3.8	1.2	0.0	0.2	1.3
Latin America	2.8	4.8	4.2	3.9	5.4	4.6	4.5	4.9	5.4	5.8	5.2	4.6	4.2	4.2	4.2	4.3
Middle East	5.1	4.6	4.4	3.7	3.0	3.9	5.0	5.8	4.1	3.7	4.6	4.8	4.0	5.7	5.8	5.1
Africa	5.9	-0.2	0.3	1.1	2.2	0.9	3.3	2.9	3.5	5.7	3.9	1.6	1.4	1.5	1.5	1.5
Total Non-OECD	3.0	3.5	4.4	4.2	4.5	4.1	3.4	4.0	3.6	4.1	3.8	4.1	3.0	3.2	3.3	3.4
World	1.6	1.0	1.2	1.4	1.5	1.3	0.5	1.8	1.2	1.7	1.3	0.6	1.2	1.0	1.0	0.9
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.43	0.37	-0.04	0.14	0.23	-0.90	-0.39	-0.34	-0.35	-0.49
Europe	0.12	0.23	-0.04	-0.03	-0.06	0.02	-0.76	-0.31	-0.23	-0.10	-0.35	-0.05	0.21	-0.03	-0.14	0.00
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.00	0.05	0.05	0.09	0.05
Total OECD	0.31	-0.36	-0.49	-0.25	-0.22	-0.33	-0.75	0.04	-0.31	-0.02	-0.26	-0.96	-0.12	-0.32	-0.40	-0.45
FSU	0.03	0.17	0.04	0.13	0.20	0.13	0.08	0.06	0.04	0.06	0.06	0.01	0.10	0.11	0.13	0.09
Europe	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.27	0.34	0.85	0.53	0.37	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.33	0.39	0.41	0.41
Other Asia	0.07	0.17	0.13	0.29	0.43	0.26	0.15	0.27	0.28	0.35	0.27	0.35	0.11	0.00	0.02	0.12
Latin America	0.14	0.23	0.21	0.20	0.28	0.23	0.23	0.26	0.29	0.31	0.28	0.25	0.24	0.24	0.24	0.24
Middle East	0.29	0.27	0.26	0.23	0.18	0.24	0.31	0.35	0.27	0.23	0.29	0.31	0.26	0.38	0.37	0.33
Africa	0.16	-0.01	0.01	0.03	0.06	0.03	0.10	0.09	0.10	0.17	0.11	0.05	0.04	0.04	0.05	0.05
Total Non-OECD	0.99	1.19	1.50	1.42	1.53	1.41	1.20	1.43	1.29	1.47	1.35	1.49	1.10	1.18	1.23	1.25
World	1.30	0.82	1.01	1.17	1.30	1.08	0.45	1.47	0.98	1.45	1.09	0.53	0.98	0.86	0.83	0.80
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.03	-0.01	-0.10	-0.08	-0.10	-0.10	-0.10
Europe	0.00	-0.01	0.00	0.02	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	-0.07	0.16	-0.02	-0.01	0.02
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.04	-0.04	-0.05	-0.05	-0.05
Total OECD	0.00	-0.01	0.00	0.02	-0.03	-0.01	-0.01	0.00	0.00	-0.03	-0.01	-0.21	0.04	-0.17	-0.16	-0.13
FSU	0.01	-0.03	-0.03	-0.03	-0.02	-0.03	0.00	0.01	0.01	0.01	0.01	-0.01	0.04	0.04	0.06	0.03
Europe	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.07	0.06	0.04
Other Asia	0.01	0.16	0.15	0.15	0.15	0.15	0.10	0.10	0.10	0.11	0.10	0.11	-0.02	-0.13	-0.12	-0.04
Latin America	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-0.01	0.00	-0.01	0.00	-0.01
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02	0.01	0.02
Africa	0.00	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.03	0.01	0.01	0.01	0.02
Total Non-OECD	0.01	0.20	0.19	0.20	0.20	0.20	0.15	0.16	0.17	0.17	0.16	0.17	0.02	-0.01	0.02	0.05
World	0.01	0.19	0.19	0.21	0.17	0.19	0.15	0.16	0.17	0.14	0.15	-0.04	0.06	-0.18	-0.14	-0.08
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.02	0.17	0.18	0.20	0.15	0.18	-0.04	-0.03	-0.05	-0.03	-0.04	-0.19	-0.10	-0.34	-0.28	-0.23

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	4Q07	1Q08	2Q08	3Q08	4Q08	Mar 08	Apr 08	May 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.78	8.84				8.80	8.77	8.91
Iran	3.91	3.98		4.04	4.04				4.02	3.90	3.87
Iraq	1.90	2.09		2.33	2.38				2.41	2.40	2.50
UAE	2.62	2.52		2.40	2.62				2.54	2.65	2.66
Kuwait	2.21	2.16		2.24	2.29				2.31	2.31	2.34
Neutral Zone	0.58	0.56		0.57	0.58				0.58	0.58	0.59
Qatar	0.82	0.80		0.80	0.85				0.84	0.83	0.85
Angola[6]		1.61		1.71	1.80				1.77	1.83	1.88
Nigeria	2.24	2.13		2.14	2.05				2.01	1.84	1.90
Libya	1.71	1.71		1.74	1.76				1.76	1.75	1.73
Algeria	1.35	1.36		1.38	1.39				1.39	1.38	1.38
Ecuador[6]					0.50				0.50	0.50	0.50
Venezuela	2.56	2.39		2.42	2.40				2.35	2.32	2.36
Indonesia	0.89	0.84		0.83	0.85				0.87	0.86	0.86
Total Crude Oil[6]	29.71	30.66		31.55	32.34				32.12	31.91	32.31
Total NGLs[1,6]	4.63	4.81	5.12	4.88	4.94	4.96	5.17	5.42	4.94	4.96	4.96
Total OPEC[6]	34.34	35.47		36.43	37.28				37.06	36.87	37.26
OPEC incl. Angola & Ecuador[6]	36.29	35.94		36.76	37.28				37.06	36.87	37.26
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.14	14.13	14.21	13.89	14.05	14.42	14.27	13.93	13.90
United States	7.34	7.48	7.55	7.52	7.65	7.57	7.44	7.55	7.73	7.58	7.57
Mexico	3.68	3.48	3.24	3.32	3.28	3.21	3.23	3.26	3.21	3.14	3.26
Canada	3.19	3.32	3.35	3.29	3.28	3.11	3.39	3.61	3.32	3.21	3.07
Europe	5.18	4.95	4.58	5.00	4.89	4.47	4.34	4.60	4.89	4.63	4.49
UK	1.66	1.66	1.48	1.70	1.64	1.44	1.34	1.50	1.66	1.45	1.42
Norway	2.78	2.56	2.37	2.58	2.52	2.30	2.28	2.39	2.52	2.44	2.35
Others	0.74	0.73	0.72	0.72	0.73	0.73	0.72	0.72	0.71	0.73	0.73
Pacific	0.58	0.63	0.73	0.65	0.60	0.72	0.75	0.84	0.60	0.71	0.72
Australia	0.53	0.55	0.61	0.54	0.50	0.61	0.63	0.70	0.50	0.60	0.61
Others	0.05	0.08	0.12	0.10	0.11	0.11	0.12	0.14	0.10	0.11	0.11
Total OECD	19.97	19.84	19.45	19.77	19.71	19.08	19.15	19.87	19.77	19.27	19.11
NON-OECD											
Former USSR	12.25	12.77	13.08	12.82	12.81	12.86	13.12	13.51	12.84	12.72	12.87
Russia	9.84	10.08	10.12	10.08	10.00	9.97	10.17	10.32	9.98	9.93	9.95
Others	2.40	2.69	2.96	2.74	2.81	2.89	2.95	3.19	2.86	2.78	2.92
Asia	6.38	6.40	6.55	6.40	6.44	6.51	6.58	6.67	6.41	6.44	6.55
China	3.67	3.73	3.83	3.68	3.76	3.83	3.86	3.88	3.77	3.75	3.86
Malaysia	0.75	0.76	0.80	0.79	0.77	0.79	0.81	0.82	0.77	0.79	0.79
India	0.79	0.81	0.81	0.81	0.81	0.81	0.81	0.80	0.81	0.81	0.81
Others	1.17	1.11	1.11	1.11	1.09	1.08	1.10	1.16	1.06	1.08	1.09
Europe	0.15	0.13	0.12	0.13	0.13	0.12	0.12	0.12	0.13	0.12	0.12
Latin America	4.38	4.32	4.07	4.19	3.95	3.98	4.15	4.19	3.93	3.96	3.92
Brazil	2.10	2.14	2.34	2.13	2.21	2.27	2.42	2.47	2.20	2.22	2.27
Argentina	0.77	0.75	0.75	0.74	0.75	0.73	0.75	0.75	0.76	0.75	0.69
Colombia	0.53	0.54	0.56	0.56	0.57	0.56	0.56	0.56	0.57	0.56	0.54
Ecuador[6]	0.54	0.50		0.50							
Others	0.45	0.39	0.42	0.26	0.42	0.42	0.42	0.41	0.41	0.42	0.42
Middle East[3]	1.74	1.66	1.59	1.63	1.62	1.60	1.58	1.56	1.64	1.60	1.60
Oman	0.75	0.72	0.71	0.72	0.73	0.72	0.71	0.70	0.76	0.71	0.72
Syria	0.42	0.40	0.38	0.39	0.39	0.38	0.38	0.37	0.39	0.38	0.38
Yemen	0.38	0.34	0.31	0.32	0.31	0.31	0.30	0.30	0.31	0.31	0.31
Africa	3.91	2.51	2.56	2.55	2.54	2.55	2.58	2.56	2.52	2.54	2.56
Egypt	0.67	0.63	0.61	0.63	0.62	0.61	0.61	0.60	0.62	0.62	0.61
Angola[6]	1.37										
Gabon	0.23	0.23	0.23	0.23	0.22	0.23	0.24	0.24	0.21	0.22	0.24
Others	1.63	1.64	1.72	1.68	1.70	1.71	1.73	1.73	1.69	1.71	1.71
Total Non-OECD	28.81	27.80	27.96	27.71	27.49	27.63	28.12	28.61	27.47	27.38	27.64
Processing Gains[4]	2.04	2.07	2.13	2.11	2.11	2.10	2.14	2.17	2.11	2.10	2.10
Other Biofuels[5]	0.25	0.33	0.49	0.35	0.43	0.49	0.49	0.56	0.43	0.49	0.49
TOTAL NON-OPEC	51.07	50.05	50.04	49.94	49.73	49.30	49.90	51.21	49.77	49.24	49.34
Non-OPEC excl. Angola & Ecuador[6]	49.12	49.58	50.04	49.61	49.73	49.30	49.90	51.21	49.77	49.24	49.34
TOTAL SUPPLY	85.41	85.52		86.36	87.02				86.83	86.11	86.60

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Dec2007	Jan2008	Feb2008	Mar2008	Apr2008*	Apr2005	Apr2006	Apr2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	432.7	446.0	454.3	464.9	466.2	455.9	476.2	475.1	0.31	-0.34	-0.30	0.35
Motor Gasoline	244.1	261.8	263.1	250.6	239.6	246.8	236.9	225.1	0.04	-0.07	0.18	0.07
Middle Distillate	208.4	206.2	189.3	178.3	175.7	176.7	191.4	193.3	0.05	0.11	0.03	-0.33
Residual Fuel Oil	47.4	47.6	47.0	47.8	47.0	45.7	48.5	46.6	-0.03	0.00	0.03	0.00
Total Products[3]	663.2	669.8	645.1	622.6	618.5	643.3	636.2	633.0	0.28	0.15	-0.07	-0.45
Total[4]	1237.5	1253.4	1236.2	1224.2	1219.4	1238.9	1255.6	1253.1	0.67	-0.01	-0.60	-0.15
Europe												
Crude	327.5	327.3	318.4	329.5	325.1	340.8	334.9	339.8	0.09	-0.13	0.07	0.02
Motor Gasoline	114.3	120.8	121.3	120.7	122.4	115.5	104.6	102.9	-0.10	0.05	0.11	0.07
Middle Distillate	240.6	250.6	235.8	244.7	237.6	239.7	253.3	269.0	0.02	-0.06	-0.18	0.04
Residual Fuel Oil	75.1	79.2	77.6	81.4	81.1	70.8	74.9	71.6	-0.04	0.11	-0.04	0.07
Total Products[3]	537.2	559.8	540.1	554.5	548.8	530.0	534.5	545.2	-0.15	0.16	-0.10	0.19
Total[4]	938.5	957.4	928.7	955.0	944.0	944.9	945.0	959.1	-0.04	0.02	-0.03	0.18
Pacific												
Crude	159.9	165.9	162.6	155.6	162.1	158.5	171.1	168.5	-0.02	-0.10	-0.01	-0.05
Motor Gasoline	22.3	22.8	23.0	26.4	23.9	25.3	24.9	24.0	0.00	-0.03	0.01	0.05
Middle Distillate	70.4	69.2	58.0	57.1	58.5	55.1	57.9	59.3	0.08	0.10	-0.08	-0.15
Residual Fuel Oil	21.4	20.0	19.2	20.1	21.7	21.5	22.4	22.3	0.00	0.04	-0.05	-0.01
Total Products[3]	174.8	174.5	159.4	164.6	165.1	164.1	170.6	167.3	0.12	0.15	-0.23	-0.11
Total[4]	404.3	414.3	393.6	391.1	398.8	391.8	413.0	409.5	0.10	0.03	-0.27	-0.14
Total OECD												
Crude	920.1	939.1	935.2	950.0	953.5	955.2	982.2	983.4	0.38	-0.57	-0.24	0.33
Motor Gasoline	380.7	405.4	407.4	397.7	385.8	387.7	366.4	352.0	-0.06	-0.05	0.30	0.19
Middle Distillate	519.4	526.0	483.1	480.1	471.8	471.5	502.5	521.6	0.15	0.16	-0.23	-0.43
Residual Fuel Oil	143.8	146.8	143.9	149.2	149.7	138.1	145.8	140.6	-0.07	0.15	-0.05	0.06
Total Products[3]	1375.2	1404.1	1344.5	1341.6	1332.3	1337.4	1341.2	1345.4	0.25	0.46	-0.39	-0.37
Total[4]	2580.3	2625.1	2558.5	2570.3	2562.2	2575.6	2613.6	2621.6	0.74	0.04	-0.91	-0.11

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Dec2007	Jan2008	Feb2008	Mar2008	Apr2008*	Apr2005	Apr2006	Apr2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	696.9	698.4	698.8	700.4	701.6	691.9	687.9	689.4	0.02	0.03	0.05	0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	184.6	184.2	184.9	185.0	185.0	164.4	171.0	174.7	0.01	0.02	0.08	0.00
Products	235.6	236.3	236.5	237.9	237.9	208.4	233.4	241.0	-0.04	0.08	-0.09	0.02
Pacific												
Crude	385.1	385.1	385.0	385.0	385.0	384.5	380.5	385.1	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.0	11.4	16.4	0.00	0.02	0.01	0.00
Total OECD												
Crude	1266.6	1267.6	1268.7	1270.4	1271.6	1240.8	1239.4	1249.1	0.03	0.05	0.12	0.04
Products	256.5	257.2	257.4	258.8	258.8	221.4	246.8	259.4	-0.04	0.10	-0.08	0.02
Total[4]	1524.1	1526.5	1527.1	1530.1	1531.3	1463.2	1487.2	1509.5	-0.01	0.15	0.04	0.07

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End March 2007		End June 2007		End September 2007		End December 2007		End March 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	182.5	80	189.7	80	201.4	86	205.8	88	202.6	-
Mexico	40.5	20	43.8	22	43.5	21	45.0	22	46.8	-
United States[4]	1678.8	81	1731.0	84	1720.9	83	1663.6	84	1655.1	-
Total[4]	1923.9	76	1986.6	78	1987.9	78	1936.5	79	1926.6	77
Pacific										
Australia	34.3	37	38.9	42	36.8	38	35.6	38	34.2	-
Japan	619.9	134	622.4	133	629.6	121	621.0	115	610.0	-
Korea	156.1	74	158.3	77	157.4	68	143.5	62	142.8	-
New Zealand	7.7	49	7.7	50	8.1	52	8.2	50	8.0	-
Total	818.0	105	827.3	106	831.9	96	808.3	92	795.0	101
Europe[5]										
Austria	24.0	81	21.1	74	22.1	76	22.1	81	23.3	-
Belgium	28.2	51	28.7	51	27.8	45	26.1	43	31.1	-
Czech Republic	20.2	92	20.5	95	19.5	98	20.2	102	20.4	-
Denmark	18.3	96	17.1	89	18.9	94	17.1	95	16.4	-
Finland	29.5	136	26.3	111	29.7	126	27.1	125	30.5	-
France	166.1	90	174.5	91	175.3	87	179.9	92	177.5	-
Germany	289.1	120	283.5	110	276.5	107	274.6	110	277.2	-
Greece	33.6	85	35.6	85	34.8	74	37.4	81	34.3	-
Hungary	18.1	107	16.0	94	17.1	98	15.4	97	16.7	-
Ireland	12.9	69	11.1	56	12.6	63	10.6	56	12.1	-
Italy	133.9	80	133.0	82	134.2	78	132.9	83	130.9	-
Luxembourg	0.9	15	0.9	15	0.9	15	0.7	12	0.6	-
Netherlands	117.7	137	115.9	128	122.9	134	116.6	121	126.5	-
Norway	20.2	78	21.2	83	21.9	80	26.8	127	25.6	-
Poland	43.9	90	50.0	90	50.9	94	58.2	112	57.6	-
Portugal	23.7	78	24.7	80	23.2	75	23.7	81	24.7	-
Slovak Republic	7.0	83	6.9	79	7.7	86	7.9	97	9.0	-
Spain	129.3	81	130.5	82	136.7	84	133.9	84	134.2	-
Sweden	38.0	105	35.2	99	33.6	93	34.5	99	34.2	-
Switzerland	38.7	173	38.5	157	38.1	132	35.9	140	36.5	-
Turkey	59.2	89	60.5	80	61.1	92	60.3	90	59.0	-
United Kingdom	105.8	59	100.8	58	98.5	57	97.7	57	100.5	-
Total	1358.3	91	1352.5	88	1364.1	88	1359.6	90	1378.8	91
Total OECD	4100.2	85	4166.3	86	4184.0	84	4104.4	85	4100.4	85
DAYS OF IEA Net Imports[6]	-	120	-	121	-	121	-	122	-	122

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End March 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
1Q2005	3995	1462	2533	82	30	52
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2628	82	30	52
4Q2005	4073	1487	2586	81	29	51
1Q2006	4073	1487	2585	85	31	54
2Q2006	4141	1493	2648	85	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4167	1499	2668	84	30	54
1Q2007	4100	1507	2593	85	31	54
2Q2007	4166	1506	2660	86	31	55
3Q2007	4184	1520	2664	84	31	54
4Q2007	4104	1524	2580	85	31	53
1Q2008	4100	1530	2570	85	32	54

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 1Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Jan 08	Feb 08	Mar 08	Year Earlier Mar 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.73	0.71	0.78	0.78	0.79	0.78	0.75	0.65	0.10
Europe	0.90	0.78	0.70	0.64	0.74	0.68	0.67	0.70	0.55	0.75	0.78	-0.03
Pacific	1.31	1.32	1.19	1.20	1.15	1.25	1.29	1.30	1.30	1.28	1.22	0.05
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.59	0.57	0.55	0.53	0.58	0.53	0.30	0.23
Europe	0.16	0.14	0.05	0.10	0.02	0.04	0.05	0.06	0.06	0.04	0.04	0.00
Pacific	0.26	0.35	0.34	0.31	0.31	0.38	0.43	0.35	0.43	0.52	0.37	0.15
Saudi Heavy												
North America	0.17	0.21	0.09	0.05	0.11	0.04	0.09	0.10	0.04	0.14	0.04	0.10
Europe	0.23	0.18	0.11	0.16	0.11	0.09	0.04	0.05	0.02	0.05	0.07	-0.02
Pacific	0.25	0.23	0.20	0.18	0.20	0.23	0.22	0.25	0.21	0.19	0.18	0.01
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.39	0.64	0.45	0.67	0.52	0.91	0.59	0.54	0.05
Europe	0.23	0.32	0.30	0.28	0.38	0.24	0.20	0.17	0.17	0.26	0.21	0.05
Pacific	0.06	0.08	0.17	0.18	0.20	0.21	0.13	0.14	0.19	0.06	0.13	-0.07
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.05	0.01	0.11	-	0.06	0.32	0.21	0.26	0.18	0.19	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.27	0.21	0.24	0.24	0.25	0.24	0.20	0.04
Pacific	0.15	0.13	0.09	0.06	0.07	0.11	0.11	0.14	0.10	0.11	0.17	-0.06
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.62	0.60	0.47	0.44	0.48	0.35	0.49	0.51	-0.02
Pacific	0.62	0.56	0.64	0.63	0.56	0.73	0.65	0.77	0.60	0.59	0.78	-0.19
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.71	0.75	0.86	0.77	0.78	0.71	0.80	0.66	0.13
Europe	0.04	0.11	0.08	0.07	0.09	0.05	0.07	0.06	0.04	0.10	0.07	0.04
Pacific	-	-	0.01	-	-	0.02	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.70	0.76	0.68	0.60	0.59	0.63	0.60	0.50	0.10
Europe	0.06	0.06	0.07	0.09	0.06	0.06	0.07	0.06	0.06	0.08	0.06	0.02
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.25	1.24	1.02	1.03	1.02	1.02	1.22	-0.20
Europe	0.17	0.16	0.14	0.11	0.18	0.15	0.14	0.13	0.19	0.12	0.14	-0.02
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.01	0.00	0.03	0.01	0.07	0.01	-	-
Europe	0.03	0.01	0.02	0.06	-	0.02	0.00	-	-	0.00	0.02	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.12	0.01	0.01	0.01	0.02	-	-	0.18	-
Europe	1.77	1.68	1.86	1.97	1.90	1.73	1.76	1.95	1.77	1.57	1.72	-0.15
Pacific	0.00	0.00	0.00	-	-	0.01	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.77	0.87	0.82	0.82	0.76	0.91	0.78	0.86	-0.07
Europe	0.35	0.33	0.24	0.27	0.22	0.23	0.27	0.41	0.16	0.24	0.18	0.06
Pacific	0.05	0.04	0.01	0.02	-	0.01	-	-	-	-	-	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.15	0.22	0.31	0.30	0.37	0.23	0.30	0.35	-0.04
Europe	0.07	0.10	0.07	0.02	0.08	0.11	0.09	0.04	0.05	0.18	0.06	0.12
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	0.03	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	2Q2007	3Q2007	4Q2007	1Q2008	Jan-08	Feb-08	Mar-08	Year Earlier Mar-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8111	8151	8267	7968	8105	8365	8095	7854	7893	0%
Europe	9792	9784	9771	9738	10062	9924	9771	10079	9288	9913	8793	13%
Pacific	6801	6813	6718	6340	6576	7003	7100	7279	7021	6997	6936	1%
Total OECD	25050	24792	24600	24229	24905	24895	24976	25723	24404	24764	24185	2%
LPG												
North America	18	14	27	14	38	41	27	37	31	13	19	-29%
Europe	248	264	276	282	244	291	305	347	321	247	248	0%
Pacific	527	579	557	588	502	572	599	613	592	592	630	-6%
Total OECD	793	858	860	884	785	903	931	997	944	853	897	-5%
Naphtha												
North America	115	71	39	31	33	60	25	22	40	15	14	8%
Europe	273	314	266	223	279	289	227	233	215	233	229	2%
Pacific	746	754	794	812	768	758	796	812	769	805	817	-1%
Total OECD	1133	1138	1099	1066	1080	1108	1049	1068	1024	1054	1060	-1%
Gasoline[3]												
North America	1034	1143	1131	1362	1198	1048	882	873	898	877	962	-9%
Europe	165	160	204	219	156	181	224	127	243	304	303	0%
Pacific	102	97	72	83	56	71	111	95	119	120	70	72%
Total OECD	1301	1400	1407	1663	1410	1301	1218	1095	1259	1302	1335	-2%
Jet & Kerosene												
North America	173	161	183	204	205	143	96	139	79	67	215	-69%
Europe	375	374	367	349	386	401	359	345	318	412	356	16%
Pacific	66	71	41	35	37	43	44	43	46	42	23	88%
Total OECD	614	606	590	588	628	587	499	528	444	521	594	-12%
Gasoil/Diesel												
North America	143	175	130	142	142	106	99	142	96	60	161	-63%
Europe	845	967	779	638	745	827	918	957	836	955	813	17%
Pacific	79	81	94	97	90	106	103	85	128	96	94	3%
Total OECD	1067	1223	1004	877	977	1040	1120	1185	1060	1112	1067	4%
Heavy Fuel Oil												
North America	527	343	323	323	286	320	328	423	303	255	449	-43%
Europe	491	476	434	420	457	400	478	464	462	509	432	18%
Pacific	85	92	92	97	92	101	125	136	141	99	75	32%
Total OECD	1102	911	848	840	835	821	930	1023	905	862	956	-10%
Other Products												
North America	1024	1119	1052	1209	1032	932	1041	1185	1031	907	1107	-18%
Europe	781	929	870	856	924	832	745	733	695	805	791	2%
Pacific	248	243	252	207	262	282	290	352	249	267	312	-15%
Total OECD	2053	2290	2173	2272	2218	2046	2077	2270	1975	1979	2211	-10%
Total Products												
North America	3034	3025	2885	3285	2934	2650	2498	2822	2477	2195	2928	-25%
Europe	3177	3484	3195	2987	3192	3222	3257	3206	3090	3465	3173	9%
Pacific	1852	1918	1901	1918	1808	1934	2068	2137	2043	2022	2020	0%
Total OECD	8063	8426	7981	8191	7933	7806	7823	8165	7609	7682	8120	-5%
Total Oil												
North America	11490	11219	10996	11436	11201	10619	10603	11187	10572	10049	11384	-12%
Europe	12970	13268	12966	12725	13253	13145	13028	13285	12378	13379	11966	12%
Pacific	8654	8731	8619	8258	8384	8937	9169	9416	9064	9019	8956	1%
Total OECD	33113	33218	32581	32420	32838	32701	32800	33888	32014	32446	32305	0%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

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User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (*OMR), *Medium-Term Oil Market Report (MTOMR) Report and Annual Statistical Supplement* (current issue of the statistical supplement dated 10 August 2007), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2008 Platts - a division of McGraw-Hill Inc.).

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OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

10 July 2008

HIGHLIGHTS

- **Crude oil futures** fell back from their early-July $145/bbl peak, but remain high, supported by a meagre 2Q08 stockbuild, tight distillate markets and ongoing geopolitical risks. Refiners are paying record premiums for distillate-rich crudes in an effort to bolster yields; however, weak gasoline and fuel oil cracks are keeping refining margins low.

- **Non-OPEC supply** is seen rising 640 kb/d to 50.6 mb/d in 2009, following a late-year increase in 2008, with Asia, the Caspian, Brazil, Canada and the US adding to supplies. In addition, NGLs from Saudi Arabia, Qatar, the UAE, Nigeria and Iran underpin the 810 kb/d expansion in OPEC gas liquids in 2009.

- **OPEC crude supply** increased by 350 kb/d in June to 32.4 mb/d, as Saudi Arabian supply rose to 9.45 mb/d and exports from floating storage lifted Iranian supply to 3.8 mb/d. Although higher supply lowers effective OPEC spare capacity to 1.7 mb/d, increases from Saudi Arabia, Angola, Iraq and Nigeria lift overall capacity by around 1.0 mb/d by end-2008.

- **Global oil product demand** is expected to grow by 1.1% or 860 kb/d to 87.7 mb/d in 2009, on a par with 890 kb/d growth in 2008. High oil prices contribute to a contraction in OECD oil product demand, offset by robust growth in developing economies. Strong non-OECD consumption also offsets downward revisions elsewhere, lifting 2008 demand by a modest 80 kb/d.

- **A counter-seasonal US crude stock draw** restricted the May OECD total oil stockbuild to 23.9 mb, only half its usual gain. Preliminary June data suggest a total 2Q08 OECD stock change of around +100 kb/d, well below the five-year average 2Q build of 900 kb/d.

- **3Q08 global refinery throughput** is revised down by 0.4 mb/d to 75.3 mb/d on weak OECD demand and poor margins. The addition of 2 mb/d of crude distillation capacity and significant investment in upgrading units elsewhere should keep gasoline markets well supplied and slightly ease middle distillate tightness during early 2009.

Next Issue: 12 August 2008

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AN EASIER TIME IN 2009?

The IEA's *Medium-Term Oil Market Report*, published on 1 July, highlighted the ongoing supply-side constraints in the world oil market; this month's *Oil Market Report* provides the opportunity to look at the shorter term as we rollout the forecast to 2009.

Data for the first five months of this year reflect the tighter market balance exemplified by current high prices. OECD stocks built by 24 mb in May, with product stocks broadly rising in line with seasonal norms. But with crude stocks seeing an unusually large draw in the US, leaving the monthly oil build around half normal levels. Together with preliminary data for June we can take a first glance at second quarter stocks, which appear to have built by just 100 kb/d, well below the 900 kb/d five-year average, and our balances suggest that there was little opportunity for stocks to rebuild globally.

Forecasting uncertainties are always present, but arguably have increased in recent years. With economists debating the length of the current US slowdown, superficially the risks to demand appear to be on the downside. However, while that may be true for the OECD, robust near-term oil demand in developing countries has led to some upward revisions in the non-OECD.

Similarly, supply-side issues are ever-present. While we always try to take a cautious stance on new project start-ups, slippage has been a major cause of supply-side revisions over the past few years. Additional uncertainties can stem from weather and field reliability issues, but these may swing both ways. Within our numbers we have allowances for both field reliability (400 kb/d) and seasonal hurricane outages (300 kb/d in September/October), which help to moderate all but the most severe outages. But of course to these we also need to add ongoing geopolitical concerns.

Keeping OPEC output steady at June levels until the end of the year implies an improvement in global stock levels. Allow for forecasting risks and it becomes less certain that we will see a stockbuild. For that reason, the additional 250 kb/d pledged by Saudi Arabia from July provides insurance that the crude market should improve. Moreover, as we head into early 2009, the bunching of new projects should lead to an increase in crude oil spare capacity.

But current high prices are not just about crude oil tightness. In the *MTOMR* we argued that refinery tightness is a major contributor to high prices, exemplified by the current diesel market. Recently, emergency power generation needs in Australia, South Africa and South America, coupled with a surge in China's middle distillate imports, have exacerbated diesel tightness. Of these problems, only the Australian outage looks set to improve significantly by the end of this year. China's recent shifts in retail prices seem unlikely to make the teapot sector profitable in the short term, but regional supplies should increase over the second half of the year and into 2009 as new refining capacity comes on stream in both China and India (notably the Jamnagar refinery).

Looking at diesel and middle distillate balances on a quarterly basis, there is the potential for the current tightness to start to ease slightly in 3Q08, but that may be over-optimistic. Given the potential for demand surges in China in the hot summer months, the need to build stocks ahead of the winter, new low-sulphur diesel specifications from 1 January 2009 in Europe and potential refinery start-up problems, it would seem more likely that product markets will only truly ease once weather risks from the 2008/09 winter have diminished. In other words, both crude and middle distillate markets may see some respite in the second half of 2008, but more likely by early next year.

DEMAND

Summary

- **Global oil product demand** is expected to reach 87.7 mb/d in 2009, compared with 86.9 mb/d in 2008. This represents an annual increase of 1.0% or 860 kb/d, very similar to the growth forecast for this year (890 kb/d). In terms of revisions, demand in 2008 is adjusted up slightly (+80 kb/d), as upward changes in non-OECD countries offset downward revisions in the OECD. It should be noted, however, that this report does not include the customary July edition revisions to annual OECD data, given some late submissions. The new figures will be included in next month's report.

- **OECD oil product demand** is seen averaging 48.0 mb/d in 2009 (1.2% or 0.6 mb/d below 2008), as rising oil prices continue to take their toll. The contraction in demand is expected to be particularly marked in North America (-380 kb/d), given the weakness of the US economy and high oil prices. Demand in both Europe and the Pacific is seen falling by roughly 100 kb/d each, as structural trends are amplified by high prices. Regarding the prognosis for 2008, demand is lowered by about 50 kb/d. A large revision of April's figures in the US, coupled with weaker-than-expected demand in Germany and Italy, offset stronger Japanese demand for residual fuel oil and crude for power generation. In addition, Australian gasoil imports are expected to be higher in the months ahead following an accidental disruption in natural gas supplies.

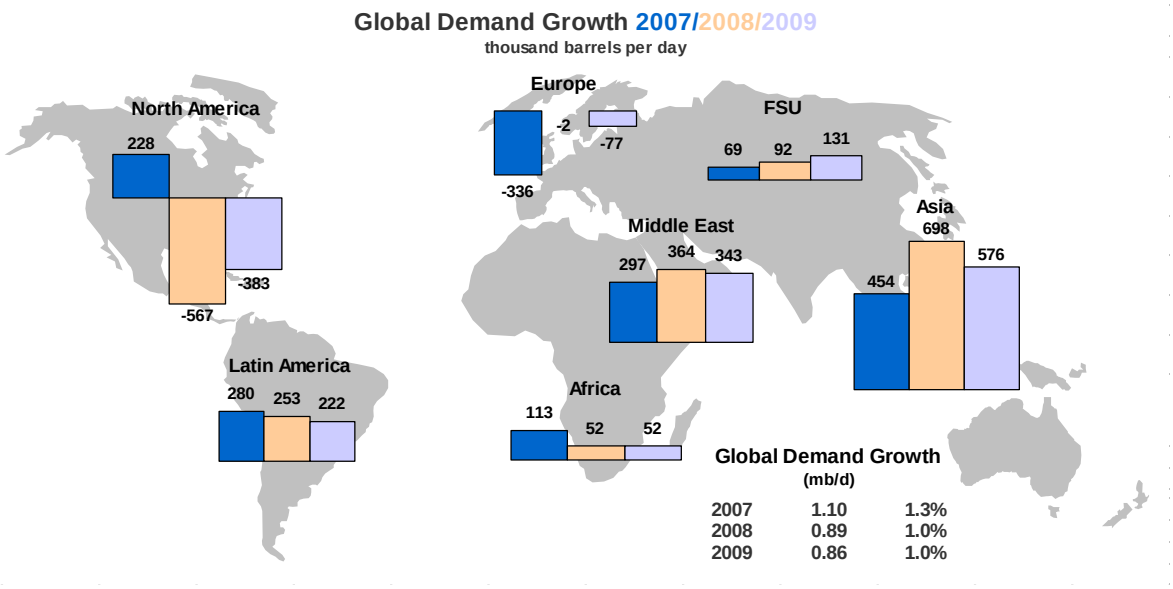
Global Oil Demand (2007-2009)

(million barrels per day)

	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.2	3.1	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Americas	31.1	31.0	31.2	31.3	31.1	30.4	30.7	31.1	31.1	30.8	30.2	30.5	30.9	31.0	30.7
Asia/Pacific	25.4	24.9	24.4	25.6	25.1	26.3	25.5	25.0	26.3	25.8	26.9	26.1	25.5	26.9	26.3
Europe	16.0	15.7	16.1	16.3	16.0	16.0	15.8	16.1	16.2	16.0	15.9	15.7	16.0	16.2	15.9
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.3
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	6.9	7.1	6.8	6.9	7.1	7.2	7.5	7.2	7.2
World	**86.1**	**85.1**	**85.6**	**87.1**	**86.0**	**86.6**	**86.2**	**86.6**	**88.1**	**86.9**	**87.6**	**86.8**	**87.4**	**89.0**	**87.7**
Annual Chg (%)	0.6	1.8	1.2	1.7	1.3	0.6	1.3	1.1	1.1	1.0	1.1	0.8	1.0	1.1	1.0
Annual Chg (mb/d)	0.5	1.5	1.0	1.5	1.1	0.6	1.1	1.0	1.0	0.9	0.9	0.7	0.9	1.0	0.9
Changes from last OMR (mb/d)	0.01	0.00	-0.01	-0.01	0.00	0.03	0.09	0.10	0.11	0.08					

- **Non-OECD oil product demand** is forecast at 39.7 mb/d in 2009 versus 38.3 mb/d in 2008. At +3.8% (+1.4 mb/d), annual growth is expected to match that of 2008. Sustained economic growth in key areas (notably Asia, the Middle East and Latin America) will drive most of the increase in demand. Moreover, despite a recent wave of adjustments in administered price regimes, notably in Asia, retail prices in many countries continue to be much lower than international benchmarks. Meanwhile, demand in 2008 is revised up by 130 kb/d, largely as a result of upward adjustments in the Middle East (given stronger-than-expected demand for transportation fuels and residual fuel oil in Iran and Saudi Arabia) and, to a lesser extent, China (where the outlook for naphtha demand was reappraised).

- **This forecast faces several risks.** These include: 1) the global economic outlook, particularly with respect to the US and several large emerging countries; 2) the evolution of oil prices, whose rise is fuelling worldwide inflation; 3) sudden and large, as opposed to our assumption of gradual and moderate, increases in capped prices across most of the developing world; 4) weather conditions in the northern hemisphere; 5) interfuel substitution in favour or away from natural gas or renewables; and 6) data uncertainties, notably in non-OECD countries.



OECD

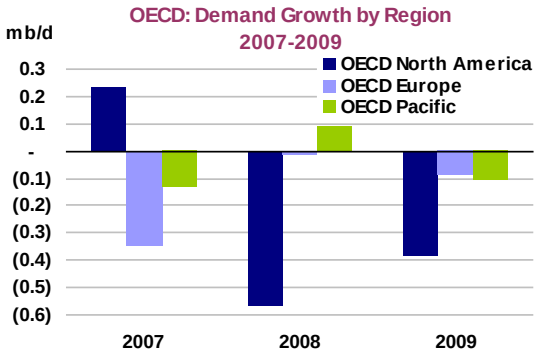
According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 0.7% year-on-year in May, with losses in North America and Europe offsetting gains in the Pacific. In **OECD North America** (including US Territories), oil product demand fell by 2.0%, as the US economy continues to weaken amid continually rising oil prices. In **OECD Europe**, demand fell by 1.0%, pulled down by Germany, the UK and Italy. In **OECD Pacific**, by contrast, demand rose by 3.9%, supported by strong Japanese growth.

OECD Demand based on Adjusted Preliminary Submissions - May 2008
(million barrels per day)

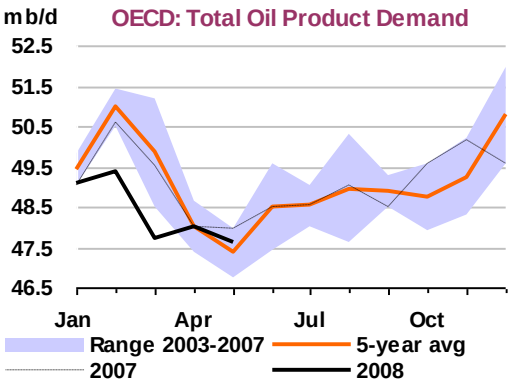
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.86**	**-1.4**	**1.81**	**-3.0**	**4.26**	**8.4**	**0.90**	**-23.4**	**1.10**	**-14.6**	**6.09**	**-2.70**	**25.01**	**-2.0**
US50	9.25	-2.1	1.58	-3.4	3.68	8.9	0.41	-39.7	0.59	-21.6	4.65	-3.9	20.16	-2.7
Canada	0.75	0.5	0.11	2.6	0.21	1.7	0.32	-4.4	0.12	0.9	0.81	1.4	2.32	0.3
Mexico	0.78	5.2	0.07	-4.9	0.31	8.9	0.13	8.9	0.29	-9.2	0.56	1.2	2.13	2.4
OECD Europe	**2.44**	**-4.8**	**1.30**	**1.9**	**4.28**	**0.5**	**1.49**	**3.9**	**1.62**	**-6.0**	**3.60**	**-0.7**	**14.73**	**-1.0**
Germany	0.47	-7.7	0.20	1.1	0.60	-3.4	0.27	-6.9	0.14	-19.3	0.60	2.7	2.29	-4.1
United Kingdom	0.42	-5.3	0.35	2.3	0.46	1.1	0.13	3.5	0.08	-14.2	0.29	-16.8	1.72	-4.3
France	0.22	-4.0	0.15	3.6	0.66	2.1	0.26	34.8	0.11	13.4	0.49	2.8	1.89	5.8
Italy	0.27	-9.1	0.09	3.1	0.55	-3.5	0.07	0.0	0.24	-16.5	0.37	-4.4	1.60	-6.4
Spain	0.15	-5.5	0.13	0.9	0.55	2.5	0.18	-6.7	0.20	-1.3	0.35	4.5	1.55	0.4
OECD Pacific	**1.49**	**-3.3**	**0.73**	**9.9**	**1.25**	**0.9**	**0.46**	**2.8**	**0.89**	**1.2**	**3.07**	**8.8**	**7.87**	**3.9**
Japan	0.92	-5.4	0.45	8.7	0.57	2.4	0.34	2.0	0.54	18.0	1.76	5.6	4.59	4.1
Korea	0.17	0.0	0.15	22.5	0.30	-5.3	0.12	5.4	0.32	-18.3	1.11	16.3	2.17	4.9
Australia	0.33	0.1	0.10	1.7	0.32	4.3	0.00	-33.6	0.02	-6.6	0.18	0.8	0.95	1.6
OECD Total	**14.79**	**-2.2**	**3.83**	**0.9**	**9.79**	**3.9**	**2.85**	**-6.7**	**3.61**	**-7.2**	**12.75**	**0.4**	**47.61**	**-0.7**

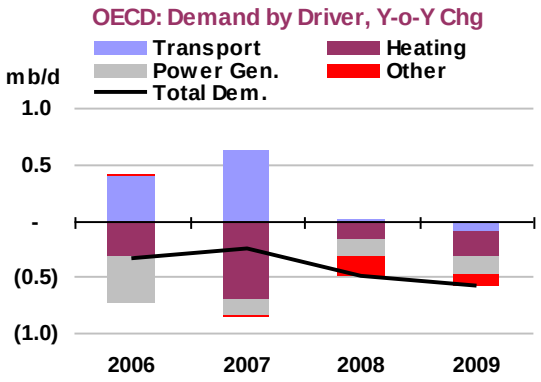
* Including US territories

April data were only slightly revised in both Europe (-40 kb/d) and the Pacific (+20 kb/d). In North America, by contrast, demand was sharply revised down in the US (almost -600 kb/d, partially carried forward through to end-2008). OECD demand is now forecast at 48.6 mb/d in 2008 (-1.0% or -0.5 mb/d versus 2007, and 50 kb/d lower than estimated in our last report). The prognosis for 2009, meanwhile, follows a similar trend: demand is expected to contract by 1.2% on a yearly basis (roughly -0.6 mb/d) to 48.0 mb/d, on the back of



continued high oil prices and a weakening US economy. Overall, all demand drivers (transportation, heating, power generation and other usages) in the OECD are set to contract in 2009. Needless to say, if prices continue to rise and/or if the economic outlook worsens, this forecast could trend lower.





Total OECD Demand by Product

(million barrels per day)

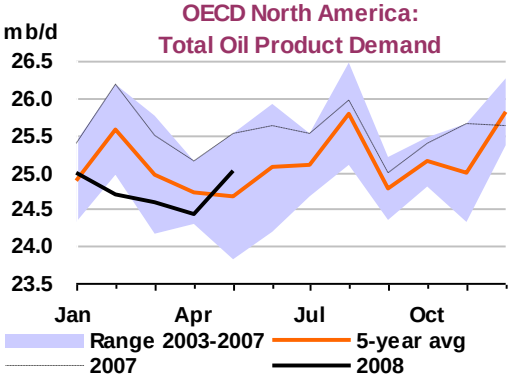
	2007	2008	2Q07	3Q07	4Q07	1Q08	Feb 08	Mar 08	Apr 08*	Latest month vs. Mar 08	Latest month vs. Apr 07
LPG & Ethane	4.80	4.73	4.64	4.44	4.90	5.14	5.29	4.94	4.71	-0.24	-0.13
Naphtha	3.21	3.13	3.06	3.15	3.24	3.21	3.26	3.10	2.95	-0.15	-0.20
Motor Gasoline	14.90	14.68	15.06	15.28	14.81	14.19	14.24	14.31	14.83	0.52	0.03
Jet & Kerosene	4.11	4.14	3.90	3.96	4.22	4.31	4.50	4.08	3.93	-0.15	-0.07
Gas/Diesel Oil	13.17	13.21	12.60	12.87	13.69	13.40	13.79	12.95	13.27	0.32	0.72
Residual Fuel Oil	3.92	3.71	3.87	3.76	3.89	3.84	3.72	3.70	3.63	-0.07	-0.16
Other Products	4.97	4.98	5.03	5.23	5.04	4.64	4.56	4.62	4.71	0.08	-0.16
Total Products	**49.08**	**48.57**	**48.16**	**48.69**	**49.79**	**48.72**	**49.38**	**47.71**	**48.01**	**0.31**	**0.02**

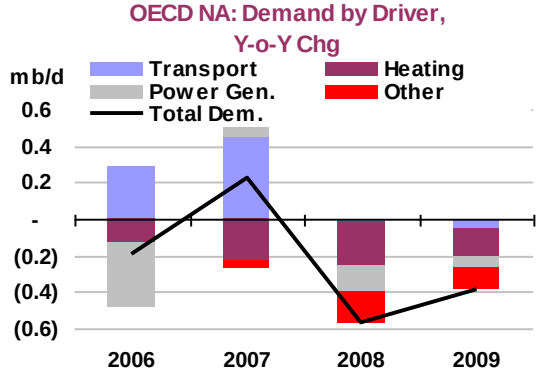
* Latest official OECD submissions (MOS)

North America

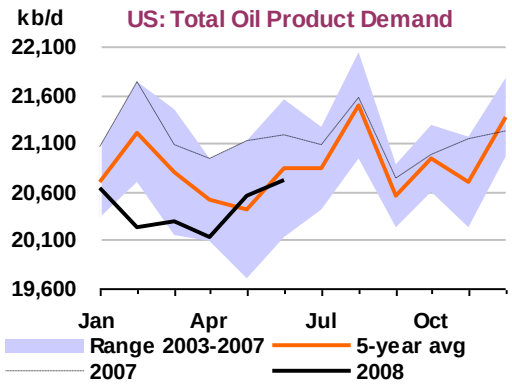
Preliminary May data indicate that oil product demand in North America (including US Territories) fell by 2.0% year-on-year, mostly because of continued weakness in the US. The contraction in regional deliveries was particularly marked in the case of high-sulphur gasoil (-23.4%, even though this is related to US reclassification issues, since low-sulphur non-road, locomotive and marine gasoil is now counted as diesel), residual fuel oil (-14.6%), and 'other products' (-5.5%).

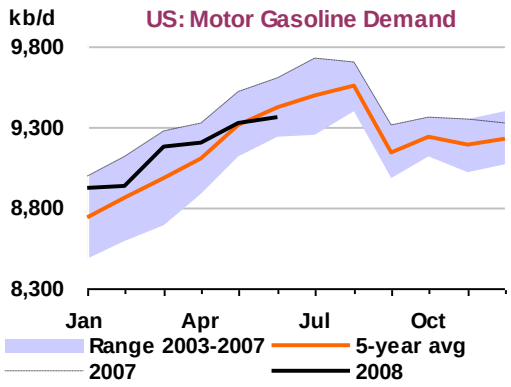
OECD North America demand is thus expected to average 25.0 mb/d in 2008 (-2.2% when compared with 2007). As a result of the economic slowdown in the US and high oil prices, this decline is seen continuing in 2009: demand is forecast at 24.6 mb/d, 1.5% or 380 kb/d lower than in 2008.



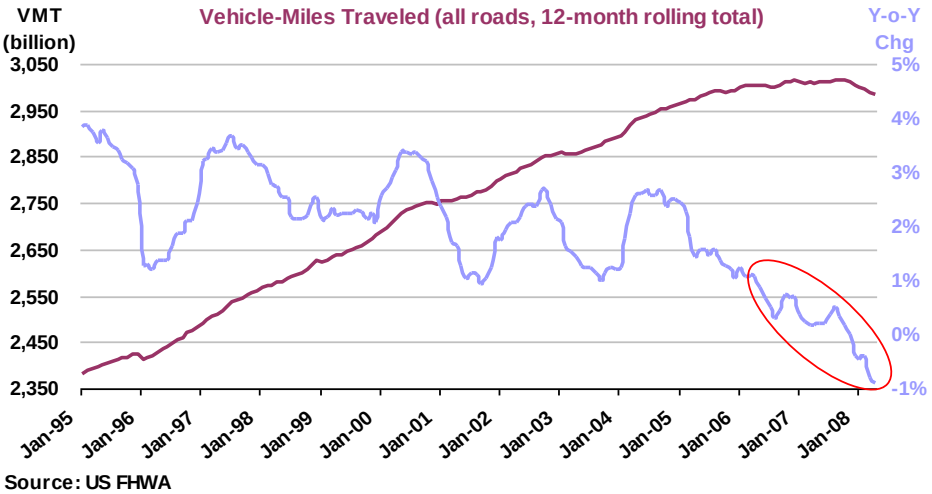


Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 2.7% year-on-year in May and by 2.3% in June, with all product categories bar gasoil registering losses. It is worth noting that demand for gasoline and jet fuel/kerosene shrank for the seventh consecutive month, providing further evidence of the effects of the ongoing economic slowdown and rising oil prices. Moreover, April data were sharply revised down (-600 kb/d). Our revision, however, was much lower than the EIA's (about -870 kb/d, of which 500 kb/d for 'other products'), since this report attempts to anticipate weekly-to-monthly data adjustments. US oil demand is now seen contracting by about 2.8% to 20.2 mb/d in 2008. This contraction is expected to be less pronounced in 2009 (-1.9%, equivalent to an average demand of 19.8 mb/d) given a slightly improved economic outlook.

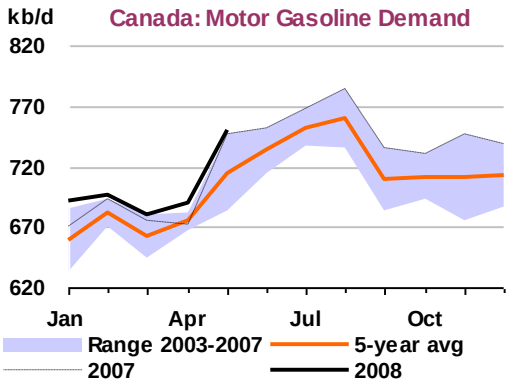


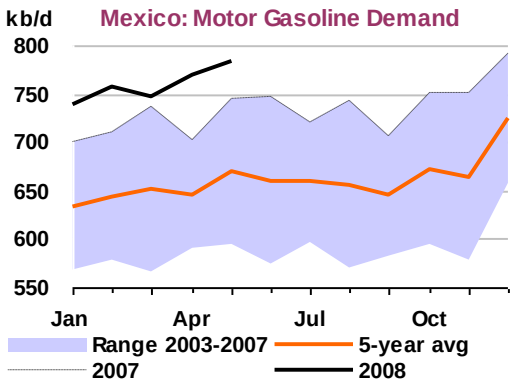


As this report has noted over the past few months, the most striking feature of the US oil market is the sharp contraction of gasoline demand. According to the US Federal Highway Administration, American motorist are driving less as the economy slows down and retail prices continue to increase (gasoline has surpassed the highly symbolic $4/gallon threshold). Preliminary figures (likely to be revised) indicate that the number of vehicle-miles travelled (VMT) fell by 0.9% year-on-year in April for the fifth month in a row. In fact, the pace of growth of VMT had begun to slow down significantly since 2006, as prices started to bite. Over the past two years, the seasonal rebound during the summer (the so-called 'driving season') was unusually weak. These data are backed by an array of anecdotal indicators, including high levels of public transport usage in big cities like New York, Chicago, Washington, Boston and Los Angeles, the increasing use of bicycles in urban areas, and the continuing fall of SUV and light truck sales, among others.



The demand outlook in both Canada and Mexico looks less bleak; in both countries demand is expected to remain essentially flat, but not contract as in the US. **Canadian** demand is expected to average 2.3 mb/d in both 2008 and 2009, largely supported by resilient gasoline consumption – the largest component of demand. Similarly, transportation fuels demand in **Mexico** will offset the sharp decline in residual fuel oil and, to a lesser extent, LPG and naphtha; as such, overall demand is seen averaging 2.1 mb/d this year and next. Admittedly, in Mexico subsidies are contributing to sustain the high pace of growth in transportation fuels demand, but at this point it is highly unlikely that they will be removed, given inflationary concerns and despite their high fiscal cost (estimated at some $20 billion in 2008, up from $5 billion in 2007).





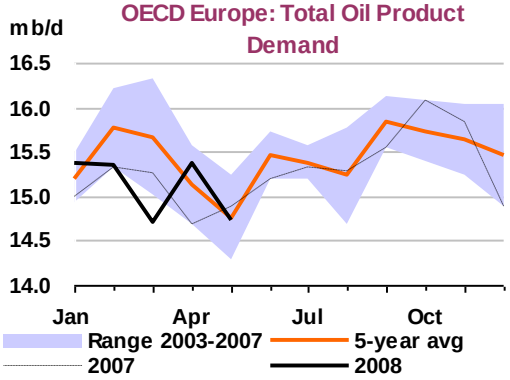
OECD North America Demand by Product
(million barrels per day)

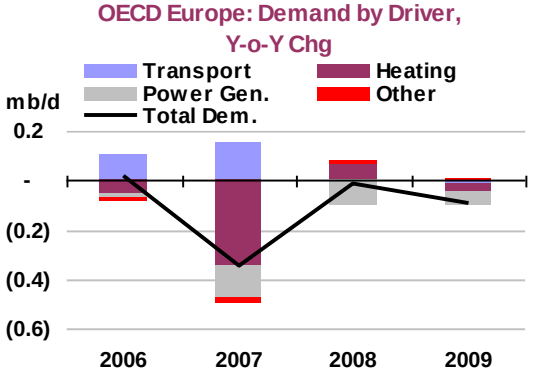
	2007	2008	2Q07	3Q07	4Q07	1Q08	Feb 08	Mar 08	Apr 08*	Latest month vs. Mar 08	Latest month vs. Apr 07
LPG & Ethane	2.91	2.84	2.75	2.70	2.94	3.09	3.16	2.95	2.68	-0.28	-0.21
Naphtha	0.43	0.38	0.45	0.43	0.43	0.37	0.38	0.35	0.40	0.06	-0.02
Motor Gasoline	10.85	10.73	10.94	11.07	10.85	10.45	10.39	10.61	10.67	0.06	-0.03
Jet & Kerosene	1.90	1.87	1.89	1.91	1.91	1.84	1.86	1.84	1.84	0.00	-0.06
Gas/Diesel Oil	5.27	5.18	5.13	5.13	5.34	5.29	5.38	5.21	5.11	-0.09	-0.02
Residual Fuel Oil	1.24	1.11	1.26	1.18	1.15	1.12	1.05	1.11	1.15	0.04	-0.05
Other Products	2.94	2.85	3.02	3.07	2.93	2.59	2.47	2.53	2.57	0.04	-0.35
Total Products	**25.53**	**24.97**	**25.44**	**25.49**	**25.54**	**24.76**	**24.69**	**24.59**	**24.42**	**-0.17**	**-0.73**

* Latest official OECD submissions (MOS)

Europe

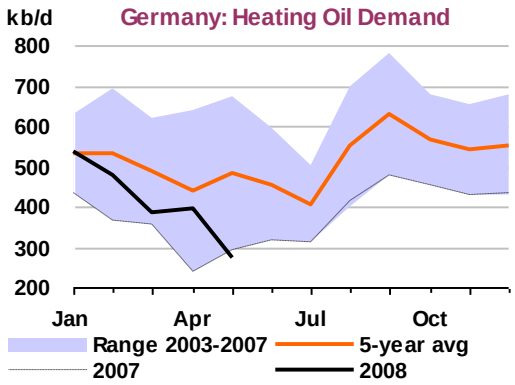
According to preliminary inland delivery data, European oil product demand shrank by 1.0% year-on-year in May. This implies a downward revision of our estimates of almost 120 kb/d, as demand for gasoil and residual fuel oil turned out to be weaker than expected. April estimates were revised down by roughly 40 kb/d following the submission of official oil statistics.

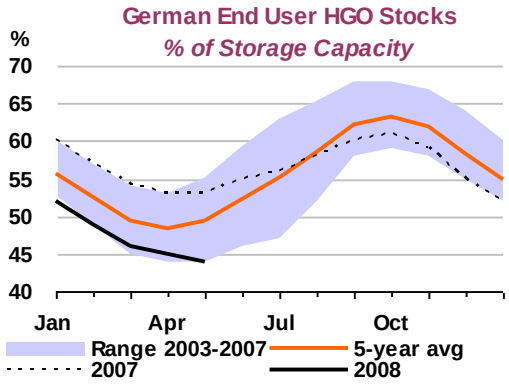




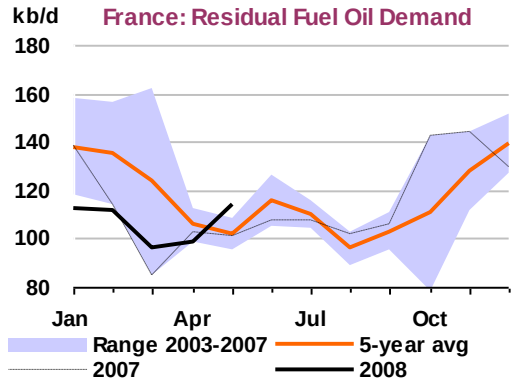
European demand, expected to average 15.3 mb/d in 2008 (virtually unchanged when compared with 2007), is seen contracting by 0.6% (-90 kb/d) to 15.2 mb/d in 2009. This decline is largely structural, driven by trends in the largest countries (France, Germany, Italy, Spain and the UK): modest economic growth, shrinking populations (notably in Germany, Italy and Spain), the ongoing 'dieselisation' of vehicle fleets, and the gradual substitution of residual fuel oil and heating oil in favour of natural gas and renewable energy sources.

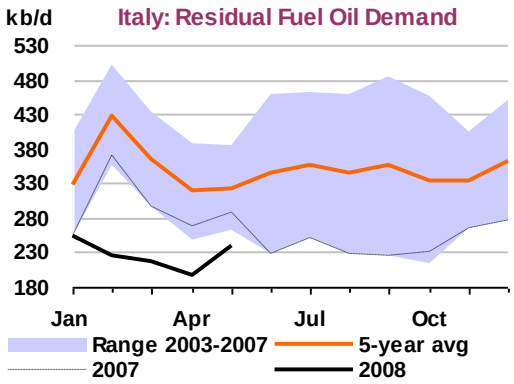
Inland deliveries in **Germany** contracted by 4.1% year-on-year in May. Gasoline, diesel, heating oil and residual fuel oil deliveries were particularly weak (-7.7%, -3.4%, -6.9% and -19.3%, respectively), partly because of the strong restocking observed in the previous month (with the exception of heating oil) but also due to relatively mild temperatures. High prices are also taking a toll: German consumer stocks of heating oil, which are usually replenished during the summer, remain at record lows, averaging 44% of capacity by end-May (from 45% a month earlier and 53% a year before).





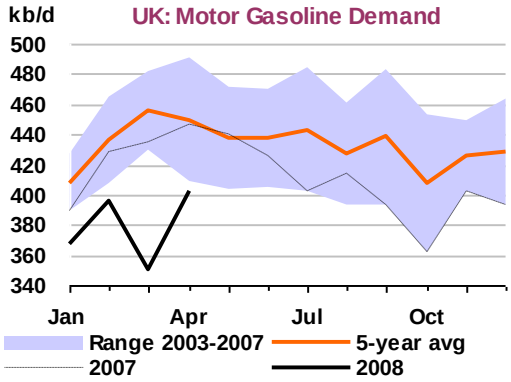
Demand in **France** soared by 5.8% year-on-year in May, with all products bar gasoline registering gains. By contrast to Germany, heating oil demand was 34.8% higher than last year, largely because of very weak sales in May 2007, which was particularly warm. Fuel oil deliveries, meanwhile, rose by 13.4%, boosted by strong electricity demand. In **Italy**, demand shrank by 6.4% year-on-year in May, dragged down by subdued diesel sales (-3.5%) and weak residual fuel oil deliveries (-16.5%).





Oil product demand in the **UK** rebounded by +2.6% in April (the latest month for which data are available), driven by strong distillates deliveries (jet fuel/kerosene soared by +9.2%, while gasoil rose by 3.4%). More importantly, at 9.9% below last year's level, the structural decline in gasoline demand is more in line with the average trend of the past few months.

The sharp fall seen in March (-19.6%) prompted some alarmist headlines in the British media, despite warnings that March was unusual because of Easter, which normally occurs in April (and when demand typically weakens sharply), and that extrapolating from a single data point is meaningless. The dieselisation of the vehicle fleet explains over half of the current rate of decline; only the rest can arguably be attributed to high prices and growing worries about the state of the British economy. Anecdotal evidence suggest that British consumers are indeed becoming more cost-conscious: Internet shopping appears to be on the rise, while retail sales in out-of-town centres – which are usually reached by car – are sliding.



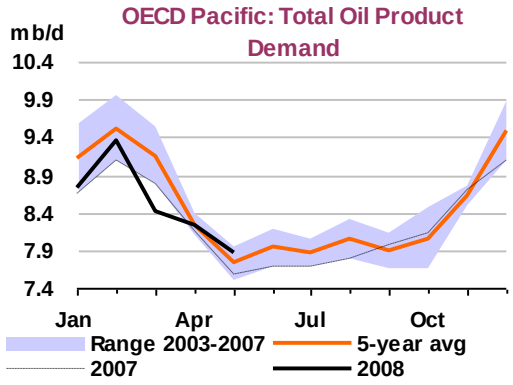
OECD Europe Demand by Product
(million barrels per day)

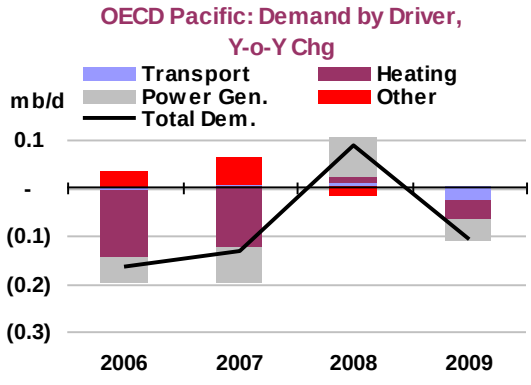
	2007	2008	2Q07	3Q07	4Q07	1Q08	Feb 08	Mar 08	Apr 08*	Latest month vs. Mar 08	Latest month vs. Apr 07
LPG & Ethane	0.97	0.98	0.97	0.88	1.00	1.08	1.09	1.04	1.07	0.03	0.10
Naphtha	1.12	1.10	1.05	1.08	1.14	1.14	1.17	1.13	1.02	-0.11	-0.06
Motor Gasoline	2.49	2.38	2.58	2.58	2.40	2.27	2.31	2.27	2.42	0.16	-0.13
Jet & Kerosene	1.29	1.32	1.28	1.39	1.28	1.24	1.23	1.24	1.29	0.04	0.06
Gas/Diesel Oil	6.12	6.26	5.73	6.07	6.50	6.32	6.54	5.93	6.36	0.42	0.73
Residual Fuel Oil	1.74	1.64	1.71	1.68	1.74	1.68	1.65	1.63	1.58	-0.05	-0.11
Other Products	1.54	1.58	1.60	1.69	1.54	1.42	1.35	1.46	1.63	0.17	0.08
Total Products	**15.28**	**15.26**	**14.92**	**15.38**	**15.60**	**15.14**	**15.34**	**14.70**	**15.37**	**0.67**	**0.67**

* Latest official OECD submissions (MOS)

Pacific

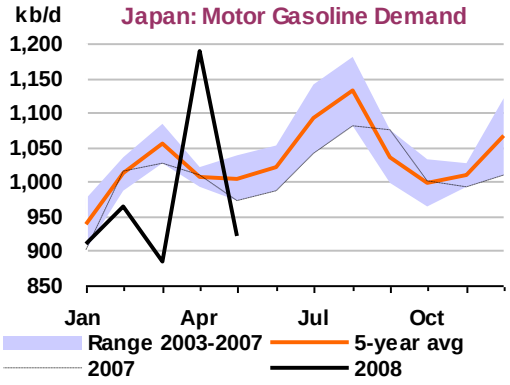
Preliminary data for May show that oil product demand in the Pacific jumped by 3.9% year-on-year, largely driven by buoyant growth in Japan and Korea. In particular, given stronger-than-expected demand in Japan for residual fuel oil and direct crude for power generation, OECD Pacific oil demand has been revised up by 280 kb/d in May. Looking forward, Australian diesel demand has been nudged up following a natural gas outage in the western part of the country. Regional demand is now seen averaging 8.4 mb/d in 2008 (+1.1% or +90 kb/d on a yearly basis). By contrast, it is expected to contract slightly in 2009 to 8.2 mb/d as Japan resumes its structural decline.

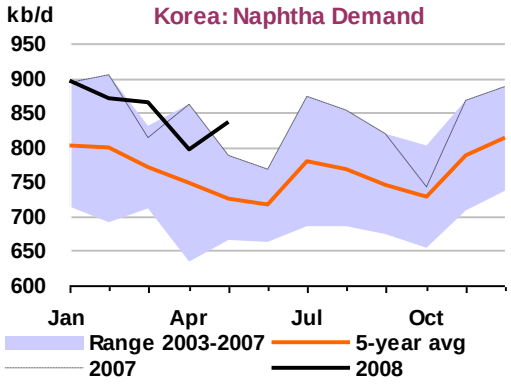




According to preliminary data, oil product demand in **Japan** – which accounts for about two-thirds of OECD Pacific's total – rose by 4.1% year-on-year in May, as all product categories bar naphtha and gasoline posted gains. Relatively cold temperatures (HDDs were higher than both the 10-year average and compared with last year) supported demand for jet fuel/kerosene (+8.7%), as well as fuel oil (+18.0%) and direct crude for power generation (included in 'other products', which rose by 33.0%). Gasoline deliveries predictably plummeted by 5.4% following the reinstatement of the gasoline tax; as such,

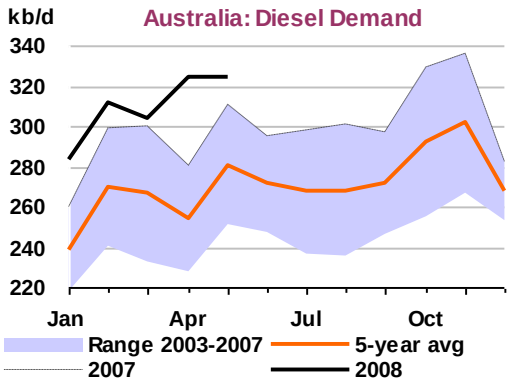
gasoline demand has resumed its briefly interrupted structural year-on-year decline. Therefore, even though oil-fired power generation is expected to remain strong at least until late 2009 given the ongoing problems of the domestic nuclear industry, Japanese demand is expected to shrink to 4.9 mb/d in 2009 (compared with 5.0 mb/d this year).





In **Korea**, preliminary data show that oil product demand rose by 4.9% year-on-year in May, mostly boosted by distillates and naphtha demand. By contrast, demand for transportation fuel is either flat (gasoline) or declining (diesel) as a result of high prices. In fact, rising energy prices have set the stage for a full-blown political crisis. Over the past few weeks, the country has gone through numerous demonstrations, a costly trucker strike, the implementation of fuel subsidies and tax rebates, a freeze of electricity and gas prices, and more recently, the announcement of a multi-stage contingency plan aimed at reducing energy consumption in the public sector. Given these woes, Korean oil demand is expected to grow modestly this year (2.2 mb/d on average) and next (2.3 mb/d), essentially supported by strong naphtha demand, which accounts for over a third of total consumption.

Australian demand is set to increase strongly this year (to almost 1.0 mb/d, +2.7% over 2007), largely as a result of buoyant domestic diesel needs, which have been further compounded by a recent accident. In early June, a pipeline blast at Apache Energy's Varanus Island oil and gas facility in Western Australia shut in about 30-40% of the country's natural gas supply. Given that the area is home to large mining concerns that are heavy power consumers, the accident led to a surge in diesel imports in order to fuel on-site generators. We estimate that this will translate in about 50 kb/d of additional diesel demand over June-August (equivalent to roughly 210,000 tonnes per month), which should then gradually diminish (all the gas production lost should be back by December, according to the company).



OECD Pacific Demand by Product
(million barrels per day)

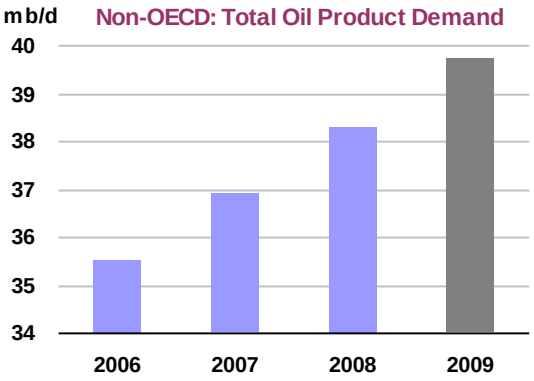
	2007	2008	2Q07	3Q07	4Q07	1Q08	Feb 08	Mar 08	Apr 08*	Latest month vs. Mar 08	Latest month vs. Apr 07
LPG & Ethane	0.93	0.91	0.92	0.86	0.95	0.98	1.04	0.95	0.96	0.01	-0.02
Naphtha	1.65	1.64	1.57	1.63	1.67	1.70	1.71	1.62	1.53	-0.10	-0.12
Motor Gasoline	1.57	1.56	1.54	1.63	1.57	1.47	1.54	1.44	1.74	0.30	0.19
Jet & Kerosene	0.91	0.95	0.73	0.65	1.03	1.23	1.41	0.99	0.79	-0.20	-0.07
Gas/Diesel Oil	1.78	1.76	1.75	1.67	1.86	1.78	1.87	1.81	1.80	-0.01	0.01
Residual Fuel Oil	0.94	0.96	0.89	0.90	0.99	1.04	1.02	0.97	0.90	-0.07	0.00
Other Products	0.49	0.55	0.41	0.48	0.58	0.63	0.74	0.63	0.51	-0.13	0.10
Total Products	**8.27**	**8.34**	**7.80**	**7.81**	**8.64**	**8.82**	**9.34**	**8.42**	**8.23**	**-0.19**	**0.08**

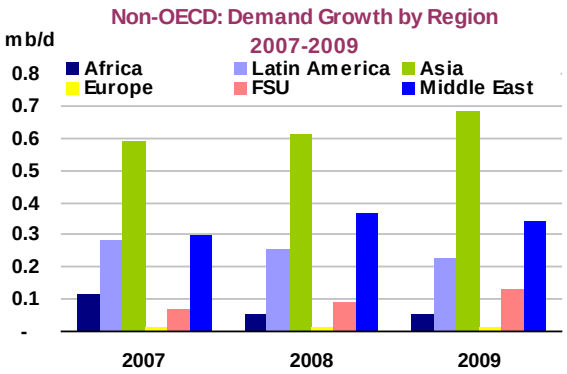
* Latest official OECD submissions (MOS)

Non-OECD

Our prognosis for non-OECD oil product demand in 2008 has been revised up by 130 kb/d, largely as a result of upward adjustments in the Middle East (given stronger-than-expected demand for transportation fuels and residual fuel oil in Iran and Saudi Arabia), and to a lesser extent, China (where the outlook of naphtha demand was reappraised). As such, non-OECD demand is seen averaging 38.3 mb/d in 2008 (+3.8% or 1.4 mb/d over 2007). This pace of growth is expected to prevail in 2009, bringing demand to 39.7 mb/d on average.

Sustained economic growth in key areas (notably Asia, the Middle East and Latin America) will drive most of the increase in demand, together with low prices. Despite a recent wave of adjustments in administered price regimes, notably in Asia, retail prices in many countries continue to be much lower than international levels. Demand is thus expected to increase by 5.8%, 5.0% and 3.8%, respectively, in China, the Middle East and Latin America.

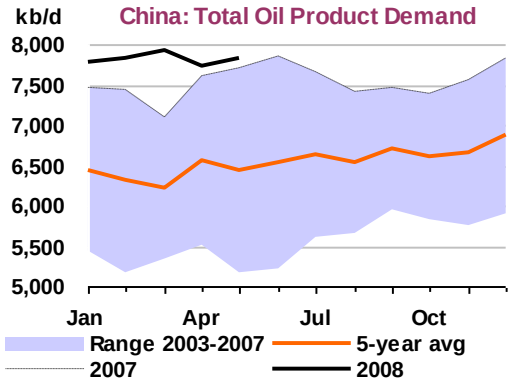


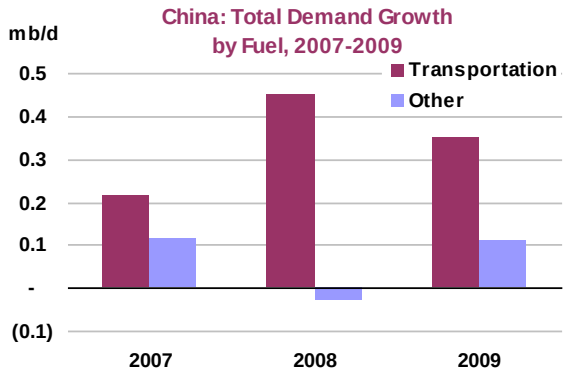


Nevertheless, this forecast faces several risks, largely related to rising oil prices, which could lead to a sudden and large – as opposed to a gradual and moderate – unwinding of administered price regimes in key emerging countries, which would have severe economic and social consequences. Another issue is related to data uncertainties, notably in the case of China.

China

Preliminary data show that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 1.6% year-on-year in May. This relatively modest rise was mostly related to sustained weakness in residual fuel oil demand – the feedstock of choice for 'teapot' refineries – which contracted by 9.3% compared with last year, and to a lower-than-expected increase in gasoil, which rose by 'only' 7.4%. Demand for gasoline, by contrast, was actually stronger than previously thought, soaring by 13.7%.





Demand growth has continued to be met by strong net oil product imports (+120 kb/d in May versus the previous month), as refinery maintenance curbed runs by 0.4% from April. Following a reappraisal of Chinese naphtha prospects, the country's total oil demand is seen averaging almost 8.0 mb/d (+5.6% over 2007). In 2009, demand is expected to grow at a similar pace to 8.4 mb/d.

Economics 101 versus Pent-Up Demand

Our forecast of Chinese demand may seem too bullish, especially in the light of the sharp gasoline and gasoil price hike of mid-June 2008 (about 15%, taking the average of the largest Chinese cities). Surely, demand should fall if prices increase? China, however, is not an economy where such a mechanistic approach can be easily applied. In fact, pent-up demand in China is arguably significant, only limited by supply constraints.

Oil demand is fuelled primarily by strong economic growth, not by artificially low retail prices. This has prompted a surge in mobility: the country's vehicle fleet of 160 million units (by end-2007, of which 76% are privately owned) accounts for over 80% of total gasoline consumption and around 40% of diesel demand, according to data from Sinopec, the National Bureau of Statistics and the Ministry of Public Security. Car owners from the country's affluent middle class are unlikely to cut back on car usage because of the rise: fuel prices in China's main cities currently average about ¢80/litre, only slightly above the cheapest country in Asia – Indonesia (¢65/litre) – but well below the most expensive one – Japan ($1.85/litre). In a previous attempt to reduce fuel demand, in April 2006 the Chinese government had sharply increased the consumption tax on large vehicles (with engines of two litres or higher) from 9% to 20%, but to little avail: sales of large cars continued unabated. Last year, for example, sales of gas-guzzling SUVs rose more than twice as fast (+50% versus +22%) as purchases of smaller cars, many of which maintain a reputation for poor manufacturing quality. Meanwhile, many other sectors will receive handouts to cushion the impact of the latest move, including farmers, fishermen, forestry workers, taxi drivers, the public transportation sector and truckers.

In fact, the price adjustment became unavoidable in order to ensure adequate supplies in the face of localised shortages and their potential negative consequences upon economic activity. (Contrary to some assertions, shortages have not been limited to Guangdong or Beijing, but have also occurred in several south-eastern provinces and in several major cities across the country, including Shanghai, Nanjing, Guangzhou and Changsha.) Before the recent hike, the government had resisted calls for further price adjustments beyond the 9% raise in November 2007, citing the threat of additional inflationary pressures and preferring to adopt other measures to ensure adequate supplies, especially ahead of the Olympic Games in August 2008. These measures, implemented over the past few months, included 1) an explicit monthly subsidy policy aimed at state-owned refiners PetroChina and Sinopec, as a way to cushion their downstream losses; 2) a temporary refund of the value-added tax levied on gasoline and gasoil imports; and 3) a mandate for wholesalers to hold minimum stocks.

While the combined impact of these measures and the recent price hike cannot be predicted at this time, this forecast assumes that capped prices will continue to be further adjusted, albeit gradually (by some 10-15% per year). This would be consistent with China's long-held pledge to bring product prices in line with the global market and would encourage domestic refiners, both independent and state-owned, to increase runs, and hoarders to release stocks.

Yet June's new 'guidance' prices are probably still unprofitable. According to local estimates, domestic gasoline and diesel ex-refinery prices (which are allowed to fluctuate by +/-8% *vis-à-vis* guidance prices) are respectively 37% and 44% below the price of imported fuel from Singapore (including taxes and transportation). There are reports that many independent refiners continue to operate at some 30% of capacity, given soaring feedstock prices and mounting cash flow problems. And even some officials from the state-owned giants, PetroChina and Sinopec, argue that the price move has failed to improve margins – at best it will only help minimise refining losses.

Following last month's increase in gasoline and gasoil prices, which as noted above was mainly intended at easing shortages, the country is abuzz with rumours of new policy moves, which could have an important effect on product supplies. On the one hand, it would appear that the government is set to repeal a value-added tax (VAT) rebate on monthly crude, gasoline and gasoil imports, which was established in April in an effort to boost imports and offset the refining losses of state-owned oil Sinopec and PetroChina. Under the deal, which was not officially renewed at expiration (end-June), the

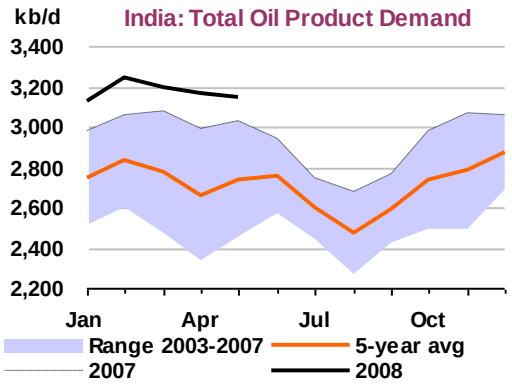
government refunded both companies all of their 17% VAT on product imports and three-quarters of the VAT on crude imports (also 17%). Removing the exception would probably be justified if the price hike had been sufficient to restore downstream profitability. As this is not the case, the refiners could again seek to minimise their losses and foster a fresh round of shortages – unless the government increases it direct subsidies or allows further price adjustments. On the other hand, it is said that the government is about to cut the fuel oil import tax from 3% to 1% to boost imports and reduce losses, notably among 'teapot' refineries (the last tax cut, from 6% to 3%, had taken place last January). This rumour, however, has had an unintended consequence: many independent refiners have delayed feedstock imports, a move that is unlikely to ameliorate the supply picture in the short term despite higher retail prices.

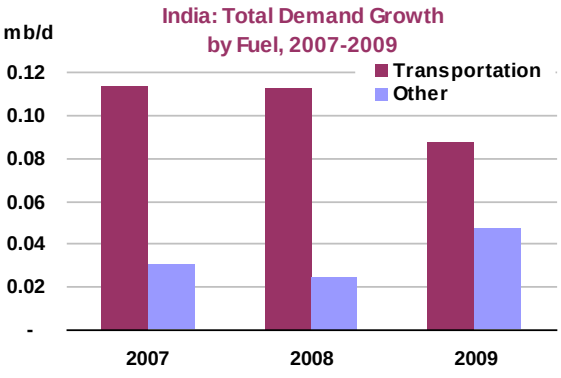
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	644	-33	-25	-4.6	-3.8
Naphtha	756	812	855	56	43	7.5	5.3
Motor Gasoline	1,221	1,257	1,415	36	158	2.9	12.6
Jet & Kerosene	259	280	305	20	26	7.8	9.2
Gas/Diesel Oil	2,415	2,576	2,843	161	267	6.7	10.4
Residual Fuel Oil	791	744	688	-48	-56	-6.0	-7.5
Other Products	1,068	1,204	1,211	136	8	12.7	0.6
Total Products	**7,213**	**7,542**	**7,962**	**329**	**421**	**4.6**	**5.6**

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – rose by 4.0% year-on-year in May. Gasoline and gasoil sales continue to be the main contributors to demand growth, rising by 15.4% and 16.5%, respectively. Although the pace of growth for both products is expected to moderate in the months ahead following June's retail fuel price rise, overall demand is poised to grow to 3.1 mb/d in 2008 (+4.6% over 2007) and almost as much in 2009, to 3.2 mb/d. As we have argued, Indian demand has been driven primarily by income growth, rather than by artificially low prices. On the basis of a continued economic expansion, the price hike will only slow down the pace of oil demand growth.

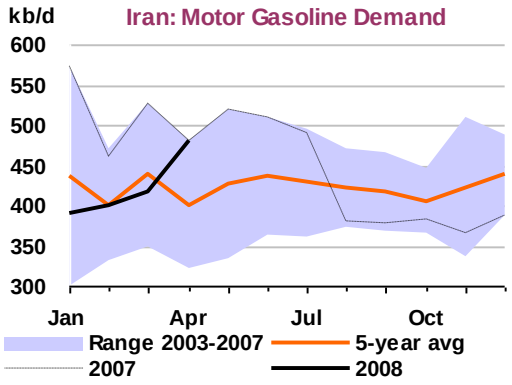


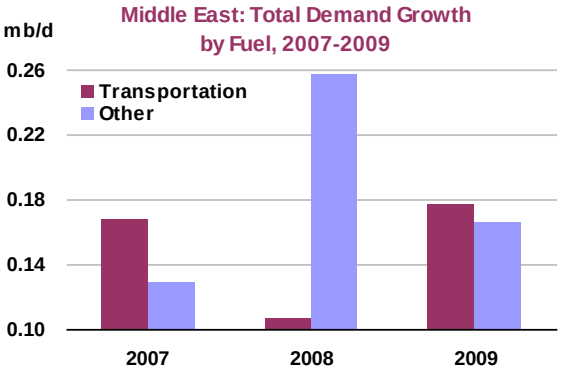


A new element, however, could alter the outlook. Over the past few weeks, there have been localised gasoil shortages across the country. This is largely due to last month's price rise: many consumers have reportedly switched to cheaper unbranded gasoil – ranging from truckers unwilling to purchase more expensive premium grades and utilities switching away from expensive fuel oil (which is not subsidised) to other users seeking to mix gasoil with subsidised kerosene (fuel adulteration is a common practice in India). Moreover, the country's state-owned refiners have also stopped supplying unbranded gasoil to commercial establishments (such as hospitals, hotels and cinemas) in an attempt to cut losses. As a result, demand for unbranded fuel is vastly exceeding supply and creating new problems: in early July some four million truckers went on strike, pressing for uniform gasoil prices – which in practice would mean

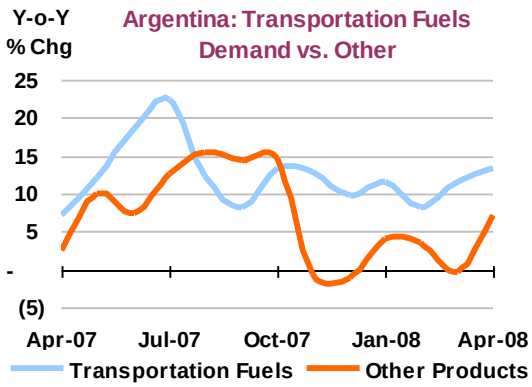
subsidising premium gasoil as well. Given inflationary concerns (most food is transported by truck) and looming elections, it remains to be seen whether the government will backtrack or not with regards to its recent price hike.

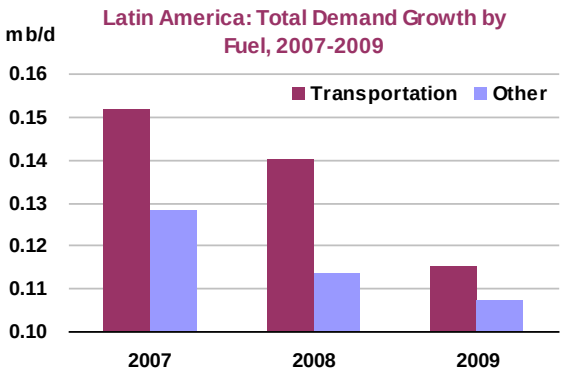
Finally, oil product demand in the **Middle East** continues to expand unabatedly, pulled by buoyant economic growth, favourable demographics, very low retail prices and occasional shortages in alternative energy sources (natural gas). Demand is set to average 6.9 mb/d in 2008 and 7.2 mb/d in 2009, compared with 6.5 mb/d in 2007. Several countries provide clear examples of this trend. In **Iran**, gasoline demand, which averaged 480 kb/d in April, is on course to reach its pre-rationing levels. Although this spike is mostly related to the Iranian New Year holiday period (which began in mid-March), it illustrates the fact that consumers are willing – and able – to purchase volumes above quota at market prices. In **Saudi Arabia**, the story is similar: transportation fuels demand has grown about 7% on average over the past year. Moreover, demand for other fuels is also quite strong. Residual fuel oil is becoming a key source for power generation given the lack of commercially available gas (demand in Iran, for example, has risen by almost 38% on average since September 2007), while LPG and naphtha are fuelling ambitious petrochemical plans in the region.





Further afield, **Latin American** oil product demand is also robust, driven by similar factors. Total demand is expected to average 5.9 mb/d and 6.1 mb/d in 2008 and 2009, respectively, against 5.6 mb/d in 2007. The pace of growth may appear to be somewhat less brisk than in the Middle East as economic activity in countries which currently feature runaway demand – notably Argentina and Venezuela – is expected to gradually slow down, but it is not inconsequential. **Argentinean** consumption, for example, is soaring: transportation fuels demand has increased by almost 14% on average over the past year. The country's energy appetite is so voracious that it is even causing regional shortages (although, admittedly, capped prices and insufficient investment have also played a major role). **Chile**, having lost natural gas supplies from Argentina, has been forced to ramp up its gasoil imports significantly, contributing to tighten the global distillate market.





SUPPLY

Summary

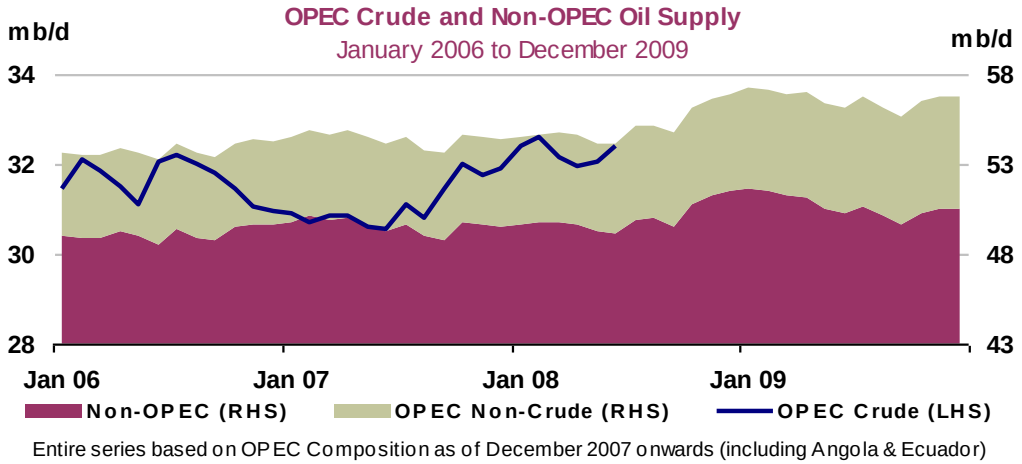
- **Global oil supply** during June increased by 285 kb/d from May to reach 86.5 mb/d. The increase came largely from OPEC, as non-OPEC output slipped by 65 kb/d overall. North Sea maintenance and unscheduled outages curbed production there by 325 kb/d, with only partial offsets coming from Latin America, China and the FSU. July could see a sharp rebound in non-OPEC supply before further maintenance stoppages affect August, and higher July OPEC crude supply also appears likely.

- **Non-OPEC production estimates for 2008** are trimmed by 40 kb/d, due to a weaker profile for biofuels supply outside of Brazil and the USA. Mexico and Malaysia also see slightly lower forecast oil output, while higher baseline supply from the UK and USA boosts those countries' 2008 output. Total non-OPEC growth averages 420 kb/d for 2008 (giving a total of 50.0 mb/d), close to the 450-500 kb/d growth seen in 2006 and 2007. Expansion is heavily back-end loaded, with new project starts concentrated later in 2008. OPEC gas liquids supply grows by 325 kb/d this year to reach 5.1 mb/d.

- **The roll-out of the non-OPEC forecast to 2009** has growth rising to 640 kb/d, taking production to 50.6 mb/d. OECD and non-OECD Asia, the Caspian republics, Brazil, Canada, and the USA are the main contributors. Ongoing decline affects the North Sea, Mexico and non-OPEC Middle East, while Russian production also slips in 2009. Much of a previously expected 2008 surge in OPEC gas liquids has been pushed back into 2009 on project delays. OPEC NGL and condensates rise by 810 kb/d in 2009 to 5.9 mb/d, with Saudi Arabia, Qatar, the UAE, Nigeria and Iran all showing strong growth.

- **OPEC crude supply in June** increased by 350 kb/d to reach 32.4 mb/d. An increase in Saudi Arabian supply to just under 9.5 mb/d, together with a rebound in Iranian supply to 3.8 mb/d, underpinned the June gains. Iraqi supply eased slightly from May's post-war record of 2.5 mb/d. Effective OPEC spare capacity is estimated at only 1.7 mb/d, although capacity increases from Saudi Arabia, Angola, Iraq and Nigeria could add around 1.0 mb/d to OPEC nameplate capacity by end-2008.

- **The 'call on OPEC crude and stock change'** for 2008 is revised up by 0.2 mb/d for 2H08 to around 31.6 mb/d on stronger non-OECD demand and marginally lower non-OPEC supply. Sub-1 mb/d global demand growth in 2009, together with combined non-OPEC oil and OPEC NGL growth of 1.4 mb/d, limit next year's call to 31.1-31.2 mb/d. Unless project slippage proves to be worse than expected, OPEC spare capacity looks likely to rise for 2009 as a whole.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

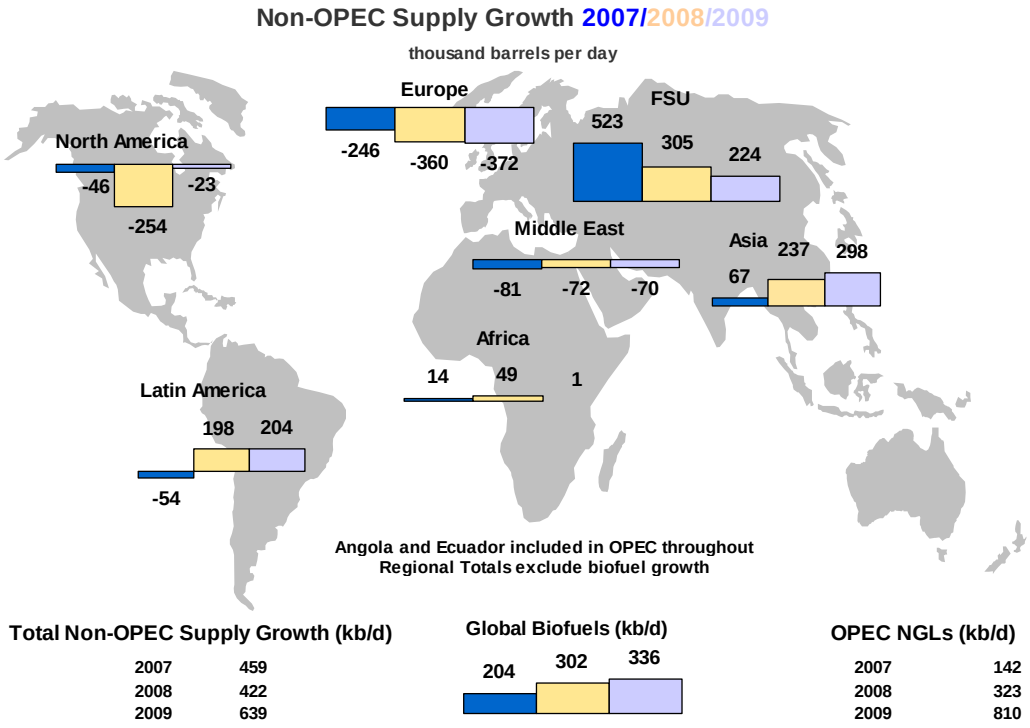
Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

The non-OPEC supply overview this month focuses on the roll out of our forecast to 2009, with discussion of key changes in production. However, to avoid duplication, several of the themes underpinning this analysis are elaborated upon in the* Medium-Term Oil Market Report (MTOMR)*, which was released on 1 July 2008. Readers should consult* MTOMR *for more detailed discussion of factors affecting supply in 2009 and beyond.

The 2009 Outlook for Non-OPEC Supply

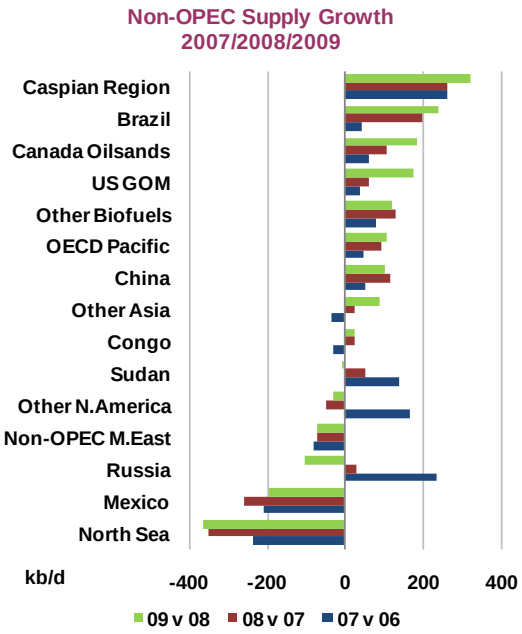
Overview

Non-OPEC supply growth in 2009 is estimated at 640 kb/d, sustained by a temporary levelling-off in recent steep OECD production decline, plus strong growth from the Caspian republics, Brazil, Asia and global biofuels. Total non-OPEC supply is seen hitting 50.6 mb/d next year. However, this maintains the trend of comparatively muted non-OPEC growth averaging 400-500 kb/d seen each year since 2005. Stronger early-decade growth driven by resurgent Russian production has given way to an upstream market characterised by cost inflation, project slippage, access constraints and tighter government fiscal and regulatory terms. With ongoing net decline in base load non-OPEC supply estimated at over 6%, or 2.6 mb/d, annually, it has become increasingly difficult to deliver new capacity on schedule as an offset.



This report and the *MTOMR* are based on bottom-up supply projections, undertaken on a field-specific basis wherever possible. As such, our forecast takes the best available information on individual new project schedules at the time. Despite endemic project slippage over the past three to four years, we resist the temptation to apply an across-the-board slippage assumption for all new projects. This is despite an observation that some major supply increments have been coming in 12-15 months behind schedule in

both OPEC and non-OPEC locations. But while the risks and extent of slippage look to be increasing, not all projects are similarly affected. Indeed, many projects still hit or exceed target. Our forecast therefore represents a view of normalised supply potential, and will be prone to adjustments as and when delays for individual projects begin to look more likely than not.



On top of this expected non-OPEC growth, a further 800 kb/d of extra liquids supply potential comes from OPEC NGL and condensate, with output reaching 5.9 mb/d in 2009 from an expected 5.1 mb/d in 2008. Against a back-drop of slowing demand growth and rising OPEC crude capacity, there is therefore the prospect that recently wafer-thin levels of spare crude capacity could ease in 2009.

Looking at the expected pattern of non-OPEC supply through the remainder of 2008 and over the course of 2009, it is clear that a bunching of new project start-ups (amounting to over 1.0 mb/d) boosts second-half 2008 production. Production in 3Q08 is seen rising contra-seasonally, by around 0.5 mb/d, while 4Q08 production gains a further 1.3 mb/d, a level of growth not seen since 2001. This compares with a 'normal' seasonal rise in 4Q of 550 kb/d, in part as seasonal maintenance and outages draw to a close. Obviously, project slippage and unscheduled production outages present downside risks for this forecast, although we already try to adjust for field reliability and traditional weather outage levels. Moreover, the scope for extended delays on projects as they approach completion should, in theory, be less than for those in the early stages of development.

OECD

Production from **OECD countries** will likely remain in decline in 2009, albeit at a slower pace than is expected for 2008 (-385 kb/d). All told, OECD supply is seen falling by 120 kb/d next year to 19.3 mb/d. This year's trend of 350 kb/d decline for **OECD Europe** production is expected to be repeated. A number

World Oil Supply 2006-2009

million barrels per day

	2006	2007	2008	2009	06 vs 05	07 vs 06	08 vs 07	09 vs 08
North America	14.21	14.27	14.14	14.27	0.07	0.06	-0.13	0.14
Europe	5.18	4.95	4.60	4.24	-0.43	-0.23	-0.35	-0.36
Pacific	0.58	0.63	0.72	0.83	-0.01	0.05	0.10	0.11
Total OECD	**19.97**	**19.84**	**19.46**	**19.34**	**-0.37**	**-0.13**	**-0.39**	**-0.12**
Former USSR	12.25	12.77	13.07	13.30	0.46	0.52	0.31	0.22
East Europe	0.15	0.13	0.12	0.11	-0.01	-0.01	-0.01	-0.01
China	3.67	3.73	3.84	3.95	0.06	0.05	0.12	0.10
Other Asia	2.71	2.67	2.70	2.79	0.05	-0.03	0.03	0.09
Latin America[3]	3.84	3.85	4.06	4.32	0.12	0.01	0.21	0.26
Middle East	1.74	1.66	1.59	1.52	-0.10	-0.08	-0.07	-0.07
Africa[1]	2.50	2.51	2.56	2.56	0.06	0.01	0.05	0.00
Total Non-OECD[1, 3]	**26.86**	**27.33**	**27.95**	**28.55**	**0.63**	**0.47**	**0.62**	**0.59**
Processing Gains	2.04	2.07	2.13	2.17	0.14	0.04	0.06	0.04
Other Biofuels	0.25	0.33	0.46	0.58	0.12	0.08	0.13	0.12
Total Non-OPEC[1, 3]	**49.12**	**49.58**	**50.00**	**50.64**	**0.52**	**0.46**	**0.42**	**0.64**
OPEC Crude	31.62	31.12			0.12	-0.49		
OPEC NGL & Non-Conv.	4.67	4.81	5.13	5.95	0.15	0.14	0.32	0.81
Total OPEC[2]	36.29	35.94			0.27	-0.35		
Total Supply	**85.41**	**85.51**			**0.79**	**0.11**		

1 - excluding Angola
2 - including Angola & Ecuador
3 - excluding Ecuador

of comparatively small scale crude oil and gas liquids developments in both the UK and Norwegian sectors of the North Sea due on stream in 2008/2009 will be insufficient to offset mature field decline which is running at 15-20% per year.

In contrast, Australia and New Zealand could enjoy a mini-surge in output, taking **OECD Pacific** output from 720 kb/d in 2008 to 825 kb/d in 2009. Developments offshore Australia due on stream in second-half 2008 include Skua, Vincent and Angel, while New Zealand will see a ramp-up of production from the Tui and Maari projects. As noted in the *MTOMR* however, regional supply growth could prove short-lived as most of the new projects are small scale and are being developed with a view to rapid build-up to peak production, followed by sharp decline.

Mexico is expected to see continued sharp decline from the Cantarell field, which in 2007 accounted for nearly half of 3.1 mb/d national crude production. Cantarell decline is now seen averaging 20-25% annually, which incremental supplies from the adjacent Ku-Maloob-Zaap fields can only partly offset. This year sees a drop in Mexican crude output of some 250 kb/d, with production expected to drop by a further 200 kb/d to 2.65 mb/d in 2009. Decline is seen continuing through the medium term unless substantive fiscal reform and oil sector reorganisation and improved access terms are implemented in the interim.

Prospects for output elsewhere in **OECD North America** look rather brighter, at least for 2009. After a two-year lull in growth from heavy oil mining/upgrading output in Alberta, the CNRL Horizon project drives an expected 130 kb/d increase in total **Canadian** oil supply in 2009. This is augmented by continued growth of *in-situ* bitumen supplies. Meanwhile, the **US Gulf of Mexico** (GOM) represents the key source of an anticipated doubling in US oil supply growth next year (+205 kb/d in 2009 compared with +95 kb/d in 2008). Some 160 kb/d of growth also derives from US ethanol supplies in 2009, helping to offset widespread declines in crude oil supply expected for onshore US areas. Total US supply reaches 7.8 mb/d in 2009 from an expected 7.6 mb/d in 2008, with crude oil accounting for over 5 mb/d of the total.

Non-OECD

After levelling off at 10.1 mb/d in 2008, **Russian** oil production is expected to slip to 10.0 mb/d in 2009, the first year-on-year decline since 1996. This is also a weighty 400 kb/d less than last year's *MTOMR* forecast for 2009, partly the result of project slippage, partly of an investment-related decline at existing, brownfield sites. The slow-down in upstream investment, resulting from a punitive tax regime and continued uncertainty over foreign company participation, is well documented. Although proposals are transiting the Russian parliament that will begin upstream fiscal reforms from January 2009, there may be a time lag before the effects of a lightening fiscal burden become apparent. Continuing uncertainty over the status of foreign company joint ventures such as TNK-BP and the three existing production sharing agreements at Sakhalin and Kharyaga only reinforces a tendency towards caution in forecasting Russian output. However, we will watch for signs of a more rapid-than-expected turnaround in Russian upstream investment, potentially rendering this as one area of upside supply risk in our 2009 forecast.

Offsetting the expected slip in Russian production however is combined growth of some 320 kb/d in 2009 from Azerbaijan and Kazakhstan, with Azerbaijan potentially seeing a fourth consecutive year of 200 kb/d growth. **Azerbaijan's** production is buoyed by the attainment of plateau 1.1 mb/d output for the Azeri-Chirag-Guneshli (ACG) complex of offshore fields, a level which operator BP now expects could be sustained through late in the next decade. A comparatively cautious view on short-term **Kazakhstan** production prospects sees total oil output attain 1.55 mb/d in 2009 compared with 1.45 mb/d for 2008. Onshore Tengiz field growth underpins the increase, although questions over export outlets cause us to lag official production targets of some 540 kb/d for Tengiz.

Latin American supply growth remains dominated by deepwater developments offshore **Brazil**, where crude output has grown by nearly 100 kb/d each year over the past 10 years. Supplies are expected to gain 165 kb/d in 2008 and 190 kb/d in 2009, to average 2.1 mb/d. The increases come largely on the basis of state operator Petrobras' expansion plans. Here again, the complexity and capital intensity of deepwater developments has resulted in project delays, with both absolute 2007 production and expected 2008 growth now around 100 kb/d less than we envisaged a year ago. Nonetheless, significant increments come from the Roncador field, from Marlim Leste and Marlim Sul and from the Golfinho facility in 2009. Strong growth in Brazilian ethanol supply also runs through 2008/2009, with output seen averaging 360 kb/d in 2008 and 415 kb/d in 2009, from 310 kb/d in 2007.

China continues to show steady production growth, albeit unspectacular in relation to surging domestic demand growth. Supply growth both this year and next averages just over 100 kb/d, taking 2009 production to 3.95 mb/d. Offshore expansion continues, with increments in 2009 coming from the Penglai and Bozhong fields. A subsidiary of China National Offshore Oil Corporation (CNOOC) recently bought Norwegian service company Awilco Offshore in a bid to boost access to drilling technology, notably for offshore areas. Onshore increases for China come from the Changqing field, where output has already increased from 100 kb/d in 2001 to nearly 300 kb/d in May 2008. Around 20 kb/d of coal-to-liquids output is also included in the 2009 production forecast, from initial phases of the Shenhua CTL project.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.14	0.06	-0.12	14.27	14.14	0.06	-0.13	0.00	-0.01	0.00	-0.01
Europe	4.95	4.58	-0.23	-0.37	4.95	4.60	-0.23	-0.35	0.00	0.02	0.00	0.02
Pacific	0.63	0.73	0.05	0.10	0.63	0.72	0.05	0.10	0.00	-0.01	0.00	-0.01
Total OECD	**19.84**	**19.45**	**-0.13**	**-0.40**	**19.84**	**19.46**	**-0.13**	**-0.39**	**0.00**	**0.01**	**0.00**	**0.01**
Former USSR	12.77	13.08	0.52	0.31	12.77	13.07	0.52	0.31	0.00	0.00	0.00	0.00
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.83	0.05	0.10	3.73	3.84	0.05	0.12	0.00	0.01	0.00	0.01
Other Asia	2.67	2.71	-0.03	0.04	2.67	2.70	-0.03	0.03	0.00	-0.02	0.00	-0.02
Latin America	3.85	4.07	0.01	0.21	3.85	4.06	0.01	0.21	0.00	0.00	0.00	0.00
Middle East	1.66	1.59	-0.08	-0.07	1.66	1.59	-0.08	-0.07	0.00	0.00	0.00	0.00
Africa*	2.51	2.56	0.02	0.05	2.51	2.56	0.02	0.05	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.33**	**27.96**	**0.47**	**0.63**	**27.33**	**27.95**	**0.47**	**0.62**	**0.00**	**-0.01**	**0.00**	**-0.01**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.33	0.49	0.08	0.16	0.33	0.46	0.08	0.13	-0.01	-0.04	0.00	-0.03
Total Non-OPEC*	**49.58**	**50.04**	**0.46**	**0.46**	**49.58**	**50.00**	**0.46**	**0.42**	**-0.01**	**-0.04**	**0.00**	**-0.03**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

Elsewhere in Asia, slowing production growth from **Thailand**, and an expected dip in supplies from **India** in 2008/2009 is offset by growth from **Malaysia** and **Vietnam,** both of which see net increments of around 45 kb/d in 2009. Malaysia benefits from ramp-up at the country's first deepwater field, Kikeh, which attains 120 kb/d plateau production in 2009. Further growth comes from the Bunga Pakma condensate project (shared on a 50:50 basis with Vietnam). For Vietnam, incremental light crude and condensate is expected from Song Doc, Ca Ngu Vang and Su Tu Vang, as well as Bunga Pakma.

While regular production data remain scarce for much of **Africa**, it appears that baseline 2007 production came in nearly 200 kb/d lower than expected. This was in part due to downward revisions for Equatorial Guinea and Sudan. Moreover, the strong growth expected for 2008 when we made our roll-out last year now appears overambitious. Regional supply in 2008 now looks likely to grow by some 50 kb/d, compared with the 130 kb/d envisaged one year ago. This looks likely to be followed by a broadly static regional output level, at 2.6 mb/d for 2009. Growth this year centres on Sudan, Congo and the Ivory Coast (despite weaker-than-expected 2007 production in the latter due to well silting), while 2009 growth centres on the latter two. Rising output from the Thar Jath project drives this year's growth from Sudan, while Congo's Moho Bilondo field builds gradually to 80 kb/d in the second half of 2009.

Non-OPEC Middle East oil production continues to decline, with expected falls of 70 kb/d in both 2008 and 2009 taking regional output next year to 1.52 mb/d. At least half of the decline comes from **Yemen**, despite positive contributions expected from the Nabrajah and An Nagyah fields. Decline at mature fields, political instability deriving from recent al-Qaeda attacks on oil infrastructure, and the need for accelerated exploration and infrastructure investment underpin our weaker Yemeni supply profile.

Other Sources of Supply Growth - Biofuels

Global biofuels are set to grow sharply in 2008 and 2009, contributing a large proportion of net incremental non-OPEC supply. In this report, national oil production totals for both Brazil and the US have historically included, and continue to include, ethanol, whereas biofuels output for all other producers combined is included as a single line item in our global balance. Total global fuel ethanol and biodiesel production (in volumetric terms) will rise from 1.35 mb/d in 2008 to 1.69 mb/d in 2009. Of this growth, around one half and one quarter respectively stem from US and Brazilian ethanol, the world's two largest producers by far. Brazil will continue to enjoy unique advantages in terms of production costs, agriculture and infrastructure and is set to expand its role as the world's largest exporter of fuel ethanol. In the US, a combination of consistently higher-than-expected actual monthly production numbers, surging production capacity and the ambitious alternative fuels mandate passed in December 2007 have seen us revise up 2008 and 2009 output significantly. US ethanol capacity is expected to rise from around 650 kb/d in 2008 to 880 kb/d by 2009, albeit actual 2009 production is forecast closer to 700 kb/d.

Other Sources of Supply Growth – OPEC Gas Liquids (NGL and Condensates)

OPEC NGL and condensate supply growth in 2008 now looks likely to average 325 kb/d, giving an annual total of 5.1 mb/d. Key contributions in 2008 come from Qatar (+150 kb/d), Saudi Arabia (+70 kb/d) and Kuwait (+35 kb/d). Next year growth is expected to accelerate, assuming a number of new project-start ups deferred over the course of 2008 finally come on stream. Annual growth in 2009 could attain an unprecedented 810 kb/d, for an annual average production level of 5.9 mb/d. Saudi Arabia and Qatar again predominate, although significant increments also come from the UAE, Nigeria and Iran. While upstream and midstream gas projects are subject to many of the same bottlenecks as those facing upstream oil, the imperative to harness hitherto frequently flared associated gas is clear. And although export-related projects in Qatar and Iran have seen deadlines slip, there nonetheless remains intense pressure to boost domestic gas production for oil field reinjection, power generation, industrial and petrochemical use. Non-associated gas streams and gas condensate are also increasingly being tapped.

OPEC UPSTREAM NGL & CONDENSATE PROJECT START-UPS

Country	Project	Peak Capacity (kb/d)	Start Year
Indonesia	Kerisi-Hiu	20	2008
Indonesia	Ujung Pangkah	10	2009
Indonesia	Oyong NGL	1	2009
Iran	Pars 6-8 Condensate	120	2008
Iran	Pars 6-8 NGL	50	2008
Iran	Pars 9-10 Condensate	80	2009
Iran	Pars 9-10 NGL	34	2009
Kuwait	Sabriyah & Umm Niqa I	50	2008
Nigeria	Agbami	50	2008
Nigeria	EA NGL	40	2008
Nigeria	Akpo	180	2009
Qatar	Qatargas Train 4	160	2008
Qatar	RasGas Train 6 Condensate	50	2009
Qatar	RasGas Train 6 NGL	25	2009
Saudi Arabia	Hawiyah	300	2008
Saudi Arabia	Khursaniyah NGL	210	2008
Saudi Arabia	Khursaniyah Condensate	80	2008
Saudi Arabia	Khurais Condensate	70	2009
UAE	Habshan 3 Gas Plant Expansion	270	2008

OPEC Crude Oil Supply in June

OPEC crude supply for June was an estimated 350 kb/d higher than in May, at 32.4 mb/d. The May total was itself revised down by 245 kb/d to just under 32.1 mb/d to reflect markedly lower May Iranian exports. This report employs a supply-based proxy (exports plus domestic crude runs) for production for Iran as well as a number of other OPEC producers. Generally, oil in floating storage will not be counted as an export until it sails for a specific destination. Evidence in April and May that Iran was storing crude in tankers offshore Kharg Island, reportedly due to a lack of buyers during refinery turnarounds, depressed the assumed export level and with it, May's supply estimate for Iran. In June however, there were indications that some of the earlier stored oil left Kharg for export destinations.

Higher exports from both Iran and Saudi Arabia underpinned the overall increase in June OPEC supply. Saudi supply is estimated up by 250 kb/d at 9.45 mb/d. In contrast, Nigeria saw continued crude production outages, which constrained supply to around 1.9 mb/d, while lower Iraqi southern exports due to weather delays trimmed supply there to 2.4 mb/d from 2.5 mb/d in May. Having seen production drop below levels of a year ago for the first three quarters of 2007, OPEC has pushed output well ahead of previous year levels for the past nine months. June supply stood 1.8 mb/d higher than June 2007, on a like-for-like basis including Ecuador.

OPEC Crude Production[1]
(million barrels per day)

	Apr 2008 Supply	May 2008 Supply	Jun 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs June 2008 Supply	Capacity end-2008	Current Target
Algeria	1.38	1.38	1.38	1.40	0.02	1.46	1.36
Indonesia	0.86	0.86	0.86	0.86	0.00	0.84	0.87
Iran	3.93	3.64	3.78	4.02	0.24	4.00	3.82
Kuwait[3]	2.60	2.63	2.63	2.63	0.00	2.65	2.53
Libya	1.75	1.73	1.75	1.80	0.05	1.81	1.71
Nigeria[4]	1.84	1.90	1.90	2.55	0.65	2.70	2.16
Qatar	0.83	0.85	0.88	0.93	0.05	0.96	0.83
Saudi Arabia[3]	9.06	9.20	9.45	10.65	1.20	10.95	8.94
UAE	2.65	2.66	2.67	2.85	0.19	2.87	2.57
Venezuela[5]	2.32	2.36	2.36	2.60	0.24	2.60	2.47
OPEC-10	**27.21**	**27.21**	**27.65**	**30.28**	**2.63**	**30.84**	**27.25**
Angola[1]	1.83	1.85	1.85	1.85	0.00	2.05	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**29.54**	**29.55**	**30.00**	**32.63**	**2.63**	**33.39**	**29.67**
Iraq	2.40	2.51	2.41	2.41	0.00	2.56	
Total OPEC	**31.94**	**32.06**	**32.41**	**35.04**	**2.63**	**35.95**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*1.74)*		

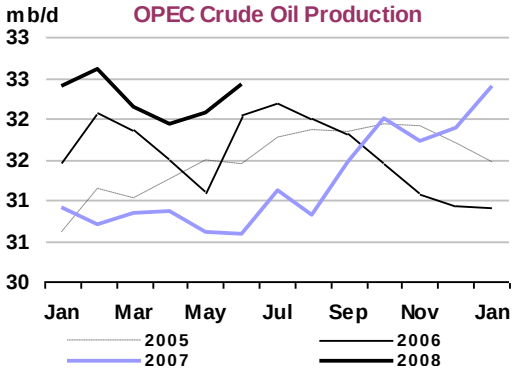
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 510 kb/d in June.

Effective OPEC spare capacity (excluding notional volumes for Indonesia, Iraq, Nigeria and Venezuela, each of which might arguably struggle to boost short-term production) remains low, at less than 2.0 mb/d. However new project developments could potentially boost OPEC installed capacity by around 1.0 mb/d to 36 mb/d by the end of 2008. Saudi Arabia, Nigeria, Angola and Iraq are the key sources of expansion running through to the end of this year. This presupposes that:

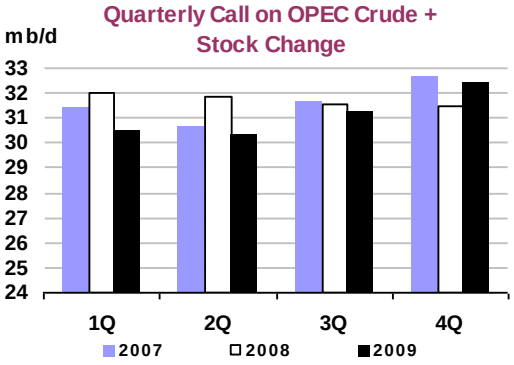
- the 500 kb/d AFK (Khursaniyah) project in Saudi Arabia enters service in 3Q;
- the 200 kb/d Agbami project offshore Nigeria starts in 3Q and continued progress is made in restoring Forcados production to around 300 kb/d;
- Iraq sees a measure of success in boosting production via a series of short-term technical service agreements (TSAs) for existing fields;
- Angola brings the next phase of the Kizomba C project, the 100 kb/d Saxi field, onstream in 3Q.

We would tend to be more confident of the Saudi and Angolan developments, bearing in mind security-related issues which have affected supply from Nigeria and Iraq for many months.

Recent international forums, including the 22 June Jeddah meeting called by Saudi Arabia's King Abdullah and the World Petroleum Congress in Madrid on 29 June – 3 July, focussed attention on prevailing high crude oil prices and their likely causes. From a supply perspective, all sides have agreed that accelerated upstream and downstream investment (alongside improvements in energy efficiency) will be required in the future. Producers are of course wary of signing any 'blank cheque' as regards future capacity expansion until the likely extent and duration of any global economic slow-down can be gauged. Most analyses, however, (including our own recent *MTOMR)* envisage sustained demand growth for the next five years, driven by strong growth in developing economies, notably Asia and the Middle East. While indications from producers such as Saudi Arabia that the next generation of capacity expansions may already be being prepared are welcome (see below), capacity expansions both within and outside OPEC look prone to prolonged delays and cost over-runs. Notwithstanding a potential easing in 2009, this could keep underlying levels of spare capacity tight for some time to come.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Saudi Arabian crude supply for June is estimated at 9.45 mb/d, up from 9.2 mb/d in May, and the highest production level since March 2006. The apparent increase came in the aftermath of Saudi claims of higher post-maintenance demand from US refiners. The Kingdom's representatives have said that July production could be raised to 9.7 mb/d, but have ruled out heavy discounting of this extra oil to make it more palatable to customers. Preliminary reports of regional tanker sailings and a run-up in crude freight rates however do tend to support, at least directionally, some further increase in July Saudi production. There are suggestions that some of these incremental volumes are going to Reliance Petroleum of India, whose new 580 kb/d refinery at Jamnagar is due on stream later this year.

Oil Minister Ali al-Naimi has also suggested that the Kingdom is considering a second phase of upstream capacity expansions, which could potentially take capacity to 15 mb/d after the phase one target of 12.5 mb/d is reached at end-2009. However, a key proviso was that there should be clear signs of long-term demand for the extra volumes. The Minister suggested that each of these capacity expansions

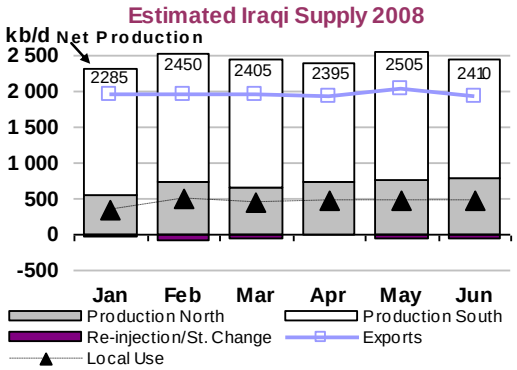
could be completed within three years of project sanction. The projects envisaged to take Saudi target capacity from 12.5 mb/d to 15.0 mb/d were listed as follows:

- Zuluf (Arab Medium) – 900 kb/d;
- Safaniyah (Arab Heavy) - 700 kb/d;
- Berri (Arab Extra Light) - 300 kb/d;
- Khurais (Arab Light) - 300 kb/d;
- Shaybah (Arab Extra Light) phase 3 – 255 kb/d.

These come in the aftermath of major increments from AFK (500 kb/d) expected in 2008, Khurais (1.2 mb/d) in 2009 and Manifa (900 kb/d, seen as sustaining, not increasing, total capacity) in 2011/2012.

Iraq's crude supply for June (net of reinjection and storage) is estimated at 2.4 mb/d, down from May's post-war record level of 2.5 mb/d. While June exports from the Turkish port of Ceyhan were marginally higher than in May (at 465 kb/d compared with 440 kb/d the previous month), southern liftings from Basrah were impeded by weather-related loading delays, coming in 120 kb/d lower than in May at 1.45 mb/d. Cross-border pipeline deliveries to Syria are estimated flat at 10 kb/d, giving total June exports of 1.93 mb/d. Domestic refinery crude use by refineries and power stations is estimated unchanged from May at 485 kb/d.

There was much discussion during June of impending plans to boost Iraqi export, refining and production capacity, now that regular output levels close to current production capacity of 2.5 mb/d have been attained. An initial boost may come from twin-pronged expansion through short-term Technical Service Agreements (TSAs) and the potential for higher exports from the northern Kurdish region. The TSAs are due to be signed imminently for six producing fields, which are expected to see increases of around 100 kb/d each. However, the deals had still not been signed by the original end-June deadline, and there are concerns that the Oil Ministry's curbing of the TSAs' duration from two years to one might be delaying agreement. The Kurdish Regional Government meanwhile has suggested that exports could attain 250 kb/d in 2009 subject to agreement being reached with Baghdad on outlets for crude from the Taq Taq and Tawke fields. Ministry plans envisage total Iraqi capacity of 4-4.5 mb/d by 2012, based in part on a just-announced licensing round that will cover the Kirkuk, Bai Hassan, Rumaila, Zubair, West Qurna and Missan fields. Our own recently released *MTOMR* assumed underlying capacity over the next five years of a more conservative 3.0 mb/d, although this was based solely on the short-term TSAs and the Kurdish developments, not the still-to-be awarded licenses for longer-term development.



Nigerian crude supply in June averaged a largely unchanged 1.9 mb/d. High-profile attacks on Shell's deepwater Bonga FPSO (225 kb/d) and pipeline-related outages affecting the Bonny Light, Escravos and Brass River export streams pushed total Nigerian production below 1.7 mb/d in the third week of June, but month-average production came in close to May levels (since early-May had seen constrained output as supplies recovered from ExxonMobil strike stoppages). Total short-term and longer-term outages hit 900 kb/d at one stage in June, but were believed back at around 550-600 kb/d late in the month.

At the time of writing, *force majeure* clauses remain in place for exports from Bonny Light, Brass River and Escravos. June's attack on the deepwater Bonga facility by the Movement for the Emancipation of the Niger Delta (MEND) represents a new departure, as onshore and shallow water infrastructure have

previously been the key targets. Speed boats attacked Bonga's FPSO on 19 June, and although production resumed on 24 June, subsequent damage to a loading buoy saw force majeure on exports reinstated on 4 July. With further-offshore and deepwater developments expected to provide the bulk of capacity increases for Nigeria in coming years, the government has been quick to bolster offshore security patrols. For its part MEND declared a cease-fire after the Bonga attacks, although only after saying that offshore facilities and international shipping will increasingly be targeted in future. Chevron had earlier announced that its 200 kb/d Agbami project, also located some 70 miles offshore, was due to start in June, but perhaps with one eye on security issues, this now looks to have slipped to later in the year.

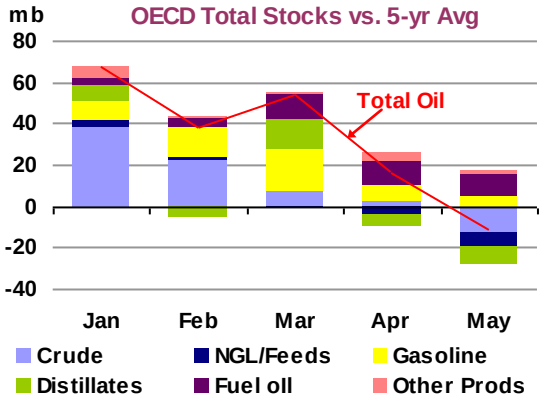
Iranian supply became a renewed focus of attention in June following suggestions that Israel was planning a military strike against Iranian nuclear targets. Although subsequent international statements have stressed diplomatic channels as the preferred option for solving the Iranian nuclear issue, a representative of Iran's Revolutionary Guard suggested in late June that any attack on Iran would inevitably lead to the imposition by Iran of controls on shipping using the Mideast Gulf and Straits of Hormuz. The latter handles tanker traffic equivalent to nearly 20% of total global oil demand.

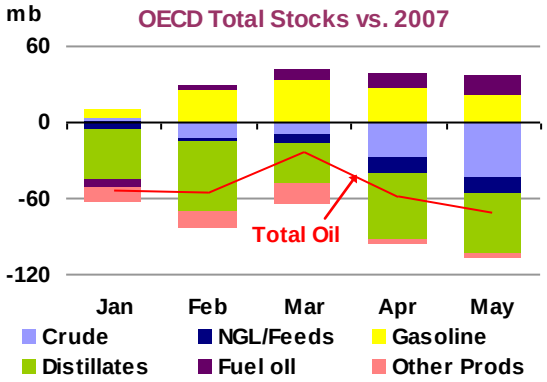
Actual Iranian supply for May was revised down markedly to 3.64 mb/d, reflecting lower Iranian exports (now seen as having averaged 2.05 mb/d compared with around 2.5 mb/d in recent months). A combination of domestic and international refinery maintenance was reportedly behind Iran's deployment of around 28 VLCCs for floating storage in April and May. Trading sources suggested up to 28 mb was held in floating storage offshore Kharg Island and Soroosh at end-May, although the Iranians themselves insisted volumes were much lower, at below 20 mb, citing a requirement for segregated storage as meaning that tankers were not fully laden. This report uses a supply proxy for Iranian production, comprising crude exports (excluding volumes in floating storage until they sail for a specific location) plus domestic refinery runs of Iranian crude (in turn net of crude swaps through the Caspian port of Neka). With throughputs at Iranian refineries just under 1.6 mb/d in May and June, the swing in Iranian supply came from exports, assessed at 2.05 mb/d in May and 2.2 mb/d in June. This results in total Iranian supply of 3.64 mb/d in May, rising to 3.78 mb/d in June. Iranian crude oil production capacity is estimated at just over 4.0 mb/d.

OECD STOCKS

Summary

- **OECD total oil stocks built by 23.9 mb in May to reach 2,588 mb**. This substantially lagged the five-year average May increase of around 50 mb, due mainly to a significant and unseasonal 19.3 mb draw in US crude stocks. Preliminary June data suggest a 4.5 mb draw which would leave the total 2Q08 OECD stock change at around +100 kb/d, well below the five-year average 2Q build of 900 kb/d.
- **The large 19.3 mb draw in US crude stocks in May**, a result of both lower imports and higher refinery throughputs, took OECD North American oil inventories below their five-year average for the first time since 4Q04. European and Pacific crude stocks rose seasonally, by 3.3 mb and 8.4 mb respectively.
- **A seasonal May rise of 7.7 mb in OECD European distillate inventories** was led by Scandinavian and Benelux countries, but still left regional cover below the five-year range. While distillate stocks in OECD North America also saw a typical May rise of 6.8 mb, they were unusually flat in the OECD Pacific. A draw of 2.4 mb took US gasoline stocks below the five-year absolute average in May, completing the erosion of a huge winter surplus.
- **OECD total oil stock cover equalled 53.5 days of forward demand at the end of May.** This marked a below-normal increase of 0.1 days from end-April and leaves cover just above the five-year average. Distillate cover remains the biggest concern at 28.8 days, or 1.3 days below the 2003-07 average. Preliminary end-June total oil cover is slightly lower at 53.4 days.





OECD Inventory Position at End-May and Revisions to Preliminary Data

The large 19.3 mb draw in US crude stocks left the total May OECD stockbuild of 23.9 mb well short of the typical seasonal increase of 50 mb-plus. Barring a large rebound in June, which looks unlikely from preliminary data, the usual post-winter rebuilding of OECD stocks is now unlikely to materialise before the onset of peak summer demand. End-May OECD oil stocks were 2,588 mb and below the five-year average for the first time this year.

Still, demand weakness means that OECD total oil stock cover remains near seasonal norms at 53.5 days of forward demand, having risen by 0.1 days from end-April. Preliminary data for the US, Japan and EU-16 suggest that this level of cover was only marginally lower at the end of June. With cover still above average, one could argue that the failure of OECD stocks to rebuild at the same pace as previous springs is therefore less significant. However, this would gloss over some key areas of stock tightness.

Forward demand cover for distillates remains below average in all three OECD regions, despite some slight improvements in May. European distillate cover rose by 0.4 days to 32.6 days of forward demand but remains significantly short of the five-year average of 34.4 days. Inflated cover in other, structurally

long product categories (namely gasoline, fuel oil and 'other products'), means that European distillate tightness is masked within the products' total. North American distillate cover is also at the bottom of the five-year range, despite a seasonal stockbuild in May. In the OECD Pacific, there was no sign of the usual May increase in distillate inventory, which remained flat compared with end of April data. Anecdotal evidence of distillate shortages in South America (a result of substitution away from a tight regional gas sector), China (prompting several months of record-high gasoil imports) and other non-OECD areas continually affirm that this tightness extends to a global scale.

Preliminary Industry Stock Change in May 2008 and First Quarter 2008

	May (preliminary) *(million barrels)*				May (preliminary) *(million barrels per day)*				First Quarter 2008 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**-17.9**	**3.3**	**8.4**	**-6.3**	**-0.58**	**0.11**	**0.27**	**-0.20**	**0.35**	**0.07**	**-0.04**	**0.38**
Gasoline	-2.7	0.1	1.2	-1.4	-0.09	0.00	0.04	-0.05	0.07	0.06	0.05	0.17
Distillates	6.8	7.7	0.1	14.6	0.22	0.25	0.00	0.47	-0.34	0.05	-0.14	-0.43
Fuel Oil	-0.2	1.3	2.0	3.1	-0.01	0.04	0.06	0.10	0.01	0.08	-0.01	0.07
Other Products	11.3	0.0	1.1	12.4	0.37	0.00	0.03	0.40	-0.20	0.01	0.00	-0.19
Total Products	**15.2**	**9.0**	**4.4**	**28.6**	**0.49**	**0.29**	**0.14**	**0.92**	**-0.46**	**0.19**	**-0.11**	**-0.38**
Other Oils[1]	-0.9	-0.9	3.3	1.6	-0.03	-0.03	0.11	0.05	-0.05	-0.03	0.01	-0.07
Total Oil	**-3.6**	**11.5**	**16.1**	**23.9**	**-0.12**	**0.37**	**0.52**	**0.77**	**-0.17**	**0.23**	**-0.14**	**-0.08**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

OECD crude stock cover (in terms of forward refinery throughputs) failed to rise in line with seasonal trends in the first quarter. Following the headline May draw in the US, it is now at 24.4 days and back at the five-year average for the first time since late 2004. North American crude cover fell by over a day in terms of forward crude runs in May and would look tighter still without Canada's brimming crude inventories, now over 25 mb above the 2003-07 average at 115.8 mb. OECD Pacific crude cover remains the lowest of all the regions, well adrift of five-year ranges, despite a May build (almost all of which was provisionally in Japan). Should OPEC Gulf members release extra volumes of crude onto the market in the next few months, it remains to be seen how much of this oil will ultimately boost OECD crude inventory rather than ending up in the opaque stockholdings of non-OECD countries.

Revisions versus 10 June 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Mar 08	Apr 08	Mar 08	Apr 08	Mar 08	Apr 08	Mar 08	Apr 08
Crude Oil	**-0.8**	**-1.2**	**4.6**	**11.8**	**0.4**	**-8.9**	**4.2**	**1.8**
Gasoline	-0.3	-1.0	-1.4	-5.3	0.0	0.0	-1.7	-6.3
Distillates	-0.6	1.5	0.8	-3.0	0.1	0.0	0.3	-1.5
Residual Fuel Oil	0.2	1.4	0.8	0.4	0.0	0.1	1.0	2.0
Other Products	-0.4	3.2	-0.2	-0.9	-0.3	0.0	-0.8	2.3
Total Products	**-1.0**	**5.1**	**0.0**	**-8.7**	**-0.2**	**0.1**	**-1.2**	**-3.5**
Other Oils[1]	-0.1	6.4	-0.1	-3.0	0.0	-0.1	-0.2	3.3
Total Oil	**-1.9**	**10.3**	**4.4**	**0.0**	**0.3**	**-8.8**	**2.8**	**1.5**

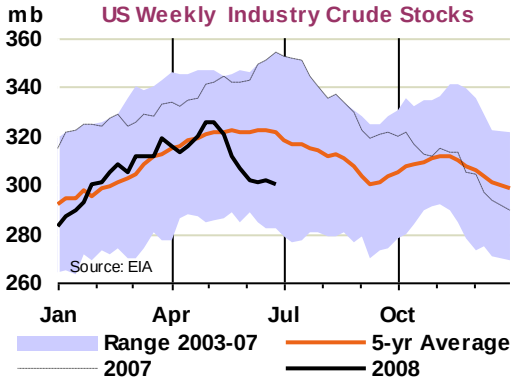
1 Other oils includes NGLs, feedstocks and other hydrocarbons.

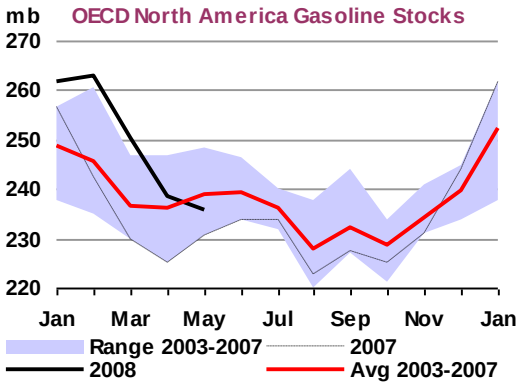
OECD total stocks were revised up by 1.5 mb for April and 2.8 mb for March. The April revision incorporated larger offsetting adjustments between North America (corrected up 10.3 mb, including 5.4 mb in US NGLs/Feedstocks and 2.9 mb in US 'Other products') and the OECD Pacific (-9.5 mb in Japanese crude, discussed further in the regional analysis below). In OECD Europe, downward revisions of 8.7 mb to 'total products' (including 3.4 mb in the UK) and 3 mb to 'other oils' stocks were offset by an upward correction of 11.8 mb in crude (of which 5 mb was related to Dutch stocks held bilaterally in Germany).

OECD Industry Stock Changes in May 2008

OECD North America

A 19.3 mb decline in US crude stocks was the big story for OECD inventories in May. At a time when US crude inventory is usually near its yearly peak, this draw potentially represented a significant shift in the US commercial stockholding mentality. It also single-handedly offset a large part of the seasonal May build in other OECD oil stocks. OECD North American total oil inventories actually drew counter-seasonally as a result, by 3.6 mb, falling short of their five-year average for the first time since 4Q04. EIA weekly data show that US crude imports dropped by 740 kb/d over the course of May, with tanker data showing the largest decreases from Mexico, where production is struggling. At the same time, refinery crude runs rose by 780 kb/d. Anecdotal evidence suggests that the crude draw reflects a desire by refiners to run down stocks as a means to free up capital in a high-price environment at a time when refinery profitability is dropping. However, it could also just partly be an indication of lower supplies or in anticipation of weaker prospective demand. A 1.4 mb build in Mexico made up the balance of the OECD North American crude stock change of -17.9 mb.





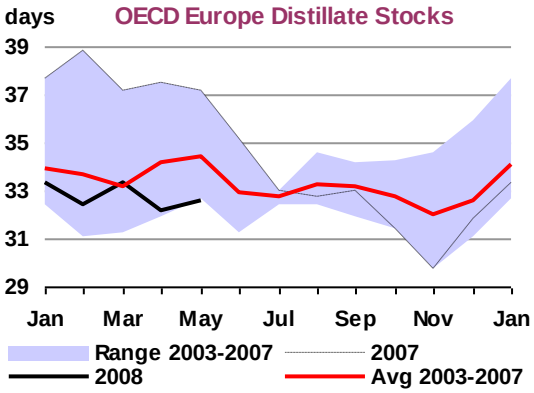
Gasoline stocks in OECD North America dropped by 2.7 mb in May to below their five-year average in absolute terms, completing the erosion of a huge winter surplus. US weekly data showed a slight improvement in gasoline stocks in June, with the summer driving season underway. Although end-May forward demand cover was below average, the continued incursion of ethanol into the finished gasoline pool may allow stock cover to suffice for the summer months of peak demand. Distillate and 'other products' stocks in OECD North American countries increased by 6.8 mb and 11.3 mb respectively, both in line with seasonal trends. The increase in regional distillate inventories included a build in the US of 7.7 mb overshadowing a drop of 0.9 mb in Mexico. Mexican distillate and gasoline stocks are below the five-year range in terms of forward demand cover while North American distillate cover as a whole remains very low.

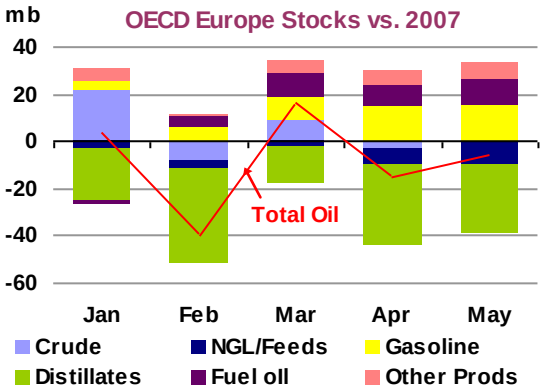
OECD Europe

Total oil stocks in OECD Europe built by 11.5 mb in May. This seasonal increase included a healthy 7.7 mb rise in middle distillate inventories led by a combined build of 4.9 mb in Finland, Norway and Sweden, as winter demand subsided. With OECD European refinery throughputs dipping by 230 kb/d in May, transatlantic trade into Europe may have been behind rising distillate inventory in certain countries. EIA data showed US product exports hitting an all-time high of 1.5 mb/d in the final week of May. Certainly, higher imports could have driven the provisional May increase of 2.25 mb in distillate stocks in the Benelux countries. In addition, end-May distillate stocks in France, Germany and the UK each showed a monthly rise of around 0.8 mb.

Independent distillate stocks in the ARA region also increased in May and, by a greater amount, in June. Still, independently held distillate stocks at the end of June remain well short of the five-year average and

those held by industry at end-May were at the bottom of the five-year range in terms of forward demand cover. European gasoline stocks were flat in May, while residual fuel oil stocks increased by 1.3 mb.

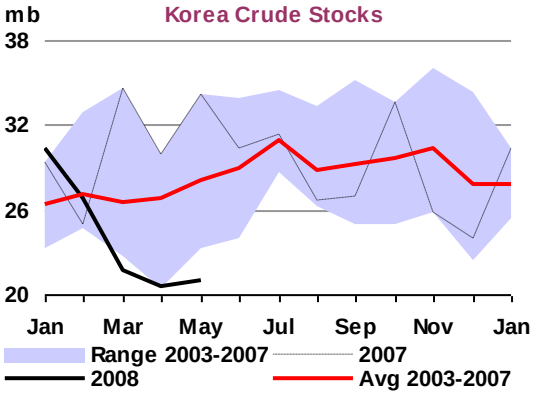


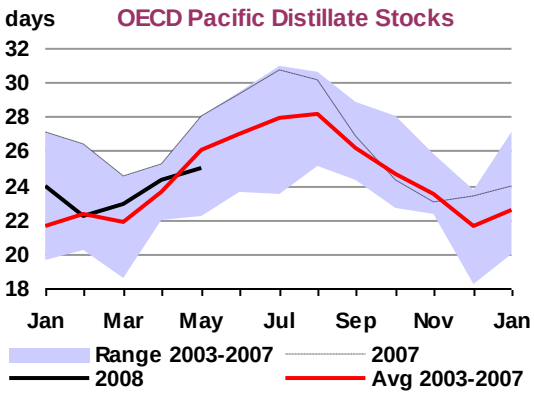


Crude inventories in OECD Europe rose by 3.3 mb in May, marking their third consecutive monthly build and allowing stocks to reach their seasonal second-quarter peak. A drop of 90 kb/d in refinery runs in the Netherlands contributed to a May build of 5.9 mb in crude. German crude stocks for the whole of 2008 have been revised up by 4-5 mb due to a revision in the amount of crude Germany is holding for the Netherlands on a bilateral basis. OECD European stocks of gas liquids (NGLs, other feedstocks, additives and oxygenates) fell by 0.9 mb in May. With April's total revised down by 3 mb, stocks in this category are well below the five-year range at 66.3 mb.

OECD Pacific

OECD Pacific oil inventories rose by 16.1 mb in May, an increase slightly behind seasonal norms. The largest monthly change was a reported increase of 8.0 mb in Japanese industry crude stocks. However, it should be noted that preliminary data for Japanese crude includes an estimate of volumes in Japanese waters waiting to be unloaded. As VLCCs hold around 2 mb each, the timing of their discharge can be very influential in monthly stock changes. For April, a stockbuild of 7.6 mb was reported last month. However, it was subsequently revealed that the amount of crude waiting to be discharged from tankers in April had been overestimated by 9.5 mb. This prompted this month's notable downward revision to the April stock change into a 1.9 mb draw. For this reason, the May increase of 8.0 mb must be treated as a preliminary figure.



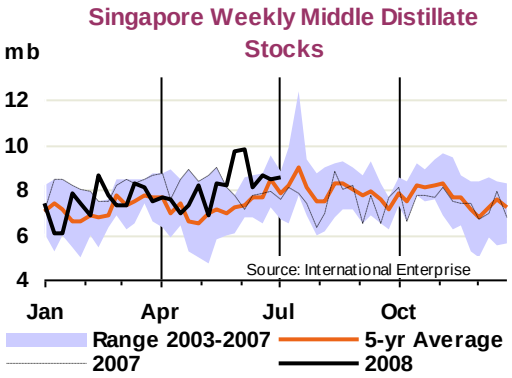


Korean crude stocks built by 0.4 mb in May, following a 200 kb/d rise in imports which outpaced the 170 kb/d in refinery runs, but remain well below the five-year range. In fact, this year's April and May Korean crude stocks are two of the three lowest end-month crude stock levels to have been reported in the last 10 years.

On the products side, OECD Pacific middle distillate stocks were flat on the month at just under 59 mb, compared with a typical May rise of around 6 mb. They now lag the five-year average in absolute and forward cover terms. In the OECD Pacific's other major product category, a build of 1.1 mb in 'other products' (which include LPG and naphtha) left inventories near the bottom of the five-year range at 62.1 mb,, eroded by an unseasonal 1.2 mb drop in Japan. By contrast, Japanese gasoline and Korean fuel oil stocks saw healthy May builds, driving regional inventory in both of these categories above five-year averages in forward cover terms.

Recent Developments in Singapore Stocks

June saw an easing by 1.2 mb of independent middle distillate stocks held in Singapore. However, middle and light distillate stocks remain near the top of five-year ranges. Residual fuel oil stocks rose by 4.0 mb in June, as fuel oil cracks remained low and storage capacity for the product continues to increase. The $10/bbl-plus premium of Singapore HSFO to Rotterdam seen in mid-May may have prompted some loading of long-haul fuel oil cargoes heading east.



PRICES

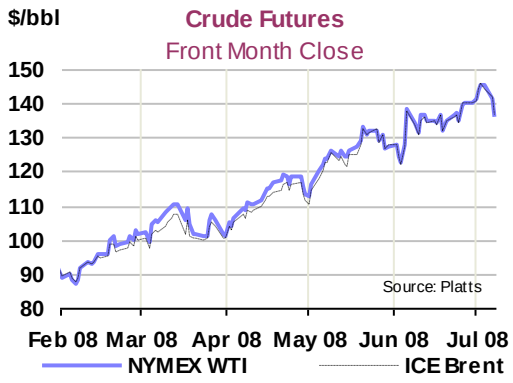
Summary

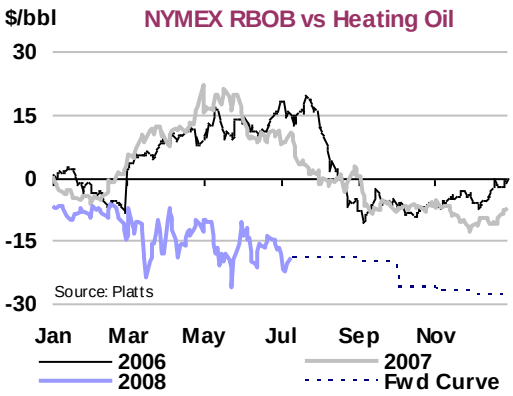
- **Crude oil futures rose further in June, breaching $145/bbl in early July**, but had slipped below $140/bbl again at the time of writing. Markets remain supported by a meagre 2Q OECD stockbuild and by a tight global distillate balance. Saudi Arabia's pledge to pump more crude was countered by outages in the North Sea, Nigeria and Iraq. Tight spare capacity is another supportive factor, especially against the background of rising tension over Iran's nuclear activities.

- **Benchmark physical crude prices rose in tandem with futures**, overshadowing product price gains, despite the absence of shortages in the near-term market. But with the global refining system struggling to profitably supply the right distillate-focused product slate, diesel and jet-rich crudes are in demand and in many cases command significant premia.

- **Refining margins mostly fell in June and early July** as record-high product prices failed to offset new crude records. Margins continue to suffer from unseasonably low gasoline cracks, which turned negative in Northwest Europe in early July, while on average, distillate crack spreads fell too. In the refined product market, jet/kerosene prices have overtaken diesel ahead of the summer travel season. But diesel/gasoil remains supported by outage-related power generation needs in Australia, Argentina and South Africa.

- **VLCC tanker rates in the Middle East rose even further above seasonal expectations** in June, approaching all-time records, due to higher OPEC exports and constrained vessel supply. West African rates retreated in June while Aframax rates were volatile due to weather and port disruptions. Clean tanker rates also surged to extreme highs on firm distillate trade in the Atlantic and Asian refinery maintenance.



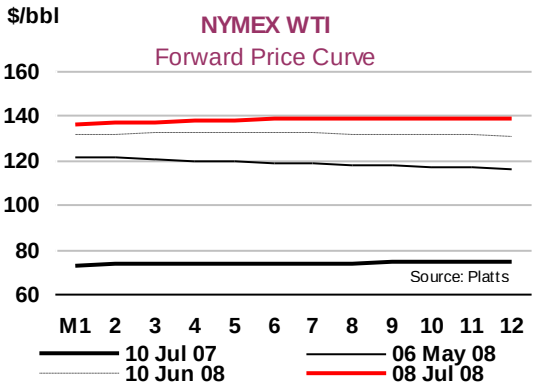


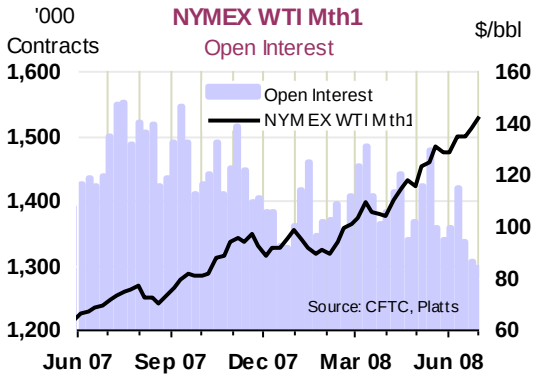
Overview

Crude oil futures breached $145/bbl in early July as a Saudi pledge to pump more oil was offset by actual crude outages in Nigeria, the North Sea and Iraq, while product and especially distillate markets remained tight and the usual 2Q stockbuild failed to materialise. Additional Saudi volumes are expected to be offered to the market in July, but it is unclear at this stage whether they will be priced at a level which makes them competitive in a weakening refinery margin environment. As is often the case, Saudi Arabia has indicated it will not heavily discount below similar crudes, but with prices at very high levels, additional discounting may be required to incentivise stockbuilding. At the same time, tensions over the Iranian nuclear programme served to increase risk-management buying.

Even ahead of the Jeddah summit on 22 June called by Saudi Arabia's King Abdullah, the Kingdom had indicated its willingness to hike output from 9.45 mb/d in June to upwards of 9.7 mb/d from July. Participants at the meeting – producers and consumers alike – concurred that oil prices are damagingly high. But around the same time, first the fire-related shut-in of Statoil/Hydro's Oseberg A platform in the North Sea and then the unexpectedly audacious attack on the deepwater Bonga production facilities, offshore Nigeria added a counter-balance to the market. The latter marked a new degree of escalation in insurgent attacks, as previously, only onshore or shallow-water oil facilities were deemed to be at risk. Soon after, an oil workers' strike was narrowly avoided in Nigeria. Lastly, one of the first hurricanes of the year – Bertha, currently forming over the Atlantic – served as a reminder that the hurricane season in the Gulf of Mexico has begun.

Despite a decline in some crack spreads, distillate strength remains a market driver, though jet/kerosene has now overtaken diesel's previous role. Regional pockets of demand strength due to technical or weather-related outages have multiplied to maintain global market tightness, especially as some of the areas with additional needs are in markets far removed from global refining hubs, such as Argentina, Australia and South Africa. But gasoline's relative weakness – crack spreads in Northwest Europe have turned negative and are depressed in the Mediterranean – mean that refining economics are poor and several plants have announced economic run cuts.



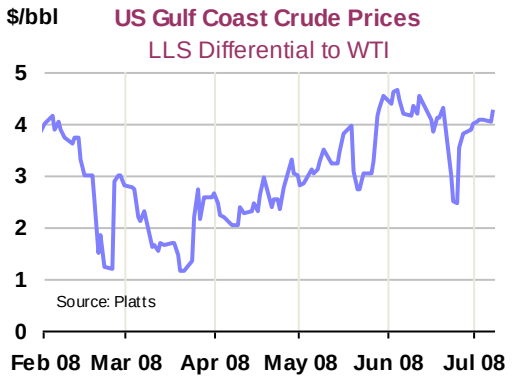


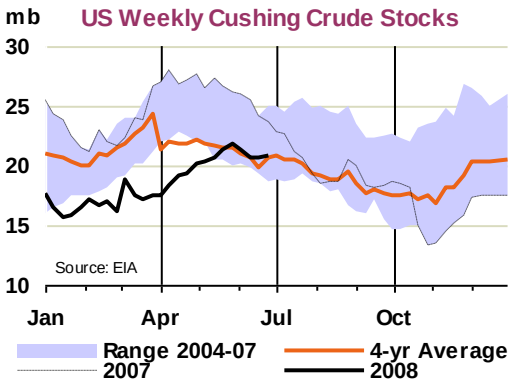
Moreover, prices were generally supported by a rise in geopolitical tension. Besides the Bonga attack, concerns increased over a possible military confrontation between Israel and Iran after military manoeuvres on both sides. Iran warned of shipping restrictions in the Straits of Hormuz, the gateway to the Middle Eastern Gulf, which shook markets. More than 15 mb/d of oil pass through this choke-point, the world's most important tanker route. Moreover, Iran is once again in the international spotlight after being offered a new range of incentives in return for suspension of its alleged uranium enrichment activities. Prices also responded to a Libyan threat to cut off supplies after the passage of a bill in the US that could in theory enable legal claims against OPEC. Saudi Arabia also announced it had prevented major attacks on its oil facilities by arresting 500 suspects in the Kingdom since the beginning of the year.

Crude futures curves remained more or less flat, while higher overall, pushed up by the range of short and long-term concerns. If anything, the near-term contango widened slightly. US crude futures have recently traded at a discount to ICE Brent, the latter taking strength from North Sea and Nigerian outages, while the former is pressured by crude stocks levels at delivery point Cushing, which in recent weeks have risen to average levels again. The 'speculation' argument was dealt another blow by CFTC Commitment of Traders data, with peak prices coinciding with the lowest open interest in WTI since March 2007, and falling net non-commercial positions.

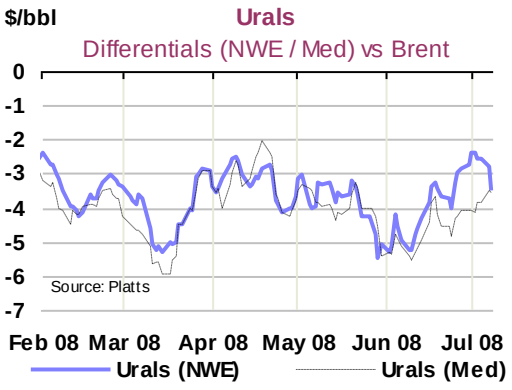
Spot Crude Oil Prices

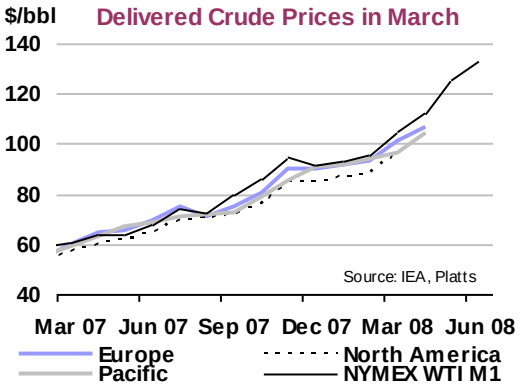
Spot crude oil prices were supported by a tight short-term market, especially for distillate-rich crudes. **US** Light Louisiana Sweet (LLS) maintained its premium over WTI of around $4/bbl on strong diesel demand. US refinery distillate yields are at their highest ever, despite overall refinery utilisation remaining at the bottom of its five-year range. Total US crude stocks have fallen to around 50 mb below last-year and 20 mb below their five-year average, apparently as US refiners, mostly on the Gulf Coast, prefer to draw down stocks in tune with weaker demand than buy more highly priced oil. In addition, an unseasonable surge in dirty freight rates may be partly hampering the flow of crude across the Atlantic.





In **Europe**, as a result of North Sea and Nigerian outages, Dated Brent's discount to WTI narrowed in July, albeit remaining very volatile. Nigerian grades maintain their strong premia around $6/bbl over Brent due to distillates' strength, as well as to some extent the new outages and further insecurity after the Bonga attack. Russian Urals meanwhile has sharply narrowed its discount to Brent on lower Russian production and exports. Expected lower Primorsk outflows in July especially have seen Urals NWE halve its discount to Brent since early June, to its lowest level since February. In the Mediterranean, Urals is still suffering from competing Middle Eastern medium sours and lower refinery interest among reports of some economic run cuts.





With refineries in **Asia** ramping up runs to peak post-maintenance, plants will be on the lookout for any additional crude offered by Saudi Arabia, especially for new plant start-ups in India and China. Much uncertainty still surrounds how much Iranian crude remains in offshore storage, with reports that Iran is having difficulty finding buyers for some grades due to its pricing policy. In the sweet market meanwhile, Indonesia is reportedly raising its 3Q08 term import volume by around 20% to 3.4 mb in order to raise runs and avoid costly product imports.

Spot Crude Oil Prices and Differentials

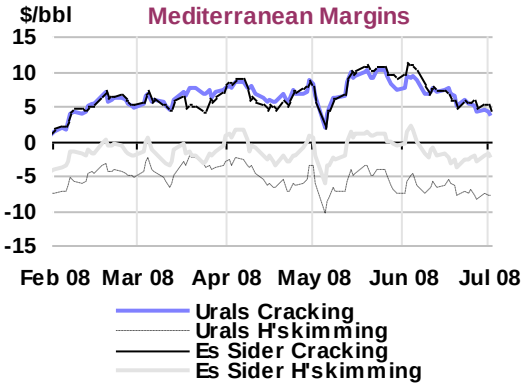
(monthly and weekly averages, $/bbl)

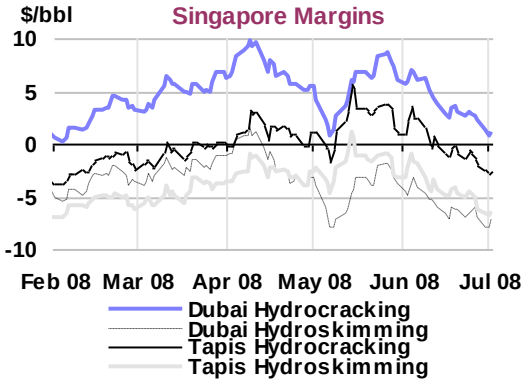
	Apr	May	Jun	Jun-May Avg Change	%	Week Commencing: 09 Jun	16 Jun	23 Jun	30 Jun	07 Jul
Crudes										
Dated Brent	108.97	122.73	132.44	9.71	7.9	134.10	132.26	135.68	141.90	139.94
Brent (Asia) Mth1 adjusted	109.93	124.03	132.90	8.88	7.2	134.50	133.04	136.39	143.60	144.20
WTI (Cushing) Mth1 adjusted	112.63	125.38	133.93	8.55	6.8	134.74	134.38	137.25	142.48	141.37
Urals (Mediterranean)	105.74	118.78	127.73	8.94	7.5	128.80	128.13	131.25	137.90	136.46
Dubai Mth1 adjusted	103.41	119.50	127.82	8.32	7.0	129.35	128.73	131.00	138.16	138.85
Tapis (Dated)	116.55	131.15	140.71	9.55	7.3	142.56	141.37	143.93	150.34	150.65
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	3.66	2.66	1.50	-1.16		0.64	2.12	1.57	0.58	1.44
Urals (Mediterranean)	-3.23	-3.94	-4.71	-0.77		-5.30	-4.13	-4.43	-4.00	-3.47
Dubai Mth1 adjusted - Dated Brent	-5.56	-3.23	-4.62	-1.39		-4.75	-3.53	-4.68	-3.74	-1.09
Tapis (Dated)	7.58	8.43	8.27	-0.16		8.47	9.11	8.26	8.44	10.72
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	0.03	-0.60	-0.91	-0.30		-0.94	-1.40	-0.89	-0.65	-0.91
Forward WTI Cushing Mth1-Mth2 adj	0.71	0.08	-0.53	-0.62		-0.56	-0.63	-0.60	-0.58	-0.66

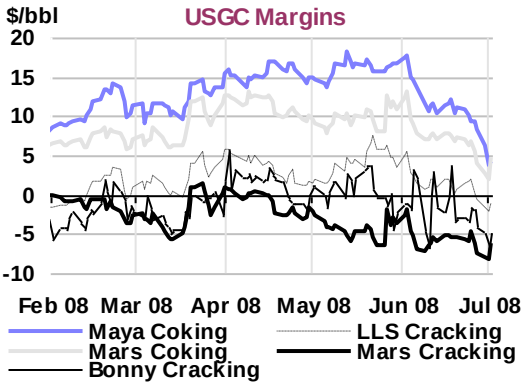
Source: Platts

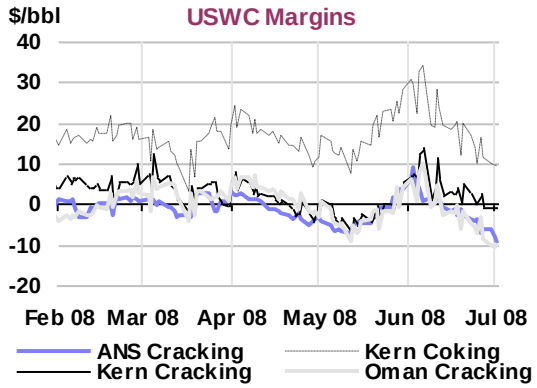
Refining Margins

Refining margins were mostly down in June as both distillate and gasoline cracks fell. Despite record-high outright product prices in most cases, crude's volatility and support from geopolitical and other headlines is squeezing margins. In addition, gasoline continues to suffer from relative seasonal weakness, with European crack spreads near or below zero in late June and early July. Nonetheless, cracking margins in Europe are still comfortable, given higher typical regional distillate yields. Hydroskimming margins in Europe remain poor, leading to reports of economic run cuts at Wilhelmshaven, Elefsis and other plants. In the US, Gulf Coast margins weakened even further in June, with only coking margins remaining positive by early July. The West Coast was the only region to see a pick-up in margins in June after gasoline cracks rose due to regional tightness on refinery outages. Asian margins fell too on lower Chinese import requirements and the return of many plants from maintenance.









Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Apr 08	May 08	Jun 08	Jun 08-May 08	04 Jun	11 Jun	18 Jun	25 Jun	02 Jul
NW Europe	Brent (Cracking)	6.59	6.55	4.47	-2.07	6.23	4.87	5.31	3.22	2.49
	Urals (Cracking)	7.04	7.17	5.16	-2.01	7.11	6.06	6.17	4.06	1.58
	Brent (Hydroskimming)	-0.75	-1.61	-3.72	-2.11	-2.61	-4.01	-3.05	-4.53	-4.26
	Urals (Hydroskimming)	-3.78	-5.20	-7.08	-1.88	-6.30	-6.77	-5.99	-7.67	-9.35
Mediterranean	Es Sider (Cracking)	6.68	8.33	7.29	-1.03	10.10	8.58	7.02	5.48	5.05
	Urals (Cracking)	6.92	7.75	6.76	-0.99	8.14	7.69	7.25	5.57	4.29
	Es Sider (Hydroskimming)	-1.11	-0.69	-1.62	-0.93	0.36	-0.85	-2.17	-2.90	-2.34
	Urals (Hydroskimming)	-4.97	-5.88	-6.73	-0.85	-6.61	-6.48	-6.13	-7.24	-7.89
US Gulf Coast	Bonny (Cracking)	1.73	-0.13	-2.89	-2.76	-2.50	-1.76	-1.48	-4.58	-6.07
	Brent (Cracking)	1.35	0.58	-1.54	-2.12	-2.13	-1.20	0.57	-2.84	-4.40
	LLS (Cracking)	3.53	4.04	1.55	-2.50	4.25	1.54	1.62	1.19	-1.10
	Mars (Cracking)	-0.89	-4.27	-5.55	-1.28	-3.16	-6.34	-5.41	-5.42	-7.18
	Mars (Coking)	11.45	9.75	7.51	-2.24	11.57	7.67	7.60	6.79	3.75
	Maya (Coking)	15.45	15.97	11.66	-4.31	16.69	12.39	11.43	10.35	6.38
US West Coast	ANS (Cracking)	-1.00	-3.19	-0.62	2.57	5.11	1.99	-1.15	-3.16	-7.47
	Kern (Cracking)	1.50	-1.79	4.34	6.13	5.18	8.56	3.69	1.72	-0.07
	Oman (Cracking)	2.66	-3.02	-0.91	2.12	3.02	4.38	-1.01	-5.11	-8.40
	Kern (Coking)	16.73	16.72	20.38	3.66	26.55	26.63	20.33	14.60	11.38
Singapore	Dubai (Hydroskimming)	-1.39	-4.44	-5.75	-1.30	-4.07	-4.48	-6.29	-6.51	-7.20
	Tapis (Hydroskimming)	-2.72	-1.86	-4.03	-2.17	-2.48	-3.09	-4.38	-4.66	-6.19
	Dubai (Hydrocracking)	7.12	5.31	4.07	-1.23	6.35	5.78	3.40	3.01	1.61
	Tapis (Hydrocracking)	1.14	2.26	0.04	-2.22	1.88	1.18	-0.43	-0.75	-2.28
China	Cabinda (Hydroskimming)	-1.23	-1.98	-1.79	0.19	-1.70	-2.46	-0.74	-1.44	-4.76
	Daqing (Hydroskimming)	-1.01	-2.22	-2.82	-0.60	-1.95	-2.57	-2.88	-3.10	-4.35
	Dubai (Hydroskimming)	-2.24	-5.86	-7.11	-1.26	-5.27	-5.62	-7.65	-8.04	-8.86
	Daqing (Hydrocracking)	3.38	1.79	1.20	-0.59	2.79	1.68	0.91	0.53	-0.50
	Dubai (Hydrocracking)	6.28	3.89	2.72	-1.17	5.17	4.66	2.05	1.48	-0.06

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

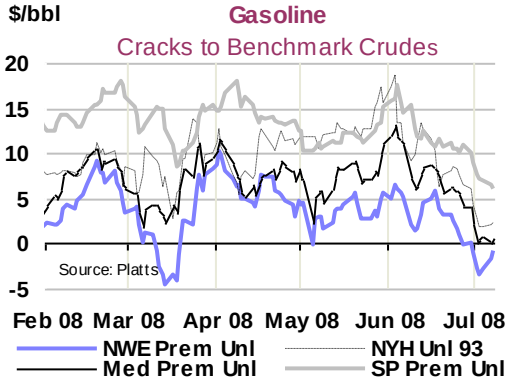
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.
Sources: IEA, Purvin & Gertz Inc.

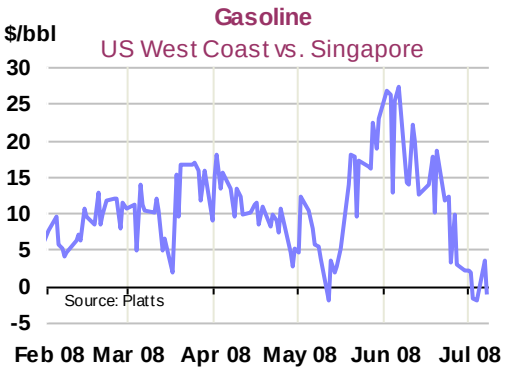
Spot Product Prices

Falling US demand, an increased share of ethanol and Europe's structural shift towards diesel are keeping the **gasoline** market depressed. A closed arbitrage to the west saw pressure on European crack spreads, which declined to zero or below in late June and early July. On the US West Coast, despite rising gasoline cracks in July, premia over Asian prices have shrunk to next to nothing since early June, hampering trans-Pacific flows. Unlike gasoline, Asian naphtha discounts to crude narrowed in mid-June but have subsequently plummeted again, with the prospect of around 500,000 tonnes of European product heading east for August.

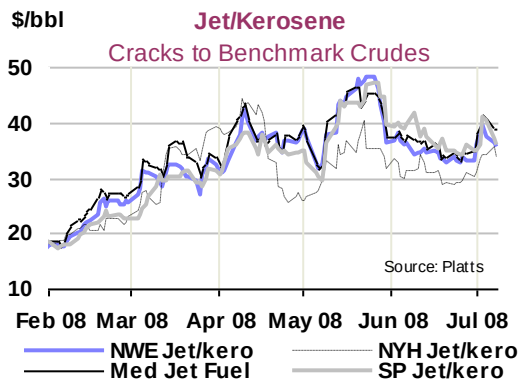
Distillate crack spreads in all major regions fell during June, but picked up again slightly in early July. Asian markets are becoming slightly less tight as refineries return from maintenance and Chinese product import demand has weakened somewhat. Reportedly, China will only import 450,000 tonnes of gasoil/diesel in July, down from June, as pre-Olympic stockbuilding perhaps nears completion. Importers may also be hesitant after the decision not to extend VAT tax breaks that expired at the end of June. But other regional pockets of demand strength remain, notably in the southern hemisphere, which is entering winter. Problems at Western Australia's Varanus Island gas production have required increased diesel imports – reportedly up by around 80 kb/d – and are set to last several months. South Africa's 1Q diesel imports show nearly 10% growth year-on-year, to 180 kb/d on continuing power problems. Chile and Argentina are maintaining stronger-than-usual imports due to natural gas shortages, and Turkey was

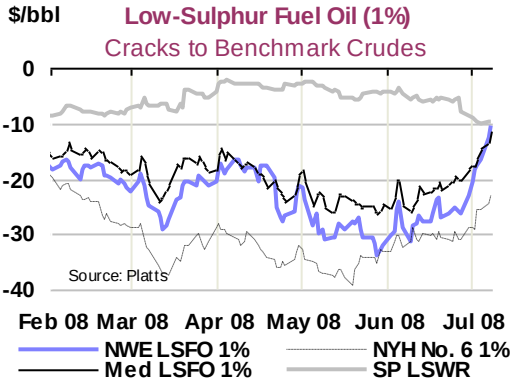
buying higher volumes of gasoil 0.1% ahead of a tightening in specifications from 1 July. Jet/kerosene has actually slightly overtaken diesel in crack spread terms, reflecting a tighter market ahead of summer travel, and after a strong focus on maximising diesel yields tightened jet supply.





More unusually, **fuel oil** discounts to benchmark crudes narrowed quite dramatically – both for low and high-sulphur barrels. Strong demand from Argentina – again on power problems heading into the winter – has boosted low-sulphur residue in Northwest Europe and the Mediterranean, while discounts for low-sulphur waxy residue – most commonly used for Japanese direct burning – have widened slightly. Northwest Europe, where the surge has been most marked, saw independent fuel oil stocks fall back within their five-year range in June. Meanwhile, the high-sulphur market is reportedly taking some strength from greater bunker demand, as especially dirty freight rates surged in June, possibly reflecting higher tanker demand.





End-User Product Prices in June

End-user product prices on average increased by 8.6% in June in surveyed IEA countries – in US dollars, ex-tax. Transport fuel prices on average rose by 8.1%, but moved even higher in the UK and Japan, where gasoline prices jumped by 11.0% and 10.5% and diesel prices by 12.4% and 10.2%, respectively (again, in US dollars, ex-tax). Heating oil retail prices on average rose by 8.2% and low-sulphur fuel oil prices increased by 10.8% in June 2008. Compared with June 2007, retail prices are now 70% higher than a year ago, with the largest increases in heating oil (+85%), low-sulphur fuel oil (+81%) and diesel retail prices (+76%). Gasoline prices on average rose by 45% year-on-year.

Spot Product Prices

(monthly and weekly averages, $/bbl)

	Apr	May	Jun	Jun-May Change	Jun-May %	Week Commencing: 09 Jun	16 Jun	23 Jun	30 Jun	07 Jul	Apr	May	Jun
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	115.22	126.79	135.89	9.10	7.2	136.68	136.84	137.33	139.89	138.20	6.25	4.07	3.45
Naphtha	99.79	109.15	120.79	11.65	10.7	120.74	122.13	124.53	128.04	126.92	-9.18	-13.58	-11.64
Jet/Kerosene	145.46	164.40	166.97	2.57	1.6	168.68	166.03	168.95	178.73	176.17	36.49	41.67	34.53
ULSD 10ppm	143.45	163.67	167.62	3.95	2.4	170.86	167.61	168.10	174.32	172.52	34.47	40.95	35.19
Gasoil .1%	137.87	158.88	163.81	4.93	3.1	167.12	164.34	165.25	171.70	169.33	28.90	36.16	31.38
LSFO 1%	88.58	93.94	105.73	11.79	12.6	105.70	106.63	109.75	122.68	127.20	-20.39	-28.79	-26.70
HSFO 3.5%	76.73	83.75	93.30	9.55	11.4	93.29	95.41	97.35	106.03	107.48	-32.24	-38.98	-39.13
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	113.71	126.63	135.57	8.95	7.1	136.01	135.68	136.79	139.41	136.65	7.97	7.84	7.84
Naphtha	98.87	108.00	119.01	11.01	10.2	119.07	120.15	122.49	126.46	125.57	-6.88	-10.79	-8.72
Jet Aviation fuel	143.37	160.28	163.36	3.08	1.9	165.21	162.82	165.38	176.83	175.35	37.62	41.50	35.63
Gasoil .2%	136.66	157.40	161.07	3.67	2.3	163.69	160.42	162.92	168.71	167.36	30.91	38.61	33.34
LSFO 1%	86.57	95.13	105.81	10.68	11.2	105.10	106.49	110.95	121.20	123.04	-19.17	-23.65	-21.92
HSFO 3.5%	75.87	83.89	93.50	9.60	11.4	93.28	95.83	97.73	106.52	108.03	-29.87	-34.89	-34.23
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	122.71	138.22	144.33	6.11	4.4	145.97	143.07	145.04	146.22	143.54	10.07	12.84	10.39
Unleaded	115.55	130.09	138.20	8.12	6.2	139.36	138.29	139.07	140.66	138.71	2.91	4.71	4.27
Jet/Kerosene	148.31	158.45	164.72	6.27	4.0	166.88	164.47	166.78	174.68	177.01	35.68	33.07	30.79
No. 2 (Heating Oil)	135.35	151.66	159.53	7.87	5.2	162.59	159.03	160.56	167.17	165.57	22.72	26.28	25.60
LSFO 1%	80.31	89.70	103.23	13.53	15.1	104.20	104.09	106.42	114.36	116.70	-32.32	-35.68	-30.70
No. 6 3%	76.93	84.50	94.25	9.75	11.5	94.68	95.16	98.23	107.70	109.70	-35.71	-40.88	-39.68
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	118.08	131.13	140.30	9.17	7.0	142.17	139.81	141.59	146.30	145.39	14.67	11.64	12.48
Naphtha	102.61	113.69	125.25	11.56	10.2	124.31	125.88	130.01	133.83	133.50	-0.80	-5.80	-2.57
Jet/Kerosene	138.58	159.58	164.88	5.30	3.3	168.11	164.66	165.74	175.54	175.92	35.17	40.08	37.07
Gasoil .5%	138.34	158.62	166.45	7.83	4.9	169.78	166.35	168.95	175.49	176.40	34.92	39.13	38.63
LSWR Cracked	100.30	115.18	122.22	7.04	6.1	123.75	123.09	124.82	128.84	129.11	-3.11	-4.32	-5.59
HSFO 180 CST	84.00	94.35	99.50	5.15	5.5	99.49	100.46	103.49	111.71	115.07	-19.41	-25.15	-28.32
HSFO 380 CST 4%	81.92	91.85	99.14	7.29	7.9	99.77	100.19	103.02	112.32	115.58	-21.49	-27.65	-28.68

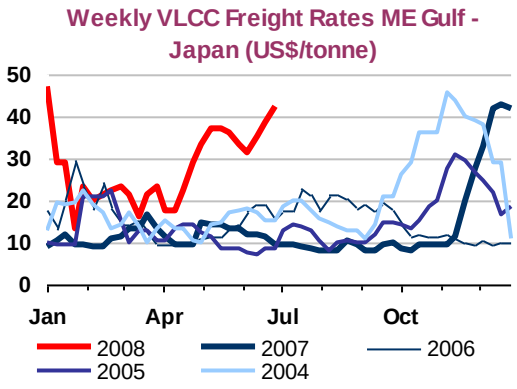
Source: Platts

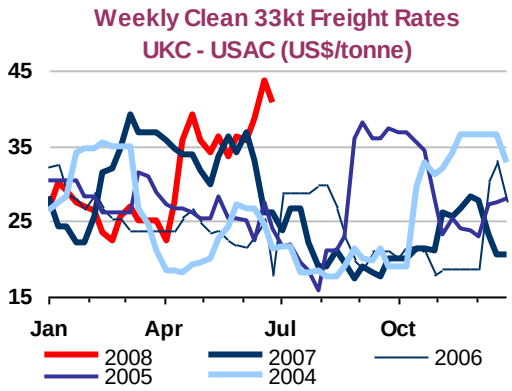
Freight

VLCC tanker rates in the Middle East Gulf rose even further above seasonal expectations in June, approaching all-time records towards the end of the month. Signs of higher OPEC Gulf exports and continued constraints on tanker supply boosted charter rates at a time of year when they are usually at their lowest. West African rates retreated from mid-May highs as vessel supply improved, while Aframax rates were volatile in June due to various weather and port disruptions. Clean tanker rates increased as Asian refinery maintenance gathered pace and distillate trade in the Atlantic remained firm.

Despite an estimated halving of the earlier-reported 14 tankers storing crude offshore Iran in June, regional tanker supply apparently trailed demand in the Middle East Gulf as rates rose throughout the month. On the benchmark route to Japan, spot VLCCs chartered for around $42/tonne at the end of June compared with $32/tonne at the start of the month. Westbound long-haul VLCC rates also increased in June, but by less. Tanker reports suggest that Middle East sailings could rise through most of July. However, it is questionable whether the pricing of Saudi Arabia crude for July and August will support additional summer purchases by refiners, especially with processing profitability ebbing in certain regions.

Despite disruptions to Nigerian loadings in June, aggregate supplies appear to have been broadly sustained. Asian purchases of West African July-loading crude were reportedly higher than those loading in June, including large volumes bought by Indian refiners. However, West African tanker rates fell in June, possibly as a result of increased tanker supply in the Atlantic. Benchmark Suezmax rates from West Africa to the US Atlantic dropped from a mid-May high of almost $40/tonne to under $28/tonne by the end of June.





By contrast, Aframax rates have been volatile over the last two months, with a number of factors quickly changing the tonnage situation. Weather disruptions in the Caribbean and discharging problems at Chiba in Japan (necessitating the use of Aframaxes instead of VLCCs) tightened Aframax vessel fundamentals. However, lower exports from Primorsk due to pipeline maintenance may have had an offsetting effect. North Sea to Northwest Europe dirty rates for 80 kmt vessels started June below $9/tonne, before rising to $19/tonne mid-month and then easing below $14/tonne by the month's end.

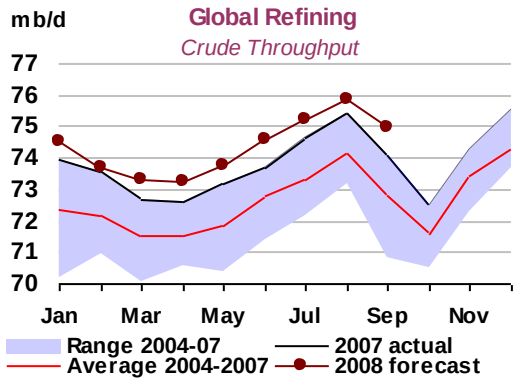
Clean tanker rates rose in June and are at multi-year highs. In the Atlantic basin, 33 kmt marker rates from UK Continent to US Atlantic topped $43/tonne towards the end of June. This coincides with the EIA showing high volumes of US product exports of over 1.4 mb/d for all of May and June. Anecdotes of off-specification material heading to South America and Asia alongside increased Australian imports all point to firm clean trading activity and consequently high vessel demand. Refinery maintenance and reportedly higher petrochemical throughputs have kept clean tanker rates high in 'East of Suez' markets as well.

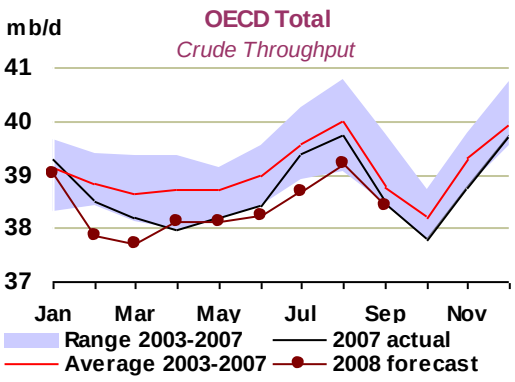
REFINING

Summary

- **Global crude throughput averaged 74.6 mb/d in June, a month-on-month increase of 0.8 mb/d.** Much of the increase was in the Atlantic Basin, China and Russia as refineries completed planned maintenance. Only the OECD Pacific saw materially weaker crude runs, due to seasonal maintenance. However, crude throughput levels are vulnerable to economic crude run cuts, as margins remain under pressure from weak fuel oil and weak gasoline cracks.

- **The 3Q08 global crude throughput forecast is cut by 0.4 mb/d to an average of 75.3 mb/d,** on the weaker refining margin outlook. 3Q08 forecast year-on-year growth is lowered to 0.6 mb/d, as non-OECD growth of 1.1 mb/d more than offsets the 0.4 mb/d decline in the OECD. Conversely, 2Q08 crude throughput is revised up by 0.2 mb/d, as stronger reported May crude runs in the OECD, Asia and the Middle East boost the quarterly average.





- **The OECD bears the brunt of the downward revisions to the 3Q08 crude throughput forecast,** as weak gasoline cracks and hence cracking margins, in the US and Europe reduce our forecasts. Some independent refiners, in the US and elsewhere, are reportedly facing financial problems from the weaker margin outlook combined with rising crude and operating costs.

- **New refinery capacity will add 2.0 mb/d of crude distillation capacity in 2009,** largely in China and Other Asia. In addition, significant investment in upgrading capacity is expected in OECD and non-OECD regions. The outlook for product markets over the course of 2009 is for a continuation of the trend towards increased gasoline supply potential, while distillate markets will remain relatively tight.

Global Refinery Throughput

Global crude throughput in June of 74.6 mb/d is forecast to increase to 75.2 mb/d in July. Higher runs in the OECD (+0.4 mb/d) and a rebound in Chinese throughput (+0.1 mb/d), following the completion of planned maintenance drive much of the increase. Chinese runs may weaken if unconfirmed reports of the abolition of VAT rebates on imports are correct, but July runs are nonetheless expected to remain near record levels.

As highlighted last month, the overall profitability of refining remains crucial to global crude runs. The emergence of economic run cuts in several regions, notably Europe, the Pacific and North America, highlights the current difficult conditions facing some refiners, despite distillate cracks remaining at exceptionally high levels. Hydroskimming refineries in the Mediterranean and Northwest Europe have seen margins deteriorate to -$7/bbl on processing Urals - the region's typical medium-sour crude. The weakness in gasoline cracks in the has weighed heavily on gasoline-biased US cracking margins and we estimate that some US refineries may have implemented economic crude run-cuts. Similarly, refiners in Japan say sluggish demand is forcing them to cut throughput.

Global crude throughputs for 3Q08 are estimated at 75.3 mb/d, 0.4 mb/d lower than in last month's report. The weaker margin environment has resulted in lower estimates for crude throughput, primarily in North America, but also Europe. This is partly offset by higher estimates in China, where the increase in domestic prices and the start-up of new capacity should result in 3Q08 crude throughput averaging 6.9 mb/d, 0.1 mb/d higher than last month's report.

Forecast **OECD** 3Q08 crude throughput averages 38.8 mb/d, 0.4 mb/d lower than last month's report, due to weak demand, the poor margin environment and the fundamental factors underpinning the low gasoline cracks. This level of crude throughput is 0.7 mb/d below the five-year quarterly average, highlighting the current weak margin environment, and contracting regional demand.

However, it would be wrong to conclude that refiners are producing less refined product than previously, despite lower margins. Rather it merely illustrates that the use of crude is declining in favour of other, cheaper feedstocks, such as atmospheric residue, VGO, and NGLs. Overall, total OECD refinery inputs (of crude and other feedstocks) are 0.7 mb/d above the five-year average for the January to April period, compared with a 0.7 mb/d shortfall for crude runs. Hence, refiners are running closer to capacity than indicated by merely considering crude throughput levels, but economics dictate that the crude competes for its place within a range of potential feedstocks

Global Refinery Crude Throughput[1]

million barrels per day

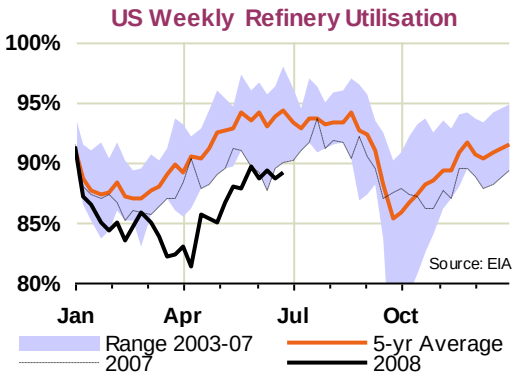
	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08
OECD Crude Runs									
North America	17.9	17.6	17.2	17.8	18.3	*18.4*	*18.5*	*18.4*	*18.1*
Europe	13.7	13.1	13.3	13.4	13.2	*13.5*	*13.6*	*13.7*	*13.5*
Pacific	7.4	7.1	7.3	6.9	6.7	*6.4*	*6.6*	*7.0*	*6.8*
Total OECD	39.0	37.9	37.7	38.1	38.1	*38.2*	*38.7*	*39.2*	*38.4*
NON-OECD Crude Runs									
FSU	5.7	6.0	*6.0*	*5.7*	*5.8*	*6.1*	*6.0*	*6.1*	*6.1*
Europe	0.8	0.7	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	6.9	*6.8*	*6.7*	*6.5*	*6.8*	*6.9*	*6.9*	*6.9*
Other Asia	8.4	8.2	*8.2*	*8.3*	*8.3*	*8.3*	*8.4*	*8.4*	*8.4*
Latin America	5.5	5.3	*5.4*	*5.5*	*5.4*	*5.6*	*5.6*	*5.6*	*5.6*
Middle East	5.9	6.1	*6.0*	*6.0*	*6.2*	*6.2*	*6.2*	*6.2*	*6.1*
Africa	2.5	2.5	*2.4*	*2.2*	*2.5*	*2.6*	*2.6*	*2.6*	*2.6*
Total Non-OECD	35.5	35.8	*35.6*	*35.2*	*35.6*	*36.3*	*36.5*	*36.7*	*36.5*
Total Crude Runs	74.5	73.7	*73.3*	*73.3*	*73.7*	*74.6*	*75.2*	*75.9*	*74.9*

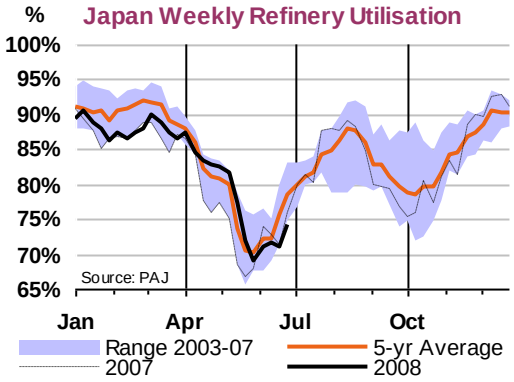
1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

3Q08 crude throughput in **OECD North America** accounts for much of the reduction in this month's OECD forecast. US runs are cut by 0.2 mb/d, to an average 18.3 mb/d, which is slightly lower than 3Q07. The current weak margin environment is hurting the financial health of some US refiners. Several independent US refiners have reported the need to either rearrange debt facilities or cut inventory levels to cope with the impact of high oil prices on their cash flows and balance sheets. The outlook for the industry's earnings has been materially downgraded by some investment banks, who are predicting second-quarter losses for some players, while others may only be slightly better than break even during the second quarter.

US refinery crude throughput averaged 15.4 mb/d in June, according to provisional weekly data, some 0.2 mb/d below our expectations. Crude runs reached the highest levels since the beginning of the year in the Midwest and West Coast regions, but fell in the US Gulf Coast following a series of power-related outages during the latter half of the month. July crude throughput is forecast to increase to 15.5 mb/d and again to 15.6 mb/d in August. Higher crude runs are certainly possible given the lack of reported planned

maintenance, but the weak margin environment leaves us sceptical they will occur. Conversely, we do not explicitly adjust our forecast for potential hurricane-related outages during the third quarter, leaving forecasts vulnerable to any repeat of the significant operational problems seen in 2004 and 2005.





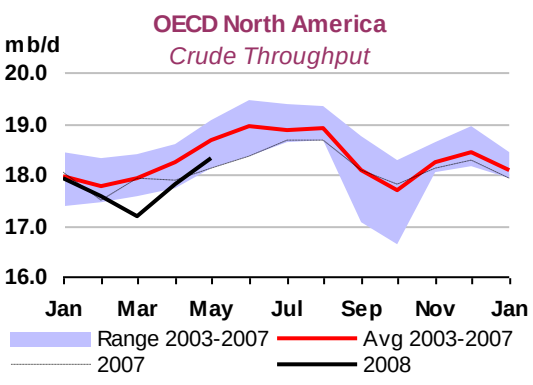
The 3Q08 **OECD Pacific** throughput forecast is unchanged at 6.8 mb/d, despite the reprots of run cuts at Nippon Oil and Showa Shell in Japan. Weekly data for June suggest that crude runs were 3.4 mb/d, in line with our forecast, and should represent the seasonal low point in refinery activity as refineries complete maintenance. The re-emergence of run cuts in Japan mirrors the weak margin environment in the Atlantic Basin, although high gasoline stocks following changes to gasoline taxation earlier in the year may also be a factor in refineries' decision to trim runs. One positive note for Japanese refiners is the continued need for additional fuel oil supplies within Japan to meet power generation needs, following the long-term problems with nuclear generation plants. This has forced net imports to the highest level since 2003, cutting losses on fuel oil sales, compared with export alternate value.

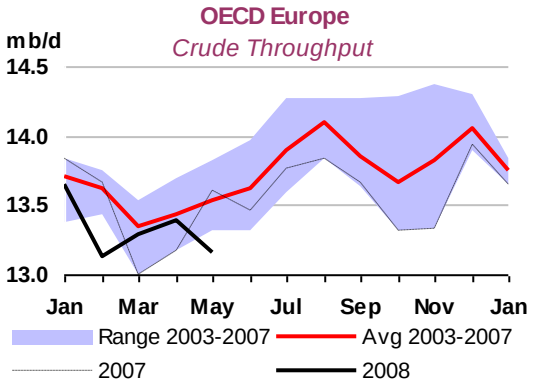
Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	*Apr 08*	*May 07*	May 08	May 07
OECD North America										
US[2]	15.19	14.80	14.63	14.36	14.80	15.22	0.42	-0.15	87.21	87.98
Canada	1.83	1.88	1.78	1.59	1.74	1.81	0.06	0.27	89.56	76.27
Mexico	1.23	1.25	1.18	1.24	1.26	1.28	0.02	0.05	83.12	71.96
Total	18.26	17.93	17.59	17.19	17.80	18.30	0.50	0.17	87.13	86.25
OECD Europe										
France	1.73	1.78	1.62	1.47	1.70	1.67	-0.03	-0.21	85.10	95.91
Germany	2.31	2.26	2.20	2.35	2.20	2.08	-0.12	-0.07	86.08	88.79
Italy	1.95	1.87	1.78	1.81	1.70	1.73	0.03	-0.15	74.16	80.56
Netherlands	1.08	1.00	1.01	1.03	1.05	0.96	-0.09	-0.08	78.87	85.74
Spain	1.14	1.20	1.14	1.11	1.21	1.18	-0.03	-0.02	92.44	93.79
UK	1.52	1.48	1.40	1.51	1.59	1.54	-0.05	-0.08	81.85	86.12
Other OECD Europe	4.23	4.07	3.98	4.01	3.94	4.00	0.06	0.17	85.28	81.73
Total	13.94	13.65	13.13	13.28	13.39	13.16	-0.23	-0.44	83.41	86.20
OECD Pacific										
Japan	4.27	4.13	4.15	4.18	3.97	3.53	-0.44	0.21	75.41	70.93
Korea	2.57	2.53	2.37	2.40	2.28	2.45	0.17	0.02	89.56	88.82
Other OECD Pacific	0.71	0.77	0.63	0.67	0.68	0.70	0.02	-0.01	86.72	87.82
Total	7.54	7.43	7.15	7.25	6.92	6.68	-0.24	0.22	81.23	78.54
OECD Total	39.74	39.01	37.87	37.72	38.11	38.14	0.03	-0.05	84.75	84.83

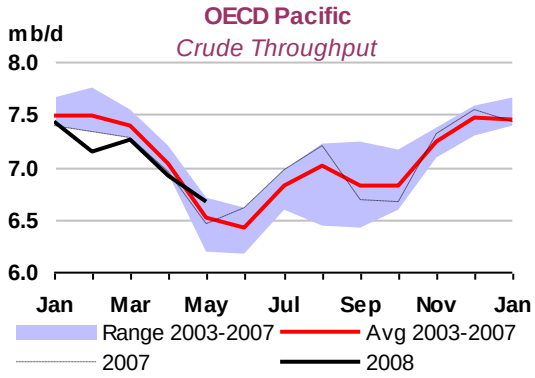
1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50

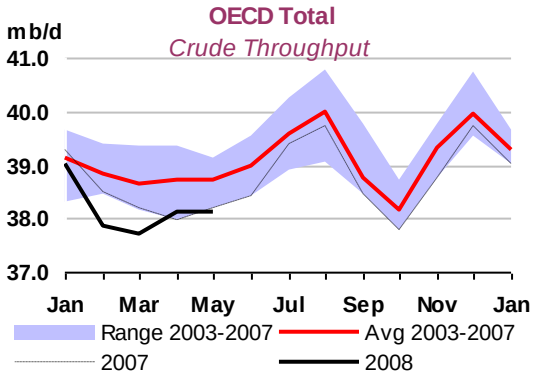
Korean runs were stronger than expected during May at just over 2.4 mb/d. The commercial start-up of a second residue fluid catalytic cracker at SK Energy's 840 kb/d Ulsan refinery should improve Korea's ability to maintain runs in a weak margin environment as it converts fuel oil into gasoline, distillate and petrochemical feedstock.





OECD Europe crude throughput in May fell by 0.2 mb/d to an average of 13.2 mb/d, slightly above our forecast. Crude runs remain below the five-year range, reflecting the weak margin environment with run cuts reported in Germany and Greece. However, it is apparent from the data that other European refineries have also trimmed runs in May, but that these run cuts are unreported. Consequently, we have revised down our 3Q08 forecast to 13.6 mb/d, 0.2 mb/d lower than last month and 0.1 mb/d below 3Q07 levels.





Chinese crude runs registered a 0.1 mb/d dip in May to average 6.5 mb/d, slightly above our forecast for the second month running. We have revised up 3Q08 runs by 0.1 mb/d to an average of 6.9 mb/d, on the back of stronger-than-expected level of crude throughput and the increase in domestic prices announced in June. At the time of writing it remains unclear whether the VAT rebate offered on crude imports would remain in place for the third quarter, possibly indicating that the Chinese government considers it has done enough for refineries to maintain domestic supplies by raising product prices. Furthermore, July diesel imports, estimated at almost 110 kb/d, are at the lowest level since February, suggesting that state refiners see the potential for higher domestic crude runs to ease shortages as refineries meet an increased proportion of demand.

In addition to the increased domestic pricing, July crude runs at the recently commissioned Qingdao refinery are expected to be 20 kb/d higher than previously forecast as the refinery increases utilisation towards full operating rates. Furthermore, the completion of additional crude distillation and distillate hydrotreating capacity at Sinopec's Wuhan refinery will allow a 30 kb/d increase in crude throughputs. However, elsewhere in China the increase in domestic prices, announced in June, appears to have been insufficient to entice higher activity levels among the independent refiners. Reports suggest that the cash flow crisis faced by some independent refiners has been aggravated by delays to payments by Sinopec under buyback arrangements agreed earlier this year.

Refinery Capacity Additions and Product Supply in 2009

Refining capacity is set for a period of substantial growth over the course of 2009. New refineries in Asia account for the majority of the forecast 2.0 mb/d increase in crude distillation during 2009. In addition, significant investment in upgrading capacity is expected in OECD and non-OECD regions. The outlook for product markets over the course of 2009 is for a continuation of the trend towards increased gasoline supply potential, while distillate markets are likely to remain tight, although not as tight as currently. Fuel oil markets should start to tighten as on the back of the start-up of upgrading capacity at existing refineries.

The majority of refinery capacity additions in 2009 are concentrated in the start-up of half a dozen large grassroots refineries in Asia. The largest project expected on stream in the next 18 months is the 580 kb/d Jamnagar II refinery in India. This full-conversion, export-orientated refinery is expected to be operational at the end of 2008 and is designed to process heavy, sour crudes and produce a range of transportation fuels that meet the most demanding quality standards. Elsewhere in India, expansions at several Indian refineries also contribute to Asian growth. Similarly, the completion of Vietnam's Dung Quat refinery and additional upgrading capacity projects in Thailand will also raise the region's output of light and middle distillates.

Chinese projects in 2009 continue to increase the size, complexity and output quality of the domestic refining industry. These follow several large-scale projects in 2008, including Sinopec's 200 kb/d Qingdao refinery, which entered service in 2Q08, and expansions at Sinopec Wuhan and CNPC's Yumen and Dalian facilities. Growth in 2009 is driven by CNOOC's new 240 kb/d Huizhou refinery and CNPC's 200 kb/d Qinzhou plant. In addition, the expansion of CNPC's Fushun and Dushanzi facilities, plus the 160 kb/d expansion of the Sinopec Quanzhou refinery, as a joint venture with Saudi Aramco and ExxonMobil, underpins forecast growth of over 700 kb/d in 2009.

Elsewhere, growth in refining capacity comes from the start-up of Qatar's 146 kb/d condensate splitter in Ras Laffan, which we assumed would start in late 2008, although recent comments by some of the project sponsors indicate that it will not start until early 2009. OECD regions contribute a combined 300 kb/d over the course of 2008 and 2009. Pacific expansions are driven by additional condensate processing capacity in Japan, associated with petrochemical processing expansions. Conversely, North American and European refinery expansions by Valero, BP and others are aimed at improving the ability to process a heavier, sourer, and hence cheaper crude slate.

Product supply trends are forecast to diverge in 2009. Continued easing of global gasoline and naphtha markets contrasts with a marginal easing of tightness in middle distillates, despite tighter diesel quality specifications in Europe from January 2009. Fuel oil markets could start to tighten during 2009 (although this assumes that incremental supplies of heavy sour crude are not sold to hydroskimming refineries, which would result in additional fuel oil supplies).

Global gasoline supply potential increases significantly in 2009, thanks to the increase in refining capacity in Asia and North America, and increasing supplies of ethanol. Against this, weak global demand growth is forecast in the major consuming regions. OECD demand declines on the back of a mixture of cyclical and structural factors, while non-OECD regions post below-trend demand growth on the back of high gasoline prices. Concurrently, naphtha's supply potential will increase as rising supplies of gas condensates are processed in the Middle East and Asia, limiting refiners' ability to raise naphtha yields and minimise the gasoline overhang.

Middle distillate markets are expected to remain relatively tight in the face of robust demand growth next year. The Chinese refinery expansions noted above are forecast to reduce Chinese distillate imports over the course of 2008 and restore China's net export status during 2009. However, rising import requirements in OECD Europe and Latin America will keep the pressure on refineries to maximise middle distillate yields where possible. The Middle East also looks set for tighter gasoil/diesel markets as strong demand growth outstrips local refinery supply capabilities, although the region will remain a net exporter of jet fuel/kerosene. European diesel markets will move to 10 ppm sulphur limits at the start of 2009, from 50 ppm currently (apart from the UK and Germany, which have already adopted the 10 ppm rule), as part of the move to Euro-V standard fuels. This change, which affects around 3mb/d of diesel supply, could support diesel cracks over the coming winter and into 2009, particularly if some European refineries are not ready to meet the tighter specifications.

Fuel oil markets should start to tighten as new upgrading capacity additions outpace falling demand. Moreover, tightness in LNG and coal markets could support demand, particularly as spot LNG cargoes are trading well above price parity with fuel oil in Asia. Overall, the scale of investment in upgrading suggests that fuel oil markets should see tighter conditions emerge over the course of 2009.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.5	25.3	25.7	25.4	25.5	25.5	25.5	24.8	24.9	25.1	25.1	25.0	24.4	24.5	24.7	24.8	24.6
Europe	15.6	15.6	15.2	14.9	15.4	15.6	15.3	15.1	15.1	15.4	15.5	15.3	15.1	14.9	15.3	15.4	15.2
Pacific	8.6	8.4	8.8	7.8	7.8	8.6	8.3	8.8	8.0	7.9	8.7	8.4	8.7	7.8	7.8	8.7	8.2
Total OECD	49.7	49.3	49.7	48.2	48.7	49.8	49.1	48.7	47.9	48.3	49.3	48.6	48.2	47.2	47.8	48.8	48.0
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.3
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.0	8.0	8.1	8.0	8.3	8.4	8.4	8.5	8.4
Other Asia	8.8	9.0	9.2	9.4	9.1	9.4	9.3	9.6	9.6	9.1	9.5	9.5	9.8	9.8	9.3	9.7	9.7
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.9	6.0	6.0	5.9	5.9	6.1	6.2	6.2	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.9	7.1	6.8	6.9	7.1	7.2	7.5	7.2	7.2
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.2	3.1	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	37.9	38.2	38.2	38.7	38.3	39.4	39.6	39.6	40.2	39.7
Total Demand[1]	83.8	84.9	86.1	85.1	85.6	87.1	86.0	86.6	86.2	86.6	88.1	86.9	87.6	86.8	87.4	89.0	87.7
OECD SUPPLY																	
North America	14.1	14.2	14.4	14.4	14.2	14.1	14.3	14.2	13.9	14.0	14.4	14.1	14.6	14.1	14.1	14.3	14.3
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.6	4.3	4.6	4.6	4.5	4.2	4.0	4.2	4.2
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
Total OECD	20.3	20.0	20.2	19.9	19.5	19.8	19.8	19.7	19.2	19.1	19.8	19.5	20.0	19.2	18.9	19.3	19.3
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	13.1	13.5	13.1	13.5	13.4	13.2	13.1	13.3
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.9	3.9	3.8	3.9	4.0	4.0	3.9	3.9
Other Asia	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.6	2.7	2.8	2.7	2.8	2.8	2.8	2.8	2.8
Latin America	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.1	4.2	4.1	4.3	4.3	4.3	4.3	4.3
Middle East	1.8	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Africa[2]	3.7	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.5	27.6	28.1	28.6	28.0	28.7	28.7	28.4	28.3	28.5
Processing Gains[3]	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[5]	50.4	51.1	50.4	50.2	49.6	49.9	50.0	49.7	49.3	49.8	51.1	50.0	51.4	50.6	50.1	50.4	50.6
Non-OPEC excl. Angola & Ecuador[2]	48.6	49.1	49.9	49.7	49.1	49.6	49.6	49.7	49.3	49.8	51.1	50.0	51.4	50.6	50.1	50.4	50.6
OPEC																	
Crude[6]	29.7	29.7	30.3	30.2	30.6	31.5	30.7	32.4	32.1								
NGLs	4.5	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.4	5.1	5.7	5.9	6.0	6.2	5.9
Total OPEC	34.2	34.3	35.1	34.9	35.4	36.4	35.5	37.3	37.1								
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	35.9	36.8	35.9	37.3	37.1								
Total Supply[7]	84.6	85.4	85.5	85.1	85.1	86.4	85.5	87.0	86.4								
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	0.0	-0.9	-0.2	-0.1									
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1									
Total	0.2	0.3	-0.7	0.7	0.2	-0.9	-0.2	0.0									
Floating Storage/Oil in Transit	-0.1	-0.1	0.2	-0.2	-0.2	0.2	0.0	0.3									
Miscellaneous to balance[8]	0.6	0.4	-0.1	-0.5	-0.5	-0.1	-0.3	0.1									
Total Stock Ch. & Misc	0.8	0.5	-0.6	0.0	-0.5	-0.7	-0.5	0.4	0.3								
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.9	29.2	30.9	30.1	31.1	32.3	31.1	32.0	31.9	31.6	31.5	31.7	30.5	30.3	31.3	32.4	31.1
Adjusted Call on OPEC + Stock ch.[10]	29.6	29.5	30.8	29.7	30.6	32.2	30.8	32.1	32.0	31.6	31.6	31.8	30.6	30.4	31.3	32.5	31.2
"Call" incl. Angola & Ecuador[2]	30.7	31.1	31.4	30.6	31.6	32.6	31.6	32.0	31.9	31.6	31.5	31.7	30.5	30.3	31.3	32.4	31.1
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.3	30.2	31.1	32.5	31.3	32.1	32.0	31.6	31.6	31.8	30.6	30.4	31.3	32.5	31.2

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-0.2	-0.1	-	-0.1					
Europe	-	-	-	-	-	-	-	-	-0.1	-	-	-					
Pacific	-	-	-	-	-	-	-	-	0.1	-	-	-					
Total OECD	-	-	-	-	-	-	-	-	-0.1	-	-	-					
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-					
Europe	-	-	-	-	-	-	-	-	-	-	-	-					
China	-	-	-	-	-	-	-	-	-0.1	0.1	0.1	-					
Other Asia	-	-	-	-	-	-	-	-	0.1	-	0.1	-					
Latin America	-	-	-	-	-	-	-	-	0.1	-	-	-					
Middle East	-	-	-	-	-	-	-	-	0.1	-	-	-					
Africa	-	-	-	-	-	-	-	-	-	-	-	-					
Total Non-OECD	-	-	-	-	-	-	-	-	0.2	0.1	0.2	0.1					
Total Demand	-	-	-	-	-	-	-	-	0.1	0.1	0.1	0.1					
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-					
Europe	-	-	-	-	-	-	-	-	0.1	-	-	-					
Pacific	-	-	-	-	-	-	-	-	-	-	-	-					
Total OECD	-	-	-	-	-	-	-	-	0.1	-	-0.1	-					
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-					
Europe	-	-	-	-	-	-	-	-	-	-	-	-					
China	-	-	-	-	-	-	-	-	-	-	-	-					
Other Asia	-	-	-	-	-	-	-	-	-0.1	-	-	-					
Latin America	-	-	-	-	-	-	-	-	-	-	-	-					
Middle East	-	-	-	-	-	-	-	-	-	-	-	-					
Africa	-	-	-	-	-	-	-	-	-	-	-	-					
Total Non-OECD	-	-	-	-	-	-	-	-	-0.1	-	-	-					
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-					
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-					
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-					
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-					
OPEC																	
Crude	-	-	-	-	-	-	-	-									
NGLs	-	-	-	-	-	-	-	-	-	-	-	-					
Total OPEC	-	-	-	-	-	-	-	-									
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-									
Total Supply	-	-	-	-	-	-	-	-									
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-									
Government	-	-	-	-	-	-	-	-									
Total	-	-	-	-	-	-	-	-									
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-									
Miscellaneous to balance	-	-	-0.1	-	-	-	-	-									
Total Stock Ch. & Misc	-	-	-	-	-	-	-	-									
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	-	0.1	0.2	0.2	0.1					
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	0.1	0.2	0.2	0.1					

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.31	25.66	25.44	25.49	25.54	25.53	24.76	24.86	25.10	25.14	24.97	24.36	24.46	24.73	24.77	24.58
Europe	15.62	15.19	14.92	15.38	15.60	15.28	15.14	15.09	15.35	15.46	15.26	15.10	14.90	15.27	15.40	15.17
Pacific	8.40	8.83	7.80	7.81	8.64	8.27	8.82	7.98	7.89	8.74	8.36	8.71	7.83	7.80	8.66	8.25
Total OECD	49.33	49.68	48.16	48.69	49.79	49.08	48.72	47.93	48.34	49.34	48.58	48.18	47.19	47.81	48.83	48.00
FSU	4.06	4.11	3.92	4.18	4.28	4.13	4.11	4.06	4.29	4.41	4.22	4.27	4.18	4.41	4.54	4.35
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.77	0.76	0.83	0.78	0.72	0.78	0.78
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.96	7.97	8.07	7.96	8.32	8.41	8.41	8.55	8.42
Other Asia	9.00	9.24	9.36	9.05	9.41	9.26	9.59	9.60	9.12	9.50	9.45	9.84	9.82	9.31	9.75	9.68
Latin America	5.33	5.41	5.58	5.73	5.72	5.61	5.66	5.87	5.97	5.96	5.87	5.87	6.09	6.20	6.19	6.09
Middle East	6.22	6.40	6.51	6.73	6.44	6.52	6.72	6.85	7.13	6.83	6.88	7.05	7.19	7.48	7.17	7.23
Africa	2.96	3.09	3.08	2.99	3.12	3.07	3.16	3.13	3.03	3.17	3.12	3.21	3.18	3.08	3.23	3.17
Total Non-OECD	35.52	36.39	36.92	36.90	37.32	36.88	37.91	38.23	38.22	38.71	38.27	39.39	39.64	39.61	40.20	39.71
World	84.86	86.07	85.08	85.59	87.10	85.96	86.63	86.15	86.56	88.06	86.85	87.57	86.83	87.42	89.03	87.72
of which:																
US50	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.00*	*20.12*	*20.37*	*20.32*	*20.20*	*19.60*	*19.71*	*19.99*	*19.94*	*19.81*
Euro4	*8.18*	*7.85*	*7.68*	*7.86*	*8.00*	*7.85*	*7.76*	*7.72*	*7.84*	*7.88*	*7.80*	*7.74*	*7.53*	*7.72*	*7.77*	*7.69*
Japan	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.41*	*4.74*	*4.67*	*5.23*	*5.01*	*5.27*	*4.58*	*4.57*	*5.12*	*4.88*
Korea	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.32*	*2.12*	*2.09*	*2.37*	*2.23*	*2.34*	*2.14*	*2.13*	*2.40*	*2.25*
Mexico	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.02*	*2.11*	*2.00*	*2.09*	*2.06*	*2.02*	*2.11*	*2.00*	*2.10*	*2.06*
Canada	*2.26*	*2.34*	*2.28*	*2.38*	*2.34*	*2.33*	*2.35*	*2.29*	*2.38*	*2.35*	*2.34*	*2.35*	*2.29*	*2.38*	*2.36*	*2.34*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.40*	*2.43*	*2.50*	*2.42*	*2.42*	*2.48*	*2.51*	*2.58*	*2.50*
India	*2.80*	*3.04*	*2.99*	*2.73*	*3.03*	*2.95*	*3.19*	*3.13*	*2.85*	*3.17*	*3.08*	*3.35*	*3.27*	*2.97*	*3.29*	*3.22*
Annual Change (% per annum)																
North America	-0.7	1.7	1.5	-0.1	0.6	0.9	-3.5	-2.2	-1.5	-1.6	-2.2	-1.6	-1.6	-1.5	-1.5	-1.5
Europe	0.1	-4.8	-2.1	-1.5	-0.6	-2.2	-0.4	1.1	-0.2	-0.9	-0.1	-0.2	-1.2	-0.5	-0.4	-0.6
Pacific	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	0.0	2.2	1.0	1.1	1.1	-1.2	-1.8	-1.1	-0.9	-1.3
Total OECD	-0.7	-1.5	0.1	-0.6	0.0	-0.5	-1.9	-0.5	-0.7	-0.9	-1.0	-1.1	-1.5	-1.1	-1.0	-1.2
FSU	3.4	2.2	2.0	1.0	1.6	1.7	0.0	3.5	2.5	2.9	2.2	3.9	2.9	2.7	3.0	3.1
Europe	1.0	2.0	1.9	1.9	1.5	1.8	1.6	1.9	1.9	1.9	1.8	1.6	1.9	1.9	1.9	1.8
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	3.0	6.0	6.3	5.6	6.0	5.7	5.5	5.9	5.8
Other Asia	2.3	1.6	2.9	3.1	3.8	2.9	3.8	2.6	0.7	1.0	2.1	2.6	2.2	2.1	2.6	2.4
Latin America	4.6	4.6	5.0	5.5	5.9	5.2	4.7	5.1	4.2	4.2	4.5	3.7	3.8	3.8	3.8	3.8
Middle East	4.0	5.2	5.9	4.2	3.8	4.8	4.9	5.3	6.0	6.1	5.6	5.0	5.0	4.9	5.0	5.0
Africa	0.9	3.3	2.9	3.5	5.7	3.8	2.2	1.7	1.4	1.5	1.7	1.6	1.6	1.7	1.8	1.6
Total Non-OECD	4.0	3.5	4.1	3.6	4.1	3.8	4.2	3.5	3.6	3.7	3.8	3.9	3.7	3.7	3.8	3.8
World	1.2	0.6	1.8	1.2	1.7	1.3	0.6	1.3	1.1	1.1	1.0	1.1	0.8	1.0	1.1	1.0
Annual Change (mb/d)																
North America	-0.19	0.44	0.37	-0.04	0.14	0.23	-0.91	-0.57	-0.39	-0.40	-0.57	-0.40	-0.40	-0.37	-0.37	-0.38
Europe	0.02	-0.76	-0.31	-0.23	-0.10	-0.35	-0.06	0.16	-0.03	-0.14	-0.02	-0.03	-0.19	-0.08	-0.06	-0.09
Pacific	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.00	0.17	0.08	0.09	0.09	-0.11	-0.14	-0.09	-0.08	-0.11
Total OECD	-0.33	-0.74	0.04	-0.31	-0.02	-0.26	-0.97	-0.23	-0.35	-0.44	-0.50	-0.54	-0.74	-0.54	-0.51	-0.58
FSU	0.13	0.09	0.08	0.04	0.07	0.07	0.00	0.14	0.11	0.13	0.09	0.16	0.12	0.12	0.13	0.13
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.23	0.45	0.48	0.42	0.47	0.45	0.44	0.47	0.46
Other Asia	0.21	0.15	0.26	0.27	0.35	0.26	0.35	0.25	0.06	0.10	0.19	0.25	0.21	0.20	0.24	0.22
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.25	0.28	0.24	0.24	0.25	0.21	0.22	0.23	0.23	0.22
Middle East	0.24	0.32	0.36	0.27	0.24	0.30	0.32	0.34	0.40	0.39	0.36	0.33	0.34	0.35	0.34	0.34
Africa	0.03	0.10	0.09	0.10	0.17	0.11	0.07	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.05
Total Non-OECD	1.36	1.22	1.44	1.29	1.48	1.36	1.52	1.31	1.32	1.40	1.39	1.48	1.41	1.40	1.49	1.44
World	1.03	0.48	1.49	0.98	1.45	1.10	0.55	1.07	0.97	0.95	0.89	0.94	0.68	0.86	0.97	0.86
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.01	0.00	0.00	0.00	0.00	0.01	-0.18	-0.06	-0.05	-0.07	-	-	-	-	-
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	0.00	0.00	-0.02	-	-	-	-	-
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.03	0.01	0.04	-	-	-	-	-
Total OECD	0.00	0.01	0.00	0.00	0.00	0.00	0.00	-0.12	-0.03	-0.05	-0.05	-	-	-	-	-
FSU	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.05	0.00	0.00	0.01	-	-	-	-	-
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	0.06	0.07	0.01	-	-	-	-	-
Other Asia	-0.02	-0.02	-0.03	-0.02	-0.02	-0.02	-0.02	0.11	0.04	0.06	0.05	-	-	-	-	-
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.02	-	-	-	-	-
Middle East	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.09	0.03	0.03	0.04	-	-	-	-	-
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	-	-	-	-	-
Total Non-OECD	-0.02	0.00	0.00	-0.01	-0.01	0.00	0.03	0.21	0.13	0.16	0.13	-	-	-	-	-
World	-0.02	0.01	0.00	-0.01	-0.01	-0.01	0.03	0.09	0.10	0.11	0.08	-	-	-	-	-
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.05	0.03	0.02	0.01	0.01	0.02	0.02	0.10	0.11	0.13	0.09	-	-	-	-	-

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	1Q08	2Q08	3Q08	4Q08	1Q09	Apr 08	May 08	Jun 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.84	8.94				8.77	8.91	9.16
Iran	3.98			4.07	3.78				3.93	3.64	3.78
Iraq	2.09			2.38	2.44				2.40	2.51	2.41
UAE	2.52			2.62	2.66				2.65	2.66	2.67
Kuwait	2.16			2.29	2.33				2.31	2.34	2.34
Neutral Zone	0.56			0.58	0.58				0.58	0.59	0.59
Qatar	0.80			0.85	0.85				0.83	0.85	0.88
Angola[6]	1.61			1.80	1.84				1.83	1.84	1.85
Nigeria	2.13			2.05	1.88				1.84	1.90	1.90
Libya	1.71			1.76	1.74				1.75	1.73	1.75
Algeria	1.36			1.39	1.38				1.38	1.38	1.38
Ecuador[6]				0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.40	2.35				2.32	2.36	2.36
Indonesia	0.84			0.85	0.86				0.86	0.86	0.86
Total Crude Oil[6]	30.66			32.38	32.13				31.94	32.06	32.41
Total NGLs[1,6]	4.81	5.13	5.94	4.94	4.96	5.19	5.44	5.65	4.96	4.96	4.96
Total OPEC[6]	35.47			37.31	37.09				36.89	37.02	37.37
OPEC incl. Angola & Ecuador[6]	35.94			37.31	37.09				36.89	37.02	37.37
NON-OPEC[2]											
OECD											
North America	14.27	14.14	14.27	14.21	13.90	14.03	14.40	14.59	14.11	13.80	13.80
United States	7.48	7.57	7.78	7.65	7.64	7.45	7.56	7.82	7.79	7.58	7.54
Mexico	3.48	3.22	3.02	3.28	3.17	3.19	3.23	3.14	3.14	3.17	3.21
Canada	3.32	3.34	3.47	3.28	3.09	3.39	3.61	3.63	3.19	3.05	3.05
Europe	4.95	4.60	4.24	4.89	4.60	4.33	4.58	4.54	4.80	4.67	4.34
UK	1.66	1.50	1.36	1.64	1.52	1.34	1.50	1.51	1.68	1.42	1.47
Norway	2.56	2.38	2.20	2.52	2.35	2.26	2.37	2.33	2.40	2.51	2.14
Others	0.73	0.72	0.68	0.73	0.72	0.72	0.71	0.70	0.71	0.74	0.73
Pacific	0.63	0.72	0.83	0.61	0.70	0.75	0.83	0.84	0.66	0.72	0.72
Australia	0.55	0.60	0.69	0.50	0.59	0.63	0.69	0.70	0.55	0.61	0.61
Others	0.08	0.12	0.14	0.11	0.11	0.12	0.14	0.14	0.11	0.11	0.11
Total OECD	19.84	19.46	19.34	19.71	19.20	19.11	19.81	19.97	19.57	19.18	18.86
NON-OECD											
Former USSR	12.77	13.07	13.30	12.83	12.86	13.10	13.50	13.46	12.82	12.84	12.93
Russia	10.08	10.11	10.01	10.00	9.97	10.16	10.31	10.17	9.93	9.97	9.99
Others	2.69	2.97	3.29	2.83	2.90	2.94	3.19	3.29	2.89	2.87	2.93
Asia	6.40	6.54	6.74	6.44	6.44	6.59	6.70	6.76	6.42	6.42	6.50
China	3.73	3.84	3.95	3.76	3.82	3.89	3.91	3.95	3.75	3.81	3.88
Malaysia	0.76	0.79	0.83	0.77	0.76	0.80	0.82	0.84	0.76	0.75	0.77
India	0.81	0.80	0.79	0.81	0.80	0.81	0.80	0.80	0.81	0.81	0.78
Others	1.11	1.11	1.16	1.09	1.07	1.10	1.17	1.18	1.09	1.05	1.06
Europe	0.13	0.12	0.11	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Latin America	4.32	4.06	4.32	3.95	3.97	4.14	4.18	4.28	3.99	3.92	4.01
Brazil	2.14	2.34	2.58	2.21	2.27	2.41	2.46	2.53	2.25	2.26	2.32
Argentina	0.75	0.74	0.75	0.75	0.72	0.75	0.75	0.76	0.76	0.69	0.72
Colombia	0.54	0.56	0.57	0.57	0.56	0.57	0.57	0.57	0.57	0.55	0.57
Ecuador[6]	0.50										
Others	0.39	0.42	0.42	0.42	0.42	0.42	0.41	0.42	0.42	0.42	0.42
Middle East[3]	1.66	1.59	1.52	1.62	1.60	1.58	1.56	1.54	1.60	1.60	1.60
Oman	0.72	0.71	0.70	0.73	0.72	0.71	0.70	0.70	0.71	0.72	0.72
Syria	0.40	0.38	0.36	0.39	0.38	0.38	0.37	0.37	0.38	0.38	0.38
Yemen	0.34	0.31	0.27	0.31	0.31	0.30	0.30	0.28	0.31	0.31	0.30
Africa	2.51	2.56	2.56	2.54	2.55	2.58	2.56	2.57	2.54	2.56	2.56
Egypt	0.63	0.61	0.58	0.62	0.61	0.61	0.60	0.59	0.62	0.61	0.61
Angola[6]											
Gabon	0.23	0.23	0.24	0.22	0.23	0.24	0.24	0.24	0.22	0.24	0.24
Others	1.64	1.72	1.74	1.70	1.71	1.73	1.73	1.73	1.71	1.71	1.71
Total Non-OECD	27.80	27.95	28.55	27.51	27.56	28.11	28.62	28.72	27.49	27.47	27.72
Processing Gains[4]	2.07	2.13	2.17	2.11	2.10	2.14	2.17	2.17	2.10	2.10	2.10
Other Biofuels[5]	0.33	0.46	0.58	0.39	0.46	0.46	0.52	0.55	0.46	0.46	0.46
TOTAL NON-OPEC	50.04	50.00	50.64	49.72	49.32	49.81	51.13	51.41	49.62	49.21	49.14
Non-OPEC excl. Angola & Ecuador[6]	49.58	50.00	50.64	49.72	49.32	49.81	51.13	51.41	49.62	49.21	49.14
TOTAL SUPPLY	85.51			87.03	86.41				86.52	86.22	86.51

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jan2008	Feb2008	Mar2008	Apr2008	May2008*	May2005	May2006	May2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	446.0	454.8	464.1	465.1	447.1	452.9	463.5	480.8	0.28	-0.34	-0.30	0.35
Motor Gasoline	261.8	263.1	250.3	238.5	235.8	248.2	242.1	230.4	0.04	-0.07	0.18	0.07
Middle Distillate	206.2	189.3	177.7	177.2	184.0	182.8	196.4	196.4	0.05	0.11	0.03	-0.34
Residual Fuel Oil	47.6	47.0	48.0	48.4	48.1	47.0	49.4	44.3	-0.03	0.00	0.03	0.01
Total Products[3]	669.8	645.6	621.6	623.6	638.8	668.1	658.1	649.3	0.28	0.15	-0.07	-0.46
Total[4]	1253.4	1237.1	1222.3	1229.7	1226.0	1266.3	1269.9	1275.2	0.63	-0.01	-0.60	-0.17
Europe												
Crude	331.6	322.7	334.1	336.9	340.2	356.4	348.5	340.8	0.09	-0.13	0.07	0.07
Motor Gasoline	121.1	121.5	119.3	117.1	117.2	112.3	102.5	102.0	-0.10	0.05	0.11	0.06
Middle Distillate	250.7	236.3	245.4	234.6	242.2	246.0	252.6	271.5	0.02	-0.06	-0.18	0.05
Residual Fuel Oil	79.5	78.0	82.2	81.5	82.8	78.5	72.7	72.0	-0.04	0.11	-0.04	0.08
Total Products[3]	560.2	541.0	554.5	540.0	549.1	539.2	529.5	545.1	-0.15	0.16	-0.10	0.19
Total[4]	962.2	934.0	959.5	944.1	955.5	968.5	951.2	961.2	-0.04	0.02	-0.03	0.23
Pacific												
Crude	165.9	162.5	156.0	153.3	161.7	171.9	185.4	171.2	-0.02	-0.10	-0.01	-0.04
Motor Gasoline	22.8	23.0	26.4	23.9	25.1	25.7	24.9	25.6	0.00	-0.03	0.01	0.05
Middle Distillate	69.2	58.0	57.3	58.5	58.6	62.5	67.0	64.7	0.08	0.10	-0.08	-0.14
Residual Fuel Oil	20.0	19.2	20.1	21.8	23.8	24.7	24.4	22.6	0.00	0.04	-0.05	-0.01
Total Products[3]	174.5	159.4	164.4	165.2	169.6	178.1	180.5	178.1	0.12	0.15	-0.23	-0.11
Total[4]	414.3	393.6	391.4	390.0	406.1	422.8	438.1	422.9	0.10	0.03	-0.27	-0.14
Total OECD												
Crude	943.5	940.1	954.2	955.2	948.9	981.2	997.5	992.8	0.34	-0.57	-0.24	0.38
Motor Gasoline	405.7	407.6	396.1	379.5	378.1	386.2	369.5	358.0	-0.06	-0.05	0.30	0.17
Middle Distillate	526.1	483.5	480.4	470.2	484.8	491.2	515.9	532.5	0.15	0.16	-0.23	-0.43
Residual Fuel Oil	147.1	144.2	150.3	151.7	154.7	150.1	146.5	138.9	-0.07	0.15	-0.05	0.07
Total Products[3]	1404.5	1346.0	1340.5	1328.9	1357.5	1385.5	1368.1	1372.5	0.25	0.45	-0.39	-0.38
Total[4]	2629.8	2564.6	2573.2	2563.7	2587.6	2657.6	2659.1	2659.2	0.70	0.04	-0.91	-0.08

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jan2008	Feb2008	Mar2008	Apr2008	May2008*	May2005	May2006	May2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	698.4	698.8	700.4	701.5	704.4	693.9	688.6	690.3	0.02	0.03	0.05	0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	184.2	184.9	185.0	181.1	181.1	164.4	172.0	175.0	0.01	0.02	0.08	0.00
Products	236.3	236.5	237.9	235.6	235.6	210.2	233.0	237.6	-0.04	0.08	-0.09	0.02
Pacific												
Crude	385.1	385.0	385.0	385.0	385.0	384.5	380.5	385.0	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.0	11.7	16.4	0.00	0.02	0.01	0.00
Total OECD												
Crude	1267.6	1268.7	1270.4	1267.6	1270.5	1242.8	1241.1	1250.3	0.03	0.05	0.12	0.04
Products	257.2	257.4	258.8	256.5	256.5	223.2	246.7	256.0	-0.04	0.10	-0.08	0.02
Total[4]	1526.5	1527.1	1530.1	1525.1	1528.0	1467.0	1488.7	1507.3	-0.01	0.15	0.04	0.07

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End March 2007		End June 2007		End September 2007		End December 2007		End March 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	186.1	82	189.7	80	201.4	86	205.8	88	200.7	-
Mexico	40.5	20	43.8	22	43.5	21	45.0	22	46.8	-
United States[4]	1678.8	81	1731.0	84	1720.9	83	1663.6	84	1655.1	-
Total[4]	1927.5	76	1986.6	78	1987.9	78	1936.5	79	1924.7	77
Pacific										
Australia	34.3	37	38.9	42	36.8	38	35.6	38	34.3	-
Japan	619.9	134	622.4	133	629.6	121	621.0	115	610.0	-
Korea	156.1	74	158.3	77	157.4	68	143.5	62	142.8	-
New Zealand	7.7	49	7.7	50	8.1	52	8.2	50	8.2	-
Total	818.0	105	827.3	106	831.9	96	808.3	92	795.3	100
Europe[5]										
Austria	24.0	81	21.1	74	22.1	76	22.1	81	23.3	-
Belgium	28.2	51	28.7	51	27.8	45	26.1	43	31.3	-
Czech Republic	20.2	92	20.5	95	19.5	98	20.2	102	20.4	-
Denmark	18.3	96	17.1	89	18.9	94	17.1	95	16.4	-
Finland	29.5	136	26.3	111	29.7	126	27.1	125	30.5	-
France	166.1	90	174.5	91	175.3	87	179.9	92	177.5	-
Germany	289.1	120	283.5	110	276.5	107	274.6	110	281.5	-
Greece	33.6	85	35.6	85	34.8	74	37.4	81	34.3	-
Hungary	18.1	107	16.0	94	17.1	98	15.4	97	16.7	-
Ireland	12.9	69	11.1	56	12.6	63	10.6	56	12.1	-
Italy	133.9	80	133.0	82	134.2	78	132.9	83	130.9	-
Luxembourg	0.9	15	0.9	15	0.9	15	0.7	12	0.6	-
Netherlands	117.7	137	115.9	128	122.9	134	116.6	121	126.5	-
Norway	20.1	79	21.1	84	21.8	81	26.6	127	25.4	-
Poland	43.9	90	50.0	90	50.9	94	58.2	112	57.6	-
Portugal	23.7	78	24.7	80	23.2	75	23.7	81	24.7	-
Slovak Republic	7.0	83	6.9	79	7.7	86	7.9	97	9.0	-
Spain	129.3	81	130.5	82	136.7	84	133.9	84	134.2	-
Sweden	38.0	105	35.2	99	33.6	93	34.5	98	34.2	-
Switzerland	38.7	173	38.5	157	38.1	132	35.9	140	36.5	-
Turkey	59.2	89	60.5	80	61.1	92	60.3	90	59.0	-
United Kingdom	105.8	59	100.8	58	98.5	57	97.7	57	100.5	-
Total	1358.2	92	1352.4	88	1364.0	88	1359.4	90	1383.3	92
Total OECD	4103.7	86	4166.3	86	4183.8	84	4104.2	85	4103.3	86
DAYS OF IEA Net Imports[6]	-	120	-	121	-	121	-	122	-	122

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End March 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
1Q2005	3995	1462	2533	82	30	52
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2586	81	29	51
1Q2006	4072	1487	2585	85	31	54
2Q2006	4141	1493	2648	85	30	54
3Q2006	4252	1495	2758	85	30	55
4Q2006	4166	1499	2668	84	30	54
1Q2007	4104	1507	2596	86	31	54
2Q2007	4166	1506	2660	86	31	55
3Q2007	4184	1520	2664	84	31	54
4Q2007	4104	1524	2580	85	31	53
1Q2008	4103	1530	2573	86	32	54

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 1Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Feb 08	Mar 08	Apr 08	Year Earlier Apr 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.73	0.71	0.78	0.75	0.78	0.68	0.83	0.81	0.02
Europe	0.90	0.78	0.70	0.64	0.74	0.68	0.67	0.55	0.75	0.53	0.70	-0.16
Pacific	1.31	1.32	1.19	1.20	1.15	1.25	1.29	1.30	1.28	1.14	1.28	-0.14
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.59	0.57	0.58	0.58	0.62	0.59	0.57	0.02
Europe	0.16	0.14	0.05	0.10	0.02	0.04	0.05	0.06	0.04	0.17	0.06	0.12
Pacific	0.26	0.35	0.34	0.31	0.31	0.38	0.43	0.43	0.52	0.32	0.36	-0.04
Saudi Heavy												
North America	0.17	0.21	0.09	0.05	0.11	0.04	0.06	0.04	0.03	0.06	0.04	0.02
Europe	0.23	0.18	0.11	0.16	0.11	0.09	0.04	0.02	0.05	0.07	0.21	-0.14
Pacific	0.25	0.23	0.20	0.18	0.20	0.23	0.22	0.21	0.19	0.27	0.21	0.06
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.39	0.64	0.45	0.74	0.90	0.81	0.56	0.31	0.25
Europe	0.23	0.32	0.30	0.28	0.38	0.24	0.20	0.17	0.26	0.15	0.29	-0.14
Pacific	0.06	0.08	0.17	0.18	0.20	0.21	0.13	0.19	0.06	0.15	0.15	0.00
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	0.04	-	0.13	-	-	-
Europe	0.05	0.01	0.11	-	0.06	0.32	0.21	0.18	0.19	0.30	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.27	0.21	0.24	0.25	0.24	0.15	0.32	-0.16
Pacific	0.15	0.13	0.09	0.06	0.07	0.11	0.11	0.10	0.11	0.10	0.06	0.05
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.62	0.60	0.47	0.44	0.35	0.49	0.42	0.65	-0.23
Pacific	0.62	0.56	0.64	0.63	0.56	0.73	0.65	0.60	0.59	0.59	0.63	-0.04
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.71	0.75	0.86	0.65	0.71	0.47	0.53	0.73	-0.20
Europe	0.04	0.11	0.08	0.07	0.09	0.05	0.07	0.04	0.10	0.05	0.13	-0.08
Pacific	-	-	0.01	-	-	0.02	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.70	0.76	0.68	0.58	0.63	0.54	0.38	0.72	-0.34
Europe	0.06	0.06	0.07	0.09	0.06	0.06	0.07	0.06	0.08	0.06	0.07	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.25	1.24	1.03	1.02	1.05	1.03	1.17	-0.14
Europe	0.17	0.16	0.14	0.11	0.18	0.15	0.14	0.19	0.12	0.20	0.11	0.09
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.01	0.00	0.03	0.07	0.01	0.01	-	-
Europe	0.03	0.01	0.02	0.06	-	0.02	0.00	-	0.00	0.04	0.00	0.03
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.12	0.01	0.01	0.01	-	-	-	0.21	-
Europe	1.77	1.68	1.86	1.97	1.90	1.73	1.76	1.77	1.57	2.03	2.06	-0.02
Pacific	0.00	0.00	0.00	-	-	0.01	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.77	0.87	0.82	0.85	0.91	0.87	0.76	0.70	0.06
Europe	0.35	0.33	0.24	0.27	0.22	0.23	0.27	0.16	0.24	0.15	0.22	-0.07
Pacific	0.05	0.04	0.01	0.02	-	0.01	-	-	-	-	0.01	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.15	0.22	0.31	0.31	0.23	0.33	0.26	0.17	0.10
Europe	0.07	0.10	0.07	0.02	0.08	0.11	0.09	0.05	0.18	0.18	0.03	0.15
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Feb-08	Mar-08	Apr-08	Year Earlier Apr-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8111	8151	8267	7968	8089	8067	7857	8128	7543	8%
Europe	9792	9784	9771	9738	10062	9924	9771	9288	9913	9613	9901	-3%
Pacific	6801	6813	6718	6340	6576	7003	7100	7021	6997	6656	6469	3%
Total OECD	25050	24792	24600	24229	24905	24895	24960	24376	24767	24397	24420	0%
LPG												
North America	18	14	27	14	38	41	27	31	13	5	14	-64%
Europe	248	264	276	282	244	291	305	321	247	232	321	-28%
Pacific	527	579	557	588	502	572	599	592	592	690	581	19%
Total OECD	793	858	860	884	785	903	931	944	853	926	916	1%
Naphtha												
North America	115	71	39	31	33	60	25	40	15	81	35	134%
Europe	273	314	266	223	279	289	227	215	233	215	253	-15%
Pacific	746	754	794	812	768	758	796	769	805	731	710	3%
Total OECD	1133	1138	1099	1066	1080	1108	1049	1024	1054	1028	998	3%
Gasoline[3]												
North America	1034	1143	1131	1362	1198	1048	888	898	895	1083	1248	-13%
Europe	165	160	204	219	156	181	224	243	304	294	189	55%
Pacific	102	97	72	83	56	71	112	119	122	107	49	116%
Total OECD	1301	1400	1407	1663	1410	1301	1224	1259	1322	1483	1487	0%
Jet & Kerosene												
North America	173	161	183	204	205	143	96	79	68	93	221	-58%
Europe	375	374	367	349	386	401	359	318	412	348	371	-6%
Pacific	66	71	41	35	37	43	44	46	42	31	29	10%
Total OECD	614	606	590	588	628	587	499	444	523	473	621	-24%
Gasoil/Diesel												
North America	143	175	130	142	142	106	99	96	60	65	156	-59%
Europe	845	967	779	638	745	827	918	836	955	619	669	-7%
Pacific	79	81	94	97	90	106	102	128	96	106	79	33%
Total OECD	1067	1223	1004	877	977	1040	1120	1060	1111	789	904	-13%
Heavy Fuel Oil												
North America	527	343	323	323	286	320	328	303	255	305	360	-15%
Europe	491	476	434	420	457	400	478	462	509	408	441	-8%
Pacific	85	92	92	97	92	101	125	141	99	145	95	53%
Total OECD	1102	911	848	840	835	821	930	905	862	858	896	-4%
Other Products												
North America	1027	1121	1053	1210	1035	934	1042	1029	910	1042	1154	-10%
Europe	781	929	870	856	924	832	745	695	805	867	899	-3%
Pacific	248	243	252	207	262	282	290	249	267	244	167	46%
Total OECD	2056	2293	2174	2273	2221	2047	2077	1973	1982	2153	2220	-3%
Total Products												
North America	3037	3028	2886	3286	2937	2652	2505	2475	2217	2673	3187	-16%
Europe	3177	3484	3195	2987	3192	3222	3257	3090	3465	2983	3143	-5%
Pacific	1852	1918	1901	1918	1808	1934	2068	2043	2023	2053	1710	20%
Total OECD	8066	8429	7982	8191	7936	7807	7831	7608	7705	7710	8041	-4%
Total Oil												
North America	11493	11222	10997	11437	11203	10620	10594	10542	10074	10801	11237	-4%
Europe	12970	13268	12966	12725	13253	13145	13028	12378	13379	12596	13044	-3%
Pacific	8654	8731	8619	8258	8384	8937	9169	9064	9020	8710	8179	6%
Total OECD	33116	33221	32582	32421	32840	32702	32791	31983	32472	32107	32461	-1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

12 August 2008

HIGHLIGHTS

- **Crude prices had fallen $30/bbl from mid-July highs** by early August on increased supplies, weaker OECD demand and as the first US Gulf hurricanes passed without causing damage. Currently, neither the recent shut-down of the Baku-Tblisi-Ceyhan (BTC) pipeline, nor military clashes in the Caucasus have materially affected prices.

- **OECD oil stocks fell by 15.3 mb in June** to 2,579 mb, confirming the near absence of the usual 0.9 mb/d 2Q stockbuild. Weak demand kept OECD forward demand cover above average at 53.4 days. Preliminary July data for the US, Japan and the EU-16 show a 30 mb stockbuild.

- **Global oil supply increased by 890 kb/d in July** to 87.8 mb/d. Norway, Canada, Argentina and Brazil underpinned non-OPEC growth of 520 kb/d, amid a lull in seasonal maintenance elsewhere. Growth in non-OPEC output now averages 455 kb/d for 2008 and 665 kb/d for 2009, after 425 kb/d in 2007.

- **OPEC July crude supplies rose by 145 kb/d to 32.8 mb/d**. Nigeria, Saudi Arabia and Iran all saw higher output, although over 0.5 mb/d remains shuttered in Nigeria. Effective OPEC spare capacity is 1.5 mb/d, but should rise by end-2008 and through 2009.

- **Global oil product demand for 2008 remains unchanged** at 86.9 mb/d (+0.9% or 0.8 mb/d versus 2007). Demand in 2009 is nudged up 70 kb/d to 87.8 mb/d (+1.1% or 0.9 mb/d versus 2008). Growth is driven by projected non-OECD demand, largely unchanged at 38.3 mb/d in 2008 and 39.7 mb/d in 2009.

- **Global refinery crude throughput averaged 75.0 mb/d in July**, 0.1 mb/d up versus June. Lower OECD crude run estimates on still-weak US refining margins offset upward revisions to China, after its record June throughput.

Next Issue: 10 September 2008

INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

The IEA is Seeking to Recruit a Senior Oil Market Analyst

The International Energy Agency (IEA), an international organisation based in Paris, is seeking to recruit a Senior Oil Market Analyst to examine developments in, and future prospects for, global oil supplies and production. The successful applicant will work under the guidance of the Head of the Oil Industry and Markets Division of the International Energy Agency.

Major responsibilities include:

- Participate in interdisciplinary teams which monitor, analyse, assess and report on developments and future prospects in the international oil markets in terms of supply, consumption, stocks, prices, trade and refining operations
- Monitor, analyse and forecast developments in the global upstream oil market for the short and medium term. Monitor developments in oil exploration and reserves, oil production trends, international oil production economics, fiscal and investment regimes and the oil services sector.
- Develop, populate and utilise appropriate computer databases/models for this analysis.
- Research and draft the supply section of the IEA's monthly ***Oil Market Report***, annual ***Medium-Term Oil Market Report*** and ***Annual Statistical Supplement***.
- Present analysis and findings at meetings of the IEA's Standing Groups, and represent the Secretariat on subjects related to oil market analysis at international conferences and seminars.
- Develop and maintain contacts in the oil industry, governments and oil consultancies.

The ideal candidate will possess:

- A university degree in geology, petroleum engineering, economics, or other numerate discipline, supplemented by an advanced university degree in business, finance, resource economics or other relevant subjects.
- At least eight to 10 years' experience in an oil market or natural resource-consulting role, and/or within corporate planning, financial or business analysis functions within an energy company or financial institution with a focus on upstream developments. International experience desirable.
- Policy experience with exposure to energy questions in government and/or industry. Experience in quantitative data analysis and in developing analytical methodologies. Strong computer skills in working with spreadsheets, graphics and word processing software.
- Ability to work well under very demanding deadlines, independently and as part of a team.
- Excellent drafting and speaking ability in English and a working knowledge of French. Strong presentational skills, with experience of presenting analysis to industry, government and media.

For the full vacancy notice and on-line application form, visit **www.oecd.org** and click on *Job Vacancies*, *Job Reference No.* ***2854 - Senior Oil Market Analyst - Oil Industry and Markets***). On-line applications (in English or French) from nationals of OECD Member countries should include a CV and covering letter and should be submitted by no later than **Wednesday 10 September 2008**.

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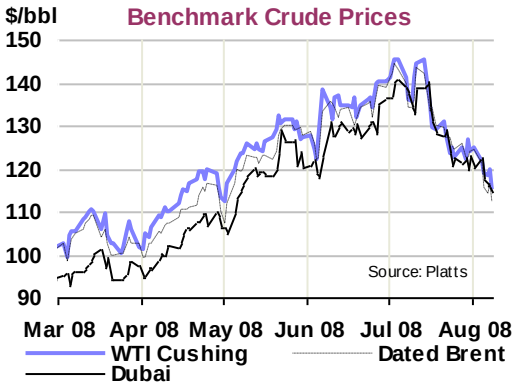
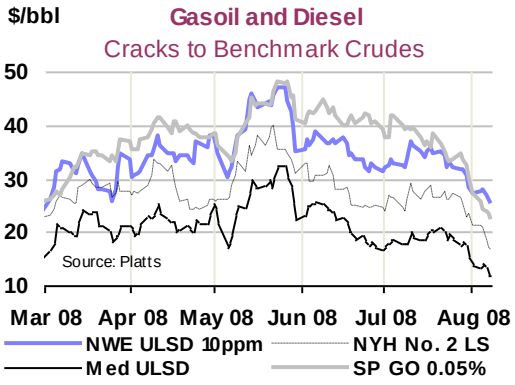
SEA CHANGE, OR JUST EBB AND FLOW?

Crude futures have fallen 20% from early-July highs. Any fall from recent peaks is welcome, but $115-$120/bbl remains high by any measure, sustaining inflationary concerns, not least in developing importer countries. However, this report and the *MTOMR* have for some months pointed to a potential easing in fundamentals for 2H08 and into 2009, before a renewed tightening thereafter. Minor adjustments to the fundamentals this month do not change that view. The past month has seen renewed signs of weaker OECD economic performance and most forecasts see US and European growth edging lower in months to come.

Despite slightly stronger than expected US GDP growth in 1H08, oil demand data are coming in weaker on an underlying trend basis. Annual US demand revisions for previous years, positive to the tune of 100-200 kb/d during 2004-2006, came in for 2007 at negligible levels. This only reinforces the view that high prices are beginning to play a central role in determining demand, at least for the OECD countries.





On top of slowing demand, July OPEC crude supply of 32.8 mb/d was 1.0 mb/d above April levels. Moreover, there are encouraging signs for crude capacity, with summer field start-ups in Nigeria and Angola, and a reportedly imminent capacity boost in Saudi Arabia, which could raise OPEC spare capacity from July's very low level of 1.5 mb/d. Middle distillate tightness (which we believe has been a key driver of crude prices) has begun to ease, and there is some prospect of higher natural gas availability unwinding a recent tightening in fuel oil fundamentals. Weaker products markets after a post-maintenance increase in supply have now led OECD refiners to trim runs in the face of poorer margins, thus squeezing utilisation rates. The dollar has staged something of a rally, NYMEX open interest has fallen sharply and net non-commercial positions have turned short.

Is this really the tipping point for the market that some pundits have identified? We would hesitate before automatically extrapolating the recent price trend. Our 'all other things being equal' forecast suggests easing fundamentals and potentially higher stocks in the months to come. But July and early August have thrown up a number of warning signs which caution against complacency. On the supply side, major outages have affected Nigerian and Azeri supplies these past two weeks. The outage on the BTC pipeline and recent hostilities in the Caucasus highlight the potentially precarious nature of pipeline energy supplies from the region. Hurricanes Bertha and Dolly, and Tropical Storm Edouard, did little damage to oil installations, but flagged a vigorous start to what could be an active autumn storm season. Project delays abound, with suggestions that major projects in Brazil, Canada and Russia will now be late. Political logjams could further derail Iraqi and Russian supply growth. OECD inventory remained worryingly flat in 2Q08 (versus a normal 0.9 mb/d build) and recent trends in Chinese crude runs suggest a possibility of stronger than expected demand, pre-Olympic stockpiling, or both. While OECD demand could still surprise us on the downside, non-OECD prospects, particularly for China and the Middle East Gulf, could be subject to upside adjustment. Add in customarily ever-changing sentiment over Iran, and it looks too early to cite definitively a sea change in the market.

DEMAND

Summary

- **Forecast global oil product demand** remains virtually unchanged in 2008 at 86.9 mb/d, +0.9% or 0.8 mb/d versus 2007. For 2009, the forecast has been nudged up by 70 kb/d to 87.8 mb/d (+1.1% or 0.9 mb/d versus 2008), mostly following a reassessment of the demand outlook in OECD Europe.

- **OECD oil product demand** is expected to average 48.6 mb/d in 2008 (-1.3% or -0.6 mb/d versus 2007, and 16 kb/d lower than previously estimated). In 2009, demand is expected to contract to 48.0 mb/d (-1.1% or -0.5 mb/d on a yearly basis, and 47 kb/d higher than in our last report). This outlook incorporates annual revisions to historical OECD data (+100 kb/d on average between 2000 and 2007), as well as minor GDP revisions following the release of the IMF's *World Economic Outlook Update* and a marginal upward reassessment of German heating oil demand.

Global Oil Demand (2007-2009)

(million barrels per day)

	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Americas	31.1	31.0	31.3	31.2	31.2	30.5	30.6	30.9	30.9	30.7	30.3	30.5	30.7	30.8	30.6
Asia/Pacific	25.5	24.9	24.5	25.7	25.1	26.3	25.6	25.1	26.4	25.9	27.0	26.2	25.6	27.1	26.5
Europe	16.0	15.7	16.1	16.4	16.1	16.0	15.7	16.1	16.3	16.0	16.0	15.6	16.1	16.3	16.0
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.4
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	6.9	7.1	6.8	6.9	7.0	7.2	7.5	7.2	7.2
World	**86.2**	**85.1**	**85.8**	**87.2**	**86.1**	**86.8**	**86.1**	**86.6**	**88.0**	**86.9**	**87.8**	**86.9**	**87.4**	**89.0**	**87.8**
Annual Chg (%)	0.4	1.5	1.1	1.5	1.1	0.7	1.1	0.9	1.0	0.9	1.1	1.0	1.0	1.1	1.1
Annual Chg (mb/d)	0.4	1.3	0.9	1.3	1.0	0.6	0.9	0.8	0.9	0.8	1.0	0.9	0.9	1.0	0.9
Changes from last OMR (mb/d)	0.13	0.07	0.17	0.05	0.11	0.16	-0.10	-0.01	-0.02	0.01	0.19	0.09	0.00	-0.01	0.07

- **Forecast non-OECD oil product demand** remains largely unchanged at 38.3 mb/d in 2008 and 39.7 mb/d in 2009, equivalent to annual growth of +3.8% or +1.4 mb/d in both years and roughly 20 kb/d higher than previously estimated. In general terms, minor upward adjustments in Asia and the FSU exceeded slight downward revisions in Latin America.

- **In light of the Beijing Olympic Games, the short-term outlook for China's oil demand remains subject to considerable uncertainty.** On the one hand, the recent strength in crude and oil product imports may diminish after the Olympics, provided that stocks are ample. However, demand will likely rebound as temporary measures to curb pollution are lifted. On the other hand, ongoing power shortages could herald a spike in gasoil use, even though high prices may also deter small-scale power generation. Finally, it is unclear whether the government may adopt policies that could potentially induce further changes to the supply and demand picture, notably regarding import taxes and end-user prices.

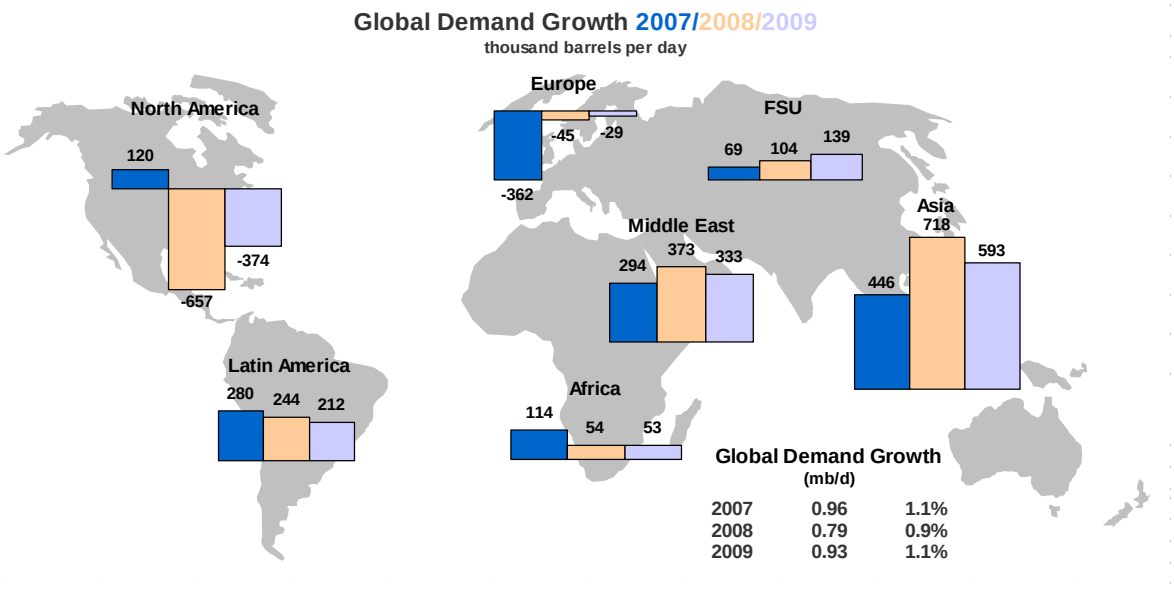
OECD

OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 1.4% year-on-year in June, according to preliminary data. Losses in North America and Europe largely offset gains in the Pacific. In **OECD North America** (which includes US Territories), oil product demand continued to shrink (-2.2% year-on-year) given the weakness of the US economy and restricted driving by US motorists, deterred by high oil prices. In **OECD Europe**, demand fell by 2.3% given losses in the five biggest countries, most notably in Italy and Spain. In **OECD Pacific**, by contrast, demand rose by 2.7%, supported by strong Japanese electricity needs and, to a lesser extent, by buoyant demand in Australia, partly boosted by the unexpected diesel spike that resulted from the Varanus natural gas outage.

OECD Demand based on Adjusted Preliminary Submissions - June 2008
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.85**	**-2.1**	**1.84**	**-4.1**	**4.43**	**9.4**	**0.76**	**-29.5**	**1.11**	**-15.7**	**6.10**	**-1.65**	**25.09**	**-2.2**
US50	9.24	-2.6	1.59	-4.9	3.85	8.5	0.31	-45.7	0.57	-22.2	4.67	-0.8	20.24	-2.3
Canada	0.77	0.1	0.13	4.7	0.22	0.9	0.29	-4.7	0.13	-2.9	0.81	-1.8	2.35	-1.0
Mexico	0.77	1.8	0.07	-3.0	0.30	7.8	0.13	7.8	0.31	-11.8	0.56	-8.5	2.14	-2.3
OECD Europe	**2.46**	**-7.1**	**1.37**	**1.6**	**4.38**	**-0.9**	**1.42**	**-1.0**	**1.60**	**-6.9**	**3.66**	**-0.3**	**14.87**	**-2.3**
Germany	0.48	-6.6	0.21	3.6	0.66	-0.6	0.32	5.6	0.16	-13.9	0.61	6.0	2.43	-0.2
United Kingdom	0.40	-6.8	0.35	0.5	0.44	0.6	0.13	-4.3	0.08	-20.7	0.34	9.5	1.74	-1.3
France	0.21	-14.2	0.16	2.4	0.65	-7.8	0.24	8.8	0.13	28.7	0.47	-0.4	1.87	-2.0
Italy	0.29	-10.1	0.10	-2.6	0.56	-2.6	0.07	-9.1	0.16	-30.2	0.38	-4.0	1.55	-8.4
Spain	0.15	-9.9	0.13	3.8	0.52	-6.3	0.15	-21.0	0.21	-8.1	0.33	-5.7	1.50	-7.8
OECD Pacific	**1.47**	**-4.1**	**0.71**	**4.8**	**1.29**	**-0.8**	**0.49**	**-1.9**	**0.93**	**2.9**	**3.09**	**8.2**	**7.98**	**2.7**
Japan	0.94	-5.6	0.46	8.7	0.63	2.5	0.37	1.9	0.59	18.0	1.81	6.9	4.81	4.6
Korea	0.16	-4.5	0.12	-5.2	0.25	-27.6	0.09	-14.5	0.29	-18.4	1.09	11.5	1.99	-3.7
Australia	0.32	-0.2	0.10	1.8	0.36	22.9	0.02	-2.5	0.04	-1.5	0.17	2.6	1.02	7.6
OECD Total	**14.78**	**-3.2**	**3.91**	**-0.6**	**10.09**	**3.4**	**2.66**	**-11.4**	**3.64**	**-7.6**	**12.85**	**0.9**	**47.94**	**-1.4**

* Including US territories

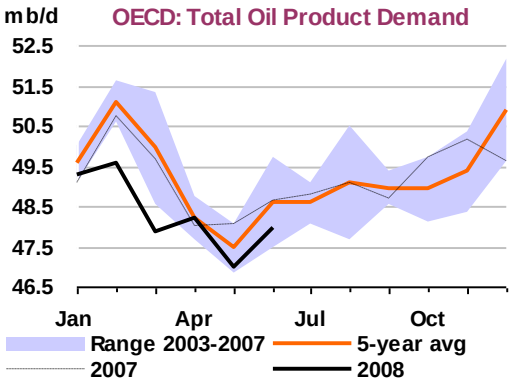


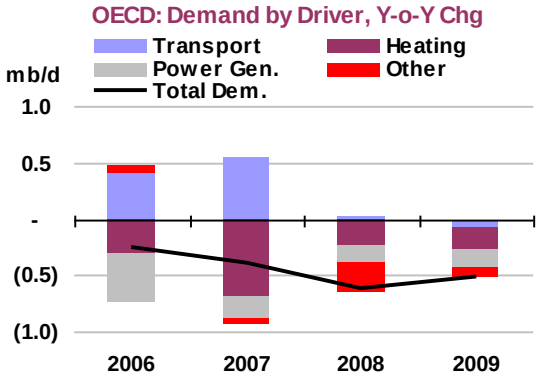
It should be noted that this report incorporates the customary annual revisions to OECD figures, following data submissions from all member countries. These adjustments are not uniform; for some countries, they go back to as far as 2000, as detailed in the table below. OECD demand has thus turned out to be slightly higher than previously anticipated. The 2007 revision (preliminary) has largely been carried through to the 2008 and 2009 forecast.

OECD Demand Revisions, 2000-2007
(thousand barrels per day)

	2000	2001	2002	2003	2004	2005	2006	2007
North America	8	9	9	10	11	68	114	5
Europe	25	14	27	30	41	66	55	29
Pacific	16	21	17	13	30	39	80	76
OECD Revisions	**50**	**44**	**53**	**52**	**81**	**172**	**248**	**110**

Note: sum may be different because of rounding





In addition, the outlook incorporates minor changes to GDP assumptions for several key countries following the July publication of the IMF's *World Economic Outlook Update*, as well as a marginal reassessment of heating oil prospects in Germany. OECD demand is thus seen averaging almost 48.6 mb/d in 2008 (-1.3% or -0.6 mb/d over 2007, and 16 kb/d lower than estimated in our last report). In 2009, demand is expected to contract by 1.1% on a yearly basis (roughly -0.5 mb/d) to 48.0 mb/d, some 47 kb/d higher than previously estimated.

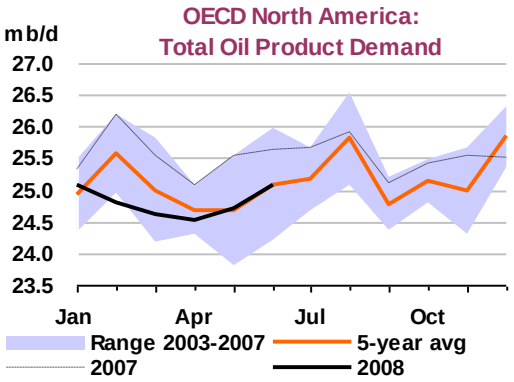
Total OECD Demand by Product
(million barrels per day)

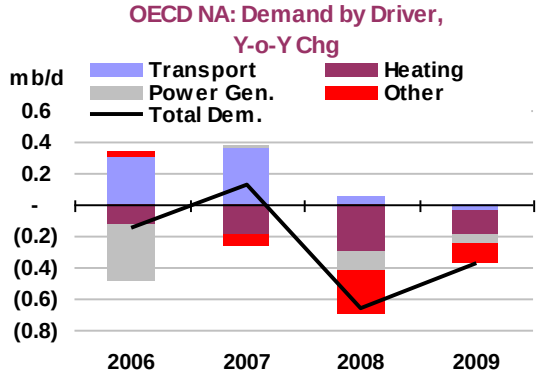
	2007	2008	2Q07	3Q07	4Q07	1Q08	Mar 08	Apr 08	May 08*	Latest month vs. Apr 08	Latest month vs. May 07
LPG & Ethane	4.84	4.77	4.65	4.48	4.93	5.16	4.94	4.72	4.62	-0.10	0.00
Naphtha	3.24	3.18	3.09	3.19	3.28	3.25	3.14	2.99	2.98	-0.01	-0.12
Motor Gasoline	14.92	14.68	15.08	15.31	14.83	14.23	14.36	14.88	14.76	-0.12	-0.40
Jet & Kerosene	4.12	4.12	3.92	3.97	4.23	4.34	4.11	3.94	3.78	-0.16	-0.04
Gas/Diesel Oil	13.14	13.19	12.60	12.87	13.59	13.40	12.96	13.27	12.43	-0.84	-0.05
Residual Fuel Oil	3.95	3.72	3.87	3.80	3.93	3.87	3.73	3.69	3.58	-0.11	-0.29
Other Products	4.98	4.91	5.04	5.25	5.03	4.65	4.62	4.72	4.85	0.13	-0.19
Total Products	**49.19**	**48.57**	**48.25**	**48.86**	**49.83**	**48.89**	**47.86**	**48.22**	**47.00**	**-1.22**	**-1.09**

* Latest official OECD submissions (MOS)

North America

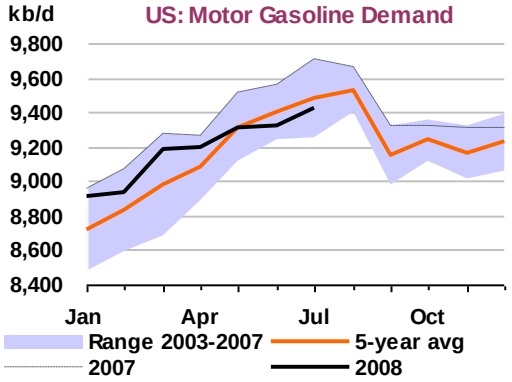
Oil product demand in North America (including US Territories) shrank by 2.2% year-on-year in June, according to preliminary data, mostly as a result of continued demand weakness in the US. As in the previous month, deliveries for three product categories contracted conspicuously: high-sulphur gasoil (-29.5%, although this is related to US reclassification issues, since low-sulphur non-road, locomotive and marine gasoil are now counted as diesel), residual fuel oil (-15.7%), and 'other products' (-6.5%). Only diesel deliveries registered gains (+9.4%), and as such total gasoil demand rose by a modest 1.2%.

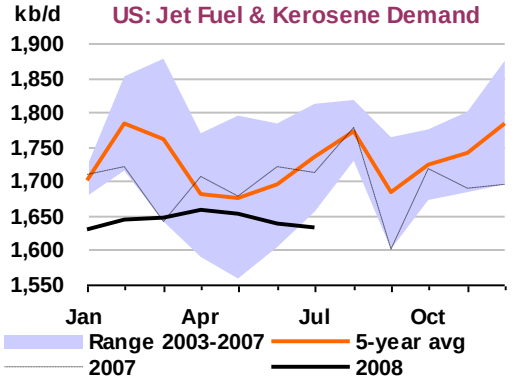




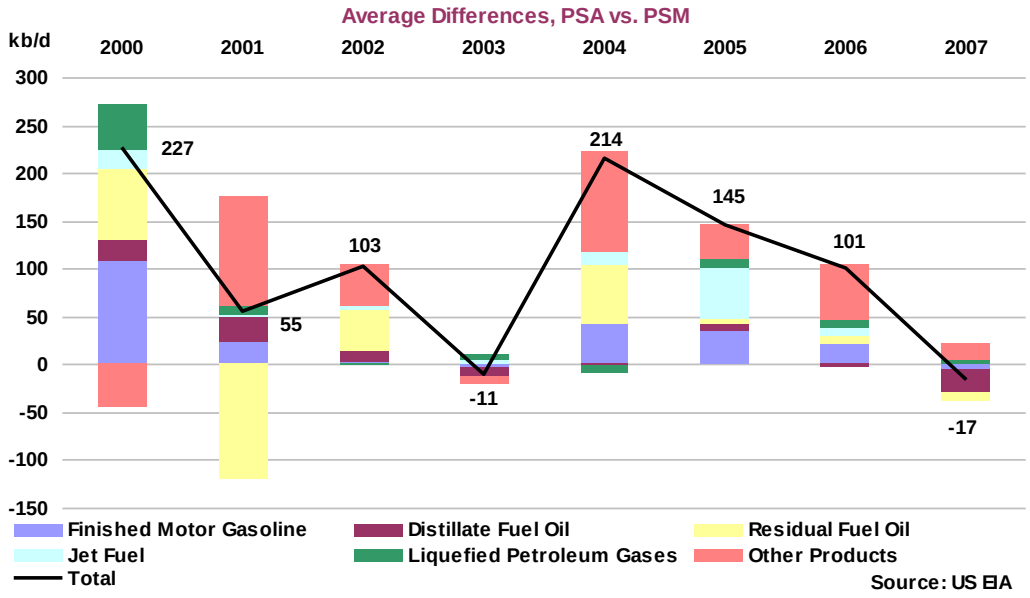
The forecast has been marginally altered following the revision of the annual series and the incorporation of modified regional GDP growth assumptions. Demand in OECD North America is expected to average 24.9 mb/d in 2008 (-2.6% or -660 kb/d when compared with 2007). In 2009, the weakness in the US will continue to weigh down on the region, with demand seen at 24.5 mb/d, 1.5% or 370 kb/d lower than in 2008.

Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 2.3% year-on-year in June and by as much as 4.0% in July, with all product categories bar gasoil registering significant contractions. Demand for gasoline and jet fuel/kerosene continues to fall on a yearly basis, providing further evidence of the effects of the ongoing economic slowdown and rising oil prices, which are prompting consumers to reduce road and air travel.





In July the Energy Information Administration (EIA) revised 2007 demand data minimally (-17 kb/d). (Preliminary monthly demand is derived from weekly data from the *Weekly Petroleum Status Report*, which are revised two months later in the *Petroleum Supply Monthly* and then finally adjusted in the *Petroleum Supply Annual*, usually in mid-year). This annual revision bucked the trend observed in recent years, when demand had been typically – and often significantly – revised *up*. Given that this report attempts to anticipate annual changes based on the monthly average revisions of previous years, our own 2007 revision was therefore greater (-110 kb/d). For 2008, we are factoring in an annual correction of roughly +80 kb/d.

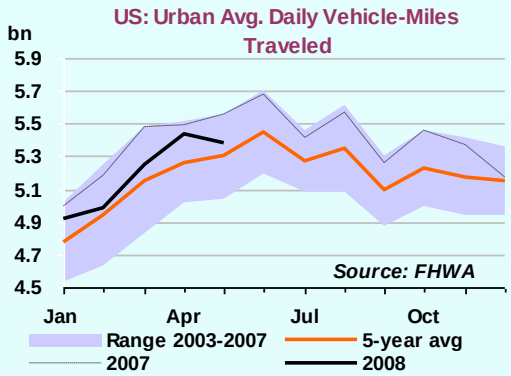


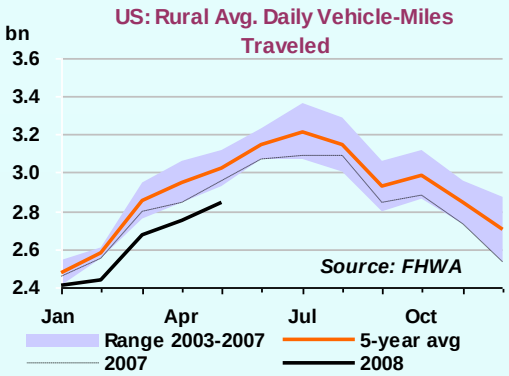
In its latest economic outlook, the IMF has markedly revised its economic outlook for the US, most notably for 2008 (the revisions to other countries, by contrast, were minor). GDP is now expected to expand by 1.3% in 2008 and by 0.8% in 2009 (instead of 0.5% and 0.6%, respectively, as forecast last April). At first glance this adjustment may seem surprising, but it actually reflects much stronger-than-expected 1H08 data and assumes that the US economy will contract in 2H08. Indeed, most indicators suggest that the economy is rapidly weakening and most likely heading towards recession. The credit crunch, falling house prices, and food and energy inflation will effectively continue to constrain consumer spending, as real incomes will at best remain stagnant (the fiscal effect of the tax rebate provided by the government was effectively largely wiped out by higher oil prices).

Moreover, the noticeable weakness in 1H08 oil demand despite resilient economic growth confirms that the negative effect of higher oil prices has been sizeable. The ongoing woes of both the automotive and airline industries – seen in the sharp contraction of gasoline and jet fuel/kerosene demand – illustrate the degree to which US consumers are shunning travel and trying to save energy. This trend is unlikely to be reversed in the short term – unless oil prices collapse, which seems a remote possibility despite their recent slide. Therefore, US oil demand is expected to remain subdued, contracting by 3.1% in 2008, to 20.0 mb/d, and by 2.0% in 2009, to 19.6 mb/d. It should be noted that the expected economic contraction in the second half of this year underlies our revisions in 3Q08 and 4Q08 (roughly -250 kb/d on average), which have been carried through to 2009.

Smaller Cars, Less Driving

The collapse of SUV and light truck sales in the US continues apace. Total vehicle sales plummeted by almost 19% year-on-year to a 16-year low in July (12.6 million units), but the fall in sales by companies specialising in SUVs and light trucks was much more pronounced: Chrysler, General Motors, Ford and Toyota reported a 29%, 26%, 15% and 12% decline, respectively. By contrast, manufacturers of smaller cars managed to contain the fall (Honda's sales dropped by only 2%) or even posted gains (Nissan's jumped by almost 9%). This trend could well mean that US gasoline demand may have peaked in 2007; even if retail prices ease, it seems unlikely that motorists who have purchased smaller cars will revert to gas-guzzling vehicles, despite the numerous incentives offered by the automotive industry (ranging from rebates, zero percent financing and subsidised gasoline). Nevertheless, the transition to a more fuel-efficient US fleet will take some time. On the one hand, the SUV and light truck fleet is relatively young (7 years on average, compared with about 9 years for cars). On the other hand, car manufacturers will need some time to reconfigure their factories to produce smaller cars.





Motorists are not only looking for more efficient vehicles but they are also driving much less, relying instead on public transportation, car-pooling or even bicycle riding. As we noted in our previous report, the number of vehicle-miles travelled (VMT) compiled by the US Federal Highway Administration has actually declined since 2006, as prices began to bite. Disaggregating the series into urban and rural driving provides an interesting insight. Both urban and rural VMT are down year-on-year (-3.2% and -4.1%, in May, respectively). However, urban VMT remain within their five-year range; rural VMT, by contrast, are now well below their range. This may suggest that US motorists have sharply reduced leisure driving, a trend that appears to be supported by the so far lacklustre driving season.

OECD North America Demand by Product
(million barrels per day)

	2007	2008	2Q07	3Q07	4Q07	1Q08	Mar 08	Apr 08	May 08*	Latest month vs. Apr 08	Latest month vs. May 07
LPG & Ethane	2.93	2.86	2.75	2.73	2.97	3.10	2.93	2.67	2.71	0.03	0.01
Naphtha	0.41	0.38	0.42	0.42	0.41	0.36	0.34	0.39	0.37	-0.02	-0.06
Motor Gasoline	10.84	10.73	10.93	11.07	10.84	10.47	10.63	10.69	10.84	0.15	-0.19
Jet & Kerosene	1.89	1.84	1.89	1.91	1.90	1.84	1.85	1.83	1.81	-0.03	-0.05
Gas/Diesel Oil	5.24	5.18	5.12	5.13	5.24	5.29	5.20	5.11	5.00	-0.11	-0.11
Residual Fuel Oil	1.25	1.12	1.25	1.21	1.18	1.14	1.12	1.20	1.22	0.02	-0.04
Other Products	2.97	2.78	3.05	3.11	2.95	2.63	2.56	2.62	2.77	0.16	-0.39
Total Products	**25.54**	**24.88**	**25.42**	**25.57**	**25.49**	**24.84**	**24.63**	**24.51**	**24.71**	**0.20**	**-0.82**

* Latest official OECD submissions (MOS)

Both Canada and Mexico posted large annual revisions to historical demand data. **Canadian** revisions pertain essentially to residual fuel oil over 2005-2007, which has been lifted by roughly 25 kb/d on average. Total demand is now expected to average 2.4 mb/d in both 2008 and 2009. Meanwhile, **Mexican** revisions over 2006-2007 (almost +80 kb/d) relate to three product categories – LPG, residual fuel oil and 'other products' – as previously underestimated backflows have now been included. Overall demand is now seen averaging slightly above 2.1 mb/d this year and the next.

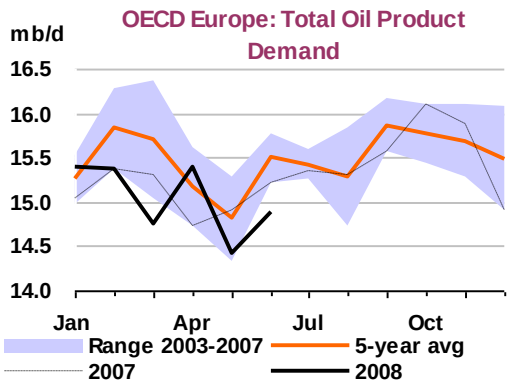
Pricing Arbitrage: The US-Mexico Border

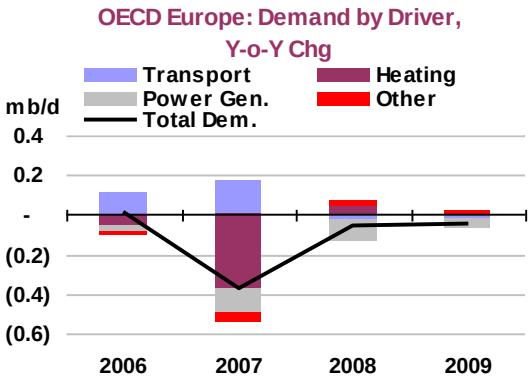
The differential between retail gasoline prices in Mexico and the US is leading to renewed market distortions along the border between both countries. Mexico's state-owned PEMEX has reportedly restricted gasoline deliveries to 556 service stations on the border area, particularly on the western edge (around the San Diego/Tijuana area) following similar curbs regarding diesel supplies a few weeks ago. These moves have been prompted by concerns that US motorists and truckers are crossing over to Mexico to refill their tanks, since retail prices are much lower (gasoline, for example, costs about $0.70 per litre in Mexico, versus roughly $1.10 in the US) and despite worries about allegedly inferior Mexican fuel quality. Understandably, the Mexican government is trying to limit the exorbitant cost of fuel subsidies, poised to exceed $20 billion in 2008 (four times more than last year), but such supply restrictions could lead to shortages. Indeed, the strong growth in Mexican fuel demand observed in the past several years has been fuelled by domestic economic growth, not by additional demand from US consumers in the border area.

Moreover, this transnational arbitrage is not new. A few years ago, the flow of traffic was actually in the opposite direction, as US prices were cheaper than in Mexico. Successive Mexican governments have tried to close this arbitrage by setting differentiated prices between the border and the rest of the country. The arbitrage, however, has never totally disappeared (excepting in the rare occasions when US prices have coincided with Mexican ones), while such price discrimination has created some resentment within Mexico, as consumers feel penalised on the grounds of their geographical location. One solution would be to liberalise prices and adopt a similar tax regime to that in the US, so that prices in both countries converged, or at the very least to reduce subsidies. However, given inflationary concerns and political constraints, this is unlikely to happen in the near future.

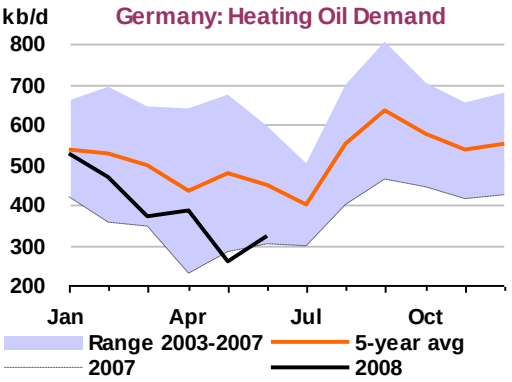
Europe

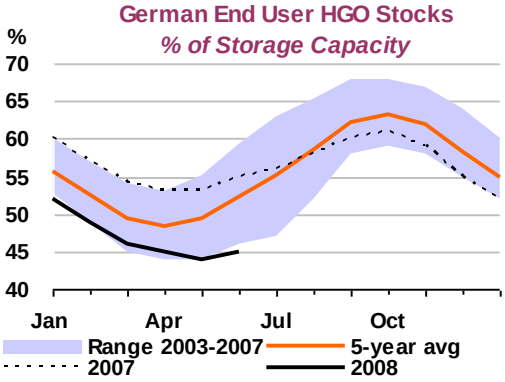
European oil product demand shrank by 2.3% year-on-year in June, according to preliminary inland delivery data, with all product categories bar LPG and naphtha registering losses. The contraction in gasoline deliveries (-7.1%) was particularly marked. Revisions to annual submissions, meanwhile, averaged some +35 kb/d over 2000-2007, largely driven by Belgium, which adjusted its naphtha demand upwards following some methodological changes. Looking forward, these revisions, coupled with June's submissions, a marginal reappraisal of the demand outlook in Germany and minor changes to GDP growth assumptions in several European economies, suggest that demand in OECD Europe will average 15.2 mb/d in both 2008 and 2009, implying a year-on-year decline of 0.4% and 0.3%, respectively.





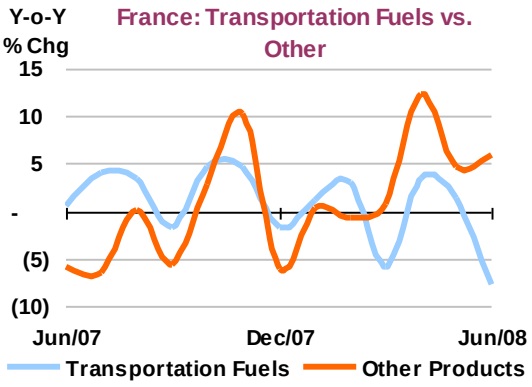
Inland deliveries in **Germany** fell by a modest 0.2% year-on-year in June, according to preliminary data. The weakness observed in previous months continued with regards to gasoline (-6.6%), diesel (-0.6%) and residual fuel oil deliveries (-13.9%). By contrast, heating oil demand showed some signs of revival, jumping by 5.6%, partly because German consumer stocks had reached historical lows. Heating oil stocks averaged 45% of capacity by end-June, slightly above the levels registered a month earlier (44%) but well below the readings of June 2007 (55%). On the basis of more normal patterns of refilling in 2009, we have slightly adjusted up our forecast of German heating oil demand, thus marginally lifting overall European oil demand.

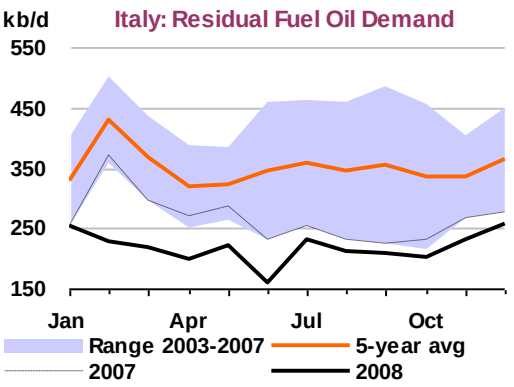




Demand in France shrank by 2.0% year-on-year in June, dragged down by a sharp contraction in the deliveries of gasoline (-14.2%) and diesel (-7.8%). This suggests that French motorists are finally reacting to high oil prices, by driving less or at reduced speed. In fact, gasoline and diesel demand during 1H08 had been inordinately resilient. Jet fuel/kerosene demand, by contrast, remains buoyant (+2.4% in June) and likely to remain so, reflecting the importance of Paris as a key European air flight hub. Meanwhile, French fuel oil deliveries rose by 28.7% year-on-year in June as state-owned utility EDF reportedly proceeded to replenish its stocks.

France is not alone in recording plummeting demand for road fuels. In **Italy**, gasoline and diesel contracted respectively by 10.1% and 2.6% year-on-year in June. In **Spain**, the fall was 9.9% and 6.3%, respectively. This is consistent with both economies being arguably the weakest in the Eurozone (Italy is being dragged down by a falling manufacturing competiveness and Spain by the bursting of its housing bubble). In addition, in both countries natural gas continues to displace residual fuel oil for power generation. In Italy, residual fuel oil deliveries plummeted for the fifth consecutive month (-30.2%); in Spain the fall was less sharp (-8.1%) but nonetheless significant. Overall, total oil demand in both countries plunged in June (-8.4% in Italy and -7.8% in Spain).





Administering Diesel Demand: France's Incentives Scheme

In early 2008, France introduced a fiscal policy aimed ostensibly at discouraging the purchase of large cars on environmental grounds. Under the so called *bonus-malus* system, the price of vehicles emitting more than 160 grams of CO_2 per kilometre is increased by as much as €2,600 according to a sliding scale. By the same token, cars emitting less than 120 g/km benefit from a discount that can be as high as €1,000.

France's Incentives Scheme – New Vehicles

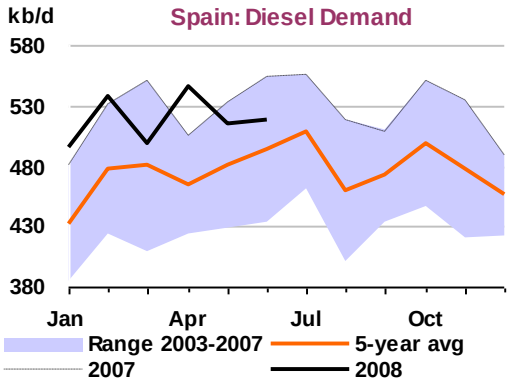
CO_2 Emissions	*Bonus* (Discount)	*Malus* (Surcharge)
>250	€0	€2,600
201-250	€0	€1,600
166-200	€0	€750
161-165	€0	€200
131-160	€0	€0
121-130	€200	€0
101-120	€700	€0
<100	€1,000	€0

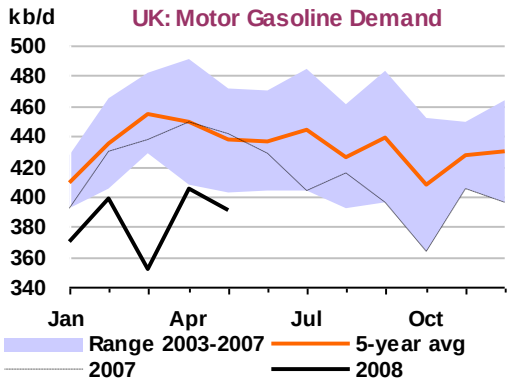
In practice, this new system has helped support the sales of diesel-powered cars. On the basis of equivalent horse-power, a gasoline engine will typically emit more CO_2 than a diesel one. In the case of small engines, this can translate into a significant cost difference: for example, a 90 HP diesel engine emitting 120 g/km will benefit from a €200 discount, whereas an equivalent gasoline engine will emit 150 g/km – within the emissions range where no discount can be applied.

Although diesel vehicles are about a third more efficient than gasoline cars, they are also generally more expensive, both in terms of their purchase price and maintenance costs. As such, the drive towards the dieselisation of Europe's vehicle fleet over the past decade was primarily related to the fact that, until recently, diesel was much cheaper than gasoline. A consumer purchasing a diesel-powered vehicle could thus expect to rapidly amortise the price differential *vis-à-vis* gasoline engines, even if driving relatively little.

With the sharp increase in oil and distillates prices over the past few years, diesel and gasoline prices have tended to converge in most countries (in some cases, retail diesel has even become more expensive). As such, diesel cars have become less attractive for the average consumer; only motorists driving very long distances may still find diesel advantageous from a cost perspective. More interestingly, this could augur a renewed interest in gasoline engines, thus partly reversing Europe's dieselisation trend – unless other countries emulate France's policy.

Oil product demand in the **UK** contracted by 10.0% year-on-year in May (the last month for which official data are available), dragged down by very weak deliveries of transportation fuels (gasoline contracted by 11.5%, jet fuel/kerosene by 15.3% and diesel by 5.2%) and residual fuel oil (-34.8%). This appears to confirm the dampening effect of high oil prices and the ongoing slowdown of the British economy. As such, in mid-July the UK government announced it will postpone a planned increase in the country's fuel duty. The two-pence (US$0.04) per litre rise was scheduled to take effect in October, but implementation will now wait at least until April 2009. The rise had already been pushed back from April 2008 given soaring prices and loud protests from motorists and businesses over the past few months. This delay, however, runs counter the government's public commitment to enhance energy efficiency and combat climate change via market-based policies.





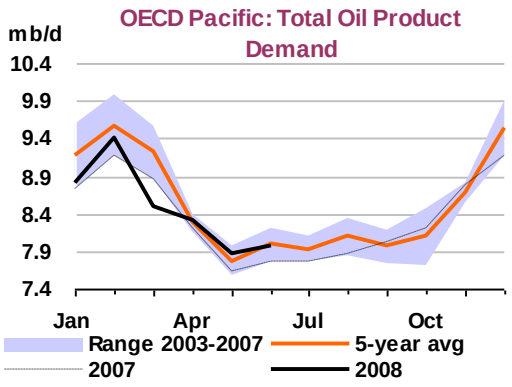
OECD Europe Demand by Product
(million barrels per day)

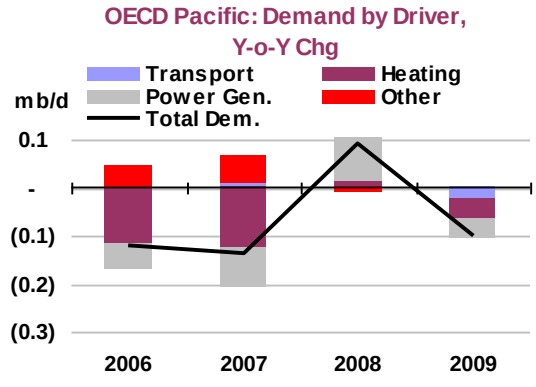
	2007	2008	2Q07	3Q07	4Q07	1Q08	Mar 08	Apr 08	May 08*	Latest month vs. Apr 08	Latest month vs. May 07
LPG & Ethane	0.95	0.97	0.95	0.86	0.98	1.05	1.02	1.05	0.94	-0.11	-0.06
Naphtha	1.18	1.15	1.11	1.14	1.20	1.19	1.19	1.08	1.03	-0.05	-0.09
Motor Gasoline	2.51	2.39	2.60	2.60	2.42	2.29	2.29	2.44	2.45	0.01	-0.14
Jet & Kerosene	1.30	1.32	1.29	1.40	1.29	1.25	1.26	1.30	1.25	-0.05	-0.03
Gas/Diesel Oil	6.10	6.22	5.71	6.05	6.48	6.31	5.93	6.34	5.70	-0.64	0.02
Residual Fuel Oil	1.73	1.62	1.70	1.67	1.73	1.67	1.62	1.57	1.48	-0.09	-0.24
Other Products	1.53	1.58	1.59	1.68	1.52	1.40	1.44	1.61	1.58	-0.03	0.05
Total Products	**15.30**	**15.25**	**14.95**	**15.41**	**15.62**	**15.16**	**14.74**	**15.39**	**14.43**	**-0.96**	**-0.47**

* Latest official OECD submissions (MOS)

Pacific

Preliminary data indicate that oil product demand in the Pacific rose by 2.7% year-on-year in June, largely driven by buoyant growth in Japan and, to a lesser extent, Australia. **Japanese** demand, which represents two-thirds of the regional total, jumped by 4.6%, as it continues to be supported by strong demand for residual fuel oil and direct crude use for power generation given the ongoing nuclear outages.





Australian demand, meanwhile, surged by an estimated 7.6% year-on-year in June following the spike in diesel demand that resulted from the June outage at Apache Energy's Varanus Island natural gas production hub. According to recent reports, production in the facility is being gradually restored, and should be fully back by the end of the year or perhaps even earlier.

Given that annual revisions turned out to be relatively minor – essentially a combined average upward adjustment of 23 kb/d to Japanese jet fuel/kerosene and residual fuel demand – projections of OECD Pacific oil demand are virtually unchanged compared with the last report. It is expected to average 8.4 mb/d in 2008 (+1.1% or +90 kb/d on a yearly basis) and 8.3 mb/d in 2009 (-1.2% or -100 kb/d) as oil demand in Japan resumes its structural decline.

OECD Pacific Demand by Product
(million barrels per day)

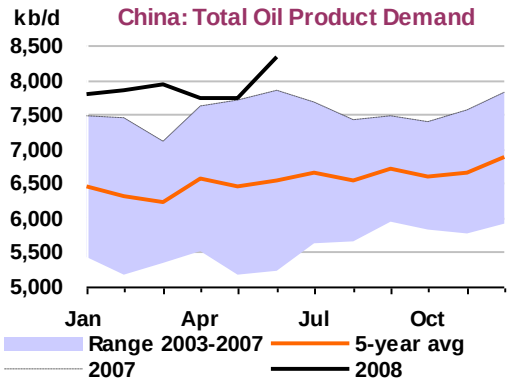
	2007	2008	2Q07	3Q07	4Q07	1Q08	Mar 08	Apr 08	May 08*	Latest month vs. Apr 08	Latest month vs. May 07
LPG & Ethane	0.96	0.95	0.95	0.89	0.98	1.01	0.98	1.00	0.98	-0.02	0.04
Naphtha	1.65	1.65	1.56	1.63	1.66	1.69	1.62	1.52	1.58	0.06	0.03
Motor Gasoline	1.58	1.56	1.55	1.64	1.58	1.48	1.45	1.75	1.47	-0.28	-0.07
Jet & Kerosene	0.93	0.96	0.74	0.66	1.04	1.24	1.00	0.81	0.72	-0.09	0.04
Gas/Diesel Oil	1.80	1.79	1.77	1.69	1.88	1.80	1.83	1.82	1.73	-0.08	0.03
Residual Fuel Oil	0.96	0.97	0.91	0.92	1.01	1.06	0.99	0.92	0.88	-0.04	-0.01
Other Products	0.48	0.55	0.39	0.46	0.56	0.61	0.62	0.49	0.50	0.00	0.15
Total Products	**8.35**	**8.44**	**7.88**	**7.89**	**8.72**	**8.89**	**8.49**	**8.31**	**7.86**	**-0.45**	**0.21**

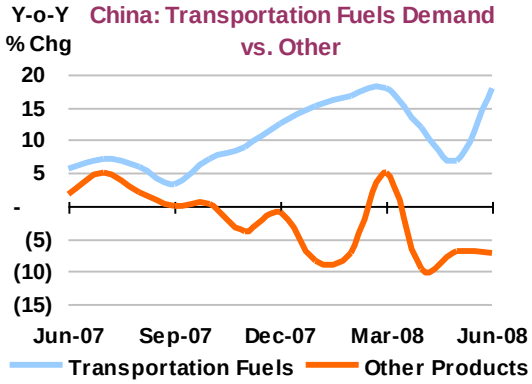
* Latest official OECD submissions (MOS)

Non-OECD

China

In June, according to preliminary data, China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) jumped by an estimated 6.2% year-on-year. The rise was supported by strong deliveries of transportation fuels (gasoline, gasoil and jet fuel/kerosene soared by 22.2%, 15.1% and 23.8%, respectively). These largely offset the sustained weakness in residual fuel oil demand – the feedstock of choice for 'teapot' refineries – which contracted by 33.7% and the contraction in LPG demand (-7.5%), which is not subject to price caps. Overall, demand surpassed the highly symbolic 8-mb/d mark for the first time ever in June, reaching 8.3 mb/d.





As in recent months, demand growth was met by strong oil product imports and higher refinery output (+11.3% from May). However, the fact both net crude imports and net oil product imports, albeit high (respectively 3.4 mb/d and 677 kb/d in June), were well below the highs recorded in May (3.8 mb/d and 872 kb/d), suggests that the state-owned majors, PetroChina and Sinopec, decided to draw down stocks rather than pay ever-rising prices. It should be noted, in particular, that net fuel oil imports almost halved to 233 kb/d in June, compared with the previous month. This arguably implies that the economics of teapot refineries running fuel oil as a feedstock have not improved despite the retail fuel price hike in

early June. It could also indicate, as pointed out in our last report, that the rumours regarding the government's alleged intention to cut the fuel oil import tax from 3% to 1% have indeed prompted refiners to delay feedstock imports as long as possible.

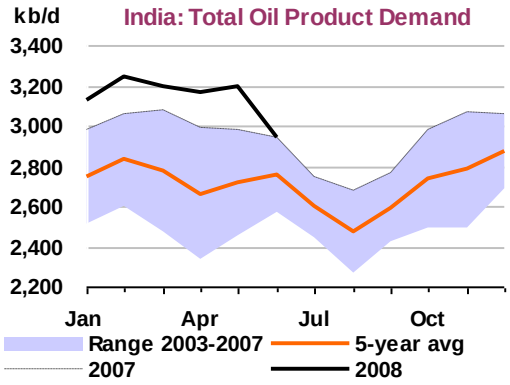
China: Demand by Product
(thousand barrels per day)

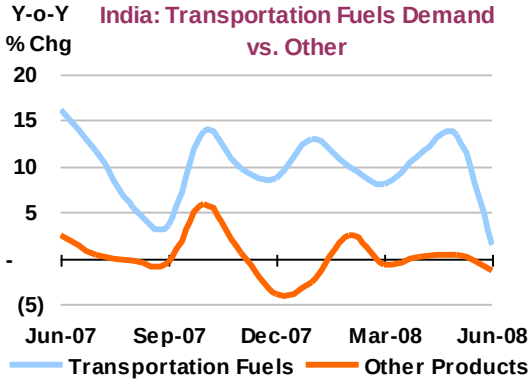
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	640	-33	-29	-4.6	-4.4
Naphtha	756	812	845	56	33	7.5	4.0
Motor Gasoline	1,221	1,257	1,425	36	168	2.9	13.3
Jet & Kerosene	259	280	306	20	26	7.8	9.4
Gas/Diesel Oil	2,415	2,576	2,860	161	284	6.7	11.0
Residual Fuel Oil	791	744	666	-48	-78	-6.0	-10.5
Other Products	1,068	1,204	1,223	136	19	12.7	1.6
Total Products	**7,213**	**7,542**	**7,964**	**329**	**423**	**4.6**	**5.6**

We have kept our forecast of China's total oil demand essentially unchanged versus our last report, at 8.0 mb/d in 2008 (+5.6% year-on-year) and 8.4 mb/d in 2009 (+5.7%). There is, though, considerable uncertainty regarding this outlook in the months ahead, as discussed below.

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – rose by 0.1% year-on-year in June. This weak rate of growth mostly reflects the fact that retailers had reportedly built ample stocks in May in anticipation of June's widely publicised increase to gasoline, gasoil and LPG retail prices.





Interestingly, despite such a stockbuild, only gasoline sales registered a contraction (-5.9% year-on-year in June). Both LPG and, more importantly, gasoil sales, which account for over a third of total oil product sales, posted relatively brisk increases (+2.2% and +3.3%, respectively). This would confirm, as we had anticipated, that the price hike merely slowed down the pace of oil demand growth, rather than fostering a contraction in absolute levels. Therefore, our demand forecast remains virtually unchanged at 3.1 mb/d in 2008 (+4.6% over 2007) and 3.2 mb/d in 2009 (+4.5%).

China's Demand Outlook Has Not Become Any Clearer

Several months ago (*Oil Market Report,* 11 April 2008) we argued that assessing short-term Chinese oil demand was a particularly difficult exercise, notably for the period through 3Q08. At present, despite having gone through half the year, China's demand trends remain remarkably opaque, posing a considerable risk to the demand forecast for 2H08.

- Some commentators argue that demand growth will ease markedly after the Olympics, citing lower scheduled purchases by Sinopec for August. This could well be the case – as long as stocks are ample. Given the lack of data on Chinese inventories, it is unclear whether the high levels of imports recorded over the past four months were prompted by any (or a combination) of the following issues: a) the government's attempts to stockpile ahead of the Games, when demand should spike; b) the need to replace the substantial production loss from teapot refineries, whose production was restrained by high feedstock prices; or c) buoyant demand growth fuelled by breakneck economic growth and low retail prices, despite recent hikes (in November 2007 and June 2008).
- The need to reduce Beijing's air pollution levels during the two-week Olympic Games has led to the closure of several close-by industrial facilities (such as refineries, steel plants and coal-fired power plants), notably in the western suburbs, and to the removal of some one million cars off the city's roads. This will likely reduce oil demand in the Beijing area from early July to mid-September – but the extent of such a reduction is difficult to estimate at this point. In any case, by end-September local demand should be back to its pre-Games levels.
- The power shortages affecting several provinces are evolving into a full-blown crisis. Nation-wide shortages could be as high as 15 MW during the summer, given a) tight coal supplies and low inventories following the weather disruptions earlier this year and the closure of small mines; b) the shutting down of small generators; c) rising coal prices (despite an official cap); and d) frozen retail prices, which discourage producers. However, this coal-fired power tightness may not necessarily prompt a surge in gasoil use as during the massive shortages of 2004, when many manufacturers, notably in coastal areas, resorted to small gasoil generators to maintain operations. (Over 80% of the country's power generation capacity is coal fired, and industry accounts for almost 70% of total electricity demand.) A major difference is that gasoil has now become much more expensive, implying an additional – and significant – financial burden for a manufacturing sector that is already facing higher input costs (notably labour), an appreciating currency and contracting export markets. Therefore, the potential spike may be limited (many of the less competitive manufacturers, notably in coastal areas, have reportedly gone out of business over the past few months).
- There could be important policy changes that might alter the oil supply and demand picture:

  a. The government has still not officially renewed the value-added tax (VAT) rebate on monthly crude, gasoline and gasoil imports, which expired at the end of June. The rebate had been decreed in April in an effort to boost imports and offset the refining losses of state-owned oil companies Sinopec and PetroChina (the government refunded both firms' 17% VAT on product imports and 75% of their 17% VAT on crude imports). The government and the state-owned companies are reportedly negotiating to extend the rebate at least to July's import bill (or possibly all of 3Q08). Afterwards, however, refiners could well cut imports sharply to minimise their losses and thus foster a fresh round of shortages, unless they are assured of some other form of financial compensation (either higher direct subsidies or a reduction of the windfall tax on crude production) or if international oil prices continue to fall.

  b. In the same vein, as noted above, the government may cut the fuel oil import tax from 3% to 1% in an attempt to coax teapot refineries into increasing production.

  c. The government may adjust end-user prices once again just after the end of the Olympic Games, either by raising the so-called 'guidance' (ex-refinery) prices or by introducing a fuel tax. Such rumours, however, are recurrent and often unsubstantiated (the latest suggested that another price increase would take place in July, which did not occur). In fact, if international oil prices fall further the government could well decide to leave retail prices unchanged if inflation fails to abate. Nevertheless, faced with the need to address China's macroeconomic imbalances, it appears that the government is leaning towards an adjustment via higher energy prices rather than through a further appreciation of the yuan, seen in some quarters as eroding the country's key competitive advantage. The political risks of higher inflation may be perceived to be lower than those associated with stagnating economic growth.

SUPPLY

Summary

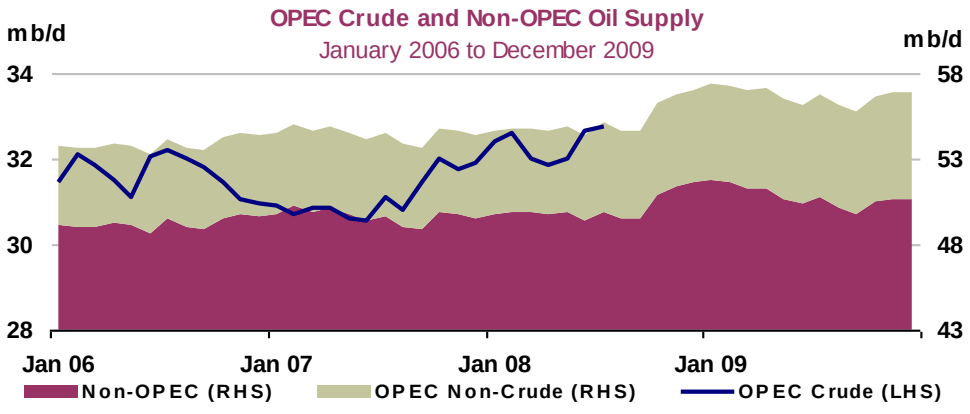
- **Global oil supply** increased by 890 kb/d in July to average 87.8 mb/d. The Americas and Norway are thought to have underpinned the 520 kb/d of non-OPEC growth, amid a lull in seasonal maintenance elsewhere. OPEC crude gained 145 kb/d with the balance coming from higher gas liquids supply. Just as in June, July global supply stood 2.3 mb/d above levels of a year ago.

- **Non-OPEC supply** is revised up by 0.1 mb/d historically and for 2008/2009. It averages 50.1 mb/d in 2008 and 50.8 mb/d in 2009. FSU processing gains are included after April's methodology change and a review of refinery yields. US and North Sea projections combined are now 0.1 mb/d higher for 2008 and 2009. The US sees higher NGL and ethanol output, while stronger May and June crude supply affects the UK and Norway. Non-OECD projections are cut by 130 kb/d for 2008 and by 80 kb/d for 2009, with lower output from Malaysia, Brunei, Brazil, Russia and Kazakhstan. Forecast Azerbaijan output is also cut by 235 kb/d for 3Q08 and 55 kb/d for the year after the BTC pipeline outage.

- **Growth in non-OPEC output** averages 455 kb/d for 2008 and 665 kb/d for 2009, after 425 kb/d in 2007. Rising supply from US, Canada, Australia and New Zealand help offset declines elsewhere in the OECD. Brazil, Azerbaijan, China and Kazakhstan drive non-OECD growth, with contributions also from Malaysia and Vietnam in 2009. Russian supply is seen levelling off. Subject to on-schedule project completion, OPEC NGL output rises from 4.8 mb/d in 2007 to 5.1 mb/d in 2008 and 5.9 mb/d in 2009, with Saudi Arabia, Qatar, the UAE, Nigeria and Iran all showing strong growth.

- **OPEC crude supply in July** rose by 145kb/d to 32.8 mb/d. Nigeria, Saudi Arabia and Iran all saw higher output, although over 0.5 mb/d of Nigerian output remains shuttered in the Niger Delta. Maintenance work cut Libyan and Angolan production, and a combination of lower Ceyhan exports and weaker crude runs cut observed Iraqi supply by 100 kb/d to 2.4 mb/d. Effective OPEC spare capacity stands at some 1.5 mb/d, although installed capacity is seen rising by end-2008 and through 2009.

- **The 'call on OPEC crude and stock change'** for 2008 is revised down by 0.1 mb/d to 31.6 mb/d but remains unchanged at 31.1 mb/d for 2009. The downward trend in the 'call' going forward is dependent upon a strong rebound in non-OPEC supplies in late 2008/early 2009. While any further weakening in OECD demand could reinforce this trend, upside potential for the call also exists if non-OECD demand growth comes in stronger than anticipated.



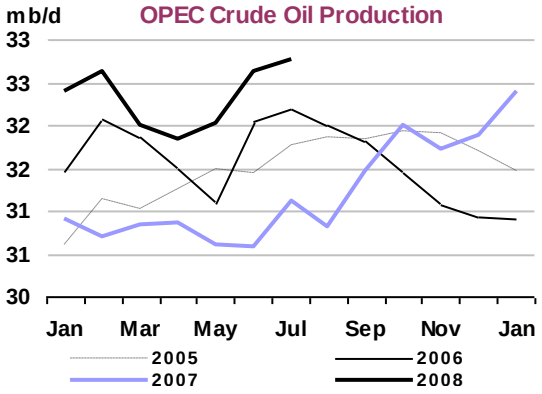
Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

All world oil supply figures for July discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary July supply data.

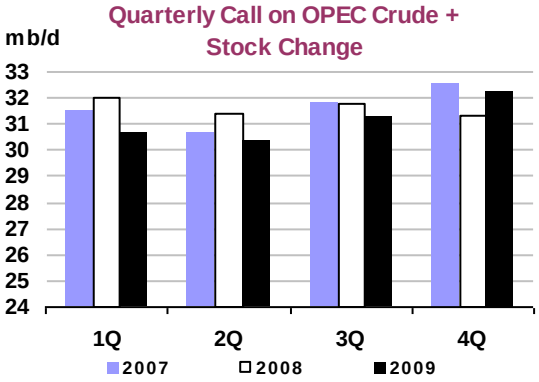
Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC crude supply in July rose by 145 kb/d to 32.8 mb/d. The June total was revised up by 215 kb/d to 32.6 mb/d on indications of higher crude runs and exports for both Iran and Iraq. In July, Nigeria, Saudi Arabia and Iran all saw higher output, although over 0.5 mb/d of Nigerian output remains shuttered due to attacks on pipelines and other oil installations in the Niger Delta. Field outages and maintenance work cut Libyan and Angolan production, and a combination of lower Ceyhan exports and weaker crude runs cut observed Iraqi supply by 100 kb/d to 2.4 mb/d.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Effective OPEC spare capacity stood at 1.5 mb/d in July, although installed capacity is seen rising by nearly 900 kb/d by end-2008 to 36 mb/d and further through 2009. Net capacity increases over the balance of this year are likely to come from Saudi Arabia, Angola and from offshore deep-water Nigeria.

OPEC ministers will meet in Vienna on 9 September. While Iranian sources have suggested that observance of quotas might be on the meeting's agenda, OPEC President Chakib Khelil was quoted as saying that prices close to $120/bbl were not indicative of a pressing need to curb output. A further, extraordinary meeting has been called for Oran in Algeria on 17 December.

Saudi Arabian supply is estimated to have increased by around 100 kb/d to 9.55 mb/d. Preliminary Middle East Gulf tanker sailings data do not support a sharper rise towards publicly-flagged 9.7 mb/d levels, nor reportedly were refiners over-enthusiastic about pricing terms. Saudi pronouncements of an ability to boost to 9.7 mb/d in July were in any case subject to incremental crude demand, which may have proved elusive, at least in the case of OECD refiners. However, indications for the most recent month are patchy at best, and could be subject to revision later on. Meanwhile price formulae announced for September term sales generally narrowed spreads between light and heavy grades, reflecting strengthening fuel oil markets.

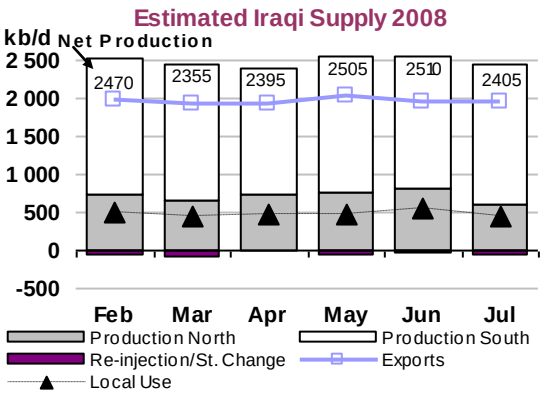
Our capacity estimates for Saudi Arabia (which attempt to exclude condensates and Bahrain's 50% share of Abu Safah crude production) brush 11 mb/d by end-2008 and 11.8 mb/d by end-2009. We continue to assume that the 500 kb/d AFK/Khursaniyah project enters service later in 3Q08.

OPEC Crude Production[1]
(million barrels per day)

	May 2008 Supply	Jun 2008 Supply	Jul 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs July 2008 Supply	Capacity end-2008	Current Target
Algeria	1.38	1.38	1.38	1.40	0.02	1.46	1.36
Indonesia	0.86	0.86	0.87	0.86	-0.01	0.84	0.87
Iran	3.83	3.95	4.02	4.05	0.03	4.00	3.82
Kuwait[3]	2.60	2.63	2.63	2.64	0.00	2.65	2.53
Libya	1.75	1.75	1.70	1.80	0.10	1.81	1.71
Nigeria[4]	1.84	1.83	1.97	2.55	0.59	2.70	2.16
Qatar	0.83	0.88	0.88	0.93	0.05	0.96	0.83
Saudi Arabia[3]	9.06	9.45	9.55	10.65	1.10	10.95	8.94
UAE	2.65	2.67	2.67	2.85	0.19	2.87	2.57
Venezuela[5]	2.32	2.36	2.36	2.60	0.24	2.60	2.47
OPEC-10	**27.11**	**27.75**	**28.01**	**30.32**	**2.30**	**30.84**	**27.25**
Angola[1]	1.83	1.87	1.85	1.85	0.00	2.05	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**29.44**	**30.12**	**30.36**	**32.67**	**2.30**	**33.39**	**29.67**
Iraq	2.40	2.51	2.41	2.41	0.00	2.56	
Total OPEC	**31.84**	**32.63**	**32.77**	**35.07**	**2.30**	**35.95**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*1.48)*		

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 510 kb/d in July.

Iraqi crude supply for July is assessed at 2.4 mb/d, down by 100 kb/d from an upward revised June total. The June revision sprang from higher-than-expected domestic crude throughput (our Iraqi proxy for production comprises exports plus domestic crude use in refineries and for power generation). June domestic crude use was reported at a recent high of 565 kb/d, although we believe refinery maintenance may have seen this slip to some 450 kb/d in July. Crude exports from southern ports gained 100 kb/d in July to 1.57 mb/d, but were offset by a similar magnitude fall in northern exports to 390 kb/d. Nonetheless, the story of 2008 so far has been of remarkably steady northern exports averaging 400 kb/d. This compares to minimal and sporadic levels prior to the installation of a security zone around the Kirkuk-Baiji stretch of pipeline last summer.



Indeed, many analysts now see political and regulatory bottlenecks becoming more of an impediment to Iraqi supply growth prospects than security risks. While it is premature to write off the real security issues that persist in Iraq, nonetheless slow progress in agreeing an election law and the regulatory framework for foreign company oil company investment look to be taking on greater prominence. Our *MTOMR* projections of expanding capacity from late 2008 may need to be revisited if technical service contracts aimed at adding some 0.5 mb/d of new capacity within two years remain unsigned for much longer. There is a risk that with the government shortening their duration, companies may wait instead until longer-term contracts under the first licensing round are awarded in 2009.

Despite regular reports of field and pipeline outages through July, **Nigerian** supply is believed to have increased by 135 kb/d to 1.97 mb/d. 2Q08 supply levels were revised lower by an average 70 kb/d on evidence of lower-than-expected domestic crude runs, resulting in a new June supply figure of 1.83 mb/d.

Ministerial statements in early August tend to back up our own estimate, citing current production at just below 2.0 mb/d. July began on an optimistic note, with the resumption on 9 July of full Bonga field output. Earlier restrictions on Escravos and Bonny Light exports were also lifted in mid-July, while both Qua Iboe and Pennington output levels are thought to have increased in July. That said, renewed attacks on the Tebida flow station and Nembe pipeline later in the month again curbed Brass River and Bonny Light supplies respectively. *Force majeure* on Bonny Light exports remains in force for August and September liftings. Current production outages lie in a 500-600 kb/d range.

On 31 July, Chevron started production from the deepwater Agbami field, although it may be early 2009 before volumes rise in excess of 100 kb/d and approach capacity 200 kb/d. ExxonMobil also started up output from the East Area NGL expansion, which should ultimately generate 40 kb/d of gas liquids. These developments illustrate once again the dichotomy between disruption-prone onshore and Niger Delta production on the one hand and ongoing offshore expansion on the other (notwithstanding the earlier attack on Bonga).

We have markedly revised up Iranian June supply to take account of what now look like higher exports and domestic refinery crude runs. June supply is revised up to 3.95 mb/d from 3.8 mb/d in last month's report. A further increase of 75 kb/d is estimated for July, taking output to 4.02 mb/d. Reports through July and early August suggest gradual draw-down of crude previously held in floating storage offshore Kharg Island. On 5 August, state company NIOC suggested the remaining 6 mb of crude in storage would be processed at the newly expanded Bandar Abbas refinery.

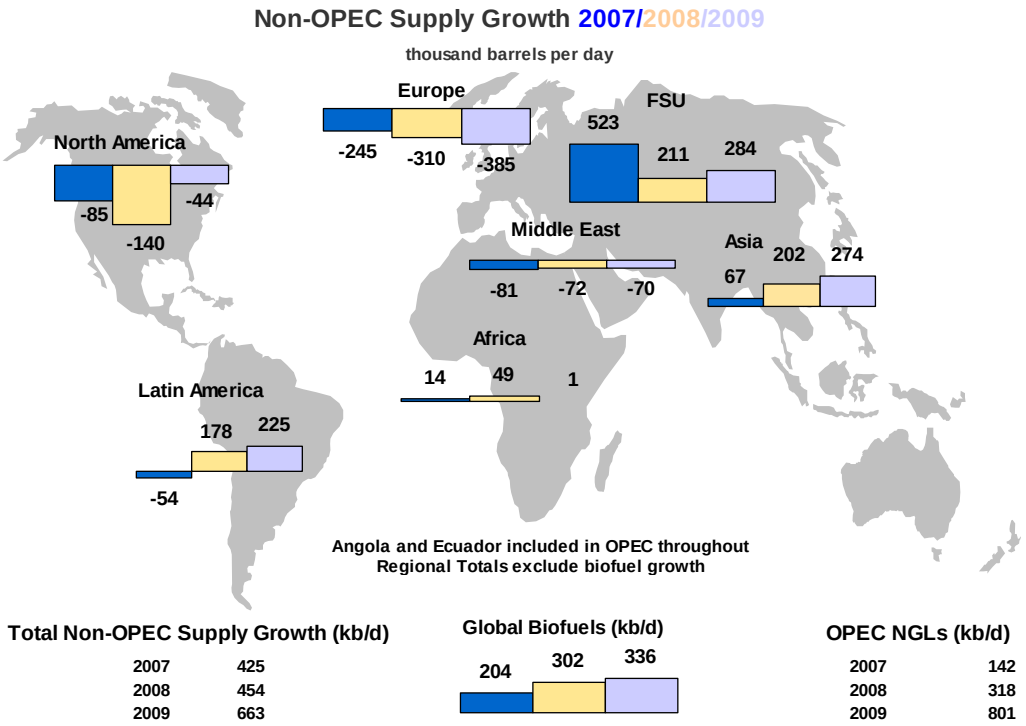
Iranian sources discussed a potential expansion of some 60 kb/d in production by September deriving from the onshore Azadegan and Darkhovin fields, and from Hendijan and Hengam offshore. Revolutionary Guard sources also restated threats in July that any attack on Iran over its nuclear programme would inevitably lead to disrupted shipping movements via the Straits of Hormuz.

Non-OPEC Overview

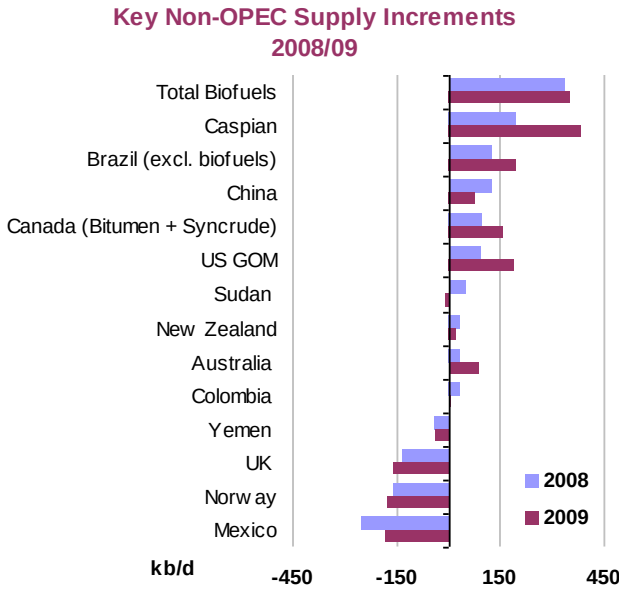
Non-OPEC July supply is estimated at 49.9 mb/d, up by 520 kb/d from June. We think that Canada, Argentina, Brazil, Malaysia and China saw July growth, although this is based on preliminary indications only. As important as month-to-month changes, however, is the observation that July followed May and June in showing growth in non-OPEC output compared with the same month in 2007, after a preceding six months of annual declines. July supply stood 265 kb/d above July 2007 levels. Our *ceteris paribus*, working forecast envisages non-OPEC growth accelerating markedly in 2H08 and into early 2009.

This month's report sees non-OPEC supply revised up by 0.1 mb/d historically (back to 1986) and for 2008/2009. Supply averages 50.1 mb/d in 2008 and 50.75 mb/d next year, after averaging 49.6 mb/d (excluding Angola and Ecuador) in 2007. FSU refinery processing gains (themselves estimated at around 0.1 mb/d) are now included in the processing gains aggregate in our global balance. This follows April's FSU demand methodology change and a subsequent review of FSU refinery yields.

Elsewhere, US and North Sea oil output projections combined are now 0.1 mb/d higher for 2008 and 2009. The US adjustment comes from higher gas liquids and ethanol output, while stronger May and June crude supply affects the UK and Norway. In contrast, non-OECD projections are trimmed by 130 kb/d for 2008 and by 80 kb/d for 2009, with lower output now expected from Malaysia, Brunei, Brazil, Russia and Kazakhstan. Forecast Azerbaijan output has also been cut by 235 kb/d for 3Q08 and 55 kb/d for the year following this month's BTC pipeline outage.



Growth in non-OPEC output now averages 455kb/d for 2008 and 655 kb/d for 2009, after 425 kb/d in 2007. Rising supply from the US, Canada, Australia and New Zealand help offset declines elsewhere in the OECD. Brazil, Azerbaijan, China and Kazakhstan drive non-OECD growth, with contributions also from Malaysia and Vietnam in 2009. Russian supply is seen levelling off at close to 10.0 mb/d. OPEC NGL output rises from 4.8 mb/d in 2007 to 5.1 mb/d in 2008 and potentially to as high as 5.9 mb/d in 2009. Saudi Arabia, Qatar, the UAE, Nigeria and Iran all show strong gas liquids increases although, as we note below, attaining project completion close to latest available schedules will be critical to this impressive level of growth being realised. That said, the impetus to boost natural gas output to quench local thirst for industrial, petrochemical, power generation and oilfield reinjection purposes, or for exports, is clear.



Our non-OPEC supply and OPEC NGL projections show resurgent growth from now onwards through 2009. On the surface, there are ample new projects approaching completion which can offset decline – in the short term at least. This marks a potential reversal of the trend evident in the period since mid-2007, when non-OPEC supply has consistently lagged levels of a year ago. But we readily acknowledge there are substantial risks surrounding this forecast, deriving from unscheduled production stoppages, cost inflation and new field delays, and political, fiscal and regulatory uncertainty. One look at the past couple of months' slate of news illustrates the point: a major explosion on the BTC pipeline in Turkey; uncertainties over pipeline supplies transiting Georgia; specific project delays announced for Russia, Kazakhstan, Canada, Australia and the Philippines; a mooted windfall profits tax in the UK and contractual uncertainty surrounding Brazil and Russia.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.14	14.27	-0.13	0.14	14.21	14.33	-0.02	0.12	0.08	0.05	0.11	-0.02
Europe	4.60	4.24	-0.35	-0.36	4.65	4.28	-0.30	-0.37	0.05	0.04	0.05	-0.01
Pacific	0.72	0.83	0.10	0.11	0.70	0.81	0.08	0.11	-0.02	-0.01	-0.02	0.01
Total OECD	**19.46**	**19.34**	**-0.39**	**-0.12**	**19.57**	**19.42**	**-0.24**	**-0.15**	**0.11**	**0.08**	**0.14**	**-0.03**
Former USSR	13.07	13.30	0.31	0.22	12.98	13.26	0.21	0.28	-0.09	-0.03	-0.09	0.06
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.84	3.95	0.12	0.10	3.86	3.93	0.13	0.08	0.01	-0.01	0.01	-0.03
Other Asia	2.70	2.79	0.03	0.09	2.67	2.76	0.00	0.09	-0.03	-0.03	-0.03	0.00
Latin America	4.06	4.32	0.21	0.26	4.04	4.32	0.19	0.28	-0.02	0.00	-0.02	0.02
Middle East	1.59	1.52	-0.07	-0.07	1.59	1.52	-0.07	-0.07	0.00	0.00	0.00	0.00
Africa*	2.56	2.56	0.05	0.00	2.56	2.56	0.05	0.00	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.95**	**28.55**	**0.62**	**0.59**	**27.82**	**28.47**	**0.49**	**0.64**	**-0.13**	**-0.08**	**-0.13**	**0.05**
Processing Gains	2.13	2.17	0.06	0.04	2.24	2.29	0.07	0.04	0.11	0.11	0.02	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
Total Non-OPEC*	**50.00**	**50.64**	**0.42**	**0.64**	**50.09**	**50.75**	**0.45**	**0.66**	**0.09**	**0.11**	**0.03**	**0.02**

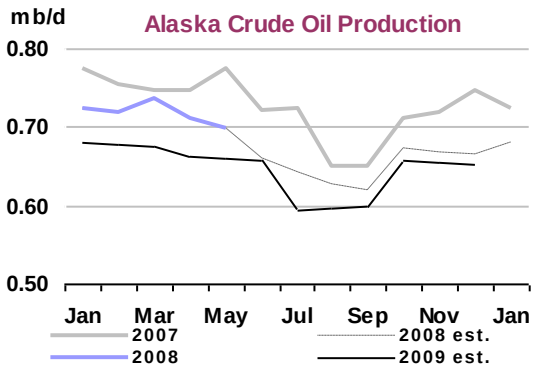
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

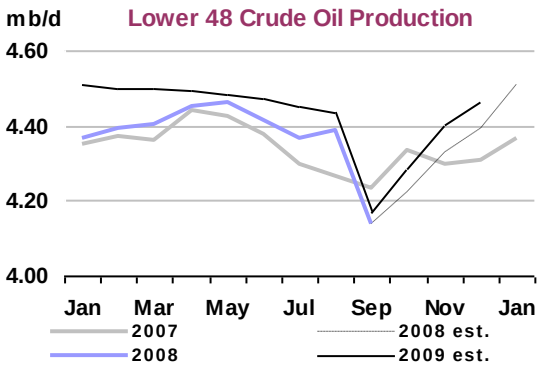
OECD

North America

US – July Alaska actual, others estimated: Revised 2007 data from the EIA cut US crude estimates by 40 kb/d (to 5.06 mb/d), largely based on marginally lower US GOM output. Our aggressive hurricane outage assumptions for 2H08 (based on the rolling five-year average) constrain US GOM supply for the remainder of this year to around 1.4 mb/d. July saw three major storms transit the region, causing precautionary oil and gas installation shut-ins, but with only minor volumetric impact and scant damage recorded. Nonetheless, forecasters envisage an active storm season this year, albeit less so than in 2005. However, even allowing for potential storm outages, new field start-ups push expected total GOM supply to 1.56 mb/d for 2009, up nearly 200 kb/d from this year's average.

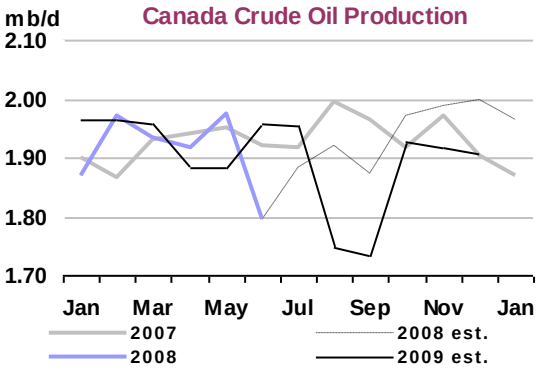
Total US oil production in 2008 is now forecast at 7.65 mb/d, with stronger baseline NGL and ethanol supplies adding a combined 65 kb/d to last month's forecast. As we note elsewhere in the report, surging US natural gas production has pushed gas prices lower, but is also generating substantial extra gas liquids volumes. Next year's supply rises by some 200 kb/d to 7.85 mb/d (5.1 mb/d crude oil) as gains of around 180 kb/d each from GOM and ethanol supply are partially offset by lower crude supply from other areas of the US.

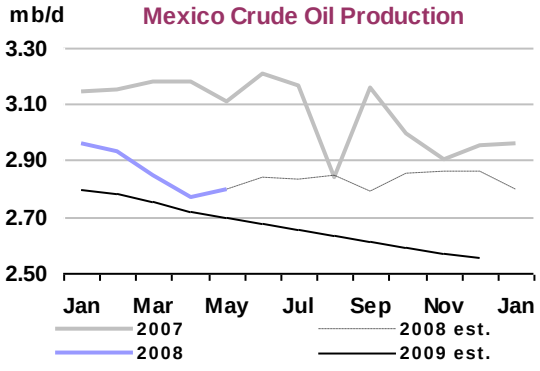




Canada – Newfoundland June, others May: Our Canadian oil production forecast is trimmed by 10 kb/d for 2008 and by 40 kb/d for 2009, centred on lower expected Alberta in-situ bitumen output. Although data through May point to slightly higher-than-expected production, we have cut the outlook for supply based on recent announcements from producer group CAPP. They have cited typical project delays for

oil sands projects now amounting to two years. Moreover, the group has trimmed its expectation for 2008 oil sands production from 1.4 mb/d to 1.3 mb/d, something we have mirrored in our own projections. All told, Canadian oil production is expected to average 3.3 mb/d in 2008 (unchanged from 2007) and



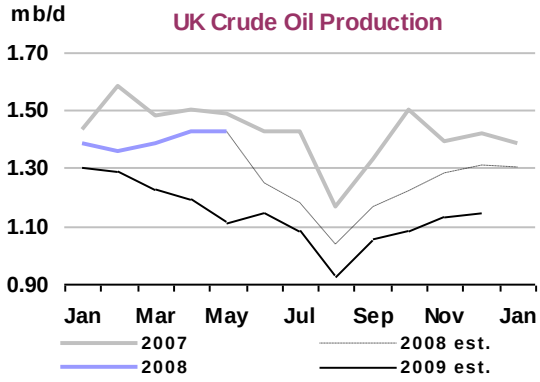


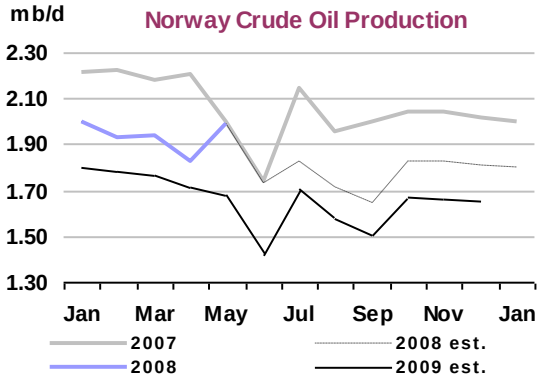
3.4 mb/d in 2009. Conventional crude (net of NGL and mining output) averages 1.9 mb/d both years.

Mexico – June actual: Mexican projections are revised up modestly this month, by around 10-20 kb/d for the forecast period. Nonetheless, crude production is expected to drop by nearly 200 kb/d in both 2008 and 2009, averaging 2.85 mb/d and 2.67 mb/d respectively. While we retain an assumption of near-25% decline from the offshore Cantarell field, other areas, notably the south eastern offshore region, are performing better than we anticipated. State oil company Pemex recently reduced its forecast for 2008 crude production to 2.8-2.85 mb/d, close to our own expectation. Natural gas liquids output is seen levelling off close to 375 kb/d in this report's forecast.

North Sea

Norway – May actual, June provisional: Some 20 kb/d is added to the forecast of Norwegian oil production for 2008 and 2009, with May data showing stronger Heidrun field supply. Also, 1 August saw start-up of StatoilHydro's Vilje field, two months later than our original forecast, but with plateau output now seen at 35 kb/d compared with our earlier estimate of 25 kb/d. Latest crude loading schedules for the main North Sea export streams reinforce our prevailing view that June and August would be Norway's peak maintenance period. All in all, maintenance cuts Norwegian crude supply by 300 kb/d from spring output levels in those two months, although output could recover to around 1.8 mb/d again by end-year. Total crude output for 2008 averages 1.84 mb/d and 1.66 mb/d in 2009. Crude thus drops by around 200 kb/d on an annual trend basis. Gas liquids production could prove more resilient, averaging around 560 kb/d both years, compared with 500 kb/d in 2007.





UK – May actual: UK offshore production is expected to decline by around 150 kb/d in both 2008 and 2009, after stabilising at 1.4 mb/d in 2007. May production came in nearly 260 kb/d above expectation, with both scheduled maintenance and the impact of the Grangemouth/Forties system outage proving less

than we originally estimated. This, however, is a one-off adjustment and a more modest upward revision of 10 kb/d from revised field-by-field detail through April is all that is carried through the forecast.

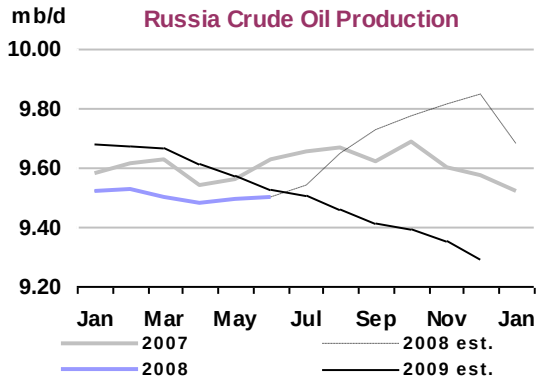
August appears to be the peak month for UK offshore maintenance, with a dip of around 140 kb/d expected for loadings of the key export streams. Regarding new field start-ups, condensate from the Brodgar and Callanish satellites of the Britannia gas field started up around 25 July, nearly one month ahead of our assumption. Earlier caution on our part regarding start-up at Nexen's Ettrick field seems to have been well placed, with the company now expecting output to begin in 4Q08 (our forecast already assumed December).

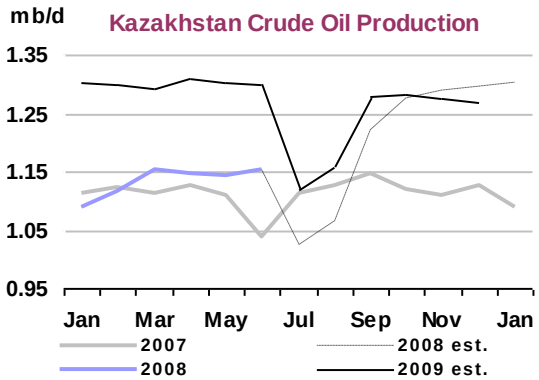
Producer group UK Oil and Gas stated that new projects in the North Sea now require $60-80/bbl prices in order to obtain the same returns as generated by $20-30/bbl five years ago. Unconfirmed press reports suggested that a windfall profits tax on energy companies is being considered by the UK Treasury.

Former Soviet Union (FSU)

Russia – June actual, July provisional: Forecast Russian production has been trimmed by 25 kb/d for both 2008 and 2009, now averaging 10.1 mb/d and 10.0 mb/d respectively (and including around 470 kb/d of NGL and condensate). Weaker than expected June and July output accrued from TNK-BP, Gazpromneft, Surgutneftegaz and Gazprom. Production from Lukoil and from smaller operators came in ahead of our previous outlook. July production from the three production sharing agreements (PSAs) came in 60 kb/d below expectation. This was due to a delayed start-up of summer season production from the Sakhalin 2 project, and therefore this adjustment is not carried through the forecast. This is important, since our expectation of stronger Russian supply in 2H08 is based largely on higher Sakalin 2 production alongside some gains from Lukoil. The neighbouring Sakhalin 1 project faces weakening production in the short term, and an announcement that the related Odoptu field development will not after all start in 2009 was widely anticipated (our *MTOMR* assumed a 2012 start).

Fiscal and regulatory uncertainty continues to surround Russian hydrocarbon prospects, despite an initial package of tax relief measures due to be enacted in 2009. During July there were signs of a deepening rift between TNK-BP shareholders, Lukoil warned of a need for further tax reform to avoid falling production and Russian audit authorities cautioned PSA operators over unrealised 2007 production targets.





Kazakhstan – June actual: July and August maintenance at the Tengiz oilfield is now expected to remove higher volumes of production than previously expected. This underpins downward adjustments of 15 kb/d for 2008 production and, replicating a similar maintenance profile next year, 5 kb/d for 2009. Growth in Kazakh production now averages 45 kb/d in 2008 and 110 kb/d in 2009, taking total production to 1.43 mb/d this year and 1.54 mb/d next year (some 270 kb/d of this is gas condensate). Growth derives largely from the Tengiz project, with operator TCO citing target 500 kb/d production for 2H08. This report retains a more cautious build-up to 500 kb/d in 2009, partly on uncertainty about transport infrastructure.

Damage to the Baku-Tblisi-Ceyhan Pipeline

An explosion on a block valve of the Turkish section of the Baku-Tblisi-Ceyhan (BTC) crude oil pipeline early on 6 August has led to the pipeline's complete shutdown. Kurdish insurgents of the PKK have claimed responsibility, although Turkish authorities cite a technical problem. Turkish pipeline authority Botas has responsibility for this section of the pipeline. The fire was reportedly extinguished early on Monday 11 August, but as yet there is no definitive assessment of the extent of the damage, although some sources have suggested a likely pipeline outage of at least one to two weeks. Tanker loadings of Azeri crude from the Turkish port of Ceyhan ceased on 7 August after storage at Ceyhan ran dry and force majeure on exports has been declared. Oil market reaction to the incident, together with the outbreak of hostilities involving Russia and Georgia, has been relatively muted, but these developments appear to have placed a floor under recent crude price falls.

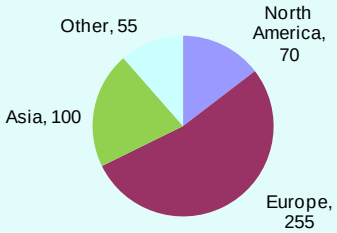


BTC has a capacity of 1.0 mb/d, and is to be expanded to 1.2 mb/d during 2008. Some 910 kb/d of Azeri Light crude was scheduled to be pumped along the line during August, compared with 775 kb/d in July. At the time of the outage, production from the BP-operated Azeri-Chirag-Guneshli (ACG) fields offshore Azerbaijan, which form the bulk of BTC throughput, was running at between 850-900 kb/d. BP has scaled back production from the ACG complex on a precautionary basis, with press reports citing weekend output at between 250-450 kb/d. It was reported on 7 August that the 2 mb of crude storage capacity at the Azeri end of the pipeline was almost full. ACG production has been expanding recently with new supplies from the Guneshli deep formation potentially expected to take production to around 1.0 mb/d by late 2008.

Azeri Light is high quality, 35°API/0.2% sulphur crude, similar to Nigeria's Bonny Light, exports of which are also under force majeure presently. It has a high yield of middle distillates, unlike more gasoline-rich grades from neighbouring Kazakhstan. Some 55% of Azeri export volumes in 2007 were destined for Europe, 21% to Asia, 14% to North America and 12% to other destinations.

Producers have been investigating alternative export routes for ACG crude. These comprise the 150 kb/d Baku to Supsa pipeline and the 100 kb/d Baku-Novorossiysk line, while some 50 kb/d of ACG crude can also be railed to the port of Batumi. All of the alternative routes involve crude transiting the Black Sea, although winter tanker delays which at other times mitigate against the use of these routes are clearly less of an issue in August. Normally exporters of ACG have shied away from using Baku-Novorossiysk as this effectively downgrades ACG quality as it is mixed with poorer quality Russian Urals crude. However, with reports that shipments from Georgian ports are disrupted, the Novorossiysk route may be the sole viable pipeline outlet for ACG crude while BTC repairs are carried out. Although it is too early to make a definitive judgement on potential lost supplies, we have scaled back our forecast of Azerbaijan production by 260 kb/d for 3Q08 and by 65 kb/d for 2008 as a whole, on the assumption that BTC remains offline for August but gradually re-enters service in September.

Azeri 2007 exports via BTC by Destination (kb/d)



Risks to Energy Transit Facilities as Military Action Escalates in Georgia

A recent escalation in military engagement between Russia and Georgia poses a threat to certain key oil and gas pipelines which transit Georgia. With negligible domestic oil production (unlike some of its Caspian neighbours), Georgia's significance to global oil and gas markets is as a transit corridor:

- **The BTC (Baku-Tblisi-Ceyhan) pipeline** which carries up to 1 mb/d of mostly Azeri crude to the Turkish port of Ceyhan passes through Georgia (for 250 km) and near to its capital Tblisi. Although temporarily closed in early August after an explosion on the eastern Turkish section of the line (claimed to have been carried out by Kurdish separatists), renewed flows through Georgia (expected from September) could be further delayed if the line is damaged during the Russia-Georgia conflict.
- Along the same corridor runs the **South Caucasus gas pipeline** which carries up to 8.8 bcm per year of Azeri natural gas to Georgia and Turkey. A branch of this pipeline continues through to the Russian port of Tuapse, transiting the region of Abkhazia, another Georgian area affected by separatist action where Russian troops are reportedly also being mobilised.
- The **Black Sea ports of Batumi, Supsa and Poti** (and the newly reopened port of **Kulevi**) are also important export terminals. Up to 150 kb/d of crude from Azerbaijan plus some products are pumped via pipeline to the ports. These are then either exported via tanker in crude parcels (most commonly to Southern Europe), exported directly as product from Batumi or Poti, or crude may be refined at the Batumi refinery and then exported as product. Some rail exports of crude and products follow the same route from Azerbaijan and augment the volumes leaving these ports, notably up to 50 kb/d via Batumi. Total product exports leaving Georgian ports typically average 50-70 kb/d, with middle distillates taking the largest share. Latest reports suggest that oil exports from Poti have ceased, while only partial operations are currently possible from Supsa and Batumi.

While the threat of an attack on the BTC pipeline poses the bigger risk to oil markets, it is clear that more generally, Georgia is a key energy transit hub in the Caucasus region and a country of significant strategic importance to energy markets. With the BTC currently closed, disruption to Georgian energy infrastructure further limits the possibility of getting Caspian oil and gas to markets.

FSU net oil exports fell to 8.83 mb/d in June, according to preliminary data. This was a modest reduction from May exports of 8.90 mb/d, when crude exports hit a record-high of 6.52 mb/d, including 940 kb/d via the BTC pipeline. In June, BTC transits dropped to 700 kb/d and there was an increase in Russian export duties (to around $54/bbl for crude). Total June crude exports for the FSU consequently declined to an average of 6.05 mb/d, with volumes of Russian crude passing through the Druzhba pipeline reduced to an extremely low level of 960 kb/d. Preliminary data indicate that FSU product exports rose to 2.82 mb/d after a sharp drop to 2.4 mb/d in May.

FSU exports could drop further in July and August. Field maintenance in Kazakhstan apparently constrained July transits via CPC, while loading schedules suggest that Russian crude and product exports were also down. Druhzba shipments may also have been affected by temporarily curtailed Russian exports to the Czech Republic. An explosion on the Turkish section of the BTC pipeline in early August (see *Damage to the Baku-Tblisi-Ceyhan Pipeline* on page 25) has for now halted crude flows to Ceyhan. Combined with a further rise in Russian export duties from 1 August, lower FSU exports are anticipated henceforth, despite indications of higher CPC transits and reports that 10 ppm diesel exports are due to start imminently from Baltic terminals.

FSU Net Exports of Crude & Petroleum Products

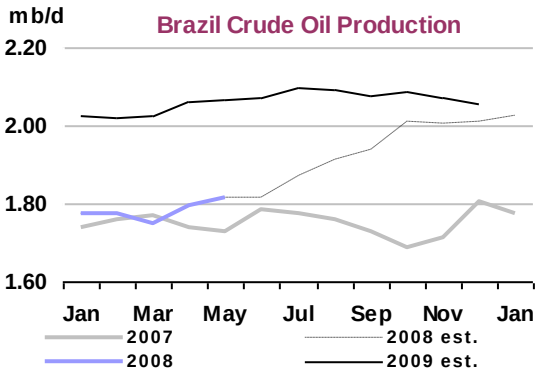
(million barrels per day)

	2006	2007	3Q2007	4Q2007	1Q2008	2Q2008	Apr 08	May 08	Jun 08	Latest month vs. May 08	Latest month vs. Jun 07
Crude											
Black Sea	2.22	2.18	2.09	2.10	1.96	2.23	2.33	2.20	2.15	-0.05	0.08
Baltic	1.55	1.59	1.58	1.61	1.41	1.54	1.56	1.55	1.50	-0.05	0.05
Arctic/FarEast	0.15	0.32	0.38	0.31	0.27	0.30	0.28	0.31	0.32	0.01	0.02
BTC	0.00	0.55	0.57	0.61	0.71	0.75	0.61	0.94	0.70	-0.24	0.06
Crude Seaborne	4.07	4.63	4.61	4.62	4.35	4.82	4.78	5.00	4.67	-0.33	0.20
Druzhba Pipeline	1.20	1.13	1.08	1.13	1.14	1.07	1.12	1.12	0.96	-0.16	-0.10
Other Routes	0.38	0.44	0.40	0.43	0.40	0.39	0.35	0.40	0.42	0.02	-0.02
Total Crude Exports	5.64	6.20	6.09	6.18	5.89	6.28	6.25	6.52	6.05	-0.47	0.08
Of Which: Transneft	4.22	4.27	4.19	4.23	3.97	4.16	4.29	4.24	3.94	-0.30	-0.07
Products											
Fuel oil	0.95	1.10	1.13	1.08	1.16	1.13	1.16	1.09	1.13	0.04	-0.04
Gasoil	0.95	0.95	1.01	0.96	1.06	0.96	1.04	0.80	1.04	0.25	0.04
Other Products	0.61	0.60	0.57	0.56	0.64	0.56	0.55	0.51	0.62	0.11	-0.10
Total Product	2.51	2.65	2.71	2.60	2.86	2.66	2.75	2.40	2.82	0.42	-0.06
Total Exports	8.16	8.85	8.80	8.78	8.75	8.93	9.00	8.93	8.87	-0.05	0.02
Imports	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.02	0.04	0.02	0.00
Net Exports	8.12	8.82	8.76	8.74	8.70	8.90	8.96	8.90	8.83	-0.07	0.01

Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

Other Non-OPEC

Brazil – May actual: Brazilian crude production should rise steadily through 2008, before stabilising close to 2.1 mb/d for 2009. Annual average crude output reaches 1.9 mb/d in 2008 (from 1.75 mb/d last year) and 2.1 mb/d in 2009. NGL supply averages close to 90 kb/d, while fuel ethanol production is expected to increase from 310 kb/d in 2007 to 360 kb/d in 2008 and 415 kb/d in 2009. Crude forecasts have been cut by 55 kb/d for 3Q08 (including the impact of now-resolved strike action affecting state producer Petrobras) and by 10 kb/d for 2009. We have also deferred start-up to 1Q09 and slowed the ramp-up of production from Chevron's Frade field in our forecast, from an earlier start assumption of late 2008.

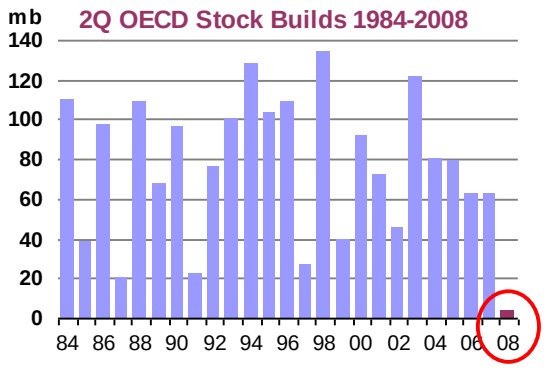


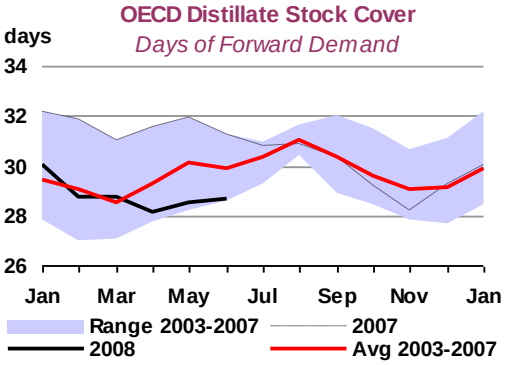
Petrobras has suggested that its huge Tupi find in the Santos Basin will begin test production in 1Q09, attaining 100 kb/d by end-2010 and an ultimate 1.0 mb/d. However, our projections exclude Tupi for 2009, after reports that Brazilian construction yards are struggling to meet Petrobras' demand for new rigs. Uncertainty over whether Brazil will change its oil law to stop offering concession arrangements, and replace these with PSAs, also casts doubt over the time lines for Tupi and adjacent field developments.

OECD STOCKS

Summary

- **OECD oil stocks fell by 15.3 mb in June to close at 2,579 mb.** This confirmed the almost total absence of the seasonal second-quarter stockbuild this year. In fact, 2Q08 stocks were essentially flat, increasing by just 3.8 mb, compared with the usual 2Q build of 81.3 mb (0.9 mb/d). Slow stockbuilding in each of the three OECD regions combined to make this the lowest total OECD 2Q stock change for over 25 years. Still, weak demand means that OECD stock cover, in days of forward demand, remains above average at 53.4 days.
- **June's OECD stock draw was driven by decreases of 5.7 mb and 10.2 mb in North American and European crude inventories, respectively**. A post-maintenance rise in refinery throughputs alongside lower crude imports contributed to draws in both regions. Gas liquids stocks in the OECD fell counter-seasonally by 4.2 mb in June.
- **OECD distillate stocks rose by 7.8 mb in June,** albeit from a downwardly revised May base. North American distillate inventories built by a healthy 7.8 mb, while European stocks were flat, resisting the usual June dip of 0.4 mb. However, Pacific distillate stocks remain very low in forward demand cover as well as absolute terms, as they are in all other Pacific product categories bar fuel oil.
- **Preliminary July data show a seasonal upturn in OECD stocks**, with a strong recovery in crude inventories of 13.5 mb (led by Europe), alongside a mild product build of 16 mb (mainly US). This would equate to total OECD oil stock cover of 54.0 days of forward demand at end-July, an increase of 0.7 days from June's closing level**.**





OECD Inventory Position at End-June and Revisions to Preliminary Data

Total OECD industry stocks closed at 2,579 mb in June. This was 81 mb below the mid-year closing stock level in 2007 and trailed the 2003-07 end-June average by 21 mb. In light of the June stock draw of 15.3 mb, OECD stock cover fell by 0.4 days of forward demand to 53.4 days, its third consecutive decrease. Still, cover remains above the five-year average of 53.1 days due to upward revisions to the base including a +7.2 mb adjustment to May stocks and a weaker OECD demand estimation.

Preliminary June data suggest that the second-quarter stockbuild amounted to a lowly 3.8 mb (or 42 kb/d). As mentioned in last month's report, an unusual draw in US crude stocks was a key limiting factor, while the erosion of the winter overhang in US gasoline was also instrumental. Even so, the absence of the seasonal stockbuild was shared fairly equally across the regions, with European and Pacific distillates also failing to rebound as expected. Admittedly, individual OECD regions have seen even slower rises in April-June oil inventories as recently as 2005 (in Europe). However, taking the OECD as a whole, our latest data show 2Q08 as the lowest second-quarter build for at least 25 years.

Preliminary Industry Stock Change in June 2008 and Second Quarter 2008

	June (preliminary) (million barrels)				June (preliminary) (million barrels per day)				Second Quarter 2008 (million barrels per day)			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**-5.7**	**-10.2**	**-1.6**	**-17.5**	**-0.19**	**-0.34**	**-0.05**	**-0.58**	**-0.16**	**-0.06**	**-0.01**	**-0.23**
Gasoline	2.1	-4.4	-2.0	-4.3	0.07	-0.15	-0.07	-0.14	-0.14	-0.10	-0.04	-0.28
Distillates	7.8	-0.4	0.4	7.8	0.26	-0.01	0.01	0.26	0.16	-0.09	0.01	0.07
Fuel Oil	1.4	-0.5	-1.5	-0.6	0.05	-0.02	-0.05	-0.02	0.03	-0.02	0.03	0.03
Other Products	5.7	0.0	-2.3	3.5	0.19	0.00	-0.08	0.12	0.34	-0.04	0.00	0.30
Total Products	**17.0**	**-5.3**	**-5.3**	**6.4**	**0.57**	**-0.18**	**-0.18**	**0.21**	**0.39**	**-0.26**	**0.00**	**0.13**
Other Oils[1]	-2.5	-0.9	-0.8	-4.2	-0.08	-0.03	-0.03	-0.14	0.08	0.03	0.03	0.14
Total Oil	**8.8**	**-16.4**	**-7.7**	**-15.3**	**0.29**	**-0.55**	**-0.26**	**-0.51**	**0.31**	**-0.28**	**0.01**	**0.04**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Looking beyond the simple aggregates, crude stocks in the US and OECD Europe were at their lowest end-June level for five years. In the OECD Pacific, they were only 1.5 mb above their lowest ever level (at April's close). In fact, end-June OECD Pacific stock cover was at the bottom or below the five-year range for all product categories except gas liquids and residual fuel. Total OECD distillate stock cover also remained at the low end of the 2003-07 range at 28.7 days, well below the five-year average of 29.9 days.

It is not all negative news for OECD inventories, though. Firstly, the weak 2Q stockbuild must be taken in context: it followed a milder-than-average first-quarter stock draw (-4.7 mb or -50 kb/d vs. the five-year average of -36.7 mb or -406 kb/d) and comes at a time of weak OECD demand. Consequently, stock cover is still above average as 2008 hits its mid-point. Secondly, there was a clear improvement in distillate stock cover in June, its shortfall versus the five-year average narrowing by 0.4 days, albeit from a downwardly revised May base. Preliminary data for July suggest that the distillate recovery (including a notable rise in jet fuel stocks) continued in OECD commercial inventories, as well as in independent product tankage in ARA and Singapore, while crude stocks rebounded ahead of July norms. More generally, our balances suggest that global oil stocks could build from this summer as new supplies are expected online. Of course, it should be remembered that non-OECD stock changes remain a critical unknown in the equation.

Revisions versus 10 July 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Apr 08	May 08	Apr 08	May 08	Apr 08	May 08	Apr 08	May 08
Crude Oil	**3.6**	**9.4**	**-0.1**	**-1.2**	**0.0**	**-5.3**	**3.4**	**2.9**
Gasoline	-0.2	-0.4	1.1	-2.6	0.2	0.1	1.1	-2.9
Distillates	-0.4	0.1	-3.9	-5.0	0.0	-0.8	-4.3	-5.8
Residual Fuel Oil	0.3	1.2	-0.1	-2.2	0.0	0.2	0.1	-0.7
Other Products	0.1	0.8	-0.6	-2.8	0.1	0.5	-0.4	-1.4
Total Products	**-0.2**	**1.8**	**-3.5**	**-12.6**	**0.2**	**0.1**	**-3.4**	**-10.8**
Other Oils[1]	0.4	6.7	2.6	8.8	0.0	-0.4	3.0	15.1
Total Oil	**3.8**	**17.8**	**-1.0**	**-5.0**	**0.2**	**-5.6**	**3.0**	**7.2**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

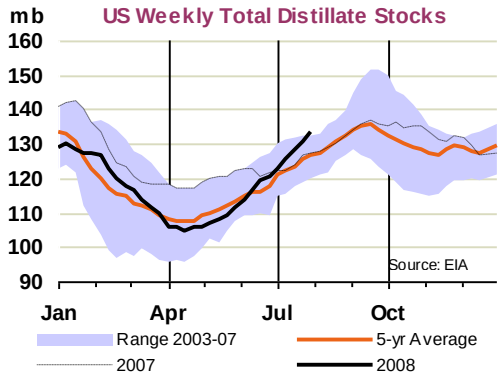
Revisions to OECD stock data totalled +7.2 mb for May and +3.0 mb for April. For May, the most significant revisions were seen for 'other oils' (essentially gas liquids), corrected up by 15.1 mb in total including 6.7 mb and 8.8 mb in North America and Europe respectively. Otherwise, North American crude stocks for April and May were adjusted upwards by 3.6 mb and 9.4 mb respectively. Corresponding European product stocks were corrected down by 3.5 mb and 12.6 mb, with the majority of the revisions in distillates. As presaged in last month's report, Japanese May crude stocks were reassessed lower by 5.3 mb.

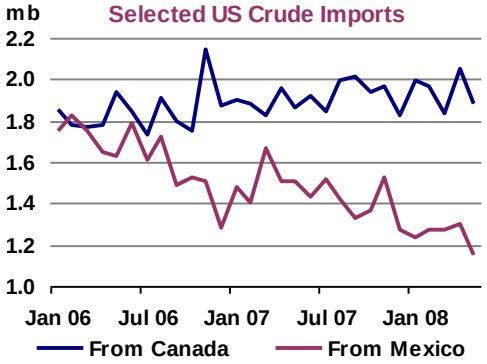
OECD Industry Stock Changes in June 2008

OECD North America

Commercial oil stocks in OECD North American countries rose by 8.8 mb in June, as a total product build of 17 mb outpaced a combined reduction in crude and gas liquids stocks of 8.2 mb. Within the seasonal product build, there were healthy June increases in all product categories in the US, and notable rises of 8.7 mb and 2.0 mb in US distillates and gasoline inventories, respectively. US gasoline stocks were boosted

by weak demand, while higher distillate inventory was a result of refiners' increasing their distillate yields in the face of a massive premium of distillate prices over gasoline. EIA weekly data indicate that distillate (and jet) stocks continued to rise throughout July, while gasoline stocks likely peaked before a late-July draw as demand stabilised. Elsewhere, a June drop in Mexican refinery activity of 170 kb/d contributed to a sizeable 1.1 mb dip in product inventory, including 0.9 mb in middle distillates.

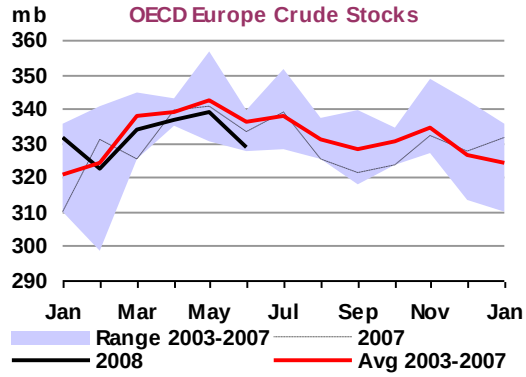


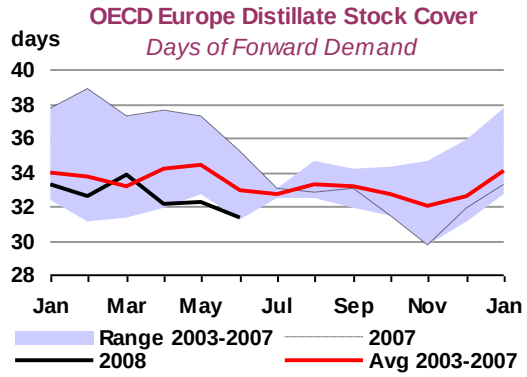


US crude stocks were off by 9.1 mb in June. As discussed in recent reports, this follows weaker imports (notably from Mexico) but could be a continued push by refiners to hold less inventory in the face of lower demand and high prices. This would release much-needed capital at a time of low refining profitability. An unseasonal June fall of 2.5 mb in US gas liquids was also observed. Weekly July data show a counter-seasonal rebound in US crude stocks, a trend which may continue with higher OPEC volumes expected to arrive in the coming weeks. The dip in Mexican throughputs afforded a crude build of 3.4 mb in June while latest Canadian data showed an upward revision to May crude stocks to a new record high of 121.6 mb, now 21 mb higher than one year ago. Accordingly, trade data show that US imports of Canadian crude and gas liquids (combined) decreased by 170 kb/d in May, compared with April.

OECD Europe

In OECD Europe, a large crude stock draw of 10.2 mb combined with a mild product draw of 5.3 mb to prompt a typical June decrease of 16.4 mb in total oil inventories. Most notable within the crude stock change were draws of 5.7 mb, 3.0 mb and 2.2 mb in France, Italy and the UK respectively. Rising refinery throughputs account for some of the dent in European crude stocks, as spring maintenance continued to wind down, alongside evidence from tanker data of lower crude imports in June.



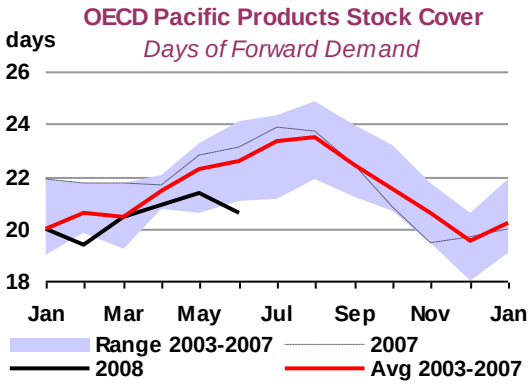


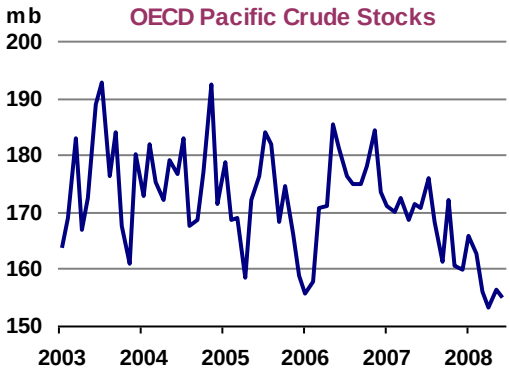
European distillate stocks remained flat in June, a month when they often fall. This slightly narrowed their deficit to the five-year average in both cover and absolute terms, after May levels were revised down by 5.0 mb. Higher refinery throughputs contributed to distillate builds of 2.6 mb in France and, preliminarily, of 1.1 mb in Denmark. ARA independent stocks, a useful indicator of marginal product trade or stock changes in the region, showed pronounced builds in gasoil and jet kerosene throughout June and July, although Euroilstock data shows a mild 2.5 mb July build. Regional motor gasoline stocks

decreased in line with seasonal expectations in June, with notable draws in the UK (-1.7 mb) and Germany (-0.8 mb), possibly related to a reduction in gasoline yields allied to faltering gasoline prices. In partial offset, French gasoline stocks rose for the second month in a row, this time by 0.3 mb, to top the five-year average for the first time in over 10 years. Preliminary July data from Euroilstock reflects a sharp 8.7 mb fall in EU-16 gasoline stocks. With signs of unfavourable export economics to the US, this likely reflects a further lowering of regional gasoline production.

OECD Pacific

OECD Pacific oil stocks fell by 7.7 mb in June, a month when they are usually building towards a late summer peak. Counter-seasonal stock draws were observed in crude, distillates and 'other products', three of the four largest regional stock categories (alongside gas liquids). Crude stocks fell counter-seasonally by 1.6 mb in June from a May base which was itself revised downwards by 5.3 mb. The May revision included a -4.7 mb correction in Japanese crude stocks, the potential for which was flagged in last month's report and the submission of new data from Australia and New Zealand, which in both cases recorded unseasonal May crude draws. In June, Japanese crude imports fell sharply, by almost 600 kb/d, which overshadowed a dip of 160 kb/d in refinery throughputs, prompting a draw in crude stocks of 4.6 mb (provisionally). OECD Pacific refinery throughputs generally hit their low point for the year in June and, accordingly, Korean crude runs were down by 240 kb/d on the month. A 200 kb/d drop in June crude imports contributed to a build of 3.0 mb in Korean crude inventories. More positively, weekly Japanese data indicate a 5.1 mb build in crude stocks in July, despite a sharp seasonal uptick in refinery throughputs.

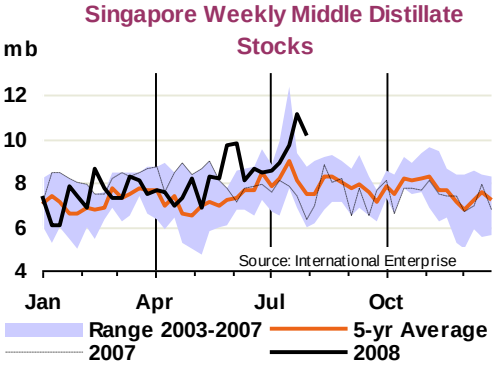




OECD Pacific product stocks decreased counter-seasonally by 5.3 mb in June to 164.4 mb, or almost 16 mb below the five-year average. Pacific product stocks usually build in the second quarter as post-winter demand drops. However, a very marginal June build of 0.4 mb mean that distillate stocks were basically flat between end-February and end-June at around 58 mb. Meanwhile, June drops in both motor gasoline and 'other products' inventories eroded a large part of the stockbuilds seen in these categories earlier in the year. Rising naphtha prices in June may have curbed imports and hence contributed to a monthly stock draw of 2.3 mb in 'other products', with petrochemical throughputs reportedly strengthening. May data for Australia showed a 0.9 mb dip in distillate stocks, confirming the shortages they had at the time, due to a natural gas plant outage.

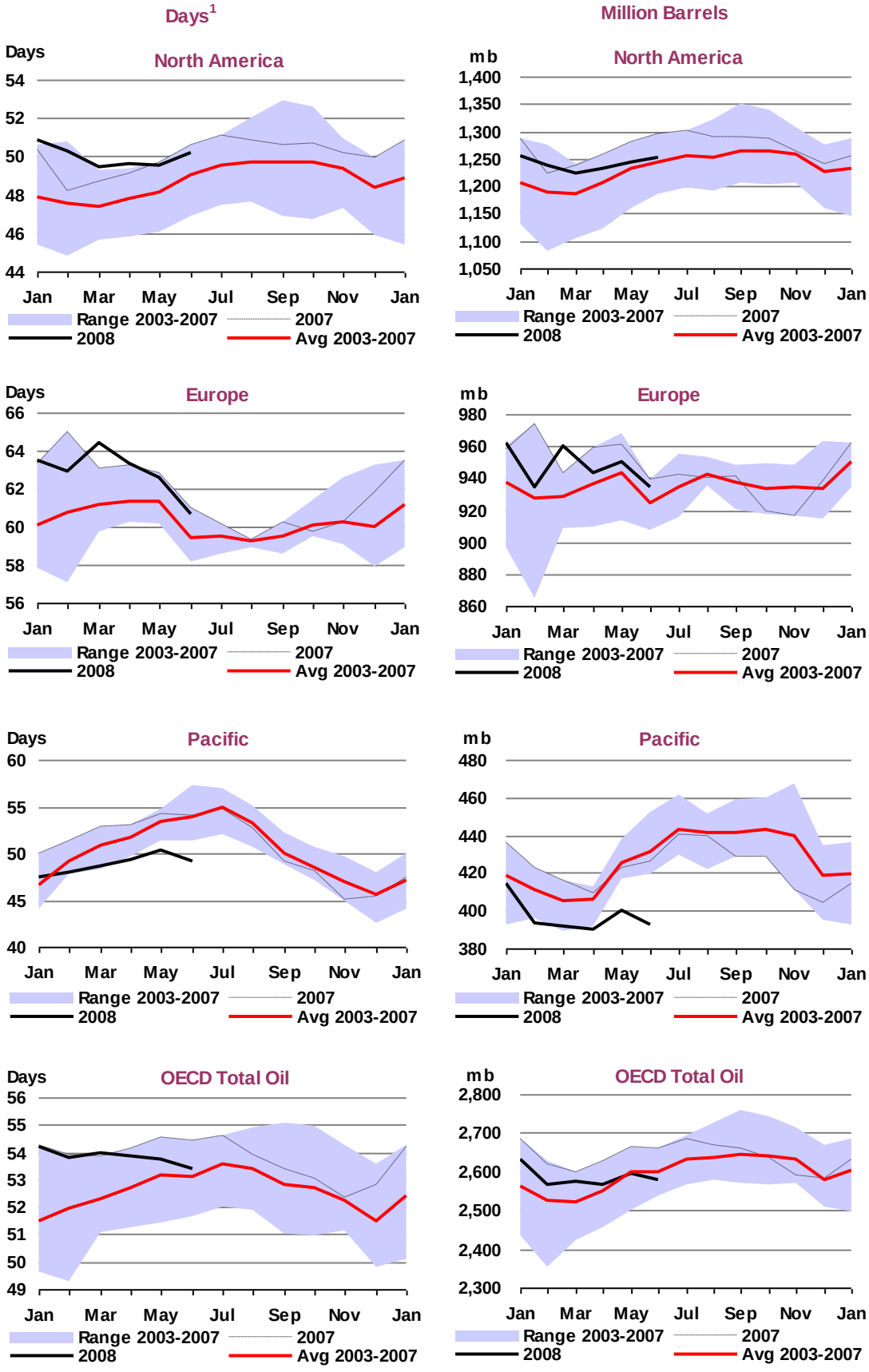
Recent Developments in Singapore Stocks

In July, there was a 1.6 mb increase in middle distillate stocks held independently in Singapore. This followed higher Pacific refinery throughputs, including extremely high Chinese runs and a recovery from peak maintenance in Japan, potentially boosting regional light product supplies. Residual fuel oil inventories fell by 2.4 mb following a tightening in local fuel oil markets and higher freight costs possibly acting as a constraint on long-haul imports.



Regional OECD End-of-Month Industry Stocks

(in days of forward demand and millions barrels of total oil)



1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

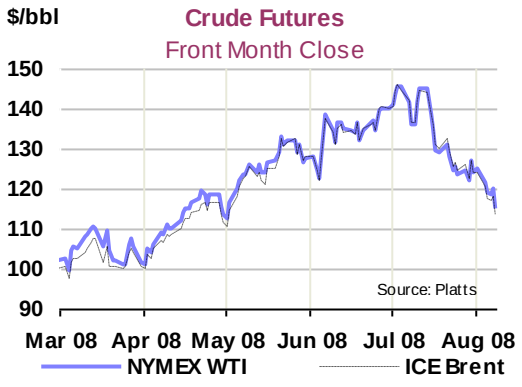
- **Oil prices fell sharply in the latter half of July and early August** on easing fundamentals and against the background of a general downturn in many other commodities, including natural gas. Crude futures were down around $30/bbl or 20% since all-time highs reached in early July, as OPEC increased supply, demand in the OECD weakened and the first seasonal US Gulf hurricanes passed without anything more than precautionary shut-ins.

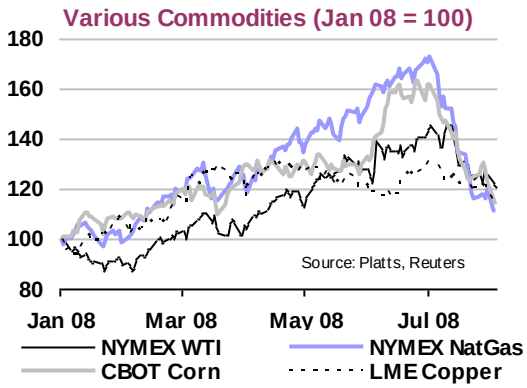
- **Spot crude prices fell on below-average OECD throughputs**, as refining margins remained weak. Light/heavy differentials narrowed on fuel oil's relative gains. At the time of writing, neither the shut-in of the Baku-Tblisi-Ceyhan (BTC) pipeline, nor military clashes in the Caucasus had affected prices.

- **Refining margins were mostly down in July**, with cracking and coking margins weakened by already-low gasoline and falling distillate cracks respectively. Hydroskimming margins in simple refineries, however, benefited from fuel oil's recovery, but remain negative.

- **Product prices mostly fell in absolute terms in July and early August**, as did crack spreads. Fuel oil discounts narrowed, but were more than offset by lower distillate and still-weak gasoline cracks. Long-time fuel oil weakness has forced refineries to invest in upgrading which, in combination with reduced Middle Eastern exports on lower local demand, is tightening fundamentals.

- **West African Suezmax rates joined Middle East Gulf VLCC rates at historically high levels** in mid-July, as higher OPEC exports boosted dirty vessel demand. However, crude tanker rates corrected down dramatically in the final week of the month on reports of improved vessel supply. Weak US gasoline demand undermined transatlantic clean tanker rates in July, while Asian clean rates rose on more attractive eastbound naphtha trade economics.

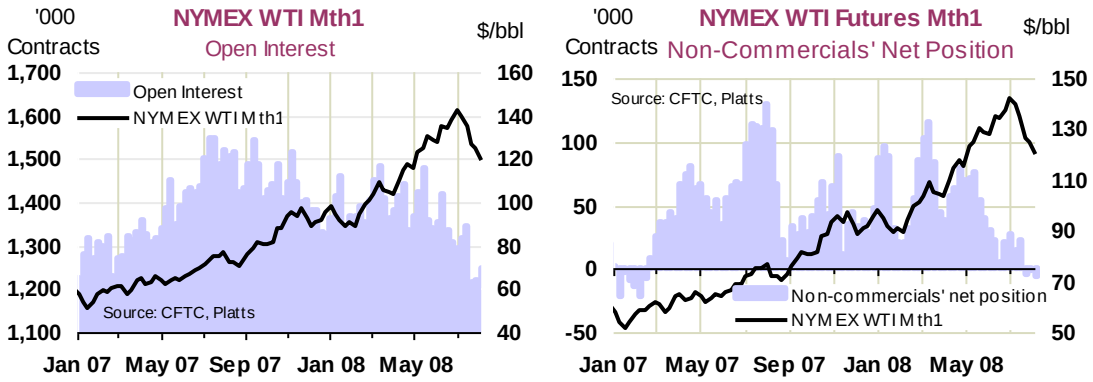




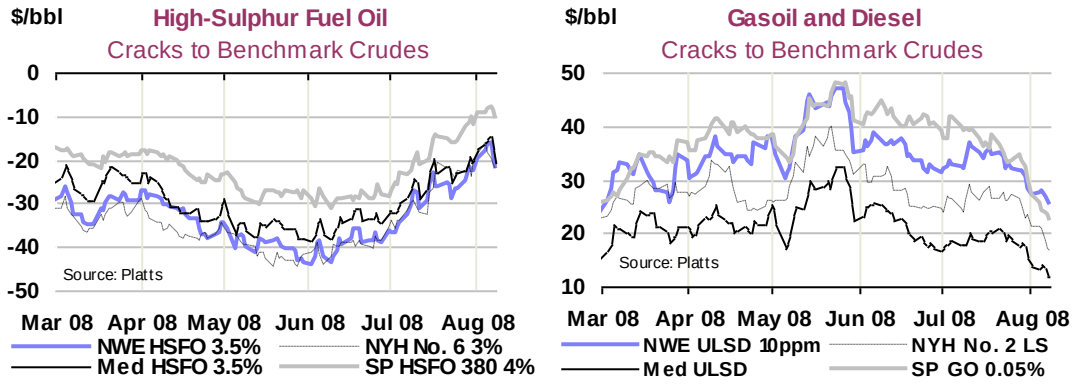
Overview

Oil prices fell from a mid-July peak to three-month lows in early August as fundamentals eased. Crude futures dipped below $115/bbl in early August, after hitting $147 in trading on 11 July, a fall of around 20% or more than $30/bbl. Higher OPEC production, weak OECD demand, a rise in stocks and – so far – the absence of any substantial weather-related shut-ins in the US Gulf have contributed to bring down crude. Moreover, peak summer refinery throughputs, a shift in yields towards distillate maximisation and slower demand in key areas have combined to ease the previously very tight distillate market. Lastly, the decline in oil prices comes against a background of weaker energy and commodity prices in general (see *Gas and Crude Prices – Correlation or Causality?*).

As foreseen in previous reports and in the *Medium-Term Oil Market Report*, fundamentals have eased. While it may be too early to identify a sea change (see page 4), commodity markets in general appear to be reacting to high prices and many price indices are down. Besides oil and gas, other commodities such as corn, wheat, copper and gold have all fallen in recent weeks. These declines have also come at the same time as a strengthening of the dollar. While the Jefferies/Reuters CRB index lost 10% in July, its sharpest fall since March 1980, total open interest in WTI on the NYMEX has continued its decline, while non-commercials have recently gone net-short for the first time since February last year.



In terms of oil fundamentals, crude and product supply tightness has eased. OPEC pumped an additional 145 kb/d in July, with Saudi Arabia seemingly following up on earlier pledges to raise supply. After total OECD stocks failed to match their usual build in the second quarter, preliminary data for July show a higher-than-normal build of around 30 mb. In product markets, the distillate tightness that has been a pillar of support of high oil prices this year has now begun to loosen, as demand from key sources weakens and the global refinery system has ramped up output. Conversely, fuel oil cracks have recovered strongly due to tighter fundamentals, which may however, if sustained, have the positive effect of strengthening refining margins, thus encouraging higher throughputs and greater product availability.



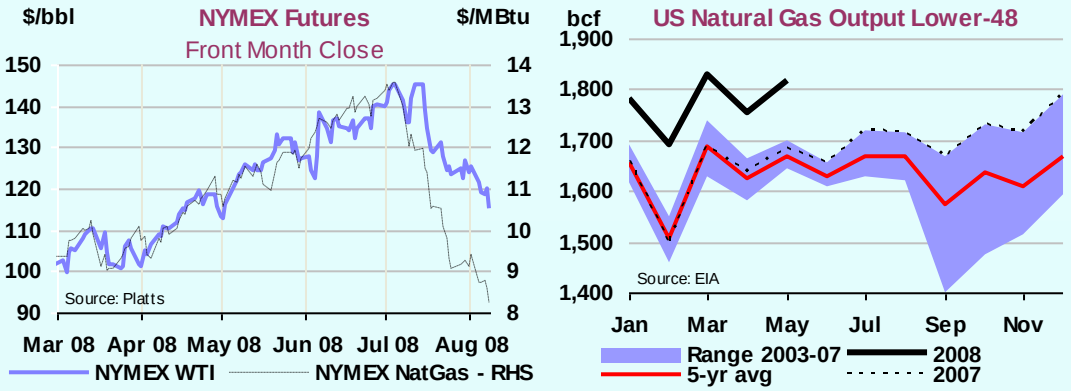
On the demand side, the slowdown in demand related to the general economic downturn and high oil prices is becoming increasingly evident – at least in the OECD and predominantly in the US. Consumers clearly are reacting by a change in behaviour as evidenced by less driving, shorter and more local holidays, different consumption patterns, etc. For instance, the US Federal Highway Administration reported in late July nearly 38 billion fewer vehicle-miles travelled (VMT) in May year-on-year, the third-largest monthly drop ever. May is considered the start of the peak summer driving season, when traffic rises due to the Memorial Day holiday and the subsequent holiday period.

Gas and Crude Prices – Correlation or Causality?

Oil prices' decline since early July may be seen against the background of a wider energy and commodity downturn. Indeed, US NYMEX natural gas futures have fallen by around 35% since 4 July, to around $8.5/MBtu currently. WTI and gas had tracked each other since the beginning of the year, but since early July gas started declining earlier and more steeply than oil (on an energy basis, gas remains considerably cheaper). While most would argue that oil and gas prices are linked in some way, this begs the question whether the decline in oil prices in this case was partly caused by gas.

US gas prices have arguably fallen on a significant increase in domestic gas production. Production in the US Lower-48 started to rise in 2007, culminating in a surge in output at the beginning of this year. Year-to-date, production has increased nearly 9% year-on-year, to over 1,800 bcf. This rebound – stimulated in part by high oil and gas prices – followed a long period of stagnation since the turn of the decade. In addition, production is forecast to continue to grow if demand and high oil prices are sustained, albeit not at the same pace.

Moreover, gas prices fell despite an increase in demand for air conditioning in the US and the precautionary, but temporary shutdown of the Independence Hub in the US Gulf due to Hurricane Dolly, the latter taking about 25 mcm/day of production off the market. In addition, total US Lower-48 gas in storage is very much in line with its five-year average level.



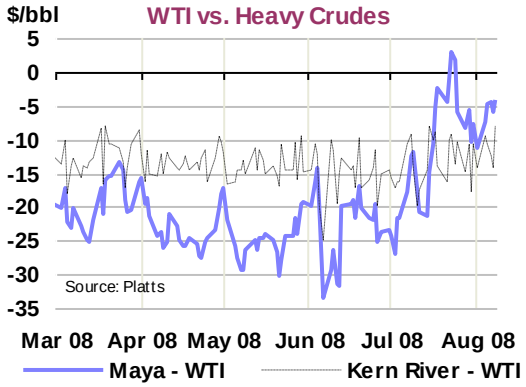
The most obvious physical link between oil and gas prices is in the realm of competition as feedstock for power generation. An increasing number of power stations, especially in the US, have the ability to choose between the two, depending upon price and logistics (fuel substitution). The growth in volumes in the liquefied natural gas (LNG) market and gas's increasing physical liquidity mean that for the first time, a *quasi-global* market for gas is emerging. Already, some Atlantic Basin and Middle Eastern producers can choose between sending cargoes to the US, Europe or East Asia – or even change direction mid-journey if the economics make sense.

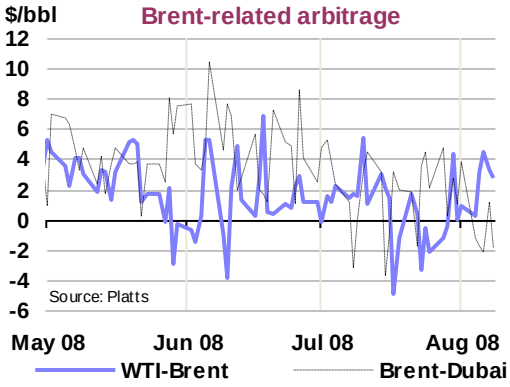
But increasing volumes of gas on the global market would – according to this logic – imply weaker fuel oil prices, which is not what we are seeing (albeit many power stations increasingly prefer to run distillates as an alternative to gas). Quite the opposite; since early July, fuel oil prices have to some extent bucked the downward trend compared with crude and light and middle distillates, though for low-sulphur product this is less true in the US than in other markets.

Thus the link between oil and gas appears tenuous in this case. There may be a time lag: when any excess LNG volumes get redirected towards Asia – arguably now the tightest market in terms of fuel oil – we may begin to see a widening of fuel oil discounts again. While record price falls suggest more correlation than causality, further work and data visibility is needed to understand substitution trends.

This feature benefited from input by the IEA's Energy Diversification Division. For more background and analysis, see the forthcoming IEA Natural Gas Market Review 2008*, to be published in September.*

A flurry of geopolitical and weather-related news may have lent some support to oil prices, but could not prevent the broad downward slide. On 5 August, the 1 mb/d Baku-Tblisi-Ceyhan (BTC) pipeline was set on fire – reportedly by Kurdish insurgents – which led to its complete shutdown (see *Damage to the Baku-Tblisi-Ceyhan Pipeline* on page 25). At the time of writing, it was unclear how long repairs might take, but reportedly, loadings of Azeri Light crude from the Turkish port of Ceyhan had stopped completely. In addition, a flare-up in fighting in Georgia raised concerned about Caspian export supplies (see *Risks to Energy Transit Facilities as Military Action Escalates in Georgia* on page 26). In early August, Tropical Storm Edouard briefly forced the shut-in of some US Gulf oil facilities, but ultimately had little impact on operations and prices. However, it and previous Hurricanes Bertha and Dolly were a reminder that the autumn hurricane season's peak is yet to come. The US National Oceanic and Atmospheric Administration (NOAA) recently predicted a more active 2008 season than previously envisaged, now forecasting seven to 10 hurricanes, of which three to six may be classified as 'major'.

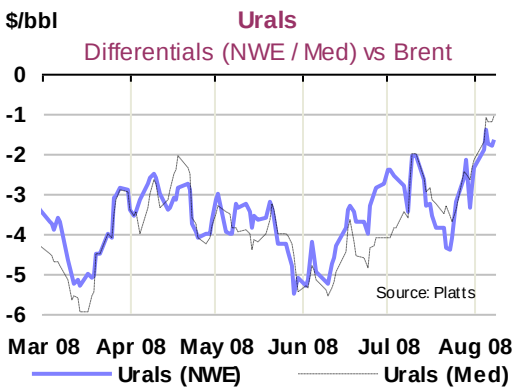


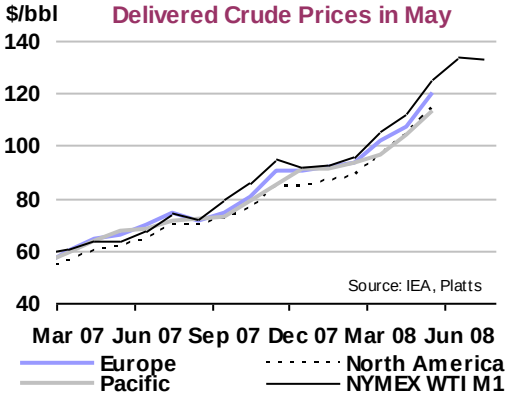


In other geopolitical developments, Nigerian infrastructure experienced further attacks, but nonetheless actually increased production slightly in July. The partial curtailment of Russian Druzhba supplies to the Czech Republic looked to be short-lived, with flows assumed to return to normal in August. Meanwhile, Libyan threats to halt crude exports to Switzerland have apparently not resulted in reduced flows. A strike by Petrobras workers in Brazil briefly shut-in some production, but a larger industrial action threatened for August was avoided. The crisis over Iran's alleged nuclear activities is however ongoing and more sanctions against it are being considered.

Spot Crude Oil Prices

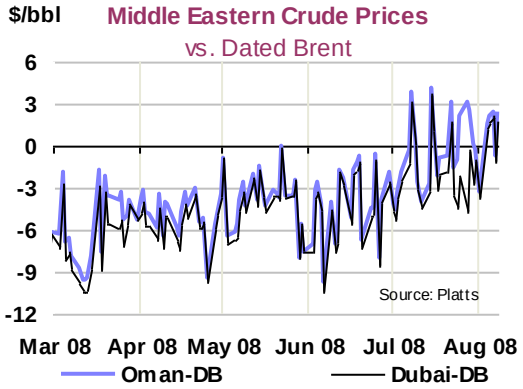
Spot crudes declined in line with futures, with supplies slightly higher and below-average OECD refinery throughputs crimping crude demand. Total OECD crude stocks fell further in June, remaining below their five-year average, but preliminary numbers for July saw a crude build of around 13.5 mb. Meanwhile, distillates' relative price decline, even as fuel oil discounts contract, is narrowing light/heavy differentials by boosting fuel oil-rich crude grades.

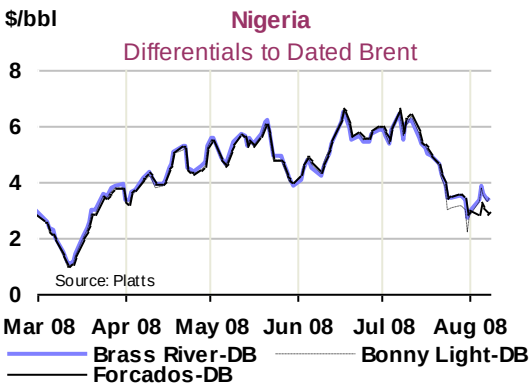




In the **US**, where cracking margins are especially weak, light sweet crudes came under particular pressure given lower gasoline and distillate crack spreads. Hence, Gulf Coast sour benchmark Mars improved against LLS and, to a lesser extent, against WTI. Heavy sour Maya also moved from a strong discount to WTI to – unusually – a brief premium, though this is also related to lower Maya production in Mexico. US refiners appear to have shown less interest in West African and other Atlantic Basin crudes, with arbitrage spreads a disincentive. Stellar dirty freight rates also contributed, limiting the transatlantic flow.

In **Europe**, Dated Brent moved to a premium to WTI in mid-July, though this was short-lived and possibly more related to the unusual, counter-seasonal distillate premium and thus relatively stronger interest in Brent (while, as argued above, US refiners currently prefer medium and heavy sours). At the time of writing, the BTC pipeline outage had not noticeably affected the price of Azeri Light despite the reported halt to exports from Ceyhan. But medium-sour Urals had seen its discount to Brent narrow to the lowest in the past year, shored up by stronger fuel oil. Additional support came from lower Kirkuk availability in the Mediterranean and lower Forties output in the North Sea in July.





In **Asia**, marker grades Dubai and Oman were both strengthened *vis-à-vis* Brent by stronger fuel oil. Dubai lost around $5/bbl less than Brent since highs reached in early/mid-July. Regarding light sweet imports, Asian refiners were reportedly seeking 1.4 mb/d of West African crude for August loading, the highest in over a year. Nigerian premia to Brent have fallen, partly due to lower US interest on weaker gasoline and diesel cracks. A narrower Brent/Dubai spread and Malaysian Tapis soaring to a near $20/bbl premium to Brent in mid-July both assisted the flow of Atlantic Basin crude towards the east.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, $/bbl)

	May	Jun	Jul	Jul-Jun Avg Change	%	Week Commencing: 07 Jul	14 Jul	21 Jul	28 Jul	04 Aug
Crudes										
Dated Brent	122.73	132.44	133.18	0.75	0.6	137.58	135.23	126.68	123.87	116.85
Brent (Asia) Mth1 adjusted	124.03	132.90	135.29	2.38	1.8	141.26	138.16	127.99	124.16	119.70
WTI (Cushing) Mth1 adjusted	125.38	133.93	133.30	-0.64	-0.5	139.78	135.30	125.88	124.58	119.61
Urals (Mediterranean)	118.78	127.73	130.06	2.33	1.8	134.84	132.26	123.19	121.43	115.55
Dubai Mth1 adjusted	119.50	127.82	131.27	3.46	2.7	136.47	134.51	124.68	121.39	117.85
Tapis (Dated)	131.15	140.71	144.66	3.96	2.8	148.67	149.79	138.65	134.29	129.23
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	2.66	1.50	0.11	-1.38		2.20	0.07	-0.80	0.71	2.76
Urals (Mediterranean)	-3.94	-4.71	-3.12	1.58		-2.74	-2.97	-3.48	-2.43	-1.30
Dubai Mth1 adjusted - Dated Brent	-3.23	-4.62	-1.91	2.71		-1.10	-0.72	-2.00	-2.48	1.00
Tapis (Dated)	8.43	8.27	11.48	3.21		11.10	14.56	11.98	10.43	12.38
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	-0.60	-0.91	-0.87	0.03		-0.84	-1.23	-0.84	-0.90	-1.24
Forward WTI Cushing Mth1-Mth2 adj	0.08	-0.53	-0.65	-0.12		-0.66	-0.69	-0.78	-0.47	0.01

Source: Platts

Refining Margins

Cracking margins remain low and on average fell in July month-on-month due to a decline in distillate cracks, while gasoline spreads remained weak. This remains especially true in the US, where cracking Brent or Bonny Light on the Gulf Coast remains unprofitable (based on full-cost calculations) – not least due to high freight rates. However, by early August, US cracking margins had picked up due to some improvement in gasoline prices. Conversely, coking margins were not improved by fuel oil's gains, as long as gasoline remains weak.

The more unusual development was the increase in hydroskimming margins on the back of a sharp narrowing of fuel oil's discount to crude. Thus in Europe, Brent and Urals hydroskimming rose around $1-2/bbl in July, though margins remain negative due to sliding distillate and still-weak gasoline cracks. In Asia, Dubai hydroskimming also improved by $1.50/bbl. Tapis margins meanwhile – both in simple and more complex refineries – fell sharply in July and early August, due to the crude grade's strength. Tapis hydrocracking was especially low, falling to -$5.62/bbl on average in July and even further in early August.

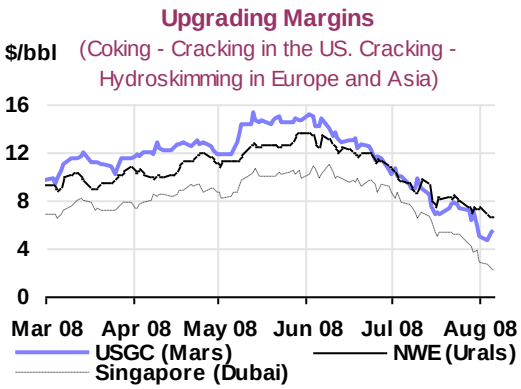
Selected Refining Margins in Major Refining Centres

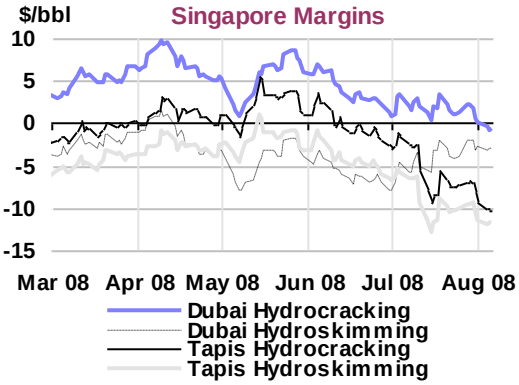
($/bbl)

		Monthly Average			Change	Average for week ending:				
		May 08	Jun 08	Jul 08	Jul 08-Jun 08	09 Jul	16 Jul	23 Jul	30 Jul	06 Aug
NW Europe	Brent (Cracking)	6.55	4.47	3.11	-1.36	2.93	4.04	3.35	2.64	3.48
	Urals (Cracking)	7.17	5.16	3.83	-1.32	2.67	4.22	5.64	4.04	3.98
	Brent (Hydroskimming)	-1.61	-3.72	-2.51	1.21	-2.57	-1.87	-2.30	-2.60	-1.85
	Urals (Hydroskimming)	-5.20	-7.08	-4.79	2.29	-6.71	-4.50	-2.64	-3.58	-3.05
Mediterranean	Es Sider (Cracking)	8.33	7.29	3.92	-3.38	4.48	4.51	3.99	2.57	3.09
	Urals (Cracking)	7.75	6.76	4.44	-2.32	4.44	4.88	5.06	3.89	3.85
	Es Sider (Hydroskimming)	-0.69	-1.62	-2.20	-0.57	-1.44	-2.04	-2.19	-3.05	-2.42
	Urals (Hydroskimming)	-5.88	-6.74	-5.36	1.38	-6.15	-5.20	-4.37	-4.75	-3.96
US Gulf Coast	Bonny (Cracking)	-0.15	-2.91	-5.01	-2.10	-5.98	-3.51	-6.19	-3.78	-2.13
	Brent (Cracking)	0.56	-1.56	-4.61	-3.05	-4.12	-1.97	-6.59	-5.30	-1.66
	LLS (Cracking)	4.02	1.53	0.48	-1.05	-1.14	0.46	1.08	2.11	1.84
	Mars (Cracking)	-4.29	-5.57	-4.22	1.36	-6.70	-4.31	-2.92	-1.96	-0.16
	Mars (Coking)	9.73	7.49	3.97	-3.52	2.75	4.04	4.46	5.17	5.12
	Maya (Coking)	15.94	11.63	2.15	-9.48	2.81	1.98	1.08	2.08	2.01
US West Coast	ANS (Cracking)	-3.22	-0.65	-4.29	-3.65	-8.47	-6.86	-2.04	0.88	2.78
	Kern (Cracking)	-1.82	4.31	4.71	0.40	-2.65	1.46	7.58	13.16	14.91
	Oman (Cracking)	-3.05	-0.94	-9.06	-8.12	-12.35	-9.12	-8.78	-6.49	-1.27
	Kern (Coking)	16.67	20.35	8.39	-11.97	6.71	7.57	6.94	11.65	11.16
Singapore	Dubai (Hydroskimming)	-4.45	-5.76	-4.26	1.50	-5.25	-4.61	-3.26	-2.84	-3.00
	Tapis (Hydroskimming)	-1.87	-4.04	-8.97	-4.93	-6.17	-10.34	-10.21	-9.79	-11.47
	Dubai (Hydrocracking)	5.29	4.06	1.81	-2.25	2.48	1.75	1.96	1.65	-0.25
	Tapis (Hydrocracking)	2.24	0.02	-5.62	-5.64	-2.13	-6.76	-7.12	-7.12	-9.60
China	Cabinda (Hydroskimming)	-1.99	-1.80	-2.83	-1.02	-2.07	-3.10	-1.83	-3.10	-1.76
	Daqing (Hydroskimming)	-2.23	-2.83	-5.26	-2.43	-5.53	-5.95	-4.80	-4.57	-5.24
	Dubai (Hydroskimming)	-5.87	-7.12	-5.75	1.37	-6.82	-6.10	-4.77	-4.23	-3.66
	Daqing (Hydrocracking)	1.78	1.19	-2.29	-3.48	-1.78	-2.70	-2.25	-2.43	-3.43
	Dubai (Hydrocracking)	3.88	2.70	0.33	-2.37	0.94	0.26	0.45	0.28	-0.90

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimised for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

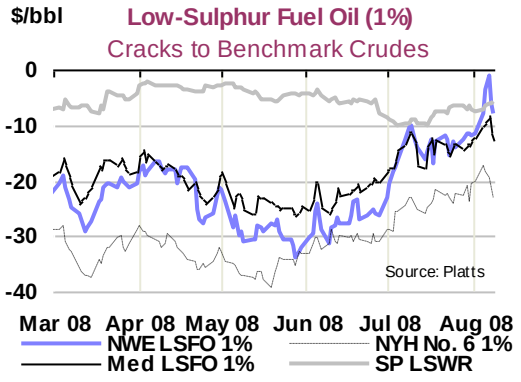
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.
Sources: IEA, Purvin & Gertz Inc.

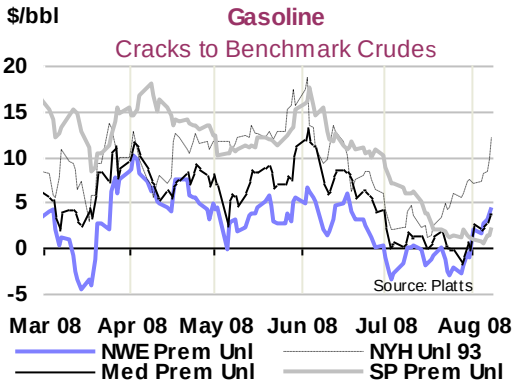




Spot Product Prices

On average in July, **fuel oil** was the only product for which prices increased. Against a background of sliding distillate and still-weak gasoline crack spreads, fuel oil's discount to crude has narrowed substantially in all regions, both for high and low-sulphur product. This appears to be largely due to tightening fuel oil fundamentals. Structurally, many refineries have been forced to upgrade in order to remain profitable, as fuel oil discounts have in many cases been prohibitive in recent years. Meanwhile, a hot summer is raising utility demand in the Middle East, halting Saudi fuel oil export volumes entirely – a key source for Asia. Iran is expected to curb exports later in the year due to extensive refinery maintenance and strong demand. South Korea has also cut August fuel oil exports by around 15% on higher domestic refinery use. Asia, the key fuel oil market, is expected to see August imports around only 2 million tonnes, some 30% lower year-on-year, also hampered by strong dirty freight rates in most of July. High shipping demand has also boosted bunker needs, while in Japan, key nuclear power stations will likely stay shut-down for longer than expected.





Middle distillate cracks – which have been a key pillar of support for oil prices in general so far this year – fell in July and early August, as refinery throughputs reached seasonal peaks and efforts to maximise distillate yields have borne some fruit. Russia, which has recently started up a new, dedicated pipeline to Primorsk on the Baltic Sea, is expected to export 200,000 tonnes (~48 kb/d) of 10 ppm ultra-low-sulphur diesel in August, up from 85,000 tonnes in July. Moreover, key centres of recent additional demand are seeing some relaxation. China is reportedly expected to cut August diesel imports to around 120 kb/d, from 240 kb/d in June and 200 kb/d in July. Many had surmised that China has been stockpiling diesel and other products ahead of the Olympic Games, though insufficient data prevent a conclusive answer on this. Elsewhere, Chile, which has imported around 165 kb/d of diesel for additional power generation in the first half of 2008, hopes to slash this volume to around 40 kb/d in the latter half of the year, as heavy rains have boosted hydropower. In Australia, the Varanus gas plant is gradually coming back on line, implying that diminishing volumes of diesel imported for power generation are likely needed.

Spot Product Prices

(monthly and weekly averages, $/bbl)

	May	Jun	Jul	Jul-Jun		Week Commencing:					May	Jun	Jul
				Change	%	07 Jul	14 Jul	21 Jul	28 Jul	04 Aug			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	126.79	135.89	131.71	-4.18	-3.1	137.16	134.04	124.89	122.93	119.63	4.07	3.45	-1.47
Naphtha	109.15	120.79	119.73	-1.06	-0.9	125.03	121.76	112.47	110.94	107.02	-13.58	-11.64	-13.45
Jet/Kerosene	164.40	166.97	169.91	2.95	1.8	173.67	173.19	163.68	157.72	146.84	41.67	34.53	36.73
ULSD 10ppm	163.67	167.62	166.43	-1.19	-0.7	171.74	170.17	160.00	153.69	143.98	40.95	35.19	33.25
Gasoil .1%	158.88	163.81	163.78	-0.03	0.0	168.80	167.13	157.34	151.80	142.00	36.16	31.38	30.60
LSFO 1%	93.94	105.73	119.19	13.46	12.7	125.49	120.52	113.23	112.08	112.22	-28.79	-26.70	-13.99
HSFO 3.5%	83.75	93.30	105.11	11.81	12.7	107.85	109.26	100.12	101.69	99.60	-38.98	-39.13	-28.07
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	126.63	135.57	130.57	-5.00	-3.7	135.88	132.97	123.55	121.56	118.32	7.84	7.84	0.51
Naphtha	108.00	119.01	118.95	-0.06	0.0	124.09	121.31	111.87	110.49	106.56	-10.79	-8.72	-11.11
Jet Aviation fuel	160.28	163.36	168.61	5.25	3.2	173.28	171.77	161.66	156.83	145.52	41.50	35.63	38.55
Gasoil .2%	157.40	161.07	161.41	0.34	0.2	167.09	165.11	154.20	149.91	141.31	38.61	33.34	31.35
LSFO 1%	95.13	105.81	115.78	9.97	9.4	121.53	117.93	109.10	108.21	105.70	-23.65	-21.92	-14.27
HSFO 3.5%	83.89	93.50	105.28	11.79	12.6	108.28	109.39	100.12	101.54	99.64	-34.89	-34.23	-24.77
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	138.22	144.33	137.15	-7.17	-5.0	143.14	137.27	130.47	131.23	127.98	12.84	10.39	3.86
Unleaded	130.09	138.20	132.15	-6.05	-4.4	138.54	132.75	125.27	125.61	121.90	4.71	4.27	-1.14
Jet/Kerosene	158.45	164.72	166.05	1.33	0.8	174.72	169.06	157.89	152.96	142.06	33.07	30.79	32.75
No. 2 (Heating Oil)	151.66	159.53	157.78	-1.75	-1.1	164.69	160.55	150.75	145.87	136.28	26.28	25.60	24.49
LSFO 1%	89.70	103.23	109.42	6.18	6.0	115.77	111.39	102.98	103.07	100.46	-35.68	-30.70	-23.88
No. 6 3%	84.50	94.25	106.45	12.20	12.9	108.88	109.34	103.16	103.08	100.80	-40.88	-39.68	-26.84
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	131.13	140.30	135.27	-5.03	-3.6	142.63	137.93	126.19	122.77	118.89	11.64	12.48	4.00
Naphtha	113.69	125.25	125.46	0.21	0.2	130.42	127.74	118.51	116.04	111.11	-5.80	-2.57	-5.81
Jet/Kerosene	159.58	164.88	167.28	2.40	1.5	172.98	170.93	160.01	154.07	144.07	40.08	37.07	36.01
Gasoil .5%	158.62	166.45	165.97	-0.48	-0.3	173.75	169.55	157.20	151.18	139.70	39.13	38.63	34.70
LSWR Cracked	115.18	122.22	122.91	0.69	0.6	127.04	125.63	117.65	114.36	111.33	-4.32	-5.59	-8.36
HSFO 180 CST	94.35	99.50	112.92	13.42	13.5	115.37	117.60	108.59	109.77	107.92	-25.15	-28.32	-18.35
HSFO 380 CST 4%	91.85	99.14	113.26	14.12	14.2	115.42	117.72	108.95	110.47	109.43	-27.65	-28.68	-18.01

Source: Platts

Gasoline crack spreads to benchmark crudes remain weak, but saw some improvement in the latter half of July and early August. Demand in the key US market is still weak, with below-average summer driving. However, New York Harbor cracks picked up again slightly from mid-July as stocks fell. US refiners have reacted to unseasonably weak gasoline cracks by maximising distillate yields, but despite two weekly US stock draws, total gasoline stocks remain at the top end of the range in absolute and forward demand cover terms. Relative economics curbed the usual transatlantic arbitrage flow in July, as evidenced in declining clean freight rates. European and Asian gasoline cracks remain subdued.

End-User Product Prices in July

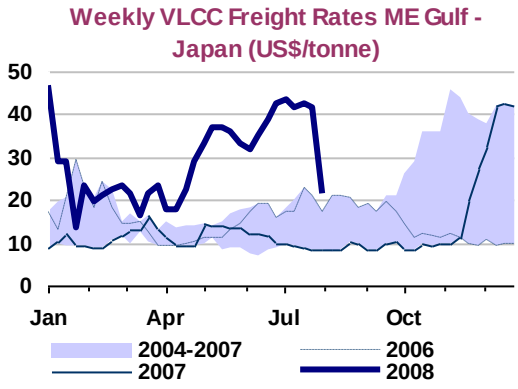
End-user product prices on average rose 3.5% in July month-on-month in surveyed IEA countries – in US dollars, ex-tax. This was mainly driven by a 13.5% surge in low-sulphur fuel oil prices. In comparison, retail transport fuel prices on average rose 1.8%, in US dollars, ex-tax, with the highest increases in Japan, where gasoline and diesel prices grew up by 6.3% and 7.0%, respectively. In July, consumers in the US on average paid $1.075/litre ($4.11/gallon), in Japan $1.681/litre (¥182/litre) and in Europe from $1.948/litre in Spain (€1.248/ litre) to $2.453/litre in Italy (€1.571/litre). Heating oil retail prices on average rose by 1.9%, in US dollars, ex-tax. Compared with July 2007, retail prices are now approximately 70% higher than a year ago with the largest increases in low-sulphur fuel oil (89%), heating oil (81%) and diesel prices (74%). Gasoline prices rose by 46% since July 2007.

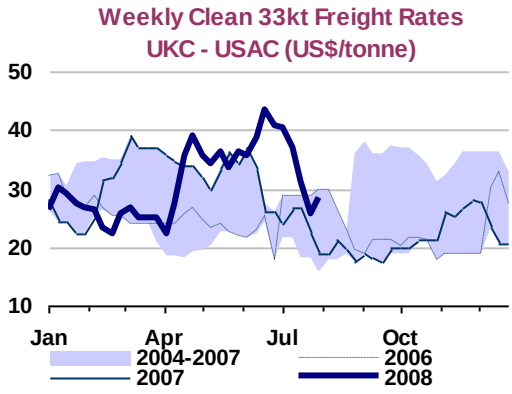
Freight

VLCC charter rates stood firm at historically high levels for most of July before plummeting at the end of the month. A late-July downward correction also reduced Suezmax rates from a mid-month spike which had broached record levels. Transatlantic clean rates dropped in July as New York gasoline prices fell relative to those in Rotterdam while Asian clean rates firmed on higher eastbound naphtha volumes.

VLCC rates on the benchmark routes from the Middle East Gulf to Japan remained above $40/tonne for most of July, extending the unseasonably firm run in VLCC rates to a third month. High levels of oil in transit on long-haul routes, a result of apparent increases in OPEC production, pushed rates very close to the record highs of $45/tonne witnessed in late 2004. At the same time, Middle East Gulf tanker supply remained subject to the constraint of eight Iranian VLCCs still apparently storing crude offshore at end-July. However, the final week of July witnessed a dramatic halving of VLCC rates (on the same MEG-Japan route) to $21/tonne. While reports emerged of increases in prompt tonnage, this could have also marked a sudden lull in demand after the initial tranche of extra OPEC exports. Approaching autumn refinery maintenance may lead to a more sustained easing in tanker demand and, by extension, VLCC rates. Downside potential in crude-in-transit levels in the third quarter was supported by last week's stories of refiners refusing extra crude cargoes offered by the UAE prior to the onset of field maintenance.

Suezmax rates from West Africa to the US Atlantic coast surged to record highs of almost $50/tonne in mid-July, a rise of $20/tonne from the start of the month. Suezmax demand was boosted by an overspill from the buoyant VLCC sector. Demand from Asia was also supportive, but low US cracking margins and high early-month Bonny premiums to Brent kept transatlantic arbitrage economics unfavourable, in theory. China increased monthly purchases of West African crude for August loading to 675 kb/d, while Indian buying of cargoes in July and August was also high. The logistical flexibility of Suezmaxes (they can load and discharge at a much wider variety of terminals compared with VLCCs) may have been another factor supportive of demand, in the face of disrupted Nigerian loadings and the threat of hurricanes in the US Gulf. Suezmax rates also declined steeply in late-July, potentially linked to improved Atlantic Basin vessel availability.





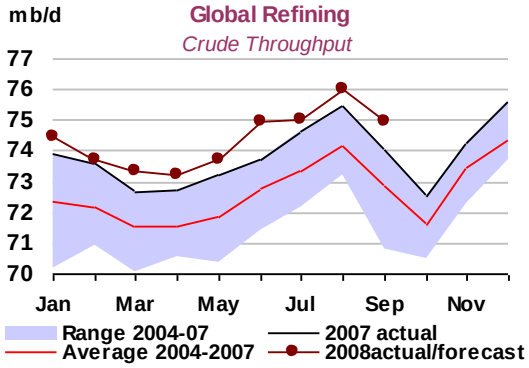
Clean rates in the Atlantic basin dropped markedly in July, coinciding with continued weak US gasoline demand (and falling prices) which undermined transatlantic trade. UK Continent to the US Atlantic Coast clean rates for 35 kmt vessels neared $25/tonne towards the end of July, having started the month above $40/tonne. A late-month rise in the US-Rotterdam gasoline spread allowed these rates to rebound slightly. By contrast, 75 kmt clean rates from Middle East Gulf to Japan gained around $8/tonne in July to reach $54/tonne, as Asian naphtha demand was reportedly boosted by easing prices.

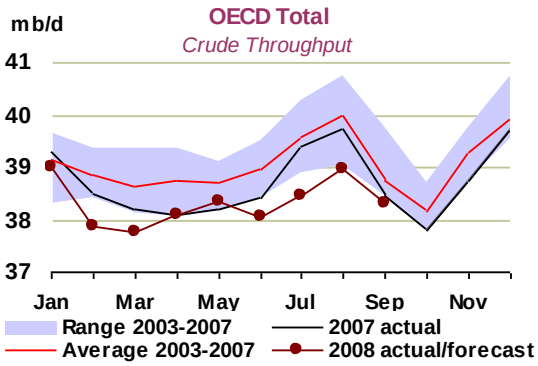
REFINING

Summary

- **Global crude throughput averaged 75.0 mb/d in July, a month-on-month increase of 0.1 mb/d.** Lower OECD crude throughput estimates for the month, following continued weak cracking margins in the US, offset the upward revision to Chinese crude runs, following the country's record throughput level in June. Year-on-year growth drops to 0.4 mb/d in July from 1.2 mb/d in June, as OECD crude throughput falls 0.9 mb/d below levels of a year ago.

- **The 3Q08 global crude throughput forecast is unchanged at an average of 75.3 mb/d**, as higher Chinese and Middle Eastern forecasts offset weaker the OECD throughput estimates. Increased maintenance estimates for OECD Europe and Russia, in addition to lower 2Q08 Nigerian runs also reduce our 3Q08 forecast. Year-on-year growth is lowered to 0.6 mb/d, as non-OECD growth of 1.2 mb/d more than offsets the 0.6 mb/d decline in the OECD. In addition, 2Q08 crude throughput is revised up by 0.1 mb/d, following surprisingly strong Chinese and Middle Eastern June crude throughput and upwardly revised May OECD Europe throughput.





- **Weak gasoline cracks continue to undermine refinery margins, particularly in the US.** Consequently, refining activity levels have remained more subdued than forecast in the OECD, most notably in the US and there remains a risk that the 3Q08 OECD crude throughput forecast remains too high. Operational problems at several US Gulf and West Coast refineries, in conjunction with hurricane-related disruptions have also curtailed crude throughput levels during July. Further disruptions may lend some support to gasoline cracks over the balance of the third quarter.

- **Refineries in all three OECD regions continue to raise middle distillate yields,** at the expense of fuel oil and gasoline. Refineries in the OECD regions have increased middle distillate yields year-on-year every month bar one since the beginning of 2007. Year-to-date fuel oil yields have remained below the five-year range, driven by investment in upgrading capacity and poor hydroskimming margins.

Global Refinery Throughput

Preliminary estimated July global crude throughput of 75.0 mb/d was slightly below the forecast of 75.2 mb/d contained in last month's report. Weaker-than-expected OECD activity levels depressed global crude runs, while non-OECD runs appear broadly in line with expectations for the month despite upward revisions to Chinese and Middle Eastern throughputs.

Crude runs are forecast to increase to a seasonal peak of 76.0 mb/d in August, driven by higher OECD runs and higher Middle Eastern and Chinese crude throughput. September runs should drop back to around 75.0 mb/d, as autumn maintenance starts in several regions. Overall 3Q08 crude throughput is unchanged

from last month's report at 75.3 mb/d as regional changes cancel each other out. Furthermore, we continue to exclude trial crude runs at the 580 kb/d expansion of the Jamnagar refinery in India. Some unconfirmed reports suggest that commissioning is likely before the end of the third quarter, offering the potential for an upward revision to September if that in fact occurs.

Refining margins remain a key determinant of refinery activity levels and the continued weakness in US cracking and coking margins underscores the challenges facing some industry players. Offsetting the recent rebound in US gasoline cracks are weaker middle distillate cracks, although these remain at historically high levels. Refineries in the OECD continue to adapt to the changes in crack spreads, posting the 19th consecutive month of year-on-year increases in diesel/gasoil yields. However, conditions remain tough for refineries. Valero, often regarded as a barometer for US refining, and the largest independent refiner, reported its lowest second-quarter earnings per share since 2003 and 61% below 2Q07. Furthermore, several independent US refiners reported losses for the quarter, with many lowering expenditure plans for the year to conserve cash. Similarly, integrated oil companies reported substantially weaker downstream earnings. ExxonMobil reported 2Q08 downstream profitability was more than 80% lower in the US and nearly 25% lower for its non-US businesses than in 2Q07.

Forecast **OECD** 3Q08 crude throughput averages 38.6 mb/d, 0.2 mb/d lower than last month's report, due to weak demand and the poor margin environment noted above. This pushes crude throughput to 0.9 mb/d below the five-year average for 3Q08 and 0.6 mb/d below 3Q07 average levels.

Global Refinery Crude Throughput[1]

million barrels per day

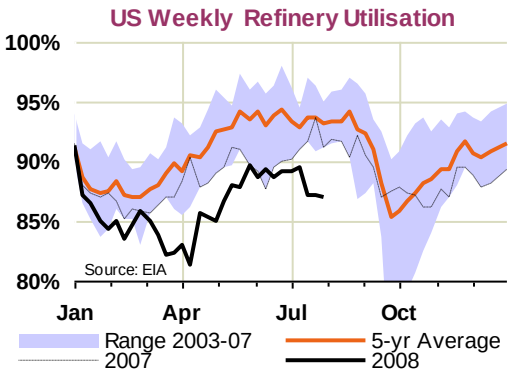
	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08
OECD Crude Runs									
North America	17.9	17.6	17.2	17.8	18.4	18.3	*18.1*	*18.2*	*18.1*
Europe	13.7	13.1	13.3	13.4	13.3	13.5	*13.6*	*13.7*	*13.4*
Pacific	7.4	7.1	7.3	6.9	6.6	6.3	*6.7*	*7.1*	*6.8*
Total OECD	39.0	37.9	37.8	38.1	38.3	38.1	*38.5*	*39.0*	*38.3*
NON-OECD Crude Runs									
FSU	5.7	6.0	*6.0*	*5.7*	*5.8*	*6.1*	*5.9*	*6.0*	*5.8*
Europe	0.8	0.7	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	6.9	*6.8*	*6.7*	*6.5*	*7.2*	*7.1*	*7.1*	*7.1*
Other Asia	8.4	8.2	*8.2*	*8.3*	*8.2*	*8.3*	*8.4*	*8.4*	*8.4*
Latin America	5.5	5.4	*5.3*	*5.5*	*5.4*	*5.5*	*5.5*	*5.6*	*5.6*
Middle East	5.9	6.1	*6.0*	*5.9*	*6.1*	*6.5*	*6.4*	*6.6*	*6.5*
Africa	2.5	2.5	*2.4*	*2.2*	*2.5*	*2.4*	*2.5*	*2.5*	*2.5*
Total Non-OECD	35.4	35.9	*35.5*	*35.1*	*35.4*	*36.9*	*36.5*	*37.0*	*36.7*
Total Crude Runs	74.4	73.7	*73.3*	*73.2*	*73.7*	*74.9*	*75.0*	*76.0*	*75.0*

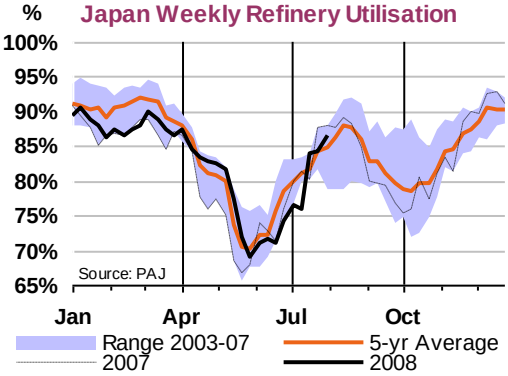
1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

2Q08 **OECD North American** crude throughput is slightly weaker than reported last month, following weaker June throughput data for Mexico. The 3Q08 crude throughput forecast for OECD North America is reduced on the back of weak US levels in July and the continued poor outlook for margins. North American crude throughput is 0.2 mb/d lower, at an average of 18.2 mb/d for the quarter.

US refinery crude throughput averaged 15.2 mb/d in July, according to provisional weekly data, some 0.3 mb/d below our expectations. Crude runs fells consistently over the course of the month to their lowest level since early May, with precautionary hurricane-related disruptions and operational problems adding to the impact of the poor margin environment. Only West Coast runs remained at or near typical levels for the time of year, with every other region at, or below, the lower end of the five-year range. Gasoline imports also collapsed mid-month to the lowest weekly level since February 2004, although

unfinished component imports remain within the five-year range, further highlighting the pressure on gasoline cracks and the excess supply potential in the Atlantic Basin compared with demand.



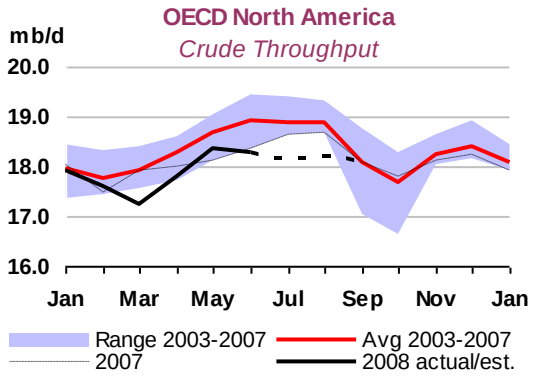


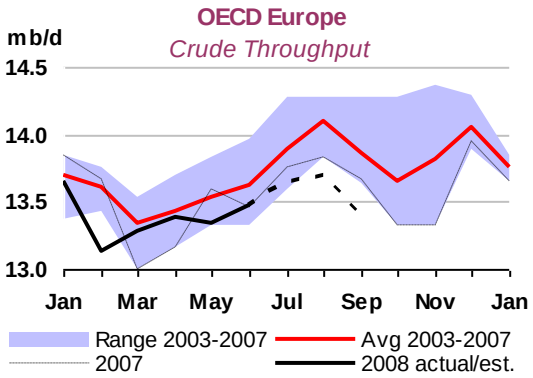
The 3Q08 **OECD Pacific** throughput forecast is broadly unchanged at 6.8 mb/d, although forecast September runs are raised slightly, due to some planned maintenance being delayed into October. Weekly data for July indicate that crude runs in Japan were weaker than levels of a year ago, despite the sharp rebound at the beginning of the month, averaging 3.8 mb/d. On a year-to-date basis the weakness in Japanese demand for transport fuels has been partially offset by higher product exports which, from January to May, have increased by almost 50% from the comparable period in 2007. Some refiners, notably Nippon Oil, still appear to be curtailing operations, with August crude throughput forecast to be 2% below the rate achieved last August. **Korean** runs fell in June to 2.2 mb/d as maintenance activity increased. Runs are forecast to dip further in July, before recovering over the balance of the quarter to reach 2.5 mb/d in September.

Refinery Crude Throughput and Utilisation in OECD Countries

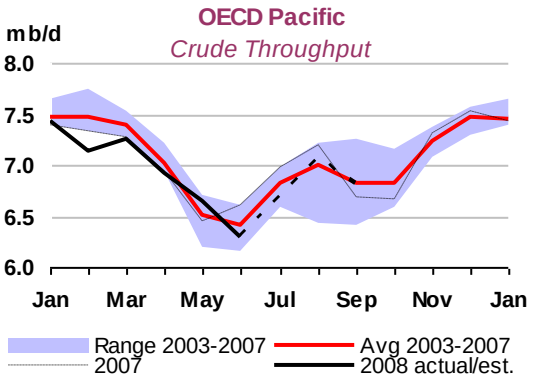
	million barrels per day						*Change from*		Utilisation rate[1]	
	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08	*May 08*	*Jun 07*	Jun 08	Jun 07
OECD North America										
US[2]	14.80	14.63	14.36	14.80	15.29	15.38	0.09	0.14	88.13	87.28
Canada	1.88	1.78	1.65	1.73	1.78	1.80	0.02	-0.06	89.23	92.09
Mexico	1.25	1.18	1.24	1.26	1.28	1.11	-0.17	-0.15	72.10	71.96
Total	17.93	17.59	17.24	17.79	18.35	18.29	-0.06	-0.08	87.06	87.36
OECD Europe										
France	1.78	1.62	1.47	1.70	1.67	1.73	0.07	0.17	88.51	79.79
Germany	2.26	2.20	2.35	2.20	2.08	2.11	0.02	-0.18	87.15	94.70
Italy	1.87	1.78	1.81	1.70	1.63	1.69	0.06	-0.16	72.43	79.20
Netherlands	1.00	1.01	1.03	1.05	1.10	0.96	-0.14	0.01	79.19	78.43
Spain	1.20	1.14	1.11	1.21	1.18	1.11	-0.07	-0.05	87.09	90.97
UK	1.48	1.40	1.51	1.59	1.56	1.64	0.08	0.08	87.05	82.58
Other OECD Europe	4.07	3.98	4.01	3.94	4.13	4.23	0.10	0.14	90.10	87.17
Total	13.65	13.13	13.28	13.39	13.35	13.47	0.12	0.01	85.39	85.31
OECD Pacific										
Japan	4.13	4.15	4.18	3.97	3.56	3.40	-0.16	-0.06	72.66	73.87
Korea	2.53	2.37	2.40	2.28	2.45	2.21	-0.24	-0.24	80.70	89.61
Other OECD Pacific	0.77	0.63	0.67	0.68	0.63	0.70	0.06	-0.01	86.30	87.14
Total	7.43	7.15	7.25	6.92	6.64	6.30	-0.34	-0.31	76.67	80.41
OECD Total	39.01	37.87	37.78	38.10	38.34	38.06	-0.28	-0.37	84.58	85.37

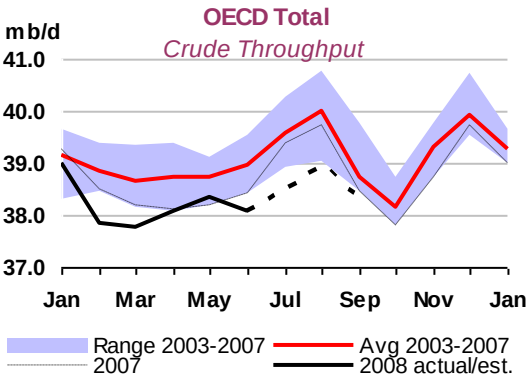
1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50





OECD Europe crude throughput edged up in June by 0.1 mb/d to an average of 13.5 mb/d, from an upwardly revised May level of 13.4 mb/d. Crude runs remain weak relative to the five-year range and are forecast to peak in August at 13.7 mb/d, below the five-year range. Negative gasoline cracks and hydroskimming margins, plus operational problems at refineries such as Neste's Porvoo refinery, are expected to limit crude runs over the balance of the third quarter. Diesel cracks remain strong, although off their recent highs. These have helped European refiners, which typically have a higher distillate yield than US refineries, to remain relatively more profitable during the second quarter. Autumn maintenance should increase in September, with several large-scale shutdowns, including Shell's Pernis, StatoilHydro's Mongstad and Chevron's Pembroke refineries.





Chinese crude runs jumped by 0.7 mb/d in June to average 7.2 mb/d, according to National Bureau of Statistics data. This surprisingly strong level of growth, 0.4 mb/d above our forecast, from the May throughput level follows the completion of heavy maintenance work. The increase could reflect strong demand or the desire by Chinese refiners to bolster product stocks ahead of the Olympics. However, we consider the impact of the price increase mandated by Chinese authorities on June 20 as being minimal during the month, as it was probably too late to materially increase average crude runs. Nevertheless, we have raised 3Q08 crude throughput forecasts by 0.2 mb/d, to an average of 7.1 mb/d, reflecting the higher June throughput level, but also the uncertainty over Chinese demand, post the Olympics. However, operating plans at China's ten largest refineries for July and August suggest that runs may reach 7.3-7.4 mb/d if other refineries, including the new 200 kb/d Qingdao refinery, continue at the June level of crude throughput, presenting some upside risk to the 3Q08 forecast.

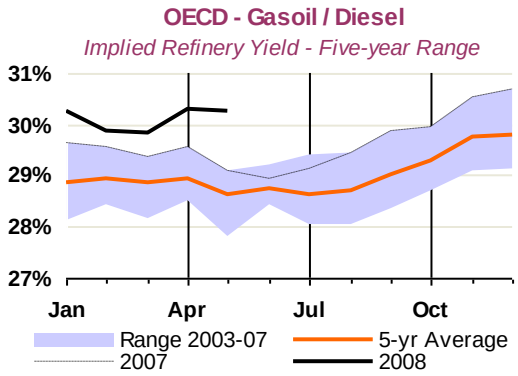
Middle Eastern crude throughput was 6.5 mb/d in June, 0.3 mb/d above forecast, due to stronger-than-expected Iranian, Iraqi and Saudi Arabian crude runs. Iranian crude throughput breached 1.7 mb/d, the highest level on record, suggesting that planned work to complete the expansion of the Bandar Abbas refinery, to increase the process capacity for heavy sour crudes, such as Soroush-Nowruz, may have been delayed until July. This raises the possibility of further increases over the course of the 3Q08 on completion of the work.

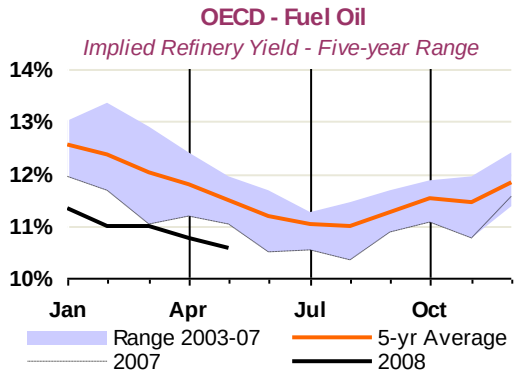
Similarly, Saudi Arabian crude runs were above our forecast, reaching 1.9 mb/d, the highest level since November 2006 and close to all-time highs. This level of throughput suggests that Saudi Aramco refining capacity is running flat out to meet domestic and export demand. Lastly, Iraqi crude runs are estimated to have reached nearly 0.5 mb/d, a post-war high. Regional crude runs in July are expected to dip following reports of maintenance at Iraq's Baiji refinery and the expansion work noted at Bandar Abbas, but overall we have revised up our 3Q08 estimates by 0.3 mb/d to reflect the higher 2Q08 base throughput levels.

Offsetting these increases, the 3Q08 **FSU** crude throughput forecast is cut by 0.2 mb/d, due to higher maintenance estimates for Russia, as several refineries operated by Lukoil and Rosneft undergo maintenance during August and September. **African** 3Q08 throughput estimates are reduced by 0.1 mb/d, as despite the reported start-up of the Kaduna and Warri refineries in Nigeria, regional runs do not appear to have increased to the extent expected.

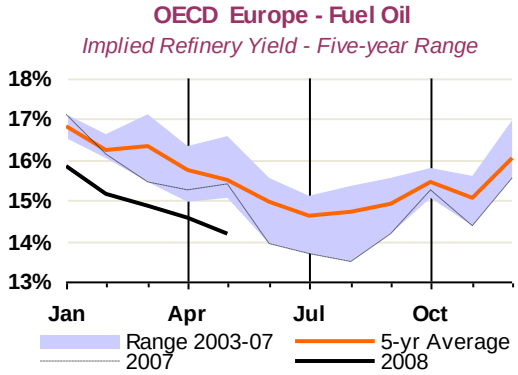
OECD Refinery Yields

Refineries in all three OECD regions continue to raise middle distillate yields, (jet, kerosene, gasoil and diesel) at the expense of fuel oil and gasoline. Refineries in the OECD have increased middle distillate yields year-on-year every month bar one since the beginning of 2007. In North America, refineries have increased middle distillate yields year-on-year for 28 of the last 36 months. Similarly, in Europe, middle distillate yields have increased in 33 of the last 36 months.





Year-to-date fuel oil yields have remained below the five-year range, driven by investment in upgrading capacity and poor hydroskimming margins. The notable exception is in Japan where fuel oil yields have risen above levels of a year ago as Japanese power utilities increase the use of fuel oil to cover shortfalls in nuclear generating capacity. Recent strengthening of fuel oil cracks are unlikely to raise fuel oil yields at cracking refineries, given fuel oil continues to trade at a discount to crude prices. However, it may increase crude runs at hydroskimming refineries, which could imply higher fuel oil yields on an aggregate basis.



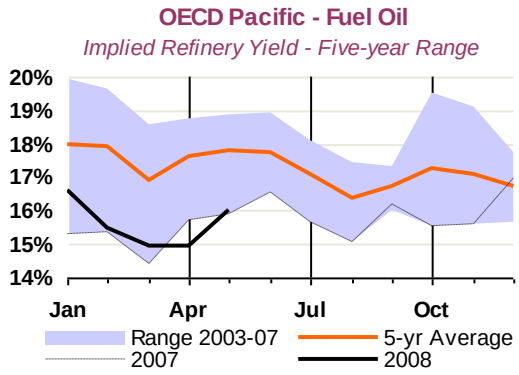


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.6	25.4	25.7	25.4	25.6	25.5	25.5	24.8	24.8	24.9	25.0	24.9	24.5	24.4	24.6	24.6	24.5
Europe	15.7	15.7	15.2	15.0	15.4	15.6	15.3	15.2	14.9	15.4	15.5	15.2	15.2	14.8	15.4	15.5	15.2
Pacific	8.6	8.5	8.9	7.9	7.9	8.7	8.3	8.9	8.0	8.0	8.8	8.4	8.8	7.9	7.9	8.8	8.3
Total OECD	49.8	49.6	49.8	48.2	48.9	49.8	49.2	48.9	47.7	48.3	49.3	48.6	48.4	47.2	47.8	48.8	48.0
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.4
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	7.9	8.0	8.1	8.0	8.3	8.4	8.4	8.6	8.4
Other Asia	8.8	9.0	9.2	9.3	9.1	9.4	9.3	9.6	9.6	9.1	9.5	9.5	9.9	9.9	9.3	9.8	9.7
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.6	5.9	6.0	5.9	5.9	5.9	6.1	6.2	6.2	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.9	7.1	6.8	6.9	7.0	7.2	7.5	7.2	7.2
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	37.9	38.3	38.2	38.7	38.3	39.4	39.8	39.6	40.2	39.7
Total Demand[1]	84.0	85.1	86.2	85.1	85.8	87.2	86.1	86.8	86.1	86.6	88.0	86.9	87.8	86.9	87.4	89.0	87.8
OECD SUPPLY																	
North America	14.1	14.2	14.3	14.4	14.1	14.1	14.2	14.2	14.1	14.1	14.4	14.2	14.6	14.2	14.1	14.3	14.3
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.7	4.4	4.6	4.7	4.6	4.2	4.1	4.2	4.3
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
Total OECD	20.3	20.0	20.1	19.9	19.5	19.8	19.8	19.7	19.5	19.2	19.9	19.6	20.0	19.2	19.0	19.4	19.4
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	12.8	13.5	13.0	13.4	13.4	13.1	13.1	13.3
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.8	2.8
Latin America[2]	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	3.9	4.1	4.2	4.0	4.3	4.3	4.3	4.3	4.3
Middle East	1.8	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Africa[2]	3.7	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.5	27.5	27.7	28.6	27.8	28.6	28.6	28.3	28.3	28.5
Processing Gains[3]	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[2]	50.4	51.2	50.5	50.2	49.7	50.0	50.1	49.8	49.7	49.6	51.3	50.1	51.5	50.7	50.2	50.6	50.8
Non-OPEC excl. Angola & Ecuador[2]	48.7	49.2	50.0	49.7	49.2	49.7	49.6	49.8	49.7	49.6	51.3	50.1	51.5	50.7	50.2	50.6	50.8
OPEC																	
Crude[5]	29.7	29.7	30.3	30.2	30.6	31.5	30.7	32.3	32.2								
NGLs	4.5	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.4	5.1	5.6	5.9	6.0	6.2	5.9
Total OPEC[2]	34.2	34.3	35.1	34.9	35.4	36.4	35.5	37.3	37.1								
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	35.9	36.8	35.9	37.3	37.1								
Total Supply[6]	84.7	85.5	85.5	85.2	85.1	86.5	85.6	87.1	86.8								
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	0.0	-0.8	-0.2	-0.1	0.0								
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0								
Total	0.2	0.3	-0.7	0.7	0.2	-0.8	-0.2	0.0	0.0								
Floating Storage/Oil in Transit	-0.1	-0.1	0.2	-0.2	-0.2	0.2	0.0	0.3	0.0								
Miscellaneous to balance[7]	0.5	0.2	-0.2	-0.5	-0.6	-0.1	-0.4	-0.1	0.7								
Total Stock Ch. & Misc	0.7	0.4	-0.7	0.0	-0.6	-0.7	-0.5	0.3	0.7								
Memo items:																	
Call on OPEC crude + Stock ch.[8]	29.1	29.3	31.0	30.1	31.3	32.2	31.2	32.0	31.4	31.8	31.4	31.6	30.6	30.3	31.2	32.3	31.1
Adjusted Call on OPEC + Stock ch.[9]	29.6	29.5	30.8	29.7	30.7	32.1	30.8	32.0	32.1	31.7	31.3	31.8	30.6	30.3	31.2	32.2	31.1
"Call" incl. Angola & Ecuador[2]	30.8	31.3	31.5	30.7	31.8	32.6	31.6	32.0	31.4	31.8	31.3	31.6	30.6	30.3	31.2	32.3	31.1
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.3	30.2	31.2	32.4	31.3	32.0	32.1	31.7	31.3	31.8	30.6	30.3	31.2	32.2	31.1

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 Ecuadorean production is reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
6 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
7 Includes changes in non-reported stocks in OECD and non-OECD areas.
8 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
9 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	0.1	0.1	-	-	0.1	-0.1	-	0.1	-0.1	-0.2	-0.2	-0.1	0.1	-0.1	-0.2	-0.2	-0.1
Europe	0.1	0.1	-	-	-	-	-	-	-0.2	0.1	0.1	-	-	-0.1	0.1	0.1	-
Pacific	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total OECD	0.2	0.2	0.1	0.1	0.2	-	0.1	0.2	-0.2	-	-	-	0.2	-	-	-	-
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-	-
Total Demand	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	-0.1	-	-	-	0.2	0.1	-	-	0.1
OECD SUPPLY																	
North America	-	-	-0.1	-	-0.1	-	-	-	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Europe	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-0.1	-	-0.1	-	-	-	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-0.3	-	-0.1	-	-	-0.1	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-0.1	-0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Processing Gains	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	0.1	0.1	-	0.1	-	0.1	0.1	0.1	0.3	-0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Non-OPEC excl. Angola & Ecuador	0.1	0.1	-	0.1	-	0.1	0.1	0.1	0.3	-0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-								
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-								
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-								
Total Supply	0.1	0.1	-	0.1	-	0.1	0.1	-	0.4								
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	0.1	-	-									
Government	-	-	-	-	-	-	-	-									
Total	-	-	-	-	-	0.1	-	-									
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-									
Miscellaneous to balance	-0.1	-0.2	-0.1	-	-0.1	-	-0.1	-0.1									
Total Stock Ch. & Misc	-0.1	-0.2	-0.1	-	-0.1	0.1	-	-0.1	0.5								
Memo items:																	
Call on OPEC crude + Stock ch.	0.1	0.2	0.1	-	0.1	-0.1	-	0.1	-0.4	0.2	-0.1	-0.1	0.1	-	-0.1	-0.2	-
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-0.1	-	-0.1	0.2	0.1	-0.2	-	-	-0.1	-0.2	-0.3	-0.1

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.42	25.68	25.42	25.57	25.49	25.54	24.84	24.77	24.95	24.97	24.88	24.45	24.41	24.58	24.60	24.51
Europe	15.68	15.23	14.95	15.41	15.62	15.30	15.16	14.89	15.40	15.52	15.25	15.15	14.83	15.35	15.48	15.20
Pacific	8.48	8.91	7.88	7.89	8.72	8.35	8.89	8.05	7.98	8.84	8.44	8.78	7.92	7.89	8.76	8.34
Total OECD	49.58	49.82	48.25	48.86	49.83	49.19	48.89	47.71	48.33	49.33	48.57	48.38	47.15	47.82	48.83	48.05
FSU	4.06	4.11	3.92	4.18	4.28	4.13	4.11	4.10	4.29	4.41	4.23	4.27	4.23	4.41	4.55	4.37
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.77	0.76	0.83	0.78	0.72	0.78	0.78
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.94	7.98	8.09	7.96	8.32	8.38	8.42	8.56	8.42
Other Asia	9.00	9.24	9.34	9.05	9.41	9.26	9.60	9.61	9.12	9.51	9.46	9.85	9.86	9.32	9.76	9.70
Latin America	5.33	5.41	5.58	5.73	5.72	5.61	5.65	5.87	5.96	5.95	5.86	5.85	6.08	6.17	6.17	6.07
Middle East	6.22	6.40	6.50	6.73	6.44	6.52	6.71	6.90	7.12	6.83	6.89	7.04	7.23	7.46	7.16	7.22
Africa	2.96	3.09	3.08	2.99	3.13	3.07	3.15	3.16	3.04	3.16	3.13	3.20	3.21	3.08	3.22	3.18
Total Non-OECD	35.52	36.39	36.90	36.89	37.32	36.88	37.89	38.34	38.22	38.71	38.29	39.37	39.77	39.60	40.19	39.74
World	85.11	86.21	85.15	85.76	87.15	86.07	86.78	86.05	86.55	88.04	86.86	87.76	86.92	87.42	89.02	87.79
of which:																
US50	*20.69*	*20.79*	*20.63*	*20.73*	*20.58*	*20.68*	*19.99*	*19.96*	*20.14*	*20.04*	*20.03*	*19.60*	*19.57*	*19.75*	*19.64*	*19.64*
Euro4	*8.23*	*7.87*	*7.70*	*7.89*	*8.02*	*7.87*	*7.79*	*7.64*	*7.88*	*7.93*	*7.81*	*7.77*	*7.50*	*7.80*	*7.84*	*7.73*
Japan	*5.20*	*5.43*	*4.64*	*4.70*	*5.25*	*5.01*	*5.44*	*4.79*	*4.70*	*5.28*	*5.05*	*5.30*	*4.64*	*4.60*	*5.17*	*4.93*
Korea	*2.18*	*2.36*	*2.12*	*2.06*	*2.31*	*2.21*	*2.33*	*2.09*	*2.11*	*2.38*	*2.23*	*2.34*	*2.13*	*2.13*	*2.40*	*2.25*
Mexico	*2.08*	*2.12*	*2.14*	*2.06*	*2.16*	*2.12*	*2.10*	*2.16*	*2.04*	*2.18*	*2.12*	*2.10*	*2.17*	*2.05*	*2.18*	*2.13*
Canada	*2.30*	*2.38*	*2.31*	*2.43*	*2.39*	*2.38*	*2.37*	*2.30*	*2.41*	*2.38*	*2.36*	*2.36*	*2.31*	*2.41*	*2.39*	*2.37*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.42*	*2.43*	*2.50*	*2.43*	*2.42*	*2.50*	*2.51*	*2.58*	*2.50*
India	*2.80*	*3.04*	*2.97*	*2.73*	*3.03*	*2.94*	*3.19*	*3.10*	*2.85*	*3.17*	*3.08*	*3.35*	*3.26*	*2.97*	*3.29*	*3.21*
Annual Change (% per annum)																
North America	-0.6	1.3	1.0	-0.3	-0.1	0.5	-3.3	-2.6	-2.4	-2.0	-2.6	-1.6	-1.5	-1.5	-1.5	-1.5
Europe	0.1	-4.9	-2.2	-1.7	-0.8	-2.4	-0.4	-0.4	0.0	-0.7	-0.4	-0.1	-0.5	-0.3	-0.3	-0.3
Pacific	-1.4	-4.1	-0.4	-0.7	-0.9	-1.6	-0.2	2.2	1.2	1.4	1.1	-1.2	-1.6	-1.1	-0.9	-1.2
Total OECD	-0.5	-1.6	-0.3	-0.8	-0.5	-0.8	-1.9	-1.1	-1.1	-1.0	-1.3	-1.0	-1.2	-1.1	-1.0	-1.1
FSU	3.4	2.2	2.0	1.0	1.6	1.7	0.0	4.5	2.6	3.0	2.5	4.0	3.1	2.9	3.1	3.3
Europe	1.0	2.0	1.9	1.9	1.5	1.8	1.6	1.9	1.9	1.9	1.8	1.6	1.9	1.9	1.9	1.8
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	2.7	6.2	6.5	5.6	5.9	5.6	5.5	5.8	5.7
Other Asia	2.3	1.6	2.7	3.1	3.8	2.8	3.9	2.9	0.7	1.1	2.2	2.6	2.6	2.2	2.6	2.5
Latin America	4.6	4.6	5.0	5.5	5.9	5.2	4.4	5.1	4.0	3.9	4.3	3.6	3.5	3.6	3.7	3.6
Middle East	4.0	5.1	5.8	4.2	3.8	4.7	4.9	6.1	5.9	6.0	5.7	4.9	4.8	4.8	4.9	4.8
Africa	0.9	3.3	2.9	3.5	5.9	3.9	1.8	2.6	1.6	1.0	1.7	1.7	1.6	1.6	1.8	1.7
Total Non-OECD	4.0	3.5	4.0	3.6	4.1	3.8	4.1	3.9	3.6	3.7	3.8	3.9	3.7	3.6	3.8	3.8
World	1.3	0.4	1.5	1.1	1.5	1.1	0.7	1.1	0.9	1.0	0.9	1.1	1.0	1.0	1.1	1.1
Annual Change (mb/d)																
North America	-0.14	0.34	0.25	-0.08	-0.02	0.12	-0.84	-0.65	-0.62	-0.52	-0.66	-0.39	-0.36	-0.37	-0.38	-0.37
Europe	0.01	-0.78	-0.34	-0.26	-0.13	-0.38	-0.06	-0.06	0.00	-0.10	-0.06	-0.01	-0.07	-0.05	-0.04	-0.04
Pacific	-0.12	-0.39	-0.03	-0.05	-0.08	-0.14	-0.02	0.17	0.09	0.12	0.09	-0.11	-0.12	-0.09	-0.08	-0.10
Total OECD	-0.26	-0.83	-0.13	-0.39	-0.23	-0.39	-0.92	-0.54	-0.53	-0.50	-0.62	-0.51	-0.56	-0.51	-0.49	-0.52
FSU	0.13	0.09	0.08	0.04	0.07	0.07	0.00	0.18	0.11	0.13	0.10	0.17	0.13	0.12	0.14	0.14
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.21	0.46	0.49	0.42	0.47	0.45	0.44	0.47	0.46
Other Asia	0.21	0.15	0.25	0.27	0.35	0.26	0.36	0.28	0.07	0.11	0.20	0.25	0.25	0.20	0.25	0.24
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.24	0.29	0.23	0.23	0.24	0.20	0.21	0.21	0.22	0.21
Middle East	0.24	0.31	0.36	0.27	0.23	0.29	0.31	0.40	0.40	0.39	0.37	0.33	0.33	0.34	0.33	0.33
Africa	0.03	0.10	0.09	0.10	0.17	0.11	0.06	0.08	0.05	0.03	0.05	0.05	0.05	0.05	0.06	0.05
Total Non-OECD	1.37	1.21	1.42	1.29	1.48	1.35	1.50	1.44	1.33	1.39	1.41	1.48	1.43	1.38	1.48	1.44
World	1.11	0.38	1.30	0.90	1.25	0.96	0.58	0.90	0.80	0.89	0.79	0.98	0.87	0.87	0.98	0.93
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.11	0.01	-0.01	0.07	-0.05	0.01	0.08	-0.09	-0.15	-0.17	-0.08	0.09	-0.05	-0.16	-0.17	-0.08
Europe	0.05	0.04	0.03	0.03	0.03	0.03	0.03	-0.19	0.05	0.06	-0.01	0.05	-0.07	0.08	0.07	0.03
Pacific	0.08	0.09	0.07	0.07	0.07	0.08	0.07	0.07	0.09	0.10	0.08	0.07	0.09	0.09	0.10	0.09
Total OECD	0.25	0.14	0.09	0.17	0.05	0.11	0.18	-0.22	-0.01	-0.01	-0.02	0.21	-0.04	0.01	0.00	0.05
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.01	0.01	0.05	0.01	0.01	0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.01	0.01	0.00	0.00	-0.02	0.01	0.01	0.00
Other Asia	0.00	0.00	-0.02	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.05	0.01	0.02	0.02
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	-0.01	-0.01	-0.01	-0.02	-0.01	-0.03	-0.02	-0.02
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.05	-0.01	-0.01	0.01	-0.01	0.04	-0.02	-0.02	0.00
Africa	0.00	0.00	0.00	0.00	0.01	0.00	-0.01	0.03	0.01	-0.01	0.00	-0.01	0.03	0.00	-0.01	0.00
Total Non-OECD	0.00	0.00	-0.02	0.00	0.00	0.00	-0.02	0.11	0.00	0.00	0.02	-0.02	0.13	-0.01	-0.01	0.02
World	0.25	0.13	0.07	0.17	0.05	0.11	0.16	-0.10	-0.01	-0.02	0.01	0.19	0.09	0.00	-0.01	0.07
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.08	-0.10	-0.19	-0.08	-0.20	-0.14	0.02	-0.17	-0.18	-0.07	-0.10	0.03	0.19	0.01	0.01	0.06

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	1Q08	2Q08	3Q08	4Q08	1Q09	May 08	Jun 08	Jul 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.84	8.94				8.91	9.16	9.26
Iran	3.98			4.03	3.84				3.74	3.95	4.02
Iraq	2.09			2.37	2.47				2.51	2.51	2.41
UAE	2.52			2.62	2.66				2.66	2.67	2.67
Kuwait	2.16			2.29	2.33				2.34	2.34	2.34
Neutral Zone	0.56			0.58	0.58				0.59	0.59	0.59
Qatar	0.80			0.85	0.85				0.85	0.88	0.88
Angola[6]	1.61			1.80	1.85				1.84	1.87	1.85
Nigeria	2.13			2.05	1.81				1.76	1.83	1.97
Libya	1.71			1.76	1.74				1.73	1.75	1.70
Algeria	1.36			1.39	1.38				1.38	1.38	1.38
Ecuador[6]	0.04			0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.40	2.35				2.36	2.36	2.36
Indonesia	0.84			0.85	0.86				0.86	0.86	0.87
Total Crude Oil[6]	30.66			32.33	32.16				32.02	32.63	32.77
Total NGLs[1,6]	4.81	5.13	5.93	4.94	4.96	5.18	5.43	5.63	4.96	4.96	5.18
Total OPEC[6]	35.47			37.27	37.12				36.98	37.58	37.95
OPEC incl. Angola & Ecuador[6]	35.94			37.27	37.12				36.98	37.58	37.95
NON-OPEC[2]											
OECD											
North America	14.23	14.21	14.33	14.20	14.09	14.11	14.45	14.64	14.14	13.98	14.21
United States	7.44	7.65	7.85	7.65	7.78	7.54	7.63	7.90	7.87	7.70	7.63
Mexico	3.48	3.23	3.04	3.28	3.17	3.20	3.25	3.16	3.17	3.21	3.21
Canada	3.32	3.33	3.43	3.26	3.13	3.37	3.57	3.58	3.11	3.07	3.37
Europe	4.95	4.65	4.28	4.89	4.74	4.36	4.63	4.58	4.97	4.43	4.51
UK	1.66	1.53	1.37	1.64	1.62	1.35	1.51	1.51	1.68	1.48	1.41
Norway	2.56	2.40	2.22	2.52	2.40	2.28	2.39	2.36	2.56	2.22	2.37
Others	0.73	0.73	0.69	0.73	0.72	0.73	0.72	0.71	0.73	0.73	0.73
Pacific	0.63	0.70	0.81	0.61	0.67	0.72	0.81	0.83	0.66	0.70	0.69
Australia	0.55	0.58	0.67	0.50	0.56	0.61	0.67	0.69	0.55	0.59	0.59
Others	0.08	0.12	0.14	0.11	0.11	0.12	0.14	0.14	0.11	0.11	0.11
Total OECD	19.81	19.57	19.42	19.70	19.49	19.19	19.88	20.05	19.76	19.11	19.41
NON-OECD											
Former USSR	12.77	12.98	13.26	12.83	12.86	12.75	13.48	13.44	12.86	12.89	12.84
Russia	10.08	10.08	9.98	10.00	9.96	10.10	10.28	10.14	9.97	9.97	9.99
Others	2.69	2.90	3.28	2.83	2.90	2.66	3.20	3.30	2.89	2.92	2.85
Asia	6.40	6.53	6.69	6.44	6.43	6.59	6.66	6.70	6.41	6.50	6.58
China	3.73	3.86	3.93	3.76	3.82	3.93	3.92	3.93	3.81	3.88	3.92
Malaysia	0.76	0.77	0.81	0.77	0.74	0.76	0.79	0.81	0.75	0.72	0.77
India	0.81	0.81	0.80	0.81	0.82	0.81	0.81	0.80	0.81	0.82	0.81
Others	1.11	1.10	1.14	1.09	1.06	1.09	1.14	1.16	1.04	1.07	1.08
Europe	0.13	0.12	0.11	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Latin America	4.32	4.04	4.32	3.95	3.93	4.10	4.20	4.28	3.89	3.92	4.06
Brazil	2.14	2.32	2.57	2.21	2.26	2.36	2.46	2.53	2.26	2.27	2.32
Argentina	0.75	0.73	0.75	0.75	0.69	0.75	0.75	0.76	0.64	0.67	0.75
Colombia	0.54	0.57	0.58	0.57	0.58	0.57	0.57	0.57	0.58	0.57	0.57
Ecuador[6]	0.46										
Others	0.43	0.42	0.42	0.41	0.41	0.42	0.42	0.42	0.41	0.42	0.42
Middle East[3]	1.66	1.59	1.52	1.62	1.60	1.58	1.56	1.54	1.60	1.60	1.59
Oman	0.72	0.71	0.70	0.73	0.72	0.71	0.70	0.70	0.72	0.72	0.71
Syria	0.40	0.38	0.36	0.39	0.38	0.38	0.37	0.37	0.38	0.38	0.38
Yemen	0.34	0.31	0.27	0.31	0.31	0.30	0.30	0.28	0.31	0.30	0.31
Africa	2.51	2.56	2.56	2.54	2.55	2.58	2.56	2.57	2.56	2.56	2.58
Egypt	0.63	0.61	0.58	0.62	0.61	0.61	0.60	0.59	0.61	0.61	0.61
Angola[6]											
Gabon	0.23	0.23	0.24	0.22	0.23	0.24	0.24	0.24	0.24	0.24	0.24
Others	1.64	1.72	1.74	1.70	1.71	1.73	1.73	1.73	1.71	1.71	1.73
Total Non-OECD	27.80	27.82	28.47	27.50	27.50	27.72	28.57	28.64	27.46	27.59	27.77
Processing Gains[4]	2.17	2.24	2.29	2.22	2.22	2.25	2.29	2.29	2.22	2.22	2.25
Other Biofuels[5]	0.33	0.46	0.58	0.39	0.46	0.46	0.52	0.55	0.46	0.46	0.46
TOTAL NON-OPEC	50.10	50.09	50.75	49.81	49.67	49.62	51.26	51.53	49.89	49.37	49.89
Non-OPEC excl. Angola & Ecuador[6]	49.63	50.09	50.75	49.81	49.67	49.62	51.26	51.53	49.89	49.37	49.89
TOTAL SUPPLY	85.57			87.08	86.78				86.87	86.95	87.84

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
5 Comprises fuel ethanol and biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Feb2008	Mar2008	Apr2008	May2008	Jun2008*	Jun2005	Jun2006	Jun2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	454.8	465.2	468.6	456.5	450.8	446.1	459.7	490.3	-0.37	-0.25	0.36	-0.16
Motor Gasoline	263.1	250.3	238.4	235.4	237.5	246.5	240.4	234.3	-0.06	0.20	0.07	-0.14
Middle Distillate	189.3	177.7	176.8	184.1	191.9	191.8	200.0	195.7	0.12	0.02	-0.34	0.16
Residual Fuel Oil	47.0	48.0	48.6	49.4	50.7	46.3	51.8	44.4	0.00	0.04	0.01	0.03
Total Products[3]	645.6	622.2	623.4	640.6	657.5	679.8	668.1	657.1	0.16	-0.04	-0.46	0.39
Total[4]	1237.1	1224.4	1233.4	1243.8	1252.6	1275.4	1276.9	1294.9	-0.05	-0.54	-0.15	0.31
Europe												
Crude	322.7	334.1	336.7	339.0	328.7	339.4	339.8	333.2	-0.13	0.07	0.07	-0.06
Motor Gasoline	121.5	119.3	118.2	114.6	110.2	101.9	98.5	100.3	0.04	0.11	0.06	-0.10
Middle Distillate	236.2	245.4	230.7	237.2	236.8	231.3	248.4	262.4	-0.06	-0.18	0.05	-0.09
Residual Fuel Oil	78.0	82.2	81.4	80.6	80.1	71.4	74.4	69.0	0.11	-0.04	0.08	-0.02
Total Products[3]	540.9	554.4	536.6	536.5	531.2	506.0	522.8	531.0	0.16	-0.10	0.19	-0.26
Total[4]	934.2	959.7	943.1	950.5	934.2	914.7	935.1	939.7	0.02	-0.03	0.24	-0.28
Pacific												
Crude	162.5	156.0	153.3	156.4	154.8	176.4	181.2	170.7	-0.10	-0.01	-0.04	-0.01
Motor Gasoline	23.0	26.7	24.1	25.2	23.2	24.5	24.6	24.4	-0.03	0.01	0.05	-0.04
Middle Distillate	58.0	57.3	58.5	57.8	58.2	58.9	69.7	67.9	0.10	-0.08	-0.14	0.01
Residual Fuel Oil	19.2	20.1	21.8	24.0	22.6	23.4	23.2	22.1	0.04	-0.05	-0.01	0.03
Total Products[3]	159.4	164.7	165.5	169.6	164.4	173.2	183.2	182.4	0.15	-0.23	-0.11	0.00
Total[4]	393.6	391.7	390.2	400.4	392.7	422.1	435.7	425.9	0.03	-0.27	-0.14	0.01
Total OECD												
Crude	940.1	955.3	958.7	951.8	934.3	961.8	980.7	994.2	-0.61	-0.19	0.39	-0.23
Motor Gasoline	407.6	396.3	380.6	375.2	370.9	372.9	363.6	359.0	-0.05	0.32	0.17	-0.28
Middle Distillate	483.5	480.3	466.0	479.1	486.9	482.0	518.2	526.1	0.16	-0.23	-0.43	0.07
Residual Fuel Oil	144.2	150.3	151.8	154.0	153.4	141.0	149.4	135.4	0.15	-0.05	0.07	0.03
Total Products[3]	1345.9	1341.3	1325.5	1346.7	1353.1	1359.0	1374.2	1370.4	0.46	-0.37	-0.37	0.13
Total[4]	2564.9	2575.7	2566.7	2594.8	2579.5	2612.2	2647.7	2660.5	0.01	-0.84	-0.05	0.04

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Feb2008	Mar2008	Apr2008	May2008	Jun2008*	Jun2005	Jun2006	Jun2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	698.8	700.4	701.5	704.3	706.1	696.4	687.9	690.3	0.03	0.05	0.04	0.06
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	184.9	185.0	181.1	181.6	181.6	164.9	173.5	175.3	0.02	0.08	0.00	-0.04
Products	236.5	237.9	235.6	235.1	235.1	235.1	236.2	236.6	0.08	-0.09	0.02	-0.03
Pacific												
Crude	385.0	385.0	385.0	385.0	385.0	383.4	380.9	385.0	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.1	11.8	16.4	0.02	0.01	0.00	0.00
Total OECD												
Crude	1268.7	1270.4	1267.6	1270.8	1272.6	1244.8	1242.2	1250.6	0.05	0.12	0.04	0.02
Products	257.4	258.8	256.5	256.0	256.0	248.2	249.9	254.9	0.10	-0.08	0.02	-0.03
Total[4]	1527.1	1530.1	1525.1	1527.8	1529.6	1493.9	1493.1	1506.5	0.15	0.04	0.07	-0.01

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End June 2007		End September 2007		End December 2007		End March 2008		End June 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	189.7	78	201.4	84	205.8	87	202.8	-	-	-
Mexico	43.8	21	43.5	20	45.0	21	46.8	-	-	-
United States[4]	1731.6	84	1718.5	84	1667.3	84	1655.1	-	-	-
Total[4]	1987.2	78	1985.5	78	1940.2	78	1926.7	78	1960.7	79
Pacific										
Australia	38.9	40	36.8	37	35.6	37	34.3	-	-	-
Japan	622.4	132	629.6	120	621.0	114	610.0	-	-	-
Korea	158.3	77	157.4	68	143.5	62	142.8	-	-	-
New Zealand	7.7	49	8.1	51	8.2	49	8.4	-	-	-
Total	827.3	105	831.9	95	808.3	91	795.6	99	796.6	100
Europe[5]										
Austria	21.1	73	22.1	76	22.1	80	23.3	-	-	-
Belgium	28.7	48	27.8	42	26.1	40	31.3	-	-	-
Czech Republic	20.5	95	19.5	98	20.2	102	20.4	-	-	-
Denmark	17.3	92	18.8	96	17.1	95	16.4	-	-	-
Finland	26.3	114	29.7	129	27.1	128	30.5	-	-	-
France	174.5	90	175.3	87	179.9	91	177.5	-	-	-
Germany	283.5	110	276.5	108	274.6	110	281.5	-	-	-
Greece	35.6	84	34.8	73	37.4	80	34.3	-	-	-
Hungary	16.0	96	17.1	100	15.4	100	16.7	-	-	-
Ireland	11.1	55	12.6	62	10.6	55	12.1	-	-	-
Italy	133.0	80	134.2	77	132.9	82	130.9	-	-	-
Luxembourg	0.9	15	0.9	15	0.7	12	0.6	-	-	-
Netherlands	115.9	115	122.9	121	116.6	109	126.5	-	-	-
Norway	21.1	90	21.8	86	26.6	138	25.4	-	-	-
Poland	50.0	89	50.9	92	58.2	109	57.6	-	-	-
Portugal	24.7	82	23.2	77	23.6	82	24.9	-	-	-
Slovak Republic	6.9	81	7.7	87	7.9	99	9.0	-	-	-
Spain	130.5	81	136.7	84	133.9	84	134.2	-	-	-
Sweden	35.2	101	33.6	95	34.5	100	34.2	-	-	-
Switzerland	38.5	162	38.1	136	35.9	144	36.5	-	-	-
Turkey	60.5	80	61.1	92	60.3	90	59.0	-	-	-
United Kingdom	100.8	58	98.5	57	97.7	57	100.5	-	-	-
Total	1352.5	88	1363.8	87	1359.3	89	1383.5	93	1351.9	88
Total OECD	4167.0	85	4181.3	84	4107.8	84	4105.8	86	4109.1	85
DAYS OF IEA Net Imports[6]	-	121	-	121	-	122	-	122	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End March 2008 and June 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2586	80	29	51
1Q2006	4072	1487	2585	84	31	53
2Q2006	4141	1493	2648	84	30	54
3Q2006	4252	1495	2758	85	30	55
4Q2006	4166	1499	2668	84	30	54
1Q2007	4104	1507	2597	85	31	54
2Q2007	4167	1506	2660	85	31	54
3Q2007	4181	1520	2661	84	30	53
4Q2007	4108	1524	2584	84	31	53
1Q2008	4106	1530	2576	86	32	54
2Q2008	4109	1530	2579	85	32	53

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 1Q2008 and 2Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Mar 08	Apr 08	May 08	Year Earlier May 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.73	0.71	0.78	0.75	0.68	0.83	0.70	0.80	-0.10
Europe	0.90	0.78	0.70	0.64	0.74	0.68	0.67	0.75	0.53	0.69	0.55	0.13
Pacific	1.31	1.32	1.19	1.20	1.15	1.25	1.29	1.28	1.14	1.36	1.10	0.26
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.59	0.57	0.58	0.62	0.59	0.64	0.50	0.14
Europe	0.16	0.14	0.05	0.10	0.02	0.04	0.05	0.04	0.17	0.03	0.18	-0.15
Pacific	0.26	0.35	0.34	0.31	0.31	0.38	0.43	0.52	0.32	0.38	0.28	0.10
Saudi Heavy												
North America	0.17	0.21	0.09	0.05	0.11	0.04	0.06	0.03	0.06	0.04	0.09	-0.06
Europe	0.23	0.18	0.11	0.16	0.11	0.09	0.04	0.05	0.07	0.12	0.11	0.00
Pacific	0.25	0.23	0.20	0.18	0.20	0.23	0.22	0.19	0.27	0.26	0.19	0.07
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.39	0.64	0.45	0.74	0.81	0.56	0.66	0.37	0.28
Europe	0.23	0.32	0.30	0.28	0.38	0.24	0.20	0.26	0.15	0.23	0.20	0.03
Pacific	0.06	0.08	0.17	0.18	0.20	0.21	0.13	0.06	0.15	0.23	0.17	0.06
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	0.04	0.13	-	0.10	-	-
Europe	0.05	0.01	0.11	-	0.06	0.32	0.21	0.19	0.30	0.35	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.27	0.21	0.24	0.24	0.15	0.21	0.37	-0.16
Pacific	0.15	0.13	0.09	0.06	0.07	0.11	0.11	0.11	0.10	0.07	0.04	0.03
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.62	0.60	0.47	0.44	0.49	0.42	0.47	0.63	-0.17
Pacific	0.62	0.56	0.64	0.63	0.56	0.73	0.65	0.59	0.59	0.47	0.55	-0.08
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.71	0.75	0.86	0.66	0.49	0.60	0.63	0.72	-0.10
Europe	0.04	0.11	0.08	0.07	0.09	0.05	0.07	0.10	0.05	0.09	0.04	0.05
Pacific	-	-	0.01	-	-	0.02	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.70	0.76	0.68	0.60	0.60	0.39	0.34	0.73	-0.39
Europe	0.06	0.06	0.07	0.09	0.06	0.06	0.07	0.08	0.06	0.05	0.12	-0.07
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.25	1.24	1.03	1.05	1.03	0.99	1.29	-0.30
Europe	0.17	0.16	0.14	0.11	0.18	0.15	0.14	0.12	0.20	0.14	0.01	0.12
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.01	0.00	0.03	0.01	0.01	0.01	0.03	-0.02
Europe	0.03	0.01	0.02	0.06	-	0.02	0.00	0.00	0.04	-	0.18	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.12	0.01	0.01	0.01	-	-	0.12	0.10	0.02
Europe	1.77	1.68	1.86	1.97	1.90	1.73	1.76	1.57	2.03	1.71	1.73	-0.02
Pacific	0.00	0.00	0.00	-	-	0.01	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.77	0.87	0.82	0.85	0.87	0.84	0.62	0.84	-0.22
Europe	0.35	0.33	0.24	0.27	0.22	0.23	0.27	0.24	0.15	0.23	0.28	-0.05
Pacific	0.05	0.04	0.01	0.02	-	0.01	-	-	-	-	0.05	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.15	0.22	0.31	0.31	0.33	0.31	0.27	0.08	0.19
Europe	0.07	0.10	0.07	0.02	0.08	0.11	0.09	0.18	0.18	0.16	-	-
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Mar-08	Apr-08	May-08	Year Earlier May-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8111	8151	8267	7968	8087	7852	8128	8023	7686	4%
Europe	9792	9784	9770	9738	10056	9924	9771	9913	9703	9789	9740	1%
Pacific	6801	6813	6718	6340	6576	7003	7100	6997	6646	6472	6139	5%
Total OECD	25050	24792	24599	24229	24899	24895	24958	24762	24477	24284	24155	1%
LPG												
North America	18	14	27	14	38	41	27	13	5	8	16	-52%
Europe	248	264	276	282	244	291	305	247	231	240	265	-9%
Pacific	527	579	557	588	502	572	599	592	690	669	596	12%
Total OECD	793	858	860	884	785	903	931	853	926	917	878	4%
Naphtha												
North America	115	71	39	31	33	60	25	15	81	39	34	14%
Europe	273	314	266	223	279	289	227	233	218	250	223	12%
Pacific	746	754	794	812	768	758	796	805	731	767	859	-11%
Total OECD	1133	1138	1099	1066	1080	1108	1049	1054	1030	1056	1115	-5%
Gasoline[3]												
North America	1034	1143	1130	1357	1198	1048	888	895	1073	1210	1440	-16%
Europe	165	160	204	219	156	181	224	304	294	194	217	-11%
Pacific	102	97	72	83	56	71	112	122	102	115	98	16%
Total OECD	1301	1400	1406	1659	1410	1301	1224	1322	1469	1518	1755	-14%
Jet & Kerosene												
North America	173	161	183	205	205	143	96	68	93	79	187	-58%
Europe	375	374	364	347	385	398	361	412	357	359	427	-16%
Pacific	66	71	41	35	37	43	44	42	31	44	44	0%
Total OECD	614	606	588	587	627	584	501	523	482	482	658	-27%
Gasoil/Diesel												
North America	143	175	130	141	142	106	99	60	66	22	122	-82%
Europe	845	967	780	640	745	827	914	955	597	656	578	13%
Pacific	79	81	94	97	90	106	102	96	103	176	95	86%
Total OECD	1067	1223	1004	878	977	1040	1116	1111	765	853	795	7%
Heavy Fuel Oil												
North America	527	343	323	323	286	320	328	255	314	268	290	-8%
Europe	491	476	434	420	457	400	478	509	408	352	378	-7%
Pacific	85	92	92	97	92	101	125	99	145	154	96	60%
Total OECD	1102	911	848	840	835	821	930	862	866	774	764	1%
Other Products												
North America	1027	1121	1053	1210	1035	934	1041	908	1043	1090	1308	-17%
Europe	781	929	869	855	923	831	745	805	866	789	828	-5%
Pacific	248	243	252	207	262	282	290	267	244	281	237	18%
Total OECD	2056	2293	2174	2272	2220	2047	2077	1980	2152	2160	2373	-9%
Total Products												
North America	3037	3028	2885	3281	2937	2652	2504	2215	2674	2715	3398	-20%
Europe	3177	3484	3192	2986	3190	3218	3255	3465	2970	2840	2916	-3%
Pacific	1852	1918	1901	1918	1808	1934	2068	2023	2046	2206	2026	9%
Total OECD	8066	8429	7978	8185	7934	7803	7828	7704	7690	7760	8339	-7%
Total Oil												
North America	11493	11222	10996	11432	11203	10620	10592	10067	10802	10738	11673	-8%
Europe	12970	13268	12962	12724	13246	13141	13026	13379	12672	12629	12656	0%
Pacific	8654	8731	8619	8258	8384	8937	9169	9020	8693	8677	8165	6%
Total OECD	33116	33221	32577	32414	32833	32698	32786	32466	32167	32044	32494	-1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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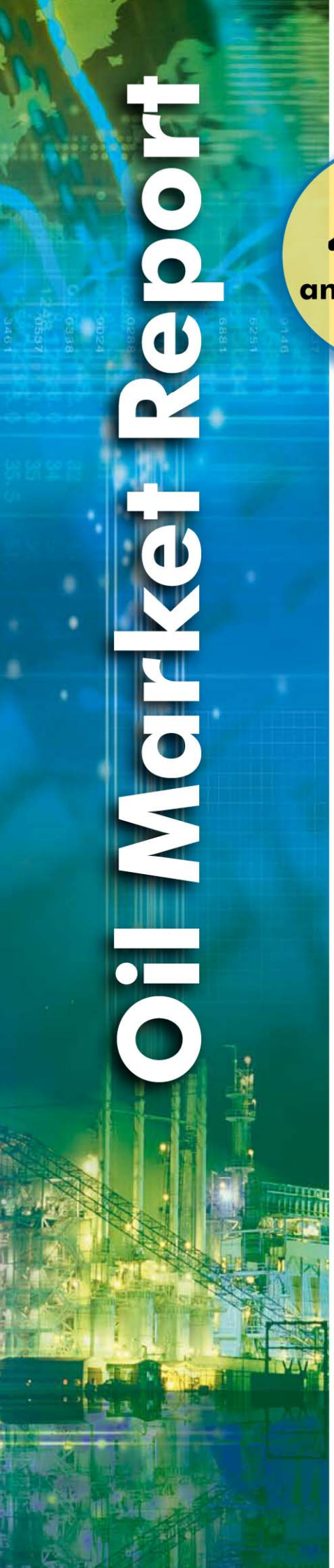

INTERNATIONAL ENERGY AGENCY

25th anniversary issue

10 September 2008

HIGHLIGHTS

- **August global oil supply fell by 1.0 mb/d to 86.8 mb/d** on North Sea maintenance, the BTC pipeline outage and lower OPEC supply. Non-OPEC output is revised by -180 kb/d for 2008 and by -85 kb/d for 2009, with hurricane outages impeding 2H08 supply. Non-OPEC growth including OPEC NGL is now 580 kb/d in 2008 and 1.56 mb/d in 2009.
- **OPEC crude supply in August fell by 195 kb/d to 32.5 mb/d** on field and pipeline outages in Iraq, Angola, Libya and Nigeria, while effective spare capacity rose from 1.5 mb/d to 1.9 mb/d. The 'call' on OPEC is revised up to 32.2 mb/d for 3Q08 and 31.7 mb/d for 4Q08. This report went to press ahead of the OPEC 9 September meeting in Vienna.
- **Hurricane activity in the US Gulf of Mexico** results in a 1.4 mb/d downward revision to US refinery crude throughput in September, to an average of 13.9 mb/d. Global September crude runs could decline by 1.3 mb/d from August. OECD crude runs are forecast to average 37.4 mb/d in September, their lowest level since October 2002.
- **OECD stocks rose by 47 mb in July to 2,646 mb**. A large, unseasonal crude build from a revised June base and weaker demand leave end-July OECD cover at 54.5 days. Higher OECD end-June stocks now imply a 380 kb/d OECD stockbuild in 2Q08 versus last month's estimate of flat second-quarter stocks, and a seasonal 2Q average build of 0.9 mb/d.
- **Forecast global oil demand has been lowered for both 2008 and 2009**, following weaker deliveries in the OECD. World demand averages 86.8 mb/d in 2008 (+0.8% or +0.7 mb/d versus 2007 and 100 kb/d lower than previously estimated) and 87.6 mb/d in 2009 (+1.0% or +0.9 mb/d year-on-year and 140 kb/d lower than in our last report).
- **Benchmark crude futures continued their downward slide** in August, approaching $100/bbl in early September, as fundamentals eased. Weaker OECD demand and higher stocks dominated sentiment, while markets have so far shrugged off Hurricanes Gustav and Ike, though the latter could yet defer post-Gustav supply recovery.

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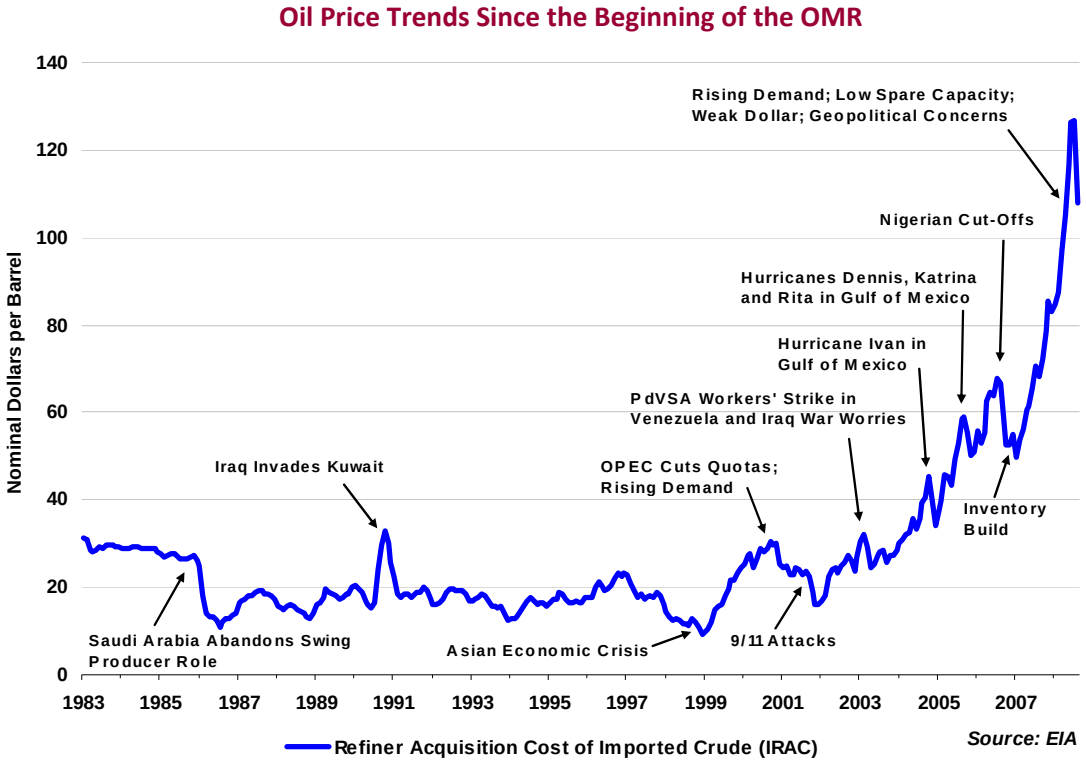
FOREWORD FROM THE FIRST OMR EDITOR

25th Anniversary of the IEA Oil Market Report

This month marks the 25th anniversary of the IEA *Oil Market Report (OMR)*. I had the privilege to edit the report from its first public issue in September 1983 until August 1985. I would like to acknowledge my predecessor, James Bretherton, who worked tirelessly to prepare the groundwork to take the *OMR* public. The report's growth and contribution to understanding the complex world oil market is impressive as each succeeding editor has contributed their special talents. The *OMR* provides readers with a consistent, accurate and timely picture of key oil developments and first-rate objective analysis of market trends. A large and growing number of subscribers from consuming and producing countries including governments, oil industry executives and oil market watchers around the world regularly read the *OMR*. The report provides valuable data and objective analysis on world oil consumption, production, capacity, trade, prices, refinery activity and OECD inventories. Over the years, the report has broadened and deepened its coverage to include more countries and new topics. The next 25 years will be equally challenging as changing market developments and new issues emerge.

The First 25 Years

The oil market has experienced many swings in oil prices over the past 25 years, driven by geopolitical issues including wars and supply disruptions, changes in OPEC production behaviour and economic business cycles which influenced the world oil balance and price trends. As shown in the graph below, oil prices exhibited wide swings over this period, falling in 1986 in response to the Saudi decision to abandon its role as swing supplier, rising in 1990 following Iraq's invasion of Kuwait and falling again in late 1997 and 1998 following the Asian financial crisis that depressed oil demand. From 1983 to 2001 annual oil prices rose in seven years and fell in 11 years with prices averaging a low of $14 per barrel in 1998 and a high of $30 per barrel in 1983 and 2000.



The last seven years have been characterised by an unprecedented, sharp and steady rise in oil prices. Prices have risen for a record-setting seven consecutive years from $26 per barrel in 2001 to over $140 per barrel in July 2008. The reality of fundamentally tight market conditions, combined with market uncertainties about demand, supply and political developments, is putting steady upward pressure on prices. World oil consumption rose by 9 million b/d over the period. China, India, and the Middle East are major contributors to this growth. Non-OPEC supply, excluding Angola, climbed by almost 4 million b/d with OPEC countries supplying the remaining increase in demand. Over the period, available surplus production capacity dropped from 4 million b/d in 2001 to under 2 million b/d currently. Surplus capacity has fallen well below historical levels, which creates uncertainty in the market and amplifies any actual or perceived geopolitical concerns.

The Next 25 Years

The current high oil prices and concern about the global economy and the environment promises to make oil market conditions a priority issue for both consuming and producing countries in the years ahead. The *OMR* will remain a critical tool to help understand oil market trends. The future challenges for the report, however, are substantial as market watchers are eager to know the answers to tough questions such as why are prices so high, will the recent downturn in prices continue, when and by how much will prices fall? The current debate over the cause of high oil prices between those believing fundamental factors are the primary driver and others arguing that speculators are the culprit, reinforces the view that well-functioning markets need transparency. A clearer understanding of current and forward supply and demand fundamentals, as well as a better understanding of non-traditional fundamental factors, such as the influence of financial markets, is needed. More accurate information about future available production capacity levels in both OPEC and non-OPEC countries would add to market transparency. Collecting consumption and inventory data on non-OECD countries is also important given they will represent a growing share of the world market. The joint statement from the recent Jeddah Energy Meeting in June 2008 noted the need for enhanced oil-data collection to further improve market transparency and stability. The IEA certainly will play an important role in meeting that challenge.

Acknowledgements

I would like to acknowledge the hundreds of dedicated individuals that worked tirelessly to meet tight deadlines amid fast-changing developments that required last-minute adjustments to put out the monthly report over the past 25 years. I also want to challenge the individuals that will work on the report in the future to make it better and more useful and more transparent to oil market watchers.

Guy Caruso

TWENTY-FIVE YEARS AND COUNTING: DATA, DEMAND DESTRUCTION AND SUPPLY DOWNTIME

This issue coincides with the 25th anniversary of the very first *Oil Market Report*. We are celebrating the occasion with a new look for the report, with an introductory article from our very first editor, Guy Caruso and, by coincidence, with a new Editor, as Lawrence Eagles moves on to new challenges after ably steering the Oil Industry and Markets Division at the IEA for three years.

It would be nice to reflect that, 25 years on, analysis had somehow filled in most of the gaps in our understanding of how the oil market functions and where it may be headed in future. In reality, the challenges are as great as ever, and the proliferation of information and technologies these past two and a half decades, while helping us dig deeper beneath the workings of the industry, throw up many of their own surprises.

Data availability and quality remain crucial. Huge progress has been made by governments and international bodies, through valuable initiatives such as JODI. Yet this report frequently calls for more data on reserves and field-specific output from producers, and for more granular demand and inventory data from the developing countries that now drive global consumption growth. We will continue to do so. This month's report also sees notable revisions to preliminary data from the US, Japan, Canada and Belgium among others. Data revisions are a fact of life, although the scale of some of the recent adjustments is larger than usual. Our own member countries recognise gaps in their data-reporting systems, highlighting the need for adequate resources if analysts are to be able to keep up with ever-more complex, globalised, and yet at times more differentiated, markets.

This month's report touches on the debate over OECD demand suppression versus destruction. It is too early to come down overwhelmingly on one side or the other, though there are clear signs that weakening economic prospects plus high prices are causing behavioural shifts and purchasing choices in the OECD countries. Whether these would be sustained if prices were to weaken further remains open to debate, but it is something we will continue to try to assess. We also have to bear in mind potential two-way substitution impacts, into and away from oil. Significantly, we are yet to see clear signs that economic slow-down or demand weakness are becoming entrenched in the non-OECD economies. Quite the reverse, as higher demand estimates for China, India and Iran this month partly counter downward revisions for the OECD economies. There are even signs that some earlier reductions in price subsidies in Asia are being reversed, so it looks premature to write off global demand growth yet.

OPEC Ministers will have already met in Vienna to decide on production policy by the release date of this report. Market fundamentals look likely to ease in coming months, in part a response to the high prices seen over the past 12-18 months. Inventories look slightly more comfortable, but maybe they need to be, given the market risks and tight spare capacity that persist. New upstream capacity in Saudi Arabia and Angola is welcome, but is being temporarily eclipsed by stoppages elsewhere. The recent BTC pipeline outage, shuttered Georgian ports and Hurricanes Gustav, and now Ike, show how easily and quickly crude and products can be knocked out of the supply/demand balance if weather, technical and political risks materialise. In this environment, Guy Caruso's call for a better, more useful and transparent *OMR* in future represents a stiff challenge, one we grasp with enthusiasm, but also one which will require the help of producer and consumer governments alike.

DEMAND

Summary

- **Forecast global oil demand** has been lowered in both 2008 and 2009, following weaker-than-expected deliveries in the OECD. World demand is expected to average 86.8 mb/d in 2008 (+0.8% or +0.7 mb/d versus 2007 and 100 kb/d lower than previously estimated) and 87.6 mb/d in 2009 (+1.0% or +0.9 mb/d compared with the previous year and 140 kb/d lower than in our last report).

- **Oil demand in the OECD** is seen averaging 48.4 mb/d in 2008 (-1.6% or -0.8 mb/d versus 2007) and 47.9 mb/d in 2009 (-1.1% or -0.5 mb/d on a yearly basis). These prognoses are roughly 160 kb/d lower than previously estimated for both years, as a result of significant revisions in both North America and the Pacific. The data suggest that the demand impact of weaker economic conditions and high prices during the summer – when oil prices reached an all-time peak – was more marked than expected, notably in the United States. Furthermore, the effects of the ongoing hurricane season on US demand are subject to considerable uncertainty.

Global Oil Demand (2007-2009)

(million barrels per day)

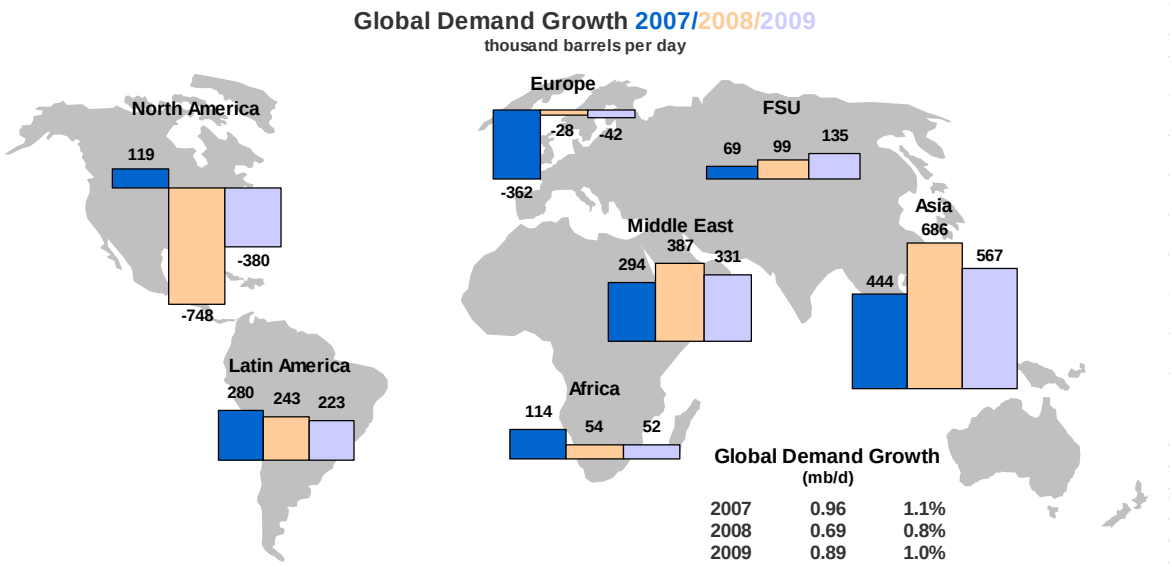
	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Americas	31.1	31.0	31.3	31.2	31.2	30.5	30.4	30.8	30.9	30.6	30.3	30.3	30.6	30.8	30.5
Asia/Pacific	25.5	24.9	24.5	25.7	25.1	26.3	25.4	25.1	26.4	25.8	26.9	26.0	25.6	27.1	26.4
Europe	16.0	15.7	16.1	16.4	16.1	16.0	15.6	16.1	16.3	16.0	16.0	15.6	16.1	16.3	16.0
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.4
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.2	6.8	6.9	7.0	7.3	7.5	7.1	7.2
World	**86.2**	**85.1**	**85.8**	**87.2**	**86.1**	**86.8**	**85.7**	**86.5**	**88.0**	**86.8**	**87.8**	**86.5**	**87.3**	**89.0**	**87.6**
Annual Chg (%)	0.4	1.5	1.1	1.5	1.1	0.7	0.6	0.9	1.0	0.8	1.1	1.0	0.9	1.1	1.0
Annual Chg (mb/d)	0.4	1.3	0.9	1.2	1.0	0.6	0.5	0.8	0.9	0.7	1.0	0.8	0.8	1.0	0.9
Changes from last OMR (mb/d)	0.00	-0.01	0.00	0.00	0.00	0.03	-0.38	-0.04	-0.01	-0.10	0.02	-0.42	-0.15	-0.01	-0.14

- **Non-OECD oil demand** is forecast at 38.3 mb/d in 2008 (+4.0% or +1.5 mb/d versus 2007 and 50 kb/d higher than previously estimated) and 39.8 mb/d in 2009 (+3.7% or +1.4 mb/d compared with the previous year and 20 kb/d higher than in our last report). These upward revisions are mostly related to a reassessment of China's 3Q08 demand, gasoil use in India and fuel oil consumption in Iran. Non-OECD demand thus continues to offset the contraction seen in the OECD. Moreover, even though the outlook for post-Olympics Chinese demand remains uncertain, claims that growth will plummet during the forthcoming months are open to question.

- **Demand in the US may be poised for a more permanent, rather than transient, downward trend.** Sustained high prices and sluggish economic activity are arguably likely to reinforce the current wave of structural adjustments, which could further reduce US consumption per capita in the medium to long term. Anecdotal evidence of this transformation includes the marked shift to more efficient vehicles, changing mobility and driving habits, signs that suburban living is gradually losing its appeal, and ongoing modifications in business practices. Nevertheless, we have kept our US demand forecast for 2009 largely unchanged until more tangible proof of these trends becomes available.

OECD

OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 1.5% year-on-year in July, according to preliminary data, with losses in North America and Europe largely offsetting gains in the Pacific. In **OECD North America** (which includes US Territories), oil product demand shrank further (-2.9%) as a result of less driving by US motorists amid record-high oil prices. In **OECD Europe**, demand was also affected by high prices, but fell by a more modest 0.1%. In **OECD Pacific**, demand rose by only 0.1%, despite strong Japanese electricity needs and vigorous demand in Australia.



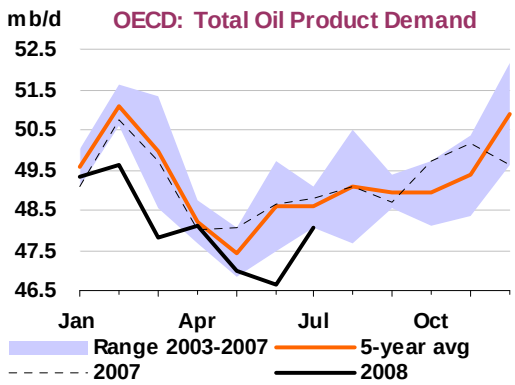
OECD Demand based on Adjusted Preliminary Submissions - July 2008

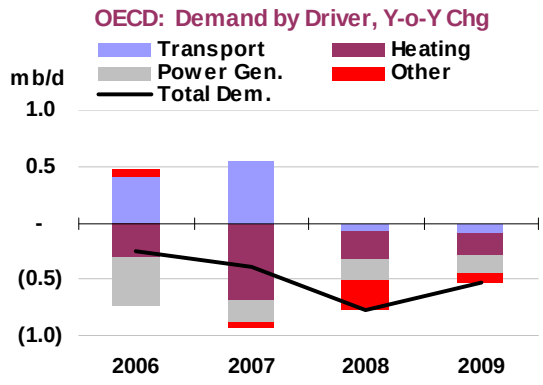
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.99**	**-2.1**	**1.86**	**-3.6**	**4.16**	**4.5**	**0.96**	**-6.3**	**1.12**	**-7.3**	**5.83**	**-7.49**	**24.92**	**-2.9**
US50	9.34	-3.1	1.60	-4.2	3.61	2.3	0.49	-2.7	0.59	-11.8	4.28	-9.7	19.91	-4.0
Canada	0.78	0.2	0.15	2.8	0.19	1.1	0.31	-5.1	0.13	-1.1	0.89	-0.9	2.45	-0.7
Mexico	0.79	8.4	0.07	-5.0	0.31	15.6	0.13	15.6	0.30	-2.9	0.60	-0.4	2.21	5.0
OECD Europe	**2.52**	**-4.8**	**1.41**	**-0.1**	**4.44**	**0.9**	**1.66**	**10.3**	**1.62**	**-3.9**	**3.69**	**-0.3**	**15.34**	**-0.1**
Germany	0.49	-3.7	0.21	0.7	0.68	0.2	0.44	46.1	0.18	-8.7	0.60	-1.3	2.59	3.9
United Kingdom	0.38	-5.6	0.35	0.1	0.45	0.4	0.14	-7.7	0.07	-1.1	0.35	1.5	1.75	-1.6
France	0.23	-5.9	0.17	2.1	0.71	0.4	0.29	14.9	0.12	20.0	0.48	1.6	2.01	2.9
Italy	0.31	-7.8	0.11	-5.6	0.58	0.4	0.08	-3.9	0.23	-8.9	0.34	-2.1	1.65	-3.7
Spain	0.16	-5.4	0.15	3.5	0.56	1.6	0.18	-8.8	0.21	-4.0	0.36	1.3	1.63	-1.0
OECD Pacific	**1.52**	**-4.9**	**0.56**	**-12.5**	**1.22**	**1.7**	**0.41**	**-13.0**	**0.88**	**0.4**	**3.18**	**6.7**	**7.78**	**0.1**
Japan	0.98	-6.8	0.32	-18.8	0.58	-2.0	0.30	-13.9	0.52	10.8	1.86	6.5	4.55	-0.9
Korea	0.16	-5.1	0.11	-5.3	0.23	-13.5	0.09	-11.6	0.31	-13.7	1.13	8.1	2.03	-1.3
Australia	0.33	0.0	0.11	2.1	0.36	21.7	0.02	-2.9	0.04	-1.2	0.17	2.7	1.04	7.3
OECD Total	**15.03**	**-2.8**	**3.84**	**-3.8**	**9.82**	**2.5**	**3.03**	**1.0**	**3.63**	**-4.0**	**12.69**	**-2.2**	**48.04**	**-1.5**

* Including US territories

June revisions, however, were significant. Finalised figures indicate that OECD demand contracted by 4.1% during that month – almost three times more than previously estimated and implying a downward adjustment of 1.3 mb/d for the month and 0.5 mb/d for 2Q08. These revisions came essentially from the US and Japan. Consequently, OECD demand is now forecast at 48.4 mb/d in 2008 (-1.6% or -0.8 mb/d versus 2007). In 2009, demand is seen contracting by 1.1% on a yearly basis (roughly -0.5 mb/d) to 47.9 mb/d. For both years, these estimates are about 160 kb/d lower when compared with our last report.





Total OECD Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Apr 08	May 08	Jun 08*	Latest month vs. May 08	Latest month vs. Jun 07
LPG & Ethane	4.83	4.74	4.48	4.93	5.16	4.59	4.69	4.57	4.51	-0.07	-0.03
Naphtha	3.24	3.21	3.19	3.28	3.28	3.00	3.03	3.02	2.95	-0.07	-0.05
Motor Gasoline	14.92	14.65	15.31	14.83	14.23	14.72	14.88	14.76	14.52	-0.24	-0.74
Jet & Kerosene	4.12	4.11	3.97	4.23	4.34	3.87	3.94	3.78	3.90	0.13	-0.03
Gas/Diesel Oil	13.14	13.14	12.86	13.59	13.39	12.61	13.27	12.42	12.15	-0.27	-0.62
Residual Fuel Oil	3.95	3.70	3.80	3.93	3.87	3.62	3.69	3.59	3.57	-0.02	-0.37
Other Products	4.98	4.87	5.25	5.04	4.63	4.83	4.64	4.83	5.03	0.20	-0.17
Total Products	**49.19**	**48.42**	**48.86**	**49.83**	**48.90**	**47.24**	**48.13**	**46.97**	**46.63**	**-0.34**	**-2.01**

* Latest official OECD submissions (MOS)

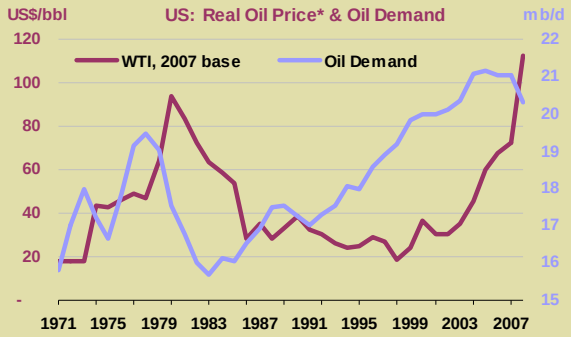
Demand 'Destruction' versus Demand 'Suppression'

As oil demand continues to shrink in the OECD as a result of adverse fundamentals – the economic slowdown and the high oil price – there is ongoing debate on whether this loss will be permanent or temporary – i.e., whether demand has been 'destroyed' or merely 'suppressed', notably in the US, the largest OECD (and global) oil consuming country. Although, at first glance, historical evidence would lend some credence to the 'suppression' view, the 'destruction' case may be more persuasive and points to profound long-term consequences.

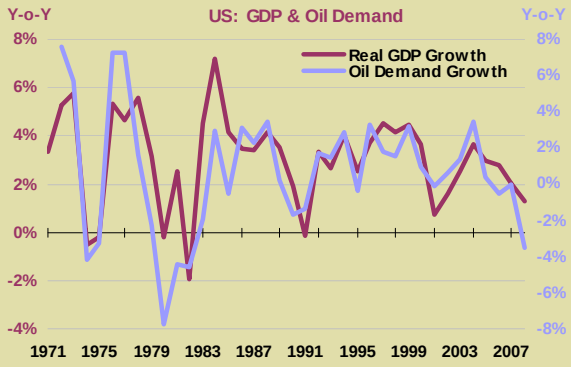
Proponents of the 'suppression' view argue that US oil demand will rebound to previous levels as oil prices fall. According to this thinking, the oil market is cyclical: strong demand prompts the oil price to rise, which then eventually curbs demand; the weaker demand, in turn, depresses the price, fostering a new round of demand growth.

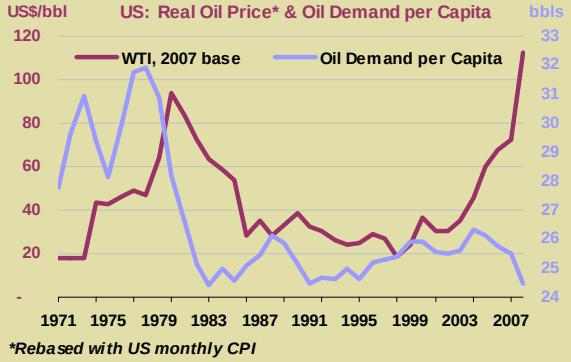
The sharp price rise that began in the late 1970s, which slammed US oil demand, is thus often presented as incontrovertible evidence of this dynamic. The oil price doubled in real terms between 1978 and 1980, leading to a 9.9% oil demand contraction over that period. By 1983, US demand had fallen to 15.7 mb/d. Over the following 20 years, however, the oil price gradually fell to its pre-1979 level (in real terms) and, by 1998, oil demand had more than recovered (averaging 19.2 mb/d in that year). By extrapolation, the current price slide should therefore result in a similar outcome, with US oil demand eventually rebounding to its 2005 peak of 21.2 mb/d.

Such reasoning, however, ignores the fact that, even though a price decline may play an important role, the rebound in oil demand will be primarily driven by strong economic growth; the correlation between economic activity and oil demand is very strong. Between 1983 and 2007, US GDP grew by 3.2% per year on average, while demand expanded by 1.1% per year on average over the same period. The current contraction in oil demand, and particularly of gasoline, is mainly related to worsening economic conditions (an endogenous factor), which have coincided with skyrocketing prices (an exogenous factor).



Rebased with US monthly CPI





Rebased with US monthly CPI

Demand 'Destruction' versus Demand 'Suppression' (continued)

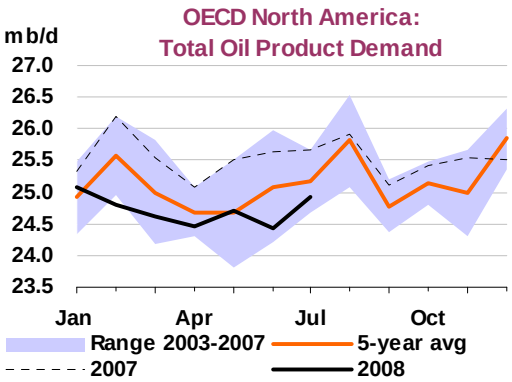
The 'suppression' argument also overlooks efficiency improvements (notably regarding vehicle fuel efficiency), interfuel substitution (particularly away from heavy fuel oil) and demographic patterns: as such, US oil demand *per capita* fell from 32 barrels in 1978 to almost 26 barrels in 2007 – a 19% drop, despite the increase in overall oil demand. Thus, both the income and price effects are *asymmetric*: their rise has greater impact upon demand than their decline, a conclusion supported by much academic literature.

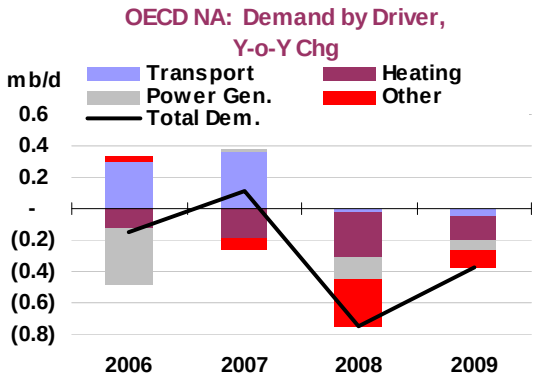
As such, rather than pondering whether demand will be 'destroyed' or 'suppressed', a more pertinent question is arguably whether the ongoing structural shift towards greater energy efficiency will be more pronounced than in the past. Even though the current price slide from its July all-time record high is largely related to fundamentals (the severe contraction in OECD demand, most notably in the US), the oil market will likely remain tight given the continued strength of demand growth outside the OECD and supply-side constraints. From that perspective, sustained high prices and sluggish economic activity (the economic rebound in the OECD is not expected to occur before late 2009 at best) will continue to support the current wave of structural adjustments, which will further reduce US consumption per capita in the medium to long term. The available evidence so far, albeit admittedly anecdotal, suggests that US consumers are both expecting the oil price to stay high and the economy to remain subdued. Nevertheless, we have kept our US 2009 forecast largely unchanged until more tangible proof of these trends becomes available.

- The shift from gas-guzzling SUVs and light trucks to smaller, more efficient vehicles is becoming a stampede (the share of gas-guzzling units with respect to total vehicle sales is now below 50% for the first time since the early 2000s). This change in sales patterns is likely to have significant consequences upon the efficiency of the overall US 250-million vehicle fleet (in addition to tougher fuel-efficiency standards), of which 90% runs on gasoline. Although it would probably take almost two decades to turn over the entire fleet, assuming that sales remained at about 13 million new vehicles per year on average, the potential effect could be dramatic: a 30% efficiency improvement – to levels seen in Europe and Japan – could translate into a fall of some 3 mb/d in US gasoline demand (which currently accounts for close to 45% of total domestic oil demand). This figure may seem far-fetched, but the current trend may well be seen in retrospective as the inflexion point – i.e., the peak – of US gasoline demand.
- US motorists are driving much less and using other means of transportation. The number of vehicle-miles driven (VMT) has fallen for the eighth month in a row in June (the latest available figure), notably in rural areas. More symbolically still, most observers expect a sharp VMT drop during the Labor Day weekend in early September, when the so far lacklustre summer driving season comes to an end. The same can be observed in air travel, which is also contracting and unlikely to pick up as fares rise and previously complimentary services such as checked baggage become subject to a fee. More travellers are expected instead to opt for trains, buses, motorcycles and cruise ships during the Labor Day holiday. Admittedly, these patterns may be transient and revert once the economy improves; however, it is unclear whether old habits will return, as behavioural changes could by then be well entrenched.
- The suburban sprawl may be gradually losing its appeal. House prices seem to be falling slightly more outside city centres or in areas where economic activity is concentrated – that is, in the suburbs and most particularly in the 'exurbs' (which are further away). This could suggest that more Americans are considering living closer to their place of work, given often-limited public transportation alternatives – another structural trend that would eventually entail even less driving.
- Finally, there is increasing evidence that businesses, ranging from manufacturing to airlines, are fundamentally changing the way they operate – since many business practices were designed for an era of cheap energy. Many US companies are seemingly reviewing how they handle stocks or manufacture, package and ship goods. This trend could also signal a momentous structural change in the making.

North America

Oil product demand in North America (including US Territories) shrank, for the seventh month in a row, by 2.9% year-on-year in July, according to preliminary data. Demand weakness in the US and to a certain extent in Canada continued to drag down regional consumption by largely offsetting sturdy Mexican





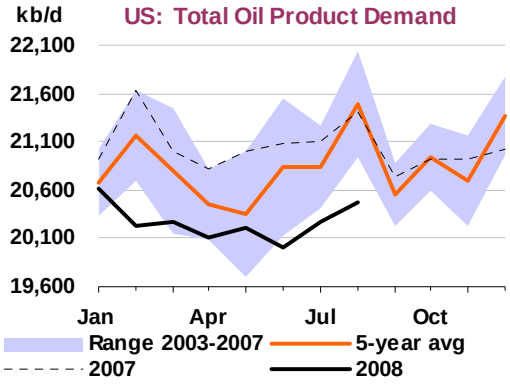
growth. Moreover, revisions to June preliminary data, as noted earlier, were particularly large (almost -0.7 mb/d): demand in OECD North America actually contracted by 5.3% year-on-year during that month, over twice as much as previously estimated. Regional oil demand is now expected to average 24.8 mb/d in 2008 (-2.9% or -750 kb/d on a yearly basis) and 24.4 mb/d in 2009 (-1.5% or -380 kb/d). Compared with our last report, these estimates are about 100 kb/d lower in both years.

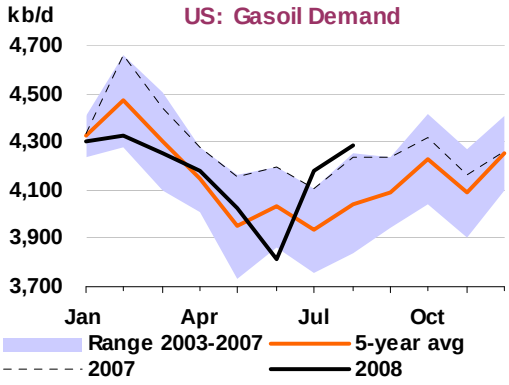
OECD North America Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Apr 08	May 08	Jun 08*	Latest month vs. May 08	Latest month vs. Jun 07
LPG & Ethane	2.93	2.82	2.73	2.97	3.10	2.64	2.63	2.65	2.64	-0.02	-0.09
Naphtha	0.41	0.39	0.42	0.41	0.36	0.37	0.39	0.37	0.34	-0.04	-0.10
Motor Gasoline	10.84	10.71	11.07	10.84	10.47	10.74	10.69	10.85	10.68	-0.17	-0.41
Jet & Kerosene	1.89	1.84	1.91	1.90	1.84	1.84	1.83	1.81	1.88	0.07	-0.04
Gas/Diesel Oil	5.24	5.14	5.13	5.24	5.29	4.95	5.11	4.99	4.75	-0.24	-0.38
Residual Fuel Oil	1.25	1.13	1.21	1.18	1.14	1.22	1.19	1.23	1.23	0.00	-0.08
Other Products	2.97	2.76	3.11	2.95	2.63	2.78	2.60	2.82	2.91	0.10	-0.12
Total Products	**25.54**	**24.79**	**25.57**	**25.49**	**24.84**	**24.54**	**24.45**	**24.72**	**24.43**	**-0.28**	**-1.22**

* Latest official OECD submissions (MOS)

Adjusted preliminary data in the continental **United States** corroborate the demand weakness that has been documented since August 2007. Inland deliveries – a proxy of oil product demand – contracted by 4.0% year-on-year in July and by as much as 4.5% in August, with all product categories bar naphtha and gasoil registering significant contractions. More dramatically, monthly data for June were sharply revised down (-600 kb/d), with the bulk of the adjustment related to gasoil deliveries.





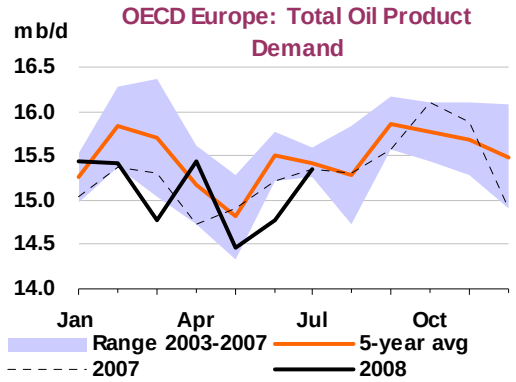
This confirms the assertion that the oil price rise, combined with the economic downturn, has been devastating for beleaguered US consumers – after all, retail prices have almost tripled in less than two years, while most indicators suggest that many economic sectors are rapidly weakening (with the possible exception of exports, which underpinned the relatively strong 2Q08 GDP growth). US oil

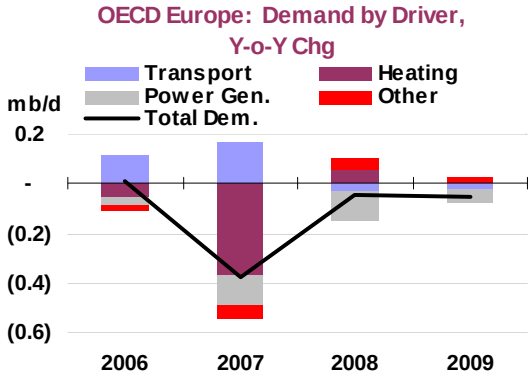
demand is thus on track to contract by as much as 3.6% year-on-year in 2008 to 19.9 mb/d, and by 1.9% in 2009 (to 19.5 mb/d), roughly 100 kb/d less for both years when compared with our previous report.

The June revisions also bring back to the fore the issue of reliability of the weekly data released by the US Energy Information Administration (EIA). Our adjustment was lower than the EIA's (which totalled almost -800 kb/d), but simply because we attempt to anticipate such changes. We nevertheless base our estimates of the current month (in this case, August) on EIA weekly figures – yet, by its own admission, the agency is having increasing difficulties in estimating weekly deliveries. EIA officials have recently pointed out that this is related to missing ethanol and trade data (notably exports), which results in inflated estimates of gasoline and diesel deliveries – and in subsequently large downward revisions.

Europe

Oil product demand in Europe fell by a modest 0.1% year-on-year in July, according to preliminary inland delivery data. Gains in naphtha and gasoil almost entirely offset losses on other product categories, notably gasoline (-4.8%) and residual fuel oil (-3.9%). Revisions to June annual submissions, meanwhile, stood at -110 kb/d, largely driven by the Netherlands (lower-than-expected fuel oil deliveries) and Turkey (minor downward revisions across the board). In addition, Belgium made further upward adjustments to its naphtha figures back to January (roughly +30 kb/d). Looking forward, demand in OECD Europe is foreseen to average 15.3 mb/d in 2008 and 15.2 mb/d in 2009, implying a year-on-year decline of 0.3% and 0.4%, respectively, only marginally lower than our previous forecast.



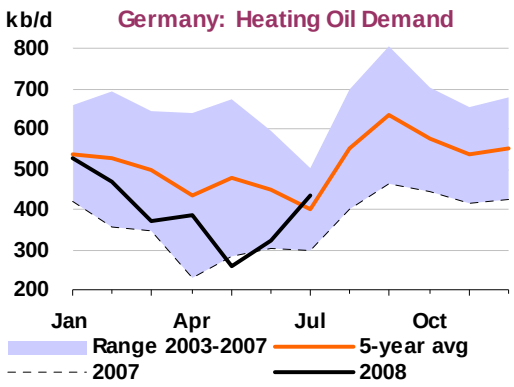


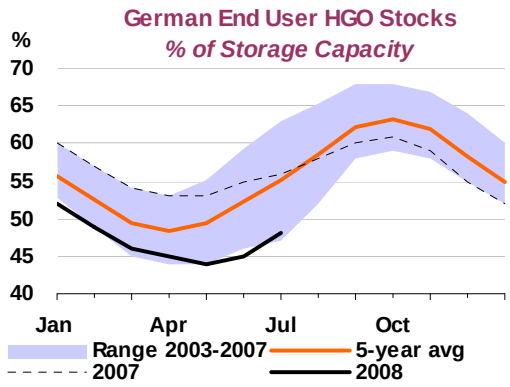
Inland deliveries in **Germany** rebounded by 3.9% year-on-year in July. Higher-than-expected heating oil deliveries (+46.1%) were largely behind the rise, as the relative weakness of gasoline (-3.7%) and residual fuel oil demand (-8.7%) observed in recent months prevailed. Heating oil consumer stocks averaged 48% of capacity by end-July, markedly higher than a month earlier (45%) but well below the readings of July 2007 (56%). The German heating oil market has thus shown some signs of life over the past two months, but demand could nevertheless remain quite subdued when compared with last year. For 2009, though, we continue to base our forecast on expectations of more normal patterns of refilling.

OECD Europe Demand by Product
(million barrels per day)

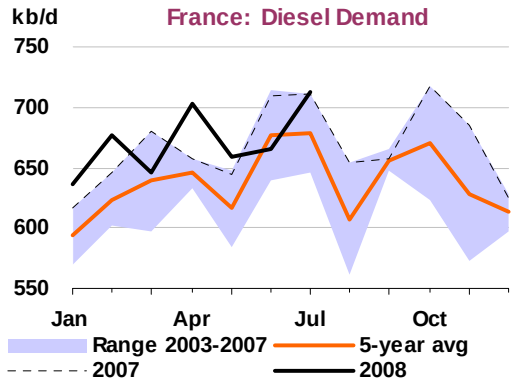
	2007	2008	3Q07	4Q07	1Q08	2Q08	Apr 08	May 08	Jun 08*	Latest month vs. May 08	Latest month vs. Jun 07
LPG & Ethane	0.95	0.97	0.86	0.98	1.06	0.98	1.05	0.94	0.95	0.01	0.04
Naphtha	1.18	1.18	1.14	1.20	1.23	1.08	1.11	1.07	1.06	-0.01	0.00
Motor Gasoline	2.51	2.38	2.60	2.42	2.29	2.44	2.44	2.44	2.42	-0.02	-0.22
Jet & Kerosene	1.30	1.32	1.40	1.29	1.25	1.31	1.30	1.25	1.37	0.12	0.03
Gas/Diesel Oil	6.10	6.23	6.05	6.48	6.30	5.94	6.34	5.70	5.78	0.09	-0.06
Residual Fuel Oil	1.73	1.61	1.67	1.73	1.67	1.51	1.57	1.48	1.48	0.00	-0.23
Other Products	1.53	1.58	1.68	1.52	1.41	1.63	1.62	1.58	1.70	0.12	-0.01
Total Products	**15.30**	**15.26**	**15.41**	**15.62**	**15.20**	**14.88**	**15.44**	**14.46**	**14.77**	**0.31**	**-0.46**

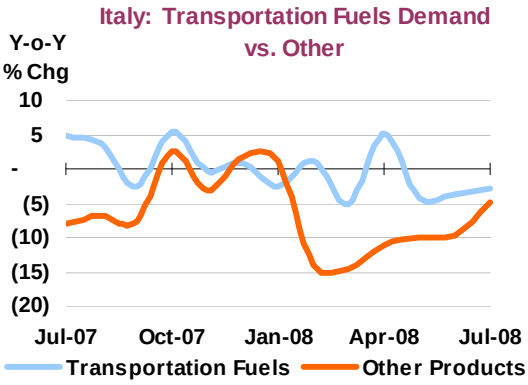
* Latest official OECD submissions (MOS)





Demand in **France** rose by 3.0% year-on-year in July, pulled up by strong deliveries of heating oil (+14.9%) and residual fuel oil (+20.0%), which offset the pronounced weakness in gasoline demand (-5.9%). The heating oil rebound is akin to the one observed in Germany, probably indicating that consumer stocks were low (although there are no figures for inventories). The spike in fuel oil, meanwhile, was probably prompted by stockbuilding, since the weather was not particularly hot.



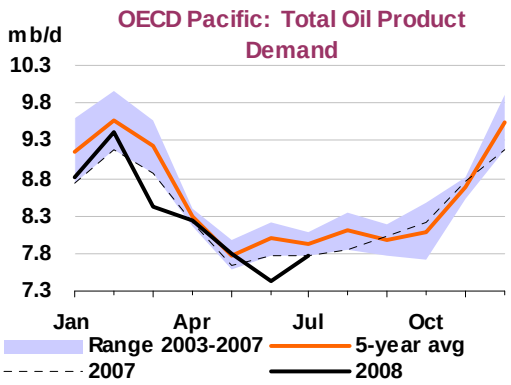


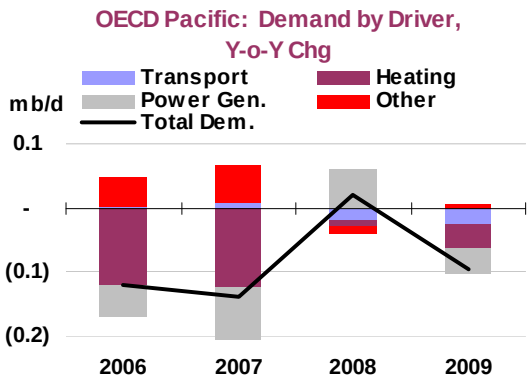
Demand for road transport fuels remains subdued in the main European countries. The relative weakness of diesel deliveries is quite instructive in this regard and provides further evidence of the deterrent effects of high oil prices. (Gasoline, which is structurally declining across most of Europe, is a less reliable indicator of the vigour of transportation fuel demand.) In July, diesel demand rose by a paltry 0.2% in Germany, and by 0.4% in France and **Italy**. By contrast, it plummeted in both **Spain** (-10.6%) and the **United Kingdom** (-2.5%) in June (the last month for which official data are available).

It should be noted, though, that the overall demand picture is much weaker in Italy, Spain and the UK than in France and Germany, since all three have been facing a sharp economic slowdown for some time (although the outlook for the latter two has also worsened recently). This has contributed to amplify the negative effects of high oil prices. Italian demand, in particular, has contracted during most of this year across all product categories.

Pacific

According to preliminary data, oil product demand in OECD Pacific rose by just 0.1% year-on-year in July. Gains in Japanese demand for both residual fuel oil and direct crude use for power generation resulting from the ongoing nuclear outages, and in Australian diesel demand following June's natural gas temporary disruption, barely offset losses in other product categories, notably in transportation fuels. This provides further evidence of the shattering effects of record-high oil prices.





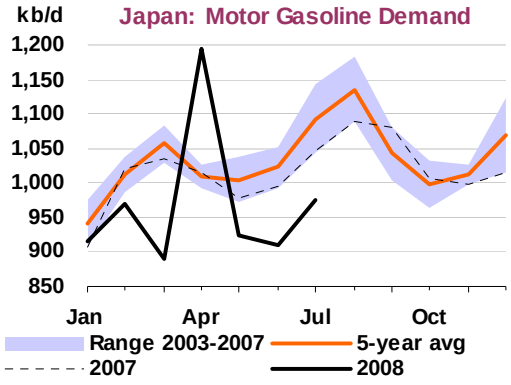
Meanwhile, revisions to June preliminary data, as noted earlier, were significant (-0.5 mb/d): demand in OECD Pacific plummeted by 4.4% year-on-year during that month, instead of growing by 2.7% as previously estimated. As a result, oil demand in the Pacific is expected to average 8.4 mb/d in 2008 (+0.2% or +20 kb/d on a yearly basis) and 8.3 mb/d in 2009 (-1.2% or -100 kb/d) – down in both years by about 70 kb/d when compared with our last report. The contraction in 2009 is poised to be driven by falling Japanese demand, notably for gasoline, as discussed below.

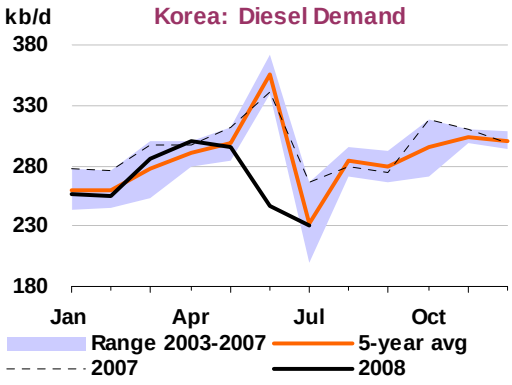
OECD Pacific Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Apr 08	May 08	Jun 08*	Latest month vs. May 08	Latest month vs. Jun 07
LPG & Ethane	0.96	0.95	0.89	0.99	1.01	0.97	1.00	0.98	0.92	-0.06	0.01
Naphtha	1.65	1.64	1.63	1.66	1.69	1.55	1.52	1.58	1.56	-0.02	0.06
Motor Gasoline	1.57	1.55	1.64	1.57	1.48	1.55	1.75	1.47	1.42	-0.05	-0.11
Jet & Kerosene	0.93	0.95	0.66	1.04	1.24	0.72	0.81	0.72	0.65	-0.07	-0.02
Gas/Diesel Oil	1.80	1.77	1.68	1.87	1.80	1.72	1.82	1.73	1.61	-0.12	-0.18
Residual Fuel Oil	0.96	0.96	0.92	1.01	1.06	0.89	0.92	0.88	0.85	-0.03	-0.05
Other Products	0.48	0.54	0.46	0.56	0.59	0.42	0.42	0.43	0.41	-0.01	-0.05
Total Products	**8.35**	**8.37**	**7.89**	**8.72**	**8.87**	**7.82**	**8.24**	**7.79**	**7.43**	**-0.36**	**-0.34**

* Latest official OECD submissions (MOS)

The June revisions were mostly linked to **Japan**, where all product categories bar naphtha were adjusted down. In addition, the 'other products' category was also revised down from March to May 2008, as naphtha backflows (which are subtracted) had been underreported in official submissions. As such, Japanese demand, which represents two-thirds of regional demand, actually fell by 5.6% in June (instead of rising by 4.6%) and further declined in July (-0.9%). It is worth noting that high oil prices have amplified the structural decline of gasoline demand. This trend is set to accelerate next year: electric vehicles will reportedly be commercialised next year on a massive scale. The government is indeed actively encouraging the construction of recharging facilities and other infrastructure across the country.



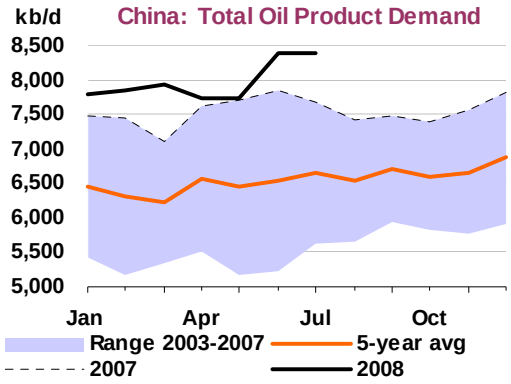


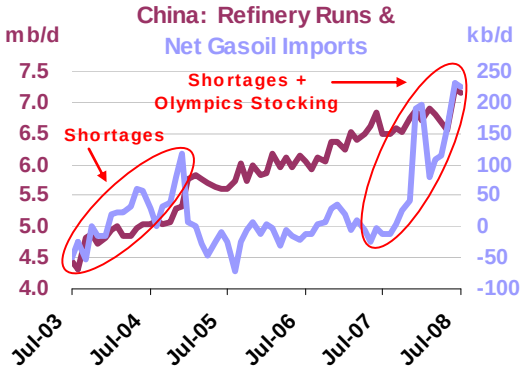
Korea is featuring a similar story. Overall demand (-1.3% year-on-year in July) has been dragged down mostly by a marked weakness in transportation fuels demand following the sharp rise in international oil prices. For example, gasoline deliveries declined by almost 5.0% year-on-year in both June and July, instead of rising seasonally. More striking still was the fall in diesel demand: -27.6% in June and -13.5% in July. Nevertheless, it should be noted that weaker deliveries of fuel oil (-15.6% on average from January to July), which is being increasingly substituted by LNG, have also contributed to the country's subdued demand picture.

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) rocketed up by an estimated 9.4% year-on-year in July. As in recent months, the rise was supported by strong deliveries of transportation fuels (gasoline, gasoil and jet fuel/kerosene rose by 21.3%, 21.5% and 8.1% year-on-year, respectively) ahead of the August Olympic Games. Meanwhile, the weakness in residual fuel oil demand – the feedstock of choice for 'teapot' refineries – persisted for the twelfth month in a row, with deliveries contracting by 38.2% as a result of continuing poor refining economics. Although we revised up slightly our 3Q08 forecast of China's oil demand to account for somewhat higher-than expected growth in July, our prognosis for the year remains essentially unchanged compared with our last report, at 8.0 mb/d (+5.9% versus 2007) and 8.4 mb/d in 2009 (+5.3%). As we have noted, however, this forecast may be revised again as the post-Olympics picture becomes clearer.

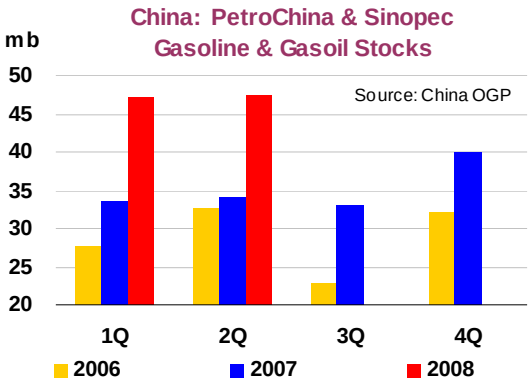


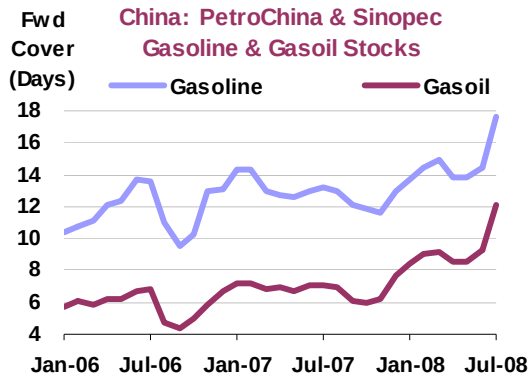


The jury is still out on whether the strong oil product imports – notably of gasoil – and higher refinery runs seen in the build-up to the Olympics will abruptly fall from September (or even August, but data for last month are not yet available). The state-owned majors, PetroChina and Sinopec have indeed strongly hinted that this will be case, arguing that stocks are plentiful. Other observers argue that a possible rise in retail prices and a slowing economy will further curb oil demand. These assertions, however, need to be qualified.

First, gasoline and gasoil stocks from PetroChina and Sinopec have reportedly surged by 66% year-on-year to a combined 58.4 mb in July, according to data compiled by *China OGP*. However, even though the composition of this limited sample of data is open to question (only three years have been documented, while secondary stocks are seemingly not included), inventories are not particularly high in terms of forward demand cover. At roughly 18 days for gasoline and 12 days for gasoil, the cover is about half of OECD levels – where demand growth is much lower. From this perspective, the decision to curb imports is most likely dictated by the losses incurred by the majors given the prevailing caps on retail prices, rather than by a sober assessment regarding supply security. If anything, China probably

needs to continue building up its product inventories, which means maintaining a minimum level of imports until new refining capacity becomes operational.





Second, the rise in end-user prices is far from certain, despite recurring rumours and given recent policy moves ostensibly aimed at improving energy efficiency and curbing demand growth. In mid-August, the government increased the sales tax on some gas-guzzling new vehicles, while reducing it for small cars. Although the move was largely symbolic – the tax for car engines between 1.0 and 2.5 litres, which account for roughly 80% of the country's fleet, was left untouched – the government will probably wait before making another move. (The sales tax increase, in fact, was arguably aimed at supporting domestic car manufacturers, which tend to specialise in mid-sized engines, whereas imported vehicles have generally bigger engines.) Moreover, a key motivation for adjusting retail prices – the gap between international and domestic prices – has become less pressing given the recent slide in international oil prices, which is reportedly contributing to restore a modicum of profitability to refining activities and, if sustained, could help bring back some production from teapot refineries.

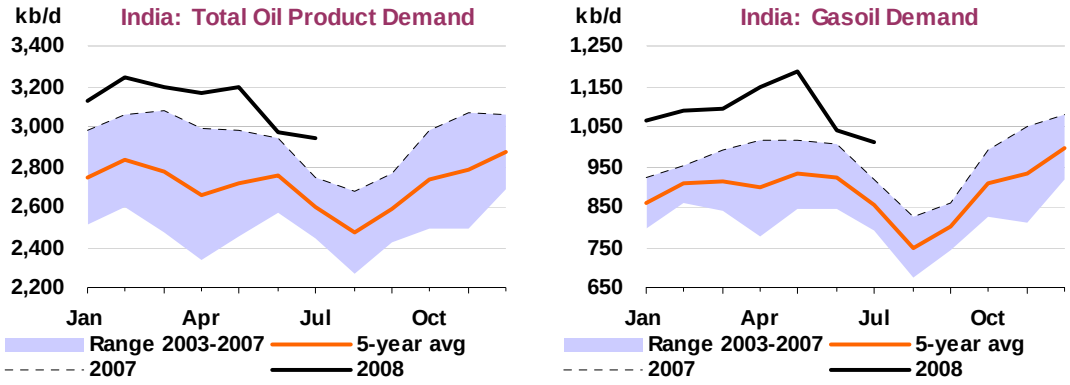
Third, China's often-cited, impending economic slowdown remains elusive. June's relatively low export growth (18% year-on-year) prompted many pundits to declare that China had finally been hit by the economic slowdown in OECD economies – but then July figures came in, showing a rebound of almost 27%. In addition, subdued construction and real estate activity in the Beijing/Tianjin area, which accounts for less than 6% of Chinese GDP, hardly portends a nationwide slowdown. Moreover, some economists contend that real GDP growth is actually higher than reported (perhaps as high as 14-15%), simply because it does not match with nominal GDP growth and inflation figures – unless inflation is actually higher. Meanwhile, the yuan's appreciation has significantly slowed down – suggesting that Chinese policymakers are prepared to use the exchange rate as a tool of trade competitiveness if their main foreign markets slowdown – and bank lending quotas have been relaxed. That being said, though, there is one element that could eventually dampen growth: the recurrent power shortages in several key regions. Therefore, if over the next few months China's economic growth shows more tangible evidence of a weaker outlook, we may adjust our demand prognosis accordingly.

China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	669	643	647	-26	5	-3.9	0.7
Naphtha	812	830	916	18	86	2.3	10.3
Motor Gasoline	1,257	1,433	1,530	176	97	14.0	6.8
Jet & Kerosene	280	304	322	24	19	8.7	6.1
Gas/Diesel Oil	2,576	2,889	3,075	313	186	12.1	6.4
Residual Fuel Oil	744	636	650	-108	14	-14.5	2.2
Other Products	1,204	1,254	1,275	50	21	4.2	1.7
Total Products	**7,542**	**7,990**	**8,416**	**448**	**427**	**5.9**	**5.3**

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – rebounded by 7.2% year-on-year in July, following June's weak growth (1.2%), when retail prices for several products were raised. As we had predicted, the modest price hike merely slowed down the pace of growth, rather than inducing a contraction in absolute levels: in July, sales of LPG, gasoline and gasoil – the products subject to the increase – rose by 2.1%, 5.8% and 10.3%, respectively. It should be noted that hitherto-subdued naphtha demand (mostly used for petrochemical production) was stronger than expected, increasing by 19.8% versus July 2007. Nevertheless, our forecast remains basically unchanged compared with our last report, with Indian demand expected to average 3.1 mb/d in 2008 (+4.9% on a yearly basis) and 3.2 mb/d in 2009 (+4.4%).

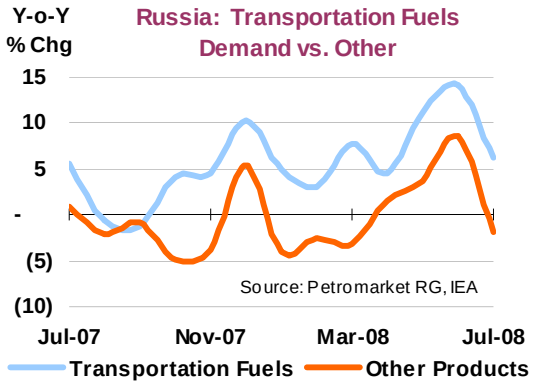


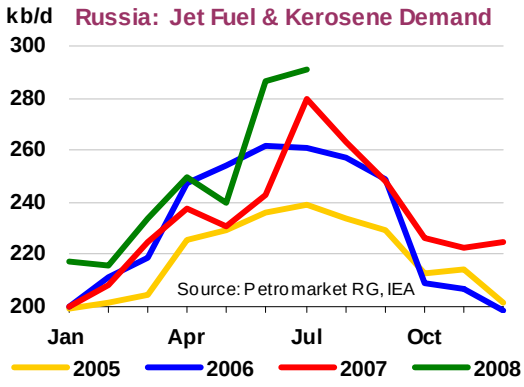
The increase in gasoil sales, which account for over a third of total oil product sales, was particularly strong. As noted in past reports, the spike in gasoil demand has been largely prompted by consumers switching to cheaper unbranded gasoil. Truckers seeking to reduce their costs after the June price rise are unwilling to purchase more expensive premium grades, relying instead on unbranded gasoil, which does not contain performance-enhancing additives; utilities are switching away from much more expensive fuel oil (which is not subsidised and currently costs some 10% more than gasoil); and many motorists are mixing gasoil with subsidised kerosene (adulteration is a common practice in India). In addition, the unusually weak start of the monsoon season in July, in western and southern India (with strong rains normally falling from July until late September), forced farmers to irrigate their fields with gasoil-fuelled pumps. It also curbed hydroelectric generation, obliging urban and rural dwellers to rely on back-up gasoil generators.

The gasoil surge has resulted in localised shortages across the country, notably in the states of Maharashtra, Gujarat, Bihar, Jharkhand, and Madhya Pradesh, despite efforts by state-owned oil companies to meet demand. Gasoil demand from utilities may ease somewhat if fuel oil becomes competitive given the fall in international oil prices; in addition, August's monsoon rains were reportedly abundant, which could reduce the usage of back-up generators. By contrast, gasoil demand from truckers and motorists is unlikely to recede – unless the government decides to increase gasoil prices sharply, an implausible proposition given the forthcoming national elections. A government-mandated high-level panel recently advocated a gradual, monthly increase in gasoline and gasoil retail prices over the coming months, but some voices arguing in favour of a price cut are getting louder, following July's massive strike by truckers calling for more supplies of unbranded gasoil.

Preliminary data indicate that oil demand in **Russia** grew by 0.9% year-on-year in July. As in other large emerging countries, demand is driven by transportation needs, with gasoline, gasoil and jet fuel/kerosene soaring by 7.0%, 4.0% and 14.2%, respectively, in July. As such, total Russian demand is expected to average 2.9 mb/d in 2008 (+2.8% versus 2007) and 3.0 mb/d in 2009 (+3.3%).

Even though oil product prices are nominally market driven, the Russian government has pressured refiners to reduce wholesale prices on jet fuel and diesel. In mid-July, following two months of complaints about excessively high jet fuel prices by several domestic airlines – and also probably due to concerns regarding mounting inflation (which reached 15.1% in June) – Prime Minister Vladimir Putin threatened to fire key officials of the Federal Antimonopoly Service (FAS) if they failed to take measures aimed at reducing jet fuel prices. The FAS obliged by launching an investigation into eight companies supplying jet fuel to airports across Russia, as well as into the country's five majors – Lukoil, Gazprom Neft, TNK-BP, Rosneft and Surgutneftegas. The charges include setting unacceptably high prices for jet fuel and diesel, and charging differentiated prices.





In mid-August, arguably seeking to avoid a costly confrontation with the authorities, Lukoil, Gazprom Neft and Surgutneftegas announced month-on-month wholesale price cuts, with further reductions to follow over the next few months. Interestingly, the cuts – ranging from 4% to 15% –- have not only been applied to jet fuel and diesel, but also to gasoline and fuel oil. As a result, motorists in Moscow, for example, currently pay 25 roubles ($1.03) per litre of gasoline, some 30% less than in Europe or Japan.

Russia: Demand by Product

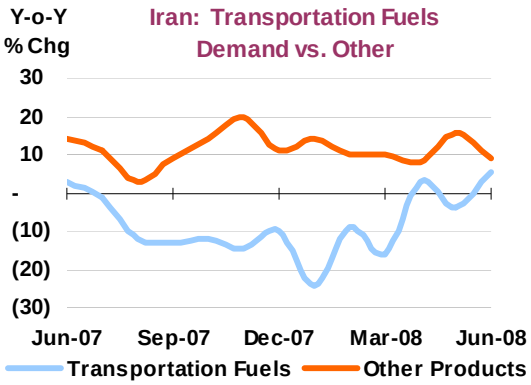
(thousand barrels per day)

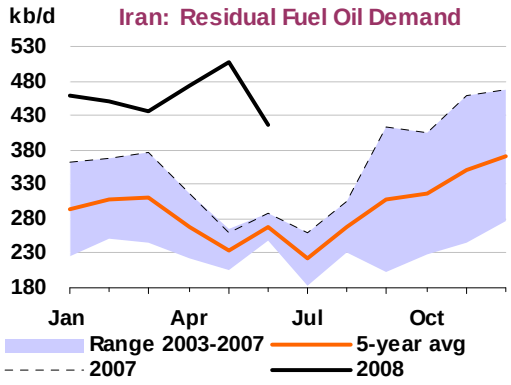
	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	304	328	347	23	19	7.7	5.7
Naphtha	243	230	231	-13	2	-5.5	0.7
Motor Gasoline	683	722	744	39	22	5.7	3.0
Jet & Kerosene	234	247	254	13	8	5.4	3.0
Gas/Diesel Oil	592	615	638	23	24	3.9	3.8
Residual Fuel Oil	303	279	296	-24	17	-8.0	6.2
Other Products	490	508	515	18	7	3.7	1.4
Total Products	**2,849**	**2,928**	**3,025**	**79**	**98**	**2.8**	**3.3**

Source: Petromarket RG, IEA

According to preliminary data, oil demand in **Iran** jumped by 7.7% year-on-year in June. Demand was not only driven by transportation fuels (+8.6%), but also by buoyant residual fuel consumption (+44.5%). Gasoline use, which rose by 2.2%, has virtually returned to its 2007 pre-rationing levels of about 500 kb/d, although demand could slip a bit in the months ahead following adjustments to the quota system (in late June, quotas for taxis, trucks and some dual-fuel private vehicles were reduced). Total Iranian oil demand is foreseen to reach 1.8 mb/d in 2008 (+4.9% on a yearly basis) and 1.9 mb/d in 2009 (+5.1%).

The soaring demand for fuel oil, meanwhile, has been driven by power needs, as Iran has suffered recurrent and widespread power shortages during most of the summer. A severe drought has left dams virtually empty, thus crippling hydroelectric plants (some 5,000 MW out of the country's installed





6,500-MW hydro capacity has reportedly been shut in since the 2007 summer). Nevertheless, thermal power generation (about 34,000 MW or 85% of total capacity) has also proved insufficient, largely because of the slow pace of generating capacity additions amid frozen end-user prices. Under the current administration, supply has indeed failed to match the country's rapidly growing electricity consumption (about +10% per year).

A Reversal of Asian Retail Price Increases?

In the past few months a number of non-OECD countries, notably in Asia, surrendered to ever-rising international oil prices by revising their end-user price regimes. The cost of subsidies had become untenable, threatening the fiscal position of many governments in the region. Given their highly contentious nature, these adjustments were far from homogenous – ranging from a 10% increase in India to a 63% hike in Malaysia. Although in many cases these increases were not sufficient to offset the growing subsidy burden, they were nonetheless commended by many observers as a positive step in the right direction – that is, the beginning of market pricing in a region accustomed to very cheap energy and runaway oil demand growth. The only exception has been Thailand, which had *de facto* reintroduced subsidies in March, by imposing set prices in its theoretically unregulated market.

Over the past few weeks, however, several governments have backtracked, following the recent slide in international oil prices. The trigger has been widespread discontent from populations already struggling with high inflation, which is running at or close to double-digit levels in several countries. The first country to reverse previous price increases was **Taiwan**, which in early August cut end-user prices of gasoline (-5.6%) and diesel (-6.6%). From now on, retail prices will be adjusted every Friday (instead of every month) in order to better reflect changing market conditions. **Thailand's** state-owned company PTT followed suit, cutting gasoline prices by 1.6% and diesel prices by about 2.3%. In the **Philippines** (nominally a deregulated market), oil companies have shaved retail prices twice since late July. Finally, in late August the **Malaysian** government decreed a 5.6% reduction in gasoline prices and 3.1% in diesel prices. Starting in September, prices will be adjusted in the first day of every month.

Do these moves augur a domino effect of price cuts across the region? Probably not, considering that the largest Asian oil consuming countries – China, India and Indonesia, in that order – are expected to hold off on cutting prices, which remain well below international levels despite the recent hikes. Cutting prices would increase the subsidy burden; China could arguably afford it, but India and Indonesia less so. More importantly, perhaps, it would probably create fresh supply disruptions, as refiners (such as 'teapot' refineries in China) would again see their losses mount, or even go bankrupt (which could happen to state-owned refiners in India). Nevertheless, price cuts cannot be entirely ruled out given electoral considerations. India and Indonesia, which face parliamentary and presidential elections next year, could follow the example of Malaysia – which had pledged to fully liberalise prices before backtracking following the government's recent popularity plunge.

SUPPLY

Summary

- **Global oil supply** fell by around 1.0 mb/d to 86.8 mb/d in August. The bulk of the month-on-month decline came from non-OPEC countries. European summer oil field maintenance and the now-resolved outage on the BTC pipeline from Azerbaijan underpinned the drop. However, on a year-to-year basis, global supplies looked healthier, gaining in excess of 2 mb/d for a third month running.

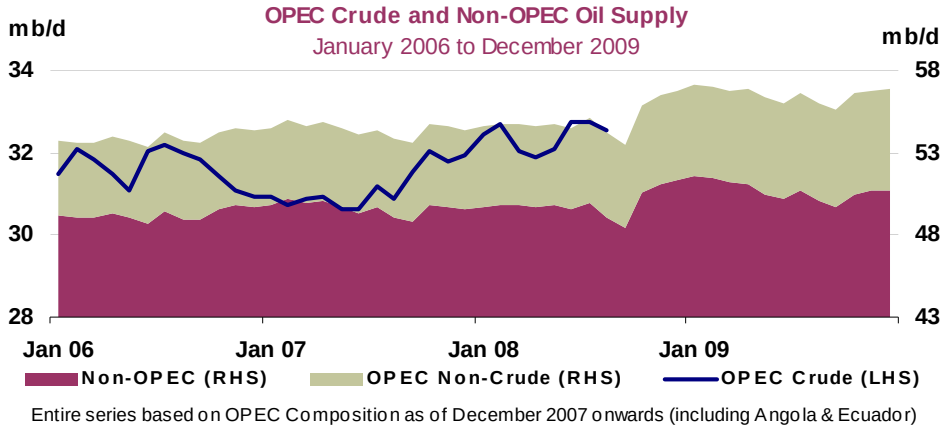
- **Non-OPEC production** estimates have been revised down by 180 kb/d for 2008 and by 85 kb/d for 2009, to 49.9 mb/d and 50.7 mb/d respectively. Output is now 470 kb/d lower than previously expected in 3Q08 and 270 kb/d lower for 4Q08. Third-quarter production is affected by an assumption of substantially heavier September hurricane outages for the USA. Downward adjustments for Russian supply, and assumed ongoing October US hurricane outages cut the forecast for 4Q08. Weaker Russian, Norwegian, Australian and Chinese projections are employed for 2009.

- **Growth in non-OPEC output** averages 270 kb/d for 2008 and 760 kb/d for 2009, after an increase of 425 kb/d in 2007. The US, Brazil, Azerbaijan, China and global biofuels are key components of this year's increases. Canada, Australia and Kazakhstan will potentially join that list for 2009.

- **OPEC condensates and gas liquids** growth, which has averaged around 0.2 mb/d each year so far this decade, accelerates to 0.3 mb/d in 2008 and potentially 0.8 mb/d in 2009, taking total OPEC NGL supply next year to 5.9 mb/d. Saudi Arabia, Qatar, the UAE, Nigeria and Iran underpin the rise.

- **OPEC crude supply in August** fell by 195 kb/d to 32.5 mb/d on oil field and pipeline outages in Iraq, Angola, Libya and Nigeria. Effective OPEC spare capacity increased from July's 1.5 mb/d to 1.9 mb/d. Lower production and higher installed capacity for Saudi Arabia, Angola and Iran drove the rise. This report went to press ahead of OPEC's 9 September Vienna meeting. Pre-meeting, lower prices and potentially easing fundamentals appeared to foster debate within OPEC over a trimming of supplies, either officially via lower target output or unofficially via closer adherence to previous targets.

- **The 'call on OPEC crude and stock change'** for 3Q08 is revised up by 0.5 mb/d to 32.2 mb/d and by 0.3 mb/d to 31.7 mb/d for 4Q08 after downward adjustments to non-OPEC supply. Lower OECD demand reduces the 2Q09 'call' to 30.1 mb/d, but overall the 2009 'call' is unchanged from last month's 31.1 mb/d. The potential for a weaker 2009 'call' on lower OECD demand is likely offset by downside risks for non-OPEC supply and upside non-OECD demand growth.



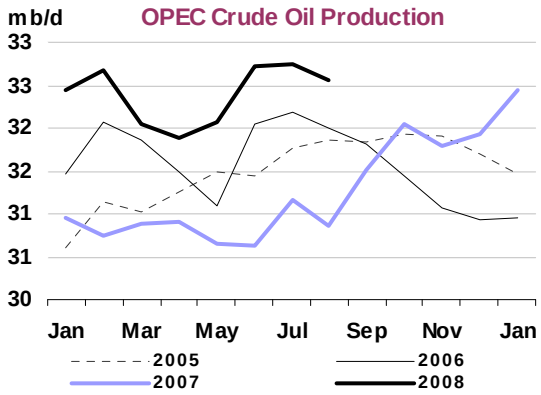
Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

All world oil supply figures for August discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary August supply data.

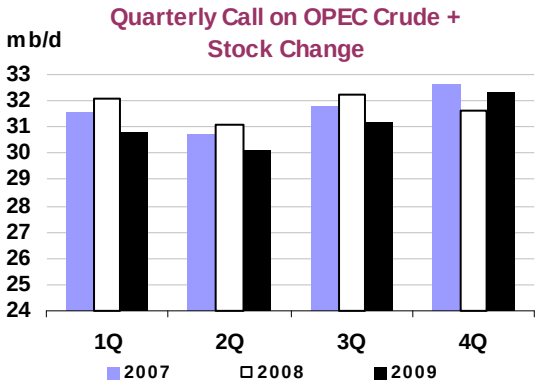
Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC crude supply in August fell by 195 kb/d to 32.5 mb/d. The August reduction was based largely on involuntary cuts by Iraq, Angola, Libya and Nigeria, where oil field and pipeline shut-ins were instrumental in reducing monthly supply. September supplies are difficult to assess, particularly with uncertainty surrounding the timing and extent of some of the facility outages. OPEC's 9 September Vienna meeting, the outcome of which was unknown at the time of writing, could change the production dynamic further, albeit any official production changes are unlikely to take effect before October. In addition, a series of recent field start-ups in Nigeria, Angola and Saudi Arabia further cloud the issue, as do preliminary tanker tracking data, which in part underpin the reduction we estimate for August, but which appear to show a modest increase for the first three weeks of September.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

Effective OPEC spare capacity increased from the 1.5 mb/d estimated for July, reaching around 1.9 mb/d in August (2.7 mb/d on a notional basis including Iraq, Indonesia, Nigeria and Venezuela). The increase comes partly from lower monthly production in August, but also from increased estimates for capacity for three producers after new field start-ups. **Saudi Arabia** reportedly saw initial volumes produced from the AFK (Khursaniyah) project after long delays associated with gas processing facilities. Production of crude is seen building to an initial 250 kb/d in the next few months and 500 kb/d in early 2009. Our capacity estimates for Saudi Arabia are likely to nudge 11 mb/d by end-year accordingly. Khursaniyah, along with much of the impending 2009 increase in Saudi capacity, is likely to comprise predominantly Arab Light grade or lighter. August saw a relative shift in Saudi price discounts, suggesting that supplies of heavier/sourer grades may be reined in to make way for incremental lighter barrels.

August also saw start-up at the Saxi-Batuque fields offshore Angola, part of the Kizomba C project which will ultimately produce 200 kb/d. Angolan crude capacity now stands at 2.0 mb/d. Finally, we have boosted Iranian capacity to 4.1 mb/d after higher supply levels in recent months, albeit exports have oscillated due to crude marketing issues. Total OPEC crude capacity is seen increasing by almost 500 kb/d, to just shy of 36 mb/d, between now and the end of the year as these projects ramp up. Increments also derive from deepwater Nigeria, and from Iraq, although serious question marks now hang over the short-term service agreements which underpin any increase in Iraqi capacity.

OPEC Crude Production[1]

(million barrels per day)

	Jun 2008 Supply	Jul 2008 Supply	Aug 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Aug 2008 Supply	Capacity end-2008	Current Target
Algeria	1.38	1.38	1.38	1.40	0.02	1.46	1.36
Indonesia	0.86	0.86	0.87	0.87	0.00	0.84	0.87
Iran	3.95	3.97	4.10	4.10	0.00	4.00	3.82
Kuwait[3]	2.63	2.63	2.61	2.64	0.02	2.65	2.53
Libya	1.73	1.68	1.65	1.80	0.15	1.81	1.71
Nigeria[4]	1.83	1.97	1.95	2.55	0.60	2.70	2.16
Qatar	0.88	0.88	0.88	0.93	0.05	0.96	0.83
Saudi Arabia[3]	9.50	9.50	9.45	10.75	1.30	10.95	8.94
UAE	2.69	2.66	2.66	2.85	0.20	2.87	2.57
Venezuela[5]	2.36	2.36	2.36	2.60	0.24	2.60	2.47
OPEC-10	**27.80**	**27.88**	**27.89**	**30.47**	**2.58**	**30.84**	**27.25**
Angola[1]	1.92	1.90	1.85	2.00	0.16	2.05	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**30.21**	**30.28**	**30.24**	**32.97**	**2.73**	**33.39**	**29.67**
Iraq	2.51	2.47	2.31	2.31	0.00	2.56	
Total OPEC	**32.72**	**32.74**	**32.55**	**35.28**	**2.73**	**35.95**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*1.89)*		

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 510 kb/d in August.

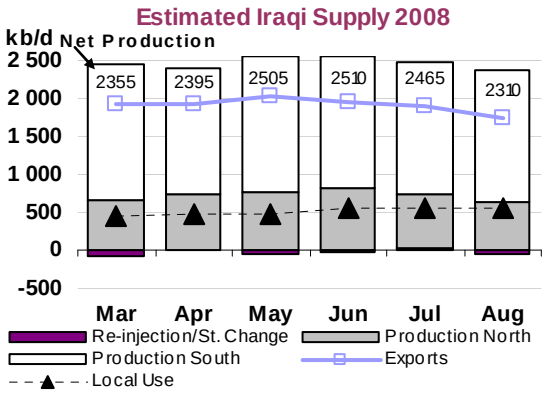
At the time of writing, OPEC Ministers were meeting in Vienna to discuss production policy and indeed readers of this report will likely be aware of their decision. The downward shift in prices from July peaks has seen more hawkish members of the producer group call for reduced output levels, with suggestions that Iran, Venezuela, Algeria and Libya are eyeing defence of a $100/bbl price floor. However, market reports suggest that Saudi Arabia and others may see a lower floor of perhaps $80/bbl as being more realistic. The latter group, so the argument goes, mindful of the adverse impact of $100/bbl-plus oil on OECD consumption levels, is thought happier to allow prices to go slightly lower, not only to shore-up medium-term crude demand, but also to avoid the political difficulty of being seen to cut official production ahead of the winter heating season.

While the Organisation may find actually cutting official targets difficult in the present environment, closer adherence to the individual production targets published briefly last September might be an option. On our reckoning this option, if pursued, would cut OPEC supply by around 570 kb/d compared with August levels, to around 29.7 mb/d for the OPEC-12 and perhaps 32 mb/d for the Organisation as a whole. Although it has largely been the core Gulf Arab producers who have been producing above target (partly to make up for shortfalls elsewhere), Iran also appears to have done so in recent months.

Brazilian officials were quoted during August as having turned down an invitation from Iran to join OPEC, with indications that Brazil sees its longer-term future more as a refined product exporter than a crude exporter if plans for new refining capacity are realised.

August **Iraqi** crude supply is assessed down by 155 kb/d compared with July, averaging 2.3 mb/d. On our estimation, this is the lowest level since January. Power outages affected southern crude exports, which fell from 1.51 mb/d to 1.43 mb/d, while interrupted northbound pipeline deliveries to Ceyhan also had an impact on tanker liftings from the Turkish port. These were 305 kb/d in August compared with 380 kb/d in July. Domestic crude use is estimated at 565 kb/d, including around 80 kb/d for power generation.

There were further reports in late August of political delays for the six Technical Support Agreements (TSAs) designed to add 500 kb/d to Iraqi crude capacity via existing fields over the next one to two years. In contrast, 28 August saw Iraq reach agreement with China's CNPC to develop the 1.2 billion barrel al-Ahdab field. A new technical service agreement replaces a production sharing contract signed by CNPC a decade ago for development of the same field. The project is costed at $3 billion and could see start-up in three years for ultimate capacity of 100-120 kb/d.



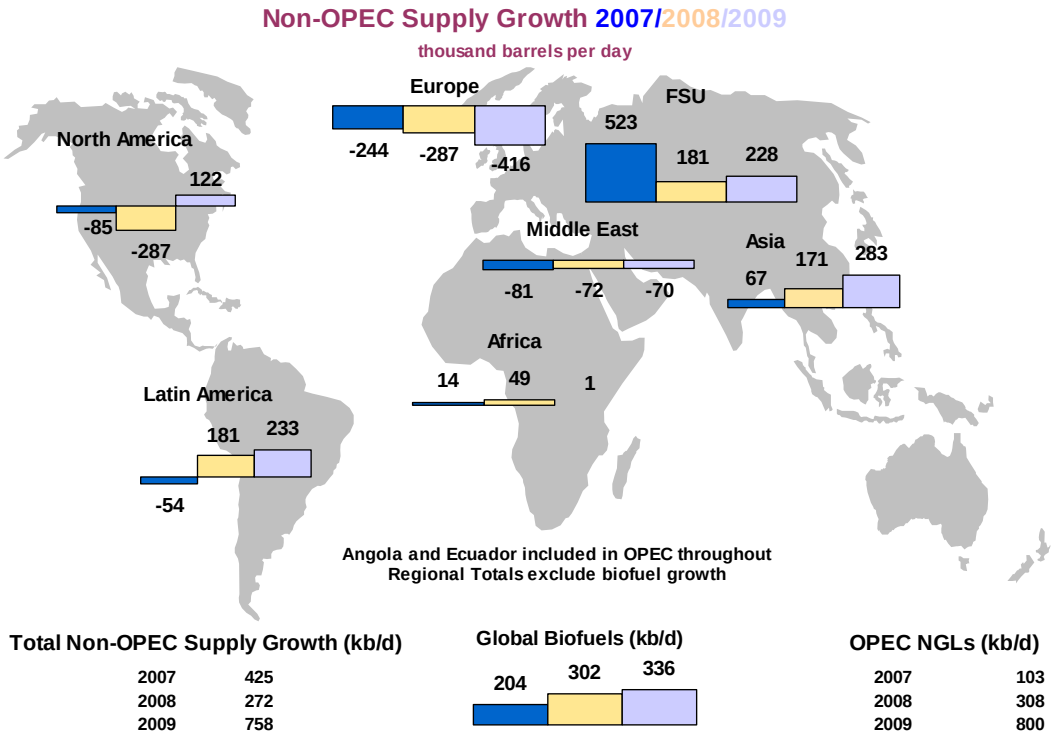
Nigerian output is estimated to have fallen by 15 kb/d in August to 1.95 mb/d, as outages on the Bonny pipeline system and elsewhere persisted, and offsets expected from new field start-ups proved disappointing. *Force majeure* announced in July for exports of Bonny Light will remain in place through September. Meanwhile, technical/documentation problems have prevented initial exports from Chevron's recently started Agbami field and have limited initial production levels to only some 15 kb/d. Field capacity is 200 kb/d, although this is unlikely to be reached until some time in 2009. A supply vessel for the Agbami field was also attacked during August.

In Libya, production outages have also multiplied in recent weeks. We estimate that production is running some 150 kb/d below capacity of 1.8 mb/d. The offshore, 45 kb/d al-Jurf field which was shut for repairs in late April, is now expected to remain offline through September and October. Although pipeline maintenance also shuttered around 100 kb/d of Waha crude in August, this is due to be back online in September. However, as much as 70-100 kb/d of supply was also cut by a tank fire at the Ras Lunuf export terminal on 19 August.

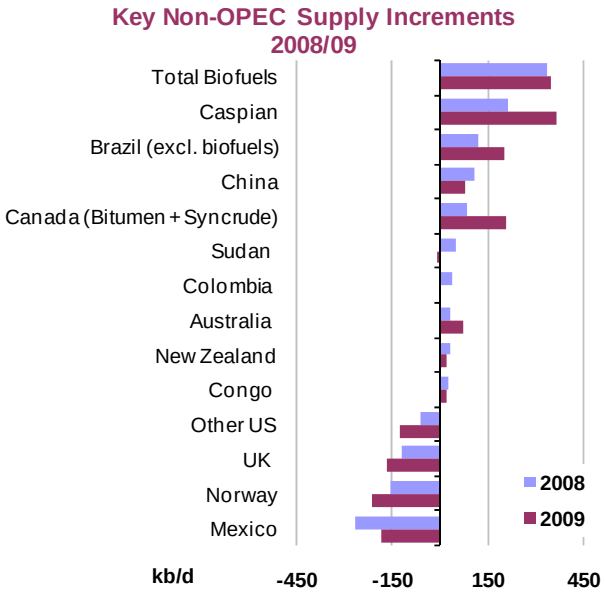
Angola meanwhile has seen field outages overshadow otherwise rising supply from new field start-ups. Production of crude oil for August is estimated at 1.85 mb/d compared with 1.90 mb/d in July. BP was forced to stop production on the Greater Plutonia FPSO on 16 August after a blockage of gas flow to a flare. It is believed that repairs might keep Greater Plutonia output of some 200 kb/d off stream until late September. This has overshadowed the mid-August start of production from the Saxi-Batuque fields, which will eventually double existing production at the Kizomba C project. The first phase of Kizomba C, the Mondo field, began production of around 100 kb/d from January.

Non-OPEC Overview

Estimates for 2008 and 2009 non-OPEC supply have been cut by 180 kb/d and 85 kb/d respectively. Autumn storms, pipeline outages and project deferrals underpin the changes this month, with North America being the focus of reductions for 2008 and a weaker Russian profile now envisaged for 2009. US production in September 2008 could be reduced by as much as 1.5 mb/d by the passage of Hurricanes Gustav and Ike. After the yearly contraction seen for much of the period since November 2007, non-OPEC Growth could surge potentially in excess of 1.0 mb/d for 4Q08. New project starts are part of the expansion late in the year, but so too is an assumed seasonal reduction in autumn maintenance and storm-related shut-ins. All told, 2008 non-OPEC supply now averages, 49.9 mb/d, rising to 50.7 mb/d in 2009. Non-OPEC growth averages 270 kb/d in 2008 and is centred upon Brazil, China, the Caspian Republics, the USA and global biofuels. In 2009, growth reaches 760 kb/d, with Canada and Malaysia augmenting the list of expansions seen in 2008.



Having rebounded by 410 kb/d in July from maintenance-affected June lows, non-OPEC production dipped 0.8 mb/d below July, to an estimated 49.1 mb/d in August, US production came in lower, with outages in Alaska, prior to significant Gulf of Mexico hurricane outages at the end of the month. Summer maintenance schedules saw a 500 kb/d fall in August North Sea supplies, and a sharp drop from Azerbaijan due to the near-three-week outage on the BTC pipeline. September is likely to see recovering North Sea production and near-normal operations in Azerbaijan, but this is offset now by markedly higher assumed hurricane outages for the US Gulf in September after passage of Hurricane Gustav and the approach of Hurricane Ike. As a result, September non-OPEC production actually falls from August levels of 49.1 mb/d to 48.4 mb/d. Sharp growth to 50.5 mb/d is possible in October, based on recovering supplies from North America and Europe, with this growth reflecting a combination of new project start-ups and a seasonal run-up in supply after autumn maintenance and weather-related downtime.



Over and above non-OPEC production growth, the forecast continues to assume sharp growth for 2008 and 2009 in OPEC condensates and gas liquids. These volumes effectively augment the non-OPEC portion of our forecast since, unlike crude oil, gas developments in OPEC countries tend not to be subject to voluntary production quotas or targets. Indeed, OPEC NGL expansion matches or exceeds the entire growth expected from other non-OPEC producers in both years.

Total OPEC gas liquids output averages 5.1 mb/d in 2008 (up from 4.8 mb/d in 2007) and 5.9 mb/d in 2009:

- **Saudi Arabian** NGL production (including ethane) is seen hitting 1.8 mb/d in 2009 from 1.5 mb/d this year after the recent start-up of the Khursaniyah project and with further non-associated gas treatment expected from the Hawiyah plant;
- **Qatari** gas liquids are seen adding a combined 300 kb/d for 2008 and 2009 to reach 760 kb/d next year based on North Field liquefaction plant expansion;
- **Iranian** condensate and gas liquids output gains 100 kb/d over 2007 and 2008 to reach 485 kb/d in 2009, growth coming from expected completion of phases 6-10 of the South Pars project;
- **Nigerian** gas liquids gain 100 kb/d in 2009 to reach 315 kb/d following recent start-up at facilities at the EA and Agabmi fields and next year at the Akpo field.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08
North America	14.21	14.33	-0.02	0.12	14.06	14.35	-0.17	0.28	-0.15	0.02	-0.15	0.17
Europe	4.65	4.28	-0.30	-0.37	4.68	4.27	-0.28	-0.41	0.02	-0.01	0.02	-0.03
Pacific	0.70	0.81	0.08	0.11	0.70	0.80	0.07	0.10	0.00	-0.02	0.00	-0.01
Total OECD	**19.57**	**19.42**	**-0.24**	**-0.15**	**19.44**	**19.41**	**-0.37**	**-0.03**	**-0.13**	**-0.01**	**-0.13**	**0.12**
Former USSR	12.98	13.26	0.21	0.28	12.95	13.18	0.18	0.23	-0.03	-0.09	-0.03	-0.06
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.86	3.93	0.13	0.08	3.84	3.92	0.11	0.08	-0.01	-0.01	-0.01	0.00
Other Asia	2.67	2.76	0.00	0.09	2.66	2.76	-0.01	0.11	-0.01	0.01	-0.01	0.02
Latin America	4.04	4.32	0.19	0.28	4.05	4.33	0.19	0.29	0.00	0.01	0.00	0.01
Middle East	1.59	1.52	-0.07	-0.07	1.59	1.52	-0.07	-0.07	0.00	0.00	0.00	0.00
Africa*	2.56	2.56	0.05	0.00	2.56	2.56	0.05	0.00	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.82**	**28.47**	**0.49**	**0.64**	**27.77**	**28.39**	**0.44**	**0.62**	**-0.06**	**-0.08**	**-0.06**	**-0.02**
Processing Gains	2.24	2.29	0.07	0.04	2.24	2.29	0.07	0.04	0.00	0.00	0.00	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
Total Non-OPEC*	**50.09**	**50.75**	**0.45**	**0.66**	**49.91**	**50.66**	**0.27**	**0.76**	**-0.18**	**-0.09**	**-0.18**	**0.10**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

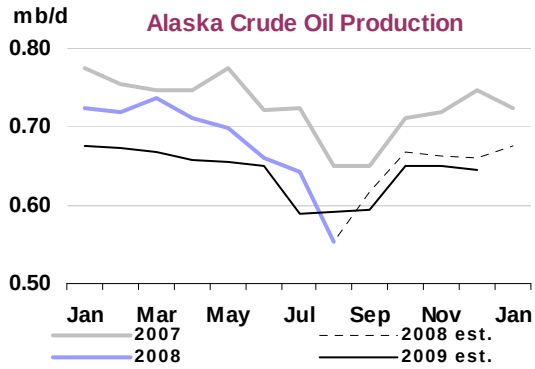
Bearing in mind the bottlenecks evident in raw materials, drilling and installation capacity, we are wary of such a significant increase concentrated in 2009. However, latest information suggests that these projects are on schedule for completion as modelled in our forecast, although clearly there are risks on the downside if project delays materialise late in the day. It is also worth noting that associated petrochemical capacity expansions appear to back up the likelihood of these expanded NGL supplies.

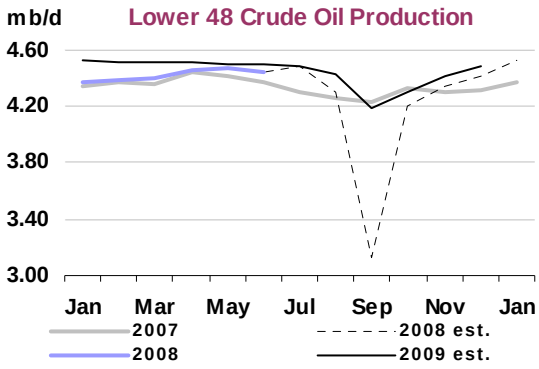
OECD

North America

US – August Alaska actual, others estimated: Forecast US oil production for 2008 has been cut by 105 kb/d, largely as the result of now sharply higher assumed September hurricane outages in the Gulf of Mexico (see below). In addition, Alaskan August crude production came in well below expectation at only around 555 kb/d. This followed maintenance work on the Trans Alaska Pipeline system and other outages affecting the Alpine and Lisburne production systems, although Alaskan output is expected to recover over the remainder of 2008.

Total US oil production in 2008 is now forecast at 7.55 mb/d, of which 5.0 mb/d is crude oil. Annualised growth amounts to 100 kb/d, with increases in NGL production and ethanol offsetting declines for crude oil. Earlier expected annual growth deriving from new fields in the GOM has been wiped out by the now-higher expectation of autumn hurricane outages. The US forecast for 2009 has been left largely unchanged however, at 7.87 mb/d for total oil and 5.1 mb/d for crude. Ethanol and GOM crude oil growth underpin next year's rise.

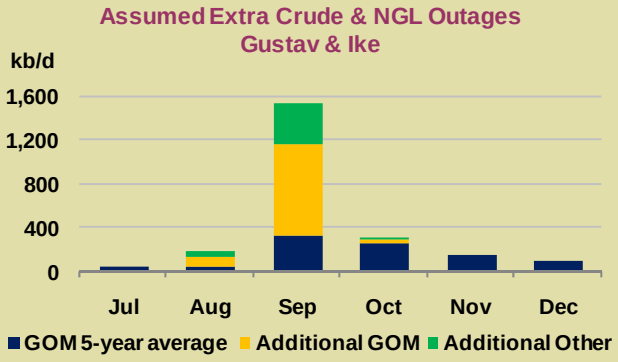




The Impact of Hurricanes Gustav and Ike on US Crude and NGL Production

At the time of writing in early September around 1.03 mb/d of Federal Offshore US Gulf crude production remained shut after the passage of Hurricane Gustav (down from an earlier 1.3 mb/d), plus an estimated additional 300 kb/d of US Gulf Coast NGL capacity and Louisiana state crude production. Although Gustav is not believed to have caused substantial damage to production infrastructure, platform and pipeline inspections were continuing before extra volumes of production could be reactivated. Those inspections now look likely to be impeded by the approach of Hurricane Ike. Latest projections from the National Hurricane Centre see this storm reaching producing areas of the GOM around 10-11 September and making landfall sometime the following weekend.

We have therefore decided to revise up prevailing hurricane outage assumptions for 2008 (normally a rolling, five-year average of GOM production stoppages). Our new working assumption is that offshore facility evacuations and production shut-ins begin anew on 9 September and result in the bulk of GOM, Louisiana and regional NGL production remaining completely offline for one week after Ike's assumed landfall on 14 September. For now, we assume no lasting damage to production facilities. Production then progressively recovers during the two weeks through 6 October. After that date, Louisiana state production and Gulf Coast NGL output return to normal levels. The forecast for Federal offshore GOM production then reverts to October's five-year rolling average assumption of 266 kb/d shut-in.

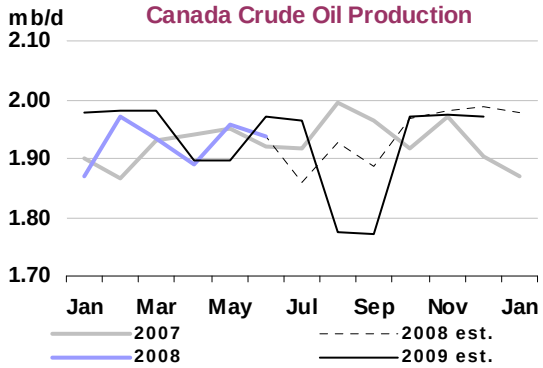


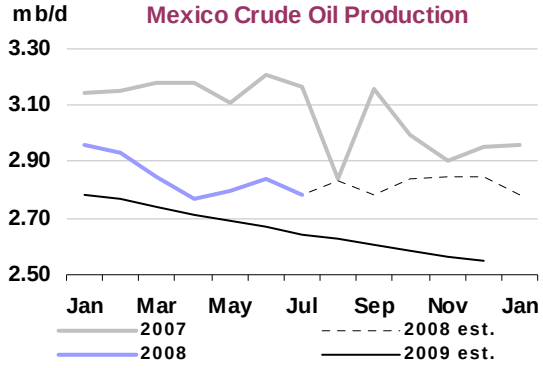
In total, this scenario implies average September shut-ins totalling 1.5 mb/d, with 1.1 mb/d in the Federal waters of the GOM. This is a massive 1.2 mb/d higher than our previous September assumption, but close to our related assumption for September that regional refinery crude runs are cut by an average 1.4 mb/d due to the storms. October average crude outages fall back to around 325 kb/d in total, within 55 kb/d of the previously assumed average. These assumptions will naturally change as the actual track and impact of Hurricane Ike and any subsequent Atlantic storms hitting the GOM becomes apparent. Until final assessments of 2008 production outages are available, we have not changed our lower storm assumptions for the 2009 forecast.

Canada – Newfoundland July actual, others June actual: Total forecast Canadian oil production has been trimmed by 30 kb/d for 2008 but is boosted by 15 kb/d for 2009. The 2008 adjustment follows news that start-up at CNRL's Horizon oilsands project is delayed from 3Q to 4Q. Mined syncrude supply has been reduced by 30 kb/d for 3Q and by 70 kb/d for 4Q as a result. However, we have re-evaluated our projection for Canadian *in-situ* bitumen output, with new project announcements suggesting this

could rise by a net 65 kb/d in 2009 versus 2008. A 40 kb/d upward adjustment for our 2009 bitumen number offsets a net 25 kb/d downward revision for other components of Canadian oil production, leaving the 2009 forecasts for Canada a total 15 kb/d higher than last month.

Our *OMR* and *MTOMR* forecasts for Canadian supply growth are underpinned largely by growth in Alberta's oil sands production. However, August saw an agreement reached for development of the offshore Newfoundland/Labrador Hebron project. Project operator Chevron now expects the $7 billion project to enter service around 2016 and attain 150 kb/d plateau production two years later. The project had been delayed over the past few years by uncertainties over provincial government equity stakes and royalty rates. Settlement of these issues for Hebron will likely open the way for further offshore developments such as Hibernia South.

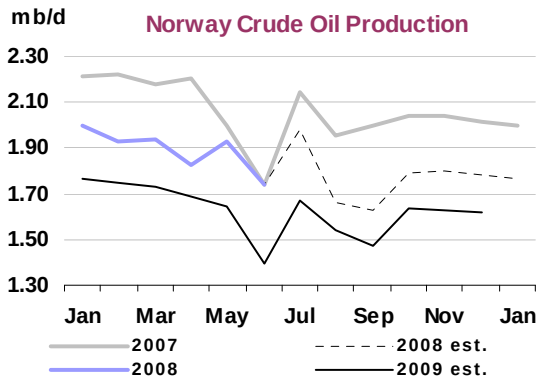


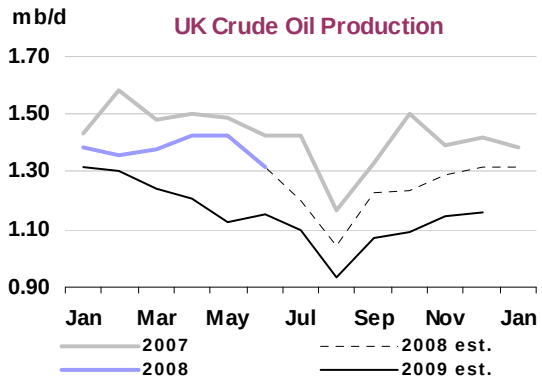


Mexico – July actual: Mexican crude production fell by 57 kb/d in July versus June, to 2.78 mb/d. NGL production was stable at 374 kb/d. Production at the baseload Cantarell field has fallen for ten straight months, and averaged 970 kb/d in July compared with over 1.5 mb/d a year ago. Our forecast envisages Mexican crude output continuing to slide, averaging 2.8 mb/d in 2008 and 2.6 mb/d in 2009, with gas liquids production expected to average 375 kb/d both years.

North Sea

Norway – June actual, July provisional: Total Norwegian liquids production in 2008 and 2009 is likely to continue to show the annual decline of some 150-200 kb/d seen during recent years. Output averages 1.8 mb/d of crude in 2008 and 1.6 mb/d in 2009. These volumes are augmented by around 570 kb/d of gas liquids, resulting in total oil production of 2.4 mb/d and 2.2 mb/d for 2008 and 2009 respectively. That said, June and July data came in stronger than our forecast, suggesting that our maintenance assumptions may have been too high. Upward adjustments are not immediately extended through the forecast however, as export loading schedules for key Norwegian grades suggest lower output month-on-month in August and September, before a seasonal rebound in production in October of up to 200 kb/d. The 2009 forecast is in fact reduced by 25 kb/d, largely on recent evidence that Grane field output has been running below our original 220 kb/d plateau assumption.



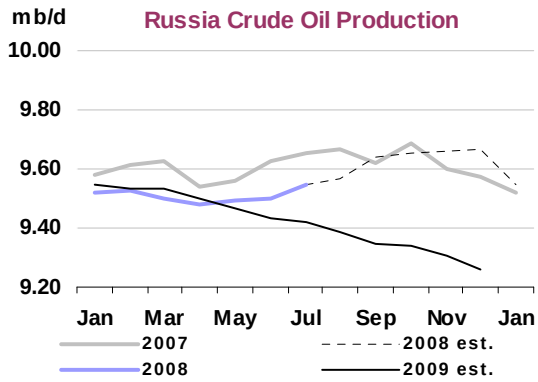


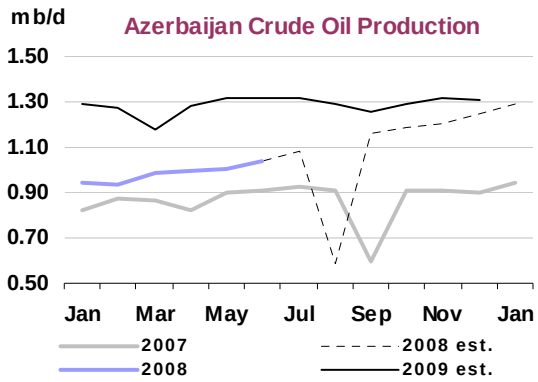
UK – June actual: Stronger than expected June production, and indications of higher export loadings from the key crude streams through September, boost our forecast for 2Q08 and 3Q08 UK production by around 25 kb/d. A 10 kb/d upward adjustment accrues to the 2009 forecast on evidence of marginally higher Forties system production. However, these alterations do not change the underlying trend in UK production, seen falling by 115 kb/d in 2008 and by 165 kb/d in 2009 to average 1.55 mb/d and 1.38 mb/d respectively. Output from mature fields has fallen sharply since 1999, when UK output averaged 2.9 mb/d. New field start-ups expected for the UK in 2008 and 2009 are generally small, with only the Ettrick and Brodgar/Callanish projects exceeding 20 kb/d.

Former Soviet Union (FSU)

Russia – July actual, August provisional: July and August Russian crude production made modest month-on-month gains of 50 kb/d and 20 kb/d respectively, reaching 9.57 mb/d in August. Condensates and gas plant liquids production amounted to around 445 kb/d in July and 475 kb/d in August, giving a total August production level of just over 10.0 mb/d. Forecast production now stands at 10.0 mb/d in 2008 and 9.9 mb/d in 2009, following 10.1 mb/d in 2007. Our now-weaker forecast for Russia follows news that the country's largest producer, state-sponsored Rosneft, is curbing its production outlook after delays for its 3.8 billion barrel Vankor field in Eastern Siberia. The company has pushed back Vankor start from late 2008 until 2H09, although plateau capacity is reportedly doubled to 500 kb/d.

ExxonMobil has also raised its production forecast for the Sakhalin 1 project for 2008 to the equivalent of 189 kb/d for 2008 and 169 kb/d for 2009 after discovering a new productive layer at the field earlier in the year. Since this is close to prevailing *OMR* forecast output levels for Sakhalin 1, there is no impact to our existing projections. There have also been renewed reports that year-round exports of Vityaz crude from the Sakhalin 2 project will begin this year, again confirming our earlier assumption. This follows the completion of an onshore pipeline to the southern Sakhalin export terminal at Prigorodnoye.





Azerbaijan – June actual: Forecast 2008 production for Azerbaijan is revised up by around 25 kb/d after a faster recovery in production from the offshore Azeri-Chirag-Guneshli (ACG) fields than had been assumed in last month's report. In the aftermath of the 6 August explosion on the BTC pipeline, which ships ACG crude to the Turkish Mediterranean port of Ceyhan, we had previously assumed that production would remain constrained until mid-September. However, in the event pumping resumed on BTC in the fourth week of August, with tanker loadings beginning again from Ceyhan on 25-26 August. Azeri crude exports were reported back at levels close to 1.0 mb/d on 3 September. That said, the ACG consortium and state company Socar have been forced to juggle export schedules as shipments on the Baku-Supsa pipeline and by rail to Georgian ports were disrupted by the now-ended hostilities between Russian and Georgian forces in August. The BTC pipeline outage itself may have 'cost' nearly 0.5 mb/d in lost August ACG production as the producers were forced to reduce output substantially.

FSU net oil exports fell by 220 kb/d in July, to 8.62 mb/d, according to preliminary data. Crude exports were almost flat, rising by just 35 kb/d on the month. A 140 kb/d rise in BTC exports, plus 60 kb/d extra through the Druzhba pipeline (notably heading for Poland and Slovakia), overshadowed drops in other seaborne exports. FSU product exports decreased by 250 kb/d, led by a drop of 150 kb/d in gasoil. Representing partly a correction from unusually high June volumes, this reduction in July may also have been prompted by stronger domestic demand.

FSU Net Exports of Crude & Petroleum Products

(million barrels per day)

	2006	2007	3Q2007	4Q2007	1Q2008	2Q2008	May 08	Jun 08	Jul 08	Latest month vs. Jun 08	Latest month vs. Jul 07
Crude											
Black Sea	2.22	2.18	2.09	2.10	1.96	2.23	2.20	2.15	2.06	-0.09	-0.06
Baltic	1.55	1.59	1.58	1.61	1.41	1.54	1.55	1.50	1.44	-0.06	-0.12
Arctic/FarEast	0.15	0.32	0.38	0.31	0.27	0.29	0.31	0.32	0.31	-0.01	-0.11
BTC	0.00	0.55	0.57	0.61	0.71	0.75	0.94	0.70	0.84	0.14	0.20
Crude Seaborne	4.07	4.63	4.61	4.62	4.35	4.81	5.00	4.67	4.64	-0.03	-0.09
Druzhba Pipeline	1.20	1.13	1.08	1.13	1.14	1.07	1.12	0.96	1.01	0.06	0.01
Other Routes	0.38	0.44	0.40	0.43	0.40	0.42	0.41	0.42	0.43	0.01	0.00
Total Crude Exports	5.64	6.20	6.09	6.18	5.89	6.30	6.53	6.05	6.09	0.03	-0.08
Of Which: Transneft	4.22	4.27	4.19	4.23	3.97	4.16	4.24	3.94	3.96	0.01	-0.16
Products											
Fuel oil	0.95	1.10	1.13	1.08	1.16	1.13	1.09	1.13	1.12	-0.01	0.01
Gasoil	0.95	0.95	1.01	0.96	1.06	0.96	0.80	1.04	0.90	-0.15	-0.17
Other Products	0.61	0.60	0.57	0.56	0.64	0.56	0.51	0.61	0.58	-0.03	-0.05
Total Product	2.51	2.65	2.71	2.60	2.86	2.66	2.40	2.82	2.57	-0.25	-0.25
Total Exports	8.16	8.85	8.80	8.78	8.75	8.95	8.93	8.87	8.65	-0.22	-0.33
Imports	0.04	0.04	0.05	0.04	0.05	0.03	0.02	0.03	0.03	0.00	0.00
Net Exports	8.12	8.82	8.76	8.74	8.70	8.92	8.91	8.84	8.62	-0.22	-0.33

Sources: Petro-Logistics, IEA estimates

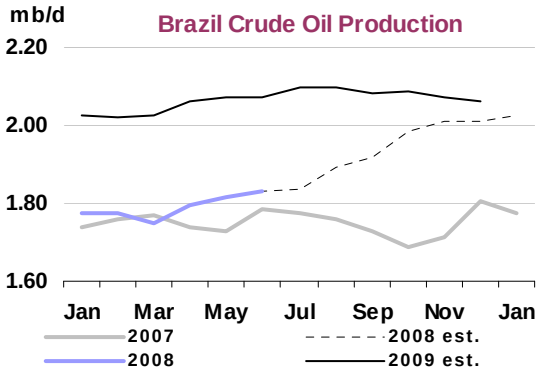
Note: Transneft data has been revised to exclude Russian CPC volumes.

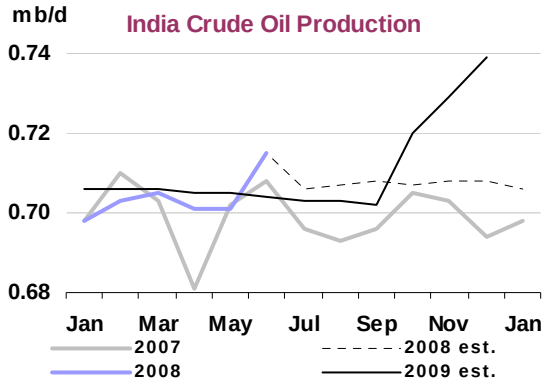
August data are likely to reflect the sharp decrease in Azeri crude exports resulting from shutting of the BTC pipeline for almost three weeks in August, following an explosion on the line in Turkey. Our production estimate from last month's report, which assumed a cut of around 500 kb/d for August as a whole, has not been changed. Furthermore, the military intervention of Russia in regions of Georgia in August resulted in the closure of several Black sea ports (Supsa, Poti and Batumi) while the Baku-Supsa pipeline and parallel rail links were also out of operation for some time. An increase in Russian export duty from 1 August may have reduced exports of Russian crude as well. However, the reopening of certain trade routes through Georgia, not least the BTC pipeline in late August, could prompt a September recovery in FSU exports from low August volumes.

Other Non-OPEC

Brazil – June actual: Crude production reached 1.83 mb/d in June and an estimated 1.87 mb/d in July, the latter based on preliminary Petrobras data. A strike by Petrobras workers previously expected for early August was averted.

All told, Brazilian crude production is seen averaging 1.88 mb/d in 2008 and 2.1 mb/d in 2009, annualised growth of 135 kb/d and 215 kb/d for the two years respectively. New field developments expected before the end of 2008 include the Marlim Sul and Marlim Leste projects in the Santos Basin, to be followed by the Jabuti project in the Campos Basin from 2Q09. However, official expectations for dominant state producer Petrobras have been revised down recently due to field underperformance and delays in new project start-ups.





Mitsui Ocean Development and Engineering was reported to have won a contract to convert an existing FPSO vessel for use at the giant deepwater Tupi field in the Santos Basin. The 100 kb/d vessel is scheduled to begin production in 4Q10. Petrobras intends to install up to ten such vessels at the Tupi field by 2015, after initial production tests.

India – June actual: Indian oil production is seen levelling off at close to 815 kb/d in 2008 and rising modestly to 820 kb/d in 2009 (with NGL production accounting for 110 kb/d in both years). An offshore explosion at the Panna-Mukta fields in June has been overcome, and production recommenced at partial levels in July. Meanwhile, Reliance Industries is expected to begin offshore east coast output from its MA field before end-September, with peak output of 40 kb/d expected within several months. Onshore, Cairn Energy has reported that development work has begun on its three Rajasthan fields, Mangala, Bhagyam and Aishwariya, together with the long-delayed export pipeline. Initial production is expected in 2H09, rising eventually to 175 kb/d.

OECD STOCKS

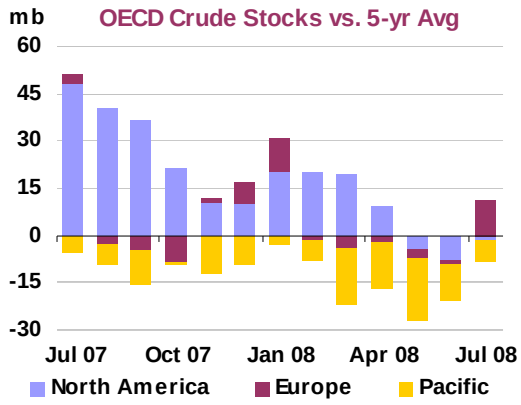
Summary

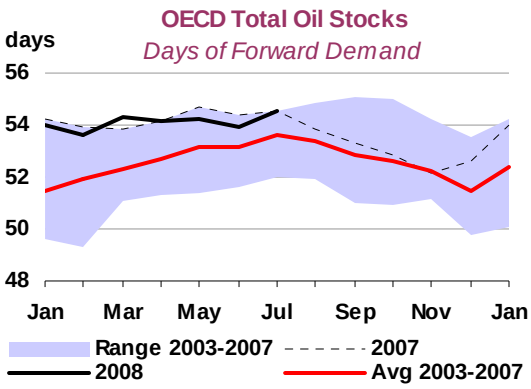
- **OECD stocks built by 46.9 mb in July to 2,646 mb.** A large and unseasonal crude build accounted for 20.3 mb of this increase, the result of higher OPEC exports since May and weak OECD refinery runs. European and Pacific crude stocks rose by 14.6 mb and 8.1 mb respectively.

- **OECD product inventories saw a typical July increase of 24.4 mb,** as a weakening of consumer demand ran in parallel with lower OECD refinery runs. A fall in OECD fuel oil stocks was the only unseasonal stock change, notably dropping 4.0 mb in OECD North America, with OECD inventories of motor gasoline seeing a characteristic July decrease of 3.9 mb. However, preliminary data suggest that usual August product stockbuilds may not fully materialise in the West, while September US product stocks could face substantial draws given the disruption to US Gulf oil infrastructure caused by this year's hurricanes.

- **A healthy July build from an upwardly revised June base leaves end-July OECD stock cover at 54.5 days, compared with the five-year average of 53.6 days.** Absolute OECD inventory levels are also above the 2003-07 average, including a greatly improved OECD Pacific crude position. Distillates remain the tightest of all the product categories in terms of forward demand cover, at 29.9 days for the OECD as a whole, lagging the five-year average by 0.5 days. Preliminary data show a hefty 15.8 mb decrease in European crude stocks in August reducing total oil cover by 0.5 days.

- **A net upward revision of 19.2 mb for OECD end-June closing stocks** now implies a 380 kb/d OECD stockbuild for 2Q08, versus last month's estimates of flat second quarter stocks and a 2Q average build of 890 kb/d. End-June European product and Pacific crude inventories were adjusted higher by 12.5 mb and 12.8 mb respectively, while Canadian crude stocks underwent large downward revisions extending back over a year, including reductions of 10-20 mb for the last seven months.





OECD Inventory Position at End-July and Revisions to Preliminary Data

The latest OECD stock data show a rise of 46.9 mb in July on top of an upward revision to end-June inventories of 19.2 mb. Coupled with a downgrading of the OECD demand outlook, this means that OECD total inventories represented 54.5 days of forward demand cover at the end of July. This was an improvement of 0.6 days on June, and took forward cover to the top of the 2003-07 range. In all product categories bar distillates, forward cover was above the five-year average at end-July.

A counterseasonal increase of 20.3 mb in crude stocks was instrumental in the July OECD stockbuild. A significant boost in OPEC crude output since May, coupled with weak OECD refinery throughputs (in a

poor margin environment) were the twin drivers of higher crude inventory. By end-July, absolute OECD crude stocks in North America had stabilised around the five-year average after three months of unseasonal decline, while in Europe they had jumped to the top or above the five-year range. In the Pacific, July saw crude stocks return within seasonal norms after five months well adrift. Still, preliminary August data suggest a hefty 15.8 mb European crude draw overshadowing a 7.2 mb increase in US crude stocks. This would drive an August drop in forward demand cover of 0.5 days for total oil.

Broadly speaking, OECD product stocks built seasonally in July, suggesting that weakness in consumer demand matched the aforementioned weakness in OECD refinery throughputs. Only distillates remain below the five-year average in terms of forward demand cover, and preliminary August data for Japan as well as ARA and Singaporean independent stockholdings reflect healthy distillate builds in the Pacific. However, initial indications show European and US product stockbuilds well behind August norms, while also subject to any losses incurred as the US hurricane season intensifies in September.

Preliminary Industry Stock Change in July 2008 and Second Quarter 2008

	July (preliminary)								Second Quarter 2008			
	(million barrels)				*(million barrels per day)*				*(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**-2.3**	**14.6**	**8.1**	**20.3**	**-0.07**	**0.47**	**0.26**	**0.66**	**-0.22**	**0.01**	**0.13**	**-0.09**
Gasoline	-1.3	-2.3	-0.3	-3.9	-0.04	-0.07	-0.01	-0.13	-0.15	-0.12	-0.03	-0.30
Distillates	13.7	1.1	6.4	21.3	0.44	0.04	0.21	0.69	0.14	0.00	0.02	0.17
Fuel Oil	-4.0	2.6	0.0	-1.5	-0.13	0.08	0.00	-0.05	0.01	-0.01	0.03	0.03
Other Products	1.5	0.7	6.4	8.6	0.05	0.02	0.21	0.28	0.34	0.01	-0.01	0.34
Total Products	**9.9**	**2.1**	**12.4**	**24.4**	**0.32**	**0.07**	**0.40**	**0.79**	**0.35**	**-0.12**	**0.01**	**0.24**
Other Oils[1]	2.3	-0.9	0.7	2.2	0.08	-0.03	0.02	0.07	0.18	0.02	0.03	0.22
Total Oil	**9.9**	**15.8**	**21.2**	**46.9**	**0.32**	**0.51**	**0.68**	**1.51**	**0.30**	**-0.09**	**0.17**	**0.38**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Substantial revisions to OECD stocks affected May and June data most significantly, culminating in net revisions of -11.8 mb and +19.2 mb respectively for those months. European distillate stocks were revised up by 9.0 mb for June, including 4.3 mb in the Netherlands and 3.3 mb in the UK. There was also a large upward adjustment to Japanese crude stocks of 10.9 mb, due to an underestimation of volumes in ocean vessels waiting to unload (a recurrent grey area which has been discussed at length in previous reports). Otherwise, for June, the adjustment-prone 'Other Oils' category in OECD North America was subject to a correction of +8.6 mb, as were European crude stocks, to the tune of +5.7 mb.

Revisions versus 12 August 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	May 08	Jun 08	May 08	Jun 08	May 08	Jun 08	May 08	Jun 08
Crude Oil	**-15.7**	**-16.7**	**0.8**	**5.7**	**0.0**	**12.8**	**-14.9**	**1.7**
Gasoline	-1.1	-0.7	-2.7	-2.1	1.1	0.8	-2.7	-2.0
Distillates	-0.1	-1.0	0.7	9.0	0.9	1.3	1.5	9.2
Residual Fuel Oil	-1.2	-1.9	2.4	1.5	0.1	-0.2	1.3	-0.6
Other Products	1.6	-0.2	1.6	4.1	0.1	-0.4	3.3	3.5
Total Products	**-0.8**	**-3.8**	**2.0**	**12.5**	**2.2**	**1.4**	**3.4**	**10.1**
Other Oils[1]	0.1	8.6	-0.4	-1.5	0.0	0.2	-0.3	7.3
Total Oil	**-16.3**	**-11.9**	**2.4**	**16.7**	**2.2**	**14.4**	**-11.8**	**19.2**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

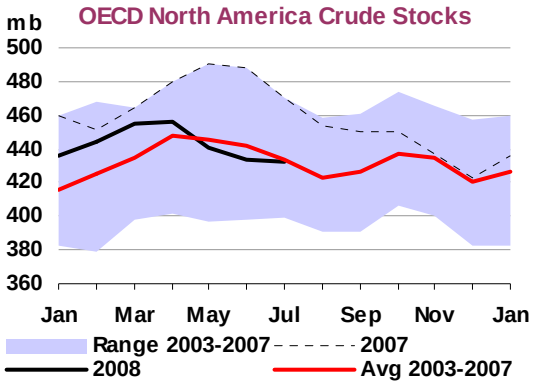
Perhaps of more long-term significance was the downward revision of Canadian crude inventories extending back over a year, including reductions of 10-20 mb for the last seven months. This meant that OECD North American crude stocks fell below the five-year average (in May and June) for the first time since September 2004. Even so, incorporating all revisions, the second quarter OECD stockbuild now stands at +380 kb/d (34.2 mb), having been reported as almost flat in last month's report. This still substantially lags the five-year average second quarter build of 890 kb/d.

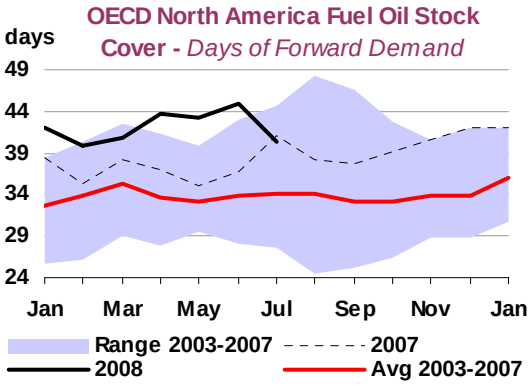
OECD Industry Stock Changes in July 2008

OECD North America

Although OECD North America stocks saw a seasonal build of 9.9 mb in July, this included a shallow crude draw of 2.3 mb while the product build of 9.9 mb was less than July norms ('Other oils' made up the balance, rising by 2.3 mb). On the crude side, Mexican stocks dropped by 2.8 mb in July led by a dip in production of 60 kb/d. US stocks were essentially flat in July, stemming the declines seen since end-April, despite a drop in US refinery crude throughputs (at least in part economic) and a slight increase in crude imports.

Canadian crude stock levels were significantly downgraded for the last year or so, with reductions of 10-20 mb affecting the last seven months. This meant that OECD North American crude inventories fell below the five-year absolute average in May and June. Questions raised at the time over inflated Canadian crude inventories and their artificially supportive effect on regional aggregates now seem to have been justified. In any case, the shallow July draw took regional crude inventories back in line with seasonal averages. Preliminary weekly data suggest that US crude stocks could see a rebound of 7.2 mb in August.





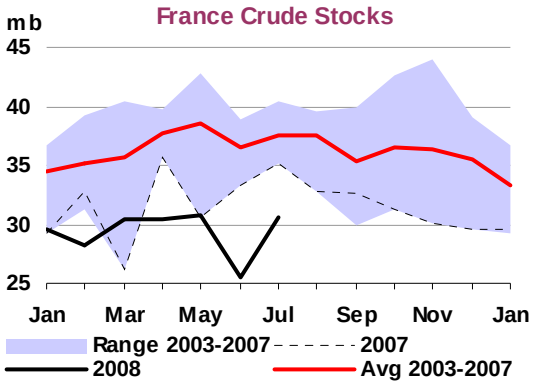
North American product inventories increased by 9.9 mb in July on aggregate. A sharp drop of 4.0 mb in fuel oil, shared between US and Mexico, reflected the broad tightening of the fuel oil sector in recent months. It also partially offset a healthy 13.8 mb July rise in US distillate stocks. A shallower-than-usual ebb in OECD North American motor gasoline stocks of 1.3 mb, possibly resulting from weak mid-summer demand, left them near the five-year average. However, September US product stocks are likely to face substantial draws given the disruption to US Gulf oil infrastructure caused by this year's hurricanes.

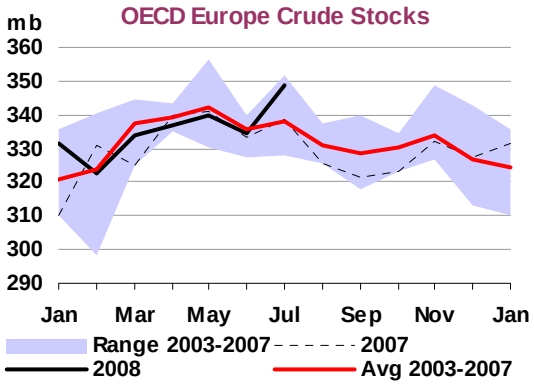
OECD Europe

A 15.8 mb build in OECD European stocks in July was well ahead of seasonal norms and almost entirely driven by a jump of 14.6 mb in crude stocks. Product stocks rose by only 2.1 mb, including a mild increase of 1.1 mb in distillates. Aided by upward revisions to end-June closing inventories for crude (+5.7 mb) and products (+12.5 mb), July stock changes pushed regional levels back above the five-year range in absolute terms.

Norway and France led the July crude stockbuild in Europe. Norwegian crude inventories increased by 7.2 mb as crude production firmed by 240 kb/d while exports apparently slowed (according to tanker data). French crude stocks built by 5.0 mb, with higher imports being the likely cause given that refinery runs were flat. Lower refinery runs contributed to an Italian crude build of 3.0 mb. Coming after an upward revision of 5.7 mb to end-June OECD Europe crude stocks, the build left regional crude inventory

near the top of the five-year range, having appeared near the bottom based on last month's preliminary figures for the end of the second quarter.

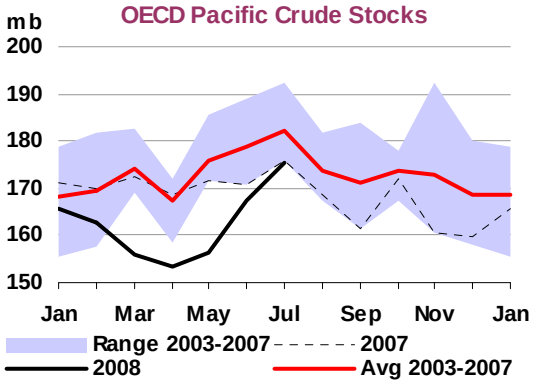


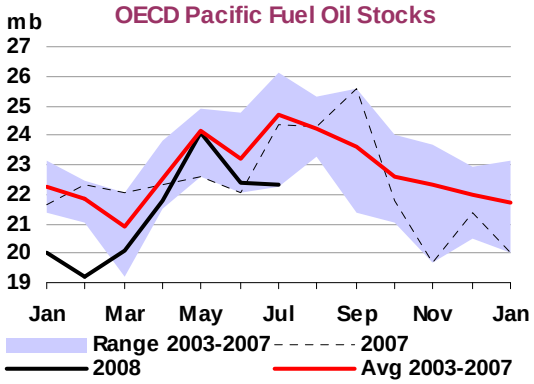


The upward revision of 9.0 mb to end-June European distillate stocks indicates that regional tightness in the product unwound by even more than was reported last month. A significant proportion of the bumper US exports of distillates reported for June (of 745 kb/d) is likely to have headed for Europe. However, a shallow rise of 1.1 mb in July, limited notably by a 1.5 mb monthly draw in Germany where consumers appear to be finally rebuilding domestic heating oil stocks, left distillate demand cover below the five-year range once again. The European draw of 2.3 mb in gasoline in July was bigger than the five-year average July decrease of 0.4 mb, possibly a result of the lower gasoline yields observed in the region or just lower throughputs. Data for independently held stocks in the ARA region show a 2.4 mb increase in August distillate stocks and a very marginal 0.1 mb draw in motor gasoline.

OECD Pacific

A large upward revision of 14.4 mb was observed for June's closing stocks in the OECD Pacific, of which 10.9 mb was Japanese crude. From this higher base, a July stockbuild of 21.2 mb, well ahead of seasonal norms, brought regional oil inventories back within the five-year range in forward demand cover terms for the first time since February.





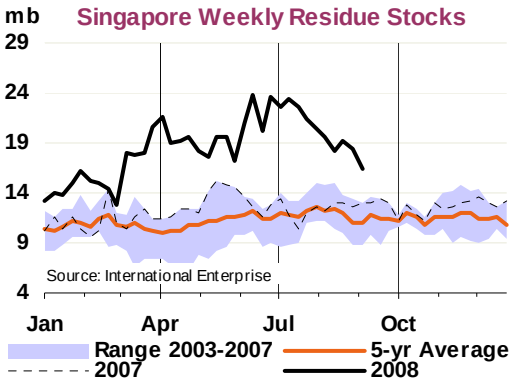
OECD Pacific commercial crude stocks were revised up by 12.8 mb for end-June and were observed to rise by a further 8.1 mb in July. This marked a significant recovery in regional crude stocks with a clear boost coming from higher imports from OPEC countries. June revisions for Japanese crude stocks amounted to +10.9 mb and were prompted by an underestimation of volumes held in vessels in Japanese waters not yet unloaded, a recurring and significant grey area when assimilating preliminary Japanese crude stock data. Japanese crude stocks are now seen to have risen by 6.3 mb and 4.8 mb in June and July respectively. METI data shows that imports from the Middle East rose by almost 1 mb/d in

July, with notable extra volumes from UAE (up 250 kb/d) and Iran (up 230 kb/d). This outpaced a 410 kb/d rise in refinery crude throughputs. Korean crude inventories built by 3.3 mb in July despite an apparent increase of 140 kb/d in refinery runs and imports only rising by 50 kb/d.

Total OECD Pacific product stocks built by 12.4 mb in July, including 6.4 mb increases in both the middle distillates and 'other products' categories. Japanese stocks of distillates rose by 5.7 mb in July, while those of 'other products' by 5.1 mb, a recovery from a very low end-June level. Regional product inventories were boosted by a 570 kb/d monthly increase in refinery crude runs. However, OECD Pacific fuel oil stocks remained close to the bottom of the five-year absolute range as a Korean build of 0.5 mb offset a corresponding Japanese draw.

Recent Developments in Singapore Stocks

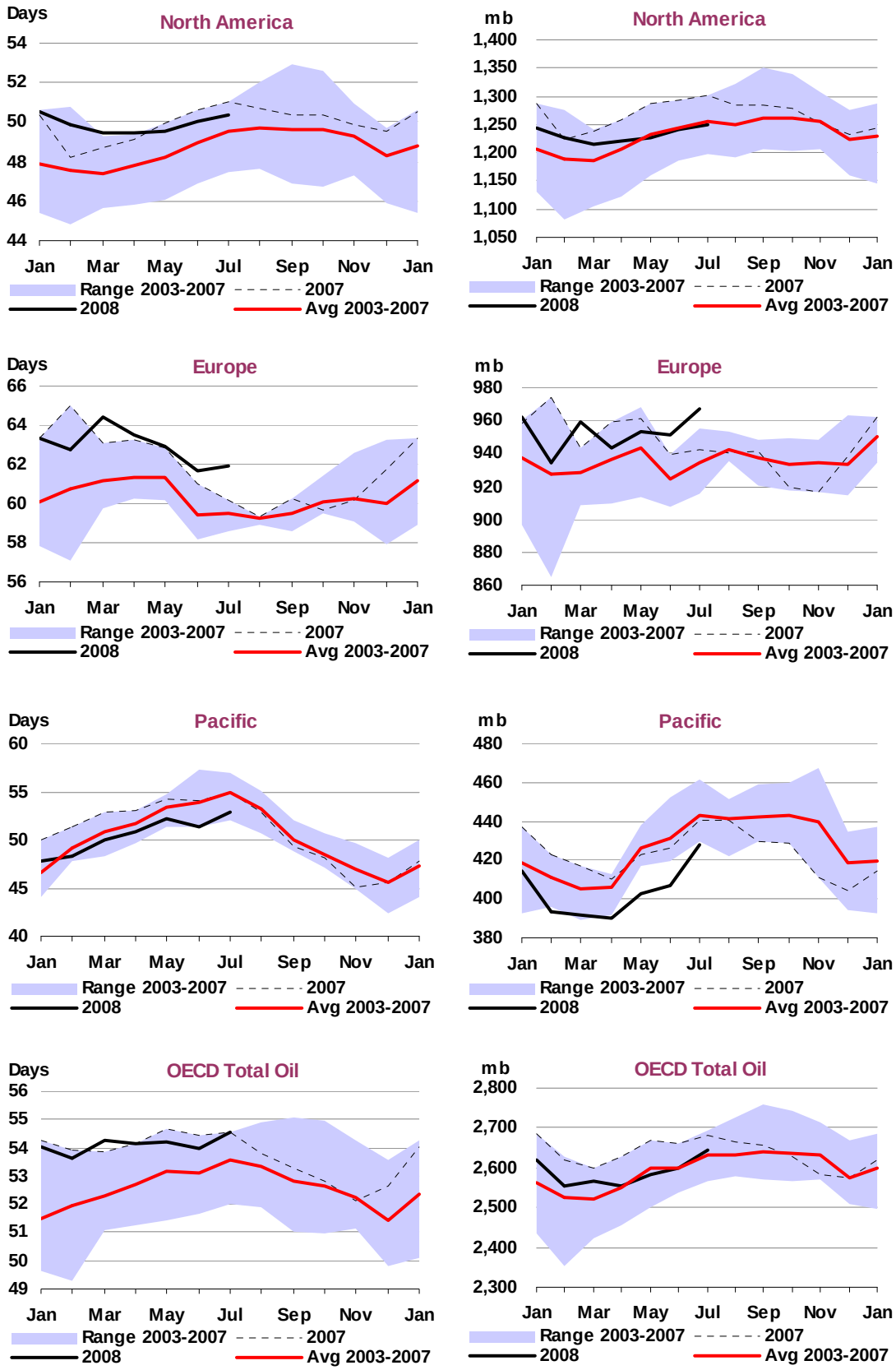
Independent stocks of light and middle distillates continued to rise in Singapore in August, by 0.7 mb and 1.0 mb respectively. Reports that China has reduced its gasoil imports since the Olympics may have reduced the distillate tightness in the region, allowing stocks to build (note: some recent Chinese stock data are discussed in this month's demand section). By contrast, independent fuel oil stocks in the same location fell by 3.0 mb as demand for the product rose (essentially for power generation), helping to drive a narrowing of the HSFO (Singapore) discount to Dubai from -$12/bbl to -$2/bbl.



Regional OECD End-of-Month Industry Stocks

(in days of forward demand and millions barrels of total oil)

Days[1] Million Barrels



1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

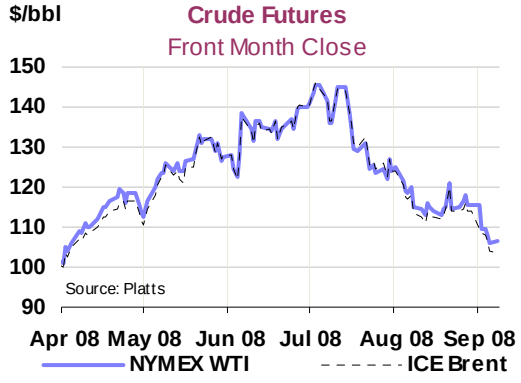
- **Benchmark crude futures continued their downward slide in August and early September**, approaching $100/bbl, as fundamentals eased and Hurricane Gustav proved less devastating than feared. Demand in the OECD weakened further, dominating market sentiment, and prices shrugged off crude shortfalls resulting from Gustav and the BTC pipeline shut-in. However, when going to press, Hurricane Ike was approaching the US Gulf and is expected to defer post-Gustav supply recovery.

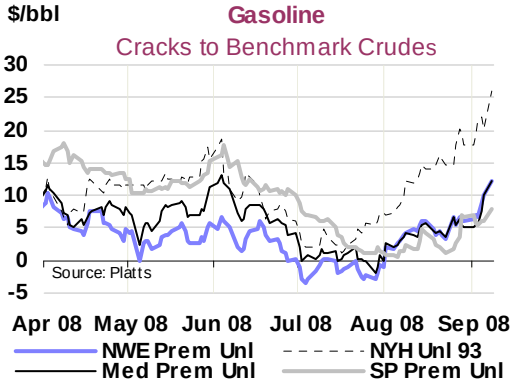
- **Spot crude prices weakened**, as the BTC pipeline shutdown and the prospect of a prolonged shut-in of US Gulf production were offset by below-average refinery throughputs. Stronger fuel oil cracks have narrowed light/heavy spreads, while gasoline's recovery is increasing premia for light sweet grades.

- **Refining margins improved in the US and Europe in August**, on stronger gasoline and fuel oil crack spreads. The recovery was particularly visible on the US Gulf Coast, where cracking margins had previously been negative. In Singapore, margins declined, as previous distillate strength unravelled and, unlike in the other regions, gasoline cracks fell month-on-month. Several refiners reported economic run cuts.

- **Gasoline crack spreads saw continued recovery**, especially in the US, where levels are now back in line with their seasonal five-year average and are contributing towards stronger refining margins. The acute distillate tightness noted in past reports has loosened, though distillate cracks remain unusually high in all regions. Fuel oil discounts to crude narrowed further on tight fundamentals.

- **August saw dirty tanker rates continue to decline** to the usual subdued levels expected in advance of autumn refinery maintenance, after a dramatic late-July plunge from historical highs. Conversely, clean tanker rates to Asia rocketed on tight vessel fundamentals and increased long-haul trading.



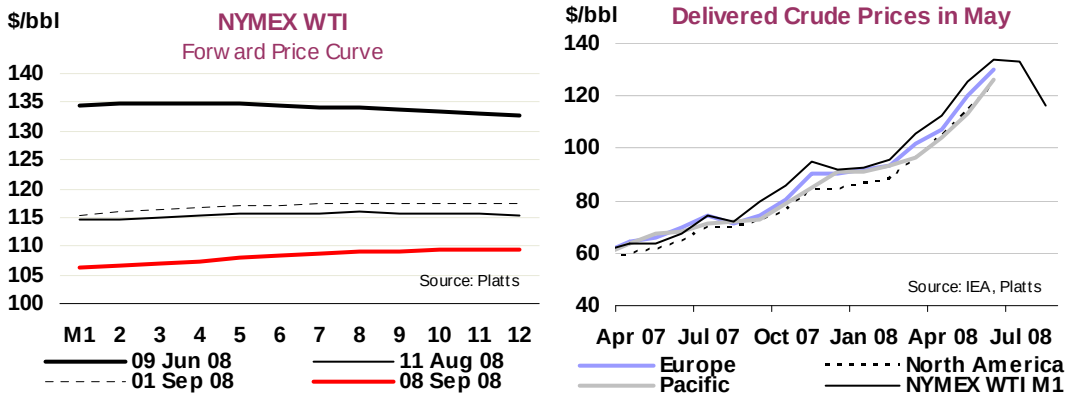


Overview

Oil prices continued their downward slide, as fundamentals eased further, with clear signs of demand weakness and a somewhat rosier stocks picture outweighing downward-revised supply. Moreover – as far as could be ascertained at the time of writing – there was considerably less damage than feared from the impact of Hurricane Gustav on the US Gulf Coast. However, the approach of Hurricane Ike could significantly impede recovery of both crude and refined products supply until late September or early October. Previously, the military flare-up in Georgia briefly halted a slide that has now taken prices from their early-July high around $147/bbl to around $105 at the time of writing – a similarly dramatic plunge of over $40 in just two months as the preceding rise in prices. Prices are now at their lowest since early April.

In what increasingly appears to be a shift in sentiment, weaker supply/demand fundamentals are asserting themselves. As soon as it was apparent that Hurricane Gustav was not going to be nearly as devastating as Hurricanes Katrina and Rita in the summer of 2005, prices began retreating sharply, with spot crudes in some cases falling by as much as $10/bbl in one day. This followed a rapid restart of the Baku-Tblisi-Ceyhan (BTC) pipeline through Turkey and an end to hostilities in Georgia.

It would appear that both Georgia and Gustav came at a time when short-term crude supplies were inflated by lower-than-average OECD crude throughputs and higher OPEC output – the widening of WTI's near-month contango would also hint at a loosening of near-term fundamentals. In addition, it appears that statements both by the US authorities and the IEA to the effect that strategic stocks would be released in the event of long-lasting outages, helped to reassure markets (at the time of writing, the SPR was set to lend a small volume of crude to some Gulf Coast refineries). Having said that, the hurricane season is not yet over, with several more major storms forecast to form. Ahead of going to press, Hurricane Ike was approaching oil and gas facilities in the US Gulf, while in August, Edouard and Fay had caused some precautionary shut-ins and evacuations in what is proving to be a stormier-than-average season. Forecasters expect 14-18 tropical storms in the US Gulf this season, which is considerably higher than the historical average of ten.

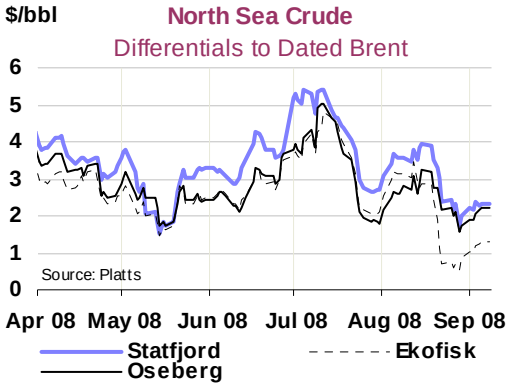


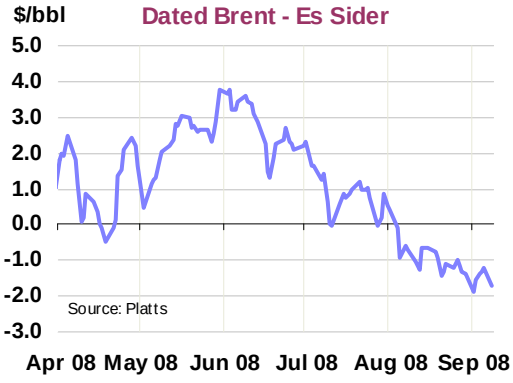
As with Katrina/Rita, the greatest potential impact looks likely to come from the shut-in *refining* capacity (compared with *crude production* capacity). However, even this, and the prospect of much of it potentially remaining offline for some weeks, has failed to rally prices. This is largely due to even weaker-than-expected OECD demand, as incoming data consistently show a decline due to the economic downturn and prevailing high prices. In the OECD, continued economic slowdown or even recession are likely to continue to hamper demand further, as reflected in this report's substantial downward revisions for 2008 and 2009.

At the same time, as highlighted in last month's report, demand from some additional, temporary non-OECD sources has abated. This is especially true for distillates, which as a result have seen a marked downturn in crack spreads compared with their previous and unseasonal premium to gasoline. Indeed, in the US, the world's largest consumer, gasoline cracks have caught up with distillates again, also supporting a rise in refining margins, and are back in line with their average. Unusually, this comes at a time when the summer driving season is traditionally considered over. On the product front, fuel oil discounts to crude have narrowed even further, again boosting simple refining margins. At the same time, various refiners have announced economic run cuts, even in China, though this may be due to a post-Olympic easing, at least of product imports.

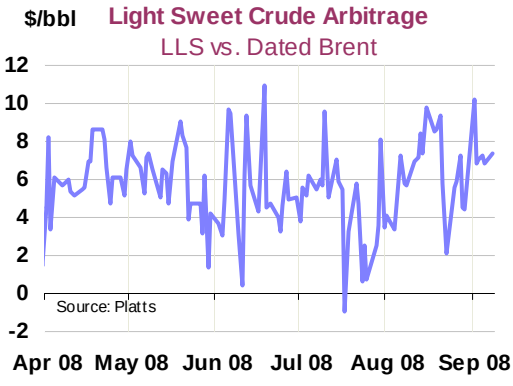
Spot Crude Oil Prices

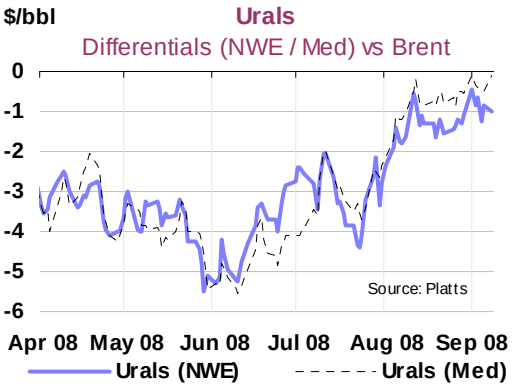
Spot crude prices in some cases fell even more steeply than futures as markets appear amply supplied. Global refinery crude throughput in August was in line with that of last year and is set to dip below year-on-year's level in September, in large part due to refinery outages on the US Gulf Coast related to Hurricanes Gustav and Ike, but also on below-average runs in the OECD as a whole. A sharp recovery of refining margins in August, at least in the US and Europe, has improved the profitability of hydroskimming and thus widened the choice of crudes for many plants. This development – if sustained, which is not unlikely, given the potential for a short-term product shortfall stemming from refinery shutdowns on the US Gulf Coast – may yet boost refining margins and hence demand for crude.





Overall, as mentioned above, the Georgia and Gustav crude outages came at a time when alternative crude supplies were higher and prices reacted with a sharp fall. In the **North Sea**, crudes fell relative to Dated Brent, despite a sharp dip in August supply. North Sea crudes were also likely to benefit from a widening discount to WTI, LLS and other US crudes, as refining dynamics change and dirty transatlantic freight rates are now much lower. In the **Mediterranean**, the Azeri Light outage was not immediately visible in prices, but eventually showed up in a strengthening of rival grade Es Sider versus Dated Brent – though Libyan crude production itself was also curbed slightly in August. Urals meanwhile saw its discount to Brent narrow further, taking some strength from the Azeri shortfall, but also from a reduced export schedule and a further narrowing of fuel oil's discount to crude.





In the **US**, the improvement in refining margins supported crudes, especially LLS and related grades for cracking, but also Mars for coking. WTI and other grades' relative strength to Atlantic Basin crudes such as Brent and Bonny Light should, especially if refining margins improve, be sufficient to draw in more crude from outside the region, should this prove necessary. Total US crude stocks increased slightly in August and remain just below their five-year average. In **Asia**, Dubai crude, which has recently been supported by fuel oil's recovery, saw one of the single greatest daily falls on 2 September, when it first

became apparent that Gustav was not going to cause as much devastation as Katrina and Rita three years ago, dropping by more than $10/bbl. The Asian market is suffering more than the US and Europe from an easing of distillate tightness, seeing refinery margins fall in August as a consequence.

Spot Crude Oil Prices and Differentials

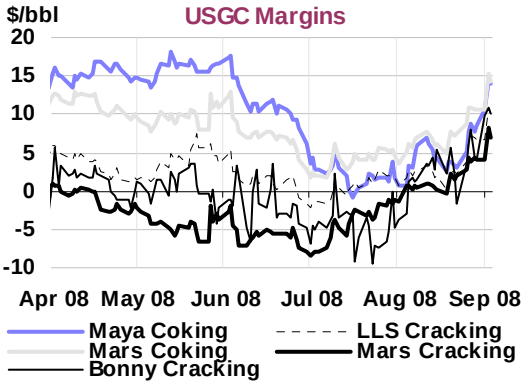
(monthly and weekly averages, $/bbl)

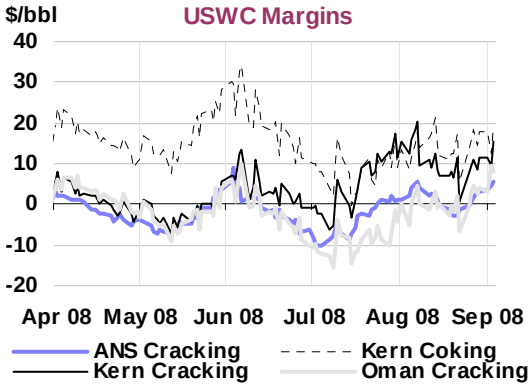
	Jun	Jul	Aug	Aug-Jul Avg Change	%	Week Commencing: 04 Aug	11 Aug	18 Aug	25 Aug	01 Sep
Crudes										
Dated Brent	132.44	133.18	113.03	-20.15	-15.1	115.93	109.69	111.58	112.69	104.70
Brent (Asia) Mth1 adjusted	132.90	135.29	114.66	-20.63	-15.3	119.01	112.25	112.61	113.10	107.71
WTI (Cushing) Mth1 adjusted	133.93	133.30	116.58	-16.71	-12.5	118.69	114.43	115.51	116.00	108.32
Urals (Mediterranean)	127.73	130.06	112.16	-17.89	-13.8	114.68	109.05	110.88	112.07	104.33
Dubai Mth1 adjusted	127.82	131.27	112.86	-18.42	-14.0	117.12	110.58	111.37	110.83	104.35
Tapis (Dated)	140.71	144.66	124.40	-20.26	-14.0	128.51	122.31	122.59	122.57	114.77
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	1.50	0.11	3.55	3.44		2.75	4.74	3.94	3.31	3.61
Urals (Mediterranean)	-4.71	-3.12	-0.87	2.26		-1.26	-0.64	-0.70	-0.61	-0.37
Dubai Mth1 adjusted - Dated Brent	-4.62	-1.91	-0.17	1.73		1.18	0.89	-0.20	-1.85	-0.35
Tapis (Dated)	8.27	11.48	11.37	-0.11		12.58	12.62	11.01	9.89	10.07
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	-0.91	-0.87	-1.43	-0.55		-1.26	-1.43	-1.50	-1.54	-1.63
Forward WTI Cushing Mth1-Mth2 adj	-0.53	-0.65	-0.20	0.46		-0.03	-0.10	-0.22	-0.39	-0.53

Source: Platts

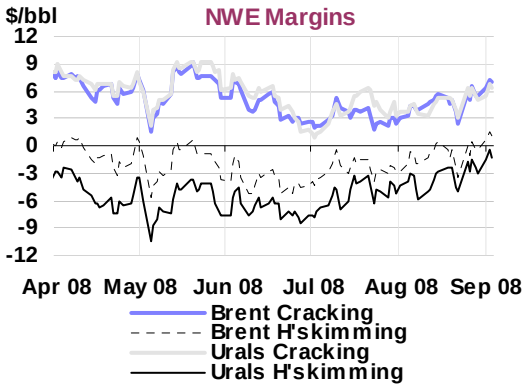
Refining Margins

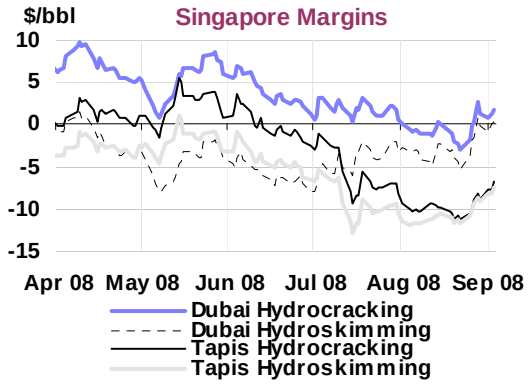
August refining margins improved in the US and Europe, but fell in Singapore. Crucially, gasoline crack spreads are recovering, especially in the **US**. This trend was already observable before Hurricane Gustav hit, but is likely to be exacerbated if outages are prolonged. Fuel oil discounts narrowed too, while distillate spreads were generally down. In any case, the margin improvement was quite marked after a weak patch, with all Gulf Coast and West Coast margins measured moving back into positive territory in August. The improvements were more noticeable for domestic crudes such as LLS, Mars and Kern, where margins were higher.





In **Europe**, margins mostly improved. The exception was Es Sider in the Mediterranean, which as a result of the Azeri Light outage and lower Libyan output, had risen sharply *vis-à-vis* other regional crudes. In Northwest Europe, diesel cracks improved, unlike elsewhere. Gasoline too was up, though not as strongly as in the US, and fuel oil cracks improved too. While in August, on average, hydroskimming margins were still negative, the latest weekly calculation showed a shift into modestly positive territory, improving the chances of some marginal capacity being reactivated.





In **Asia**, Singapore margins were mostly down on the month, as unlike the other two regions, gasoline and distillate cracks fell month-on-month, as the regional market eased. Even though latest weekly data showed an improvement, Singapore cracking margins are only just profitable, while Tapis hydroskimming margins remain deeply negative (Dubai hydroskimming crept into positive territory in early September). As a result, several regional refineries have announced economic run cuts.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Jun 08	Jul 08	Aug 08	Aug 08-Jul 08	06 Aug	13 Aug	20 Aug	27 Aug	03 Sep
NW Europe	Brent (Cracking)	4.47	3.11	4.67	1.55	3.48	4.46	5.26	4.70	6.24
	Urals (Cracking)	5.16	3.84	4.62	0.79	3.98	3.84	5.11	5.03	5.84
	Brent (Hydroskimming)	-3.72	-2.51	-1.04	1.48	-1.85	-1.29	-0.33	-1.29	0.46
	Urals (Hydroskimming)	-7.08	-4.79	-2.46	2.32	-3.05	-3.89	-1.70	-1.92	-0.69
Mediterranean	Es Sider (Cracking)	7.29	3.92	3.61	-0.31	3.10	3.57	4.30	3.43	3.66
	Urals (Cracking)	6.76	4.44	4.47	0.03	3.85	3.59	5.04	4.92	5.49
	Es Sider (Hydroskimming)	-1.62	-2.19	-2.43	-0.24	-2.42	-2.27	-1.57	-3.24	-2.62
	Urals (Hydroskimming)	-6.74	-5.36	-3.48	1.87	-3.96	-4.87	-2.65	-3.08	-1.80
US Gulf Coast	Bonny (Cracking)	-2.94	-5.05	1.94	6.99	-2.16	1.75	3.11	3.18	7.13
	Brent (Cracking)	-1.60	-4.64	2.74	7.38	-1.69	2.85	4.07	3.64	7.86
	LLS (Cracking)	1.49	0.44	3.10	2.66	1.80	2.73	1.62	4.51	8.18
	Mars (Cracking)	-5.60	-4.25	1.45	5.70	-0.19	0.78	0.70	2.91	5.51
	Mars (Coking)	7.44	3.92	7.31	3.38	5.06	7.09	6.17	9.07	12.27
	Maya (Coking)	11.58	2.09	4.74	2.65	1.92	5.78	3.72	5.62	11.03
US West Coast	ANS (Cracking)	-0.70	-4.35	1.31	5.65	2.73	3.26	-1.11	-0.36	3.96
	Kern (Cracking)	4.26	4.66	10.57	5.92	14.86	12.41	7.30	8.08	11.40
	Oman (Cracking)	-0.99	-9.11	0.41	9.52	-1.32	1.38	-1.09	0.54	5.46
	Kern (Coking)	20.28	8.36	14.25	5.89	11.37	17.34	12.34	14.18	16.45
Singapore	Dubai (Hydroskimming)	-5.77	-4.28	-2.96	1.31	-3.02	-3.92	-2.92	-3.34	0.03
	Tapis (Hydroskimming)	-4.05	-8.98	-10.90	-1.92	-11.48	-11.32	-10.98	-10.55	-8.33
	Dubai (Hydrocracking)	4.03	1.79	-0.60	-2.38	-0.28	-0.93	-0.65	-1.34	1.58
	Tapis (Hydrocracking)	0.00	-5.64	-9.94	-4.30	-9.62	-9.78	-10.32	-10.24	-7.88
China	Cabinda (Hydroskimming)	-1.81	-2.84	0.74	3.57	-1.78	0.28	2.53	0.79	2.01
	Daqing (Hydroskimming)	-2.84	-5.27	-2.47	2.80	-5.25	-3.56	-1.87	-1.17	0.69
	Dubai (Hydroskimming)	-7.14	-5.76	-3.30	2.47	-3.68	-4.25	-3.20	-3.55	-0.38
	Daqing (Hydrocracking)	1.17	-2.31	-1.24	1.06	-3.45	-1.73	-0.78	-0.65	1.62
	Dubai (Hydrocracking)	2.68	0.30	-0.90	-1.21	-0.93	-1.25	-0.88	-1.50	1.20

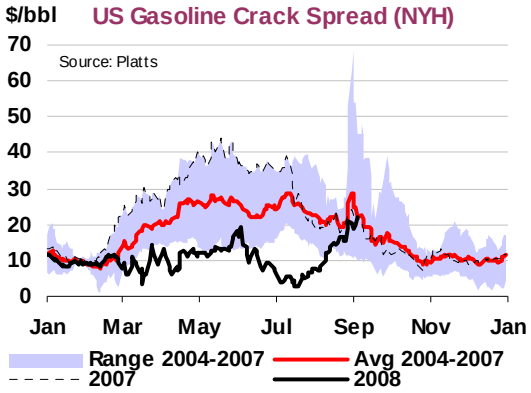
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimised for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

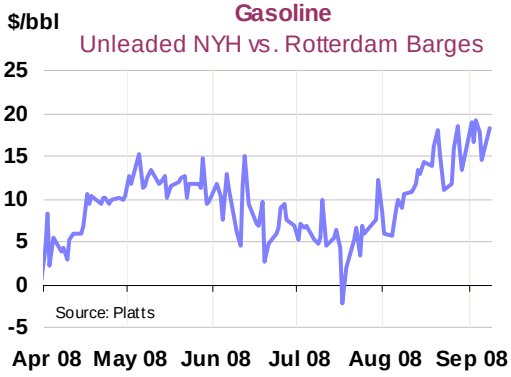
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

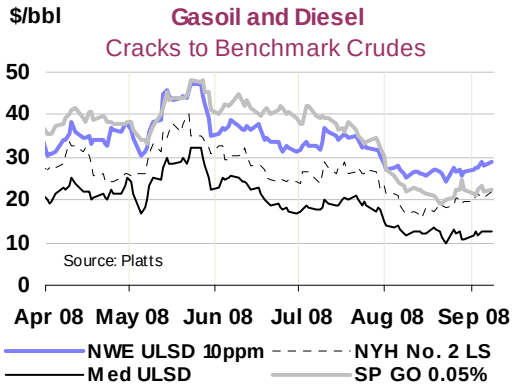
Spot Product Prices

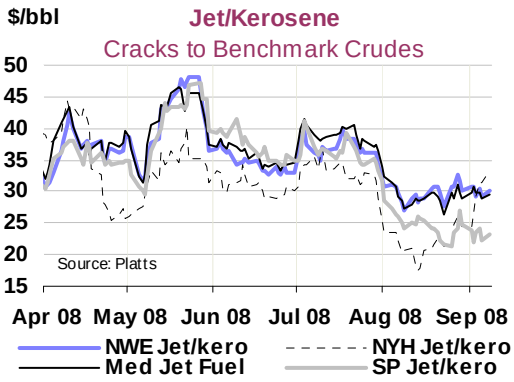
Gasoline crack spreads showed the greatest improvement in August and early September as, despite weak demand, supply has tightened after refiners hiked distillate yields. This was particularly pronounced in US markets, where gasoline prices had been unseasonably depressed on weak or declining demand due to the economic downturn and high retail prices. Compared with other regions, gasoline cracks in the US Gulf, New York Harbor and the West Coast are all significantly higher. But US cracks have in reality only just returned to their five-year average, highlighting their previous weakness. Stocks fell 14.4 mb in August – an unusually steep decline at this time of year, even though overall levels remain only below their five-year average. Gains in the US have also improved the economics of sending gasoline transatlantic. In Asia, markets have eased, with China expected to return to gasoline net-exporter status in September. Independent light distillate stocks held in Singapore have risen to well above their five-year average range for this time of year.





Diesel, jet fuel and gasoil crack spreads have continued their slide from end-May peaks but saw a slight uptick in late August/early September, when Gustav hit, and remain high. The acute tightness noted in the past several reports appears to have slackened, as pockets of temporary demand have eased. China is expected not to import any gasoil at all in September after stock requirements were apparently relaxed following the end of the Olympic Games. Indonesia is expected to import only 170 kb/d in September, down from 225 kb/d in August. Europe meanwhile has been receiving volumes from the US, but also from Asia, and the new 10 ppm ultra-low-sulphur diesel (ULSD) export stream from the Russian port of Primorsk is contributing to greater availability. The European Union will be switching to mandatory 10 ppm diesel from end-2008 and most refineries appear to be prepared.





Fuel oil discounts have in most cases continued to narrow *vis-à-vis* crude, as demand for power generation in the Middle East soars, curbing exports. Lower volumes are emanating especially from Iran, which is hit by a drought-related hydroelectric power shortage. Arab Gulf countries too are seeing a

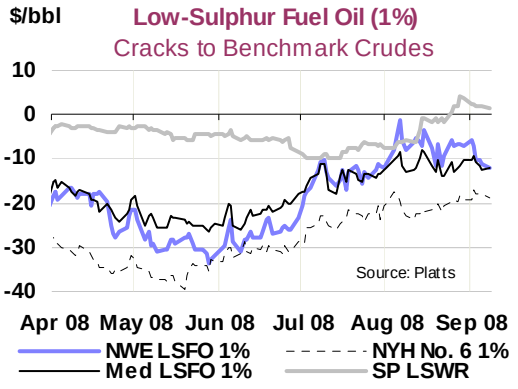
Spot Product Prices

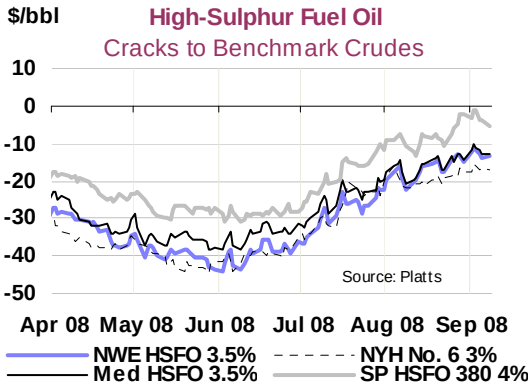
(monthly and weekly averages, $/bbl)

	Jun	Jul	Aug	Aug-Jul Change	Aug-Jul %	Week Commencing: 04 Aug	11 Aug	18 Aug	25 Aug	01 Sep	Jun	Jul	Aug
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	135.89	131.71	117.60	-14.12	-10.7	119.02	115.13	115.69	119.16	112.40	3.45	-1.47	4.57
Naphtha	120.79	119.73	105.64	-14.09	-11.8	106.49	103.12	104.44	107.67	100.16	-11.64	-13.45	-7.39
Jet/Kerosene	166.97	169.91	143.00	-26.92	-15.8	145.35	138.58	141.48	144.46	134.84	34.53	36.73	29.97
ULSD 10ppm	167.62	166.43	139.60	-26.83	-16.1	142.71	135.90	137.79	139.65	132.65	35.19	33.25	26.57
Gasoil .1%	163.81	163.78	137.67	-26.11	-15.9	140.81	134.11	135.55	137.93	129.87	31.38	30.60	24.64
LSFO 1%	105.73	119.19	106.08	-13.11	-11.0	110.62	104.00	102.21	106.16	95.82	-26.70	-13.99	-6.95
HSFO 3.5%	93.30	105.11	96.34	-8.77	-8.3	97.70	91.69	95.68	99.27	92.20	-39.13	-28.07	-16.69
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	135.57	130.57	116.53	-14.05	-10.8	117.71	113.83	115.11	118.11	111.01	7.84	0.51	4.36
Naphtha	119.01	118.95	105.02	-13.93	-11.7	106.02	102.67	103.90	106.48	98.89	-8.72	-11.11	-7.14
Jet Aviation fuel	163.36	168.61	141.51	-27.09	-16.1	144.10	137.66	139.64	142.20	134.10	35.63	38.55	29.35
Gasoil .2%	161.07	161.41	136.53	-24.88	-15.4	140.18	133.95	134.99	134.21	126.04	33.34	31.35	24.37
LSFO 1%	105.81	115.78	101.00	-14.79	-12.8	104.20	98.81	98.41	100.73	93.32	-21.92	-14.27	-11.17
HSFO 3.5%	93.50	105.28	96.29	-8.99	-8.5	97.75	91.65	95.76	98.88	92.85	-34.23	-24.77	-15.87
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	144.33	137.15	130.11	-7.04	-5.1	127.81	127.75	130.56	133.94	129.01	10.39	3.86	13.53
Unleaded	138.20	132.15	121.39	-10.76	-8.1	121.50	120.32	119.93	122.88	120.25	4.27	-1.14	4.81
Jet/Kerosene	164.72	166.05	138.57	-27.48	-16.5	140.81	133.52	137.30	140.66	138.01	30.79	32.75	21.99
No. 2 (Heating Oil)	159.53	157.78	132.93	-24.86	-15.8	134.97	128.92	131.95	133.73	126.54	25.60	24.49	16.35
LSFO 1%	103.23	109.42	95.97	-13.45	-12.3	98.76	92.07	94.48	96.75	90.63	-30.70	-23.88	-20.61
No. 6 3%	94.25	106.45	97.13	-9.33	-8.8	99.26	93.42	95.85	98.16	92.04	-39.68	-26.84	-19.45
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	140.30	135.27	115.49	-19.78	-14.6	118.39	113.75	113.53	115.12	110.43	12.48	4.00	2.64
Naphtha	125.25	125.46	108.37	-17.08	-13.6	110.67	106.63	107.31	107.76	100.55	-2.57	-5.81	-4.48
Jet/Kerosene	164.88	167.28	137.65	-29.63	-17.7	142.91	135.95	134.47	134.99	127.48	37.07	36.01	24.79
Gasoil .5%	166.45	165.97	132.17	-33.80	-20.4	138.48	130.03	127.67	129.79	123.71	38.63	34.70	19.31
LSWR Cracked	122.22	122.91	110.41	-12.50	-10.2	110.76	107.03	110.03	113.34	106.40	-5.59	-8.36	-2.45
HSFO 180 CST	99.50	112.92	103.70	-9.23	-8.2	106.84	99.65	101.68	105.33	100.42	-28.32	-18.35	-9.16
HSFO 380 CST 4%	99.14	113.26	104.65	-8.61	-7.6	108.27	100.26	102.48	106.27	101.73	-28.68	-18.01	-8.20

Source: Platts

combination of strong population growth and soaring energy needs for ambitious construction projects, not least in the energy sector. On the other side of the world, Japan's power utility TEPCO reportedly burned around double the amount of fuel oil (and crude) in July year-on-year, with little prospect of imminent recovery of nuclear power output.





End-User Product Prices in August

End-user product prices on average decreased by 10.0% in August, in US dollars, ex-tax. Following August drops in international crude and product prices, gasoline prices at the pump on average fell by 9.6% and diesel prices by 10.5% in all surveyed IEA countries except Japan. There, gasoline, diesel and heating oil prices rose by 1.4%, 2.1% and 2.3%, respectively, and started to fall only in the last week of August. At the pump, US drivers on average paid $1/litre for gasoline (¢377.9/gallon), while Japanese

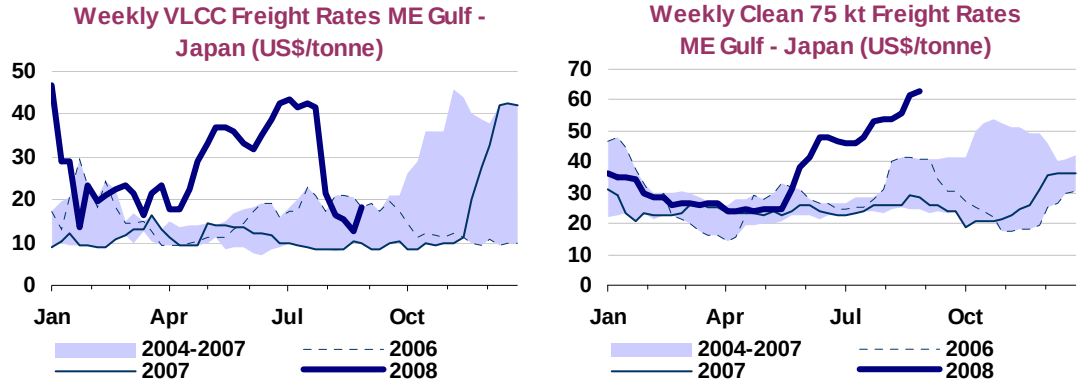
paid $1.69/litre (¥185/litre). In Europe, retail gasoline prices varied from $1.77/litre (€1.18/litre) in Spain to $2.18/litre (€1.46/litre) in Germany. Heating oil and low-sulphur fuel oil prices in IEA member countries (except Japan) on average dropped by 13.0% and 9.1%, respectively, in US dollars, ex-tax. Compared with August 2007, retail product prices are on average 56% higher than a year ago.

Freight

After a dramatic late-July plunge from historical highs, dirty tanker rates continued to decline in August to the usual subdued levels expected in advance of autumn refinery maintenance. Meanwhile, clean tanker rates to Asia rocketed to multi-year highs on tight vessel fundamentals and some increased long-haul trading.

Signs of an apparent easing in vessel fundamentals precipitated a dramatic downward correction in Middle East Gulf VLCC rates, which started in late July and carried on through much of August. On the benchmark 260 kmt route from the Middle East Gulf to Japan, rates fell from a late-July peak of $41/tonne (almost $6/bbl) to a trough of $12/tonne (under $2/bbl) four weeks later, before firming to finish August at $18/tonne. Vessel demand for crude loadings in September fell due to approaching (western and eastern) refinery maintenance. This was probably exacerbated by economic run cuts. Lower crude runs, evidence of an unseasonably high OECD crude build already occurring in July and compelling signs of a price effect on consumer demand were all disincentives for refiners to make extra crude purchases. Meanwhile, Middle Eastern vessel supply was boosted as volumes of Iranian crude being stored in VLCCs in the Gulf were finally run down, ending three months of tight vessel fundamentals. A late-month chartering rally allowed VLCC rates to stabilise as August ended, possibly the result of an improvement in US refinery margins.

Suezmax charter rates saw a similarly dramatic slide in late July and August, related principally to lower vessel demand. One million barrel rates from West Africa to the US Atlantic Coast, at almost $50/tonne in late July, had collapsed to $20/tonne by mid-August, before a late-month firming to around $27/tonne. In early August, reports emerged of US independent refiners such as Sunoco cutting third-quarter crude purchases from Nigeria due to poor margins, while forthcoming turnarounds also dented shorter-haul Suezmax demand for September. BTC exports were interrupted for three weeks in August, adding downward pressure to spot charter rates in the Mediterranean. Meanwhile, the prospect of lower Japanese crude runs undermined intra-Asian Aframax rates.



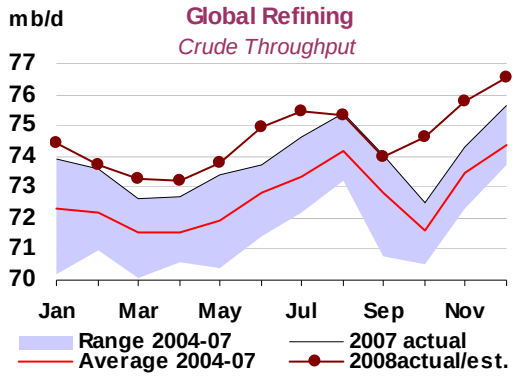
Clean tanker charter rates from the Middle East Gulf to Japan rocketed to near all-time highs in August as vessel fundamentals tightened further. Anecdotal evidence of increased long-haul clean product exports, such as from South Korea to Europe or Mexico, added further strain to Asian vessel supply. Clean rates for 75 kmt vessels rose from around $54/tonne at the start of August, to almost $62/tonne by month end. In the Atlantic basin, a rising premium of gasoline sold in New York compared with Rotterdam encouraged mogas trade towards the US, as evidenced by higher import volumes reflected in EIA weekly data.

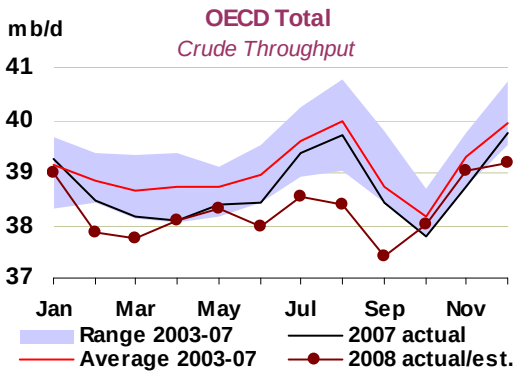
REFINING

Summary

- **Hurricane activity in the US Gulf of Mexico results in a 1.0 mb/d** downward revision to global crude throughput in September, to an average of 74.0 mb/d. Consequently, September average global crude runs decline by 1.4 mb/d from August. Stronger margins should boost crude runs in OECD regions and non-OECD Asia. Nevertheless, OECD crude runs are forecast to average 37.4 mb/d in September, their lowest level since October 2002.

- **The 3Q08 global crude throughput forecast is reduced by 0.5 mb/d to an average of 74.9 mb/d**, due to the lower August and September crude throughput, offset by higher non-OECD July crude runs. Year-on-year growth falls to 0.2 mb/d, driven by the 1.1 mb/d decline in the OECD, while non-OECD growth remains buoyant during the quarter at 1.3 mb/d.





- **Global crude runs in 4Q08 are forecast to average 75.7 mb/d,** +0.7 mb/d quarter-on-quarter and +1.5 mb/d year-on-year. Growth remains driven by the start-up of new refineries in India and China. OECD Europe and Pacific crude throughput is revised up as a consequence of the stronger margin outlook as global product markets tighten in the wake of Hurricanes Gustav and Ike.

- **Refineries in all three OECD regions continue to raise middle distillate yields**. Data for June indicates that gasoil diesel yields were 30.7%, a year-on-year increase of 1.8 percentage points, or 6%. Conversely, fuel oil yields decreased to a fresh five-year low of 10.1%. The recent increase in gasoline yields following several months of weakness may herald a temporary halt to increases in middle distillate yields in future month's data.

Global Refinery Throughput

Preliminary data indicate that August global crude throughput averaged 75.3 mb/d, some 0.7 mb/d below last month's forecast of 76.0 mb/d. OECD crude throughputs were 0.6 mb/d lower than forecast, largely on the back of US shutdowns in late August ahead of Hurricane Gustav. Non-OECD crude throughput for August is estimated to have been 0.1 mb/d weaker than expected, partly on the back of run cuts in Singapore and maintenance work in Brazil.

September global crude runs are seen declining by 1.4 mb/d month-on-month, to an average of 74.0 mb/d, driven by weaker US crude runs and downward revisions to crude runs in Singapore, Thailand and China. Consequently, September's forecast global refinery throughput is 1.0 mb/d lower than last month's report. OECD crude runs are 0.9 mb/d lower, driven mainly by a 1.4 mb/d reduction to the US forecast as a result of the refinery shutdowns in advance of, and because of Hurricanes Gustav and Ike.

The consequentially stronger margin environment should raise crude runs in other regions (notably OECD Europe and Asia) by between 0.5 and 0.8 mb/d, despite the start of autumn maintenance. This reflects the prevailing degree of available spare capacity, following the weaker margins in recent months. Overall, 3Q08 global crude throughput estimates are now 74.9 mb/d, 0.4 mb/d below last month's estimates.

We have extended our forecasts to include 4Q08, and expect global crude runs to increase by 0.7 mb/d quarter-on-quarter to an average of 75.7 mb/d. The start-up in 4Q08 of Reliance's 580 kb/d Jamnagar refinery expansion and CNOOC's 240 kb/d Huizhou refinery, which we assume to be operational from December, underpin much of the growth. Elsewhere, growth comes from the FSU, the Middle East and Latin America as capacity expansions, fiscal incentives and lower maintenance contribute to higher crude runs.

Global Refinery Crude Throughput[1]

(million barrels per day)

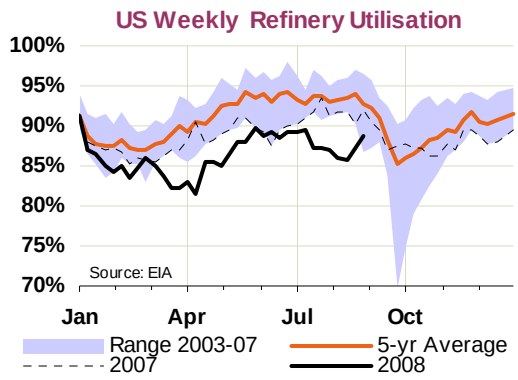
	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08
OECD									
North America	17.7	18.4	18.2	18.2	*17.8*	*16.7*	*17.6*	*18.1*	*18.2*
Europe	13.5	13.3	13.5	13.5	*13.7*	*13.7*	*13.8*	*13.8*	*13.8*
Pacific	6.9	6.6	6.3	6.8	*6.9*	*7.0*	*6.7*	*7.0*	*7.2*
Total OECD	38.1	38.3	38.0	38.5	*38.4*	*37.4*	*38.0*	*39.0*	*39.2*
NON-OECD									
FSU	5.7	*5.8*	*6.2*	*6.1*	*6.2*	*6.0*	*6.2*	*6.3*	*6.3*
Europe	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	*6.5*	*7.2*	*7.1*	*7.1*	*6.9*	*7.0*	*7.1*	*7.3*
Other Asia	8.3	*8.2*	*8.2*	*8.6*	*8.3*	*8.3*	*8.4*	*8.3*	*8.4*
Latin America	5.5	*5.5*	*5.6*	*5.5*	*5.5*	*5.5*	*5.6*	*5.6*	*5.6*
Middle East	5.9	*6.2*	*6.4*	*6.3*	*6.6*	*6.5*	*6.3*	*6.2*	*6.4*
Africa	2.2	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.3*	*2.5*	*2.5*
Total Non-OECD	35.1	*35.4*	*36.9*	*36.9*	*36.9*	*36.5*	*36.6*	*36.7*	*37.4*
Total	73.2	73.8	*74.9*	*75.5*	*75.3*	*74.0*	*74.7*	*75.8*	*76.6*

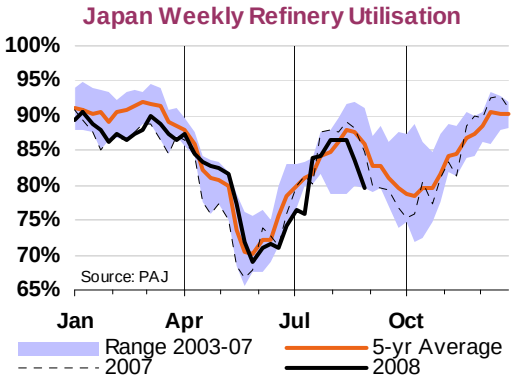
1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

Forecast **OECD** 3Q08 crude throughput averages 38.1 mb/d, 0.5 mb/d lower than last month's report. At the time of writing, the impact of Hurricane Gustav, plus the likely impact of Hurricane Ike, are forecast to reduce US crude runs by 1.4 mb/d over the course of September (see *Atlantic Hurricane Season Moves Into Full Swing*). Some offset is forecast from higher OECD Pacific and Europe runs as margins increase in response to the prospective loss of 46 mb of product supply. Consequently, we have raised our September and October estimates by 0.5 mb/d for the two regions as a whole. OECD average 3Q08 crude throughput is now expected to be 1.3 mb/d below the five-year average and 1.1 mb/d below 3Q07 average levels.

OECD crude throughput in 4Q08 is assumed to recover quickly from disruptions seen in September (assuming no further hurricane-related interruptions). Crude runs increase by 0.6 mb/d in October to 38.0 mb/d and by 1.0 mb/d in November, to 39.0 mb/d. A quicker recovery in US throughputs may dampen the increase seen elsewhere in the OECD (and non-OECD) regions, if margins again come under pressure from an easing of any potential product market tightness.

OECD North America crude throughput is forecast to decline to 16.7 mb/d in September, from 17.8 mb/d in August due to the hurricane-related drop in refinery activity on the US Gulf Coast. Little response is expected from other refineries in Canada and Mexico, as seasonal maintenance is thought likely to constrain crude runs during September and October. Elsewhere in the US, some increase is possible on the US East Coast and Midwest.





US refinery crude throughput averaged 14.9 mb/d in August, according to provisional weekly data, some 0.3 mb/d below July's level and 0.8 mb/d lower year-on-year. This August level of throughput is the lowest since 1996. The shortfall of 0.3 mb/d below our expectations is partly driven by precautionary shut-ins of Gulf Coast capacity, ahead of Tropical Storm Edouard in early August and Hurricane Gustav at the end of the month.

Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

							Change from		Utilisation rate[1]	
	Feb 08	Mar 08	Apr 08	May 08	Jun 08	Jul 08	*Jun 08*	*Jul 07*	Jul 08	Jul 07
OECD North America										
US[2]	14.63	14.36	14.80	15.29	15.38	15.22	-0.16	-0.44	86.53	89.79
Canada	1.78	1.65	1.66	1.78	1.74	1.75	0.01	-0.04	86.97	88.83
Mexico	1.18	1.24	1.26	1.28	1.11	1.22	0.11	0.01	79.11	71.96
Total	17.59	17.24	17.72	18.35	18.24	18.20	-0.04	-0.46	86.03	88.85
OECD Europe										
France	1.62	1.47	1.70	1.67	1.73	1.73	0.00	-0.06	88.49	91.51
Germany	2.20	2.35	2.20	2.08	2.11	2.25	0.14	-0.06	93.12	95.45
Italy	1.78	1.81	1.70	1.63	1.72	1.69	-0.04	-0.21	72.13	81.02
Netherlands	1.01	1.03	1.05	1.10	1.07	1.02	-0.05	-0.01	84.00	84.45
Spain	1.14	1.11	1.21	1.18	1.11	1.13	0.02	-0.02	88.83	90.09
UK	1.40	1.51	1.59	1.56	1.66	1.57	-0.09	0.03	83.34	81.90
Other OECD Europe	3.98	4.00	4.03	4.13	4.08	4.12	0.04	0.06	87.72	86.43
Total	13.14	13.28	13.48	13.35	13.48	13.51	0.02	-0.26	85.62	87.24
OECD Pacific										
Japan	4.15	4.18	3.97	3.56	3.41	3.81	0.41	-0.05	81.55	82.58
Korea	2.37	2.40	2.28	2.45	2.21	2.35	0.14	-0.04	85.88	87.43
Other OECD Pacific	0.63	0.67	0.68	0.63	0.65	0.68	0.03	-0.04	84.58	89.58
Total	7.15	7.25	6.92	6.64	6.26	6.84	0.58	-0.13	83.29	84.88
OECD Total	37.87	37.77	38.11	38.34	37.98	38.55	0.57	-0.85	85.39	87.56

1 Expressed as a percentage, based on crude throughput and current operable refining capacity

2 US50

OECD Pacific crude runs jumped 0.6 mb/d in July, due to higher Japanese throughput and Korean crude runs which were ahead of expectations. Offsetting this increase is Japan's lower-than-forecast (-0.1 mb/d) August crude throughput, according to preliminary weekly data. Nevertheless, in light of the upwardly revised September forecast, 3Q08 average throughput is revised up by 0.1 mb/d to 6.9 mb/d. Crude throughput in 4Q08 is forecast to average 7.0 mb/d, 0.2 mb/d lower than 4Q07. The assumed resumption of weak Japanese and Korean crude throughputs during November and December underpin this forecast. However, stronger margins and/or stronger demand driven by colder weather, could lead to upward revisions.

Atlantic Hurricane Season Moves Into Full Swing

The initial assessment of product supply from US Gulf Coast refiners following disruption from Hurricane Gustav suggests that approximately 27 mb of refined products is likely to have been lost. At the time of writing Hurricane Ike seems poised to result in a further loss of around 19 mb, if landfall is near Corpus Christi as assumed. However, US government forecasts note that the average error in their four-day forward path assessments is 225 miles. Therefore, it remains possible that Hurricane Ike could yet result in greater disruption were it to approach more closely the Houston, Texas City and Port Arthur refining clusters. Unlike 2005, we expect this level of disruption to be manageable given the depressed level of refining activity elsewhere in the OECD and non-OECD Asia and the relatively short duration of assumed outages.

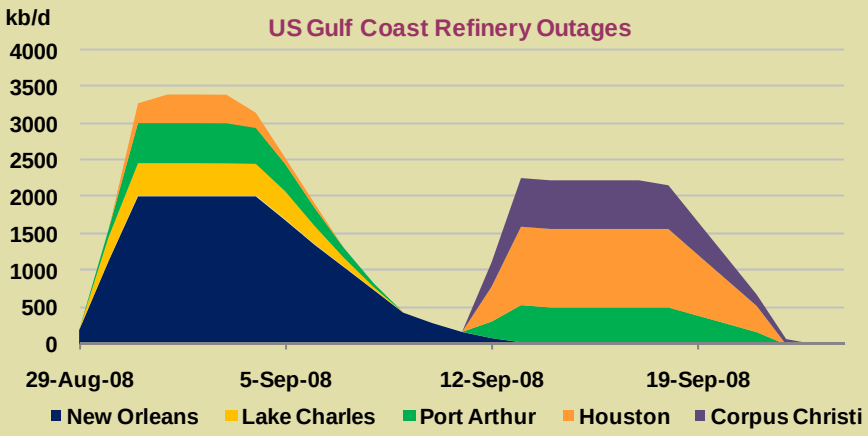
In assessing the potential impact of Ike, however, we have made numerous assumptions that may prove to be inaccurate. At the time of writing the impact from Gustav appears to be receding, with many of the refineries that shut down ahead of landfall on 1 September in the process of restarting. While the availability of third-party power supplies has been a key issue, the latest publicly available information indicates that most, if not all, refiners are now reconnected.

Using an abridged version of the product supply model we have assessed the impact for the loss of refined product supply, but this analysis does not attempt to factor in issues such as availability of pipelines, although industry comments suggests this is becoming less of a constraint. While much of the US GoM production is assumed not to return to service before the end of the month, Louisiana Offshore Oil Port and the Colonial pipeline are operating, albeit possibly at reduced rates.

The central scenario considered assumes that Hurricane Ike makes landfall on the Texas Coast, just North of Corpus Christi, as opposed to earlier projections that it would hit just south of Houston, on or about 14 September. As noted above, a significant degree of uncertainty remains over the eventual track of the storm. A more northerly track would imply a higher offline figure than we present here (doubling lost product supply to around 36 mb), as refinery operations around Houston and to the west of New Orleans would be more severely disrupted. Similarly, a more southerly track implies a lower loss of product supply.

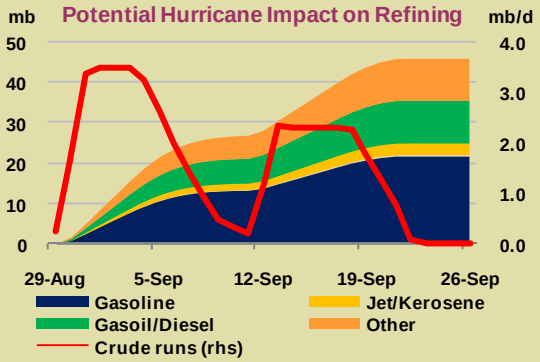
Our assumptions are as follows:

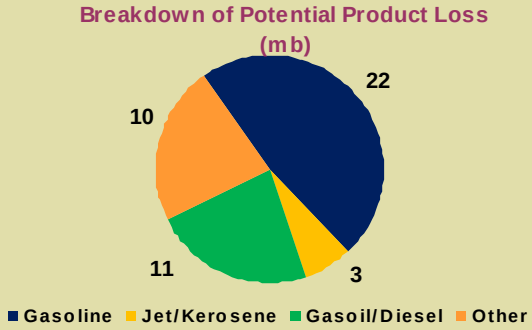
- Refineries in and around Corpus Christi, Texas, are shut-down on a precautionary basis, but none suffer severe damage. On average, operators require five days to assess and repair the damage and then a further five days to reach full throughputs.
- Refineries around Houston, Texas City and Port Arthur, temporarily reduce runs ahead of the landfall, but can quickly resume full production. Refineries in New Orleans and Lake Charles are unaffected by Ike.
- As refiners have improved their preparedness for a possible hurricane strike, no refinery suffers a long-term outage as witnessed in 2005.



Atlantic Hurricane Season Moves Into Full Swing (continued)

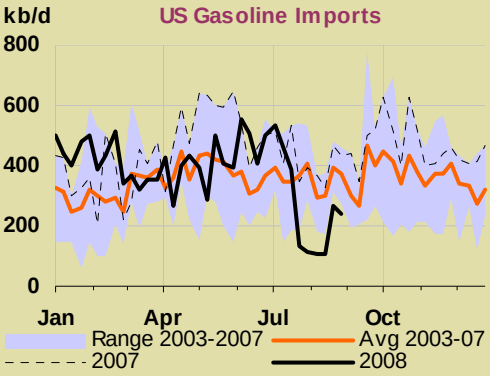
Peak hurricane-related offline capacity is around 3.4 mb/d due to Gustav and 2.2 mb/d for Ike. On aggregate, lost crude throughput is forecast to average 1.4 mb/d over the course of September, but assume the impact does not spill over into October. This level of lost refinery throughput suggests that product supply will drop by around 46 mb, after taking account of other refinery feedstocks. Gasoline will represent the majority of the loss in production, with a 22 mb reduction, followed by middle distillates down by 11 mb. The balance consists of jet/kerosene (3 mb) and other products (including LPG, refinery gas, fuel oil, petroleum coke and speciality products) of 10 mb.

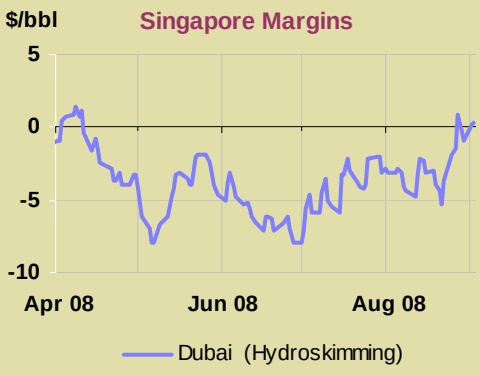




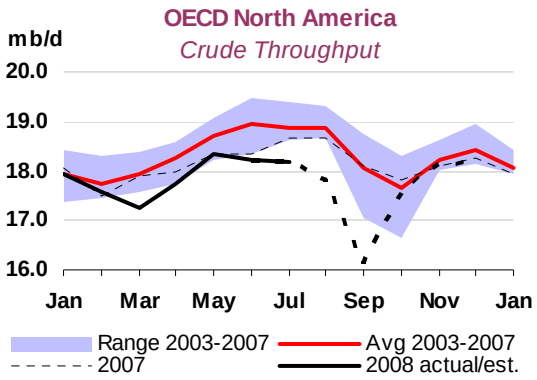
The potential peak level of disruption to product supply is comparable with that seen in September 2005. Crucially however, we do not assume a protracted outage at this stage. Furthermore, there are several key differences in the market for refined products between the two occurrences:

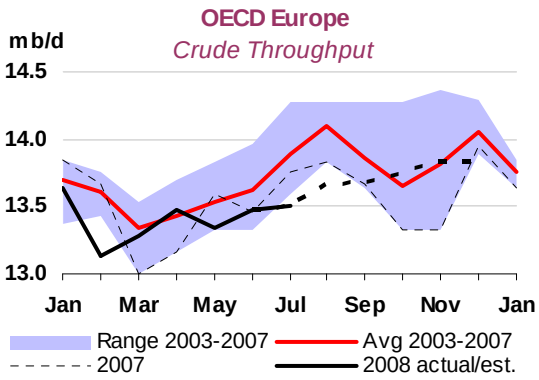
- US gasoline markets have at times displayed signs of chronic oversupply in recent months; USGC gasoline cracks to LLS were negative in July, although they have subsequently recovered and US imports of finished gasoline have, on a rolling four-week average basis, fallen in August to their lowest level since 2000.
- Refined product exports from US refiners have reached 1.4 mb/d over the summer months, up 20% year-on-year, as US demand falters, in the face of slowing economic growth and high oil prices.
- Significant idle refining capacity exists in the US, Europe, and Asia, thanks to the presence of economic run-cuts and the poor margin environment, which can be brought into service if margins strengthen sufficiently.



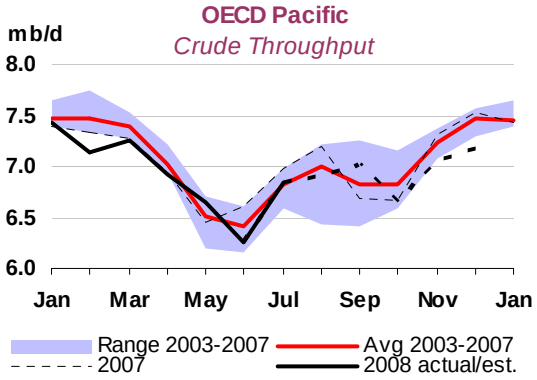


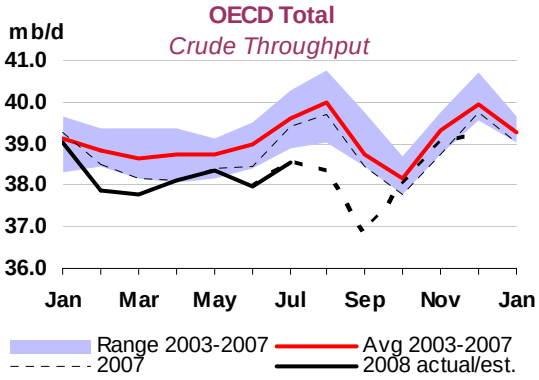
Higher levels of disruption to Gulf Coast refining than those discussed here remain eminently possible. Should a heavier-than-assumed disruption occur, or indeed further hurricanes strike the US Gulf Coast in October, then a reassessment of the situation will be required, but the scenario described above would appear, at least for the moment, to be within the ability of the market to cope.





OECD Europe crude throughput was essentially flat in July. Higher crude throughput in Germany was offset by declines in the UK and the Netherlands. Crude runs averaged 13.5 mb/d and are now below the five-year range for the first time since February. Italian crude runs remain particularly weak on the basis of the preliminary data, down 0.2 mb/d year-on-year. More generally, reports in August continue to point to economic run-cuts at some hydroskimming refineries in Northwest Europe and the Mediterranean. European crude runs are expected to increase over 3Q08, with upward revisions to September's forecast following the disruption to US crude runs.



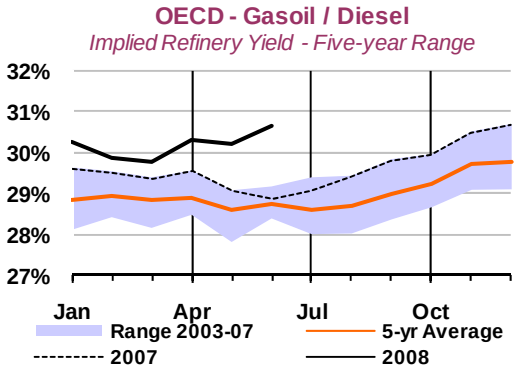


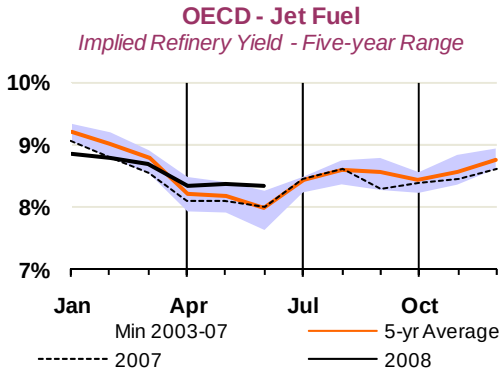
Chinese July crude runs of 7.1 mb/d, according to National Bureau of Statistics data, were in line with our forecast. However, crude throughput after the Olympics now looks to be weaker than previously thought, as higher domestic product inventories remove much of the pressure on refiners to maximise runs. Reports suggest that planned diesel import levels will drop sharply this month, with PetroChina and possibly Sinopec halting diesel imports, although much uncertainty surrounds the issue. Preliminary data on planned crude runs in September does show both lower crude throughputs at the largest refineries. Forecast September crude throughput is trimmed to 6.9 mb/d. Fourth-quarter crude runs are expected to average 7.1 mb/d as the start-up of CNOOC's Huizhou refinery in December boosts overall activity levels.

Russian July crude throughputs of 4.8 mb/d were flat month-on-month, despite reports of increased maintenance activity. The increase in crude export duties to $67.65/bbl in August from $54.31/bbl in July is likely to put further upward pressure on refiners to increase crude throughput where possible. We have therefore increased Russian (and hence FSU) throughput forecasts for 3Q08, despite reports of planned maintenance, although a dip during September still seems likely. FSU 4Q08 crude throughput is expected to increase to 6.2 mb/d from 6.1 mb/d in 3Q08 as the weaker crude price will maintain pressure on oil companies to sell refined products domestically and for export, in preference to exporting crude oil.

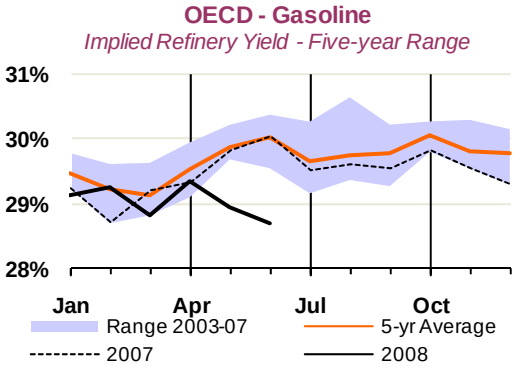
OECD Refinery Yields

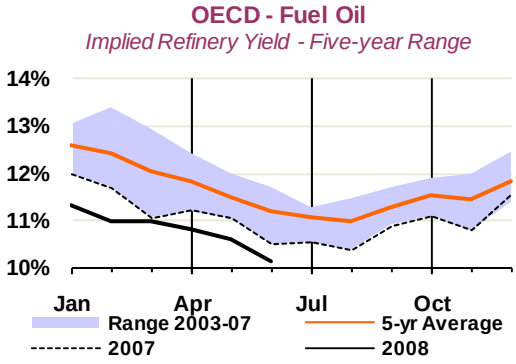
OECD refinery middle distillate (jet/kerosene and gasoil/diesel) yields continued their counterseasonal increase in June, in response to very strong middle distillate cracks. Overall OECD gasoil/diesel yields reached 30.7%, an increase of 1.8 percentage points (or 6%) year-on-year. Concurrently, OECD jet/kerosene yields increased above the five-year range for June, similarly reflecting the strength in middle distillate cracks.



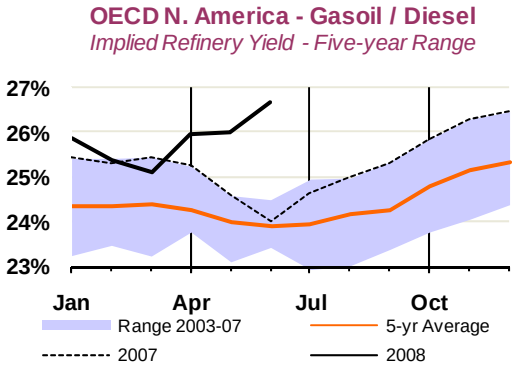


The gains in middle distillates continue to be made at the expense of gasoline and fuel oil, which continue to trail beneath the bottom end of their respective five-year ranges, according to data for June.





North American refiners continue to push ahead with increased middle distillate yields, during June, in the face of weakening gasoline demand in the US and the lowest middle distillate yield of the three OECD regions. The increase in OECD Pacific middle distillate yields is more biased towards jet/kerosene, compared with the gasoil/diesel bias in OECD North America and Europe, thus reflecting regional refinery configurations and crude selection patterns.



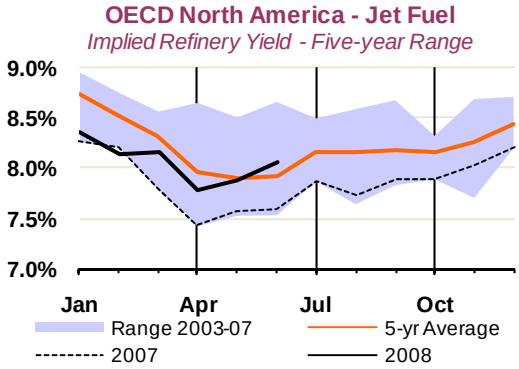


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.6	25.4	25.7	25.4	25.6	25.5	25.5	24.8	24.5	24.8	25.0	24.8	24.4	24.2	24.4	24.6	24.4
Europe	15.7	15.7	15.2	15.0	15.4	15.6	15.3	15.2	14.9	15.4	15.5	15.3	15.2	14.8	15.4	15.5	15.2
Pacific	8.6	8.5	8.9	7.9	7.9	8.7	8.3	8.9	7.8	7.9	8.8	8.4	8.8	7.7	7.9	8.8	8.3
Total OECD	49.8	49.6	49.8	48.2	48.9	49.8	49.2	48.9	47.2	48.2	49.4	48.4	48.4	46.7	47.6	48.8	47.9
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.3	4.2	4.4	4.5	4.4
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.0	8.1	8.1	8.0	8.3	8.4	8.4	8.6	8.4
Other Asia	8.8	9.0	9.2	9.3	9.1	9.4	9.3	9.6	9.6	9.1	9.5	9.5	9.9	9.9	9.3	9.8	9.7
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.6	5.9	6.0	5.9	5.9	5.9	6.1	6.2	6.2	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.2	6.8	6.9	7.0	7.3	7.5	7.1	7.2
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	37.9	38.4	38.4	38.7	38.3	39.4	39.8	39.7	40.2	39.8
Total Demand[1]	84.0	85.1	86.2	85.1	85.8	87.2	86.1	86.8	85.7	86.5	88.0	86.8	87.8	86.5	87.3	89.0	87.6
OECD SUPPLY																	
North America	14.1	14.2	14.3	14.4	14.1	14.1	14.2	14.2	14.1	13.6	14.4	14.1	14.6	14.2	14.2	14.4	14.3
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.8	4.4	4.6	4.7	4.6	4.2	4.1	4.2	4.3
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
Total OECD	20.3	20.0	20.1	19.9	19.5	19.8	19.8	19.7	19.5	18.8	19.8	19.4	20.0	19.2	19.0	19.4	19.4
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	12.8	13.3	12.9	13.3	13.3	13.0	13.1	13.2
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.9	3.9	3.8	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.7	2.8	2.8	2.7	2.8	2.8
Latin America[2]	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.1	4.2	4.0	4.3	4.3	4.4	4.3	4.3
Middle East	1.8	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Africa[2]	3.7	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.5	27.5	27.6	28.4	27.8	28.5	28.5	28.3	28.3	28.4
Processing Gains[3]	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[2]	50.4	51.2	50.5	50.2	49.7	50.0	50.1	49.8	49.7	49.1	51.0	49.9	51.4	50.6	50.1	50.6	50.7
Non-OPEC excl. Angola & Ecuador[2]	48.7	49.2	50.0	49.7	49.2	49.7	49.6	49.8	49.7	49.1	51.0	49.9	51.4	50.6	50.1	50.6	50.7
OPEC																	
Crude[5]	29.7	29.7	30.4	30.2	30.7	31.6	30.7	32.4	32.2								
NGLs	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.9	4.9	5.1	5.4	5.1	5.6	5.8	6.0	6.1	5.9
Total OPEC[2]	34.2	34.3	35.1	35.0	35.4	36.4	35.5	37.3	37.1								
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	36.0	36.8	35.9	37.3	37.1								
Total Supply[6]	84.7	85.5	85.5	85.2	85.1	86.5	85.6	87.1	86.8								
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	0.0	-0.9	-0.3	-0.1	0.4								
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0								
Total	0.2	0.3	-0.7	0.7	0.1	-0.8	-0.2	0.0	0.4								
Floating Storage/Oil in Transit	-0.1	-0.1	0.1	0.0	-0.3	0.2	0.0	0.3	0.0								
Miscellaneous to balance[7]	0.5	0.2	-0.1	-0.6	-0.5	-0.1	-0.3	-0.1	0.8								
Total Stock Ch. & Misc	0.7	0.4	-0.7	0.0	-0.6	-0.7	-0.5	0.3	1.1								
Memo items:																	
Call on OPEC crude + Stock ch.[8]	29.1	29.3	31.0	30.2	31.3	32.3	31.2	32.1	31.1	32.2	31.7	31.8	30.8	30.1	31.2	32.3	31.1
Adjusted Call on OPEC + Stock ch.[9]	29.6	29.5	30.9	29.6	30.8	32.2	30.9	32.0	31.9	32.2	31.7	32.0	30.8	30.1	31.2	32.3	31.1
"Call" incl. Angola & Ecuador[2]	30.8	31.3	31.5	30.7	31.8	32.6	31.7	32.1	31.1	32.2	31.7	31.8	30.8	30.1	31.2	32.3	31.1
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.4	30.1	31.3	32.5	31.3	32.0	31.9	32.2	31.7	32.0	30.8	30.1	31.2	32.3	31.1

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 Ecuadorean production is reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
6 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
7 Includes changes in non-reported stocks in OECD and non-OECD areas.
8 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
9 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-0.2	-0.1	-	-0.1	-	-0.2	-0.2	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-0.2	-	-	-0.1	-	-0.2	-	-	-0.1
Total OECD	-	-	-	-	-	-	-	-	-0.5	-0.2	-	-0.2	-	-0.5	-0.2	-	-0.2
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	0.1	0.1	-	-	-	0.1	-	-	-
Total Demand	-	-	-	-	-	-	-	-	-0.4	-	-	-0.1	-	-0.4	-0.2	-	-0.1
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-0.5	-0.1	-0.1	-	-	-	0.1	-
Europe	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-0.4	-0.1	-0.1	-	-	-	-	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-0.1	-0.1	-	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-0.5	-0.3	-0.2	-0.1	-0.1	-0.1	-	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-0.5	-0.3	-0.2	-0.1	-0.1	-0.1	-	-0.1
OPEC																	
Crude	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1								
NGLs	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1	-0.1
Total OPEC	-	-	-	-	-	-	-	-	-								
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-								
Total Supply	-	-	-	-	-	-	-	-	-								
STOCK CHANGES AND MISCELLANEOUS REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	0.3								
Government	-	-	-	-	-	-	-	-	-								
Total	-	-	-	-	-	-	-	-	0.3								
Floating Storage/Oil in Transit	-	-	-0.1	0.2	-0.1	-	-	-	-								
Miscellaneous to balance	-	-	0.1	-0.1	0.1	0.1	-	-	0.1								
Total Stock Ch. & Misc	-	-	-	-	-	-	-	-	0.4								
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	0.1	-0.4	0.5	0.3	0.1	0.2	-0.2	-	-	-
Adjusted Call on OPEC + Stock ch.	-	-	0.2	-0.1	0.2	0.1	0.1	0.1	-0.3	0.5	0.3	0.2	0.2	-0.2	-	0.1	-

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.42	25.68	25.42	25.57	25.49	25.54	24.84	24.54	24.81	24.97	24.79	24.44	24.19	24.41	24.59	24.41
Europe	15.68	15.23	14.95	15.41	15.62	15.30	15.20	14.88	15.41	15.55	15.26	15.19	14.78	15.35	15.50	15.21
Pacific	8.48	8.91	7.87	7.89	8.72	8.35	8.87	7.82	7.93	8.84	8.37	8.76	7.71	7.86	8.76	8.27
Total OECD	49.58	49.82	48.24	48.86	49.83	49.19	48.90	47.24	48.16	49.36	48.42	48.39	46.68	47.62	48.85	47.89
FSU	4.06	4.11	3.92	4.18	4.28	4.13	4.11	4.09	4.28	4.41	4.22	4.26	4.22	4.40	4.55	4.36
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.77	0.76	0.83	0.78	0.72	0.78	0.78
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.95	8.07	8.09	7.99	8.32	8.35	8.43	8.57	8.42
Other Asia	9.00	9.24	9.34	9.05	9.41	9.26	9.61	9.64	9.15	9.51	9.48	9.87	9.89	9.34	9.76	9.71
Latin America	5.33	5.41	5.58	5.73	5.72	5.61	5.65	5.87	5.96	5.95	5.86	5.87	6.09	6.18	6.18	6.08
Middle East	6.22	6.40	6.50	6.73	6.44	6.52	6.71	6.96	7.16	6.79	6.90	7.04	7.29	7.49	7.11	7.24
Africa	2.96	3.09	3.08	2.99	3.13	3.07	3.15	3.16	3.04	3.16	3.13	3.20	3.21	3.08	3.22	3.18
Total Non-OECD	35.52	36.39	36.90	36.89	37.32	36.88	37.90	38.43	38.36	38.67	38.34	39.39	39.82	39.65	40.17	39.76
World	85.11	86.21	85.14	85.76	87.15	86.07	86.81	85.67	86.51	88.03	86.76	87.78	86.50	87.27	89.02	87.64
of which:																
US50	*20.69*	*20.79*	*20.63*	*20.73*	*20.58*	*20.68*	*19.99*	*19.76*	*19.95*	*20.04*	*19.94*	*19.59*	*19.41*	*19.55*	*19.65*	*19.55*
Euro4	*8.23*	*7.87*	*7.70*	*7.89*	*8.02*	*7.87*	*7.79*	*7.65*	*7.91*	*7.93*	*7.82*	*7.77*	*7.49*	*7.80*	*7.84*	*7.72*
Japan	*5.20*	*5.43*	*4.64*	*4.70*	*5.25*	*5.01*	*5.41*	*4.59*	*4.68*	*5.28*	*4.99*	*5.27*	*4.45*	*4.59*	*5.16*	*4.87*
Korea	*2.18*	*2.36*	*2.12*	*2.06*	*2.31*	*2.21*	*2.33*	*2.09*	*2.08*	*2.38*	*2.22*	*2.34*	*2.11*	*2.10*	*2.40*	*2.24*
Mexico	*2.08*	*2.12*	*2.14*	*2.06*	*2.16*	*2.12*	*2.10*	*2.16*	*2.09*	*2.18*	*2.13*	*2.10*	*2.17*	*2.10*	*2.18*	*2.14*
Canada	*2.30*	*2.38*	*2.30*	*2.43*	*2.39*	*2.37*	*2.37*	*2.26*	*2.41*	*2.38*	*2.35*	*2.36*	*2.26*	*2.40*	*2.38*	*2.35*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.44*	*2.43*	*2.50*	*2.43*	*2.43*	*2.53*	*2.52*	*2.60*	*2.52*
India	*2.80*	*3.04*	*2.97*	*2.73*	*3.03*	*2.94*	*3.19*	*3.11*	*2.88*	*3.17*	*3.09*	*3.35*	*3.26*	*2.98*	*3.29*	*3.22*
Annual Change (% per annum)																
North America	-0.6	1.3	1.0	-0.3	-0.1	0.5	-3.3	-3.5	-3.0	-2.0	-2.9	-1.6	-1.4	-1.6	-1.5	-1.5
Europe	0.1	-4.9	-2.2	-1.7	-0.8	-2.4	-0.2	-0.5	0.0	-0.5	-0.3	-0.1	-0.7	-0.4	-0.3	-0.4
Pacific	-1.4	-4.1	-0.5	-0.7	-1.0	-1.6	-0.5	-0.6	0.6	1.4	0.2	-1.3	-1.4	-1.0	-0.9	-1.2
Total OECD	-0.5	-1.6	-0.3	-0.8	-0.5	-0.8	-1.8	-2.1	-1.4	-1.0	-1.6	-1.1	-1.2	-1.1	-1.0	-1.1
FSU	3.4	2.2	2.0	1.0	1.6	1.7	0.0	4.3	2.4	3.0	2.4	3.7	3.1	2.9	3.1	3.2
Europe	1.0	2.0	1.9	1.9	1.5	1.8	1.6	1.9	1.9	1.9	1.8	1.6	1.9	1.9	1.9	1.8
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	2.9	7.3	6.5	5.9	5.9	5.0	4.4	6.0	5.3
Other Asia	2.3	1.6	2.7	3.1	3.8	2.8	4.1	3.2	1.0	1.1	2.4	2.6	2.6	2.1	2.6	2.5
Latin America	4.6	4.6	5.0	5.5	5.9	5.2	4.4	5.0	4.0	3.9	4.3	3.8	3.7	3.8	3.9	3.8
Middle East	4.0	5.1	5.8	4.2	3.8	4.7	4.9	7.0	6.4	5.4	5.9	4.9	4.8	4.6	4.8	4.8
Africa	0.9	3.3	2.9	3.5	5.9	3.9	1.8	2.7	1.6	1.0	1.8	1.7	1.6	1.6	1.8	1.7
Total Non-OECD	4.0	3.5	4.0	3.6	4.1	3.8	4.2	4.1	4.0	3.6	4.0	3.9	3.6	3.4	3.9	3.7
World	1.3	0.4	1.5	1.1	1.5	1.1	0.7	0.6	0.9	1.0	0.8	1.1	1.0	0.9	1.1	1.0
Annual Change (mb/d)																
North America	-0.14	0.34	0.24	-0.08	-0.02	0.12	-0.84	-0.88	-0.76	-0.52	-0.75	-0.39	-0.35	-0.40	-0.38	-0.38
Europe	0.01	-0.78	-0.34	-0.26	-0.13	-0.38	-0.03	-0.07	0.01	-0.08	-0.04	-0.01	-0.10	-0.06	-0.05	-0.06
Pacific	-0.12	-0.38	-0.04	-0.05	-0.09	-0.14	-0.04	-0.05	0.05	0.12	0.02	-0.11	-0.11	-0.08	-0.08	-0.10
Total OECD	-0.25	-0.83	-0.14	-0.39	-0.23	-0.40	-0.91	-1.00	-0.70	-0.47	-0.77	-0.51	-0.56	-0.54	-0.51	-0.53
FSU	0.13	0.09	0.08	0.04	0.07	0.07	0.00	0.17	0.10	0.13	0.10	0.15	0.13	0.12	0.14	0.13
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.23	0.55	0.49	0.45	0.47	0.40	0.36	0.48	0.43
Other Asia	0.21	0.15	0.24	0.27	0.35	0.25	0.38	0.30	0.09	0.11	0.22	0.25	0.25	0.20	0.25	0.24
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.24	0.28	0.23	0.23	0.24	0.22	0.22	0.22	0.23	0.22
Middle East	0.24	0.31	0.36	0.27	0.23	0.29	0.31	0.46	0.43	0.35	0.39	0.33	0.34	0.33	0.33	0.33
Africa	0.03	0.10	0.09	0.10	0.17	0.11	0.06	0.08	0.05	0.03	0.05	0.05	0.05	0.05	0.06	0.05
Total Non-OECD	1.37	1.21	1.42	1.29	1.48	1.35	1.51	1.53	1.46	1.35	1.46	1.48	1.39	1.30	1.50	1.42
World	1.11	0.38	1.29	0.90	1.25	0.96	0.60	0.53	0.76	0.88	0.69	0.97	0.83	0.76	0.99	0.89
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	-0.23	-0.14	0.00	-0.09	-0.01	-0.22	-0.16	0.00	-0.10
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.01	0.01	0.03	0.02	0.04	-0.05	0.00	0.02	0.00
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.23	-0.05	0.00	-0.07	-0.03	-0.21	-0.04	-0.01	-0.07
Total OECD	0.00	0.00	-0.01	0.00	0.00	0.00	0.01	-0.47	-0.17	0.03	-0.15	0.01	-0.48	-0.20	0.01	-0.16
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	-0.01	-0.01	-0.01	0.00	-0.01
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.00	0.03	0.00	-0.03	0.01	0.01	0.00
Other Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.02	0.01	0.02	0.02	0.00	0.01
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.03	-0.04	0.01	0.00	0.06	0.02	-0.04	0.01
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.13	-0.04	0.05	0.01	0.05	0.05	-0.02	0.02
World	0.00	0.00	-0.01	0.00	0.00	0.00	0.03	-0.38	-0.04	-0.01	-0.10	0.02	-0.42	-0.15	-0.01	-0.14
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.00	-0.01	0.00	0.00	0.00	0.03	-0.37	-0.04	-0.01	-0.10	-0.01	-0.04	-0.11	0.00	-0.04

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	1Q08	2Q08	3Q08	4Q08	1Q09	Jun 08	Jul 08	Aug 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.84	8.96				9.21	9.21	9.16
Iran	3.98			4.03	3.84				3.95	3.97	4.10
Iraq	2.09			2.37	2.47				2.51	2.47	2.31
UAE	2.52			2.62	2.67				2.69	2.66	2.66
Kuwait	2.16			2.29	2.33				2.34	2.34	2.32
Neutral Zone	0.56			0.58	0.58				0.59	0.59	0.59
Qatar	0.80			0.85	0.85				0.88	0.88	0.88
Angola[6]	1.66			1.85	1.90				1.92	1.90	1.85
Nigeria	2.13			2.05	1.81				1.83	1.97	1.95
Libya	1.71			1.76	1.74				1.73	1.68	1.65
Algeria	1.36			1.39	1.38				1.38	1.38	1.38
Ecuador[6]	0.04			0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.40	2.35				2.36	2.36	2.36
Indonesia	0.84			0.85	0.86				0.86	0.86	0.87
Total Crude Oil[6]	30.71			32.38	32.23				32.72	32.74	32.55
Total NGLs[1,6]	4.77	5.08	5.88	4.89	4.91	5.13	5.38	5.58	4.91	5.13	5.13
Total OPEC[6]	35.48			37.28	37.13				37.63	37.88	37.68
OPEC incl. Angola & Ecuador[6]	35.95			37.28	37.13				37.63	37.88	37.68
NON-OPEC[2]											
OECD											
North America	14.23	14.06	14.35	14.20	14.07	13.64	14.35	14.65	13.97	14.24	14.09
United States	7.44	7.55	7.87	7.65	7.78	7.12	7.63	7.92	7.68	7.75	7.43
Mexico	3.48	3.22	3.03	3.28	3.17	3.18	3.23	3.14	3.21	3.16	3.22
Canada	3.32	3.30	3.45	3.26	3.11	3.34	3.49	3.59	3.08	3.34	3.44
Europe	4.95	4.68	4.27	4.89	4.75	4.44	4.62	4.57	4.54	4.72	4.22
UK	1.66	1.55	1.38	1.64	1.64	1.38	1.52	1.53	1.55	1.42	1.27
Norway	2.56	2.40	2.19	2.52	2.40	2.32	2.37	2.33	2.29	2.56	2.21
Others	0.73	0.73	0.69	0.73	0.71	0.74	0.73	0.71	0.70	0.73	0.74
Pacific	0.63	0.70	0.80	0.61	0.66	0.72	0.80	0.81	0.67	0.70	0.72
Australia	0.55	0.58	0.66	0.50	0.56	0.61	0.67	0.68	0.57	0.59	0.60
Others	0.08	0.12	0.14	0.11	0.10	0.11	0.14	0.14	0.10	0.10	0.11
Total OECD	19.81	19.44	19.41	19.70	19.48	18.80	19.78	20.03	19.18	19.66	19.03
NON-OECD											
Former USSR	12.77	12.95	13.18	12.83	12.86	12.78	13.33	13.31	12.89	12.85	12.44
Russia	10.08	10.03	9.89	10.00	9.96	10.04	10.12	10.01	9.97	9.99	10.04
Others	2.69	2.92	3.29	2.83	2.90	2.74	3.20	3.30	2.92	2.85	2.40
Asia	6.40	6.50	6.69	6.44	6.43	6.50	6.63	6.69	6.49	6.39	6.55
China	3.73	3.84	3.92	3.76	3.82	3.88	3.91	3.92	3.88	3.80	3.92
Malaysia	0.76	0.76	0.81	0.77	0.74	0.73	0.78	0.80	0.72	0.70	0.75
India	0.81	0.82	0.82	0.81	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Others	1.11	1.09	1.14	1.09	1.06	1.07	1.13	1.16	1.06	1.07	1.07
Europe	0.13	0.12	0.11	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Latin America	4.32	4.05	4.33	3.95	3.96	4.08	4.20	4.29	4.01	4.04	4.09
Brazil	2.14	2.31	2.57	2.21	2.26	2.33	2.45	2.53	2.28	2.28	2.34
Argentina	0.75	0.74	0.75	0.75	0.71	0.75	0.75	0.76	0.72	0.75	0.75
Colombia	0.54	0.58	0.58	0.57	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Ecuador[6]	0.46										
Others	0.43	0.42	0.42	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42
Middle East[3]	1.66	1.59	1.52	1.62	1.60	1.58	1.56	1.54	1.60	1.59	1.58
Oman	0.72	0.71	0.70	0.73	0.72	0.71	0.70	0.70	0.72	0.71	0.71
Syria	0.40	0.38	0.36	0.39	0.38	0.38	0.37	0.37	0.38	0.38	0.38
Yemen	0.34	0.31	0.27	0.31	0.31	0.30	0.30	0.28	0.30	0.31	0.30
Africa	2.51	2.56	2.56	2.54	2.55	2.58	2.56	2.57	2.56	2.58	2.58
Egypt	0.63	0.61	0.58	0.62	0.61	0.61	0.60	0.59	0.61	0.61	0.61
Angola[6]											
Gabon	0.23	0.23	0.24	0.22	0.23	0.24	0.24	0.24	0.24	0.24	0.24
Others	1.64	1.72	1.74	1.70	1.71	1.73	1.73	1.73	1.71	1.73	1.74
Total Non-OECD	27.80	27.77	28.39	27.50	27.53	27.64	28.40	28.52	27.67	27.56	27.36
Processing Gains[4]	2.17	2.24	2.29	2.22	2.22	2.25	2.29	2.29	2.22	2.25	2.25
Other Biofuels[5]	0.33	0.46	0.58	0.39	0.46	0.46	0.52	0.55	0.46	0.46	0.46
TOTAL NON-OPEC	50.10	49.91	50.66	49.81	49.68	49.15	50.99	51.38	49.52	49.93	49.10
Non-OPEC excl. Angola & Ecuador[6]	49.63	49.91	50.66	49.81	49.68	49.15	50.99	51.38	49.52	49.93	49.10
TOTAL SUPPLY	85.58			87.08	86.82				87.15	87.80	86.78

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
5 Comprises fuel ethanol and biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Mar2008	Apr2008	May2008	Jun2008	Jul2008*	Jul2005	Jul2006	Jul2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	454.5	456.6	440.8	434.1	431.8	433.8	457.5	469.8	-0.42	-0.29	0.35	-0.22
Motor Gasoline	250.3	238.4	234.3	236.8	235.5	236.5	237.4	234.0	-0.06	0.20	0.07	-0.15
Middle Distillate	177.7	176.8	184.1	190.9	204.6	207.1	207.9	203.8	0.12	0.02	-0.34	0.14
Residual Fuel Oil	48.0	48.6	48.2	48.8	44.8	46.3	52.4	48.6	0.00	0.04	0.01	0.01
Total Products[3]	622.2	624.0	639.8	653.7	663.6	690.3	684.3	675.5	0.16	-0.04	-0.46	0.35
Total[4]	1213.7	1222.0	1227.5	1240.7	1250.7	1276.2	1298.5	1300.3	-0.09	-0.58	-0.16	0.30
Europe												
Crude	333.7	336.7	339.7	334.4	349.0	339.8	351.4	338.7	-0.13	0.07	0.07	0.01
Motor Gasoline	119.2	118.1	111.9	108.1	105.8	103.8	96.6	102.6	0.04	0.11	0.05	-0.12
Middle Distillate	245.4	230.6	237.9	245.8	246.9	244.1	256.1	254.8	-0.06	-0.18	0.05	0.00
Residual Fuel Oil	82.1	81.9	83.0	81.6	84.2	71.4	74.1	70.7	0.11	-0.04	0.08	-0.01
Total Products[3]	554.2	537.0	538.4	543.7	545.8	521.2	531.4	529.2	0.16	-0.10	0.19	-0.12
Total[4]	959.1	943.5	952.9	950.8	966.7	932.6	955.6	941.9	0.02	-0.03	0.23	-0.09
Pacific												
Crude	156.0	153.3	156.4	167.5	175.6	183.8	176.1	175.9	-0.10	-0.01	-0.04	0.13
Motor Gasoline	26.7	24.1	26.4	24.0	23.7	24.4	23.6	22.8	-0.03	0.01	0.05	-0.03
Middle Distillate	57.3	58.5	58.7	59.5	65.8	68.1	75.4	75.4	0.10	-0.08	-0.14	0.02
Residual Fuel Oil	20.1	21.8	24.1	22.4	22.3	25.7	25.1	24.4	0.04	-0.05	-0.01	0.03
Total Products[3]	164.7	165.5	171.8	165.8	178.2	186.3	192.6	191.7	0.15	-0.23	-0.11	0.01
Total[4]	391.7	390.2	402.6	407.1	428.3	441.7	440.5	440.6	0.04	-0.27	-0.14	0.17
Total OECD												
Crude	944.3	946.7	936.9	936.0	956.3	957.4	985.0	984.4	-0.65	-0.24	0.38	-0.09
Motor Gasoline	396.2	380.6	372.5	368.9	364.9	364.8	357.5	359.3	-0.05	0.32	0.17	-0.30
Middle Distillate	480.4	465.9	480.6	496.1	517.4	519.3	539.4	534.0	0.16	-0.23	-0.43	0.17
Residual Fuel Oil	150.1	152.3	155.3	152.8	151.3	143.4	151.5	143.6	0.15	-0.05	0.07	0.03
Total Products[3]	1341.1	1326.4	1350.0	1363.2	1387.6	1397.8	1408.3	1396.4	0.47	-0.37	-0.38	0.24
Total[4]	2564.5	2555.7	2583.0	2598.6	2645.6	2650.6	2694.6	2682.9	-0.04	-0.89	-0.06	0.38

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Mar2008	Apr2008	May2008	Jun2008	Jul2008*	Jul2005	Jul2006	Jul2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	700.4	701.5	704.3	706.0	706.9	698.8	687.9	690.3	0.03	0.05	0.04	0.06
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	185.0	181.1	181.6	181.8	181.8	164.6	174.6	177.0	0.02	0.08	0.00	-0.03
Products	237.8	235.6	235.3	234.2	234.2	238.4	235.7	245.2	0.08	-0.09	0.02	-0.04
Pacific												
Crude	385.0	385.0	385.0	384.7	384.7	384.2	382.2	385.0	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.3	11.8	16.8	0.02	0.01	0.00	0.00
Total OECD												
Crude	1270.4	1267.6	1270.8	1272.5	1273.4	1247.6	1244.7	1252.2	0.05	0.12	0.04	0.02
Products	258.7	256.5	256.2	255.1	255.1	251.8	249.5	264.0	0.10	-0.08	0.02	-0.04
Total[4]	1530.1	1525.1	1528.0	1528.5	1529.4	1500.4	1495.2	1517.2	0.15	0.04	0.07	-0.02

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End June 2007		End September 2007		End December 2007		End March 2008		End June 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	188.0	77	195.4	82	195.7	83	192.1	85	194.3	-
Mexico	43.8	21	43.5	20	45.0	21	46.8	22	44.7	-
United States[4]	1731.6	84	1718.5	84	1667.3	84	1655.1	84	1687.5	-
Total[4]	1985.5	78	1979.5	78	1930.1	78	1916.1	78	1948.7	79
Pacific										
Australia	38.9	40	36.8	37	35.6	37	34.3	35	36.7	-
Japan	622.4	132	629.6	120	621.0	115	610.0	133	619.1	-
Korea	158.3	77	157.4	68	143.5	62	142.8	68	146.6	-
New Zealand	7.8	50	8.4	53	8.3	49	8.4	55	8.4	-
Total	827.4	105	832.3	95	808.3	91	795.6	102	810.7	102
Europe[5]										
Austria	21.1	73	22.1	76	22.1	80	22.7	77	23.0	-
Belgium	28.7	48	27.8	42	26.1	38	31.3	50	28.0	-
Czech Republic	20.5	95	19.5	98	20.2	101	20.4	91	20.2	-
Denmark	17.3	92	18.8	96	17.1	95	16.4	89	19.0	-
Finland	26.3	114	29.7	129	27.1	128	30.5	135	25.5	-
France	174.5	90	175.3	87	179.9	91	177.5	93	176.6	-
Germany	283.5	110	276.5	108	274.6	110	281.5	115	273.1	-
Greece	35.6	84	34.8	73	37.4	80	34.3	91	35.8	-
Hungary	16.0	96	17.1	100	15.4	100	16.7	101	16.6	-
Ireland	11.1	55	12.6	62	10.6	55	12.1	63	10.4	-
Italy	133.0	80	134.2	77	132.9	82	130.9	82	136.7	-
Luxembourg	0.9	15	0.9	15	0.7	12	0.6	10	0.7	-
Netherlands	115.9	115	122.9	121	116.6	109	126.5	126	121.7	-
Norway	21.1	90	21.8	86	26.6	138	25.4	104	23.1	-
Poland	50.0	89	50.9	92	58.2	109	57.6	108	57.4	-
Portugal	24.7	82	23.2	77	23.6	82	24.9	86	25.2	-
Slovak Republic	6.9	81	7.7	87	7.9	99	9.0	112	9.1	-
Spain	130.5	81	136.7	84	133.9	84	134.2	87	135.0	-
Sweden	35.2	101	33.6	95	34.5	100	34.2	97	34.1	-
Switzerland	38.5	162	38.1	136	35.9	144	36.5	150	37.2	-
Turkey	60.5	80	61.1	92	60.3	90	59.0	92	58.9	-
United Kingdom	100.8	58	98.5	57	97.7	57	100.5	59	100.3	-
Total	1352.5	88	1363.8	87	1359.3	89	1382.9	92	1367.8	89
Total OECD	4165.4	85	4175.6	84	4097.7	84	4094.5	87	4127.1	86
DAYS OF IEA Net Imports[6]	-	121	-	121	-	122	-	122	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End March 2008 and June 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2585	80	29	51
1Q2006	4072	1487	2585	84	31	53
2Q2006	4141	1493	2648	84	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4167	1499	2668	84	30	54
1Q2007	4105	1507	2598	85	31	54
2Q2007	4165	1506	2659	85	31	54
3Q2007	4176	1520	2655	84	30	53
4Q2007	4098	1524	2574	84	31	53
1Q2008	4095	1530	2564	87	32	54
2Q2008	4127	1529	2599	86	32	54

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 1Q2008 and 2Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	3Q07	4Q07	1Q08	2Q08	Apr 08	May 08	Jun 08	Year Earlier Jun 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.71	0.78	0.75	0.73	0.83	0.70	0.66	0.57	0.09
Europe	0.90	0.78	0.70	0.74	0.68	0.67	0.65	0.53	0.69	0.72	0.68	0.04
Pacific	1.31	1.32	1.19	1.15	1.25	1.29	1.24	1.14	1.36	1.21	1.22	-0.01
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.57	0.58	0.62	0.59	0.64	0.63	0.69	-0.06
Europe	0.16	0.14	0.05	0.02	0.04	0.05	0.07	0.17	0.03	0.02	0.05	-0.04
Pacific	0.26	0.35	0.34	0.31	0.38	0.43	0.36	0.32	0.38	0.37	0.30	0.07
Saudi Heavy												
North America	0.17	0.21	0.09	0.11	0.04	0.06	0.04	0.06	0.04	0.04	0.04	0.00
Europe	0.23	0.18	0.11	0.11	0.09	0.04	0.10	0.07	0.12	0.10	0.17	-0.07
Pacific	0.25	0.23	0.20	0.20	0.23	0.22	0.24	0.27	0.26	0.19	0.13	0.07
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.64	0.45	0.74	0.60	0.63	0.66	0.51	0.48	0.03
Europe	0.23	0.32	0.30	0.38	0.24	0.20	0.19	0.15	0.23	0.18	0.36	-0.18
Pacific	0.06	0.08	0.17	0.20	0.21	0.13	0.18	0.15	0.23	0.15	0.21	-0.06
Iraqi Kirkuk												
North America	-	0.00	-	-	-	0.04	0.11	-	0.10	0.22	-	-
Europe	0.05	0.01	0.11	0.06	0.32	0.21	0.28	0.30	0.35	0.18	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.27	0.21	0.24	0.23	0.15	0.21	0.31	0.24	0.07
Pacific	0.15	0.13	0.09	0.07	0.11	0.11	0.06	0.10	0.07	0.02	0.09	-0.08
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.60	0.47	0.44	0.48	0.42	0.47	0.55	0.58	-0.04
Pacific	0.62	0.56	0.64	0.56	0.73	0.65	0.49	0.59	0.47	0.42	0.71	-0.28
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.75	0.86	0.66	0.65	0.60	0.68	0.67	0.66	0.01
Europe	0.04	0.11	0.08	0.09	0.05	0.07	0.06	0.05	0.09	0.06	0.03	0.03
Pacific	-	-	0.01	-	0.02	-	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.76	0.68	0.60	0.58	0.39	0.73	0.62	0.66	-0.04
Europe	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.06	0.05	0.09	0.09	0.00
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.25	1.24	1.03	1.00	1.03	0.99	0.98	1.11	-0.13
Europe	0.17	0.16	0.14	0.18	0.15	0.14	0.18	0.20	0.14	0.21	0.20	0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.00
Europe	0.03	0.01	0.02	-	0.02	0.00	0.01	0.04	-	-	0.01	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.01	0.01	0.01	0.10	-	0.12	0.19	0.06	0.12
Europe	1.77	1.68	1.86	1.90	1.73	1.76	1.83	2.03	1.71	1.76	2.13	-0.37
Pacific	0.00	0.00	0.00	-	0.01	-	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.87	0.82	0.85	0.77	0.84	0.62	0.84	0.75	0.09
Europe	0.35	0.33	0.24	0.22	0.23	0.27	0.21	0.15	0.23	0.26	0.32	-0.07
Pacific	0.05	0.04	0.01	-	0.01	-	-	-	-	-	-	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.22	0.31	0.31	0.27	0.31	0.27	0.24	0.22	0.02
Europe	0.07	0.10	0.07	0.08	0.11	0.09	0.21	0.18	0.16	0.28	0.02	0.25
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	2Q07	3Q07	4Q07	1Q08	Apr-08	May-08	Jun-08	Year Earlier Jun-07	% change
Crude Oil												
North America	8457	8194	8118	8179	8267	7968	8087	8156	8023	8610	7627	13%
Europe	9792	9784	9770	9738	10056	9924	9769	9787	9862	9964	9573	4%
Pacific	6801	6815	6718	6340	6576	7003	7100	6646	6471	6255	6419	-3%
Total OECD	25050	24794	24606	24257	24899	24895	24957	24589	24356	24829	24115	3%
LPG												
North America	18	14	27	14	38	41	27	5	8	31	12	167%
Europe	248	264	276	282	244	291	307	234	242	260	260	0%
Pacific	527	578	557	588	502	572	599	690	669	537	587	-8%
Total OECD	793	856	860	884	785	903	934	928	919	828	858	-4%
Naphtha												
North America	115	71	39	31	33	60	25	81	39	44	25	73%
Europe	273	314	266	223	279	289	274	264	300	210	193	9%
Pacific	746	754	794	812	768	758	796	731	767	701	866	-19%
Total OECD	1133	1138	1099	1066	1080	1108	1095	1076	1107	955	1084	-12%
Gasoline[3]												
North America	1034	1143	1124	1332	1198	1048	888	1073	1216	1335	1394	-4%
Europe	165	160	204	219	156	181	224	293	194	76	252	-70%
Pacific	102	98	70	83	56	70	112	102	113	57	100	-44%
Total OECD	1301	1401	1398	1634	1410	1299	1224	1468	1522	1467	1745	-16%
Jet & Kerosene												
North America	173	161	183	205	205	143	96	93	79	62	205	-70%
Europe	375	374	364	347	385	398	361	357	370	415	241	72%
Pacific	66	71	41	35	37	43	44	31	44	42	31	34%
Total OECD	614	606	588	587	627	584	501	482	493	519	477	9%
Gasoil/Diesel												
North America	143	175	129	138	142	106	99	66	22	49	147	-66%
Europe	845	967	780	640	745	827	914	596	668	735	671	10%
Pacific	79	81	94	97	90	105	102	103	168	137	117	17%
Total OECD	1067	1223	1003	875	976	1039	1116	764	858	921	935	-2%
Heavy Fuel Oil												
North America	527	343	323	323	286	320	328	314	268	340	321	6%
Europe	491	476	434	420	457	400	478	408	353	412	442	-7%
Pacific	85	92	92	97	92	101	125	145	150	124	100	24%
Total OECD	1102	911	848	840	835	821	930	866	770	877	863	2%
Other Products												
North America	1027	1121	1053	1210	1035	934	1041	1039	1084	1142	1166	-2%
Europe	781	929	869	855	923	831	741	868	768	651	840	-23%
Pacific	248	245	254	209	264	284	290	244	281	277	220	26%
Total OECD	2056	2295	2176	2273	2222	2049	2072	2151	2133	2070	2226	-7%
Total Products												
North America	3037	3028	2878	3253	2937	2652	2504	2670	2714	3003	3269	-8%
Europe	3177	3484	3192	2986	3190	3218	3299	3019	2895	2759	2899	-5%
Pacific	1852	1919	1902	1920	1809	1933	2068	2046	2192	1875	2021	-7%
Total OECD	8066	8430	7972	8159	7935	7803	7872	7736	7801	7637	8189	-7%
Total Oil												
North America	11493	11222	10996	11432	11203	10620	10592	10827	10737	11613	11393	2%
Europe	12970	13268	12962	12724	13246	13141	13068	12806	12757	12723	12472	2%
Pacific	8654	8734	8620	8260	8385	8936	9169	8693	8663	8130	8440	-4%
Total OECD	33116	33223	32578	32416	32835	32697	32829	32325	32157	32466	32304	1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (OMR)*, *Medium-Term Oil Market Report (MTOMR) and Annual Statistical Supplement* (current issue of the statistical supplement dated 12 August 2008), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2008 Platts - a division of McGraw-Hill Inc.).

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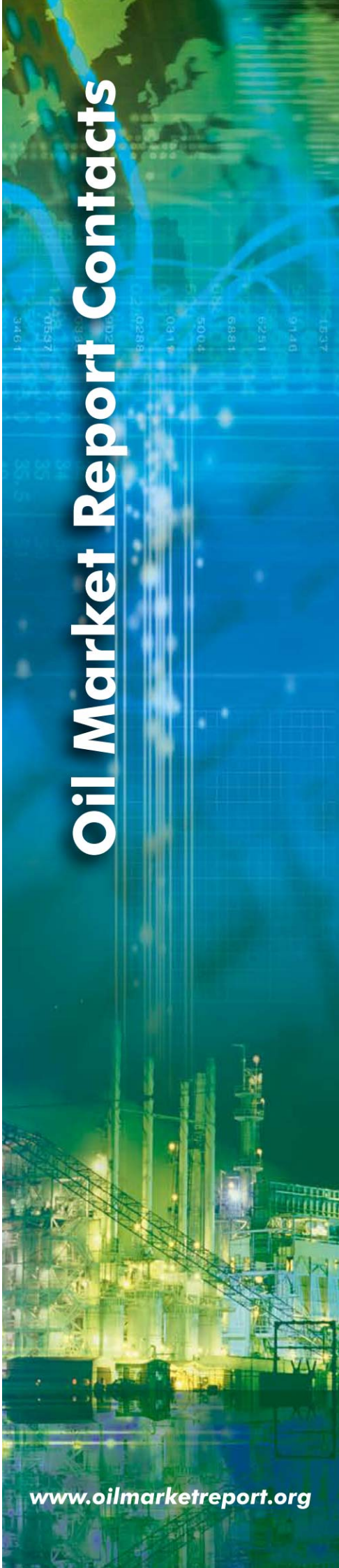

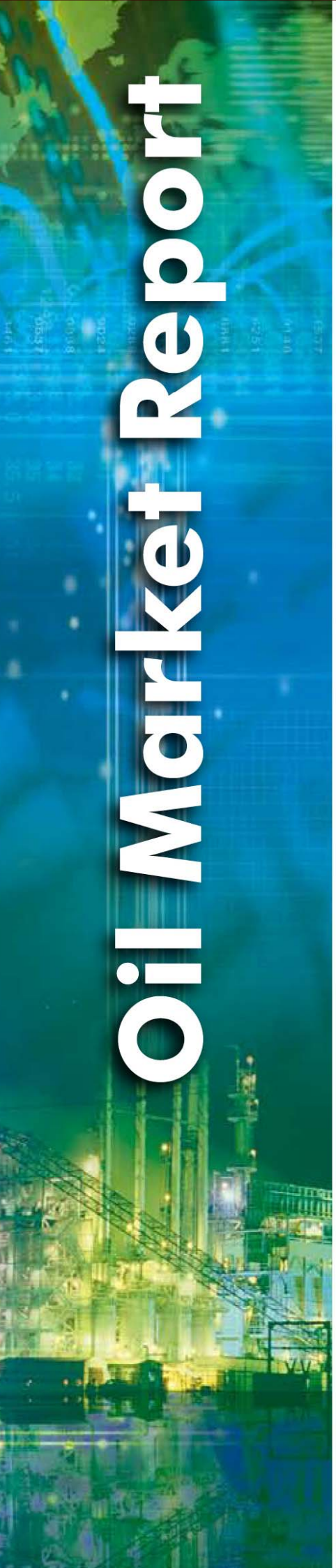

INTERNATIONAL ENERGY AGENCY

10 October 2008

HIGHLIGHTS

- **Oil prices declined in September and early October**, as demand growth weakened further, offsetting the impact of hurricane-related outages and lower OPEC output. US crude futures fell from around $100/bbl in early September to below $90 in early October. However, prices remain very volatile, with unprecedented daily swings.
- **Oil demand forecasts for 2008 and 2009 were trimmed** by 240 kb/d and 440 kb/d, respectively, given weaker OECD deliveries and the IMF's downward revisions to 2009 global GDP assumptions. World oil demand is expected to average 86.5 mb/d in 2008 (+0.5% or +0.4 mb/d vs. 2007) and 87.2 mb/d in 2009 (+0.8% or +0.7 mb/d).
- **Global oil supply declined by 1.1 mb/d in September** to 85.6 mb/d. Hurricane outages in the Gulf of Mexico and renewed stoppages in Azerbaijan and among OPEC producers offset higher supply from Russia and the North Sea. Non-OPEC net output growth is largely wiped out for 2008, now averaging 150 kb/d, plus an extra 310 kb/d from OPEC gas liquids. Combined 2009 growth is +1.45 mb/d.
- **September OPEC crude supply fell 0.3 mb/d to 32.3 mb/d**, largely due to unplanned outages. The 9 September OPEC meeting, which reinforced output targets, will be followed by an extraordinary meeting on 18 November to discuss the impact of the global financial crisis on the oil market. Effective OPEC spare capacity stands at 2.1 mb/d.
- **OECD stocks fell by 5.1 mb in August to 2,645 mb**, including notable draws in European crude and US motor gasoline. Hurricanes drove further dramatic draws in US products and could have reduced OECD total stock cover from 54.9 days at end-August to 53.6 days by end-September, according to preliminary data.
- **Global refinery crude throughput should average 74.9 mb/d in 4Q08**, 0.8 mb/d lower than forecast in last month's report, on weaker demand, higher maintenance, hurricane-related disruptions and economic run cuts.

www.oilmarketreport.org

10 October 2008

OMR PUBLISHING SCHEDULE - 2009

Please find below the 2009 release dates for the ***Oil Market Report***:

Friday 16 January
Wednesday 11 February
Friday 13 March
Friday 10 April
Thurs 14 May
Thurs 11 June
Friday 10 July
Wednesday 12 August
Thursday 10 September
Friday 9 October
Thursday 12 November
Friday 11 December

NB: On each of these dates, the report will be released at 10H00 Paris local time.

This information is also available at: **oilmarketreport.org/schedule** and **omrpublic.iea.org/schedule**.

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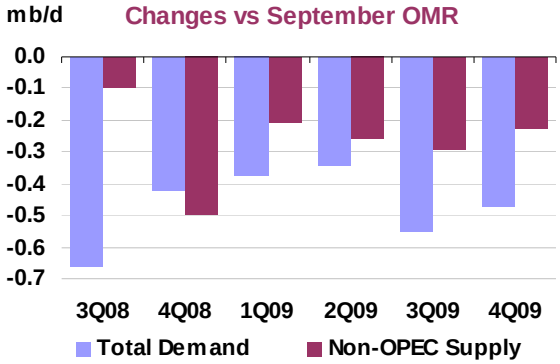
WHEN STORMS COLLIDE

Around 0.5 mb/d has been cut from our global demand estimate for 2H08 and 0.4 mb/d from 2009. Weak baseline summer demand in the main OECD consuming countries in the face of higher prices is now being perpetuated by weakening economic prospects and, most recently, by a spiralling liquidity crisis, which risks tipping OECD economies into outright recession. The latest IMF *World Economic Outlook*, upon which this report's demand forecast is based, has knocked nearly a percentage point off expected global GDP growth for 2009, with the global figure now below 3% and OECD economies seen as barely able to muster 0.5% growth.

Non-OECD economies fare rather better, with GDP growth of 6.1% expected next year, albeit this is a 0.8% downward revision from the April *Outlook*. Our oil demand estimates in the face of these adjustments show sustained decline from the OECD, but a degree of resilience for developing economies. Although non-OECD slow-down is also likely, it is by no means certain that growth will be choked off altogether. We have yet to see unambiguous evidence of a sharp slow-down from China, while Middle Eastern demand growth remains robust. Moreover, moderating global oil and commodity prices may yet provide sufficient inflationary relief to dissuade governments from a politically difficult policy of further removing price subsidies, thereby supporting demand. That said of course, no one can foresee the ferocity or duration of the current economic tempest, nor whether full-blown recession will be avoided.



But we should avoid focusing only on the demand-side implications of the current financial storm. Credit shortages are rapidly becoming yet another in a long line of impediments to industry investment. In the upstream, this will intensify the impact already accruing from access restrictions, tightening fiscal barriers and manufacturing/service capacity constraints. In short, expanding production capacity, even in line with moderating demand growth, becomes more difficult, quite apart from ever-present 'below ground' risks. Tightening credit and equity markets will slow the pace of investment, with smaller, independent producers and, potentially, several Russian operators seen as particularly at risk. Some analysts envisage a sizeable proportion of current global drilling rig orders will be cancelled. Ordinarily, financially strapped independents might raise capital through share offerings, but with hedge funds shedding E&P stocks in recent months this may be less easy. In such an environment, a renewed phase of industry consolidation is likely.

Most large IOCs and state producers should weather the financial storm. However, investment is already being affected at a number of highly leveraged companies in locations such as Russia and the Caspian. Russia's major producers have approached the government for loans to replace foreign borrowings. Ambitious expansion plans for national oil champions like Brazil's Petrobras, which will need upwards of $500 billion to finance its offshore subsalt development programme, may be further delayed as share prices tumble and amid restrictions on the availability of state development bank funding. A cash liquidity crisis also affects storage, refining and trading activity. Oil market liquidity itself is already suffering, so underlying price volatility could persist, or even increase, in the months to come, something that further complicates investment planning for the future.

The impact of this autumn's physical storms in the Gulf of Mexico, and other supply disruptions, have been somewhat eclipsed by the parallel economic and financial maelstrom. This month we highlight the upstream and downstream impacts of recent outages affecting the US Gulf Coast and Azerbaijan. It is a sobering reminder of the perils of forecasting that these two events, during the months of August-October 2008 alone, will have cut some 120 mb, or 1.3 mb/d, from forecast non-OPEC production. What is more, neither the Atlantic hurricane season nor the global financial storm have blown themselves out yet.

DEMAND

Summary

- **Forecast global oil demand** has been lowered in both 2008 and 2009, given much weaker-than-expected July and August deliveries in the OECD and a marked downward revision to global GDP prognoses by the IMF. At +2.9% in 2009, global GDP growth is almost one percentage point lower than previous estimates. World oil demand is thus now expected to average 86.5 mb/d in 2008 (+0.5% or +0.4 mb/d versus 2007 and 240 kb/d lower than previously estimated) and 87.2 mb/d in 2009 (+0.8% or +0.7 mb/d compared with the previous year and 440 kb/d lower on average compared with our last report).

- **Oil demand in the OECD** is expected to average 48.1 mb/d in 2008 (-2.2% or -1.1 mb/d versus 2007) and 47.5 mb/d in 2009 (-1.3% or -0.6 mb/d on a yearly basis), roughly 360 kb/d lower on average for both years than previously estimated. Revisions to both North America and Pacific data were significant. Rapidly weakening economic conditions, financial turmoil and high prices should have a marked impact upon OECD demand, most notably in the United States.

Global Oil Demand (2007-2009)

(million barrels per day)

	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Americas	31.1	31.0	31.3	31.2	31.1	30.5	30.4	30.4	30.5	30.5	30.2	30.2	30.3	30.6	30.3
Asia/Pacific	25.5	24.9	24.5	25.7	25.1	26.4	25.4	24.9	26.4	25.8	26.8	25.9	25.4	27.0	26.3
Europe	16.0	15.7	16.1	16.4	16.1	16.0	15.6	16.0	16.3	16.0	15.9	15.4	15.9	16.2	15.9
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.2	4.2	4.4	4.5	4.4
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.3
World	**86.2**	**85.1**	**85.8**	**87.2**	**86.1**	**86.9**	**85.7**	**85.9**	**87.6**	**86.5**	**87.4**	**86.2**	**86.7**	**88.5**	**87.2**
Annual Chg (%)	0.5	1.5	1.1	1.5	1.1	0.8	0.7	0.1	0.5	0.5	0.6	0.5	1.0	1.1	0.8
Annual Chg (mb/d)	0.4	1.3	0.9	1.3	1.0	0.6	0.6	0.1	0.4	0.4	0.5	0.4	0.9	0.9	0.7
Changes from last OMR (mb/d)	0.01	-0.01	0.01	0.01	0.00	0.05	0.06	-0.66	-0.42	-0.24	-0.38	-0.34	-0.55	-0.48	-0.44

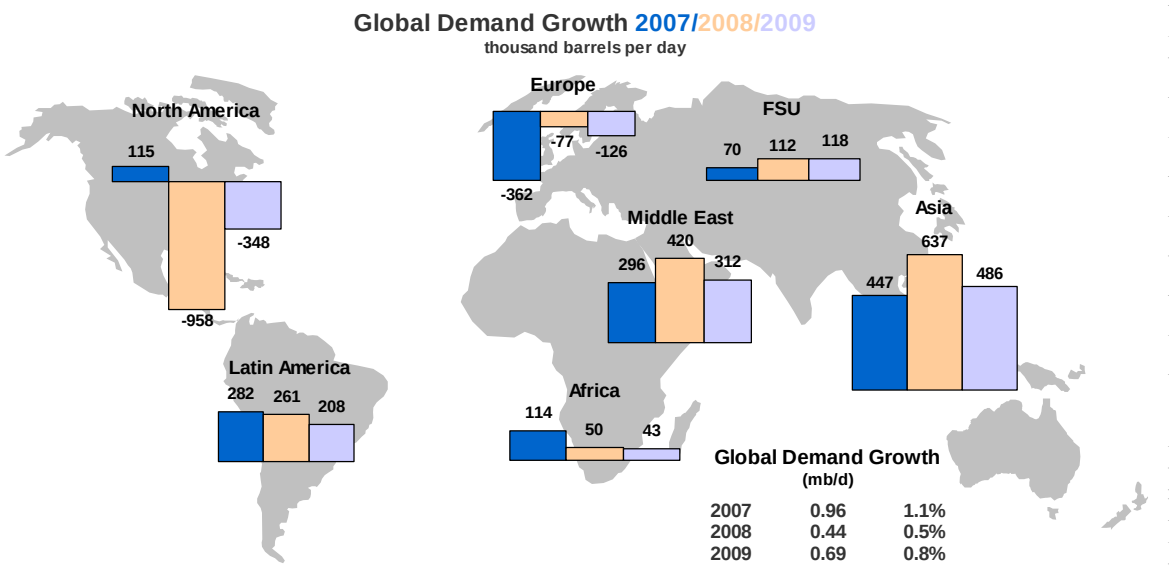
- **Non-OECD oil demand** is forecast at 38.4 mb/d in 2008 (+4.2% or +1.5 mb/d and 80 kb/d higher than previously estimated) and 39.7 mb/d in 2009 (+3.4% or +1.3 mb/d compared with the previous year and 40 kb/d than in our last report). The minor upward revision is related to stronger-than-expected demand in almost all regions. Overall, non-OECD demand growth should continue offsetting the severe OECD demand contraction.

- **The largest OECD economies will likely face a severe economic slowdown or even a recession, according to the IMF's latest prognoses.** The US mortgage market, in particular, is likely to remain in the doldrums for some time as consumers shed excessive debt. Falling purchases from US consumers will thus weigh down on oil demand. The question is whether emerging markets will be affected. Oil demand growth areas (notably the Middle East and emerging Asia) have yet to show a significant slowdown. Although eventually China's economic growth may decelerate given the contraction of its main export markets (the US and Europe), this adjustment is expected to be relatively limited, according to IMF assumptions.

OECD

According to preliminary data, OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 3.5% year-on-year in August – a month were demand normally peaks – with all the three regions posting losses. In **OECD Pacific**, demand plummeted by 4.4%, dragged down by Japan, where gasoline demand fell sharply while lower electricity needs and higher nuclear utilisation rates curbed direct oil use for power generation. In **OECD North America** (which includes US Territories), oil product demand contracted by 3.7% as a result of weak gasoline demand, even though easing retail

gasoline prices prompted a mild month-on-month rebound in consumption. In **OECD Europe**, demand also remained subdued on the back of weak transportation fuel deliveries, shrinking by 2.6%.

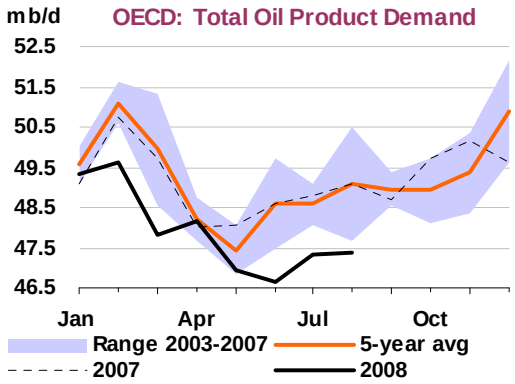


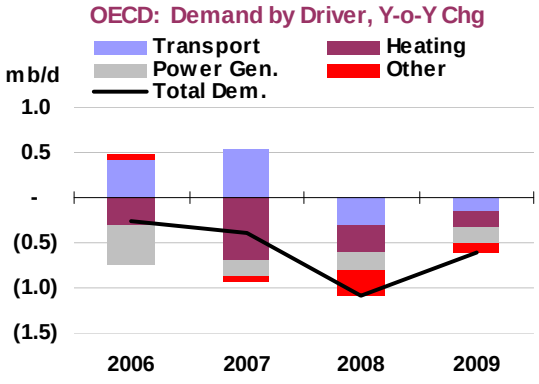
OECD Demand based on Adjusted Preliminary Submissions - August 2008

(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.90**	**-2.7**	**1.89**	**-4.6**	**4.21**	**0.7**	**0.87**	**-13.7**	**1.15**	**-8.3**	**5.95**	**-5.48**	**24.98**	**-3.7**
US50	9.26	-3.3	1.64	-5.1	3.64	-1.4	0.38	-17.2	0.62	-18.5	4.53	-5.8	20.07	-4.5
Canada	0.80	0.3	0.13	2.2	0.22	1.0	0.33	-2.6	0.14	-1.0	0.81	-1.7	2.43	-0.7
Mexico	0.76	1.6	0.07	-9.4	0.30	6.0	0.13	6.0	0.28	14.9	0.54	-8.7	2.08	0.7
OECD Europe	**2.45**	**-8.0**	**1.41**	**-0.6**	**4.06**	**-3.7**	**1.75**	**2.6**	**1.61**	**-1.9**	**3.63**	**-0.7**	**14.91**	**-2.6**
Germany	0.47	-7.2	0.20	-3.4	0.64	-3.8	0.50	25.6	0.18	2.3	0.58	-4.5	2.58	0.4
United Kingdom	0.39	-6.3	0.36	0.7	0.40	0.1	0.14	-7.8	0.08	-8.9	0.33	10.0	1.69	-0.8
France	0.21	-16.9	0.17	0.0	0.59	-10.6	0.31	11.9	0.10	2.0	0.46	-4.3	1.82	-5.1
Italy	0.29	-11.2	0.10	-4.7	0.47	-5.7	0.07	-6.9	0.21	-6.6	0.33	-4.7	1.47	-6.7
Spain	0.16	-8.7	0.14	-2.6	0.50	-3.8	0.14	-26.4	0.21	-5.9	0.34	-5.2	1.50	-7.5
OECD Pacific	**1.51**	**-9.3**	**0.54**	**-11.1**	**1.16**	**-2.9**	**0.34**	**-20.7**	**0.84**	**-10.2**	**3.11**	**3.2**	**7.51**	**-4.4**
Japan	0.94	-14.0	0.31	-14.7	0.48	-14.2	0.24	-22.2	0.52	-5.6	1.81	3.6	4.31	-6.9
Korea	0.19	-3.1	0.11	-13.3	0.28	2.0	0.08	-19.7	0.26	-20.5	1.10	3.2	2.03	-3.3
Australia	0.34	0.0	0.10	1.7	0.34	11.7	0.02	-3.0	0.04	-1.0	0.17	0.0	1.01	3.7
OECD Total	**14.87**	**-4.3**	**3.85**	**-4.2**	**9.43**	**-1.7**	**2.96**	**-5.8**	**3.59**	**-6.0**	**12.69**	**-2.1**	**47.39**	**-3.5**

* Including US territories





July revisions to preliminary data, meanwhile, were once again significant. Finalised figures indicate that OECD demand contracted by 3.0% year-on-year during that month – almost twice as much as previously estimated and implying a downward adjustment of 700 mb/d. Coupled with hurricane effects, this

translates into a 0.8 mb/d downward adjustment for 3Q08. These revisions came from OECD North America (mostly from the US) and OECD Pacific (essentially Japan, and to a lesser extent, Korea). Changes within OECD Europe largely offset each other. Consequently, OECD demand is now forecast at 48.1 mb/d in 2008 (-2.2% or -1.1 mb/d versus 2007). In 2009, demand is seen contracting by 1.3% on a yearly basis (roughly -0.6 mb/d) to 47.5 mb/d. For both years, these estimates are roughly 360 kb/d lower on average when compared with our last report.

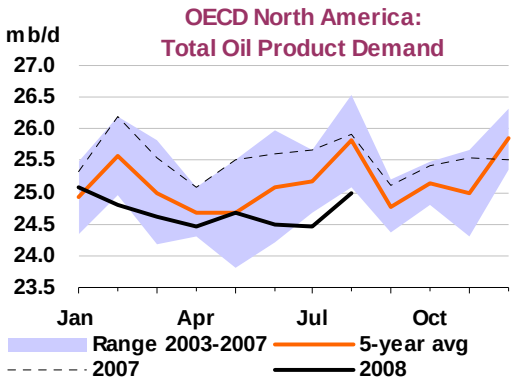
Total OECD Demand by Product
(million barrels per day)

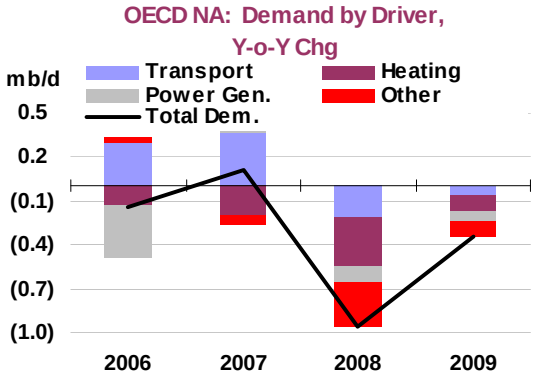
	2007	2008	3Q07	4Q07	1Q08	2Q08	May 08	Jun 08	Jul 08*	Latest month vs. Jun 08	Latest month vs. Jul 07
LPG & Ethane	4.83	4.71	4.48	4.93	5.16	4.59	4.54	4.52	4.56	0.04	-0.03
Naphtha	3.24	3.18	3.19	3.28	3.28	3.00	3.02	2.94	3.01	0.07	-0.18
Motor Gasoline	14.92	14.57	15.31	14.83	14.23	14.73	14.77	14.53	14.72	0.19	-0.74
Jet & Kerosene	4.12	4.10	3.97	4.23	4.34	3.87	3.78	3.89	3.87	-0.02	-0.12
Gas/Diesel Oil	13.14	13.03	12.86	13.59	13.39	12.61	12.42	12.16	12.44	0.27	-0.15
Residual Fuel Oil	3.95	3.72	3.80	3.93	3.87	3.62	3.58	3.60	3.69	0.09	-0.09
Other Products	4.98	4.90	5.25	5.04	4.63	4.83	4.81	5.04	5.05	0.02	-0.14
Total Products	**49.18**	**48.21**	**48.86**	**49.83**	**48.90**	**47.24**	**46.92**	**46.67**	**47.34**	**0.67**	**-1.46**

* Latest official OECD submissions (MOS)

North America

Oil product demand in North America (including US Territories) shrank by 3.7% year-on-year in August, according to preliminary data, for the eighth month in a row. Although there was a month-on-month rebound, US-centred demand weakness continued to drag down regional demand. Canadian demand has also declined during most of this year, and even steady Mexican growth has slowed down. Revisions to July preliminary data were once again relatively large (almost -0.5 mb/d): demand in OECD North America actually plummeted by 4.7% year-on-year during that month, rather than 2.9% as previously estimated. Regional oil demand is now expected to average 24.6 mb/d in 2008 (-3.8% or -960 kb/d on a yearly basis) and 24.2 mb/d in 2009 (-1.4% or -350 kb/d). Compared with our last report, these estimates are about 200 kb/d lower.

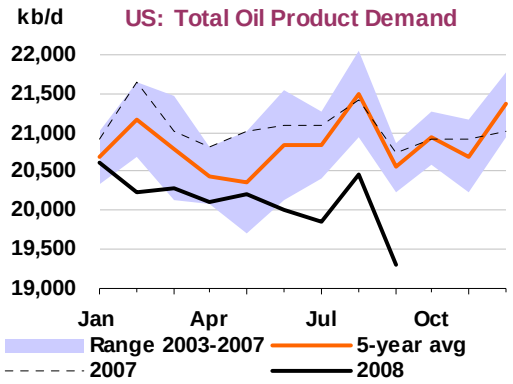


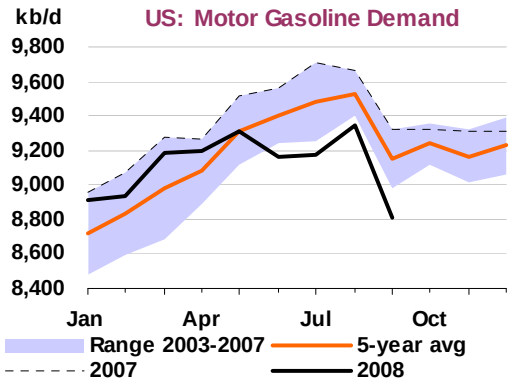


OECD North America Demand by Product
(million barrels per day)

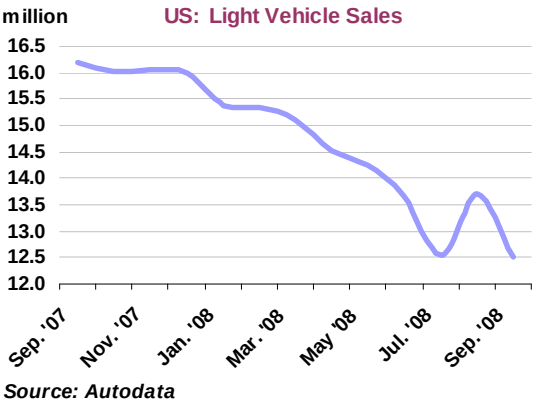
	2007	2008	3Q07	4Q07	1Q08	2Q08	May 08	Jun 08	Jul 08*	Latest month vs. Jun 08	Latest month vs. Jul 07
LPG & Ethane	2.92	2.80	2.73	2.97	3.10	2.64	2.62	2.64	2.74	0.10	-0.04
Naphtha	0.41	0.39	0.42	0.41	0.36	0.37	0.37	0.34	0.41	0.07	-0.03
Motor Gasoline	10.84	10.65	11.07	10.84	10.47	10.74	10.85	10.68	10.73	0.05	-0.49
Jet & Kerosene	1.89	1.84	1.91	1.90	1.84	1.83	1.81	1.86	1.84	-0.03	-0.10
Gas/Diesel Oil	5.24	5.06	5.13	5.24	5.29	4.96	4.99	4.77	4.72	-0.05	-0.28
Residual Fuel Oil	1.25	1.15	1.21	1.18	1.14	1.22	1.22	1.26	1.22	-0.03	0.01
Other Products	2.97	2.78	3.11	2.95	2.63	2.78	2.81	2.93	2.80	-0.13	-0.28
Total Products	**25.53**	**24.68**	**25.57**	**25.49**	**24.84**	**24.54**	**24.66**	**24.48**	**24.46**	**-0.03**	**-1.21**

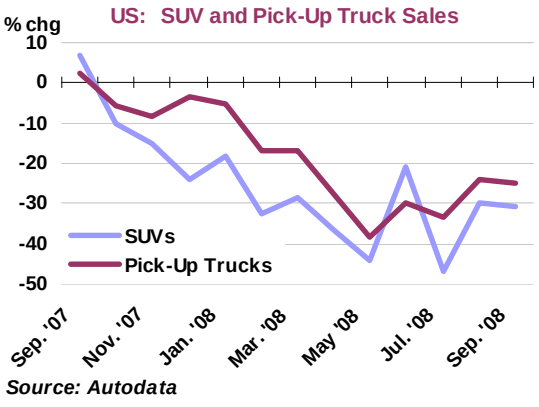
* Latest official OECD submissions (MOS)



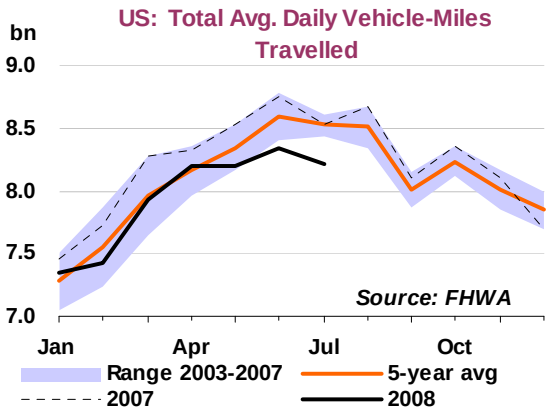


Adjusted preliminary data in the continental **United States** for September confirm what had been largely expected: a sharp fall in oil demand, weakened by both the economic slowdown amid a financial crisis and the damaging effects of Hurricanes Gustav and Ike, whose impact turned out to be of the same order of magnitude as Katrina and Rita in 2005. Inland deliveries – a proxy of oil product demand – contracted by 7.0% year-on-year, with all product categories bar naphtha registering significant contractions. Economic woes, which began to surface in early 2007, account perhaps for two-thirds of this fall, with the rest related to Ike's supply disruptions, notably in LPG deliveries.





Gasoline demand, in particular, appears to have shrunk by as much as 5.5%. Car companies, which were cautiously celebrating August's gasoline demand recovery in general and the vehicle sales rebound in particular – largely supported by price reductions and other incentives – were confronted in September by plummeting sales of *both* light trucks (-31% year-on-year) and passenger cars (-22%), since the financial turmoil has drastically curbed access to consumer credit. As such, in order to stay afloat, American automakers are either rushing to launch electric vehicles as soon as 2010 (General Motors and Chrysler), refitting European models to US standards (Ford), curbing leases (Chrysler), or even lobbying Congress for loans (all).

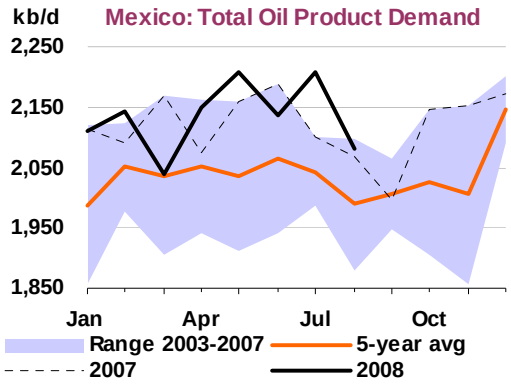


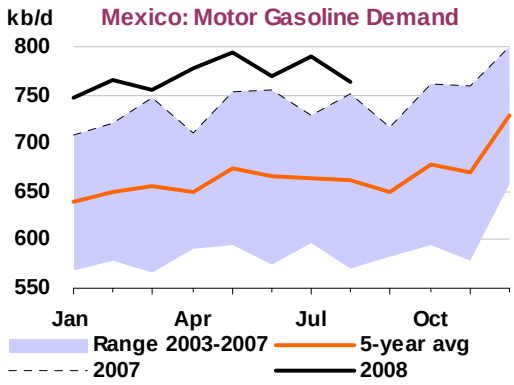
Moreover, Hurricane Ike prompted a spike in retail gasoline prices and localised shortages in southeastern states such as Georgia, which saw gasoline shortages, panic filling, closed stations, and long queues at those stations still open, notably in cities like Atlanta. Vehicle-miles travelled, meanwhile, registered a fall for the eighth month in a row (-2.0% year-on-year in July).

Our estimates of July oil demand figures, meanwhile, were revised down from preliminary weekly estimates by 400 kb/d (compared with the EIA's 700 kb/d), with the bulk of the adjustment again related to gasoil deliveries. The continued mismatch between weekly and monthly data likely reflects a previous underestimation of diesel exports, which have risen as domestic demand falls and are not captured in weekly data, rather than the more traditional overestimation of refinery production.

Regarding the outlook, the economy looks on the verge of a deep slowdown amid renewed financial turmoil. The IMF's latest *World Economic Outlook* predicts virtually no economic growth in US in 2009. Our current outlook foresees US oil demand contracting by as much as 4.6% year-on-year in 2008 to 19.7 mb/d. In 2009, assuming that the financial turmoil eases, the fall is expected to be somewhat less pronounced but nonetheless significant (-1.7% to 19.4 mb/d). The Ike effects are not carried through to 2009, so the downward revisions, when compared with our previous report, amount to roughly 200 kb/d in 2008 and 150 kb/d in 2009.

According to preliminary data, oil product demand growth in **Mexico** slowed down significantly (+0.7% year-on-year) in August. Transportation fuel demand was relatively weak, with gasoline and diesel growing by 1.6% and 6.0%, respectively, and jet fuel shrinking by 9.4%. The relative resilience of diesel demand (which had been expanding at 7.0% on average over the previous twelve months) may suggest that the overall economy in general and the export sector in particular are holding up despite the US woes. By contrast, the subdued picture for gasoline and jet fuel – which had both grown at over 6.0% on average in recent months – may indicate that consumer spending is faltering, and possibly that credit conditions for vehicle purchases are tightening.



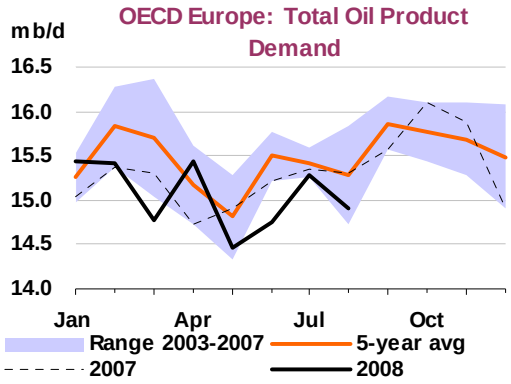


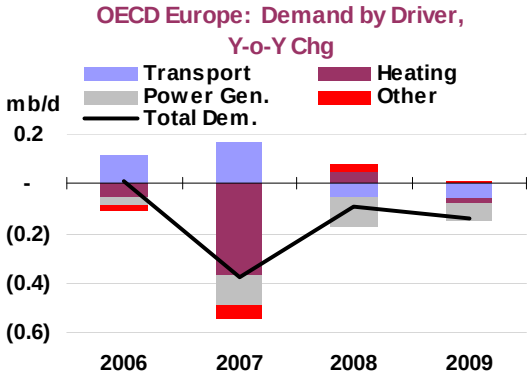
Paradoxically, slowing gasoline demand may come as good news for both the government and state-owned Pemex. Indeed, given the runaway demand growth observed in the past few years, Mexico's gasoline imports have risen to almost 40% of total demand. This, on the one hand, has put under severe strain the country's distribution system, obliging Pemex to build new pipelines and storage facilities and, on the other hand, has sharply increased both the import bill and end-user subsidies, since retail prices are about 30% lower than in the US. Pemex reckons that imports will further rise in 2009 to some 390 kb/d – roughly 50% of total demand. Moreover, the country's product import dependency is unlikely to recede in the short term, as proposals to abolish Pemex's refining monopoly and encourage new refining capacity additions are stuck in Congress.

Europe

Oil product demand in Europe contracted by 2.6% year-on-year in August, according to preliminary inland delivery data, with significant losses in gasoline (-8.0%) and diesel (-3.7%). Revisions to July annual submissions, on the other hand, were relatively small (-60 kb/d), with losses in France and the UK largely offset by stronger-than-anticipated Italian demand. Looking forward, demand in OECD Europe is foreseen averaging 15.2 mb/d in 2008 and 15.1 mb/d in 2009, implying a year-on-year decline of 0.6%

and 0.9%, respectively, about 120 kb/d lower on average for both years when compared with our previous forecast. The weak 2009 GDP growth prognoses for several key European countries underpin the revisions for next year.





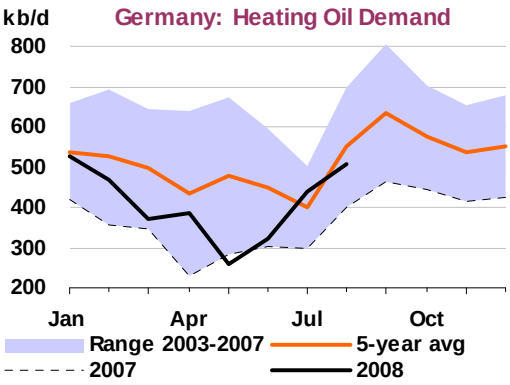
OECD Europe Demand by Product

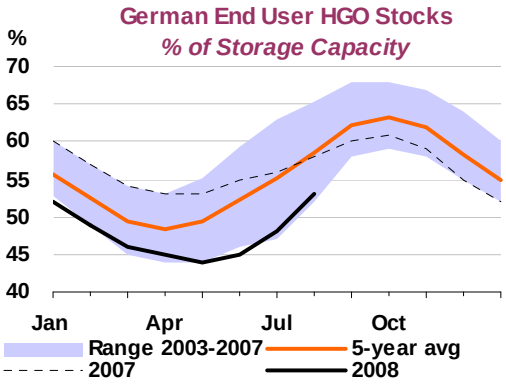
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	May 08	Jun 08	Jul 08*	Latest month vs. Jun 08	Latest month vs. Jul 07
LPG & Ethane	0.95	0.97	0.86	0.98	1.06	0.98	0.94	0.95	0.89	-0.06	-0.01
Naphtha	1.18	1.16	1.14	1.20	1.23	1.07	1.07	1.04	0.99	-0.05	-0.13
Motor Gasoline	2.51	2.38	2.60	2.42	2.29	2.44	2.45	2.42	2.49	0.06	-0.16
Jet & Kerosene	1.30	1.32	1.40	1.29	1.25	1.31	1.25	1.37	1.42	0.05	0.00
Gas/Diesel Oil	6.10	6.21	6.05	6.48	6.30	5.93	5.70	5.78	6.12	0.34	0.21
Residual Fuel Oil	1.73	1.61	1.67	1.73	1.67	1.51	1.48	1.49	1.60	0.11	-0.09
Other Products	1.53	1.58	1.68	1.52	1.41	1.63	1.58	1.70	1.77	0.08	0.10
Total Products	**15.30**	**15.22**	**15.41**	**15.62**	**15.20**	**14.88**	**14.46**	**14.75**	**15.28**	**0.53**	**-0.07**

* Latest official OECD submissions (MOS)

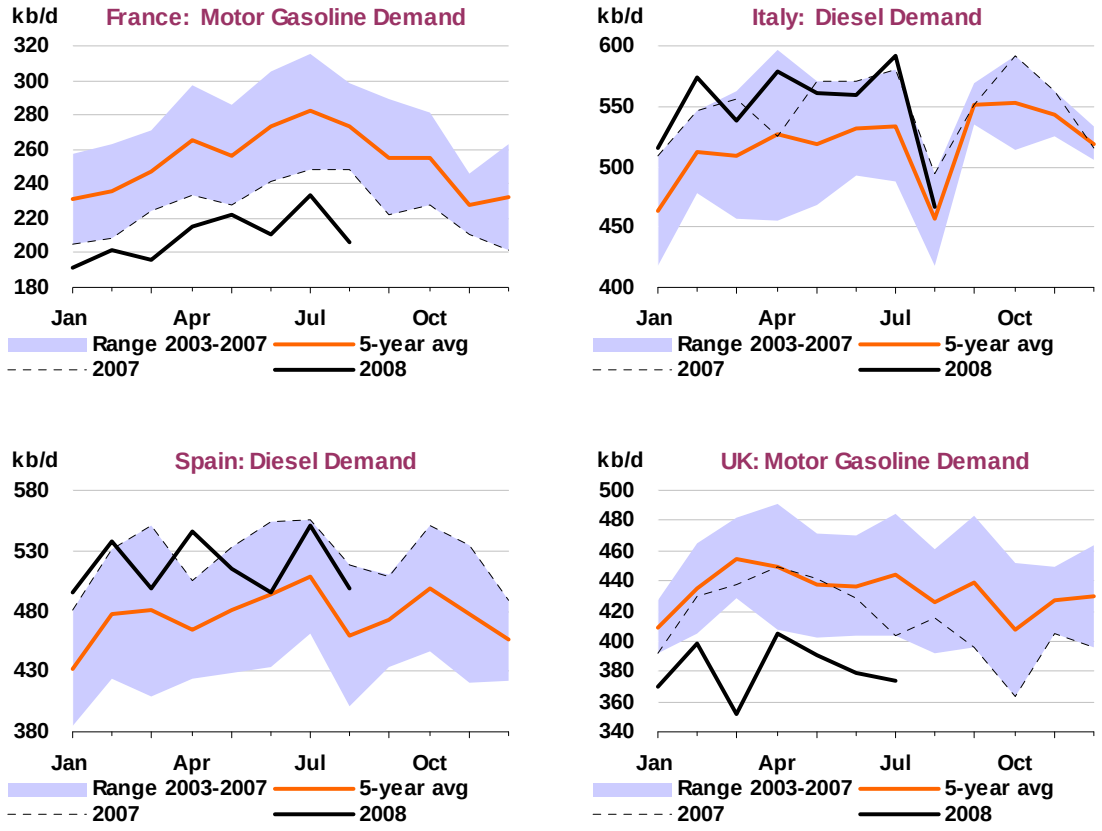
Inland deliveries in **Germany** rose by a modest 0.4% year-on-year in August, according to preliminary estimates. As in the previous month, the rebound in heating oil deliveries (+25.6%) supported the overall rise, given the weakness of gasoline and diesel. Heating oil consumer stocks averaged 53% of capacity by end-July, sharply higher than a month earlier (48%) but below the readings of August 2007 (58%), suggesting that demand will remain subdued this year when compared with 2007. In **France**, by contrast, total oil demand plummeted by 5.1% year-on-year in August, despite continued strong deliveries of heating oil (+11.9%).



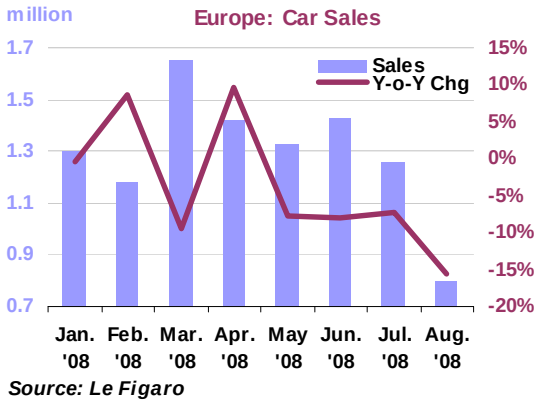


Meanwhile, transportation fuel demand continues to shrink, notably in the largest European countries. Gasoline demand – which is structurally declining across most of Europe – is falling much quicker than in the recent past (when it declined by 3.0% to 5.0% year-on-year, depending on the country): in August it contracted by 16.9% year-on-year in France, 7.2% in Germany, 11.2% in **Italy** and 8.7% in **Spain**, and in

July by 7.6% in the **United Kingdom** (the last month for which official data is available). More significantly still, diesel deliveries also contracted markedly in August on an annual basis: -10.6% in France, -3.8% in both Germany and Spain, and -5.7% in Italy; in the UK they fell by 10.3% in July. Admittedly, this plunge is largely related to the fact that oil prices reached record highs during the summer amid a noticeable economic slowdown across much of the continent.



As in the US, vehicle sales in Europe's main markets have shrunk over the past several months. Drivers have been deterred by high oil prices, which have compounded other existing driving issues, such as mounting traffic jams, parking shortages, driving restrictions in urban areas, radar-enforced speed limits and growing environmental concerns. (Moreover, the European Parliament seems in no political mood to raise emission limits above 120 grams of CO_2 per km, which will be voted next November, despite frantic lobbying by car manufacturers in favour of such an increase). In France, for example, the use of public transportation has risen by about 6% year-on-year in 1H08 in all modes (buses, suburban trains, subways and high-speed trains). Nevertheless, the car industry may find an ally in the beleaguered financial sector: the Spanish bank Banesto is offering free cars in exchange for opening over the long term, interest-free deposits.



Source: Le Figaro

A Turn for the Worse?

The financial turmoil that engulfed US and global markets in early September was unprecedented. It saw the nationalisation of several large mortgage and insurance institutions (Fannie Mae, Freddie Mac and AIG in the US, and Fortis and Dexia in Europe), the forced sales of large investment and commercial banks (Merrill Lynch and Wachovia in the US and HBOS in the UK, following in the steps of Bear Sterns last March,) and the bankruptcy of other banks (such as Lehman Brothers and Washington Mutual in the US), and culminated in plans to engineer the largest bailout in US history. Financial market volatility has been extreme, driven by outbursts of panic in several stock exchanges around the globe.

According to some observers, the global financial system, which was first hit by a lack of liquidity as the subprime bubble burst, could well enter a phase of insolvency and push the US and the global economy into a severe depression. By dumping assets at fire-sale prices in order to obtain badly needed cash, financial institutions are bound to weaken themselves more and thus cut credit, which would further undermine economic conditions and trigger another round of asset – and dollar – depreciation. From that perspective, the US $700 billion bailout could be crucial to restore confidence and recapitalise financial institutions. The details of the package, approved by the US Congress despite strong political resistance, are unclear: whether it will involve purchasing 'toxic' mortgage-backed securities, purchasing equity in troubled banks, increasing deposit protection, augmenting capital requirements, or a combination of all of these remains to be decided.

Real GDP Growth (IMF WEO, October 2008), % change

	2008	2009
WORLD	**3.81**	**2.94**
OECD	**1.56**	**0.56**
OECD, North America	1.55	0.28
OECD, Europe	1.59	0.57
OECD, Pacific	1.55	1.28
Non-OECD	**7.00**	**6.14**
Africa	5.83	5.70
Latin America	5.32	3.61
China (excl. Hong Kong)	9.74	9.25
Other Asia	6.27	5.37
Non-OECD Europe	6.33	4.39
FSU	6.87	5.40
Middle East	5.70	5.28

Current vs. Previous (April 2008 & July 2008 Update)

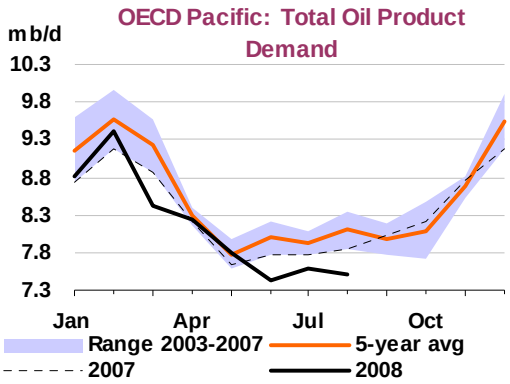
WORLD	**(0.14)**	**(0.87)**
OECD	**(0.22)**	**(0.94)**
OECD, North America	0.18	(0.73)
OECD, Europe	(0.46)	(1.14)
OECD, Pacific	(0.67)	(1.00)
Non-OECD	**(0.02)**	**(0.79)**
Africa	(0.29)	(0.58)
Latin America	0.25	(0.53)
China (excl. Hong Kong)	0.04	(0.55)
Other Asia	(0.18)	(1.20)
Non-OECD Europe	1.49	(0.07)
FSU	(0.58)	(1.63)
Middle East	0.41	0.00

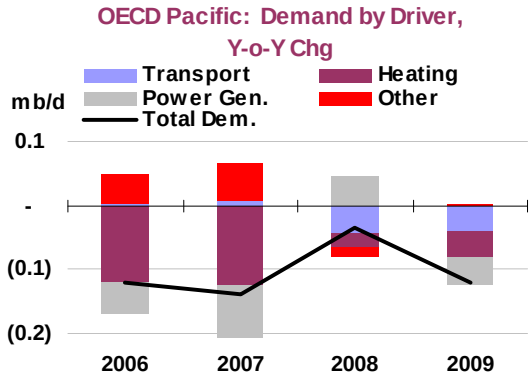
In the end, the largest OECD economies will likely face a sharp slowdown, as the IMF prognoses suggest. The US mortgage market is likely to remain in the doldrums for some time as consumers shed excessive debt. This will certainly weigh down on oil demand, as evidenced by its dramatic contraction seen so far in the US. The question is whether emerging markets will be affected. In this respect, the evidence is patchy. Some markets have indeed been hit hard: Russia, for example, has opted to shut down its exchange several times already as losses mounted up, but turmoil there is also arguably related to recent geopolitical events. Other markets, by contrast, have held up surprisingly well amid the global uncertainty (Mexico and Brazil, for example).

More crucially, oil demand growth areas (notably the Middle East and emerging Asia) have yet to show a significant slowdown. Some argue that China's economic growth will decelerate markedly, on the grounds that its main export markets (the US and Europe) are contracting. Although this may eventually occur, it remains to be seen whether such an adjustment will be significant. Although annualised industrial production growth slowed to 12.8% in August versus 14.7% in July, this is hardly a crash and is more indicative of the shut-in of several polluting industries around Beijing's metropolitan area during the Olympics. Moreover, preliminary manufacturing production figures show a month-on-month rebound in September. The slowdown case, in addition, underestimates recent Chinese policy reactions. Indeed, a *de facto* monetary easing (by reducing interest rates for the first time in six years and bringing the yuan's appreciation to a halt) is now well underway in order to sustain domestic growth given the gradual slowdown in the export sector, and the government could well engineer a fiscal boost if necessary. Therefore, even if global economic growth slows down – but short, of course, of global recession – China's oil demand growth can arguably remain in positive territory in the foreseeable future.

Pacific

According to preliminary data, oil product demand in the Pacific plummeted by 4.4% year-on-year in August, brought down by weak Japanese demand. On the one hand, given lower electricity demand and higher nuclear generation rates, Japanese residual fuel oil deliveries fell (-5.6%) for the first time in a year. More dramatically, gasoline demand in Japan shrank given record-high oil prices. Strong use of crude for direct burning in power generation in Japan, and Australian diesel support, were not high enough to offset these losses.





Meanwhile, downward revisions to July preliminary data stood at 180 kb/d: demand in OECD Pacific fell by 2.3% year-on-year during that month, instead of growing by 0.1% under previous estimates. As a result, oil demand in the Pacific is expected to average 8.3 mb/d in 2008 (-0.4% or -30 kb/d on a yearly basis) and 8.2 mb/d in 2009 (-1.4% or -120 kb/d) – down in both years by about 70 kb/d when compared with our last report, given the worsening outlook for the Japanese economy.

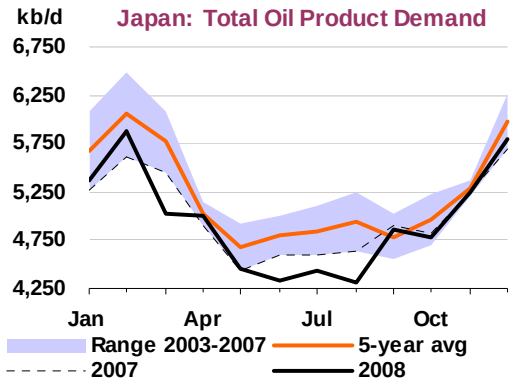
OECD Pacific Demand by Product
(million barrels per day)

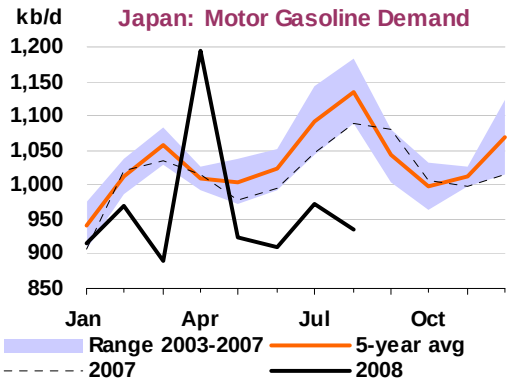
	2007	2008	3Q07	4Q07	1Q08	2Q08	May 08	Jun 08	Jul 08*	Latest month vs. Jun 08	Latest month vs. Jul 07
LPG & Ethane	0.96	0.95	0.89	0.99	1.01	0.97	0.98	0.92	0.93	0.01	0.02
Naphtha	1.65	1.64	1.63	1.66	1.69	1.55	1.58	1.56	1.61	0.05	-0.02
Motor Gasoline	1.57	1.54	1.64	1.57	1.48	1.55	1.47	1.42	1.51	0.08	-0.09
Jet & Kerosene	0.93	0.94	0.66	1.04	1.24	0.72	0.72	0.65	0.62	-0.03	-0.02
Gas/Diesel Oil	1.80	1.75	1.68	1.87	1.80	1.72	1.73	1.61	1.59	-0.02	-0.08
Residual Fuel Oil	0.96	0.95	0.92	1.01	1.06	0.89	0.88	0.85	0.86	0.01	-0.02
Other Products	0.48	0.53	0.46	0.56	0.59	0.42	0.43	0.41	0.48	0.07	0.04
Total Products	**8.35**	**8.31**	**7.89**	**8.72**	**8.87**	**7.82**	**7.79**	**7.43**	**7.60**	**0.16**	**-0.18**

* Latest official OECD submissions (MOS)

The July revisions were mostly related to **Japan**, particularly with regards to the 'other products' category, possibly because naphtha backflows continue to be underreported. As such, the fall in July's Japanese demand – which represents two-thirds of regional demand – was actually steeper (-3.4% year-on-year) than previously anticipated (-0.9%).

August preliminary data show an even larger contraction (-6.9%); as in the rest of the OECD, high oil prices during the summer have depressed Japanese transportation fuel demand: deliveries of gasoline (22% of total demand) and diesel (11% of demand) plummeted by 14.0% and 14.2%, respectively. In addition, milder temperatures in late August in the Tokyo region and higher nuclear power generation rates helped both curb power demand for air conditioning and reduce the use of fuel oil for electricity generation by local utility TEPCO. Indeed, residual deliveries contracted by 5.6% in August, in sharp contrast to the double-digit rates of growth observed during the previous year.

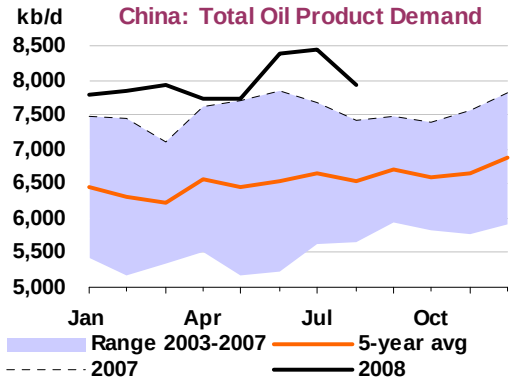


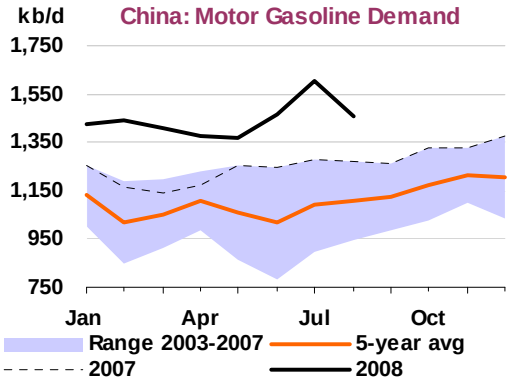


Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) grew by an estimated 6.8% year-on-year in August. As in recent months, the rise was due to buoyant domestic and international deliveries of transportation fuels (gasoline, gasoil and jet fuel/kerosene rose by 15.0%, 18.0% and 13.5%, respectively) in the midst of the Olympic Games. By contrast, the weakness in residual fuel oil demand – the feedstock of choice for 'teapot' refineries – persisted for the thirteenth month in a row, with deliveries contracting by 37.8% year-on-year as a result of continuing poor margins.





August's annual growth is a third lower than last month, and illustrates the expected fall in crude and product imports. Nevertheless, August imports were respectable: net crude imports stood at 3.6 mb/d and net product imports at 650 kb/d – both slightly above their 2008 average. As for September, post-Olympics imports are reportedly likely to decrease, as well as refinery runs. It is often argued that stocks are ample and that new refining capacity is coming online. But some industry observers claim that the main reason behind lower prospective imports is a purported decision by the Chinese government to stop subsidising imports. However, the decline in international prices could lend some support to imports: it is estimated that the breakeven oil price required by the Chinese state-owned majors (PetroChina and Sinopec) is about $90/bbl – unless, of course, the government decided to lower domestic energy retail prices to stimulate the overall economy, as has been rumoured recently.

There are concerns for the economy's export outlook. As noted, China's economic growth may slow down, since its main export markets (the US and Europe) are contracting. However, whether such an adjustment will be significant remains to be seen. At this point, this report's forecast is based on the latest – and slightly lower – GDP assumption by the IMF for 2009 (9.2% versus 9.8% previously). As such, our prognosis for this year remains largely unchanged when compared with our last report, at 8.0 mb/d

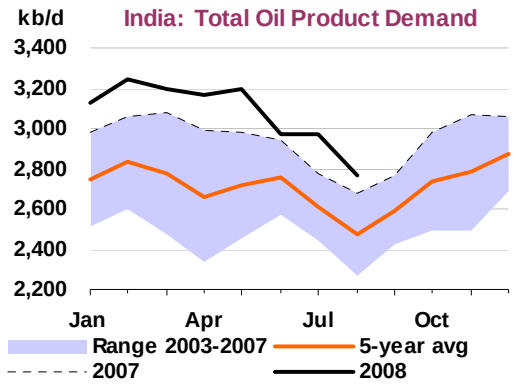
for 2008 (+6.0% versus 2007), and 8.4 mb/d in 2009 (+5.2%). This forecast, however, may be revised as the post-Olympics and post-financial turmoil picture becomes clearer.

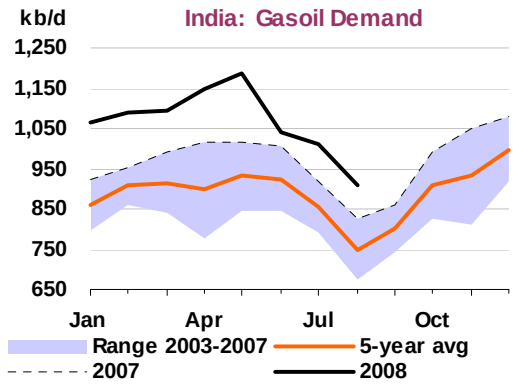
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	669	634	642	-35	8	-5.2	1.2
Naphtha	812	820	903	8	83	1.0	10.1
Motor Gasoline	1,257	1,445	1,539	188	94	14.9	6.5
Jet & Kerosene	280	303	320	23	18	8.3	5.9
Gas/Diesel Oil	2,576	2,914	3,088	338	173	13.1	6.0
Residual Fuel Oil	744	612	627	-132	16	-17.8	2.5
Other Products	1,204	1,266	1,291	62	24	5.2	1.9
Total Products	**7,542**	**7,993**	**8,410**	**452**	**416**	**6.0**	**5.2**

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – rose by a modest 3.1% year-on-year in August. This slower pace of growth was largely related to heavy rains and floods in some states (Bihar, eastern Uttar Pradesh and Punjab), which affected both industrial and construction activity, as well as oil demand. Nevertheless, demand for naphtha (+5.8), gasoline (+7.2%) and particularly diesel (+9.7%) continued to roar ahead, since this fuel is highly subsidised. Many private firms are increasingly seeking to overcome widespread power shortages with diesel-run generators, while power companies are using cheaper diesel instead of fuel oil. Our forecast is little changed compared with our last report, with Indian demand expected to average 3.1 mb/d in 2008 (+4.8% on a yearly basis) and 3.2 mb/d in 2009 (+4.1%).

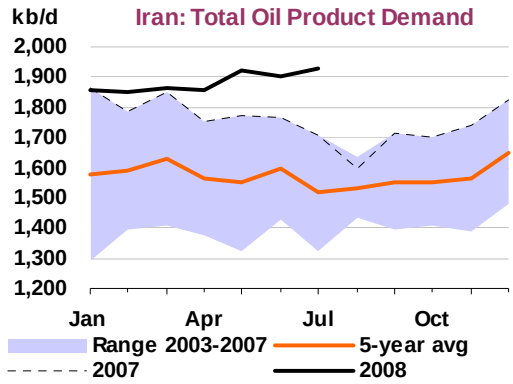


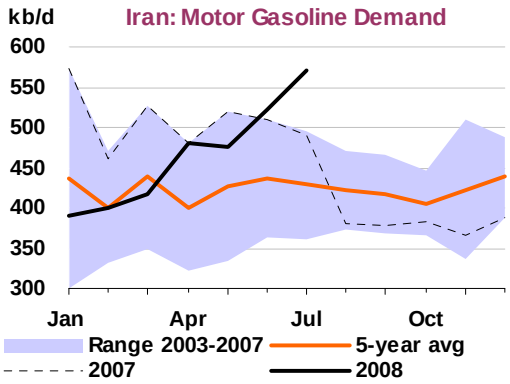


Regarding a rumoured gasoil retail price cut, the Petroleum & Natural Gas Minister has stated that this will not happen until crude oil prices reach $67/bbl. In the meantime, though, subsidies continue to distort demand in favour of gasoil, with some state-owned companies becoming more vocal (IOC, for example, has petitioned the government to allow it to charge industrial and commercial customers market prices for gasoil) in order to reduce their losses ($17.15 billion in the fiscal year to March 2008 from selling gasoline, diesel, kerosene and LPG at subsidised prices). In addition, international credit rating agencies are beginning to express concerns on the subsidy burden. Recently Fitch argued that the Indian government's policy of insulating domestic consumers from high global crude prices has damaged the finances of the country's three state-owned oil companies – Indian Oil Corporation (IOC), Bharat Petroleum Corporation (BPC) and Hindustan Petroleum Corporation (HPC) – thus impairing their investment capabilities. The expanding fuel subsidy has also further affected the government's fiscal position.

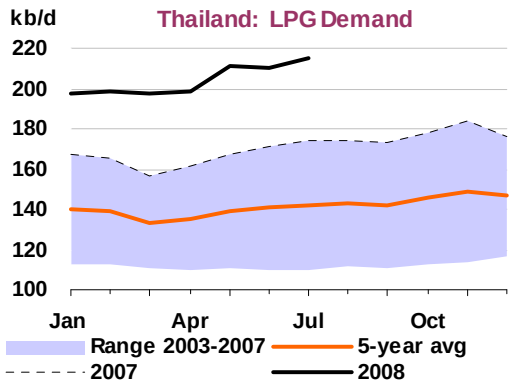
In the meantime, given the surge in domestic demand, state-owned companies will likely be obliged to import gasoil. In response, IOC has reportedly asked the government to direct privately owned Reliance Industries Limited (RIL) to sell domestically some output from its 660 kb/d Jamnagar refinery. However, given Jamnagar's status as an export-oriented unit, product sales into the domestic market would be subject to double taxation – an issue that Reliance has asked to be addressed for sales to proceed.

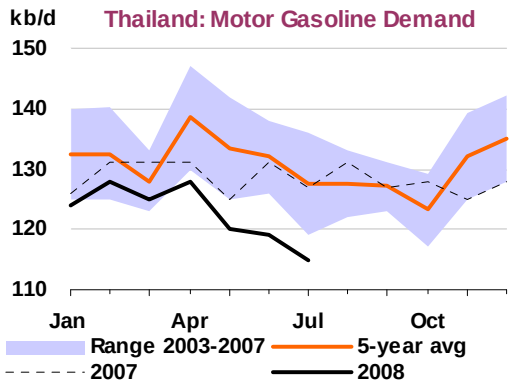
According to preliminary data, oil demand in **Iran** soared by 12.7% year-on-year in July, on the back of sustained transportation fuel (+15.8%) and residual fuel demand (+59.2%). The sharp rise in gasoline use (+16.3%) is particularly noteworthy: at 570 kb/d, demand has surpassed its 2007 pre-rationing levels (of roughly 500 kb/d on average). As such, the rationing system only brought a temporary respite, and if this trend persists, imports will have to rise again – inventories are reportedly depleted – amid renewed international tensions over Iran's nuclear programme. It could also be argued that rationing was bound to fail, given the sheer inefficiency of the fleet (according to some estimates, two-thirds of the country's 5.5 million vehicles are more than 25 years old), the lack of alternatives to driving, notably between large cities, and the government's prevarication on the price issue (subsidies are still too high and discourage conservation).





Oil demand in **Thailand** plummeted by 6.3% year-on-year in July, for the second month in a row. The sharp fall in demand is related to high oil prices for transportation fuels: gasoline, gasoil and jet fuel kerosene demand contracted by 9.4%, 10.8% and 6.4%, respectively. By contrast, LPG demand has risen markedly since the beginning of the year: facing very high prices for conventional motor fuels, some 600,000 drivers have converted their vehicles to run on subsidised LPG (Thailand has now about 1.2 million LPG-fuelled vehicles). In fact, in April the country imported its first LPG cargo in almost a decade. In response, the government looked at implementing a two-tier LPG pricing strategy (distinguishing between households and the transportation sector). However, the plan (originally scheduled for launch in July 2008) has seemingly been shelved.

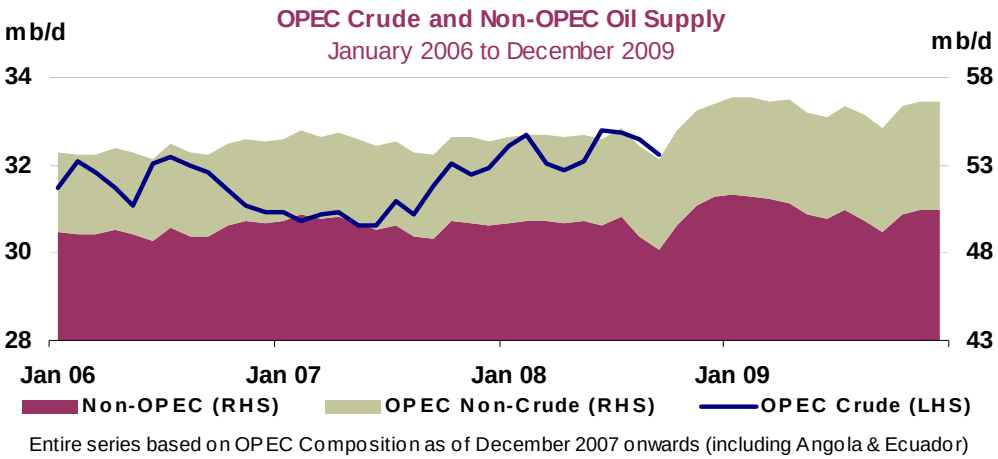




SUPPLY

Summary

- **Global oil supply** declined by over 1.0 mb/d in September, as in August, to reach 85.6 mb/d. Hurricane outages in the Gulf of Mexico (GOM), and renewed stoppages in Azerbaijan and among OPEC producers, offset higher supply from Russia and from the North Sea. Year-to-year growth in world oil supply dipped to 435 kb/d in September from 2 mb/d-plus during June-August.
- **Non-OPEC production** is adjusted down by 100 kb/d for 3Q08, by a sizeable 500 kb/d for 4Q08 and by 245 kb/d for 2009. Renewed September production stoppages in Azerbaijan drive the 3Q08 change. These extend to October and, alongside a longer tail for GOM outages after Hurricanes Gustav and Ike, account for the downward revision for 4Q08. New field delays and slower ramp-up to plateau for projects in Latin America, the FSU and Asia, pull back 2009 non-OPEC supply to 50.4 mb/d.
- **The scale of outages** in the USA due to hurricanes, and the combined impact on Azeri supplies of pipeline outages, conflict in Georgia and idled production facilities has had a major impact on 2Q08 and 3Q08 non-OPEC supply. Combined losses of 120 mb for the August to October period equate to a cut in forecast non-OPEC supply of 1.3 mb/d, or 325 kb/d on an annualised basis.
- **Net growth in non-OPEC output** is largely wiped out for 2008, now averaging only 150 kb/d, plus an extra 310 kb/d from OPEC gas liquids. Corresponding figures for 2009 are +655 kb/d and +800 kb/d respectively, with the non-OPEC component weighted towards 1Q09. This derives from a bunching of new project start-ups in the latter part of 2008 and early 2009. Azerbaijan, Brazil, the US, Canada, biofuels, China and Australia underpin 2009 non-OPEC growth, while the North Sea, Mexico and Russia see significant decline. OPEC NGL growth centres on Saudi Arabia, Qatar, the UAE, Nigeria and Iran.
- **September OPEC crude supply** fell 0.3 mb/d from August to 32.3 mb/d. OPEC's 9 September Ministerial meeting pledged to trim supply to target levels, but September's cut was driven more by unplanned supply outages, notably affecting Angola, Iraq and Nigeria. An OPEC meeting is scheduled for 17 December in Algeria, but unconfirmed reports suggest Ministers may convene earlier, on 18 November in Vienna. OPEC effective spare capacity stands at 2.1 mb/d. Installed capacity may rise by 360 kb/d by end-year to 35.8 mb/d, with increases from Saudi Arabia, Nigeria and Angola.
- **The 'call on OPEC crude and stock change'** is cut sharply for 3Q08, and by an average of 0.2 mb/d for 2009, as weaker demand outstrips the impact of lower estimates for non-OPEC supply. However, a sharp downward revision to 4Q08 FSU and North American supply nudges this quarter's call up marginally to 31.7 mb/d. The underlying level of the 'call' weakens in 2009 to average around 31 mb/d, albeit strengthening over the course of the year from low early 2009 levels.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

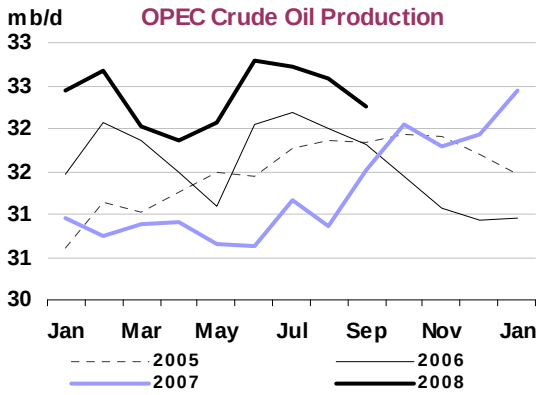
All world oil supply figures for September discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska and Russia are supported by preliminary September supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

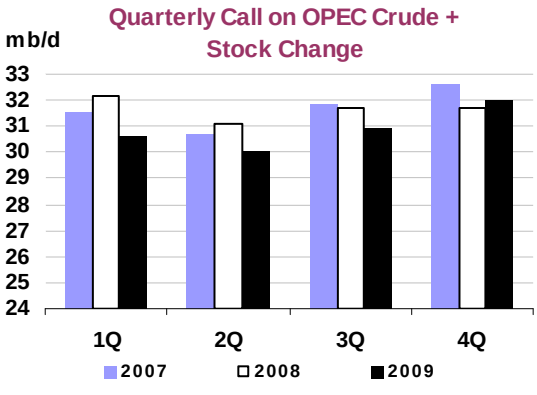
OPEC

September OPEC crude supply was 0.3 mb/d below August levels at 32.3 mb/d. However, as was the case in August, involuntary cuts due to production outages seemed to play as great a role as strategic decisions to reduce supply. Angolan, Iraqi and Nigerian supplies were all affected in this way during September. Nor have we yet seen firm evidence that **Saudi Arabian** crude supply has shifted markedly in September, with our preliminary estimate suggesting output remained close to 9.5 mb/d, albeit heavier crude volumes may now be scaled back to make way for higher volumes of Arab Light from the newly started Khursaniyah project.

While wary of trying to predict the outcome of OPEC gatherings in advance, in our last report we did identify a move to reinforce quota discipline as one of the more likely outcomes of OPEC's 9 September Vienna meeting, particularly in the face of weakening prices. In the event, this was the track followed as the meeting pledged to rein-in production to target levels agreed back in September 2007, excluding Indonesia whose membership of the Organisation is to be suspended from 2009 at its own request. Taking the suggested quota levels from last year, and adjusting for prevailing Iraqi and Indonesian production volumes suggests that OPEC may be targeting total production levels close to 32 mb/d. A further OPEC meeting is scheduled for 17 December in Oran, Algeria, although there have also been unconfirmed reports in early October that Ministers are consulting on the possibility of a further meeting on 18 November in Vienna to discuss the impact of the global financial crisis on the oil market.



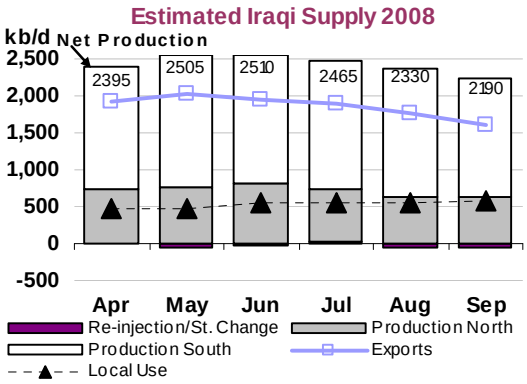
Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

OPEC effective spare capacity among producers readily able to boost supply is estimated at 2.1 mb/d. Installed capacity could rise by 360 kb/d by end-year to 35.8 mb/d, with significant increases expected to come from Saudi Arabia (with the build-up in volumes from the Khursaniyah project), Nigeria (the recently started Agbami project and assumed further recovery from Forcados) and Angola (Saxi-Batuque and Rosa).

Iraqi crude supply in September (exports plus domestic crude use) fell for the third month running, down by 140 kb/d to 2.2 mb/d because of lower exports from both Ceyhan and the southern Gulf ports around Basrah. Weather-related loading delays underpinned the reduction in the south (off by around 150 kb/d at 1.3 mb/d), while shipments from Ceyhan were also affected by a five to six day pipeline outage early in September to repair bomb damage. This was the first major stoppage of this kind since increased security on the pipeline was put in place in summer 2007. Total domestic crude use in September is estimated at 590 kb/d compared with 565 kb/d in August, as expansion projects at several smaller refining facilities have led to higher crude throughputs.



A 2006 agreement whereby Iraq supplies Jordan with crude was renewed in June. This was supposed to involve initial volumes of 10 kb/d, rising later to 30 kb/d, although to date shipments have been at minimal levels as deliveries are made by truck. Iraq's only other pipeline exports comprise some 10 kb/d of crude which moves cross-border to Syria.

OPEC Crude Production[1]

(million barrels per day)

	Jul 2008 Supply	Aug 2008 Supply	Sep 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Sep 2008 Supply	Capacity end 2008	Current Target
Algeria	1.37	1.37	1.37	1.40	0.02	1.46	1.36
Angola[1]	1.92	1.85	1.75	2.00	0.25	2.05	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
Iran	3.95	4.10	3.97	4.10	0.14	4.00	3.82
Kuwait[3]	2.63	2.61	2.60	2.64	0.04	2.65	2.53
Libya	1.73	1.65	1.70	1.80	0.10	1.81	1.71
Nigeria[4]	1.87	1.98	1.98	2.55	0.57	2.65	2.16
Qatar	0.88	0.88	0.87	0.88	0.01	0.90	0.83
Saudi Arabia[3]	9.50	9.50	9.45	10.80	1.35	11.00	8.94
UAE	2.69	2.66	2.66	2.85	0.20	2.87	2.57
Venezuela[5]	2.39	2.31	2.37	2.60	0.23	2.60	2.47
OPEC-11	**29.42**	**29.39**	**29.20**	**32.11**	**2.90**	**32.49**	**28.81**
Indonesia	0.86	0.87	0.86	0.87	0.01	0.84	
Iraq	2.51	2.33	2.19	2.50	0.31	2.50	
Total OPEC	**32.79**	**32.58**	**32.25**	**35.47**	**3.22**	**35.83**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.10)*		

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 530 kb/d in September.

We have scaled back Iraqi capacity assumptions for the next 18 months (effectively holding flat at 2.5 mb/d) after the virtual collapse of six Technical Support Agreements (TSAs) designed to add 500 kb/d to Iraqi crude capacity via existing fields over the next one to two years. Instead, focus will be on formal bidding rounds aiming at expanding capacity for the longer term. The government has said it will include four undeveloped fields in the second bidding round, aiming to add some 1.75 mb/d to capacity. The four fields are all in southern Iraq - Halfaya, Majnoon, Bin Umar and West Qurna 2 – and the bidding round is tentatively scheduled for December.

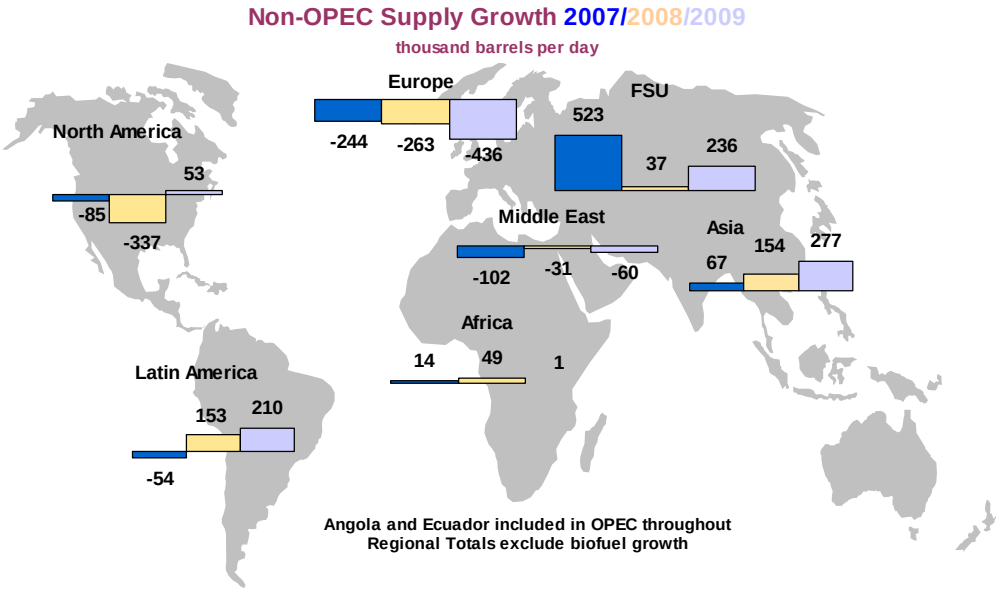
Preliminary estimates of **Iranian** exports suggest a drop of perhaps 100 kb/d from high August levels. The other component of our supply estimate – domestic refinery crude runs – may also have come in marginally lower, bearing in mind that extra swap volumes of Azeri crude were taken in at the Iranian Caspian port of Neka in September. We net off Neka volumes from our estimate of Iranian crude runs when calculating our supply 'proxy' for production. On this basis, we think Iranian supply may have been down by 130 kb/d at 3.97 mb/d in September.

Angolan production is estimated to have fallen by 0.1 mb/d to 1.75 mb/d due to the continued outage at the 200 kb/d Greater Plutonia field, which shut down in mid-August after a gas plant problem. A definitive re-start date for Greater Plutonia was not known in early-October. However, this was likely to have been partly offset during September by rising supplies from the Saxi-Batuque section of the Kizomba C project, which also started in mid-August.

Libyan and Venezuelan production are both assessed up in September by 50-60 kb/d as a result of the end of scheduled maintenance. In **Libya**, supplies of Waha crude increased after pipeline maintenance ended. However, Libyan production remains below 1.8 mb/d capacity levels due to continued outages affecting facilities at the al-Jurf field and the Ras Lunuf terminal. In **Venezuela**, we have scaled back July and August estimates to account for maintenance at the Hamaca and Sincor heavy oil upgrader units. The return of these facilities after maintenance looks to have pushed September supply to just short of 2.4 mb/d. While there are ambitious plans for future output expansion in the Orinoco region, at the same time industry reports suggest that state PDVSA is struggling to maintain western region production around Lake Maracaibo. Amid falling crude prices and the global financial squeeze, some reports suggest thousands of wells are affected by lack of maintenance and water encroachment.

Non-OPEC Overview

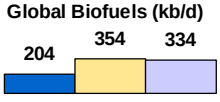
Downward adjustments to the non-OPEC forecast continue this month, with 4Q08 and year 2009 projections cut by 500 kb/d and 245 kb/d respectively. While there may be a temptation to see this as a curbing of earlier overenthusiasm in an investment-constrained environment, the reality is more to do with *force majeure*, alongside initial signs that the global credit crisis is starting to have an impact upon upstream spending. The aftermath of Hurricanes Gustav and Ike is now characterised by longer-lasting



Total Non-OPEC Supply Growth (kb/d)

2007	404
2008	149
2009	657

Global Biofuels (kb/d)

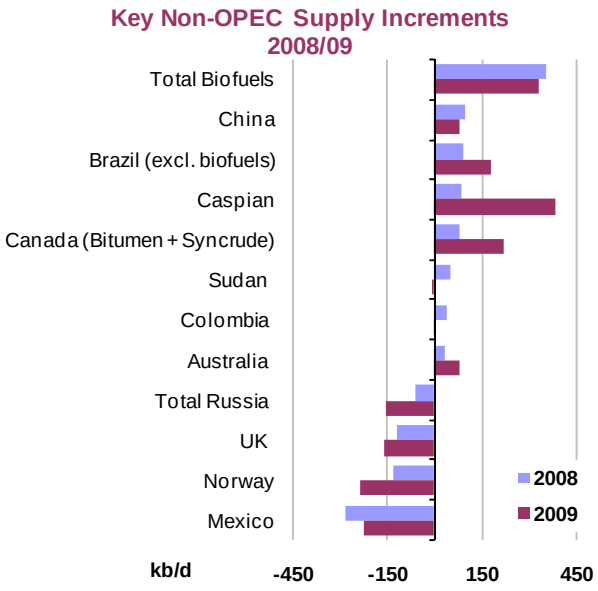


OPEC NGLs (kb/d)

2007	103
2008	308
2009	800

supply outages as over 40% of US GOM crude production remains offline amid shuttered pipeline links. And Azeri production, earlier assumed to recover quickly from the after-effects of the August BTC pipeline blast and the brief war in Georgia, now faces at least another month of sharply reduced supply due to continued pipeline outages and technical problems at offshore production facilities. These two events together cut 120 mb from 2008 non-OPEC supply, or over 300 kb/d on an annualised basis.

Since our forecast automatically employs a rolling five-year average hurricane outage assumption for the offshore US GOM, the incorporation of September's heavy outages (an estimated offshore production loss of 1.1 mb/d for the month on average) also feeds through to knock 70 kb/d off projected 3Q09 GOM supply. October 2008 outages also look likely to come in above earlier expectation, but no downward adjustment is made for October 2009 until the current month's impacts are confirmed. Until then, our October 2009 hurricane adjustment remains at the 2003-2007 average of 265 kb/d.



Delays in new field starts, and slower ramp-up to plateau for projects in Mexico, Brazil, Russia, Azerbaijan, Kazakhstan, China, Malaysia and Vietnam scale back expectations for 2009 non-OPEC output to 50.4 mb/d, from 50.7 mb/d last month. Our methodology does not involve arbitrarily slipping all upstream project starts (even though delays of up to 12 months are not uncommon at present). Instead, we prefer to assess projects on a case-by-case basis, with subscribers able to track individual projects in our field-by-field *MODS* database. But forecasting under 'normalised' conditions, when the upstream investment environment faces a multitude of barriers and bottlenecks, will always leave projections prone to downside risk. The sustained outages due to weather and *force majeure* seen in the past two months highlight that trend, as indeed could the global credit squeeze now gripping financial markets (see *When Storms Collide*). Upward adjustments to the 2009 projections are limited this month, and confined to India, Oman and Syria.

As a result, earlier expectations of healthy net growth in non-OPEC output for 2008 have been largely wiped out, with growth now averaging only 150 kb/d, plus an extra 310 kb/d from OPEC gas liquids.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08
North America	14.06	14.35	-0.17	0.28	14.06	14.28	-0.16	0.21	0.00	-0.07	0.00	-0.07
Europe	4.68	4.27	-0.28	-0.41	4.70	4.27	-0.25	-0.43	0.02	0.00	0.02	-0.02
Pacific	0.70	0.80	0.07	0.10	0.70	0.81	0.07	0.11	0.00	0.01	0.00	0.01
Total OECD	**19.44**	**19.41**	**-0.37**	**-0.03**	**19.46**	**19.36**	**-0.35**	**-0.10**	**0.02**	**-0.06**	**0.02**	**-0.08**
Former USSR	12.95	13.18	0.18	0.23	12.81	13.04	0.04	0.24	-0.14	-0.14	-0.14	0.01
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.84	3.92	0.11	0.08	3.83	3.91	0.10	0.08	-0.02	-0.01	-0.02	0.00
Other Asia	2.66	2.76	-0.01	0.11	2.66	2.74	-0.01	0.08	0.00	-0.02	0.00	-0.02
Latin America	4.05	4.33	0.19	0.29	4.02	4.28	0.16	0.26	-0.03	-0.05	-0.03	-0.02
Middle East	1.59	1.52	-0.07	-0.07	1.61	1.55	-0.03	-0.06	0.02	0.03	0.04	0.01
Africa*	2.56	2.56	0.05	0.00	2.56	2.56	0.05	0.00	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.77**	**28.39**	**0.44**	**0.62**	**27.60**	**28.20**	**0.29**	**0.60**	**-0.17**	**-0.19**	**-0.14**	**-0.02**
Processing Gains	2.24	2.29	0.07	0.04	2.24	2.29	0.07	0.04	0.00	0.00	0.00	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.91**	**50.66**	**0.27**	**0.76**	**49.76**	**50.42**	**0.15**	**0.66**	**-0.14**	**-0.25**	**-0.12**	**-0.10**

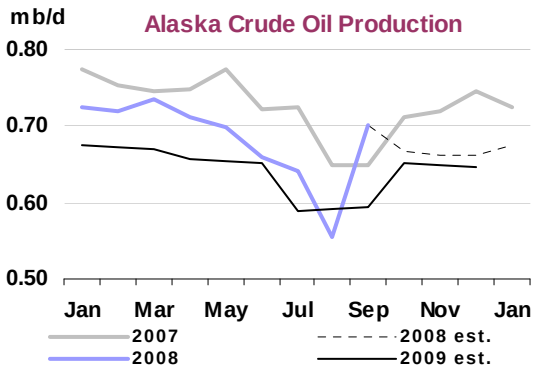
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

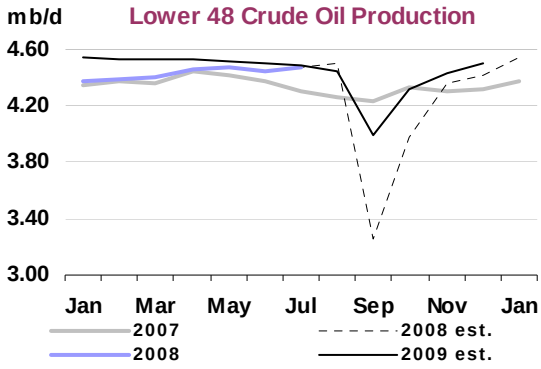
Corresponding figures for 2009 are +650 kb/d and +800 kb/d respectively, with the non-OPEC component weighted towards 1Q09, tapering off as we progress through 2009. As a result, the implied call on OPEC crude and stock change looks weak early next year, but rebounds towards 4Q09. This imbalanced supply profile derives from a bunching of new non-OPEC project start-ups in the latter part of 2008 and early 2009. Azerbaijan, Brazil, the US, Canada, China, Australia and biofuels underpin 2009 non-OPEC growth, while the North Sea, Mexico and Russia see significant decline. OPEC NGL growth centres on Saudi Arabia, Qatar, the UAE, Nigeria and Iran.

OECD

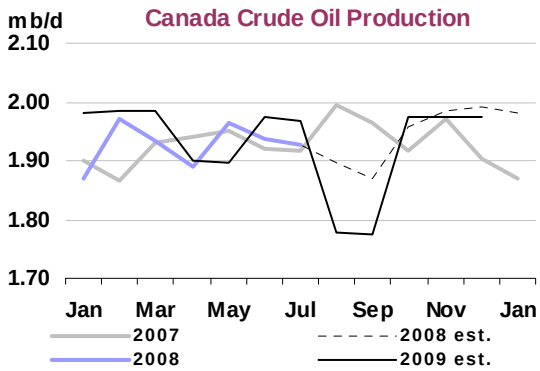
North America

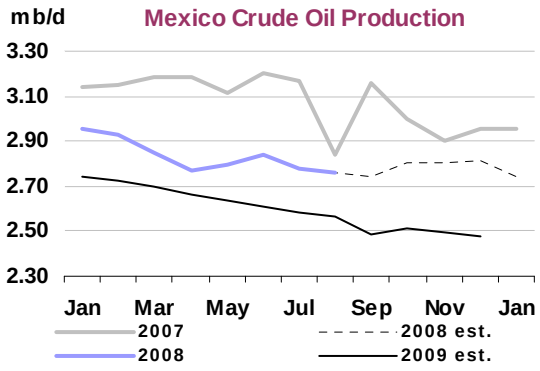
US – September Alaska actual, others estimated: Total forecast US oil production is actually revised up by 30 kb/d for 2008, despite a now-longer recovery 'tail' after Hurricanes Gustav and Ike (see *Re-evaluating Upstream Losses from Gustav and Ike*). Preliminary weekly August and September data suggest output fared better than expected. Forecast output averages 7.6 mb/d in 2008 and a largely unchanged 7.9 mb/d in 2009, with ethanol generating the bulk of this year's growth and sharing the increase with GOM crude supplies next year. Alaskan crude production falls in both years, although September showed a rebound in supplies to 700 kb/d after earlier maintenance had affected the Trans Alaska Pipeline system and the Alpine field in August.





Canada – Newfoundland August actual, others July actual: Lower indicated 3Q08 Albertan mined syncrude and offshore east coast production trim the total production estimate for the quarter by 20 kb/d. However, on a trend basis the Canadian forecast remains largely unchanged, with total oil output stable at 3.3 mb/d in 2008, then rising by 150 kb/d to 3.45 mb/d in 2009 on the strength of higher Alberta oil sands production. *In-situ* bitumen generates some of this growth, as does the expected start-up at the CNRL Horizon mining project. The operators have reported cost overruns at the latter project and a deferral of earlier-planned 3Q08 start-up, although our forecast has, for some time, assumed a more conservative end-2008 start-up.

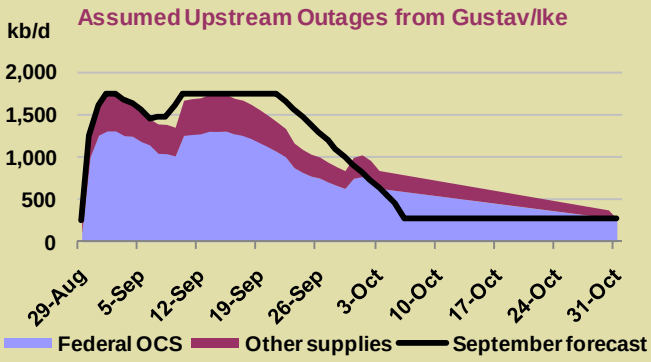




Re-evaluating Upstream Losses from Gustav and Ike

As of 7 October, 582 kb/d of Outer Continental Shelf (OCS) crude production and 2.9 bcfd of gas remained shut-in after the passing of Hurricanes Gustav and Ike, representing 45% and 39% respectively of pre-storm production levels. In addition, we estimate that perhaps 150-200 kb/d of regional shallow water and onshore crude and NGL production may also be offline.

As was the case after Hurricanes Katrina and Rita in 2005, the continued unavailability of offshore pipelines remains a key impediment to restoring production, more so than damaged production facilities per se. The Minerals Management Service (MMS) reports that 54 of the GOM's total 3,800 production facilities have been destroyed, although these account for only 13 kb/d of oil and 90 mcfd of gas production. Some 35 platforms have suffered damage requiring three to six months to repair and another 60 platforms will require one to three months recovery, although output rates have not been itemised. MMS also identifies one major crude pipeline system and eight gas transmission systems with confirmed damage, while other pipelines are being inspected and tested. MMS has said that it will consider on a case-by-case basis all requests to reroute supplies by barge or alternative pipelines or to flare gas to enable crude to be routed via undamaged pipelines.



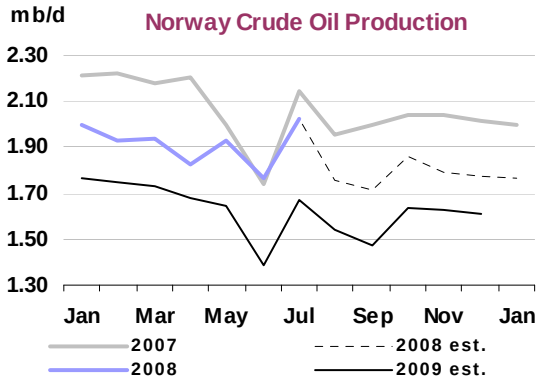
Last month our working assumption was that the bulk of production shuttered by Gustav and Ike could be restored by the end of the first week of October. This was based in part on reports after Gustav that damage to facilities appeared slight. It is apparent now however that recovery will take longer, even though actual outages in September came in below our preliminary estimate (see graph). All told, we now assume oil outages averaging 1.4 mb/d in September and 0.6 mb/d in October, reverting to the seasonal five-year average for GOM hurricane stoppages of 266 kb/d by end-October, 165 kb/d in November and 110 kb/d in December. Cumulative total oil losses therefore amount to 45 mb by end-September and potentially 65 mb by end-October. The 2009 GOM production forecast has been adjusted to include apparent September 2008 outages, but retains a 2003-2007 average level for October-December 2009 (266 kb/d, 165 kb/d and 110 kb/d respectively). Of course, all of these assumptions are subject to change as the path of supply recovery becomes clearer in coming weeks.

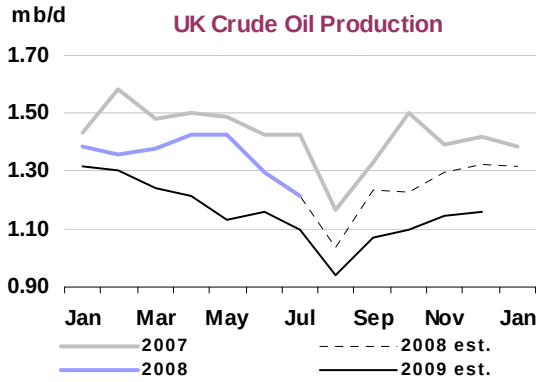
Mexico – August actual: Crude production of 2.76 mb/d in August was 75 kb/d lower than expected. Output from the Cantarell complex dipped below 1 mb/d, reportedly for the first time in 13 years. Production is likely to have fallen further in September, in part as Pemex curbed output due to weaker US Gulf refiner demand after the hurricanes, and also due to production and port facility closures due to bad weather closer to home during the month.

The latest government budget has crude output for 2009 at 2.75 mb/d, whereas our own forecast is rather lower at 2.6 mb/d (off from 2.8 mb/d in 2008). Our 2009 forecast has been trimmed by 60 kb/d to incorporate a slower build in supplies from the Ku-Maloob-Zaap complex, and also to reflect higher average autumn hurricane outages next year.

North Sea

Norway - August provisional; UK – July actual: Norwegian maintenance levels in the summer appear to have been less heavy than anticipated, while loading schedules for the main production systems for September and October also point to slightly higher output than we had been assuming up to now. Around 75 kb/d is added to the 3Q08 estimate and 25 kb/d to 4Q08, resulting in a 2008 production average of 2.4 mb/d (including 1.9 mb/d of crude). Higher condensate supplies in 2008 cushion the impact of declining crude, but production falls by 235 kb/d in 2009, to 2.2 mb/d, as the impact of condensate supply recedes.

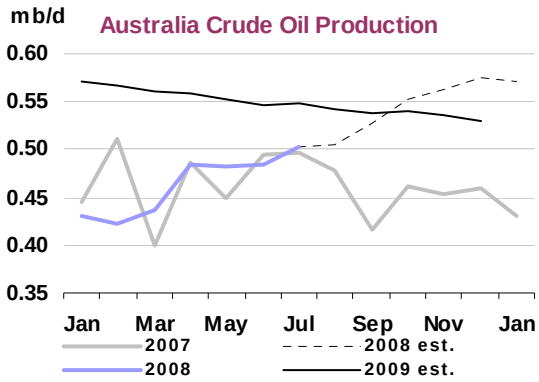




Forecast **UK** production is left largely unchanged compared with last month at 1.55 mb/d in 2008 and 1.39 mb/d in 2009. September saw the start up of Venture Production's 30 kb/d capacity Chestnut field and Maersk Oil's Dumbarton field extension, which will boost capacity by some 15 kb/d to 40 kb/d. Several new field developments however are insufficient to offset older field decline.

Pacific

Australia and others – July actual: The Australian forecast is left largely unchanged, with 2008 production at 585 kb/d (+40 kb/d v 2007), growing to 665 kb/d in 2009. New light/sweet crude and condensate supplies from the country's offshore North West Shelf area underpin growth. As part of this, the Angel gas/condensate field, which should plateau at 50 kb/d of condensate, started up on 3 October. This follows the August start of heavy, sweet crude output of some 50 kb/d from the Vincent field. Supplies in 2009 will be further augmented by 35 kb/d of new production from the Skua field in the Bonaparte Basin further north.

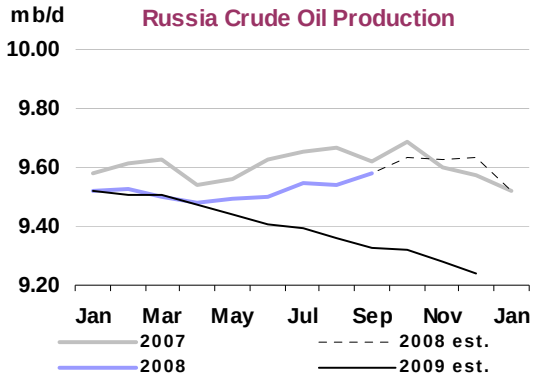


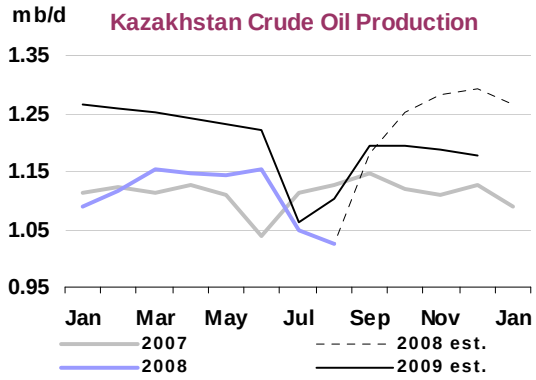
New Zealand too is expected to see a temporary surge in oil output during 2007-2009, with output on track to average 75 kb/d in 2008 and potentially over 100 kb/d in 2009. This is despite the announcement in late August of a two-month delay to expected start-up at the 35 kb/d Maari field, which will be operated by OMV of Austria.

Former Soviet Union (FSU)

Russia – August actual, September provisional: Our forecast for Russian oil production is trimmed by around 20 kb/d for the 3Q08 to 4Q09 period as both August and September data came in below expectations. There have been some suggestions that production from new projects (such as Lukoil's Yuzhno-Khylchuya) has been delayed to capture a lower mineral extraction tax coming into force in January. More generally, the fiscal regime is seen to have deterred much-needed investment in sustaining capacity at older fields, while questions have also been raised by recent turbulence in Russian equity and financial markets. Share values have fallen particularly sharply in Russia, and the country's key producers such as Gazprom and Rosneft are heavily dependent on debt to finance operations. Anecdotal reports suggest upstream investment is being scaled back further, although it is too early to identify which companies and key fields will feel the impact first. Despite the advent of lower export taxes from October, and a modestly lower tax burden overall from 2009, we envisage Russian output falling by 60 kb/d this year to 10.0 mb/d and by a further 150 kb/d in 2009 to 9.9 mb/d.

Kazakhstan – August actual: The forecast for oil production from Kazakhstan is cut by 25 kb/d for the second half of 2008 and by 80 kb/d for 2009. Annual averages now come in at 1.42 mb/d for 2008 and 1.47 mb/d for 2009. We have curbed our own expectations for Kazakh supply in line with the now-lower





expectations from the government, which envisages growth of only around 50 kb/d for 2009. This is despite Tengizchevroil's announcement that production capacity at the Tengiz field has been raised by 45% to 540 kb/d after completion of sour gas injection and crude processing units at the field. However, question marks remain over export routes for higher Tengiz supply, particularly given longstanding delays in finalising expansion of the CPC pipeline. Nor do scheduled CPC exports for October tend to support such an immediate increase in Tengiz supplies of this magnitude, although marginal extra volumes may be railed to Odessa, or shipped via BTC.

Further reinforcing the potential slow-down in Kazakh growth have been claims from the government that the global credit crisis will likely impede oil and gas sector investment, and that a new mineral extraction tax to be levied from 2009 will apply to 60% of the country's output.

A 480 kb/d monthly reduction to BTC pipeline transits (see above) was the main component of the 810 kb/d drop in **total net FSU oil exports** seen in August, to 7.8 mb/d. The fire-related closure of the BTC pipeline lasted three weeks and left August flows averaging 360 kb/d, compared with 840 kb/d in July. A 25% hike in Russian export duties from 1 August also contributed to lower volumes leaving the FSU, including a 130 kb/d ebb in Primorsk loadings. Total flows via the Transneft pipeline network (heading for sea terminals or direct to refineries) were down by 210 kb/d on average in August. FSU product exports were also down by 250 kb/d, including a significant drop of 180 kb/d in gasoil shipments.

With BTC exports back online in the last week of August, exports along this route had been expected to recover in September. However, a gas leak on the line in September and further technical problems at the offshore Azeri platforms in the Caspian have constrained both actual September, and likely October, exports considerably. Conversely, Russian exports should increase in October, following the announcement of a 25% cut in export duties from the start of that month, the first cut for 18 months.

FSU Net Exports of Crude & Petroleum Products

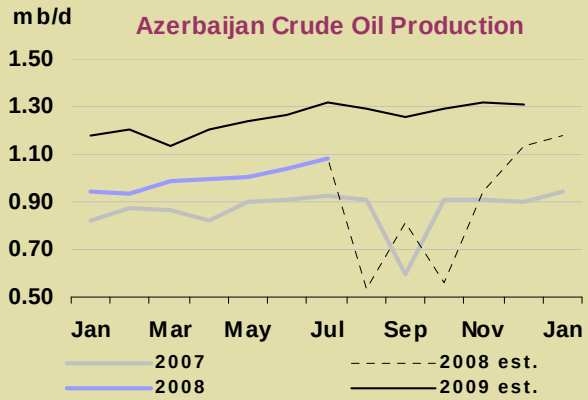
(million barrels per day)

	2006	2007	3Q2007	4Q2007	1Q2008	2Q2008	Jun 08	Jul 08	Aug 08	Latest month vs. Jul 08	Latest month vs. Aug 07
Crude											
Black Sea	2.22	2.18	2.09	2.10	1.96	2.23	2.15	2.06	2.00	-0.06	-0.02
Baltic	1.55	1.59	1.58	1.61	1.41	1.54	1.50	1.44	1.31	-0.13	-0.20
Arctic/FarEast	0.15	0.32	0.38	0.31	0.27	0.29	0.32	0.31	0.39	0.08	0.01
BTC	0.00	0.55	0.57	0.61	0.71	0.75	0.70	0.84	0.36	-0.48	-0.32
Crude Seaborne	4.07	4.63	4.61	4.62	4.35	4.81	4.67	4.64	4.06	-0.58	-0.53
Druzhba Pipeline	1.20	1.13	1.08	1.13	1.14	1.07	0.96	1.01	1.06	0.05	-0.01
Other Routes	0.38	0.44	0.40	0.43	0.40	0.42	0.42	0.43	0.40	-0.03	0.03
Total Crude Exports	5.64	6.20	6.09	6.18	5.89	6.30	6.05	6.09	5.52	-0.56	-0.52
Of Which: Transneft	4.22	4.27	4.19	4.23	3.97	4.16	3.94	3.96	3.75	-0.21	-0.30
Products											
Fuel oil	0.95	1.10	1.13	1.08	1.16	1.13	1.13	1.12	1.08	-0.04	-0.12
Gasoil	0.95	0.95	1.01	0.96	1.06	0.96	1.04	0.90	0.72	-0.18	-0.29
Other Products	0.61	0.60	0.57	0.56	0.64	0.56	0.61	0.58	0.53	-0.06	-0.05
Total Product	2.51	2.65	2.71	2.60	2.86	2.66	2.82	2.57	2.31	-0.25	-0.48
Total Exports	8.16	8.85	8.80	8.78	8.75	8.95	8.87	8.65	7.83	-0.82	-1.00
Imports	0.04	0.04	0.05	0.04	0.05	0.03	0.03	0.04	0.03	-0.01	-0.03
Net Exports	8.12	8.82	8.76	8.74	8.70	8.92	8.84	8.62	7.80	-0.81	-0.98

Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

Azeri Crude Supplies Disrupted Again

As reported in last month's report, a fire on the Turkish section of the Baku-Tbilisi-Ceyhan (BTC) pipeline on 6 August severely curtailed last month's shipments of Azeri Light crude to world markets, a development compounded from mid-month by the outbreak of hostilities in Georgia. Attempts to reroute Azeri crude supply were hampered by military activity which curbed rail shipments of crude to Georgia's Black Sea port of Batumi (some 50 kb/d, plus products shipments via Poti and Kulevi) and prevented use of the 150 kb/d Baku-Supsa line. Indeed, reports in early October suggest that although the Supsa line is operable, it is not yet operating again. Increased crude shipments were made on the Baku-Novorossiysk pipeline, although only perhaps 40-50 kb/d, while up to 35 kb/d of swap crude went to Neka in northern Iran. In all, BTC flows are estimated to have averaged 360 kb/d in August compared with 840 kb/d in July, and an August schedule before the outages of 910 kb/d.





Repairs on the BTC pipeline allowed resumed tanker loadings from Ceyhan on 25-26 August, and exports were reported back at pre-outage levels on 3 September. They later reached 940 kb/d, before a technical problem disrupted flows on BTC again on 12 September. Separately, a gas leak on 17 September affecting the Central and West Azeri fields in the Caspian saw crude supplies to BTC again severely curtailed. BP on 3 October announced that it will not be able to restore offshore production until the end of October, restricting production to 300 kb/d, before a phased increase back to 900 kb/d. As a result, the company plans to introduce limited volumes of Tengiz crude from neighbouring Kazakhstan into the now-reinstated BTC line from the second half of October, with arrival at Ceyhan by mid-November.

The impact of these incidents in and around Azerbaijan on our non-OPEC supply forecasts has been highly significant. The forecast for Azeri production for 3Q08 has been cut from 1.1 mb/d to 0.8 mb/d since report dated 10 July 2008 as a result (-280 kb/d on average), with the 4Q08 projection curbed from 1.2 mb/d to 0.9 mb/d (-335 kb/d). Put another way, these stoppages have cut 2008 crude supply by over 55 mb, similar in magnitude to the losses incurred as a result of Hurricanes Gustav and Ike in the US.

OECD STOCKS

Summary

- **OECD stocks fell by 5.1 mb in August to 2,645 mb,** as large draws in European crude and US motor gasoline were only partially offset by builds in Pacific distillates and North American 'Other Products'.
- **US motor gasoline stocks fell by 17.6 mb in August**, a much sharper drop than normally seen on a temporary firming of demand. Correspondingly, US distillates drew counterseasonally, by 2.4 mb. As a result, stock cover in both products was below the five-year range as hurricanes Gustav and Ike approached. Weekly data showed that hurricane-related disruptions drove further product draws of around 26 mb in September. Gasoline stocks temporarily fell to their lowest level for decades before a late-month rebound while distillate stocks were left very tight ahead of the winter.
- **A large 14 mb August draw in European crude inventories** reversed the build seen in July and reduced levels to seasonal averages once again. Lower Caspian exports and field maintenance in the North Sea reduced crude availability in the region in August, with French and UK crude stocks dropping by 3.7 mb and 2.2 mb respectively.
- **Strong August builds in OECD North American 'other products' (of 10.1 mb) and Pacific distillates (of 9.4 mb on weaker demand)** offset some of the decreases elsewhere. OECD Pacific product stocks are now back near the five-year seasonal average cover after three months below. Preliminary Japanese data reflect further product builds in September.
- **OECD stock cover in terms of forward demand fell by 0.7 days in August, to 54.9 days**. Despite the monthly drop, this is a high level of forward demand cover, significantly inflated by the effect of a lower OECD demand prognosis. Preliminary data incorporating the effects of the US hurricanes in September plus Japanese and Euroilstock data imply a sharp drop of 25.1 mb in OECD stocks, which would erode cover to 53.6 days.

Preliminary Industry Stock Change in August 2008 and Second Quarter 2008

	August (preliminary)								Second Quarter 2008			
	(million barrels)				*(million barrels per day)*				*(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**2.6**	**-14.0**	**-7.3**	**-18.7**	**0.08**	**-0.45**	**-0.24**	**-0.60**	**-0.21**	**0.01**	**0.13**	**-0.07**
Gasoline	-17.9	1.4	1.1	-15.4	-0.58	0.05	0.04	-0.50	-0.13	-0.13	-0.03	-0.29
Distillates	-0.5	6.3	9.4	15.1	-0.02	0.20	0.30	0.49	0.14	0.02	0.03	0.19
Fuel Oil	0.9	-2.0	1.2	0.2	0.03	-0.07	0.04	0.01	0.02	-0.02	0.03	0.03
Other Products	10.1	-0.3	4.4	14.2	0.33	-0.01	0.14	0.46	0.32	0.01	-0.01	0.32
Total Products	**-7.5**	**5.4**	**16.1**	**14.0**	**-0.24**	**0.17**	**0.52**	**0.45**	**0.35**	**-0.11**	**0.02**	**0.25**
Other Oils[1]	0.3	-0.9	0.1	-0.4	0.01	-0.03	0.00	-0.01	0.16	0.03	0.03	0.23
Total Oil	**-4.5**	**-9.5**	**8.9**	**-5.1**	**-0.15**	**-0.31**	**0.29**	**-0.16**	**0.30**	**-0.07**	**0.18**	**0.41**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

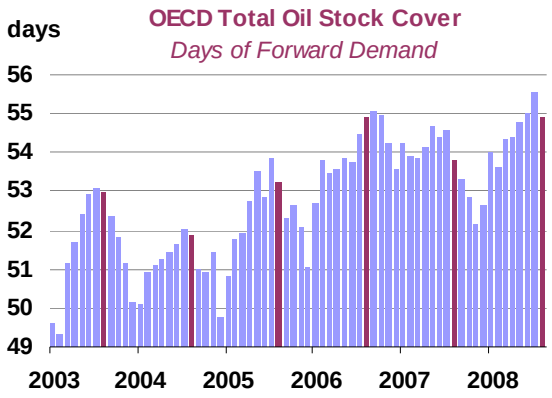
OECD Inventory Position at End-August and Revisions to Preliminary Data

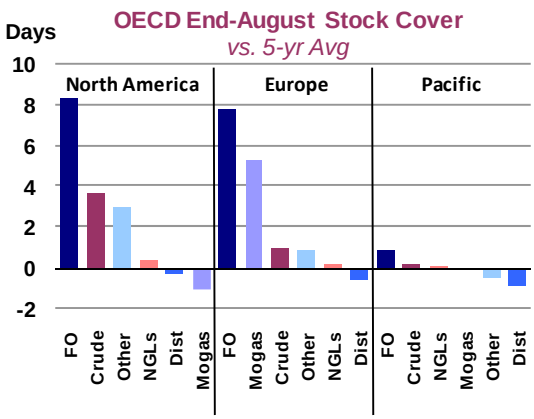
By end-August, total commercial OECD oil stocks were at 2,645 mb or 54.9 days cover. This was above the end-August absolute average for the period 2003-07 (of 2,634 mb) as well as the corresponding average for days of forward demand cover (53.4 days).

Naturally, another downward revision to our OECD demand prognosis in this month's report amplified stock cover (derived by dividing stocks by average daily demand for the next three months). In fact, cover reached as high as 55.6 days in July. Even after a notable monthly drop of 0.7 days in August, aggregate cover for the OECD is still above the five-year range.

However, this is not uniformly the case for all products across all regions. Ample stock cover for fuel oil, a structurally long product in a global context, distorts the picture by exaggerating aggregate product cover. In addition, a preliminary Canadian crude stock number for July may be subject to downward

revisions later and could be currently inflating North American crude cover artificially. Conversely, motor gasoline in North America and distillates in general remain tight in terms of forward demand cover.





Furthermore, stockdraws as a direct result of US hurricanes appear to have driven US product cover dramatically lower and total OECD stock cover could have decreased by 1.3 days by the end of September. Euroilstock data also suggests that alongside some refinery maintenance, the hurricanes may have downwardly influenced European product inventory, provisionally off by 9.6 mb in September, with arbitrage cargoes moving across the Atlantic. That distillate cracks remain above $15/bbl in both markets is a sign that distillates could be the major concern as winter approaches, although supposed lower Chinese buying of distillates after the Olympics may have an easing effect in a global context.

Revisions versus 10 September 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Jun 08	Jul 08	Jun 08	Jul 08	Jun 08	Jul 08	Jun 08	Jul 08
Crude Oil	**1.6**	**9.2**	**0.2**	**-5.1**	**0.4**	**-6.1**	**2.2**	**-2.0**
Gasoline	0.2	-1.5	-0.3	-0.1	0.2	-0.9	0.1	-2.5
Distillates	0.5	-3.6	1.7	5.0	0.1	-0.1	2.4	1.3
Residual Fuel Oil	0.2	-0.5	-1.0	-4.2	0.0	-0.2	-0.7	-4.9
Other Products	-0.1	3.1	0.1	1.1	0.0	1.0	0.0	5.2
Total Products	**0.9**	**-2.5**	**0.5**	**1.9**	**0.3**	**-0.2**	**1.7**	**-0.9**
Other Oils[1]	-0.2	4.3	1.3	2.6	0.0	0.4	1.1	7.3
Total Oil	**2.3**	**11.0**	**2.1**	**-0.6**	**0.7**	**-5.9**	**5.1**	**4.4**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Revisions to OECD closing stocks for July amounted to 4.4 mb. The largest upward corrections were to North American crude (+9.2 mb, led by the provisional reporting of a surprising Canadian build) and European distillates (+5.0 mb). These countered major downward adjustments to European crude of 5.1 mb, as new data showed draws in the Czech Republic (on lower Russian deliveries) and Greece (-2.4 mb) while the UK revised down inventory by 5.0 mb. Pacific closing crude stocks for July were also downgraded, by 6.1 mb, after a revision of -7.4 mb for Japan.

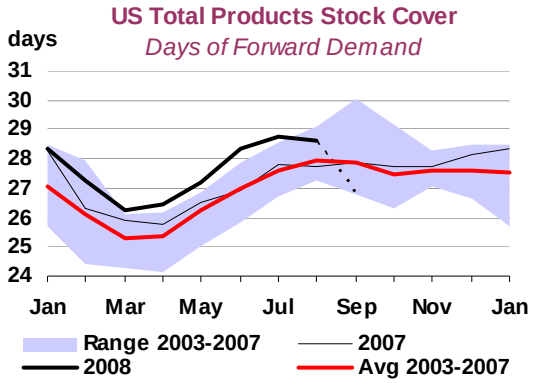
OECD Industry Stock Changes in August 2008

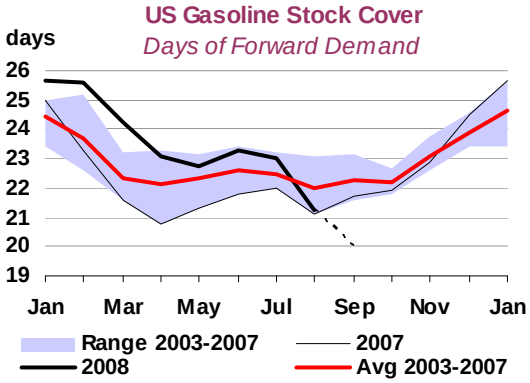
OECD North America

Before Hurricanes Gustav and Ike struck the US Gulf, a large product draw had eroded OECD North American stocks by 4.5 mb in August to 1,257 mb, but they remained just above the five-year average.

In the US, the August gasoline stockdraw of 17.6 mb was 10 mb larger than seasonal norms while distillates defied seasonality to fall by 2.4 mb to the bottom of the five-year absolute range. These draws were a result of a monthly dip in refinery throughputs combined with a late-summer firming in demand

(possibly related to an easing in prices at the pump). They left stocks tight in the run-up to September hurricanes (see '*Low End-August Stocks Add to Concern over Hurricane Impact on US Inventory*'). By contrast, US stocks of 'other products' saw a healthy increase of 9.7 mb, much of which was prompted by a seasonal build in propane stocks. Furthermore, an August bounce of 1.9 mb in distillate inventories boosted Mexican product stocks.

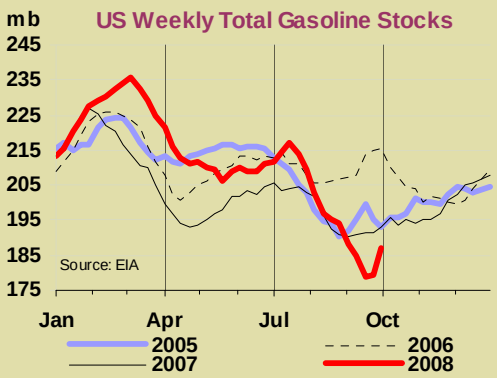


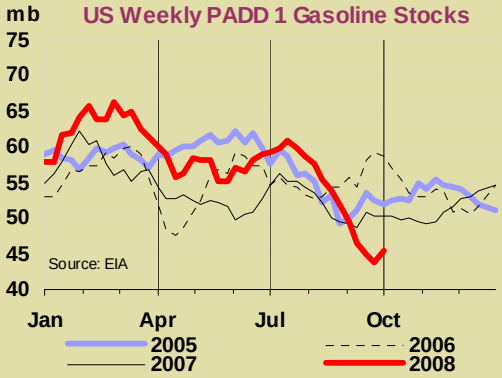


Unusually, crude stocks in North America improved in August, as a shallow Mexican draw of 1.9 mb was more than outpaced by the continued recovery in US crude inventories from a deep second quarter draw. One bumper mid-month week of almost 11 mb/d of crude imports into the US contributed to the August build of 4.5 mb. However, the reporting of an 8.2 mb July build in Canada took stocks to a level suspiciously close to those recorded before last month's round of substantial downward revisions. This suggests that there remains an issue with Canadian stock reporting and that regional crude stocks levels may soon face more downward corrections.

Low End-August Stocks Add to Concern over Hurricane Impact on US Inventory

Whether as a result of precautionary closures or actual storm damage, the disruption caused to the US oil supply chain by the passing of this year's malevolent hurricanes, Gustav and Ike, was massive. This was no surprise with Ike's epicentre passing over Houston, the focus of onshore oil infrastructure in the US Gulf. Weekly EIA data suggest that September product stockdraws were substantial and left inventory at multi-decade lows. However, significant August decreases in US product stocks meant that inventory was already tight before the disruption.





Following a monthly dip in refinery throughputs and a firming in gasoline demand, OECD data showed a hefty 17.6 mb August draw in US motor gasoline stocks, to 190.7 mb or 21.3 days of forward demand cover. This was their lowest end-August absolute level for four years and below the comparative pre-Katrina 2005 level of 193.7 mb. From this low position, weekly EIA data suggests that hurricane disruption massively reduced refinery activity, prompting a further drop in gasoline stocks to below 179 mb by the third week of September. This was their lowest value since August 1967 (excepting pre-1990 intra-month levels) and would have represented multi-decade low forward demand cover of around 19.5 days.

Low End-August Stocks Add to Concern over Hurricane Impact on US Inventory (continued)

With the focus of infrastructural closures near Houston, in Ike's direct path, PADD 3 (US Gulf) gasoline stocks fell to under 55 mb by mid-September, also lower than the post-Katrina minimum. Furthermore, disruption to inland pipeline flows was much worse than in 2005 as many lines begin in the Houston area, such as the Colonial pipeline that takes products from the Gulf to the US East coast. PADD 1 gasoline stocks had dropped below 44 mb in the week ending 26 September, significantly lower than the 2005 trough of 49 mb. However, by the end of September, a rebound had already been observed in US gasoline stocks as they finished at almost 187 mb.

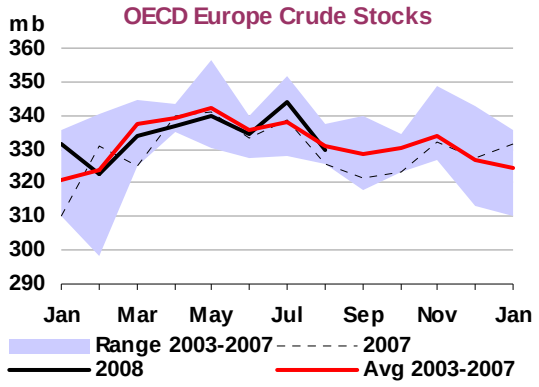
US distillate stocks bucked the seasonal August build of around 7.0 mb, instead decreasing by 2.4 mb to 173 mb - the bottom of their five-year seasonal range, with demand recovering and exports at all-time highs. Hurricane disruption prompted a further drop to below 160 mb, including a steep draw in jet fuel stocks, with distillate inventory still in decline through the end of September. US crude stocks had risen counter-seasonally in August and the hurricane-related drop in refinery throughputs offset the effect of output losses to a large extent, leaving monthly draws in commercial crude inventory limited to just 3 mb by the end of September.

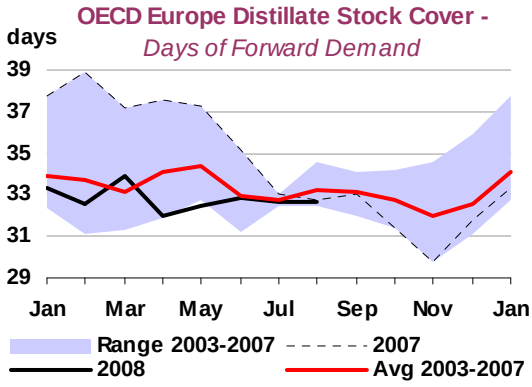
With gasoline stocks already showing a late-September rise in line with recovering refinery activity, some increased gasoline imports and the driving season now behind us, it could well be that the comparative dearth of US distillate stocks turns out to be at least of equal concern to markets as the headline-grabbing gasoline draws.

OECD Europe

A large August crude draw of 14.0 mb in OECD Europe eroded July gains, while a pre-autumn build in product inventories of 5.4 mb was conspicuously mild. Combined with a 0.9 mb draw in gas liquids, total OECD European stocks saw a counterseasonal August draw of 9.5 mb, to 957 mb.

Regional crude inventories had risen by 9.2 mb in July, a build adjusted down by 5.1 mb in the latest data submissions (including July data from Greece and the Czech Republic which reflected crude draws, the latter due to lower Russian deliveries). The subsequent 14 mb decrease in August was influenced by





disruptions to Azeri crude exports via the BTC pipeline and lower North Sea production. UK end-July closing stocks were revised down by 5.0 mb, to 33.9 mb, on slower July production, before falling by 2.2 mb in August in conjunction with the usual August output drop associated with field maintenance (which normally prompts a monthly crude draw of around 3 mb). The latest data also show a draw of 3.7 mb in August French crude stocks, possibly allied to a slight firming of refinery runs but also lower imports (notably of Caspian and North Sea grades). Lower crude cargo availability may have also been instrumental in a 1.5 mb August draw in Italian crude inventory.

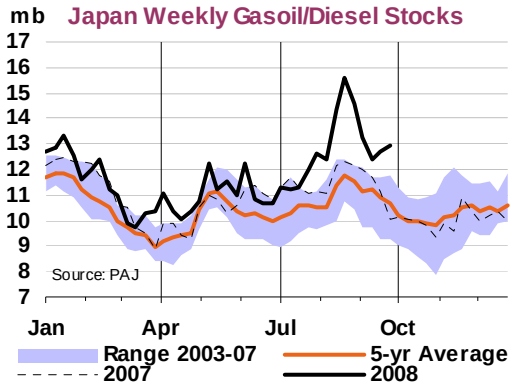
OECD European product stocks saw a very mild August build of just 5.4 mb, compared with the 15 mb increase usually seen in advance of September and October refinery maintenance. A counterseasonal

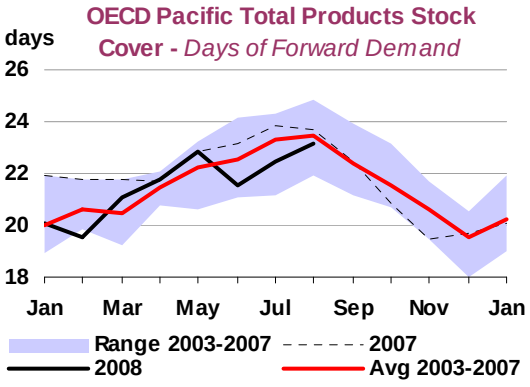
dip in refinery activity meant that distillates built slowly, by 6.3 mb, while fuel oil and 'other products' drew counterseasonally. Fuel oil markets have tightened on a global basis over the summer, related to increased demand in the Middle East, which curbed exports. Regional motor gasoline inventory increased by 1.4 mb, boosting cover ahead of seasonal norms, which left them in a good position before US hurricane disruption flung arbitrages wide open to send material across the Atlantic in September. These flows were reflected in a 2.7 mb drift in European gasoline inventory in September as recorded by Euroilstock and a concurrent decline of almost 3 mb in ARA independent stocks of gasoline. Euroilstock data also indicates further impending product tightness with a steep 7.5 mb distillate drop in September.

OECD Pacific

A sizeable 16.1 mb increase in product inventory on the back of weak demand pushed OECD Pacific oil stocks into a significant counterseasonal build of 8.9 mb in August. Forward demand cover fell in line with seasonality, to 51.4 days, however.

Regional distillate stocks rose by 9.4 mb, including a colossal 10.9 mb increment in Japan, where distillate demand was apparently down 17% year-on-year. While August seasonally sees the largest monthly builds in Japanese distillate stocks, this was the biggest monthly build (in any Japanese product) in over 20 years. However, weekly PAJ data suggest that a cut in refinery runs contributed to a subsequent hasty and substantial erosion of gasoil stocks in September. Korean distillate stocks fell seasonally, by 1.5 mb, but this took them below the five-year range for the first time since January 2006. Healthy regional builds in motor gasoline, residual fuel oil and 'other products' stocks also contributed to higher product inventory by end-August.

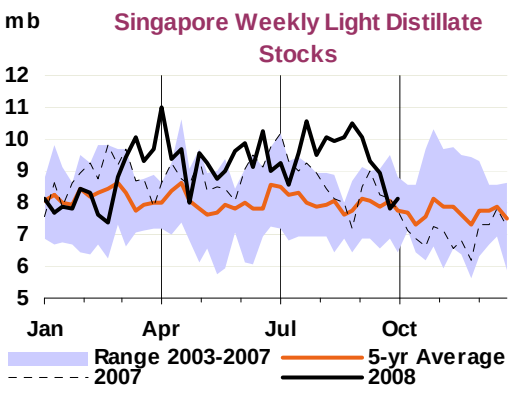




Pacific crude stocks decreased by 7.3 mb in August, in line with seasonal trends as crude runs hit their summer peak and Japanese imports dipped by 200 kb/d (notably lower from UAE, Saudi Arabia and Qatar). They remain well adrift of the five-year range, not helped by a downward revision of 7.4 mb to closing Japanese crude stock levels in July.

Recent Developments in Singapore Stocks

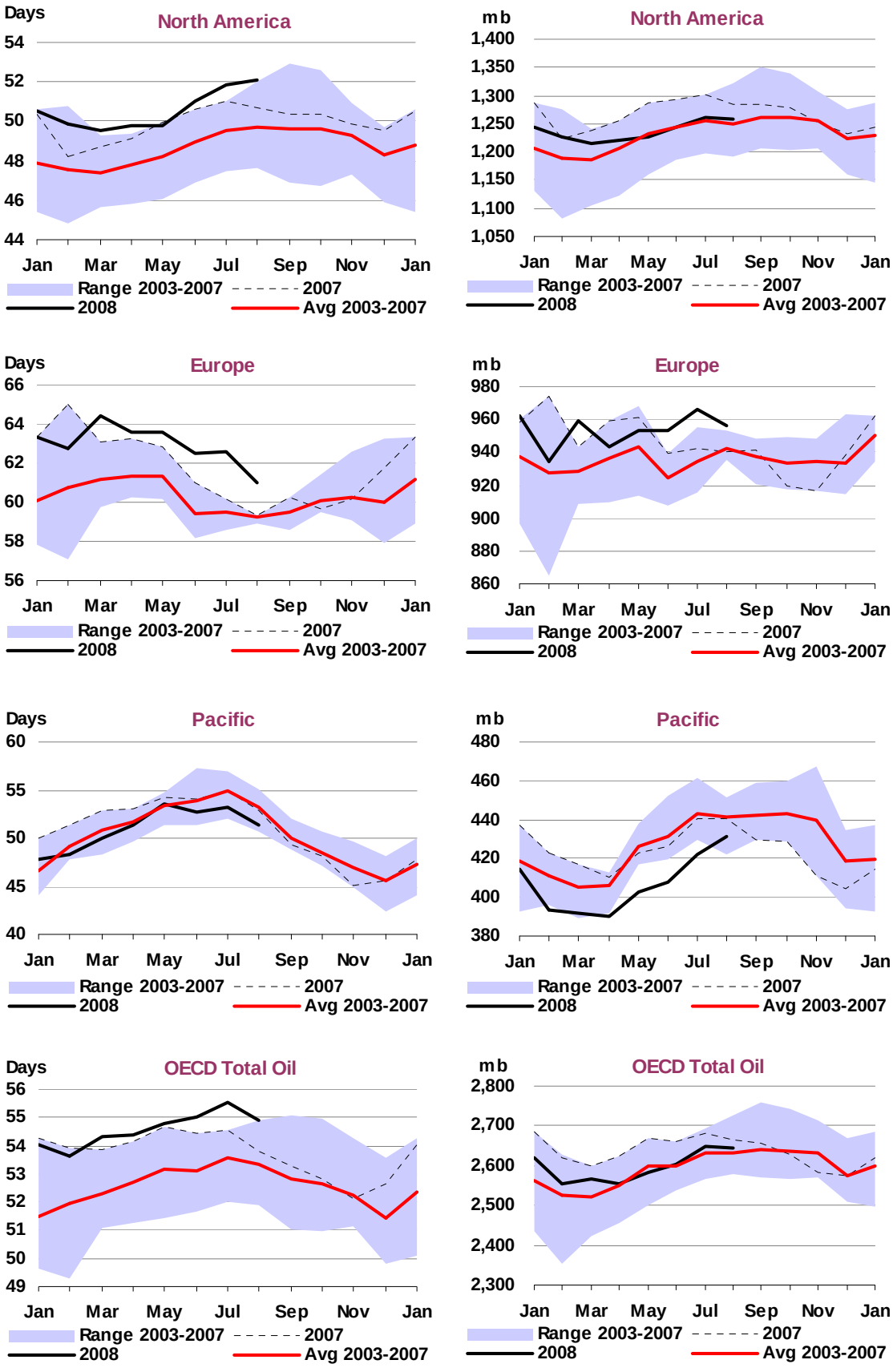
If independent stocks are a good barometer of regional product tightness at the margin, Singapore's implied that Asian light distillates and fuel oil markets tightened in September. Stocks of those products respectively drew by 2.1 mb and 2.7 mb. Fuel oil shortages have been caused by lower Middle Eastern exports and evidenced by narrowing negative fuel oil cracks. Meanwhile global gasoline markets tightened considerably following hurricanes in the US Gulf. By contrast, middle distillate stocks grew 1.3 mb, perhaps eased by lower Chinese imports since the Olympics, as has been widely reported.



Regional OECD End-of-Month Industry Stocks

(in days of forward demand and millions barrels of total oil)

Days[1] Million Barrels



1 Days of forward demand are based on average demand over the next three months

PRICES

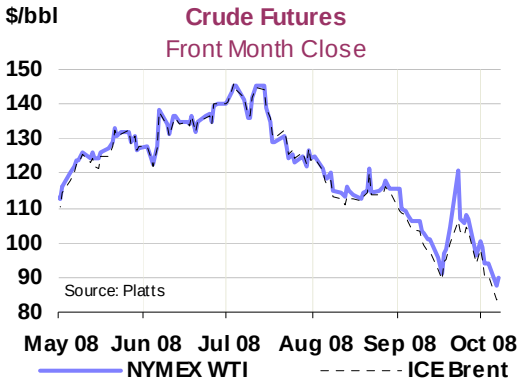
Summary

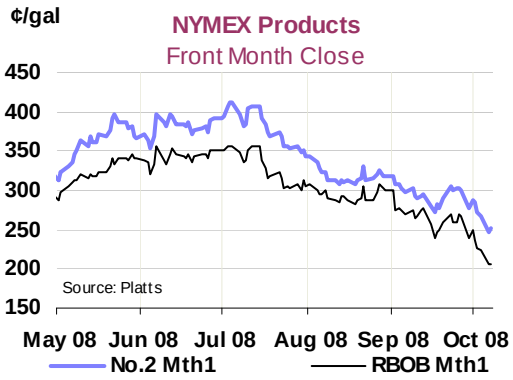
- **Oil prices declined** in September and early October, as demand growth weakened further, offsetting the impact of hurricane-related outages and lower OPEC output. US crude futures fell from around $100/bbl in early September to below $90 at the time of writing.

- **However, prices remain very volatile**, with unprecedented large daily swings. On 22 September, first-month WTI futures rose around $25/bbl and prices closed about $15/bbl higher. However, this was linked to the October contract expiry and short covering rather than more fundamental factors, and the spike was not reflected in other delivery months, nor in other crude and product futures.

- **Product prices fell, but strengthened relative to crude**, with gasoline on the US Gulf Coast briefly spiking in mid-September after Hurricane Ike's landfall. To some extent this boosted cracks in other regions, with Northwest Europe reportedly sending a flurry of gasoline cargoes in response. Distillate premia remain high around $25/bbl and fuel oil discounts to crude are negligible. As a result, refining margins rose across the board.

- **Clean charter rates in the Atlantic were boosted** by the potential for increased trade of gasoline from Europe to the hurricane-disrupted US (notably the Gulf Coast), and remained high in September before fading in early October. Dirty tanker rates firmed as charterers began to cover long-haul transportation needs for the post-maintenance period, when refinery runs are ramped up.



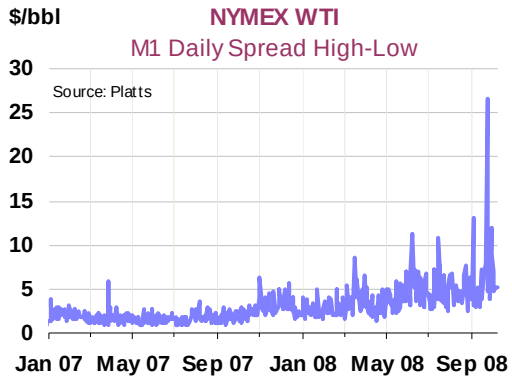


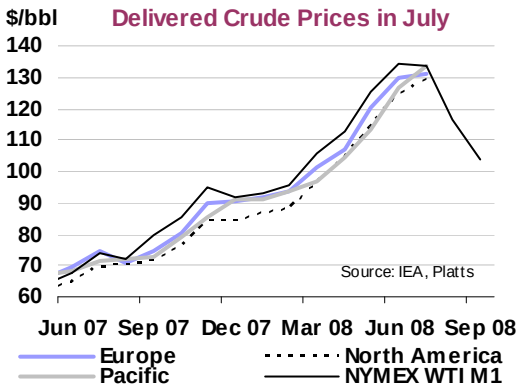
Overview

Despite a knockout blow to US Gulf crude and refinery production capacity delivered by Hurricanes Gustav and Ike, as well as lower OPEC production and tighter stocks, concerns over demand weakness due to high oil prices and the ongoing financial and now fully-blown economic crisis prevailed. As a result, crude futures prices ultimately fell from around $100/bbl at the release of the last report to currently below $90/bbl.

Prices were characterised by a hitherto unseen degree of volatility, reflecting strong uncertainty. Several days saw price swings in the range of $5-10/bbl, though even these moves were dwarfed by the dramatic spike of 22 September, when first-month NYMEX WTI briefly rose $25/bbl to close around $15/bbl higher than the previous day. Amid claims of market manipulation, this was at least partly due to the contract's expiry that day and a scramble to buy oil by those caught out holding a short position. Some have even argued it was Midwestern refiners who, needing oil, found themselves compelled to use the contract's expiry to buy crude delivered in Cushing, Oklahoma. In October Other futures prices, including

subsequent delivery months for WTI, ICE Brent and NYMEX product prices, did not see nearly such strong moves, implying that factors specific to the NYMEX Light Sweet Crude Oil contract determined its moves.





Arguably, it is the current financial meltdown in the banking sector, concurrent losses on Wall Street and other stock exchanges, and concerns about a fully-blown economic recession that are causing havoc in oil markets with perceptions of impending weakness for now trumping supply outages in driving prices. Regarding the latter, the most notable impact was that of Hurricanes Gustav and Ike, which forced the shut-in of around 1.4 mb/d of crude production capacity and 2.7 mb/d of refinery capacity respectively on average in the US Gulf in September. The full extent of damage is not yet known, but currently some 800 kb/d of crude output and 700 kb/d of refining capacity remain shut in. Ultimately, the IEA's assessment was that market flexibility would be sufficient to cope with the outages without a release of emergency stocks, notwithstanding SPR loans to refiners short of crude.

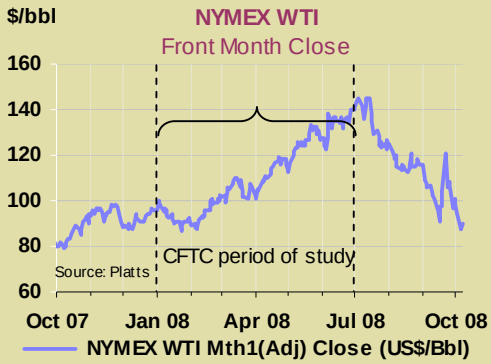
Nonetheless, the impact on inventories was pronounced, with US gasoline stocks now down well below their respective five-year range and with localised shortages causing brief gasoline price spikes on the US Gulf Coast. Furthermore, crude outages in Azerbaijan and elsewhere compounded lower output from OPEC, though the latter appeared to result more from accident than design, despite the group's 9 September pledge to adhere to quotas (and by inference, to reduce output).

All this has been overwhelmed, however, by concerns for the health of the global economy. Emanating from the credit crunch, a fully-blown credit and liquidity crisis has toppled several major banks and caused OECD and other governments to intervene with bail-out packages. US efforts to shore up its economy had an especially marked impact on oil price volatility, at least until a $700 billion package was agreed by Congress and signed into law by President Bush on 3 October, with prices see-sawing in the previous days. It remains to be seen what the impact of the bail-out measures is and whether it proves successful in stemming the economic downward slide.

Ultimately, two worries are behind the current economic crisis. Firstly, while OECD countries are already slowing or even contracting, it remains to be seen whether there is any knock-on effect on other emerging economies, which have largely underpinned global oil demand growth in the past few years – notably China. Secondly, a lack of credit or tighter restrictions on credit is curbing liquidity in oil markets, making trading and price discovery more difficult – hence the more volatile price swings. Several investment banks, which have now been taken over and were previously active in commodity markets, may have been forced to liquidate positions, as reflected in a further slide in WTI futures open interest as reported by the CFTC. And others may simply have limited their oil exposure, given current uncertainty.

CFTC Report on Commodity Swap Dealers and Index Traders

On 11 September 2008, the US Commodity Futures Trading Commission (CFTC) released its findings on the possible impact of commodity swap dealers and index traders on commodity prices (*Staff Report on Commodity Swap Dealers & Index Traders with Commission Recommendations*, available at www.cftc.gov). The CFTC was able to examine data not normally publicly available through its weekly Commitment of Trader (CoT) reports after issuing a 'special call' for data. This comes against the background of intense discussion about the reasons for recent, volatile oil price movements and specifically an ongoing debate on whether these can be attributed to market fundamentals or so-called speculation.



For this report, the CFTC looked at the period between 31 December 2007 and 30 June 2008, aiming to establish the precise amount of money invested by commodity index tracking funds. It has been argued that an increased volume of money invested in such funds has in itself contributed to high oil and other commodity prices. The CFTC's finding is that the total value of index money invested in WTI futures rose from $39 billion at the end of 2007 to $51 billion by end-June 2008 – and this in a period in which the first-month futures contract rose from $96/bbl to $140/bbl (daily closing prices).

However, while the total value of investment rose in this period, the CFTC finds no reason to conclude this is in any way a driver of the rise in prices. Crucially, it states that:

- The value of index fund money held in WTI futures rose due to higher oil prices in this period, rather than by virtue of increased investment;
- In fact, the total number of contract 'futures equivalents' held decreased from 408,000 to 363,000 – in other words index funds reduced their position in WTI futures, even as their value increased due to higher oil prices;
- A close look at individual transactions and price moves shows that significant fund investment or disinvestment decisions are generally made *in response* to oil price moves, rather than vice versa – i.e. there is no reason to assume any causality from investment to prices;
- In several other commodities, periods of increased money flows into commodity indices were concurrent with a fall in price.

Overall, the CFTC thus implicitly concludes that market fundamentals rather than 'speculation' drive oil prices, at least for the period examined. This reinforces its conclusion from a previous report (*Interim Report on Crude Oil*, 22 July 2008), in which the Commission also looked at fundamental market drivers.

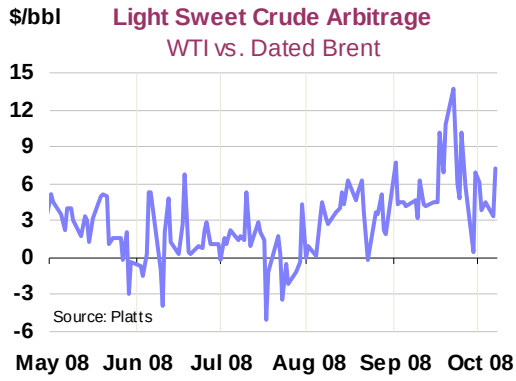
However, the CFTC also found that there were several occasions on which – had all trading activity been on-exchange (i.e. rather than in the over-the-counter or OTC market), players would have exceeded speculative position limits. It concludes that more and better data will be needed to make any final conclusions on whether speculation or manipulation is present in the market. Consequently the CFTC makes the following specific recommendations:

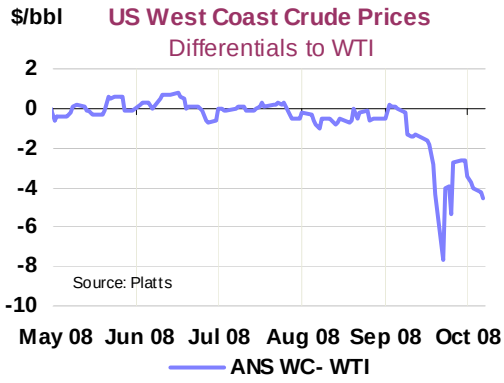
1. Swap dealers should be removed from the CoT's current 'commercial' categorisation and allocated their own classification for reporting purposes;
2. A new supplemental report on OTC swap dealer activity should be developed and published by the CFTC;
3. A new CFTC Office of Data Collection ought to be dedicated to collecting, analysing and publishing CoT data;
4. Large traders should disclose more detailed data to more accurately assess the type of trading activity;
5. Certain specific hedge exemptions should be reviewed;
6. To undertake this oversight, CFTC will require more staff and resources;
7. Clearing of OTC transactions should be centralised;
8. The independence of swap dealer commodity research should be reviewed.

The CFTC has also called for its oversight to be extended to foreign-based futures contracts, such as the ICE WTI contract based in London. To this end, the CFTC will co-chair an international task force to study oversight of commodity markets with the UK's Financial Services Authority (FSA).

Spot Crude Oil Prices

Spot crude markets were not as volatile as futures markets in September and early October but nonetheless reflected the impact of Hurricanes Gustav and Ike, with prices spiking in their aftermath. This was most pronounced in the **US**, where WTI Cushing rose from just over $90/bbl in mid-September to $114 on 22 September, the day the futures contract expired. Spot WTI also rose to premia to many other similar crudes on the outages, for example trading more than $5/bbl over Dated Brent. But gasoline-rich LLS also gained versus WTI in the scramble for cargoes, briefly hitting a premium of $6/bbl. Meanwhile, Alaskan ANS dropped to a discount of around $4/bbl to WTI, as some cargoes destined for the Gulf Coast were redirected to the West Coast if delivery was not possible.





North Sea crudes fared quite well relative to other light sweets, taking strength from the outages in the US Gulf and Azerbaijan, but also ongoing problems in Nigeria. Urals saw its discount to Dated Brent widen again on expectations of higher volumes available in October, after export duties were cut. Loading schedules imply around 125 kb/d more crude in October with an increase in the Black Sea (but a dip in the Baltic). But Urals did appear to benefit from US Gulf outages (and still-strong fuel oil), rising to a premium to Mars. It also strengthened *vis-à-vis* Oman.

Spot Crude Oil Prices and Differentials

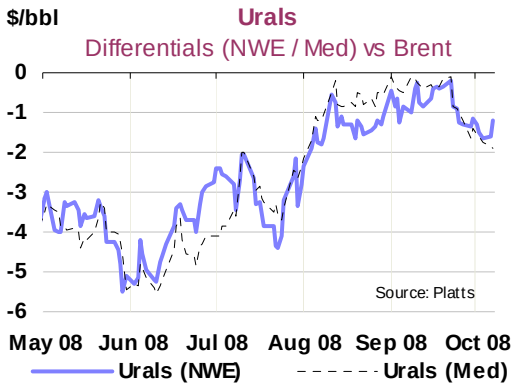
(monthly and weekly averages, $/bbl)

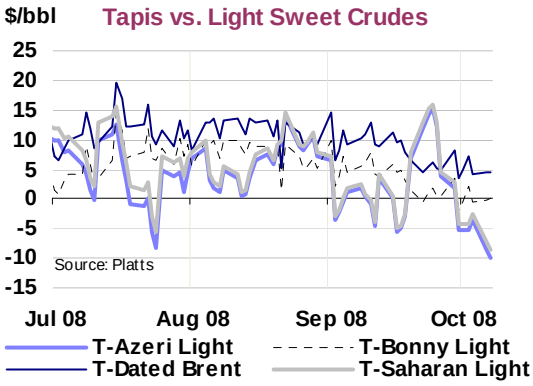
	Jul	Aug	Sep	Sep-Aug Avg Change	%	Week Commencing: 08 Sep	15 Sep	22 Sep	29 Sep	06 Oct
Crudes										
Dated Brent	133.18	113.03	98.13	-14.90	-13.2	98.03	89.84	101.28	92.31	83.72
Brent (Asia) Mth1 adjusted	135.29	114.66	99.64	-15.02	-13.1	100.63	91.42	100.74	93.28	84.72
WTI (Cushing) Mth1 adjusted	133.30	116.58	103.61	-12.97	-11.1	102.55	97.20	109.35	96.69	88.96
Urals (Mediterranean)	130.06	112.16	97.60	-14.56	-13.0	97.79	89.53	100.48	90.72	81.84
Dubai Mth1 adjusted	131.27	112.86	95.90	-16.95	-15.0	97.69	88.41	95.25	88.79	78.65
Tapis (Dated)	144.66	124.40	106.54	-17.86	-14.4	108.43	98.81	106.55	98.00	88.21
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	0.11	3.55	5.48	1.93		4.52	7.37	8.07	4.38	5.24
Urals (Mediterranean)	-3.12	-0.87	-0.53	0.34		-0.24	-0.30	-0.80	-1.59	-1.88
Dubai Mth1 adjusted - Dated Brent	-1.91	-0.17	-2.23	-2.05		-0.34	-1.42	-6.03	-3.53	-5.07
Tapis (Dated)	11.48	11.37	8.41	-2.96		10.40	8.97	5.27	5.69	4.49
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	-0.87	-1.43	-1.77	-0.34		-1.73	-2.13	-1.58	-1.54	-1.30
Forward WTI Cushing Mth1-Mth2 adj	-0.65	-0.20	0.54	0.73		-0.11	0.50	2.16	0.56	1.22

Source: Platts

Asian crude buyers may have benefited from strong volatility in the Brent-Dubai spread, which narrowed in early September and again later in the month. But regional marker grade Tapis weakened versus Nigerian and Mediterranean light sweets. Nonetheless, India reportedly bought a record 550 kb/d of

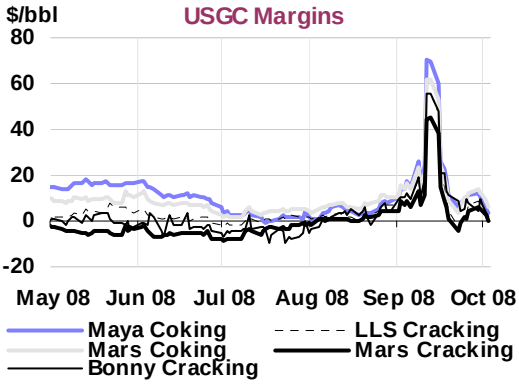
West African crude for October delivery. Freight rates were somewhat lower, Indian diesel demand is strong, and reportedly, some lighter grades are being fed into the new Jamnagar refinery ahead of start-up. China on the other hand, reportedly bought only around 600 kb/d of West African crude for October, compared with average volumes above 800 kb/d so far this year.

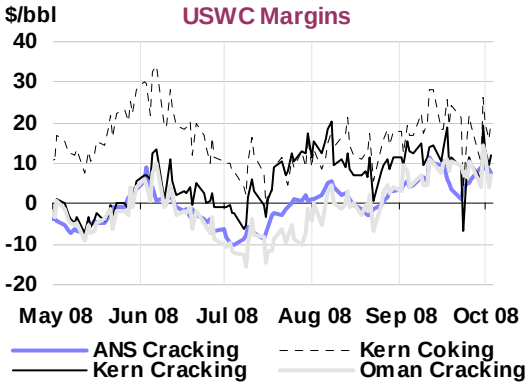




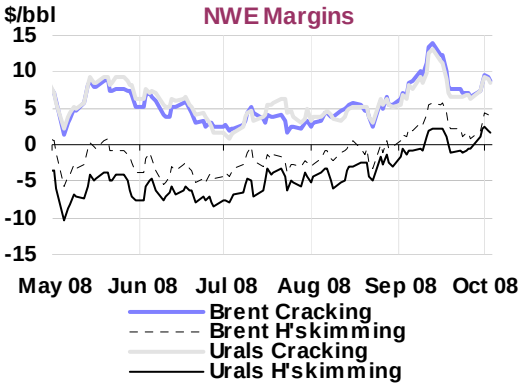
Refining Margins

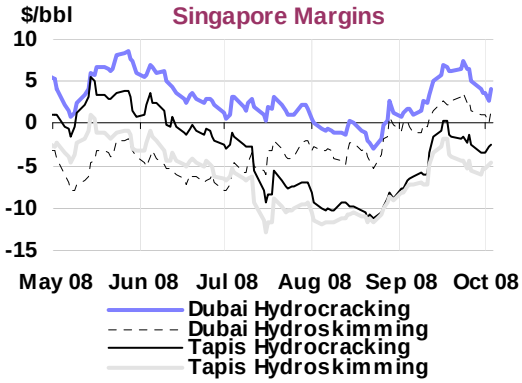
Refining margins increased across the board in September as nearly all product crack spreads increased. On the **US** Gulf coast, margins briefly shot up to $45-70/bbl mid-month as gasoline spiked and US refinery utilisation fell to its lowest in years. Margins have since fallen again, but remain in a healthy $5-10/bbl band. On the US West Coast, margins improved sharply and, in early October, were on average higher than in the US Gulf.





European refining margins improved strongly, with hydroskimming spreads moving into positive territory for the first time since May last year (for the monthly average). Gasoil 0.1% and ULSD 10 ppm diesel premia in Northwest Europe were especially strong, benefiting simple Brent margins in particular. Mediterranean refining margins were slightly weaker, where diesel cracks were lower. In Singapore, margins were the weakest of the three regions, despite rising around $5/bbl month-on-month. The Asian distillate market in particular is distinctly weaker, as demand growth slows, new refining capacity comes online and China has temporarily abandoned imports. Nonetheless, Dubai hydroskimming moved into positive territory in mid-September. Relatively high Tapis prices kept its refining margins negative, both for hydroskimming and cracking.





Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Jul 08	Aug 08	Sep 08	Sep 08-Aug 08	03 Sep	10 Sep	17 Sep	24 Sep	01 Oct
NW Europe	Brent (Cracking)	3.11	4.66	8.94	4.27	6.23	9.60	12.37	7.46	7.72
	Urals (Cracking)	3.84	4.62	8.25	3.63	5.84	8.72	11.40	6.70	7.60
	Brent (Hydroskimming)	-2.51	-1.04	2.75	3.79	0.46	2.79	5.30	1.92	2.31
	Urals (Hydroskimming)	-4.79	-2.47	1.03	3.50	-0.69	1.00	2.99	-0.08	1.26
Mediterranean	Es Sider (Cracking)	3.92	3.61	6.70	3.10	3.66	6.25	9.73	5.79	6.93
	Urals (Cracking)	4.44	4.47	7.99	3.52	5.49	7.91	10.89	6.80	7.77
	Es Sider (Hydroskimming)	-2.19	-2.43	-0.04	2.39	-2.62	-1.14	2.04	-0.38	1.09
	Urals (Hydroskimming)	-5.36	-3.48	0.11	3.59	-1.80	-0.34	1.88	-0.81	0.91
US Gulf Coast	Bonny (Cracking)	-5.05	1.94	15.81	13.87	7.13	12.33	38.53	7.86	6.50
	Brent (Cracking)	-4.64	2.74	17.02	14.28	7.86	13.71	40.10	8.66	7.71
	LLS (Cracking)	0.44	3.10	14.81	11.71	8.18	13.17	38.63	2.95	6.09
	Mars (Cracking)	-4.25	1.45	10.70	9.25	5.51	9.12	30.24	0.65	4.02
	Mars (Coking)	3.92	7.31	20.16	12.85	12.27	18.08	43.95	8.95	11.94
	Maya (Coking)	2.09	4.74	22.06	17.32	11.03	19.77	49.86	10.67	10.55
US West Coast	ANS (Cracking)	-4.34	1.31	6.18	4.87	3.96	5.49	9.59	3.66	7.65
	Kern (Cracking)	4.66	10.57	11.28	0.71	11.40	12.27	14.14	6.50	12.12
	Oman (Cracking)	-9.11	0.41	8.03	7.62	5.46	5.10	9.90	8.45	10.20
	Kern (Coking)	8.36	14.25	19.36	5.10	16.45	18.74	23.71	17.14	19.52
Singapore	Dubai (Hydroskimming)	-4.28	-2.96	1.19	4.15	0.03	-0.61	1.87	2.81	1.45
	Tapis (Hydroskimming)	-8.98	-10.90	-5.33	5.57	-8.33	-7.16	-2.91	-4.33	-5.37
	Dubai (Hydrocracking)	1.79	-0.60	4.23	4.83	1.58	1.86	5.55	6.59	4.55
	Tapis (Hydrocracking)	-5.64	-9.94	-3.52	6.42	-7.88	-6.14	-1.01	-1.74	-2.84
China	Cabinda (Hydroskimming)	-2.84	0.74	1.52	0.79	2.01	3.57	5.28	-0.76	-3.16
	Daqing (Hydroskimming)	-5.27	-2.47	1.24	3.71	0.69	2.01	3.62	0.37	-1.19
	Dubai (Hydroskimming)	-5.76	-3.30	0.60	3.90	-0.38	-1.21	1.34	2.26	0.67
	Daqing (Hydrocracking)	-2.31	-1.24	3.90	5.15	1.62	3.61	6.51	3.91	2.46
	Dubai (Hydrocracking)	0.30	-0.90	3.60	4.51	1.20	1.26	4.98	5.96	3.66

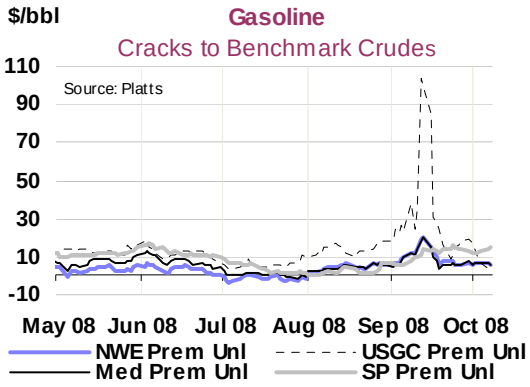
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimised for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

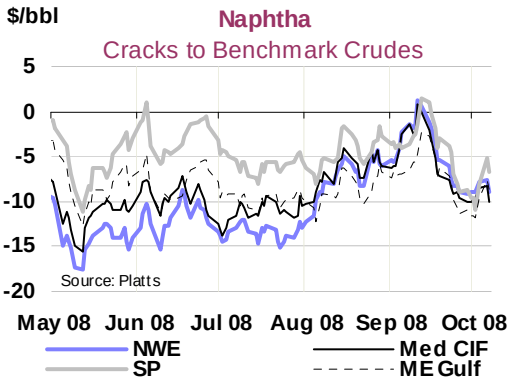
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

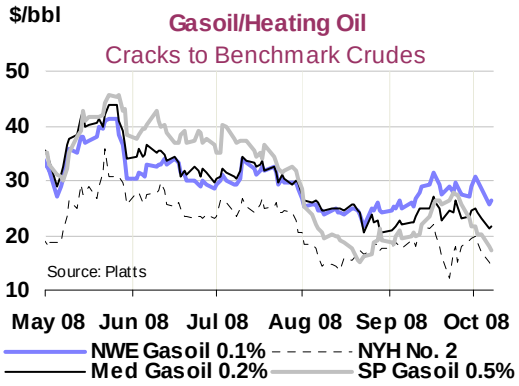
Spot Product Prices

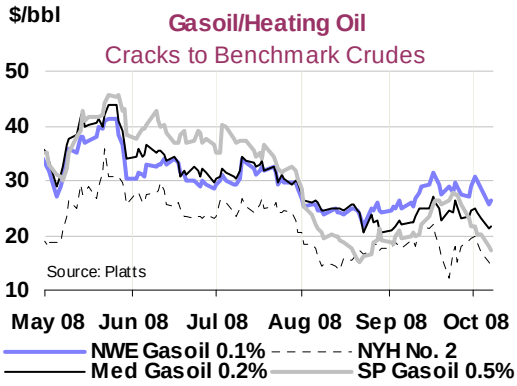
Outright product prices on average fell in September and early October, though in crack spread terms mostly made gains. Unsurprisingly, US Gulf Coast (and to a lesser extent, New York Harbor) **gasoline** crack spreads shot up post-Ike, with Premium Unleaded in the former briefly hitting nearly $100/bbl in mid-September. But despite news of regional product shortages and queues at filling stations in the US Southeast, and a large swathe of US refining capacity offline, crack spreads rapidly retreated. Northwest European gasoline margins benefited too, with a host of cargoes reportedly fixed transatlantic to fill the gap (though the precise extent of this is still unknown and is not yet clearly reflected in either trade volumes or clean freight rates). Certainly, independent gasoline product stocks held in the Amsterdam-Rotterdam-Antwerp (ARA) region fell sharply from mid-September.





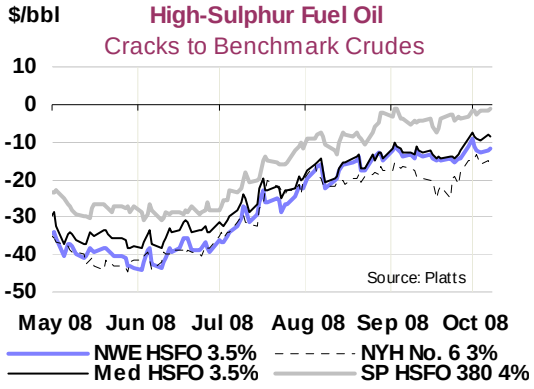
To some extent, gasoline markets were calmed by the fact that US demand – especially for gasoline – is falling in response to high prices and the general economic downturn, and by the potential for OECD refiners outside the US Gulf to boost runs. European and Asian markets' ability to export product to the US contributed, especially with China returning to gasoline net-exporter status in September. In addition, the seasonal switch to winter-specification grade helps, as it is easier to produce. Meanwhile, naphtha cracks plummeted even further and remain negative in all markets amid a downturn in demand from the petrochemical sector. The latter is suffering a global slump but also finding new potential feedstock in increased NGL output.

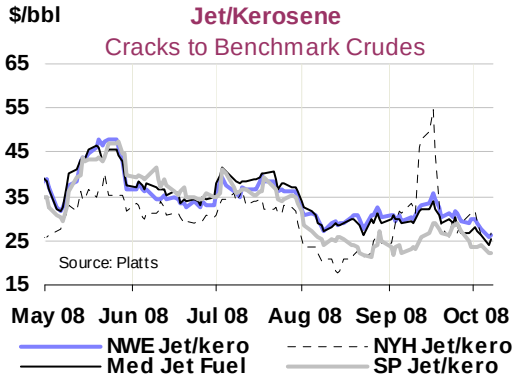




Distillate crack spreads were flat in September and early October (excepting jet in the US), but remain high, especially relative to gasoline. Markets tightened again after the relaxation seen in the summer, when higher refining throughputs and distillate yields combined with receding demand from previous pockets of fuel substitution. US refinery outages have stemmed exports to Europe, though to some extent this has been compensated for by fixings from Asia and the Middle East. European consumers appear to have re-entered the heating oil market, perhaps also stocking up while retail prices are slightly

lower. In Asia, however, distillate demand is slightly weaker, with independent distillate stocks in Singapore rising around 50% above their five-year average at end-September. China is apparently again skipping distillate imports in October, while Indonesia and Vietnam have announced lower regular purchases.





Fuel oil discounts to benchmark crudes remained steady and very narrow. Markets remain tight after lower-than-average exports from the Middle East, where domestic consumption for power generation is high. This is constraining the flow of fuel oil to the Far East, as seen in declining Singapore residual stocks. Natural gas outages in the US may also have hiked interest in fuel oil as an alternative feedstock.

Spot Product Prices

(monthly and weekly averages, $/bbl)

	Jul	Aug	Sep	Sep-Aug Change	Sep-Aug %	Week Commencing: 08 Sep	15 Sep	22 Sep	29 Sep	06 Oct	Jul	Aug	Sep
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	131.71	117.60	107.70	-9.89	-8.4	113.47	100.03	107.58	98.64	89.82	-1.47	4.57	9.57
Naphtha	119.73	105.64	93.59	-12.06	-11.4	97.51	86.36	93.47	83.54	75.42	-13.45	-7.39	-4.54
Jet/Kerosene	169.91	143.00	129.34	-13.66	-9.6	129.27	123.13	132.16	121.43	109.64	36.73	29.97	31.21
ULSD 10ppm	166.43	139.60	128.95	-10.65	-7.6	128.89	122.90	132.54	124.24	111.51	33.25	26.57	30.82
Gasoil .1%	163.78	137.67	125.71	-11.96	-8.7	124.95	119.45	129.77	121.32	109.75	30.60	24.64	27.58
LSFO 1%	119.19	106.08	87.77	-18.31	-17.3	85.55	79.95	89.67	87.67	80.72	-13.99	-6.95	-10.36
HSFO 3.5%	105.11	96.34	84.70	-11.64	-12.1	84.63	75.46	86.61	80.91	71.69	-28.07	-16.69	-13.43
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	130.57	116.53	106.46	-10.06	-8.6	112.81	98.13	106.46	97.26	88.14	0.51	4.36	8.86
Naphtha	118.95	105.02	91.96	-13.06	-12.4	96.23	84.49	91.59	81.32	73.14	-11.11	-7.14	-5.64
Jet Aviation fuel	168.61	141.51	127.51	-14.01	-9.9	128.26	121.22	129.40	117.73	106.61	38.55	29.35	29.91
Gasoil .2%	161.41	136.53	121.43	-15.11	-11.1	121.42	114.73	125.21	114.70	103.27	31.35	24.37	23.83
LSFO 1%	115.78	101.00	86.45	-14.55	-14.4	85.93	78.09	88.87	82.93	74.98	-14.27	-11.17	-11.16
HSFO 3.5%	105.28	96.29	85.21	-11.08	-11.5	85.26	75.84	86.98	82.00	73.41	-24.77	-15.87	-12.40
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	137.15	130.11	133.70	3.58	2.8	141.19	137.11	131.47	116.76	97.90	3.86	13.53	30.09
Unleaded	132.15	121.39	117.24	-4.15	-3.4	127.20	114.70	112.78	101.25	88.34	-1.14	4.81	13.63
Jet/Kerosene	166.05	138.57	138.10	-0.47	-0.3	140.70	139.25	137.87	126.53	114.13	32.75	21.99	34.49
No. 2 (Heating Oil)	157.78	132.93	122.07	-10.86	-8.2	122.24	116.67	125.41	115.42	103.52	24.49	16.35	18.46
LSFO 1%	109.42	95.97	83.15	-12.82	-13.4	83.07	74.61	86.47	79.35	70.70	-23.88	-20.61	-20.46
No. 6 3%	106.45	97.13	84.51	-12.62	-13.0	84.00	75.17	88.66	82.02	72.95	-26.84	-19.45	-19.10
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	135.27	115.49	107.10	-8.40	-7.3	108.24	101.45	109.79	101.46	93.12	4.00	2.64	11.20
Naphtha	125.46	108.37	91.97	-16.40	-15.1	95.93	86.86	88.76	79.41	72.66	-5.81	-4.48	-3.93
Jet/Kerosene	167.28	137.65	121.50	-16.15	-11.7	121.82	116.23	123.11	112.82	100.72	36.01	24.79	25.59
Gasoil .5%	165.97	132.17	118.93	-13.24	-10.0	118.21	113.92	122.24	110.01	96.23	34.70	19.31	23.02
LSWR Cracked	122.91	110.41	96.04	-14.37	-13.0	99.40	89.52	92.10	86.18	76.25	-8.36	-2.45	0.13
HSFO 180 CST	112.92	103.70	90.85	-12.84	-12.4	91.65	81.93	90.90	85.29	76.42	-18.35	-9.16	-5.05
HSFO 380 CST 4%	113.26	104.65	92.02	-12.63	-12.1	93.02	82.98	91.89	86.41	77.28	-18.01	-8.20	-3.88

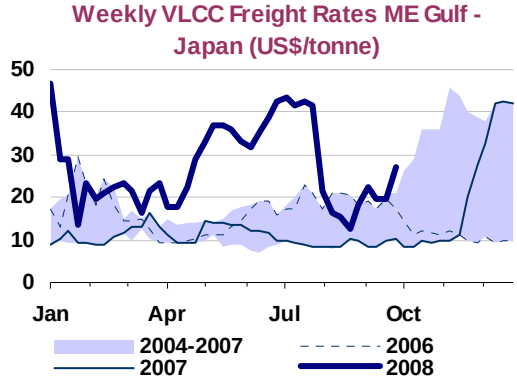
Source: Platts

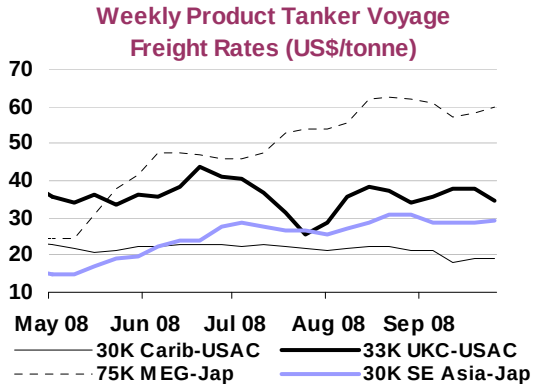
End-User Product Prices in September

September end-user product prices decreased in all surveyed IEA member countries, in US dollars, ex-tax, except gasoline prices in Canada (which rose by 1.4%). On average, gasoline prices dropped by 4.5% with the strongest decreases in the UK (-7.1%) and Japan (-6.4%). Price spikes following Hurricanes Gustav and Ike slowed the decline of the average gasoline price in the US which decreased by 1.5% to $3.72/gallon ($0.98/litre) in September. Meanwhile consumers in Japan paid ¥174/litre ($1.63/litre), in the UK £1.12/litre ($2.01/litre), and in Europe from €1.17/litre in Spain ($1.68/litre) to €1.45/litre in Germany ($2.08/litre). Diesel prices on average dropped by 6.9%, heating oil prices by 6.2% and fuel oil prices by 10.1%. Compared with September 2007, end-user product prices were 41% above levels of a year ago.

Freight

Clean charter rates in the Atlantic remained high in September, boosted by the potential for increased trade of gasoline from Europe to the hurricane-disrupted US. At the same time, dirty tanker rates firmed as charterers began to cover long-haul transportation needs for the post-maintenance November/December period when refinery runs are ramped up.





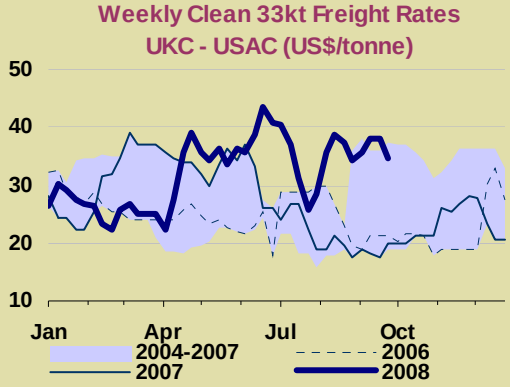
Dirty tanker rates firmed slightly in September. VLCC spot charter rates on benchmark routes from the Middle East Gulf to Japan increased from $18/tonne in late August to $27/tonne one month later. Support stemmed from renewed westbound chartering by Vela, while some October-loadings for long-haul voyages now correspond to arrivals in November, beyond autumn maintenance and a time when refiners are likely to be ramping up runs for the winter. There have been widespread reports of high volumes of West African crude purchases by Indian refiners, some for processing at the new Jamnagar unit. Despite lower Chinese purchases for October, this left Asian aggregate interest in West Africa exports at high levels, boosting long-haul vessel demand and broadly supporting the dirty sector.

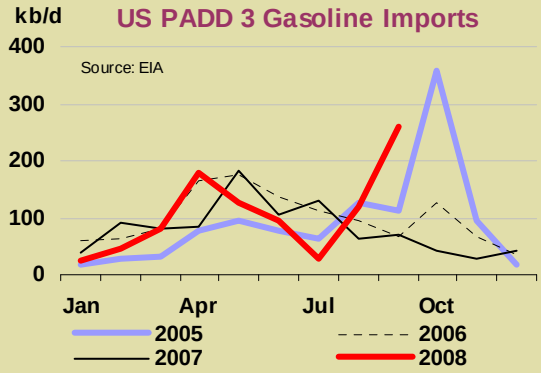
Chartering rates for Suezmax vessels trading between West Africa and the US Atlantic Coast were fairly steady around the$25/tonne mark, as the supportive effect of delays at some Nigerian terminals was offset by limited US short-haul interest with falling gasoline cracks and refinery maintenance still underway. Ongoing problems in the Caspian could restrict Mediterranean dirty vessel demand in October, while refinery maintenance continues to weigh on short-haul Aframax rates in North Europe (around $10/tonne for much of September). The post-hurricane recovery of US Gulf port infrastructure also added downward pressure to Caribbean Aframax rates.

Similar to transatlantic (so-called MR2) clean tanker rates in September (see 'Incremental Transatlantic Gasoline Mainly Heading to the US Gulf Coast'), rates on other clean routes were fairly flat but at inflated levels in September. Further increased competition for clean transportation is a distinct possibility with US diesel exports drying up, necessitating imports from elsewhere (possibly longer-haul, with anecdotes of incremental Korean diesel heading for Europe). However, reports suggest that Atlantic clean rates weakened in the first week of October.

Incremental Transatlantic Gasoline Mainly Heading to the US Gulf Coast

After rumours of large volumes of gasoline heading to the US from Europe in September, prompted by hurricane disruptions in the US Gulf, there has been initial evidence that at least some of this extra trade did occur. Gasoline imports into PADD 1 in September were around 100 kb/d higher than the August average of 810 kb/d. PADD 3 gasoline imports averaged 260 kb/d, up around 140 kb/d on July and around 230 kb/d compared with June. The majority of gasoline imports into both regions generally emanate from the other side of the Atlantic (Europe, Russia or the Mediterranean). Although 35 kmt clean tanker rates from UK continent to US Atlantic coast were little changed in September at around $36/tonne, this is a seasonally high level and certainly as high as post-Katrina levels. These heights were achieved following a rise of over $12/tonne in early August. However, early October reports suggest that these rates may have faded as the flow of arbitrage cargoes dried up.



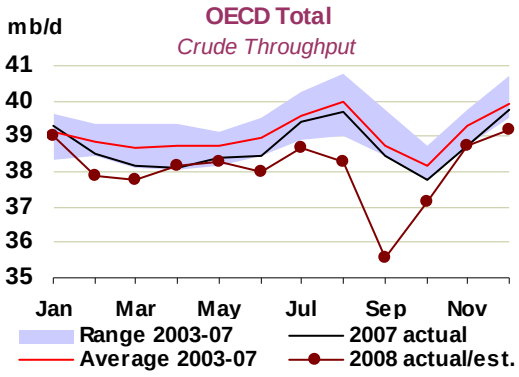


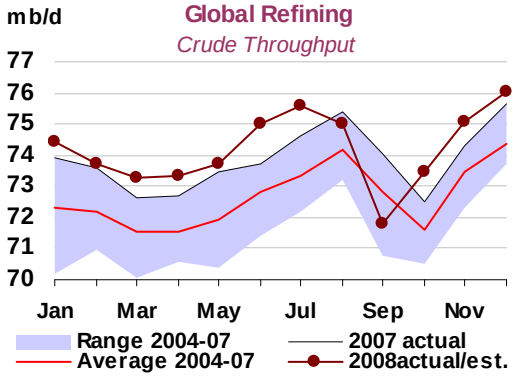
REFINING

Summary

- **Global crude throughput is forecast to average 74.9 mb/d during 4Q08,** 0.8 mb/d lower than forecast in last month's report. Weaker demand, higher maintenance and hurricane-related disruptions and reports of economic run cuts, particularly in Asia, have all contributed to the reduction. Year-on-year growth remains firmly rooted in the non-OECD regions, notably the FSU, China and the Middle East.

- **The 3Q08 global crude throughput estimate is revised down by 0.8 mb/d to 74.1 mb/d,** largely on the back of a greater impact from Hurricane Ike on the US refining industry. This follows weaker-than-estimated European and Chinese crude throughput in August and lower-than-forecast Japanese, European and US crude runs in September. September crude throughput is particularly hard hit, due to Hurricane Ike, pushing US throughputs to their lowest monthly level in more than fifteen years.





- **US hurricane-related disruption caused 33 refineries** to shut down or reduce crude runs during September. There was significant damage to refineries around Houston and Port Arthur. Weekly data show crude runs on the US Gulf Coast fell to 3.5 mb/d, their lowest level since September 2005, after Hurricane Rita, and for the US as a whole, the lowest weekly level since 1986. Recovery has been slower than anticipated, with offline capacity in September averaging 2.7 mb/d and the potential for it to average 400 kb/d in October.

- **OECD refinery yields for diesel/gasoil were flat in July,** while jet/kerosene increased, reflecting the strength in jet/kerosene cracks that emerged during the month. Fuel oil yields fell to record lows for the OECD, driven by new upgrading capacity in Korea and increased use of discretionary run cuts to limit unprofitable hydroskimming crude throughput.

Global Refinery Throughput

Preliminary data for September indicate that global crude throughput averaged 71.8 mb/d, some 2.2 mb/d below last month's forecast of 74.0 mb/d. Much of the decline was driven by the greater-than–anticipated impact of Hurricanes Gustav and Ike on the US refining industry, while Japanese refiners cited weak demand in August and September as forcing them to scale back planned crude throughput levels. OECD September crude throughput is assessed at 35.5 mb/d, its lowest level since 1995. Furthermore, reports of lower Chinese crude runs by Sinopec and a prolonged outage in the Ukraine contributed to a reduction in non-OECD crude throughput for September of around 0.3 mb/d. Nevertheless, annual global crude throughput growth of 0.7 mb/d in 4Q08 remains firmly rooted in the non-OECD regions.

At the time of writing, unconfirmed reports indicate that the liquidity problems that have beset financial markets in recent weeks are affecting refinery operations in several ways. Firstly, refiners who rely on letters of credit to facilitate product exports are finding these increasingly difficult to obtain, and at ever-higher interest rates, reducing their ability to maximise the value of their production. Secondly, counterparty risk is also limiting some trading companies' ability to deal with other companies, similarly resulting in reduced levels of trade. Lastly, some IOCs have reportedly taken the option to process crude cargoes within their own system, despite the crude being sub-optimal, in terms of margin and yields, in order to minimise third-party credit exposures. Were such practices to become widespread it could potentially lead to some refiners cutting runs for financial reasons, despite apparently healthy product margins and demand for products.

October global crude runs are forecast to recover from September's low level, despite increased maintenance work in some regions, as US refiners return to pre-hurricane utilisation rates. Crude throughput is forecast to increase by 1.7 mb/d month-on-month, to an average of 73.5 mb/d, driven by the US recovery. Nevertheless, this represents a downward revision to our forecast of 1.2 mb/d, as higher US hurricane-related outages and maintenance in Europe depress runs. The balance of 4Q08 is also revised down on the back of lower FSU and Chinese crude runs, the latter in part due to the delayed start-up of CNOOC's Huizhou refinery, which we had previously included in our December forecast.

Global Refinery Crude Throughput[1]

(million barrels per day)

	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08
OECD									
North America	17.8	18.3	18.3	18.3	*17.9*	*15.5*	*17.2*	*18.1*	*18.2*
Europe	13.5	13.4	13.5	13.6	*13.5*	*13.3*	*13.2*	*13.5*	*13.8*
Pacific	6.9	6.6	6.3	6.8	*6.9*	*6.7*	*6.7*	*7.0*	*7.2*
Total OECD	38.2	38.3	38.0	38.7	*38.3*	*35.5*	*37.1*	*38.7*	*39.2*
NON-OECD									
FSU	5.7	*5.8*	*6.2*	*6.0*	*6.1*	*5.9*	*6.1*	*6.2*	*6.2*
Europe	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	*6.5*	*7.2*	*7.1*	*6.9*	*6.8*	*6.8*	*6.9*	*6.9*
Other Asia	8.4	*8.3*	*8.3*	*8.5*	*8.4*	*8.3*	*8.4*	*8.2*	*8.4*
Latin America	5.5	*5.5*	*5.6*	*5.6*	*5.5*	*5.4*	*5.6*	*5.6*	*5.6*
Middle East	5.9	*6.2*	*6.4*	*6.3*	*6.6*	*6.5*	*6.3*	*6.2*	*6.4*
Africa	2.2	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.3*	*2.5*	*2.5*
Total Non-OECD	35.2	*35.5*	*37.0*	*36.9*	*36.7*	*36.2*	*36.3*	*36.3*	*36.8*
Total	73.3	73.7	*75.0*	*75.6*	*75.0*	*71.8*	*73.5*	*75.1*	*76.0*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

OECD 4Q08 crude throughput is forecast to average 38.4 mb/d as refiners recover from autumn maintenance and US hurricanes, rising from 37.1 mb/d during October to a seasonal peak of 39.2 mb/d by December. A significant level of uncertainty is attached to this forecast, given the continued weak demand data being reported in OECD regions, raising the prospect of further run cuts, notably in Japan and Korea, but also possibly in Europe.

OECD 3Q08 crude throughput averaged 37.5 mb/d, 0.6 mb/d lower than estimated in last month's report, on the back of weaker-than-expected US, European and Japanese September crude runs. The assumption of a bounce in September European crude throughput has been removed from our estimates, following preliminary data from Euroilstock, despite tighter Atlantic Basin middle distillate markets and the stronger margin environment in Europe. Consequently, OECD average 3Q08 crude throughput is now estimated to have been 1.9 mb/d below the five-year average and 1.7 mb/d below 3Q07 average levels.

OECD North America crude throughput is forecast to increase strongly in October, as refineries recover from the September US hurricanes. Further increases in crude throughput are expected over the course of 4Q08 as refiners gear up for the peak winter heating oil demand season. Some refiners have reported process upsets during the restart following the hurricanes but, with the exception of ExxonMobil's Beaumont refinery, the industry appears to have coped with the challenges faced during September. Fourth-quarter maintenance is likely to allow refiners the opportunity to adjust operational settings on crude towers to adjust their production towards higher middle distillate yields, given the sustained premium that exists between diesel and gasoline prices in US markets, subject to their ability to desulphurise any increased middle distillate production.

Refinery Crude Throughput and Utilisation in OECD Countries

(million barrels per day)

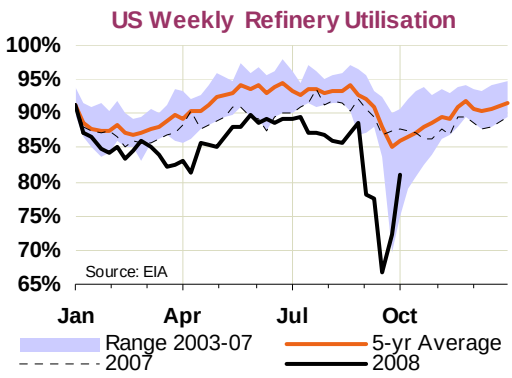
							Change from		Utilisation rate[1]	
	Mar 08	Apr 08	May 08	Jun 08	Jul 08	Aug 08	*Jul 08*	*Aug 07*	Aug 08	Aug 07
OECD North America										
US[2]	14.36	14.80	15.29	15.38	15.24	14.85	-0.38	-0.82	84.43	89.86
Canada	1.65	1.71	1.71	1.80	1.89	1.77	-0.13	-0.10	87.53	92.38
Mexico	1.24	1.26	1.28	1.11	1.22	1.23	0.01	0.09	79.94	71.96
Total	17.24	17.77	18.28	18.29	18.35	17.85	-0.50	-0.84	84.39	88.96
OECD Europe										
France	1.47	1.70	1.67	1.73	1.72	1.79	0.07	0.07	91.28	87.56
Germany	2.35	2.20	2.08	2.11	2.26	2.19	-0.07	0.05	90.65	88.38
Italy	1.81	1.70	1.63	1.72	1.73	1.66	-0.07	-0.25	71.11	81.91
Netherlands	1.03	1.05	1.10	1.07	1.04	1.05	0.00	-0.01	86.37	86.97
Spain	1.11	1.21	1.18	1.11	1.12	1.13	0.01	-0.03	88.74	91.16
UK	1.51	1.59	1.56	1.66	1.59	1.61	0.02	-0.06	85.19	88.27
Other OECD Europe	4.00	4.03	4.14	4.06	4.12	4.09	-0.03	-0.10	87.19	89.34
Total	13.28	13.48	13.36	13.46	13.58	13.51	-0.07	-0.32	85.67	87.71
OECD Pacific										
Japan	4.18	3.97	3.56	3.41	3.74	3.98	0.24	-0.17	85.15	88.79
Korea	2.40	2.28	2.45	2.21	2.35	2.28	-0.07	-0.03	83.34	84.56
Other OECD Pacific	0.67	0.68	0.63	0.65	0.67	0.68	0.02	-0.05	84.90	90.50
Total	7.25	6.92	6.64	6.26	6.76	6.95	0.19	-0.25	84.52	87.55
OECD Total	37.77	38.17	38.28	38.01	38.69	38.31	-0.37	-1.41	84.86	88.26

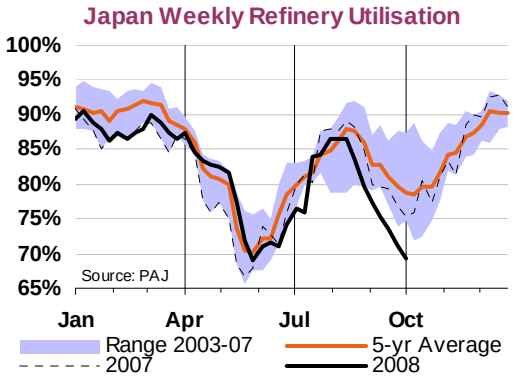
1 Expressed as a percentage, based on crude throughput and current operable refining capacity

2 US50

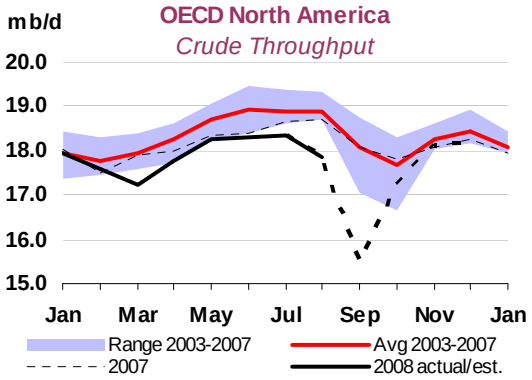
US refinery crude throughput averaged 12.8 mb/d in September, according to provisional weekly data, and follows a seasonally weak August level of crude runs. Crude runs fell to a level comparable to that seen during the September 2005 hurricane disruption of Gulf Coast refineries, although the timing of last month's hurricanes concentrates the impact within the month of September. 4Q08 refinery runs are forecast to continue the recovery already witnessed, given the low product stock levels, despite the recent deterioration in gasoline cracks on the US Gulf Coast, which may yet lead to renewed economic run cuts.

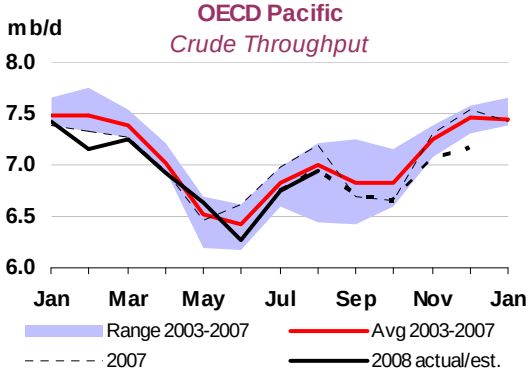
OECD Pacific crude runs increased slightly in August as Japanese refiners completed maintenance. However, rising domestic product stocks during the month, reportedly on the back of weak demand, prompted some refiners to reduce planned rates for September. Korean refiners were also reported to be cutting September crude runs, due to the weak margin environment, with utilisation of less complex capacity at SK Incheon and Hyundai Oilbank particularly affected. The margin environment has also been under pressure from the weaker Korean currency, which has depreciated by 30% against the US dollar in the last three months, forcing refiner to raise domestic prices to compensate.



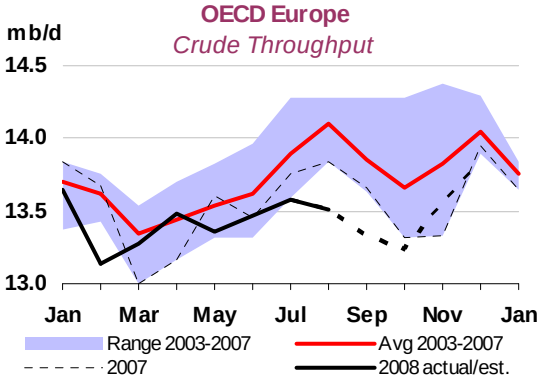


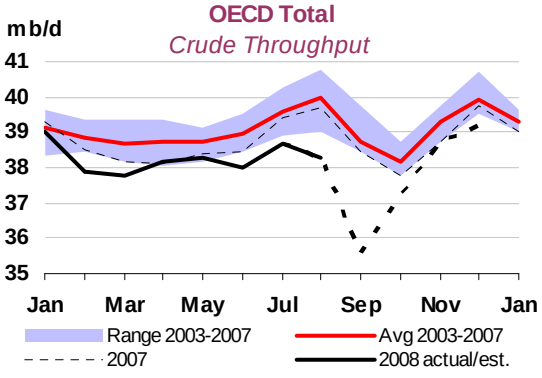
Weekly Japanese data point to continued weakness in early October, with utilisation rates falling below the five-year range for the time of year. Forecast 4Q08 crude throughput is unchanged from last month's report, but the risks are clearly to the downside given the weak demand environment and impact of the liquidity crisis on companies' ability to trade with each other.





OECD Europe crude throughput in August dipped counterseasonally, with Italian crude throughput continuing to register large year-on-year declines. Weakness in Mediterranean hydroskimming margins and regional demand appear to have constrained European runs during the month. Improved activity levels during September now look less likely than assessed last month, despite the strengthening of margins and the call for transatlantic gasoline shipments. The recent weakness in gasoline cracks, in early October, partly on a closed US arbitrage, raises the prospect of further weakness in European runs during the fourth quarter. In addition, the heavy maintenance programme during October, as refiners complete upgrades to desulphurisation equipment ahead of next January's tighter European sulphur limits in diesel, will also depress crude throughput levels during 4Q08.



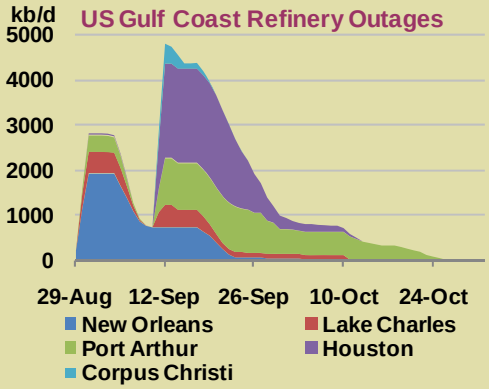


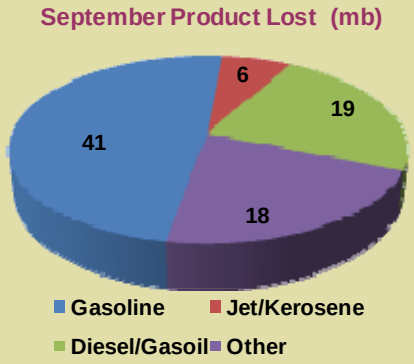
US Gulf Coast Refineries – After the Storm

Hurricanes Gustav and Ike are estimated to have reduced US product supply by around 84 mb during September, with a further 13 mb likely to be lost in October. At the time of writing only ExxonMobil's 348 kb/d Beaumont refinery was yet to restart following the hurricane-related disruption. This significantly higher level of lost product supply, compared with our assessment in last month's report, reflects both the Houston landfall that Ike made, rather than our assumption of near Corpus Christi and the longer duration to some the refinery disruptions.

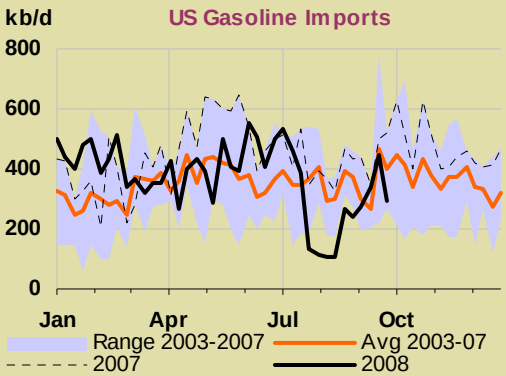
Disruption from Hurricane Ike centred on the Port Arthur, Houston and Lake Charles refining clusters, but chiefly on the former. At its peak, we estimate 4.8 mb/d of crude throughput was lost, either because of capacity that was shut down or running at reduced rates. Average offline crude processing for the month is assessed at 2.7 mb/d, with the prospect of a further 0.4 mb/d in October. The recovery following Hurricane Gustav took longer than we had anticipated for the refineries around New Orleans, while Port Arthur refineries have generally taken much longer than forecast to restart following Hurricane Ike.

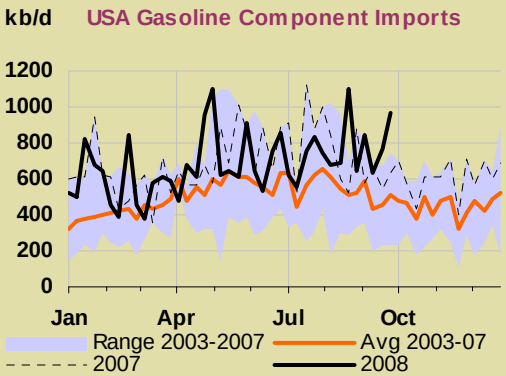
As expected, the availability of electricity supplies proved to be crucial for some refineries to complete a safe restart of operations, while the more seriously damaged plants reported lost jetties and serious flooding affecting some process units. Several refineries were able to restart, but were subsequently shut down over process unit safety concerns, highlighting the complex nature of modern refineries.





Predictably, gasoline prices/cracks spiked on concerns of lack of physical supply. However, these price movements proved short-lived and benchmark traded prices quickly moved back toward pre-hurricane levels. The potential availability of significant gasoline volumes from Europe and Asia helped offset the reduced supply in the US. Perhaps more importantly, weak gasoline demand seen over the summer period and increased use of ethanol have reduced the need for US Gulf Coast refiners to move product to the Atlantic Coast. Monthly EIA data on gasoline movements from PADD 3 to PADDs 1 and 2 show declines of 12-13% during the second quarter, when compared with the five-year average and are at their lowest level since 1994 and 2000 respectively, highlighting the reduced call on Gulf Coast capacity. The ability of the Atlantic Basin refining system to cope with this level of disruption may provide an insight into the increasing degree of excess gasoline capacity currently available.





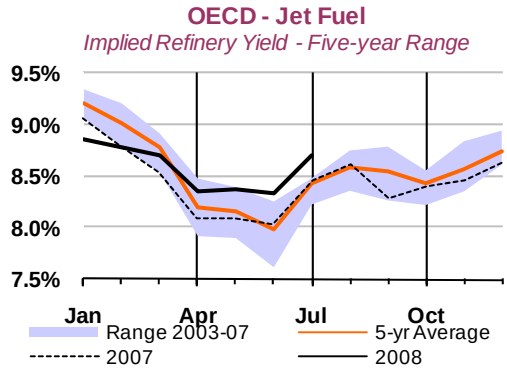
Non-OECD crude throughput continues to post healthy year-on-year growth of around 1.1 mb/d in 3Q08 and 4Q08, in contrast to the weakness observed in the OECD regions. Notable regional contributors to this increase include China, the Middle East and the FSU. Indian crude runs remained around the 3.2 mb/d level in August according to Indian government data, but should increase over the course of the fourth quarter with the commissioning of Reliance's 580 kb/d Jamnagar expansion, which we include in our forecasts from October onwards at progressively higher rates. Furthermore, commissioning a new refinery is not always a straightforward process; there is some risk that we have over-estimated the impact of Jamnagar's start-up within our forecast. Increased Indian purchases of West African crude may indicate the processing of a lighter, sweeter crude slate initially, before all the upgrading and hydrotreating capacity is brought on stream.

Chinese August crude runs were 0.2 mb/d below expectations, averaging 6.9 mb/d, according to National Bureau of Statistics data. Additional reports emerged during September that state oil companies PetroChina and Sinopec stopped product imports, while Sinopec is reported to be targeting lower crude runs over 4Q08 in an effort to trim product stock levels. Consequently, we have lowered forecast 4Q08 crude throughput by 0.3 mb/d to reflect the weaker outlook, with runs expected to trough in October on the back of maintenance. Furthermore, the start-up of CNOOC's Huizhou refinery has been postponed from December, due to delays in completing construction work and will now start in 2009, which also reduces our 4Q08 forecast.

FSU forecast 4Q08 crude throughputs are lowered following a review of Ukrainian crude throughput, given the problems facing Ukrtatnafta's Kremenchug refinery, where availability of crude supplies suggests lower runs than we had previously assumed, and the start of six weeks maintenance work at TNK-BP's Lysychansk refinery during September and October. Conversely, Russian crude runs increased in August to a new post Soviet-era high of 4.9 mb/d, as falling crude prices reinforced the incentive to refine crude into products, for either domestic or export sales, due to the current tax regime. Notwithstanding the extraordinary reduction in export tax announced for the start of October, there remains a significant incentive to sell product within Russia, rather than export it.

OECD Refinery Yields

OECD refinery gasoil/diesel yields stabilised at near-record levels in July at around 30.6%. Month-on-month gains in Europe of 0.4 percentage points (+1.2%) and the Pacific of one percentage point (+3.4%), offset the decline of 0.7 percentage points (-2.5%), witnessed in North America. This latter drop is likely the result of lower diesel cracks in the Atlantic Basin reducing the incentive for US refineries to continue to make every effort to increase diesel yields. Conversely, the strengthening of jet/kerosene cracks during July appears to have resulted in yields for jet/kerosene to increase during July, in line seasonal trends, to above the five-year range for the time of year.



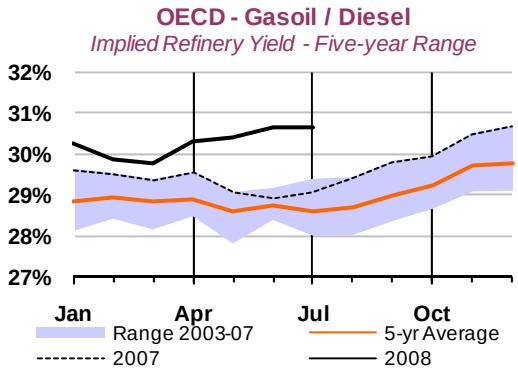


Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.6	25.4	25.7	25.4	25.6	25.5	25.5	24.8	24.5	24.4	24.6	24.6	24.3	24.1	24.1	24.4	24.2
Europe	15.7	15.7	15.2	15.0	15.4	15.6	15.3	15.2	14.9	15.2	15.5	15.2	15.1	14.7	15.2	15.4	15.1
Pacific	8.6	8.5	8.9	7.9	7.9	8.7	8.3	8.9	7.8	7.7	8.8	8.3	8.7	7.7	7.7	8.7	8.2
Total OECD	49.8	49.6	49.8	48.2	48.9	49.8	49.2	48.9	47.2	47.3	48.9	48.1	48.1	46.4	47.0	48.5	47.5
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.3	4.4	4.2	4.2	4.2	4.4	4.5	4.4
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.0	8.1	8.1	8.0	8.3	8.4	8.5	8.5	8.4
Other Asia	8.8	9.0	9.2	9.3	9.1	9.4	9.3	9.6	9.7	9.1	9.5	9.5	9.8	9.9	9.3	9.7	9.7
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.9	6.0	6.0	5.9	5.9	6.1	6.2	6.2	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.3
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	38.0	38.5	38.5	38.7	38.4	39.3	39.8	39.8	40.0	39.7
Total Demand[1]	84.0	85.1	86.2	85.1	85.8	87.2	86.1	86.9	85.7	85.9	87.6	86.5	87.4	86.2	86.7	88.5	87.2
OECD SUPPLY																	
North America	14.1	14.2	14.3	14.4	14.1	14.1	14.2	14.2	14.1	13.8	14.2	14.1	14.6	14.1	14.0	14.4	14.3
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.8	4.5	4.6	4.7	4.6	4.2	4.1	4.2	4.3
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
Total OECD	20.3	20.0	20.1	19.9	19.5	19.8	19.8	19.7	19.5	19.0	19.7	19.5	20.0	19.2	18.9	19.4	19.4
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	12.6	12.9	12.8	13.2	13.1	12.9	12.9	13.0
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.7	2.7	2.7
Latin America[2]	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.0	4.1	4.0	4.3	4.3	4.3	4.3	4.3
Middle East	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.6
Africa[2]	3.7	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.5	27.5	27.4	28.0	27.6	28.3	28.3	28.1	28.1	28.2
Processing Gains[3]	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[2]	50.4	51.2	50.4	50.2	49.7	50.0	50.1	49.8	49.7	49.0	50.5	49.8	51.2	50.3	49.8	50.4	50.4
Non-OPEC excl. Angola & Ecuador[2]	48.7	49.2	49.9	49.7	49.1	49.7	49.6	49.8	49.7	49.0	50.5	49.8	51.2	50.3	49.8	50.4	50.4
OPEC																	
Crude[5]	29.7	29.7	30.4	30.2	30.7	31.6	30.7	32.4	32.2	32.5							
NGLs	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.9	4.9	5.1	5.4	5.1	5.6	5.8	6.0	6.1	5.9
Total OPEC[2]	34.2	34.3	35.1	35.0	35.4	36.4	35.5	37.3	37.1	37.7							
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	36.0	36.8	35.9	37.3	37.1	37.7							
Total Supply[6]	84.7	85.5	85.5	85.2	85.1	86.4	85.6	87.1	86.8	86.7							
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	0.0	-0.9	-0.3	0.0	0.4								
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0								
Total	0.2	0.3	-0.7	0.7	0.1	-0.8	-0.2	0.0	0.4								
Floating Storage/Oil in Transit	-0.1	-0.1	0.1	0.0	-0.3	0.2	0.0	0.3	0.0								
Miscellaneous to balance[7]	0.5	0.2	-0.1	-0.6	-0.5	-0.1	-0.3	-0.1	0.7								
Total Stock Ch. & Misc	0.7	0.4	-0.7	0.0	-0.7	-0.7	-0.5	0.2	1.1	0.9							
Memo items:																	
Call on OPEC crude + Stock ch.[8]	29.1	29.3	31.0	30.2	31.3	32.3	31.2	32.2	31.1	31.7	31.7	31.7	30.6	30.0	30.9	32.0	30.9
Adjusted Call on OPEC + Stock ch.[9]	29.6	29.5	30.9	29.5	30.8	32.2	30.9	32.0	31.9	31.6	31.7	31.8	30.6	30.0	30.9	32.0	30.9
"Call" incl. Angola & Ecuador[2]	30.8	31.3	31.5	30.7	31.8	32.6	31.7	32.2	31.1	31.7	31.7	31.7	30.6	30.0	30.9	32.0	30.9
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.4	30.1	31.3	32.5	31.3	32.0	31.9	31.6	31.7	31.8	30.6	30.0	30.9	32.0	30.9

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 Ecuadorean production is reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
6 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
7 Includes changes in non-reported stocks in OECD and non-OECD areas.
8 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
9 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-0.4	-0.4	-0.2	-0.1	-0.1	-0.3	-0.2	-0.2
Europe	-	-	-	-	-	-	-	-	-	-0.2	-	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1
Pacific	-	-	-	-	-	-	-	-	-	-0.2	-	-0.1	-	-0.1	-0.2	-	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-0.8	-0.5	-0.3	-0.3	-0.3	-0.7	-0.4	-0.4
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.1	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	0.1	0.1	0.2	-	0.1	-0.1	-	0.1	-0.1	-
Total Demand	-	-	-	-	-	-	-	0.1	0.1	-0.7	-0.4	-0.2	-0.4	-0.3	-0.6	-0.5	-0.4
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	0.1	-0.1	-	-	-	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	0.2	-0.1	-	-	-	-0.1	-	-0.1
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-	-	-0.1	-0.1	-0.1	-0.1
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-0.3	-0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-0.1	-0.5	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-0.1	-0.5	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2
OPEC																	
Crude	-	-	-	-	-	-	-	-	-								
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-								
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-								
Total Supply	-	-	-	-	-	-	-	-	-								
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-								
Government	-	-	-	-	-	-	-	-	-								
Total	-	-	-	-	-	-	-	-	-								
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-								
Miscellaneous to balance	-	-	-	-	-	-	-	-0.1	-0.1								
Total Stock Ch. & Misc	-	-	-	-	-	-	-	-0.1	-								
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-	-	-	-	-	-0.6	0.1	-0.1	-0.2	-0.1	-0.3	-0.2	-0.2
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	-	-0.6	-	-0.1	-0.2	-0.1	-0.3	-0.3	-0.2

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.42	25.68	25.40	25.57	25.49	25.53	24.84	24.54	24.36	24.57	24.58	24.33	24.06	24.12	24.40	24.23
Europe	15.68	15.23	14.95	15.41	15.62	15.30	15.20	14.88	15.24	15.51	15.21	15.07	14.66	15.16	15.38	15.07
Pacific	8.48	8.91	7.87	7.89	8.72	8.35	8.87	7.82	7.72	8.83	8.31	8.72	7.65	7.67	8.72	8.19
Total OECD	49.58	49.82	48.23	48.86	49.83	49.18	48.90	47.24	47.33	48.91	48.09	48.12	46.38	46.95	48.49	47.49
FSU	4.06	4.11	3.93	4.18	4.28	4.13	4.11	4.10	4.33	4.41	4.24	4.25	4.20	4.44	4.53	4.36
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.77	0.71	0.77	0.77	0.84	0.78	0.73	0.78	0.78
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.95	8.09	8.08	7.99	8.27	8.37	8.48	8.52	8.41
Other Asia	9.00	9.24	9.34	9.06	9.41	9.26	9.64	9.67	9.12	9.51	9.48	9.83	9.86	9.29	9.72	9.67
Latin America	5.33	5.41	5.59	5.73	5.73	5.62	5.67	5.88	5.99	5.97	5.88	5.87	6.09	6.20	6.18	6.09
Middle East	6.22	6.40	6.50	6.73	6.44	6.52	6.73	6.97	7.25	6.80	6.94	7.04	7.29	7.57	7.11	7.25
Africa	2.96	3.09	3.08	2.99	3.13	3.07	3.14	3.15	3.03	3.16	3.12	3.19	3.19	3.07	3.20	3.16
Total Non-OECD	35.52	36.39	36.91	36.91	37.33	36.89	37.96	38.49	38.53	38.70	38.42	39.28	39.78	39.77	40.05	39.72
World	85.11	86.21	85.13	85.77	87.16	86.07	86.86	85.73	85.85	87.61	86.51	87.40	86.16	86.72	88.54	87.21
of which:																
US50	*20.69*	*20.79*	*20.63*	*20.73*	*20.58*	*20.68*	*19.99*	*19.76*	*19.52*	*19.64*	*19.73*	*19.51*	*19.31*	*19.30*	*19.49*	*19.40*
Euro4	*8.23*	*7.87*	*7.70*	*7.89*	*8.02*	*7.87*	*7.79*	*7.65*	*7.82*	*7.91*	*7.79*	*7.73*	*7.45*	*7.73*	*7.79*	*7.67*
Japan	*5.20*	*5.43*	*4.64*	*4.70*	*5.25*	*5.01*	*5.41*	*4.59*	*4.53*	*5.27*	*4.95*	*5.24*	*4.40*	*4.45*	*5.13*	*4.80*
Korea	*2.18*	*2.36*	*2.12*	*2.06*	*2.31*	*2.21*	*2.33*	*2.09*	*2.04*	*2.38*	*2.21*	*2.34*	*2.11*	*2.07*	*2.40*	*2.23*
Mexico	*2.08*	*2.12*	*2.14*	*2.06*	*2.16*	*2.12*	*2.10*	*2.16*	*2.09*	*2.17*	*2.13*	*2.07*	*2.14*	*2.08*	*2.16*	*2.11*
Canada	*2.30*	*2.38*	*2.29*	*2.43*	*2.39*	*2.37*	*2.37*	*2.26*	*2.39*	*2.38*	*2.35*	*2.35*	*2.26*	*2.39*	*2.37*	*2.34*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.44*	*2.46*	*2.51*	*2.44*	*2.43*	*2.53*	*2.55*	*2.60*	*2.53*
India	*2.80*	*3.04*	*2.97*	*2.74*	*3.03*	*2.94*	*3.19*	*3.11*	*2.88*	*3.17*	*3.09*	*3.34*	*3.25*	*2.98*	*3.29*	*3.21*
Annual Change (% per annum)																
North America	-0.6	1.3	0.9	-0.3	-0.1	0.5	-3.3	-3.4	-4.7	-3.6	-3.8	-2.0	-1.9	-1.0	-0.7	-1.4
Europe	0.1	-4.9	-2.2	-1.7	-0.8	-2.4	-0.2	-0.5	-1.1	-0.7	-0.6	-0.8	-1.5	-0.5	-0.9	-0.9
Pacific	-1.4	-4.1	-0.5	-0.7	-1.0	-1.6	-0.5	-0.7	-2.1	1.3	-0.4	-1.7	-2.1	-0.7	-1.2	-1.4
Total OECD	-0.5	-1.6	-0.3	-0.8	-0.5	-0.8	-1.8	-2.0	-3.1	-1.9	-2.2	-1.6	-1.8	-0.8	-0.8	-1.3
FSU	3.4	2.3	2.0	1.1	1.6	1.7	0.0	4.4	3.6	2.9	2.7	3.3	2.6	2.5	2.8	2.8
Europe	1.0	2.0	1.9	1.9	1.5	1.8	2.1	2.5	2.5	2.4	2.4	1.7	2.0	2.0	2.0	1.9
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	2.9	7.5	6.5	6.0	5.4	5.2	4.9	5.4	5.2
Other Asia	2.3	1.7	2.7	3.2	3.9	2.9	4.3	3.5	0.7	1.1	2.4	2.0	2.0	1.8	2.2	2.0
Latin America	4.6	4.6	5.0	5.5	5.9	5.3	4.6	5.3	4.5	4.2	4.7	3.6	3.5	3.5	3.6	3.5
Middle East	4.0	5.2	5.9	4.2	3.8	4.8	5.1	7.2	7.8	5.7	6.4	4.6	4.5	4.3	4.5	4.5
Africa	0.9	3.3	2.8	3.5	5.9	3.9	1.6	2.5	1.4	0.9	1.6	1.5	1.3	1.3	1.5	1.4
Total Non-OECD	4.0	3.5	4.0	3.7	4.2	3.8	4.3	4.3	4.4	3.7	4.2	3.5	3.4	3.2	3.5	3.4
World	1.3	0.5	1.5	1.1	1.5	1.1	0.8	0.7	0.1	0.5	0.5	0.6	0.5	1.0	1.1	0.8
Annual Change (mb/d)																
North America	-0.14	0.34	0.23	-0.08	-0.02	0.12	-0.84	-0.86	-1.20	-0.92	-0.96	-0.51	-0.47	-0.24	-0.17	-0.35
Europe	0.01	-0.78	-0.34	-0.26	-0.13	-0.38	-0.03	-0.07	-0.17	-0.11	-0.10	-0.13	-0.22	-0.08	-0.14	-0.14
Pacific	-0.12	-0.38	-0.04	-0.05	-0.09	-0.14	-0.04	-0.05	-0.16	0.11	-0.04	-0.15	-0.17	-0.05	-0.11	-0.12
Total OECD	-0.25	-0.83	-0.15	-0.39	-0.23	-0.40	-0.91	-0.99	-1.54	-0.92	-1.09	-0.79	-0.86	-0.37	-0.41	-0.61
FSU	0.13	0.09	0.08	0.04	0.07	0.07	0.00	0.17	0.15	0.13	0.11	0.14	0.11	0.11	0.12	0.12
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.23	0.57	0.49	0.45	0.42	0.41	0.39	0.43	0.42
Other Asia	0.21	0.15	0.24	0.28	0.35	0.26	0.40	0.33	0.06	0.10	0.22	0.19	0.19	0.16	0.21	0.19
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.25	0.30	0.26	0.24	0.26	0.20	0.20	0.21	0.21	0.21
Middle East	0.24	0.31	0.36	0.27	0.24	0.30	0.32	0.47	0.52	0.36	0.42	0.31	0.32	0.31	0.31	0.31
Africa	0.03	0.10	0.09	0.10	0.17	0.11	0.05	0.08	0.04	0.03	0.05	0.05	0.04	0.04	0.05	0.04
Total Non-OECD	1.37	1.22	1.43	1.30	1.49	1.36	1.56	1.59	1.62	1.37	1.53	1.33	1.29	1.24	1.35	1.30
World	1.11	0.39	1.28	0.91	1.25	0.96	0.65	0.60	0.08	0.45	0.44	0.54	0.43	0.87	0.93	0.69
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	-0.45	-0.41	-0.21	-0.12	-0.12	-0.29	-0.19	-0.18
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.18	-0.03	-0.05	-0.12	-0.12	-0.19	-0.12	-0.14
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.21	-0.01	-0.06	-0.04	-0.06	-0.19	-0.04	-0.08
Total OECD	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00	-0.83	-0.45	-0.32	-0.27	-0.30	-0.67	-0.35	-0.40
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	-0.02	-0.02	0.04	-0.02	0.00
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	-0.04	0.01	0.05	-0.05	-0.01
Other Asia	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.03	-0.02	0.00	0.01	-0.04	-0.03	-0.06	-0.04	-0.04
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.02	0.02	0.00	0.00	0.02	0.00	0.01
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.10	0.02	0.03	0.00	-0.01	0.08	0.00	0.02
Africa	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	-0.01	-0.01	-0.02	-0.01	-0.02	-0.01
Total Non-OECD	0.00	0.01	0.01	0.01	0.01	0.01	0.05	0.06	0.17	0.03	0.08	-0.10	-0.04	0.12	-0.12	-0.04
World	0.00	0.01	-0.01	0.01	0.01	0.00	0.05	0.06	-0.66	-0.42	-0.24	-0.38	-0.34	-0.55	-0.48	-0.44
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.01	-0.01	0.01	0.01	0.00	0.05	0.07	-0.67	-0.43	-0.25	-0.43	-0.40	0.11	-0.06	-0.19

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	2Q08	3Q08	4Q08	1Q09	2Q09	Jul 08	Aug 08	Sep 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.96	9.19				9.21	9.21	9.16
Iran	3.98			3.84	4.01				3.97	4.10	3.97
Iraq	2.09			2.47	2.33				2.47	2.33	2.19
UAE	2.52			2.67	2.66				2.66	2.66	2.66
Kuwait	2.16			2.33	2.33				2.34	2.32	2.31
Neutral Zone	0.56			0.58	0.58				0.59	0.59	0.58
Qatar	0.80			0.85	0.87				0.88	0.88	0.87
Angola[6]	1.66			1.90	1.83				1.90	1.85	1.75
Nigeria	2.13			1.82	1.99				2.02	1.98	1.98
Libya	1.71			1.74	1.68				1.68	1.65	1.70
Algeria	1.36			1.37	1.37				1.36	1.37	1.37
Ecuador[6]	0.04			0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.36	2.33				2.31	2.31	2.37
Indonesia	0.84			0.86	0.86				0.86	0.87	0.86
Total Crude Oil[6]	30.71			32.24	32.53				32.73	32.58	32.25
Total NGLs[1,6]	4.77	5.08	5.88	4.91	5.13	5.38	5.58	5.82	5.13	5.13	5.13
Total OPEC[6]	35.48			37.14	37.66				37.86	37.72	37.39
OPEC incl. Angola & Ecuador[6]	35.95			37.14	37.66				37.86	37.72	37.39
NON-OPEC[2]											
OECD											
North America	14.23	14.06	14.28	14.06	13.75	14.25	14.61	14.11	14.26	14.20	12.77
United States	7.44	7.58	7.86	7.78	7.30	7.57	7.92	7.90	7.78	7.67	6.43
Mexico	3.48	3.20	2.97	3.17	3.13	3.20	3.10	3.01	3.16	3.12	3.12
Canada	3.32	3.29	3.45	3.11	3.32	3.48	3.59	3.20	3.32	3.41	3.22
Europe	4.95	4.70	4.27	4.76	4.50	4.65	4.57	4.24	4.75	4.28	4.46
UK	1.66	1.55	1.39	1.64	1.38	1.53	1.53	1.39	1.44	1.26	1.46
Norway	2.56	2.43	2.20	2.41	2.39	2.40	2.33	2.15	2.62	2.29	2.28
Others	0.73	0.72	0.69	0.71	0.72	0.72	0.71	0.70	0.70	0.74	0.73
Pacific	0.63	0.70	0.81	0.66	0.71	0.80	0.82	0.81	0.68	0.71	0.74
Australia	0.55	0.58	0.66	0.56	0.61	0.67	0.68	0.67	0.59	0.61	0.63
Others	0.08	0.11	0.14	0.10	0.10	0.13	0.14	0.14	0.10	0.10	0.11
Total OECD	19.81	19.46	19.36	19.49	18.96	19.70	20.01	19.16	19.69	19.19	17.97
NON-OECD											
Former USSR	12.77	12.81	13.04	12.86	12.59	12.94	13.16	13.13	12.85	12.31	12.63
Russia	10.08	10.02	9.87	9.96	10.02	10.10	9.98	9.91	9.99	10.01	10.05
Others	2.69	2.79	3.17	2.90	2.58	2.84	3.18	3.22	2.85	2.30	2.57
Asia	6.40	6.49	6.65	6.43	6.46	6.62	6.65	6.66	6.41	6.42	6.54
China	3.73	3.83	3.91	3.82	3.83	3.89	3.91	3.91	3.81	3.77	3.92
Malaysia	0.76	0.76	0.79	0.74	0.74	0.79	0.79	0.80	0.70	0.77	0.76
India	0.81	0.83	0.84	0.82	0.84	0.84	0.84	0.84	0.85	0.86	0.83
Others	1.11	1.07	1.11	1.06	1.04	1.10	1.12	1.11	1.06	1.01	1.04
Europe	0.13	0.12	0.11	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12
Latin America	4.32	4.02	4.28	3.96	4.02	4.14	4.26	4.28	4.02	4.00	4.03
Brazil	2.14	2.29	2.52	2.26	2.27	2.40	2.50	2.52	2.27	2.25	2.29
Argentina	0.75	0.74	0.75	0.71	0.75	0.75	0.76	0.76	0.75	0.75	0.75
Colombia	0.54	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Ecuador[6]	0.46										
Others	0.43	0.42	0.43	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Middle East[3]	1.64	1.61	1.55	1.61	1.61	1.59	1.57	1.55	1.62	1.60	1.60
Oman	0.70	0.72	0.71	0.72	0.72	0.71	0.71	0.71	0.73	0.71	0.72
Syria	0.40	0.39	0.38	0.39	0.39	0.39	0.39	0.38	0.39	0.39	0.39
Yemen	0.34	0.31	0.27	0.31	0.30	0.30	0.28	0.27	0.31	0.30	0.30
Africa	2.51	2.56	2.56	2.55	2.58	2.56	2.57	2.56	2.58	2.58	2.57
Egypt	0.63	0.61	0.58	0.61	0.61	0.60	0.59	0.59	0.61	0.61	0.60
Gabon	0.23	0.23	0.24	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Others	1.64	1.72	1.74	1.71	1.73	1.73	1.73	1.73	1.73	1.74	1.73
Total Non-OECD	27.78	27.60	28.20	27.54	27.38	27.98	28.33	28.30	27.61	27.03	27.50
Processing Gains[4]	2.17	2.24	2.29	2.22	2.25	2.29	2.29	2.29	2.25	2.25	2.25
Other Biofuels[5]	0.33	0.46	0.58	0.46	0.46	0.52	0.55	0.58	0.46	0.46	0.46
TOTAL NON-OPEC	50.08	49.76	50.42	49.70	49.05	50.49	51.17	50.32	50.01	48.93	48.17
Non-OPEC excl. Angola & Ecuador[6]	49.61	49.76	50.42	49.70	49.05	50.49	51.17	50.32	50.01	48.93	48.17
TOTAL SUPPLY	85.56			86.85	86.71				87.88	86.65	85.56

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
5 Comprises fuel ethanol and biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Apr2008	May2008	Jun2008	Jul2008	Aug2008*	Aug2005	Aug2006	Aug2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	456.6	439.7	435.7	441.0	443.6	419.5	458.5	453.6	-0.42	-0.29	0.35	-0.21
Motor Gasoline	237.2	234.3	237.1	234.0	216.0	219.9	237.6	223.1	-0.05	0.20	0.06	-0.13
Middle Distillate	177.0	184.1	191.4	201.0	200.5	211.4	217.2	207.8	0.12	0.02	-0.33	0.14
Residual Fuel Oil	47.8	48.2	49.1	44.3	45.2	40.7	52.2	45.5	0.00	0.04	0.00	0.02
Total Products[3]	624.1	640.4	654.6	661.1	653.6	667.7	700.9	671.7	0.16	-0.04	-0.45	0.35
Total[4]	1222.1	1226.7	1243.0	1261.6	1257.1	1239.9	1322.5	1285.5	-0.10	-0.58	-0.14	0.30
Europe												
Crude	336.7	339.7	334.6	343.9	329.8	337.3	333.6	325.4	-0.13	0.07	0.07	0.01
Motor Gasoline	118.1	111.8	107.7	105.7	107.1	103.8	100.3	102.6	0.04	0.11	0.05	-0.13
Middle Distillate	230.6	237.8	247.5	252.0	258.2	247.1	264.3	258.3	-0.06	-0.18	0.05	0.02
Residual Fuel Oil	81.9	83.0	80.6	80.0	78.0	73.3	76.9	73.5	0.11	-0.04	0.08	-0.02
Total Products[3]	536.9	538.3	544.2	547.7	553.1	526.3	546.5	539.1	0.16	-0.10	0.19	-0.11
Total[4]	943.4	952.8	952.9	966.0	956.5	935.0	953.1	940.5	0.02	-0.03	0.23	-0.07
Pacific												
Crude	153.3	156.6	167.9	169.5	162.2	181.9	174.7	168.5	-0.10	-0.01	-0.04	0.13
Motor Gasoline	24.1	26.4	24.2	22.8	23.9	22.9	23.8	22.9	-0.03	0.01	0.05	-0.03
Middle Distillate	58.5	58.7	59.5	65.7	75.1	73.8	80.7	81.3	0.10	-0.08	-0.14	0.03
Residual Fuel Oil	21.8	24.1	22.4	22.1	23.3	23.5	24.6	24.3	0.04	-0.05	-0.01	0.03
Total Products[3]	165.5	171.8	166.1	178.0	194.1	187.9	203.1	197.5	0.15	-0.23	-0.11	0.02
Total[4]	390.3	402.8	407.8	422.3	431.3	442.3	450.6	440.2	0.04	-0.27	-0.14	0.18
Total OECD												
Crude	946.7	936.0	938.3	954.3	935.6	938.7	966.8	947.5	-0.65	-0.24	0.38	-0.07
Motor Gasoline	379.4	372.4	368.9	362.4	347.0	346.5	361.6	348.6	-0.04	0.32	0.16	-0.29
Middle Distillate	466.0	480.5	498.5	518.7	533.8	532.3	562.2	547.4	0.16	-0.23	-0.42	0.19
Residual Fuel Oil	151.5	155.3	152.0	146.4	146.5	137.5	153.7	143.3	0.15	-0.05	0.06	0.03
Total Products[3]	1326.5	1350.5	1364.9	1386.8	1400.8	1382.0	1450.5	1408.2	0.47	-0.37	-0.37	0.25
Total[4]	2555.7	2582.3	2603.7	2650.0	2644.9	2617.2	2726.2	2666.1	-0.04	-0.89	-0.05	0.41

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Apr2008	May2008	Jun2008	Jul2008	Aug2008*	Aug2005	Aug2006	Aug2007	3Q2007	4Q2007	1Q2008	2Q2008
North America												
Crude	701.5	704.3	706.0	707.2	707.6	700.7	687.8	690.4	0.03	0.05	0.04	0.06
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	181.1	181.6	181.8	180.0	180.0	165.6	174.6	176.7	0.02	0.08	0.00	-0.03
Products	235.6	235.3	234.2	235.8	235.8	239.3	237.3	245.7	0.08	-0.09	0.02	-0.04
Pacific												
Crude	385.0	385.0	384.7	384.2	384.2	383.5	381.5	385.0	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.5	11.8	17.6	0.02	0.01	0.00	0.00
Total OECD												
Crude	1267.6	1270.8	1272.5	1271.5	1271.9	1249.9	1243.9	1252.1	0.05	0.12	0.04	0.02
Products	256.5	256.2	255.1	256.7	256.7	252.7	251.1	265.3	0.10	-0.08	0.02	-0.04
Total[4]	1525.1	1528.0	1528.5	1529.2	1529.6	1503.6	1496.0	1518.4	0.15	0.04	0.07	-0.02

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End June 2007		End September 2007		End December 2007		End March 2008		End June 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	188.4	78	195.4	82	195.7	83	193.8	86	196.6	-
Mexico	43.8	21	43.5	20	45.0	21	46.8	22	44.7	-
United States[4]	1731.6	84	1718.5	84	1667.3	84	1655.1	84	1687.5	-
Total[4]	1985.9	78	1979.5	78	1930.1	78	1917.7	78	1951.0	80
Pacific										
Australia	38.9	40	36.8	37	35.6	37	34.3	35	37.4	-
Japan	622.4	132	629.6	120	621.0	115	610.0	133	619.1	-
Korea	158.3	77	157.4	68	143.5	62	142.8	68	146.6	-
New Zealand	7.8	50	8.4	53	8.3	49	8.4	55	8.4	-
Total	827.4	105	832.3	95	808.3	91	795.6	102	811.4	105
Europe[5]										
Austria	21.1	73	22.1	76	22.1	81	22.7	77	22.8	-
Belgium	28.7	48	27.8	42	26.1	38	31.3	50	28.5	-
Czech Republic	20.5	95	19.5	98	20.2	101	20.4	91	20.2	-
Denmark	17.3	92	18.8	96	17.1	95	16.4	89	19.0	-
Finland	26.3	114	29.7	129	27.1	128	30.5	135	25.5	-
France	174.5	90	175.3	87	179.9	91	177.5	93	176.6	-
Germany	283.5	110	276.5	108	274.6	110	281.5	115	273.1	-
Greece	35.6	84	34.8	73	37.4	80	34.3	91	35.8	-
Hungary	16.0	96	17.1	100	15.4	100	16.7	101	16.6	-
Ireland	11.1	55	12.6	62	10.6	55	12.1	63	10.4	-
Italy	133.0	80	134.2	77	132.9	82	130.9	82	136.7	-
Luxembourg	0.9	15	0.9	15	0.7	12	0.6	10	0.7	-
Netherlands	115.9	115	122.9	121	116.6	109	126.5	126	124.5	-
Norway	21.1	90	21.8	86	26.6	138	25.4	104	23.1	-
Poland	50.0	89	50.9	92	58.2	109	57.6	108	57.4	-
Portugal	24.7	82	23.2	77	23.6	82	24.9	86	25.3	-
Slovak Republic	6.9	81	7.7	87	7.9	99	9.0	112	9.1	-
Spain	130.5	81	136.7	84	133.9	84	134.2	87	135.0	-
Sweden	35.2	101	33.6	95	34.5	100	34.2	97	34.1	-
Switzerland	38.5	162	38.1	136	35.9	144	36.5	150	37.2	-
Turkey	60.5	80	61.1	92	60.3	90	59.0	92	58.9	-
United Kingdom	100.8	58	98.5	57	97.7	57	100.5	59	99.3	-
Total	1352.5	88	1363.8	87	1359.3	89	1382.9	92	1369.8	90
Total OECD	4165.8	85	4175.6	84	4097.7	84	4096.2	87	4132.2	87
DAYS OF IEA Net Imports[6]	-	121	-	121	-	122	-	122	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End June 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2585	80	29	51
1Q2006	4072	1487	2585	84	31	53
2Q2006	4141	1493	2648	84	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4167	1499	2668	84	30	54
1Q2007	4105	1507	2598	85	31	54
2Q2007	4166	1506	2659	85	31	54
3Q2007	4176	1520	2655	84	30	53
4Q2007	4098	1524	2574	84	31	53
1Q2008	4096	1530	2566	87	32	54
2Q2008	4132	1529	2604	87	32	55

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 2Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	3Q07	4Q07	1Q08	2Q08	May 08	Jun 08	Jul 08	Year Earlier Jul 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.71	0.78	0.75	0.73	0.70	0.66	0.79	0.70	0.10
Europe	0.90	0.78	0.70	0.74	0.68	0.67	0.65	0.69	0.72	0.65	0.69	-0.04
Pacific	1.31	1.32	1.19	1.15	1.25	1.29	1.24	1.36	1.21	1.16	1.26	-0.10
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.57	0.58	0.62	0.64	0.63	0.76	0.57	0.18
Europe	0.16	0.14	0.05	0.02	0.04	0.05	0.07	0.03	0.02	0.05	0.01	0.04
Pacific	0.26	0.35	0.34	0.31	0.38	0.43	0.36	0.38	0.37	0.47	0.22	0.25
Saudi Heavy												
North America	0.17	0.21	0.09	0.11	0.04	0.06	0.04	0.04	0.04	0.20	0.04	0.17
Europe	0.23	0.18	0.11	0.11	0.09	0.04	0.10	0.12	0.10	0.10	0.15	-0.05
Pacific	0.25	0.23	0.20	0.20	0.23	0.22	0.24	0.26	0.19	0.23	0.20	0.03
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.64	0.45	0.74	0.59	0.66	0.49	0.65	0.57	0.08
Europe	0.23	0.32	0.30	0.38	0.24	0.20	0.19	0.23	0.18	0.17	0.44	-0.27
Pacific	0.06	0.08	0.17	0.20	0.21	0.13	0.18	0.23	0.15	0.27	0.08	0.19
Iraqi Kirkuk												
North America	-	0.00	-	-	-	0.04	0.11	0.10	0.22	0.16	-	-
Europe	0.05	0.01	0.11	0.06	0.32	0.21	0.28	0.35	0.18	0.26	0.04	0.22
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.27	0.21	0.24	0.23	0.21	0.31	0.21	0.29	-0.08
Pacific	0.15	0.13	0.09	0.07	0.11	0.11	0.06	0.07	0.02	0.05	0.07	-0.01
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.60	0.47	0.44	0.48	0.47	0.55	0.51	0.56	-0.05
Pacific	0.62	0.56	0.64	0.56	0.73	0.65	0.49	0.47	0.42	0.62	0.64	-0.01
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.75	0.86	0.66	0.66	0.68	0.71	0.72	0.78	-0.06
Europe	0.04	0.11	0.08	0.09	0.05	0.07	0.06	0.09	0.06	0.05	0.15	-0.10
Pacific	-	-	0.01	-	0.02	-	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.76	0.68	0.60	0.59	0.73	0.66	0.70	0.78	-0.08
Europe	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.05	0.09	0.05	0.06	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.25	1.24	1.03	1.00	0.99	0.98	1.06	1.37	-0.31
Europe	0.17	0.16	0.14	0.18	0.15	0.14	0.18	0.14	0.21	0.17	0.19	-0.02
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.01
Europe	0.03	0.01	0.02	-	0.02	0.00	0.01	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.01	0.01	0.01	0.10	0.12	0.19	0.14	0.02	0.12
Europe	1.77	1.68	1.86	1.90	1.73	1.76	1.83	1.71	1.76	1.84	2.07	-0.23
Pacific	0.00	0.00	0.00	-	0.01	-	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.87	0.82	0.85	0.77	0.62	0.84	0.47	0.75	-0.29
Europe	0.35	0.33	0.24	0.22	0.23	0.27	0.21	0.23	0.26	0.29	0.22	0.07
Pacific	0.05	0.04	0.01	-	0.01	-	-	-	-	-	-	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.22	0.31	0.31	0.27	0.27	0.24	0.21	0.14	0.07
Europe	0.07	0.10	0.07	0.08	0.11	0.09	0.20	0.16	0.26	0.09	0.17	-0.08
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	3Q07	4Q07	1Q08	2Q08	May-08	Jun-08	Jul-08	Year Earlier Jul-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8117	8267	7968	8087	8297	8101	8610	8419	7504	12%
Europe	9792	9784	9770	10056	9924	9769	9870	9885	9937	9961	9688	3%
Pacific	6801	6815	6718	6576	7003	7100	6457	6470	6251	6681	6813	-2%
Total OECD	25050	24794	24605	24899	24895	24957	24624	24455	24798	25062	24524	2%
LPG												
North America	18	14	27	38	41	27	15	8	31	42	18	136%
Europe	248	264	276	244	291	307	246	242	262	274	265	3%
Pacific	527	578	557	502	572	599	632	669	537	663	501	32%
Total OECD	793	856	860	785	903	934	893	919	830	978	784	25%
Naphtha												
North America	115	71	39	33	60	25	54	39	44	60	54	11%
Europe	273	314	266	279	289	274	260	300	215	251	267	-6%
Pacific	746	754	794	768	758	796	734	767	701	854	678	26%
Total OECD	1133	1138	1099	1080	1108	1095	1048	1107	960	1165	1000	17%
Gasoline[3]												
North America	1034	1143	1122	1198	1048	888	1221	1216	1377	1167	1275	-8%
Europe	165	160	204	156	181	224	187	193	76	288	183	57%
Pacific	102	98	70	56	70	112	91	113	56	53	48	11%
Total OECD	1301	1401	1396	1410	1299	1224	1499	1522	1509	1508	1506	0%
Jet & Kerosene												
North America	173	161	183	205	143	96	78	79	62	42	230	-82%
Europe	375	374	364	385	398	361	381	370	416	369	372	-1%
Pacific	66	71	41	37	43	44	39	44	42	26	31	-16%
Total OECD	614	606	588	627	584	501	498	493	520	437	634	-31%
Gasoil/Diesel												
North America	143	175	129	142	106	99	46	22	50	41	181	-77%
Europe	845	967	780	745	827	914	665	667	733	914	734	24%
Pacific	79	81	94	90	105	102	135	166	134	153	83	85%
Total OECD	1067	1223	1003	976	1039	1116	846	855	917	1107	997	11%
Heavy Fuel Oil												
North America	527	343	323	286	320	328	307	268	342	260	332	-22%
Europe	491	476	434	457	400	478	391	353	413	469	385	22%
Pacific	85	92	92	92	101	125	140	150	124	135	84	60%
Total OECD	1102	911	848	835	821	930	838	770	879	864	802	8%
Other Products												
North America	1027	1121	1052	1035	934	1041	1086	1080	1143	1083	1132	-4%
Europe	781	929	869	923	831	741	765	768	661	750	868	-14%
Pacific	248	245	254	264	284	290	267	281	277	293	264	11%
Total OECD	2056	2295	2175	2222	2049	2072	2119	2129	2081	2125	2263	-6%
Total Products												
North America	3037	3028	2875	2937	2652	2504	2807	2711	3048	2694	3221	-16%
Europe	3177	3484	3192	3190	3218	3299	2896	2893	2775	3315	3074	8%
Pacific	1852	1919	1902	1809	1933	2068	2038	2190	1872	2177	1689	29%
Total OECD	8066	8430	7969	7935	7803	7872	7740	7794	7696	8185	7985	3%
Total Oil												
North America	11493	11222	10992	11203	10620	10592	11104	10812	11658	11113	11245	-1%
Europe	12970	13268	12962	13246	13141	13068	12766	12778	12712	13276	12762	4%
Pacific	8654	8734	8620	8385	8936	9169	8495	8660	8123	8858	8502	4%
Total OECD	33116	33223	32574	32835	32697	32829	32364	32249	32494	33247	32509	2%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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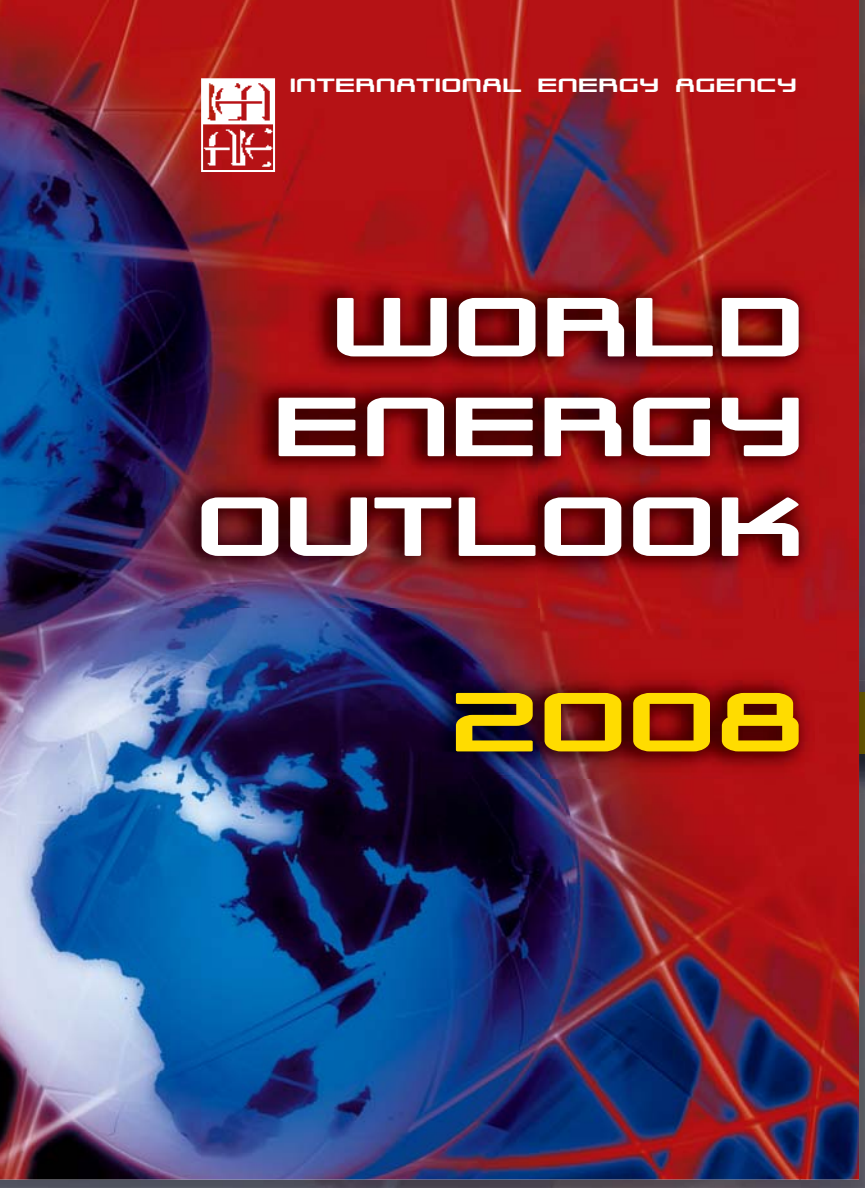

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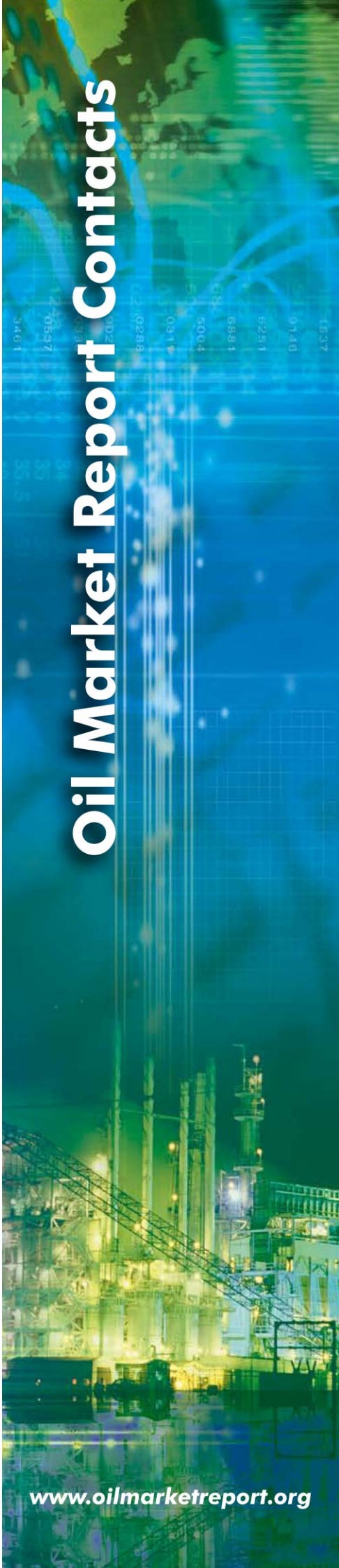

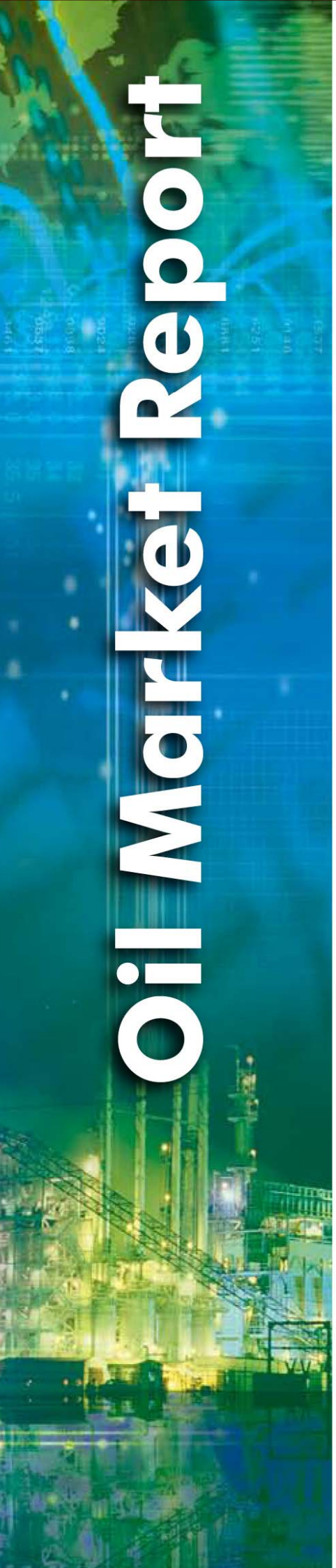

INTERNATIONAL ENERGY AGENCY

13 November 2008

HIGHLIGHTS

- **Oil prices continued their slide in October**, with crude benchmarks falling around $25 since the last report to just under $60/bbl, as demand prospects weakened further. But, crude futures stabilised in early November on a cut in OPEC output targets and further coordinated efforts to prop up the global economy.
- **Oil demand forecasts for 2008 and 2009 are cut** by 330 kb/d and 670 kb/d respectively, after another large downward revision to global GDP prognoses by the IMF and continued signs of demand weakness in the OECD. Global demand is now expected to grow by 0.12 mb/d in 2008, to 86.2 mb/d, and by 0.35 mb/d in 2009, to 86.5 mb/d.
- **OPEC October crude supply** was flat from September at 32.1 mb/d, as recovery after outages in Iraq, Angola and Libya offset lower supplies elsewhere, including Saudi Arabia. OPEC's emergency meeting on 24 October cut the OPEC-11 target by 1.5 mb/d from 1 November, implying a potential new collective output level near 30.5 mb/d.
- **Global oil supply** increased by 1.8 mb/d in October to 86.9 mb/d, as both scheduled and unscheduled production outages eased. Projected non-OPEC supply for 2008 and 2009 was revised down by 85 kb/d (to 49.7 mb/d) and 145 kb/d (to 50.3 mb/d) respectively, as Azeri and US Gulf outages proved more sustained and extensive.
- **OECD industry stocks fell by 16.9 mb** in September, to 2,649 mb, including a hurricane-driven 24.3 mb US product draw. However, upward revisions to August stocks plus lower demand prospects leave end-September cover high, at 55.0 days. Preliminary October data show a steep rebound of 51.2 mb potentially raising cover to 56.0 days.
- **4Q08 global refinery throughput** is forecast to average 73.5 mb/d, around 1.4 mb/d lower than last month's report. Weaker global demand and negative margins in many regions underpin this reduction in forecasts. Refinery investment is starting to suffer for 2009 and beyond, following the uncertain economic outlook and financial market turmoil.

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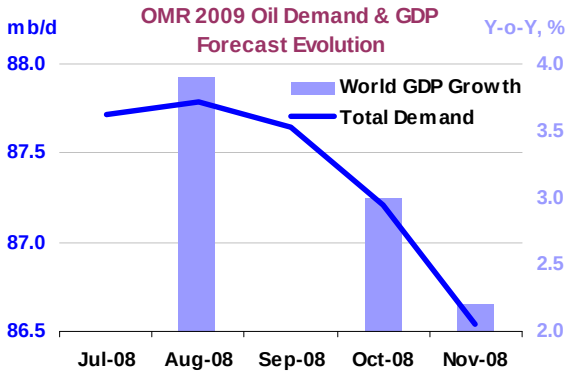
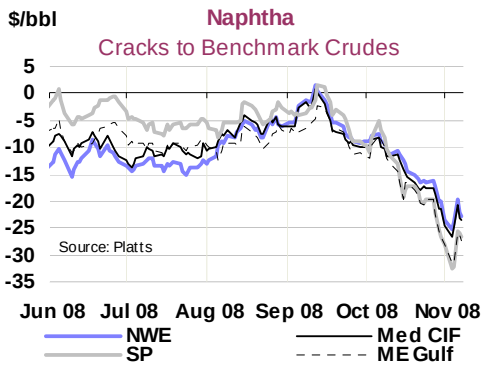
UNCHARTABLE TERRITORY

Crude prices have fallen by a further $25/bbl since last month's report, OECD oil demand is in tailspin, naphtha cracks (arguably a more reliable measure of a weak economy than transport fuel) are touching historic lows and OPEC production may dip towards comparable levels last seen in spring 2004. Charting oil market drivers requires an ability to constantly recalibrate axes in such a volatile market.

Economic recession raises its head in the IMF's most recent, exceptional revision, one month on from publication of its October *World Economic Outlook*. Latest estimates slash 0.8 points from global GDP growth for 2009, taking the total to 2.1% and leaving OECD economies clearly in recession. Incorporating this adjustment in our model, allied to substantial downward revisions to preliminary August and September OECD demand data, knocks a mind-boggling 1.0 mb/d off 4Q08 demand and 670 kb/d off next year's estimate. Assumed 4Q08 refinery crude runs have been cut by 1.4 mb/d accordingly, as margins have weakened.





But there is scant consensus on the slowdown's scale and duration. Some analysts see economic contagion from OECD countries worsening in 2009, dragging down China and the rest of the non-OECD, resulting in outright global contraction in both GDP and oil demand. While we lack crystal ball certainty for our own, more optimistic forecast, China's recent announcement of a $590 billion stimulus package for the next two years, while vague on detail, nonetheless could help avert the first global demand contraction since 1983. If the Chinese government succeeds in setting a floor below which GDP growth is not allowed to fall, China's contribution to weaker global oil demand may be less than some imagine.

OPEC's 1.5 mb/d target cut from 1 November seeks to avert sharp stock builds due to slowing demand. Some members also have an eye on the prices needed to finance higher spending requirements, though official OPEC statements shun the concept of an official price target. Market fundamentals do look weak, but uncertainty remains over winter demand, new supply project timings and risks facing producers like Iraq and Nigeria. Recent developments in Azerbaijan and the US GOM again cut non-OPEC supply for 4Q08 and 1Q09, albeit supply changes this month lag those for demand. We also need to watch a rising 'miscellaneous to balance' for 2Q08 and 3Q08. By definition, this component of the balance is not captured in official data. It may comprise non-OECD stock build, unaccounted demand or over-stated supply. So it may, in time, feed through to tighten otherwise sluggish 2009 fundamentals.

A recent pause for breath in prices around $60/bbl WTI, the far-end of the futures strip still around $85/bbl, and persistently strong distillate cracks collectively point to a possible eventual rebound. As noted before, the current credit squeeze is not just a demand-side issue for oil. Slowing oil sector investment in 2009 sows the seeds of a sharp tightening in market fundamentals if major projects are delayed, the impact being felt three to five years hence after economic recovery regains a foothold. The release of the IEA's *World Energy Outlook (WEO)* this week throws these issues into sharper focus. In the end, concerns over the adequacy of investment and re-emerging market tightness will come to eclipse the current focus on prompt market over-hang. Oil markets remain cyclical, after all, even if the amplitude and frequency of the cycles remains as difficult to plot as ever.

DEMAND

Summary

- **Forecast global oil demand** has been revised down in both 2008 and 2009, given continued weakness in the OECD and another marked downward revision to global GDP prognoses by the IMF. At +2.1% in 2009, global GDP growth is 0.8 percentage points less than the IMF's October estimates. Similarly, global economic activity was lowered by 0.2 percentage points to +3.7%. World oil demand is thus now expected to average 86.2 mb/d in 2008 (+0.1% or +0.1 mb/d versus 2007 and 330 kb/d lower than previously estimated) and 86.5 mb/d in 2009 (+0.4% or +0.4 mb/d compared with the previous year and 670 kb/d lower on average compared with our last report).

- **Oil demand in the OECD** is seen averaging 47.8 mb/d in 2008 (-2.7% or -1.3 mb/d versus 2007) and 47.1 mb/d in 2009 (-1.6% or -0.8 mb/d on a yearly basis), roughly 270 kb/d and 410 kb/d lower, respectively, than previously estimated. Once again, revisions to both North America and Pacific data were significant, reflecting a more pronounced weakening of economic conditions as a result of the financial turmoil. These revisions have been largely carried through to 4Q08. In addition, the IMF now predicts that most OECD countries will face a sharp economic recession in 2009, for the first time since the Second World War, and has also reduced its prognosis for 2008.

Global Oil Demand (2007-2009)

(million barrels per day)

	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.0	3.2	3.1
Americas	31.1	31.0	31.3	31.2	31.1	30.5	30.4	30.1	30.0	30.3	30.0	30.1	30.0	30.0	30.0
Asia/Pacific	25.5	24.9	24.5	25.7	25.1	26.4	25.5	24.7	26.0	25.7	26.8	25.8	24.9	26.5	26.0
Europe	16.0	15.7	16.1	16.4	16.1	16.0	15.6	16.1	16.3	16.0	15.8	15.4	15.9	16.1	15.8
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.4	4.3	4.2	4.2	4.2	4.5	4.5	4.3
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.2
World	**86.2**	**85.1**	**85.7**	**87.1**	**86.1**	**86.9**	**85.8**	**85.5**	**86.6**	**86.2**	**87.1**	**86.0**	**85.9**	**87.3**	**86.5**
Annual Chg (%)	0.5	1.5	1.1	1.4	1.1	0.7	0.8	-0.3	-0.6	0.1	0.2	0.2	0.4	0.8	0.4
Annual Chg (mb/d)	0.4	1.3	0.9	1.2	1.0	0.6	0.6	-0.2	-0.6	0.1	0.2	0.2	0.4	0.7	0.4
Changes from last OMR (mb/d)	0.00	0.00	-0.02	-0.01	-0.01	0.00	0.05	-0.34	-1.02	-0.33	-0.34	-0.18	-0.85	-1.29	-0.67

- **Non-OECD oil demand** is now expected to average 38.4 mb/d in 2008 (+4.0% or +1.5 mb/d and 60 kb/d lower than previously estimated) and 39.5 mb/d in 2009 (+2.9% or +1.1 mb/d compared with the previous year and 260 kb/d lower than in our last report). These revisions are due to softening economic expectations in most emerging countries, as highlighted by the IMF, most notably in 2009, in addition to a reassessment of transportation fuel demand prospects in Asia. So far, however, non-OECD demand growth is still seen offsetting the severe OECD demand contraction.

- **A potential uncertainty regarding these forecasts is the fate of China, which has been one of the main engines of global oil demand growth over the past several years.** The country indeed appears poised for a slowdown given the severity of the financial crisis affecting developed economies, which constitute important markets for Chinese exports. Under the latest IMF assessment, the Chinese economy will expand by 8.5% in 2009, rather than 9.3% under the previous forecast. This, coupled with a re-examination of gasoline and gasoil prospects in 2Q09 and 3Q09, translates into a prognosis of total oil demand growth of 290 kb/d in 2009, roughly 180 kb/d less than previously expected. If the country's economy were to expand by only 7.0% in 2009 – an admittedly low figure, but currently touted by several observers – oil demand growth would be a further 70 kb/d lower (+220 kb/d), a level not seen since the late 1990s. However, China's relatively low oil demand sensitivity suggests that the extent and duration of the recession in OECD countries are actually more relevant to the outlook of global oil demand growth.

Global Overview

This month's report features significant downward adjustments to our demand forecasts, both for 2008 and 2009. This is very much related to the dramatic worsening of global economic conditions over the past few weeks, as a result of the ongoing financial crisis. In an unprecedented move, the IMF revised its economic assumptions in early November, less than one month after releasing its latest *World Economic Outlook* and ahead of the G20 meeting scheduled on 15 November.

The Fund now sees advanced economies unable to escape recession: collectively, these are bound to contract by at least 0.2% in 2009, for the first time since the Second World War, instead of growing by 0.5% as forecast in October. In addition, their GDP growth outlook for 2008 has also been slightly adjusted down to 1.4% for the year, in anticipation of an even sharper contraction in both 3Q08 and 4Q08.

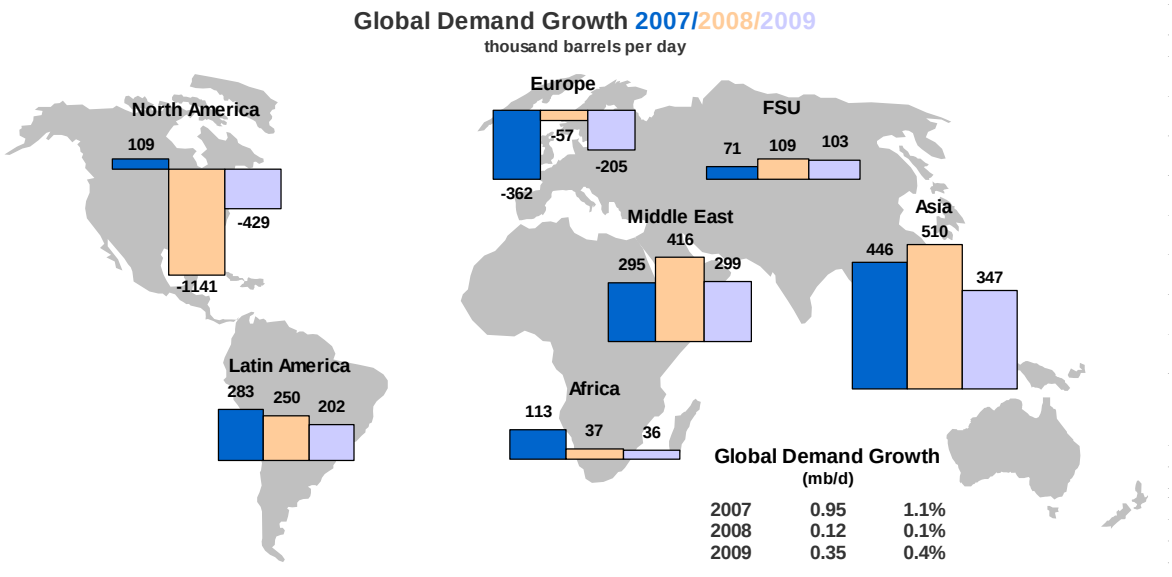
Emerging and developing economies will also suffer the consequences of the global slowdown. Growth prospects for these countries as a whole have been revised down by a fifth of a percentage point in 2008 to 6.8% and slashed by almost a full percentage point to 5.3% in 2009. Nevertheless, questions hang on the fate of the largest emerging countries, most notably China, and what slowing economic activity means in terms of oil demand (see *What If?*).

Real GDP Growth
IMF WEO, November 2008 Update

% change	2008	2009
WORLD	**3.65**	**2.13**
OECD	**1.41**	**(0.21)**
OECD, North America	1.38	(0.49)
OECD, Europe	1.44	(0.21)
OECD, Pacific	1.40	0.51
Non-OECD	**6.83**	**5.30**
Africa	5.13	4.44
Latin America	5.24	2.93
China (excl. Hong Kong)	9.70	8.50
Other Asia	6.18	4.91
Non-OECD Europe	5.89	3.25
FSU	6.65	3.31
Middle East	5.41	4.75

Current vs. Previous
October 2008

WORLD	**(0.16)**	**(0.81)**
OECD	**(0.15)**	**(0.78)**
OECD, North America	(0.17)	(0.78)
OECD, Europe	(0.14)	(0.78)
OECD, Pacific	(0.15)	(0.77)
Non-OECD	**(0.17)**	**(0.85)**
Africa	(0.70)	(1.26)
Latin America	(0.07)	(0.67)
China (excl. Hong Kong)	(0.04)	(0.75)
Other Asia	(0.08)	(0.46)
Non-OECD Europe	(0.44)	(1.14)
FSU	(0.22)	(2.09)
Middle East	(0.28)	(0.53)



Overall, the global economy is poised to expand by roughly 3.7% and 2.1% in 2008 and 2009, respectively, sharply down from the IMF's October prognosis (3.8% and 2.9%). This report – which uses IMF assumptions in its econometric model – has thus incorporated these changes. In addition, we have lowered our oil price assumption to $80/bbl in 2009 (based on the forward curve at the time of writing), versus the $110/bbl hypothesis that we had kept over the past three months (however, given the

economic contraction, a lower price will only have a very limited effect upon oil demand). Consequently, we have revised down global demand by 0.3 mb/d in 2008 and by 0.7 mb/d in 2009, to 86.2 mb/d and 86.5 mb/d, respectively. Demand growth this year is now expected to be a paltry 0.1 mb/d, rising to only 0.4 mb/d next year. It should also be noted that global demand appears to have contracted in 3Q08, for the first time since 1Q02, a trend expected to continue in 4Q08.

OECD

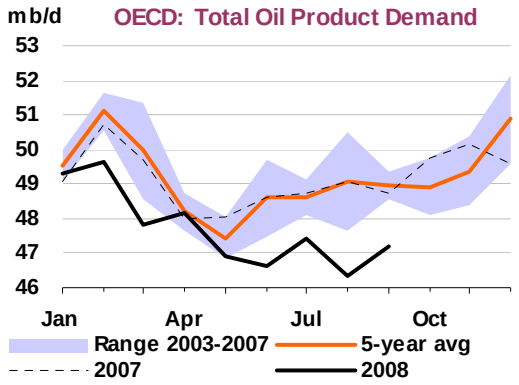
OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 3.1% year-on-year in September, according to preliminary data, with gains in Europe unable to offset losses in North America and the Pacific. Demand rebounded by 2.3% in **OECD Europe**, mostly on the back of strong heating oil deliveries ahead of the winter. By contrast, in **OECD North America** (which includes US Territories), oil product demand contracted by 5.7% given persisting weakness across all product categories, most notably transportation fuels, in addition to hurricane disruptions. In **OECD Pacific**, demand fell by 5.3%, dragged down by very weak Japanese deliveries.

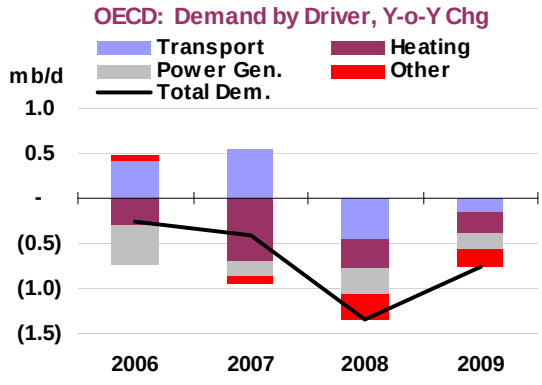
OECD Demand based on Adjusted Preliminary Submissions - September 2008
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.27**	**-4.7**	**1.76**	**-2.0**	**3.81**	**-7.0**	**0.85**	**-21.4**	**0.92**	**-21.3**	**6.05**	**-1.96**	**23.66**	**-5.7**
US50	8.70	-6.0	1.53	-1.9	3.27	-10.0	0.36	-31.9	0.48	-29.4	4.63	-2.7	18.98	-7.0
Canada	0.74	-1.6	0.12	-0.1	0.20	-0.8	0.34	-7.1	0.17	3.6	0.76	-2.0	2.31	-2.1
Mexico	0.77	7.5	0.06	-9.8	0.29	9.8	0.13	9.8	0.19	-23.4	0.61	3.8	2.05	2.5
OECD Europe	**2.44**	**-2.1**	**1.39**	**1.4**	**4.51**	**2.0**	**2.13**	**11.8**	**1.67**	**-1.4**	**3.78**	**2.7**	**15.93**	**2.3**
Germany	0.50	1.7	0.21	0.9	0.72	8.7	0.63	35.9	0.20	16.8	0.65	10.6	2.91	12.6
United Kingdom	0.38	-5.2	0.33	0.3	0.47	-0.6	0.14	-9.3	0.07	-17.5	0.32	-1.3	1.71	-3.2
France	0.22	-1.8	0.17	1.0	0.69	5.1	0.41	24.8	0.10	2.0	0.49	5.7	2.08	7.3
Italy	0.30	-3.0	0.10	-4.1	0.58	5.2	0.10	6.4	0.23	3.0	0.37	-4.1	1.69	0.7
Spain	0.15	-2.9	0.14	4.7	0.52	1.5	0.18	-1.4	0.21	-3.6	0.35	-1.8	1.54	-0.5
OECD Pacific	**1.54**	**-6.0**	**0.59**	**-19.9**	**1.24**	**-0.5**	**0.43**	**-16.3**	**0.86**	**-8.8**	**2.95**	**-0.3**	**7.61**	**-5.3**
Japan	0.99	-8.8	0.33	-27.4	0.60	-4.8	0.30	-19.4	0.50	-12.3	1.60	-10.7	4.31	-11.9
Korea	0.18	-0.6	0.14	-15.0	0.27	-0.2	0.11	-9.0	0.32	-4.4	1.15	18.9	2.17	6.5
Australia	0.32	-1.0	0.10	1.9	0.32	7.7	0.02	-0.4	0.04	-2.2	0.17	1.0	0.97	2.3
OECD Total	**14.26**	**-4.4**	**3.74**	**-4.2**	**9.57**	**-2.1**	**3.41**	**-2.5**	**3.45**	**-9.3**	**12.78**	**-0.2**	**47.21**	**-3.1**

* Including US territories

August downward revisions to preliminary data, meanwhile, were massive (1.1 mb/d). OECD demand actually contracted by 5.6% during that month, instead of -3.5% as previously estimated. This translates into a 340 kb/d downward adjustment for 3Q08. These changes came essentially from OECD North America (-240 kb/d, mostly from the US) and OECD Pacific (-210 kb/d, essentially Japan). By contrast, revisions in OECD Europe were positive (+100 kb/d). Most of these changes have been largely carried through to 4Q08. Coupled with a weaker economic growth prognosis, OECD demand is now forecast at 47.8 mb/d in 2008 (-2.7% or -1.3 mb/d versus 2007 and 270 kb/d lower than our last report). In 2009, demand is seen contracting by 1.6% on a yearly basis (roughly -0.8 mb/d) to 47.1 mb/d, 410 kb/d lower on average when compared with our previous estimate.





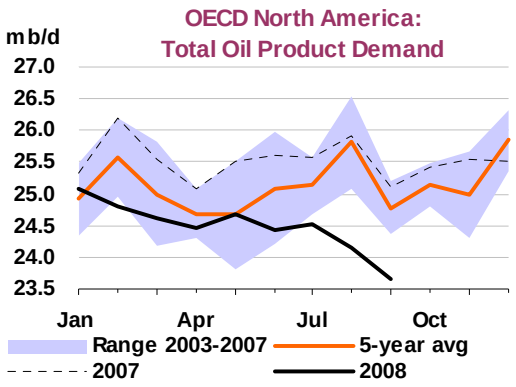
Total OECD Demand by Product
(million barrels per day)

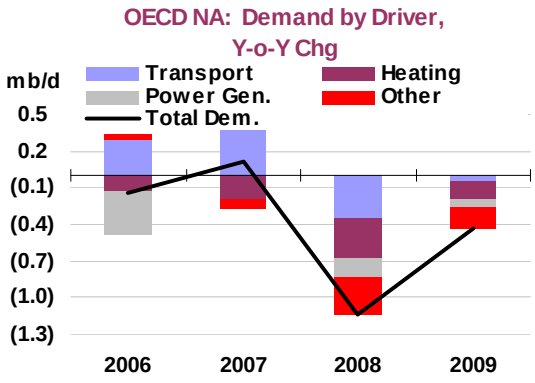
	2007	2008	3Q07	4Q07	1Q08	2Q08	Jun 08	Jul 08	Aug 08*	Latest month vs. Jul 08	Latest month vs. Aug 07
LPG & Ethane	4.82	4.76	4.45	4.93	5.16	4.58	4.50	4.57	4.45	-0.13	-0.03
Naphtha	3.24	3.17	3.19	3.28	3.28	3.00	2.94	3.01	3.09	0.08	-0.12
Motor Gasoline	14.92	14.47	15.31	14.83	14.23	14.73	14.53	14.74	14.60	-0.14	-0.94
Jet & Kerosene	4.12	4.04	3.97	4.23	4.34	3.87	3.89	3.87	3.84	-0.03	-0.17
Gas/Diesel Oil	13.14	12.91	12.86	13.59	13.39	12.61	12.16	12.49	11.99	-0.50	-0.75
Residual Fuel Oil	3.95	3.65	3.80	3.93	3.87	3.61	3.59	3.69	3.45	-0.23	-0.37
Other Products	4.98	4.83	5.25	5.04	4.63	4.83	5.02	5.06	4.90	-0.16	-0.38
Total Products	**49.18**	**47.83**	**48.84**	**49.83**	**48.90**	**47.23**	**46.62**	**47.43**	**46.32**	**-1.11**	**-2.76**

* Latest official OECD submissions (MOS)

North America

Oil product demand in North America (including US Territories) shrank by 5.7% year-on-year in September, according to preliminary data, for the ninth month in a row. Demand weakness is mostly centred in the US (-6.9% year-on-year) and Canada (-2.1%), more than offsetting Mexican growth (+2.5%). Revisions to August preliminary data were large (almost -0.7 mb/d): demand in OECD North America actually plummeted by 6.8% year-on-year during that month, almost twice as much as previously estimated. Regional oil demand is now seen averaging 24.4 mb/d in 2008 (-4.5% or -1.1 mb/d on a yearly basis and 190 kb/d lower when compared with our last report) and 24.0 mb/d in 2009 (-1.8% or -430 kb/d), 270 kb/d lower than our last assessment.



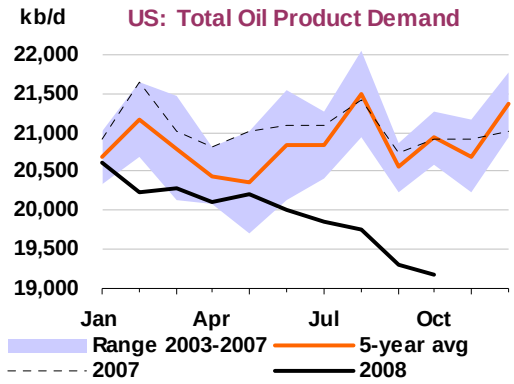


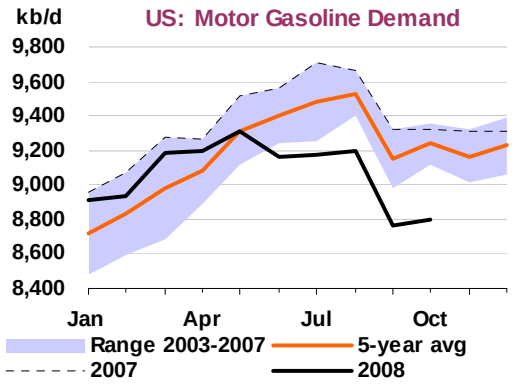
OECD North America Demand by Product
(million barrels per day)

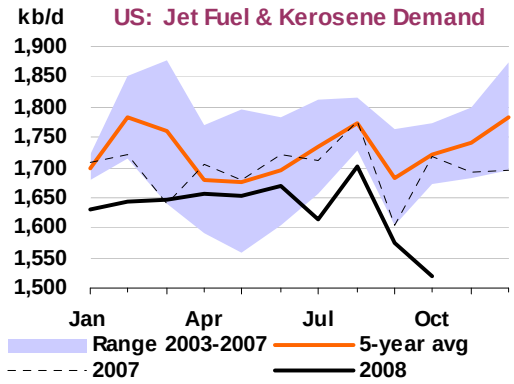
	2007	2008	3Q07	4Q07	1Q08	2Q08	Jun 08	Jul 08	Aug 08*	Latest month vs. Jul 08	Latest month vs. Aug 07
LPG & Ethane	2.92	2.83	2.70	2.97	3.10	2.63	2.62	2.76	2.72	-0.04	0.01
Naphtha	0.41	0.37	0.42	0.41	0.36	0.37	0.34	0.41	0.30	-0.10	-0.09
Motor Gasoline	10.84	10.57	11.07	10.84	10.47	10.74	10.68	10.74	10.72	-0.01	-0.48
Jet & Kerosene	1.89	1.83	1.91	1.90	1.84	1.84	1.86	1.84	1.90	0.06	-0.09
Gas/Diesel Oil	5.24	4.94	5.13	5.24	5.29	4.96	4.77	4.76	4.67	-0.08	-0.52
Residual Fuel Oil	1.25	1.10	1.21	1.18	1.14	1.22	1.25	1.23	1.07	-0.16	-0.18
Other Products	2.97	2.75	3.11	2.95	2.63	2.77	2.91	2.81	2.77	-0.03	-0.42
Total Products	**25.53**	**24.39**	**25.54**	**25.49**	**24.84**	**24.53**	**24.43**	**24.53**	**24.16**	**-0.37**	**-1.77**

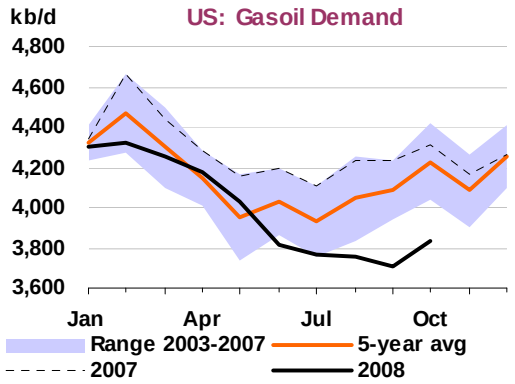
* Latest official OECD submissions (MOS)

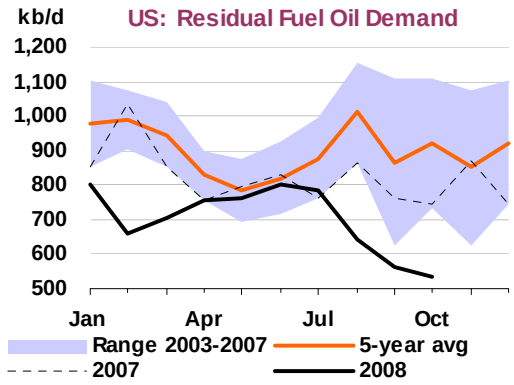
Adjusted preliminary data in the continental **United States** for October provide new evidence on the sharp fall in oil demand, particularly since last summer. Demand – battered successively by the financial crisis, high oil prices, devastating hurricanes and the gradual economic slowdown – has declined uninterruptedly since August 2007. Inland deliveries – a proxy of oil product demand – contracted by 8.5% year-on-year in October, with all product categories bar LPG and naphtha registering significant contractions. Although the plunge is also probably related to secondary and tertiary destocking, it has nonetheless been quite brutal, as illustrated in the following graphs:

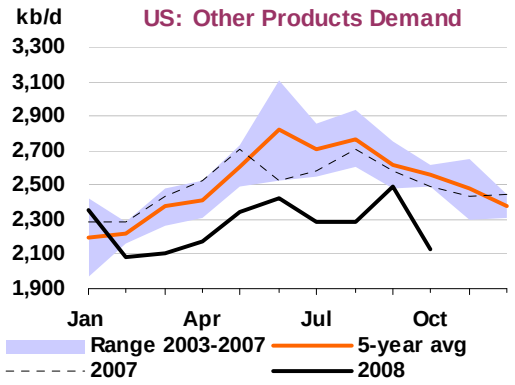




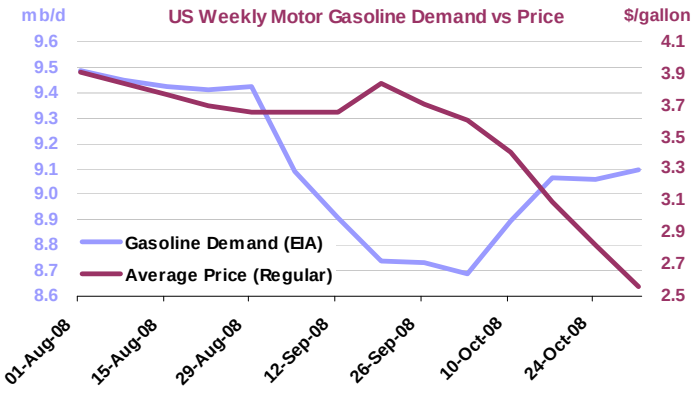








Although oil prices have dropped quite markedly from their summer highs – with retail gasoline now sold below the psychological barrier of $3/gallon – it remains to be seen whether cheaper pump prices are enough to encourage increased demand in the coming months. Indeed, as this report has repeatedly argued, US demand is far more responsive to economic activity than to prices. With the economy headed towards recession – GDP contracted by 0.3% year-on-year in 3Q08, and the IMF is now predicting a 0.7% contraction for 2009 as a whole as private consumption drops – it is unlikely that, for example, US motorists will revert to driving and purchasing gas-guzzling SUVs. If anything, the financial position of car manufacturers is getting worse by the day as SUV and light truck sales continue to plunge at annual rates surpassing 30% (-32% in October, the lowest level since

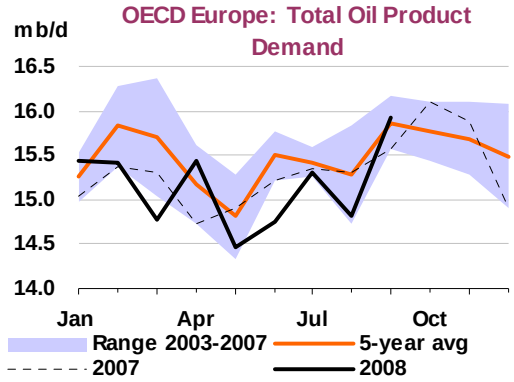


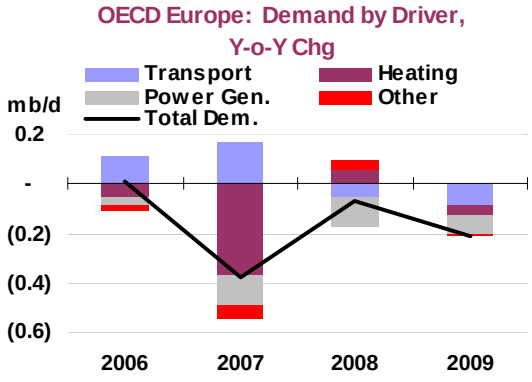
February 1983). One of the Big Three – General Motors, whose sales contracted by an unprecedented 45% in October – recently announced that it might go bankrupt by early next year unless the federal government bails it out.

On the basis of the latest IMF economic assumptions and observed revisions to current demand, US oil demand is poised to contract by 5.4% year-on-year in 2008 to 19.6 mb/d (some 170 kb/d less than our previous report) and by 2.0% in 2009 to 19.2 mb/d (about 230 kb/d less than previously anticipated). Next year's fall is expected to be less abrupt than this year, for two reasons. First, we assume that most of the potential demand destruction will have been largely completed by then – for example, the turnover of the vehicle fleet in favour of more efficient units is arguably much more limited during a sharp economic recession. Second, oil prices next year will likely be lower on average.

Europe

Oil product demand in Europe rose by 2.3% year-on-year in September, according to preliminary inland delivery data, mostly buoyed by strong deliveries of heating oil (+11.8%) and diesel (+2.0%). These offset losses in other product categories, notably gasoline (-2.1%) and residual fuel oil (-1.4%). Revisions to August annual submissions, meanwhile, were relatively minor (-85 kb/d), given stronger-than-anticipated demand in France, Germany and Italy, which offset downward adjustments in the United Kingdom and elsewhere.





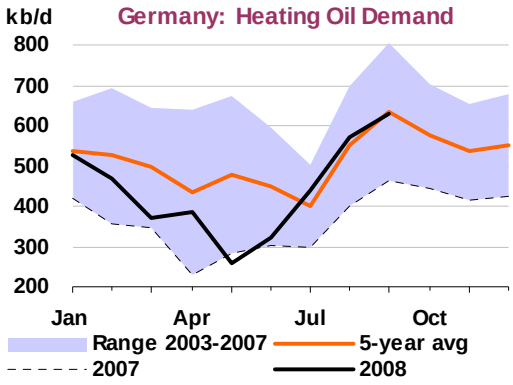
Demand in OECD Europe is thus expected to average 15.2 mb/d in 2008 and 15.0 mb/d in 2009, implying a year-on-year decline of 0.5% and 1.4%, respectively. Compared with our previous forecast, this is about 25 kb/d higher in 2008 and 50 kb/d lower in 2009, on the back of bleak GDP growth prognoses – *all* key European countries are expected to be in recession next year.

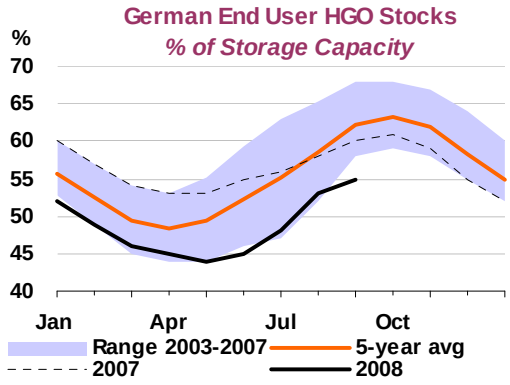
OECD Europe Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Jun 08	Jul 08	Aug 08*	Latest month vs. Jul 08	Latest month vs. Aug 07
LPG & Ethane	0.95	0.96	0.86	0.98	1.06	0.98	0.95	0.89	0.82	-0.06	-0.01
Naphtha	1.18	1.16	1.14	1.20	1.23	1.07	1.04	0.99	1.17	0.18	0.01
Motor Gasoline	2.51	2.37	2.60	2.42	2.29	2.44	2.42	2.49	2.38	-0.11	-0.28
Jet & Kerosene	1.30	1.31	1.40	1.29	1.25	1.31	1.37	1.42	1.39	-0.03	-0.03
Gas/Diesel Oil	6.10	6.23	6.05	6.48	6.30	5.93	5.78	6.14	5.84	-0.30	-0.09
Residual Fuel Oil	1.73	1.61	1.67	1.73	1.67	1.51	1.49	1.60	1.54	-0.06	-0.09
Other Products	1.53	1.58	1.68	1.52	1.41	1.63	1.70	1.77	1.68	-0.10	0.01
Total Products	**15.30**	**15.23**	**15.41**	**15.62**	**15.20**	**14.88**	**14.75**	**15.30**	**14.82**	**-0.48**	**-0.48**

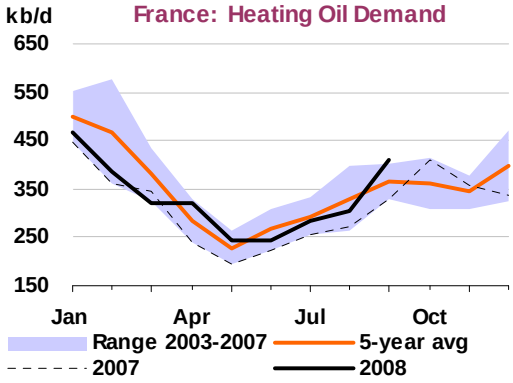
* Latest official OECD submissions (MOS)

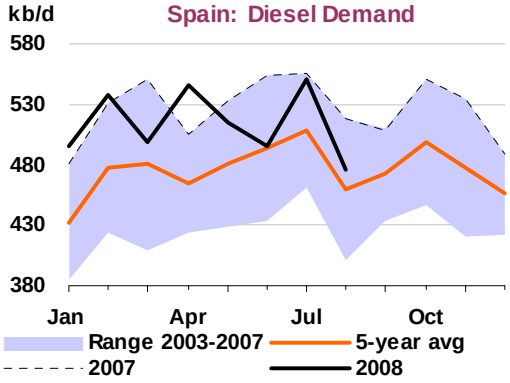
Inland deliveries in **Germany** jumped by 12.6% year-on-year in September, according to preliminary estimates, given the strong rebound in diesel (+8.7%) and heating oil deliveries (+35.9%). Heating oil consumer stocks averaged 55% of capacity by end-September, slightly higher than a month earlier (53%) but still below the level registered in September 2007 (60%), which suggests that average demand this year will be much weaker than in 2007.



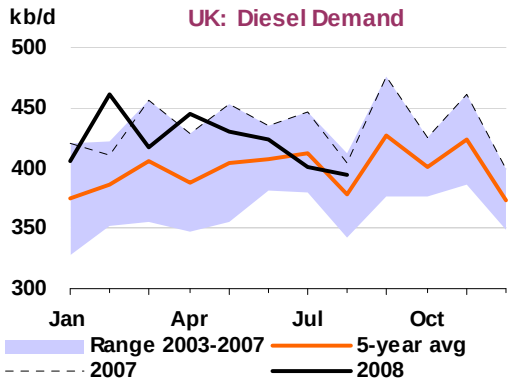


In **France**, total oil demand also increased strongly (+7.3% year-on-year in September), on the back of buoyant deliveries of diesel (+5.1%) and heating oil (+24.8%). However, the boost provided by the build-up of heating oil stocks ahead of the winter should not obscure the fact that oil demand is expected to contract markedly in 2009 in both Germany and France, since both countries are expected to face economic recession, according to the IMF.



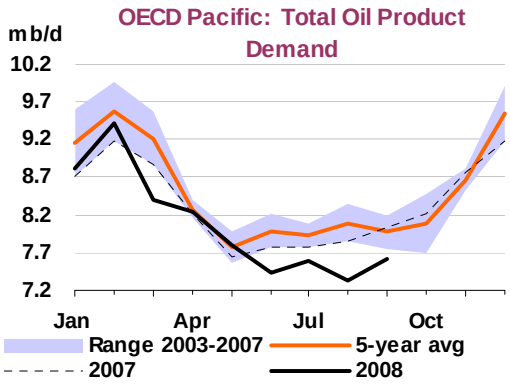


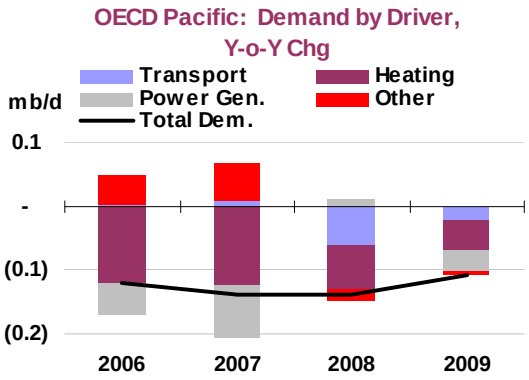
In **Italy**, deliveries rose by a more modest 0.7% year-on-year in September, thanks in part to a rebound in diesel demand (+5.2%). It is also worth noting an uptick in fuel oil demand (+3.0%), which was related to peak summer electricity demand (thus unlikely to last, as the country continues to shift towards natural gas). In **Spain**, by contrast, demand plummeted by 8.0% year-on-year in August (the last month for which data are available), as all product categories registered sharp declines, reflecting the country's worsening economic prospects. A similar situation prevails in the **United Kingdom**, with demand plunging by 7.7% in August. In the latter two countries, diesel deliveries – which correlate strongly with economic activity – are declining markedly. It should be noted, though, that the 2009 recession is expected to be far more pronounced in the UK, whose economy will contract by 1.3%, according to the IMF (more than any other European country).



Pacific

According to preliminary data, oil product demand in the Pacific plummeted by 5.3% year-on-year in September, given extremely feeble Japanese demand. The weakness observed last month with respect to Japan's deliveries of gasoline, residual fuel oil and crude for direct burning in power generation persisted, dragging down regional demand despite strong gains in Australia, Korea and New Zealand.





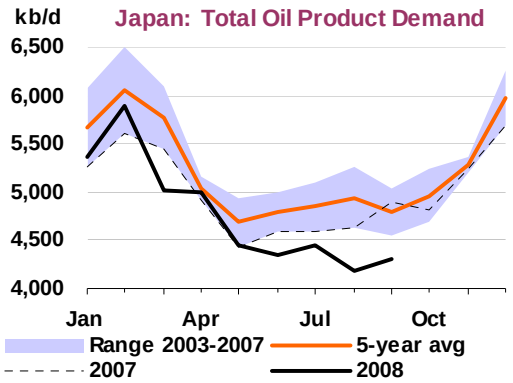
Meanwhile, downward revisions to August preliminary data stood at 170 kb/d: demand in OECD Pacific contracted by 6.6% year-on-year during that month, about a third more than previously estimated. As a result, oil demand in the Pacific should average 8.2 mb/d in 2008 (-1.7% or -140 kb/d on a yearly basis) and 8.1 mb/d in 2009 (-1.3% or -110 kb/d). These prognoses are down in both years by about 100 kb/d when compared with our last report, given the worsening outlook for the Japanese economy, which is also expected to be in recession next year.

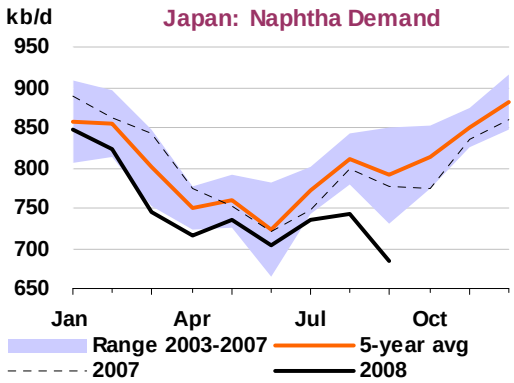
OECD Pacific Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Jun 08	Jul 08	Aug 08*	Latest month vs. Jul 08	Latest month vs. Aug 07
LPG & Ethane	0.96	0.96	0.89	0.99	1.01	0.97	0.92	0.93	0.90	-0.03	-0.03
Naphtha	1.65	1.63	1.63	1.66	1.69	1.55	1.56	1.61	1.62	0.01	-0.04
Motor Gasoline	1.57	1.53	1.64	1.57	1.48	1.55	1.42	1.51	1.50	-0.01	-0.17
Jet & Kerosene	0.93	0.90	0.66	1.04	1.24	0.72	0.65	0.62	0.55	-0.07	-0.06
Gas/Diesel Oil	1.80	1.74	1.68	1.87	1.80	1.72	1.61	1.59	1.48	-0.12	-0.14
Residual Fuel Oil	0.96	0.94	0.92	1.01	1.06	0.89	0.85	0.86	0.84	-0.02	-0.09
Other Products	0.48	0.51	0.46	0.56	0.59	0.42	0.41	0.48	0.45	-0.04	0.02
Total Products	**8.35**	**8.21**	**7.89**	**8.72**	**8.87**	**7.82**	**7.43**	**7.60**	**7.33**	**-0.26**	**-0.52**

* Latest official OECD submissions (MOS)

Oil demand in **Japan** tumbled by 11.9% in September as deliveries fell across all product categories bar LPG, according to preliminary figures. Moreover, the contraction in August was actually larger than previously estimated (-9.8% year-on-year instead of -6.9%), suggesting that naphtha backflows (listed in the 'other products' category) continue to be underreported in preliminary demand assessments.





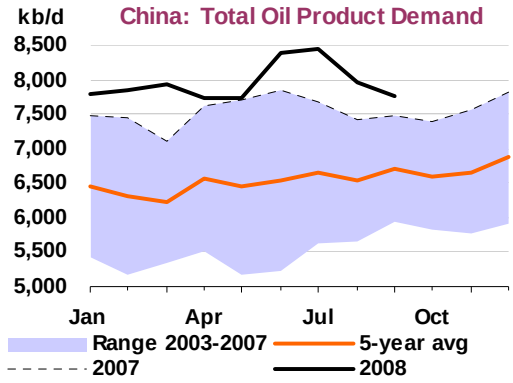
Even though the country's demand decline is largely structural in nature, the steep year-on-year drop in deliveries – for the fourth consecutive month – is also indicative of the problems facing the Japanese economy. For example, products such as naphtha (down by 11.8% year-on-year in September) tend to

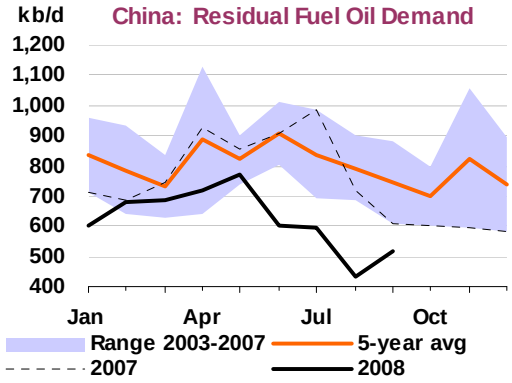
correlate with economic activity; given that Japan's economy is expected to contract by 0.2% in 2009, the outlook for demand growth remains bearish, with oil demand falling by 2.9% to 4.7 mb/d, a similar reduction as in 2008.

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) rose by an estimated 3.9% year-on-year in September. Compared with the summer months, this somewhat lower growth rate – more in line with levels seen in late 2007 and early 2008 – is indicative of reduced imports, notably of gasoline and gasoil, following the conclusion of the Olympic Games. And yet deliveries of both products remain strong, rising by 11.2% and 12.5%, respectively. By contrast, jet fuel/kerosene deliveries contracted by 9.9%, suggesting lower post-Olympics travel, while residual fuel oil demand – the feedstock of choice for 'teapot' refineries – fell for the fourteenth month in a row, with deliveries contracting by 15.2% year-on-year given persistently poor margins.





As noted earlier, the IMF cut its GDP growth forecasts for China (from 9.8% to 9.7% in 2008 and from 9.3% to 8.5% in 2009), since the country's main export markets (the US and Europe) are poised to contract sharply next year. As such, oil demand is expected to be somewhat weaker. Consequently, we have revised down our Chinese oil demand prognoses: demand is now seen rising by 5.2% to 7.9 mb/d in 2008 (roughly +400 kb/d, some 60 b/d below our previous assessment) and by only 3.7% to 8.2 mb/d in 2009 (+290 kb/d, 180 kb/d less than previously anticipated). However, as discussed below, some observers anticipate that the Chinese economy will grow at an even slower pace; should these projections materialise, this forecast would eventually be revised down further.

China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	669	617	627	-52	11	-7.8	1.7
Naphtha	812	809	875	-3	66	-0.4	8.1
Motor Gasoline	1,257	1,453	1,519	196	66	15.6	4.5
Jet & Kerosene	280	295	314	16	19	5.6	6.3
Gas/Diesel Oil	2,576	2,899	2,998	323	99	12.5	3.4
Residual Fuel Oil	744	607	646	-137	39	-18.4	6.5
Other Products	1,204	1,258	1,253	54	-5	4.5	-0.4
Total Products	**7,542**	**7,938**	**8,232**	**396**	**294**	**5.2**	**3.7**

What If?

A key uncertainty impinging upon the oil market concerns the prospects of large emerging economies, most notably China, which has been one of the main engines of global oil demand *growth* over the past several years. At this point, given the severity of the financial crisis affecting developed economies, which constitute important markets for Chinese exports, it has become clear that the country will not escape unscathed – the much cited 'decoupling' will be much less pronounced in such a gloomy international environment, which even a generous boost in domestic demand will struggle to offset. Under the latest IMF assessment, the Chinese economy will expand by 8.5% in 2009 (rather than by 9.3%, as forecast only last month). Coupled with a re-examination of gasoline and gasoil prospects, this implies that 2009 oil demand (+290 kb/d) should grow by about a third less than anticipated in our previous report.

What would happen to Chinese oil demand if economic growth were to be lower? A sensitivity analysis – taking a lower GDP growth figure, which some analysts have advanced – is illustrative. Assuming that the country's economy were to expand by 9.2% in 2008 (rather than 9.7%) and by 7.0% in 2009 (instead of 8.5%), and that the oil price averaged $100/bbl this year and $80/bbl next, oil demand growth would be some 70 kb/d lower (+220 kb/d). Admittedly, this would be a level not seen since the late 1990s. However, although this hypothetical drop in oil demand growth versus the current base scenario (-25%) may seem high in Chinese terms, it is relatively marginal in a global scale, suggesting that the extent and duration of the recession in OECD countries is actually much more pertinent to global oil demand than developments in China.



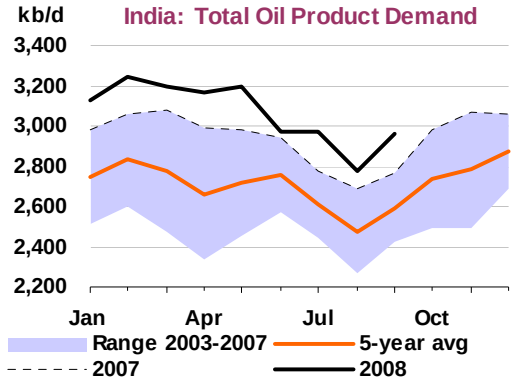
Moreover, this scenario may appear to be too pessimistic – although some observers have advanced even lower figures for economic expansion in 2009 (of around 6.0%). The risks faced by the Chinese economy are all too real – not only contracting export markets but, perhaps more importantly, a much lower pace of investment growth and rising unemployment, notably in the export and construction sectors, and cooling domestic demand, as evidenced by weaker real estate markets and falling car sales, for example. However, this does not mean that a sharp slowdown is inescapable, since Beijing has powerful stimulus tools at its disposal.

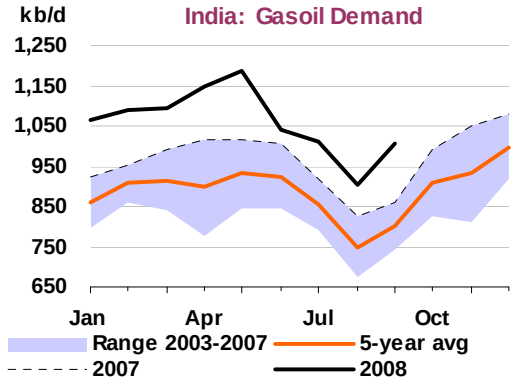
Indeed, aggressive fiscal and monetary policies – including public infrastructure investment (particularly in railway transportation and low-cost housing), social spending and subsidies (notably in rural areas), tax and VAT cuts, lower interest and mortgage rates, export rebates and a depreciating currency – could well help sustain domestic consumption and hence growth at around 8.0% in 2009. This figure is actually considered by many analysts to be the lowest acceptable to ensure economic and social stability. Nevertheless, for domestic consumption to become the economy's principal growth driver, China's high savings rate will need to fall – but this will only occur if the structural reasons that prompt Chinese citizens to save in the first place (mainly the lack of social security, retirement concerns, poor health care and urban migration) are properly addressed.

The $590 billion fiscal package recently unveiled by the government will presumably aim to tackle these issues. At the time of writing, however, several uncertainties remained regarding the stimulus plan, particularly its actual size (i.e., new versus previously budgeted spending), timeframe (the funds are to be invested gradually over the next two years, rather than immediately), sources of funds (central government, local governments and private actors) and details on proposed spending measures (notably regarding social priorities, such as health and housing).

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – surged by 7.0% year-on-year in September, essentially supported by booming gasoil demand (+17.3%). As noted in previous reports, gasoil sales have been boosted by distorting pricing policies. The fuel is now used to power both vehicles (trucks and taxis, with the latter using an adulterated mixture of gasoil and kerosene) and electricity generators. It should also be noted that naphtha demand (+8.8%) remains quite strong since last summer; the fuel has become cheaper than natural gas (LNG), and many fertiliser companies are reportedly stepping up their naphtha purchases.



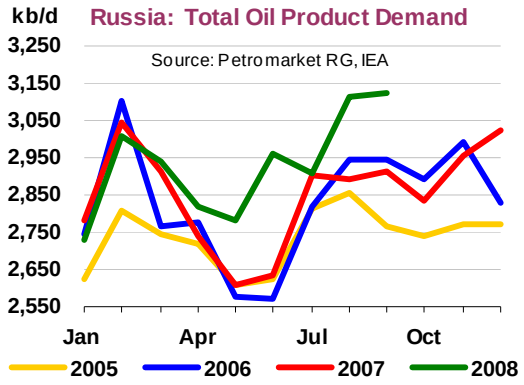


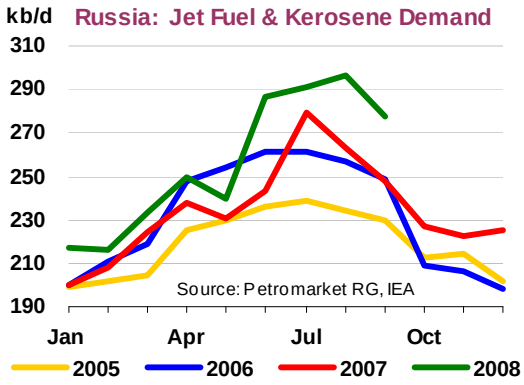
The government is still mulling whether to cut end-user prices on gasoline and gasoil. By contrast, jet fuel prices have steadily fallen since September (by about 25%). Yet Indian prices remain among the highest in the world because of steep sales taxes imposed by the country's local governments, which average around 25% in the states hosting the busiest airports (Chennai, Bangalore, Mumbai and New Delhi) and are as high as 33% in other regions. As a result, Indian airline companies have become heavily indebted – collectively, they reportedly owe state-owned oil companies (Indian Oil Corporation, Bharat Petroleum Corporation Limited and Hindustan Petroleum Corporation Limited) over $500 million, and their combined losses are expected to reach $1.5 billion this year. By lowering prices (which are now to be revised every 15 days instead of the current monthly cycle) and extending the credit period (from the current 60 days to 90 days), the oil companies are throwing a lifeline to the struggling carriers. Nevertheless, unless local taxes are lowered – an unlikely occurrence at this point – airline companies will probably continue to face serious financial woes, despite lower international oil prices.

Looking ahead, our oil demand forecast is marginally changed compared with our last report, with Indian demand expected to average 3.1 mb/d in 2008 (+5.0% on a yearly basis) and 3.2 mb/d in 2009 (+4.0%). Even though the IMF revised its 2009 economic growth prognosis for India (from 6.9% to 6.3%), the growth in transportation fuels – and hence oil demand – is prone to continue. This month, the Indian car manufacturer Tata is expected to launch its $2,500 Nano car, which should replace rickshaws and three-wheelers. The company hopes to sell some 150,000 units per year, and is likely to be followed in this market segment by other firms such as Maruti and Bajaj.

According to preliminary data, oil demand in **Russia** expanded by 7.2% year-on-year in September, on the back of strong deliveries of transportation fuels (gasoline, jet fuel/kerosene and diesel rose by 8.5%, 11.7% and 17.9% year-on-year, respectively). Overall, total oil product demand is expected to grow by 3.1% to 2.9 mb/d in 2008. The pace should be slower in 2009 (+2.9% to slightly above 3.0 mb/d) because of the global financial turmoil, on the one hand, and lower oil revenues, on the other. The IMF almost halved its Russian economic growth prediction for 2009 (from 5.5% to 3.5%); such a moderation in economic activity will likely curb growth rates among all product categories with the exception of fuel oil, which is anticipated to account for an increasing share of power generation.

The legal battle between Russia's antimonopoly agency (FAS) and the country's main oil companies (Gazprom Neft, Lukoil, Rosneft, Surgutneftegaz and TNK-BP), which erupted in July, is seemingly coming to a close. In two rulings (in September and October), the FAS stated that four out of the country's five biggest companies – Gazprom Neft, Lukoil, Rosneft and TNK-BP – were guilty of violating antimonopoly legislation. The companies are accused of abusing their dominant position, allegedly by colluding to set up and maintain high prices for gasoline, gasoil, jet fuel and fuel oil (the investigation against Surgutneftegaz was dropped because of lack of evidence). Although at this point the ensuing penalties or redressing actions are unclear, the companies could be fined by anything between 0.01% and 0.15% of their sales revenues on the incriminated products.





In the end, the companies' legal problems stem from the fact that Russian pricing is not transparent. Jet fuel prices are usually linked to Kortes – a weekly Russian assessment of regional refinery prices, which is considered by some players to be highly inaccurate – rather than to international standards. Moreover, competition is limited, with most Russian airports supplied by one company – usually the airport itself or a third party affiliated with it. As such, refuelling fees tend to be three to four times higher than in Europe, particularly in small Russian airports.

Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	304	333	349	28	16	9.3	4.9
Naphtha	243	228	226	-15	-2	-6.1	-1.1
Motor Gasoline	683	725	742	42	17	6.1	2.3
Jet & Kerosene	234	250	256	16	6	6.7	2.3
Gas/Diesel Oil	596	638	658	43	19	7.1	3.0
Residual Fuel Oil	304	254	277	-49	22	-16.2	8.7
Other Products	488	513	519	25	6	5.1	1.2
Total Products	**2,852**	**2,941**	**3,026**	**89**	**84**	**3.1**	**2.9**

Source: Petromarket RG, IEA

SUPPLY

Summary

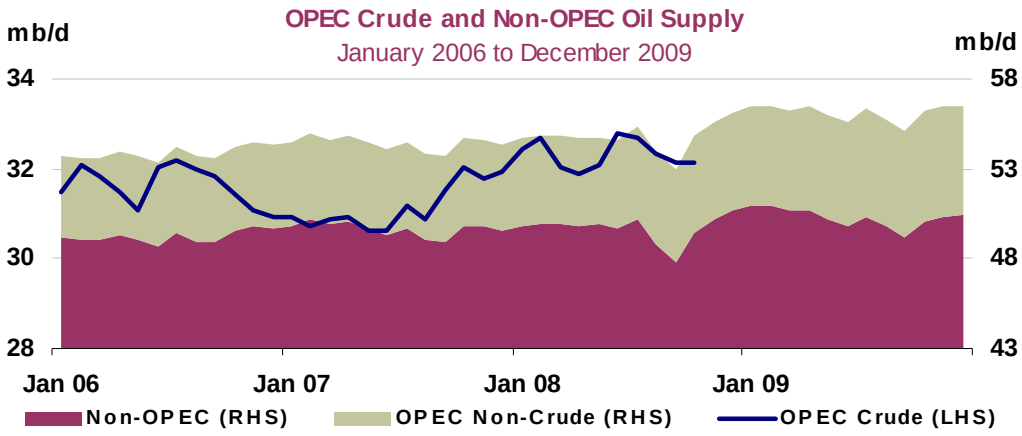
- **Global oil supply** increased by 1.8 mb/d in October to 86.9 mb/d, as both scheduled and unscheduled production outages eased, notably in North America and Europe. OPEC crude supply was largely unchanged from the previous month, although condensate and gas liquids supplies increased. Despite recovering from weak September levels, a year-on-year comparison shows October global supply growth having slowed markedly from the average 1.8 mb/d evident during January-August.

- **Forecast non-OPEC production** is revised down by 85 kb/d for 2008 and by 145 kb/d for 2009. It now totals 49.7 mb/d and 50.3 mb/d in the two years respectively. Adjustments are concentrated in 4Q08 and 1Q09, with recent production stoppages in Azerbaijan and the US Gulf of Mexico (GOM) proving to be more extensive and longer lasting than previously assumed. Canada, Mexico, Australia and India also see significant downward revisions for forecast output. Egypt, Colombia and Malaysia are subject to upward adjustment after production in recent months came in higher than expected.

- **Net growth in non-OPEC output** now stands at 35 kb/d in 2008 and 595 kb/d in 2009. OPEC gas liquids increase by an additional 310 kb/d and 800 kb/d respectively. Year-on year non-OPEC growth is strongest in 1Q09 and 3Q09, partly reflecting recovery from production outages and partly new field start-ups. Brazil, US other liquids, China, and global biofuels underpin 2008 supply, albeit offset by declines elsewhere. In 2009, growth centres on Brazil, Canada, the USA, Azerbaijan, China, Australia and biofuels. Significant declines are likely from Mexico, the North Sea and Russia next year.

- **October OPEC crude supply** was unchanged from September at 32.1 mb/d. Saudi Arabia, Qatar, UAE, Nigeria, Venezuela and Indonesia saw lower supply, but recovery after oilfield/pipeline outages in Iraq, Angola and Libya offset voluntary cuts. OPEC's emergency meeting on 24 October reduced target output for OPEC-11 (excluding Iraq and Indonesia) by 1.5 mb/d from 1 November. The new implied target is 27.3 mb/d, suggesting total OPEC supply around 30.5 mb/d if cuts are fully realised. OPEC effective spare capacity is 2.3 mb/d, and installed capacity is due to rise 0.3 mb/d in 4Q, to 35.8 mb/d.

- **The 'call on OPEC crude and stock change'** is curbed by fully 0.6 mb/d for 4Q08, and by 0.5 mb/d for 2009. Demand-side adjustments, largely on the back of sharply lower IMF economic growth expectations, are the key reason. Non-OPEC supply adjustments this month relate to production outages rather than sharper systematic decline, are focused in 4Q08 and 1Q09, and so fail to provide an offset for weaker demand for 2009 as a whole. The call averages close to 31.1 mb/d in 4Q08, before falling close to 30 mb/d for much of 2009, until 4Q09, when it recovers towards 31 mb/d.



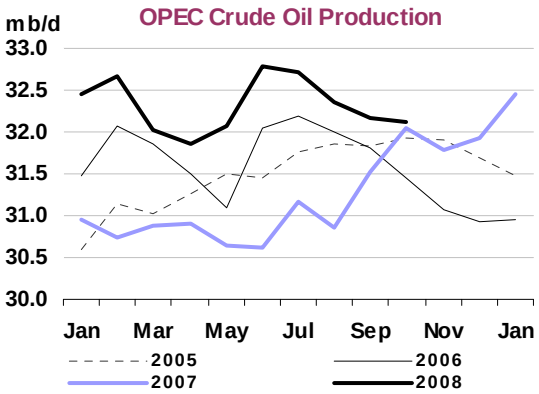
Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

All world oil supply figures for October discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Egypt and Russia are supported by preliminary October supply data.

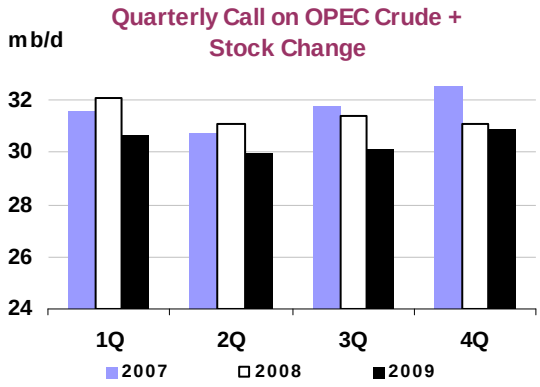
Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –430 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

October OPEC crude supply was largely unchanged from September at 32.1 mb/d. This is around 0.7 mb/d below what we estimate to have been peak June levels close to 32.8 mb/d. Saudi Arabia, Qatar, UAE, Nigeria, Venezuela and Indonesia all saw lower supply. Saudi Arabia and the UAE are estimated to have cut output by around 100 kb/d each, the latter as offshore field maintenance, that will run into November, began. Nigerian supply suffered from crude pipeline outages, which also sharply reduced domestic refinery crude runs at the Warri and Kaduna plants. However, partial recovery after earlier oilfield, pipeline and export outages in Iraq (+135 kb/d), Angola (+75 kb/d) and Libya (+25 kb/d) offset both discretionary and involuntary supply cuts by other producers. Nonetheless, a renewed northern pipeline outage in early November may again cut supply from Iraq this month.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

OPEC's Emergency Meeting on 24 October reduced target output for OPEC-11 (excluding Iraq and Indonesia) by 1.5 mb/d from 1 November (*see OPEC Agrees on 24 October to Curb Supplies*). The new implied target is 27.3 mb/d, suggesting total OPEC supply around 30.5 mb/d if cuts are fully realised and Iraq and Indonesia continue to produce at October levels. OPEC effective spare capacity is 2.3 mb/d. With installed capacity due to rise by 0.3 mb/d in 4Q08 to 35.8 mb/d, *ceteris paribus*, spare capacity is also likely to rise by end-year. Saudi Arabia and, to a lesser extent, Angola and Nigeria account for the bulk of the increase in absolute capacity by end-year as recent field starts ramp up.

OPEC Agrees on 24 October to Curb Supplies

An emergency meeting of OPEC Ministers on 24 October in Vienna was convened to discuss the impact of the global economic/financial crisis on the oil market and particularly the rapid deterioration in prospects for global oil demand. An agreement was reached to cut production targets by a collective 1.5 mb/d from 1 November. Individual production cuts were itemised in the post-meeting communiqué rather than new country-specific output levels, although 27.3 mb/d was cited as the new collective target for the OPEC-11 (excluding Iraq and Indonesia). The implied new target production levels for each of the OPEC-11 are illustrated below, taking recently re-instated target levels dating back to September 2007 as a starting point. Iraq faces no official OPEC production limits, and Indonesia has also been excluded as it will suspend its membership of OPEC at end-2008.

With the meeting coming in late October, after many producers had already informed customers of November contract volumes, it may be a couple of months before the impact and durability of actual production cuts becomes apparent. However, statements from most member countries have stressed that compliance will be strong, and export nominations so far released for December do suggest some cuts are being implemented. Moreover, current scheduled and unscheduled production shut-ins from Angola, Nigeria, Venezuela and the UAE provide those producers with some extra leeway to curb supply, although whether volumes remain off-line for a prolonged period is less certain. It is unlikely that a producer such as Nigeria, for example, whose production and revenues have been impeded for years by Niger Delta unrest, will forestall reinstating production should the opportunity arise. That said, operator Shell has been forced to invoke *force majeure* again on November and December exports, after state NNPC ordered 5% cuts in export volumes.

OPEC Crude Production[1]
(million barrels per day)

	Oct 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Oct 2008 Supply	Capacity end-2008	Current Target	Cut from November	Implied November Target
Algeria	1.37	1.40	0.02	1.46	1.36	-0.07	1.29
Angola[1]	1.82	2.00	0.19	2.05	1.90	-0.10	1.80
Ecuador[1]	0.50	0.50	0.00	0.50	0.52	-0.03	0.49
Iran	3.91	4.10	0.19	4.00	3.82	-0.20	3.62
Kuwait[3]	2.63	2.64	0.00	2.65	2.53	-0.13	2.40
Libya	1.73	1.80	0.08	1.81	1.71	-0.09	1.62
Nigeria[4]	1.94	2.60	0.66	2.65	2.16	-0.11	2.05
Qatar	0.85	0.88	0.03	0.90	0.83	-0.04	0.79
Saudi Arabia[3]	9.35	10.80	1.45	11.00	8.94	-0.47	8.48
UAE	2.55	2.85	0.30	2.87	2.57	-0.13	2.43
Venezuela[5]	2.35	2.60	0.25	2.60	2.47	-0.13	2.34
OPEC-11	**28.99**	**32.16**	**3.17**	**32.49**	**28.81**	**-1.50**	**27.31**
Indonesia	0.85	0.87	0.02	0.84			
Iraq	2.29	2.50	0.21	2.50			
Total OPEC	**32.13**	**35.52**	**3.40**	**35.83**			
(excluding Indonesia, Iraq, Nigeria, Venezuela			*2.26)*				

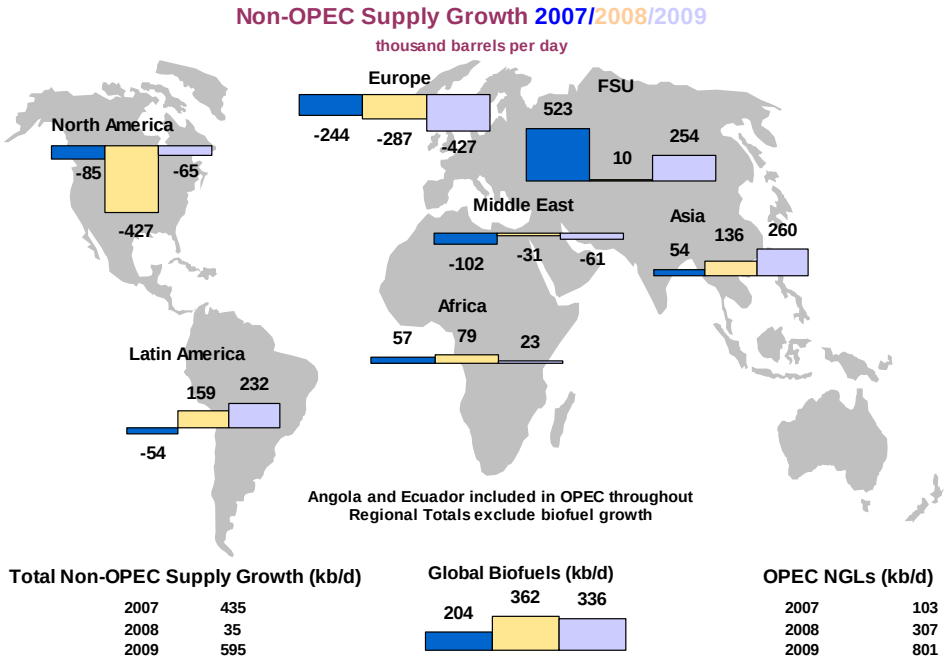
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 530 kb/d in October.

Volumetrically, Saudi Arabia, Iran and Kuwait potentially face the largest cuts. The planned reduction in targets likely came too late to materially affect Saudi November term supplies, although spot volumes may have been curtailed. Early indications of term prices for December suggest some throttling back in supplies to western destinations, while Asian buyers will reportedly see shipments curbed by 5%, or perhaps 200-250 kb/d. Kuwait meanwhile has informed Korean and Japanese buyers of 5% cuts for November, likely to amount to some 50-70 kb/d.

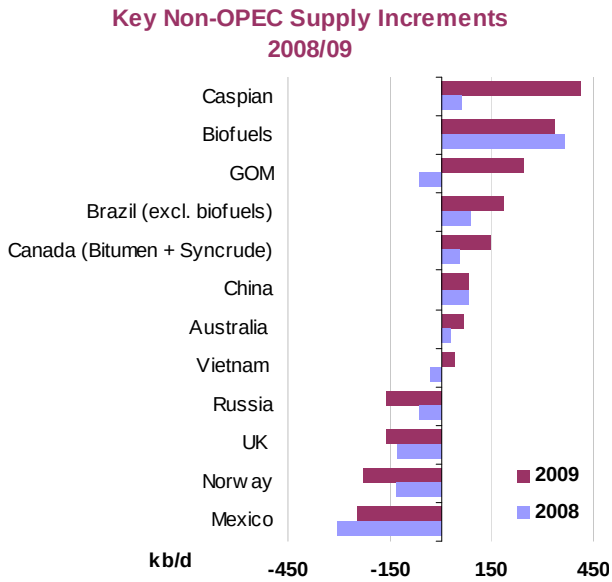
Iran was a vociferous proponent of cuts in the run up to 24 October. In light of the muted price response since then, Iran together with Venezuela has been suggesting a further 1.0 mb/d supply cut, either at the Organisation's next scheduled meeting in Algeria on 17 December, or at a previous emergency meeting in November. But Iran itself is under pressure to sustain supplies of associated gas for domestic power generation and oilfield re-injection purposes, obscuring the prospects of sustained crude production cuts. GCC OPEC members may also be wary of a further cut in target until adherence to the 1 November cuts can be better assessed. Reducing supply too steeply may be a concern, if it risks a price surge with adverse consequences for a sick global economy and already-sluggish oil demand growth.

Non-OPEC Overview

Forecast non-OPEC production has been revised down by 85 kb/d for 2008 and by 145 kb/d for 2009 in this month's report. Output now totals 49.7 mb/d and 50.3 mb/d for 2008 and 2009 respectively. Adjustments are concentrated in 4Q08 (-367 kb/d) and 1Q09 (-314 kb/d), with recent production stoppages in Azerbaijan and the US Gulf of Mexico (GOM) proving to be more extensive and longer lasting than previously assumed. Indeed, those areas account for a combined 75% of the late-08/early-09 adjustments. Thereafter, an average 90 kb/d downward revision for 2Q09-4Q09 non-OPEC production is largely due to weaker expectations for Canadian oil sands output. Mexico, Australia and India also see downward revisions for forecast output. In contrast, Egypt, Colombia and Malaysia are subject to modest upward adjustment after recent production exceeded expectations.



Net growth in non-OPEC output now stands at only 35 kb/d in 2008, recovering to 595 kb/d in 2009. Year-on year non-OPEC growth is likely to be strongest in 1Q09 and 3Q09, partly reflecting recovery from weak, previous year output, and from long-running production outages, together with the impact of expected new field start-ups. Brazil, China and output of US non-crude liquids and global biofuels help to shore up 2008 supply in the face of ongoing decline at mature fields, chronic project delays and more recently, extended production outages. In 2009, growth centres on Brazil, Canada, the USA, Azerbaijan, China, Australia and biofuels. Significant declines are likely from Mexico (-245 kb/d), the North Sea (-415 kb/d) and Russia (-160 kb/d) next year. As noted above, the 2009 forecast assumes 'normal conditions' without accounting for exceptional events. Renewed, above-trend field outages or the emergence of extended new field start-up delays could correspondingly diminish non-OPEC supply.



Revisions to Non-OPEC Oil Supply
(million barrels per day)

	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08
North America	14.06	14.28	-0.16	0.21	13.98	14.08	-0.25	0.10	-0.08	-0.20	-0.08	-0.12
Europe	4.70	4.27	-0.25	-0.43	4.68	4.26	-0.28	-0.42	-0.02	-0.01	-0.02	0.01
Pacific	0.70	0.81	0.07	0.11	0.69	0.78	0.06	0.10	-0.01	-0.02	-0.01	-0.01
Total OECD	**19.46**	**19.36**	**-0.35**	**-0.10**	**19.35**	**19.12**	**-0.46**	**-0.22**	**-0.11**	**-0.23**	**-0.11**	**-0.12**
Former USSR	12.81	13.04	0.04	0.24	12.78	13.03	0.01	0.25	-0.03	-0.01	-0.03	0.02
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.83	3.91	0.10	0.08	3.81	3.89	0.08	0.08	-0.02	-0.02	-0.02	0.00
Other Asia	2.66	2.74	-0.01	0.08	2.65	2.74	-0.01	0.08	-0.01	-0.01	0.01	0.00
Latin America	4.02	4.28	0.16	0.26	4.02	4.31	0.17	0.29	0.01	0.03	0.01	0.02
Middle East	1.61	1.55	-0.03	-0.06	1.61	1.55	-0.03	-0.06	0.00	0.00	0.00	0.00
Africa*	2.56	2.56	0.05	0.00	2.63	2.66	0.08	0.02	0.07	0.10	0.03	0.02
Total Non-OECD*	**27.60**	**28.20**	**0.29**	**0.60**	**27.63**	**28.29**	**0.29**	**0.65**	**0.03**	**0.09**	**0.00**	**0.06**
Processing Gains	2.24	2.29	0.07	0.04	2.24	2.29	0.07	0.04	0.00	0.00	0.00	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.76**	**50.42**	**0.15**	**0.66**	**49.68**	**50.27**	**0.03**	**0.60**	**-0.08**	**-0.15**	**-0.11**	**-0.06**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

OPEC gas liquids supplies (considered alongside non-OPEC output, since they tend not to be subject to OPEC output restrictions) increase by an additional 310 kb/d in 2008 and 800 kb/d in 2009. This potentially boosts total OPEC condensate and NGL output to 5.1 mb/d and 5.9 mb/d respectively. The NGL forecast remains largely unchanged from previous months, with Saudi Arabia, Qatar, the UAE, Nigeria and Iran generating the bulk of the increase. Significant new sources of gas liquids supply have recently started up in Saudi Arabia (Khursaniyah), Nigeria (Agbami) and Iran (South Pars phase 6), contributing to the sharp expected 2009 increase. The Middle East region's imperative to boost natural gas supply for domestic power generation and oilfield re-injection purposes could ensure projections of strong gas liquids growth remain robust, even in the face of global economic slow-down, weaker OECD gas import demand and lower oil prices.

Oil Price/Credit Slump Hits Long-Term Supply More than 2009/2010

Upstream operators may revisit spending plans under the impact of crude prices' slide towards $60/bbl and tightening credit markets. But larger companies Chevron, ExxonMobil, StatoilHydro and Total all stress that existing projects will be unaffected, as indeed does Saudi Aramco. Total and other companies have also reportedly identified sustained prices of $50/bbl as a threshold below which progress on the *next* generation of yet-to-be sanctioned projects might be delayed. So the impact is more likely to be felt on production five years out than on OPEC and non-OPEC supply in 2009/2010.

Operating costs vary hugely between regions and different production environments, but prices here too can probably fall to $50/bbl or lower before a significant impact on existing supply occurs. And despite statements to the contrary, OPEC Middle East Gulf producers, with large accumulated revenues from five years of rising prices and conservative, near-$50/bbl, budget price assumptions, seem unlikely to curb ongoing investment projects even at current price levels.

However, two regions that are already suffering, albeit in different ways, are Russia and Canada. Major Russian companies are highly dependent on debt for growth and until recently reductions in export tax that have lagged lower crude prices were beginning to threaten existing production. However, as our prevailing forecast for Russia was already well below that of most local companies and government agencies for 2009, the modest trimming of Russian supply expectations this month is more due to lower forecast Sakhalin 2 output and a weaker October base, than to lower crude price or credit issues.

In Canada, Suncor has said it will cut 2009 capital spending by 30-40% compared with previous estimates, but expects no impact on production volumes until 2010/2011. PetroCanada has suggested the Fort Hills upgrader investment decision will be delayed, while Shell is to delay final investment decision (FID) on phase-two expansion of the Athabasca oil sands project (a 100 kb/d phase-one expansion is proceeding).

Oil Price/Credit Slump Hits Long-Term Supply More than 2009/2010 (continued)

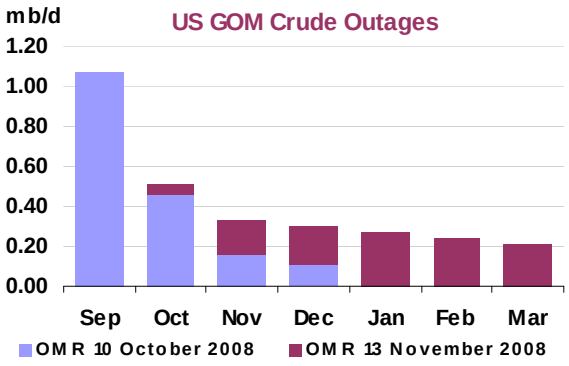
But there may be flecks of silver lining on an otherwise darkening cloud for medium-term supply. Weakening demand growth, commodity prices and liquidity could ultimately prompt new thinking among some host governments. If production and prices fall in tandem, then those governments struggling with maturing production and hitherto wedded to punitive fiscal terms or prohibitive access restrictions may be forced to re-consider. However, political impediments to genuine reform can be substantial and slow to change. Industry cost inflation could also ultimately recede, although total costs are unlikely to fall imminently, with some suggesting it could be 12-18 months before costs overall begin to ease. Nonetheless, Saudi Aramco has said it will renegotiate engineering, procurement and construction (EPC) terms already agreed for its next phase expansion programme for post-2010 from Manifa and Shaybah (oil) and Karan (gas). Of course, renegotiation itself could result in further delays for the longer term.

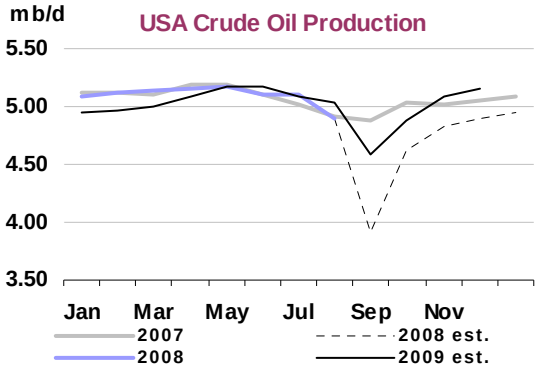
OECD

North America

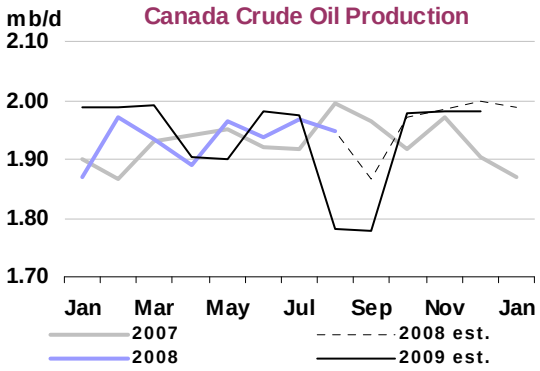
US – October Alaska actual, others estimated: US oil production has been revised down by around 35 kb/d for both 2008 and 2009 in this month's report. It now averages 7.5 mb/d in 2008 and 7.8 mb/d in 2009, with crude oil comprising respectively 4.9 mb/d and 5.0 mb/d of the total. Supply growth in 2008 amounts to 100 kb/d, similar to 2007 performance. All of this year's growth derives from non-crude liquids (predominantly NGL – in part due to a natural gas supply surge - and ethanol). Next year however also sees stronger performance from GOM crude potentially offsetting mature field decline, and contributing 0.1 mb/d to total oil growth of 0.3 mb/d.

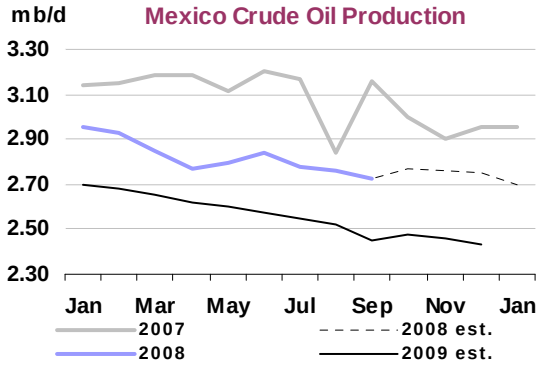
Major downward adjustments accrue to our 4Q08 and 1Q09 federal offshore GOM production assumptions, respectively -155 kb/d and -245 kb/d compared with last month. This follows reports from the Minerals Management Service (MMS) suggesting that offshore pipeline outages resulting from Hurricanes Gustav and Ike in September could keep a substantial portion of currently off-line production (245 kb/d on 5 November) shuttered until March. In as much as pipeline repairs are seen taking between three and six months to complete, supply could recover more quickly than our new assumption suggests. However, that upside risk in our forecast may be partly offset if substantial amounts of production turn out to have been lost altogether due to facility damage.





Canada – Newfoundland September actual, others August actual: Lower-than-expected output of NGL, and synthetic crude from Alberta in recent months feed through to curb our forecast of Canadian oil production by 30 kb/d in 2008 and 120 kb/d for 2009. Total oil now averages 3.27 mb/d for 2008 and 3.33 mb/d in 2009. Projected conventional crude production is left largely unchanged. Bitumen and syncrude continue to generate combined growth of 150 kb/d in 2009, partly offset by weaker supplies elsewhere. That said, the past two months have seen a spate of announcements of project deferrals affecting Alberta's oil sands expansion (*see Oil Price/Credit Slump Hits Long-Term Supply More Than 2009/2010*).



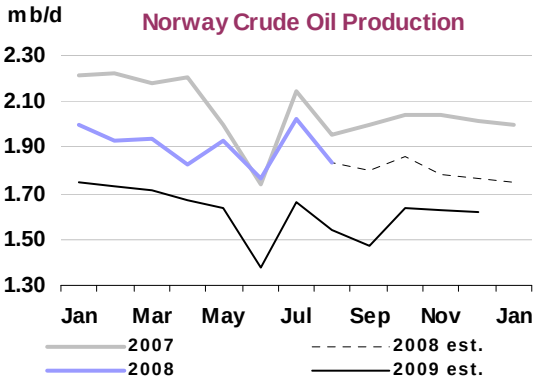


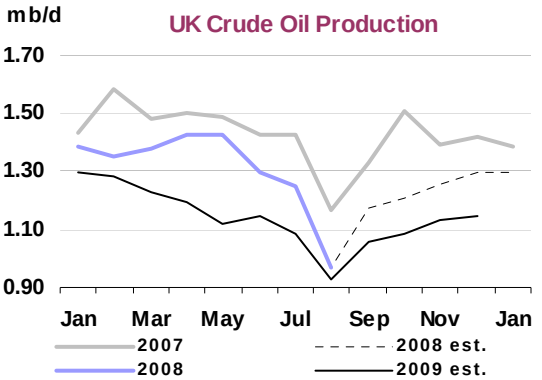
Mexico – September actual: Weakening performance from the ageing Cantarell field, reported Mexican production shut-ins in September/October due to a lack of US Gulf refiner demand and weather-derived port closures have cut 50 kb/d from 4Q08 forecast crude production. A similar downward adjustment has been applied to 2009 production, so crude production averages 2.8 mb/d in 2008 and 2.6 mb/d in 2009.

Energy reform proposals approved by Mexico's Congress include greater cash incentives, but no equity stakes for private companies drilling in Mexican waters. State company Pemex is also seen obtaining more budgetary and planning autonomy, while monitoring of energy efficiency and hydrocarbon recovery optimisation are to be strengthened. However, analysts suggest the reform package lacks provisions allowing Pemex to form joint ventures, widely seen as essential if deepwater reserves are to be tapped.

North Sea

Norway – August actual; UK – August actual: Norwegian oil production is expected to average 2.4 mb/d in 2008 and 2.2 mb/d in 2009, compared with 2.6 mb/d in 2007. Growth in gas liquids supply masks still-steeper crude decline. However, as for several OECD producing countries, we include an adjustment factor in the Norwegian forecast to reflect a historical tendency for mature fields to suffer down-time due to mechanical outages and equipment failures. For Norway, this amounts to a sizeable 160 kb/d, and this in turn depresses 2009 average crude supply to 1.62 mb/d. While this may seem an aggressive downward adjustment, evidence of problems with mature fields surfaced anew in early November, when StatoilHydro announced it will shut the Statfjord Nord field for a year. Work to enhance reservoir pressure maintenance will take the 15 kb/d field out of action until 3Q09.





Around 30 kb/d has been cut from estimated **UK** production for 3Q08 and 4Q08, partly on indications that summer maintenance was higher than anticipated, albeit this is difficult to verify as field-specific data are restricted to July 2008. Aggregate production data for August, and loading schedules for the main production grades through November also support lower assumed production. The trend in UK production is largely unchanged however, with output declining by 130 kb/d in 2008 to 1.5 mb/d and by

160 kb/d in 2009 to 1.3 mb/d. Here too the forecast is influenced by a similar field reliability adjustment to Norway's, at -160 kb/d. That aside, some incremental production accrues in 2009 from the start-up of the Ettrick, Jura, Tweedsmuir, Saxon and Perth fields, each of which adds 10-20 kb/d to 2009 production.

Pacific

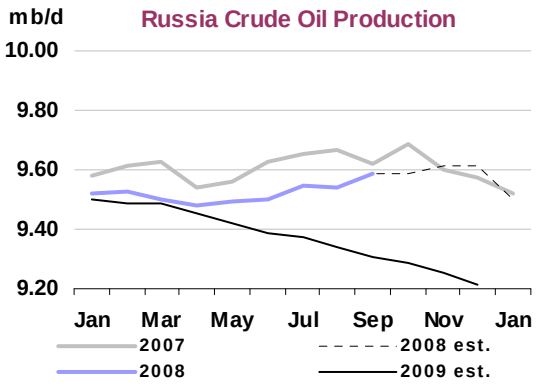
The **Australian** production forecast is trimmed by some 20 kb/d this month. Since July 2007, we have carried an upward adjustment for Australian supply of similar magnitude, reflecting a historical tendency to understate actual production over several years. As our capture of new Australian project start-ups has improved, this adjustment has become inappropriate and is now removed.

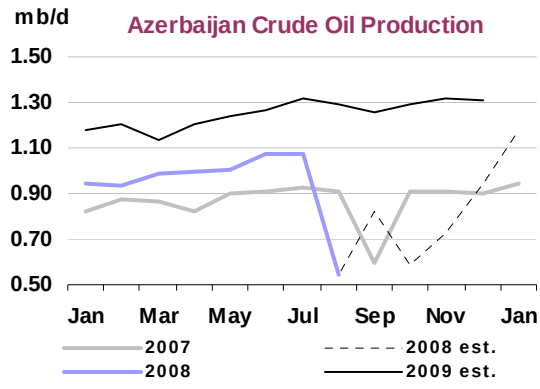
Former Soviet Union (FSU)

Russia – September actual, October provisional: Forecast total Russian oil production is largely unchanged from last month, at 10.0 mb/d for 2008 and 9.85 mb/d for 2009. However, stronger performance in the past couple of months from Rosneft, Gazprom and some smaller companies is offset by a weaker trend from Lukoil, Gazpromneft and the Sakhalin 2 project. Crude exports from the latter project face a hiatus as offshore tanker loadings cease while a new onshore pipeline is filled, allowing year-round production to commence from the end of 2008. We have however trimmed total forecast Sakhalin 2 production for end-2009 from an earlier 175 kb/d to 150 kb/d.

Major state-backed producers Lukoil, Rosneft and Gazprom have all said that investment budgets for 2009 will be scaled back in the absence of deeper tax reform than the government has so far proposed. However, most companies have reiterated that the bulk of the impact from reduced 2009 spending will likely be felt in post-2009 production. Reports that some marginal production shut-ins had already occurred, and threats of sharply lower crude exports on poor economics, encouraged the government to enact an exceptional cut in crude export tax from October's $51/bbl to $39/bbl for November. Export taxes are normally set for two months at a time, but the Finance Ministry has suggested this may change to a monthly basis from December.

Just prior to OPEC's 24 October meeting, the Russian Energy Ministry raised the prospect of setting up strategic oil storage at ports, aimed at regulating supply to influence prices. Russia does not appear to be planning direct cooperation with OPEC in terms of production quotas. However, the proposal for strategic inventory comes against a backdrop of an OPEC call ahead of 24 October for non-OPEC producers to help to curb supplies, a request that has had limited success in the past.





Azerbaijan – September estimated: The offshore Azeri-Chirag-Guneshli (ACG) complex is not now expected to have all units operating again until end-November. Up to 650 kb/d of capacity at the Central and West Azeri fields was shut in mid-September after a gas leak. This followed sharply lower exports of Azeri Light crude in August after a blast on the Turkish section of the BTC pipeline. The West Azeri field was brought back into operation in October, but Central Azeri will not be back until late November. This

report assumes that full output from ACG of around 1.0 mb/d will be regained by January 2009. Azerbaijan, which had previously been seen as a major source of potential non-OPEC growth in 2008, will now likely see total oil production largely flat in 2008 at 895 kb/d, but potentially rising in excess of 1.2 mb/d for 2009, assuming major outages are not repeated next year.

FSU net exports rebounded by 0.39 mb/d to 8.16 mb/d on average in September. Crude oil exports rose by 0.45 mb/d to almost 6 mb/d, mainly due to 340 kb/d of incremental shipments through the BTC pipeline and 160 kb/d higher exports from the Baltic port of Primorsk. The rebound was partially offset by a 120 kb/d decrease in Black Sea shipments. Product exports from the FSU fell by 80 kb/d month-on-month to 2.23 mb/d, driven by a drop in fuel oil exports and influenced by high export duties.

FSU Net Exports of Crude & Petroleum Products
(million barrels per day)

	2006	2007	4Q2007	1Q2008	2Q2008	3Q2008	Jul 08	Aug 08	Sep 08	Latest month vs. Aug 08	Latest month vs. Sep 07
Crude											
Black Sea	2.22	2.18	2.10	1.96	2.23	1.98	2.06	2.00	1.88	-0.12	-0.25
Baltic	1.55	1.59	1.61	1.41	1.54	1.40	1.44	1.31	1.46	0.16	-0.20
Arctic/FarEast	0.15	0.32	0.31	0.27	0.29	0.36	0.31	0.39	0.38	-0.01	0.04
BTC	0.00	0.55	0.61	0.71	0.75	0.63	0.84	0.36	0.71	0.34	0.33
Crude Seaborne	4.07	4.63	4.62	4.35	4.81	4.37	4.64	4.06	4.42	0.37	-0.08
Druzhba Pipeline	1.20	1.13	1.13	1.14	1.07	1.05	1.01	1.06	1.07	0.01	-0.10
Other Routes	0.38	0.44	0.43	0.40	0.42	0.44	0.43	0.40	0.47	0.07	0.09
Total Crude Exports	5.64	6.20	6.18	5.89	6.30	5.86	6.09	5.52	5.97	0.45	-0.09
Of Which: Transneft	4.22	4.27	4.23	3.97	4.16	3.87	3.96	3.75	3.90	0.15	-0.53
Products											
Fuel oil	0.95	1.10	1.08	1.16	1.14	1.04	1.08	1.07	0.98	-0.09	-0.10
Gasoil	0.95	0.95	0.96	1.06	0.96	0.79	0.90	0.72	0.74	0.02	-0.20
Other Products	0.61	0.60	0.56	0.64	0.56	0.54	0.58	0.53	0.51	-0.02	0.01
Total Product	2.51	2.65	2.60	2.86	2.66	2.37	2.57	2.31	2.23	-0.08	-0.30
Total Exports	8.16	8.85	8.78	8.75	8.95	8.23	8.65	7.83	8.20	0.37	-0.38
Imports	0.04	0.04	0.04	0.05	0.03	0.05	0.04	0.07	0.04	-0.02	-0.01
Net Exports	8.12	8.82	8.74	8.70	8.92	8.18	8.62	7.77	8.16	0.39	-0.37

Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

In October, Caspian exports likely dipped once again after production problems at the Central and West Azeri fields, although the month did see the entry of Kazakhstani Tengiz crude into the BTC pipeline for the first time. There are also reports that October exports from the Baltic port of Primorsk were hit by bad weather. The Russian government cut crude oil export duty by 25% to $50.78/bbl from 1 October before implementing a further extraordinary cut to $39.15/bbl from 1 November in an attempt to shore up export economics. Moreover, the Russian Energy Ministry is reportedly preparing a new formula for calculating export duties to better reflect recent price changes. Despite these moves, pipeline operator Transneft reported that November export shipments by major producers were likely to be sharply cut. The re-start of the Baku-Supsa pipeline in November, after outages due to conflict in Georgia, will be offset by continued shortfalls from BTC, which is likely to run once again at 50% capacity this month.

Other Non-OPEC

Revisions to Other Non-OPEC Estimates

Chinese production is trimmed by 15 kb/d for 2008 and 2009 with offshore output coming in lower than expected. Estimates for **Other Asia** remain largely unchanged, with downward adjustment for **India** and **Vietnam** countered by higher than expected production in recent months from **Brunei** and **Malaysia**. This month's report sees **Latin American** production revised up by some 30 kb/d for 2009, with **Argentina, Colombia** and **Peru** seeing stronger performance than previously envisaged during 3Q08.

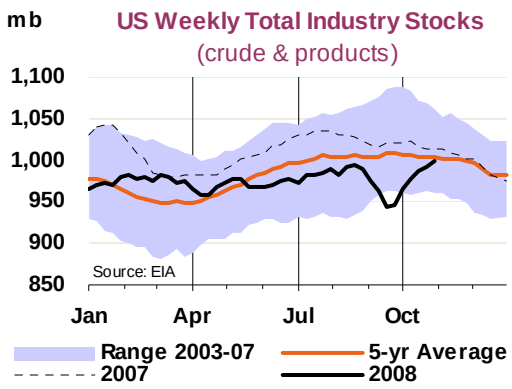
African production sees a substantial 75 kb/d upward revision for 2008 and 95 kb/d for 2009, based on a re-examination of **Egyptian** data. 2008 now looks likely to see the first annual rise in production in over a decade, and production of crude, condensate and NGL could stabilise at close to 700 kb/d this year and

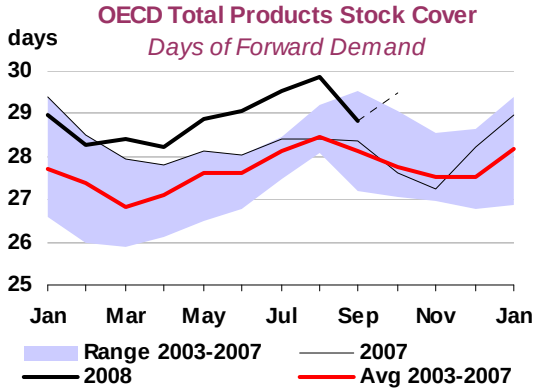
next. Our forecast for **Chad** has been cut by 10 kb/d for 2008 (to 130 kb/d, in line with reported 1H08 output), and by 20 kb/d to 115 kb/d for 2009. Declining reservoir pressure, sand clogging and a fragmented field structure are reportedly behind the disappointing performance for Doba blend output. Our assumption of flat production in 2009 at around 515 kb/d from **Sudan** is retained for now but may prove optimistic if recent kidnappings and murder of Chinese and Sudanese oil workers in the disputed Kordofan region between north and south Sudan degenerate into a renewed outbreak of civil war.

OECD STOCKS

Summary

- **An unseasonal September draw of 16.9 mb reduced OECD industry stocks to 2,649 mb,** driven by hurricane disruptions in the US. However, a 21.4 mb upward revision to end-August OECD stocks combined with a further reduction to OECD demand prospects mean that end-September forward cover is still high, at 55.0 days. The 3Q08 stock change stands at +0.50 mb/d (+46.4 mb), slightly above the five-year average third-quarter build of 0.44 mb/d.
- **Hurricane-related refinery closures led a US product stockdraw of 24.3 mb in September**. Of this, 13 mb were distillates and 6.9 mb were gasoline, with stocks of the latter already recovering by the end of the month. US crude stocks fell by only 1.1 mb as refinery outages offset the impact of production losses and lower imports.
- **Crude stockbuilds in OECD Europe and the Pacific were observed in September**, totalling 7.6 mb and 1.3 mb respectively. European cover rose as a result, despite notable draws of 10.6 mb in distillates, as domestic heating demand ran ahead of expectations, and 1.9 mb in gasoline, as extra cargoes sailed to the US. However, in the Pacific the crude build was matched by a product draw, leaving regional cover trending down seasonally.
- **Preliminary October data indicate a very sharp recovery of 51.2 mb in OECD stocks**, including 41.5 mb in the US. Combining preliminary US, Japanese and EU-16 data, this would suggest a firming of OECD cover to 56.0 days by end-October.





OECD Inventory Position at End-September and Revisions to Preliminary Data

OECD industry stocks fell by 16.9 mb in September, to close at 2,649 mb. US refinery shut-ins related to hurricanes Gustav and Ike created a dent in US product stocks of 24.3 mb over the month. European gasoline stocks dipped as extra cargoes headed across the Atlantic to mitigate product supply losses in the US. At the same time, stronger domestic demand eroded European distillate stocks by 10.6 mb.

Preliminary Industry Stock Change in September 2008 and Third Quarter 2008

	September (preliminary) *(million barrels)*				September (preliminary) *(million barrels per day)*				Third Quarter 2008 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**9.3**	**7.6**	**1.3**	**18.2**	**0.31**	**0.25**	**0.04**	**0.61**	**0.15**	**-0.04**	**-0.01**	**0.11**
Gasoline	-5.8	-1.9	-1.6	-9.4	-0.19	-0.06	-0.05	-0.31	-0.24	0.00	-0.02	-0.26
Distillates	-12.1	-10.6	-1.3	-24.0	-0.40	-0.35	-0.04	-0.80	0.02	0.15	0.16	0.33
Fuel Oil	1.5	0.7	-1.2	0.9	0.05	0.02	-0.04	0.03	-0.02	-0.03	0.00	-0.05
Other Products	-4.9	-1.0	1.9	-4.0	-0.16	-0.03	0.06	-0.13	0.07	0.02	0.14	0.23
Total Products	**-21.4**	**-12.8**	**-2.3**	**-36.5**	**-0.71**	**-0.43**	**-0.08**	**-1.22**	**-0.18**	**0.15**	**0.28**	**0.25**
Other Oils[1]	1.4	-0.9	0.9	1.4	0.05	-0.03	0.03	0.05	0.16	-0.05	0.03	0.14
Total Oil	**-10.7**	**-6.1**	**-0.1**	**-16.9**	**-0.36**	**-0.20**	**0.00**	**-0.56**	**0.14**	**0.06**	**0.31**	**0.50**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Nevertheless, end-September OECD stocks represented 55.0 days of forward demand cover. In other words, even the passage of two extremely disruptive hurricanes was unable to reduce OECD stock cover below seasonal averages. In fact, end-September cover was 1.7 days above levels of a year ago, 2.2 days above the corresponding 2003-07 average and 2.6 days above hurricane-ravaged September 2005. Furthermore, preliminary October data already point to a 41.5 mb stock build in the US (of which 28.7 mb in products) and a 51.2 mb increase in total OECD inventory. This would raise OECD cover to 56.0 days of forward demand.

There are two main reasons why OECD stock cover remains high despite such a heavy US hurricane impact. Firstly, end-August stocks were revised up by 21.4 mb, providing a higher pre-hurricane base than previously thought. Secondly, the projection of OECD daily demand for 4Q08 was reduced by 0.7 mb/d from last month's forecast; a smaller denominator for the cover calculation thereby inflating the number of days of demand that stocks represent.

The customary caveat to add to this is that, of course, ample inventory is not uniform across all regions, countries or products. Hurricanes reduced US distillate stock cover by 2.7 days in a single month, instantly eroding its surplus versus the five-year average. Although preliminary October weekly data suggest a rebuilding of distillates, levels still look tight in PADD 1 – a key region for heating oil demand – as winter approaches. In the Pacific, where Korean stockdraws offset Japanese builds in September, stock cover is still on the low side for distillates and 'other products'.

There is currently a steep contango in paper markets for crude and products (beyond seasonality), providing a theoretical economic incentive to build stocks. However, this contango appears to be the result of a weak prompt market and it would seem that lines of credit to buy extra inventory and take advantage of storage economics, are severely curtailed. In fact, there are widespread reports of an ongoing destocking in OECD and non-OECD countries to release capital. With OPEC announcing reductions to production targets from 1 November, it is indeed conceivable that 4Q08 stockbuilds will not match seasonal norms in absolute terms.

Revisions versus 10 October 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Jul 08	Aug 08	Jul 08	Aug 08	Jul 08	Aug 08	Jul 08	Aug 08
Crude Oil	**-2.0**	**-4.0**	**-0.1**	**-6.2**	**0.0**	**3.9**	**-2.1**	**-6.3**
Gasoline	-0.3	4.9	-1.0	2.3	0.0	0.1	-1.3	7.4
Distillates	0.2	4.6	2.8	14.5	0.3	0.9	3.2	20.0
Residual Fuel Oil	0.0	0.3	0.0	-0.4	0.0	0.3	0.0	0.2
Other Products	0.3	-3.3	-0.1	1.4	0.0	-0.7	0.2	-2.6
Total Products	**0.2**	**6.5**	**1.7**	**17.8**	**0.3**	**0.7**	**2.2**	**25.0**
Other Oils[1]	-1.2	5.1	0.1	-3.0	0.0	0.7	-1.1	2.7
Total Oil	**-3.0**	**7.6**	**1.7**	**8.6**	**0.3**	**5.2**	**-1.0**	**21.4**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

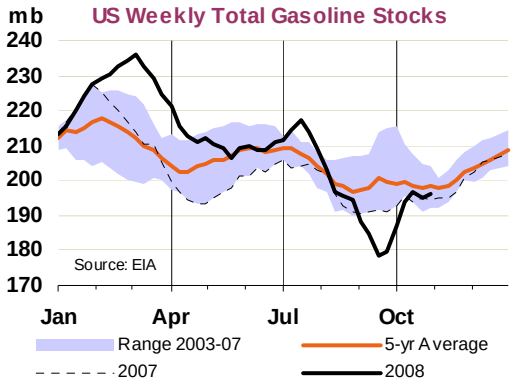
There were large revisions to end-August OECD stocks, totalling 21.4 mb. These included an upward adjustment of 14.5 mb to European distillate stocks, resulting from previously unavailable data revealing distillate builds (for example, in Greece) or accounting shifts (e.g., Belgium) or simply contradicting the indications we had from preliminary data last month (Spain, Italy). There were also significant upward changes to US products as well, including 6.8 mb and 4.5 mb in gasoline and distillates respectively, which substantially improved the pre-hurricane position. In partial offset, Italian and German crude stocks were adjusted downwards by 4.0 mb and 2.2 mb, respectively, for August. Meanwhile, after suspicions that reported Canadian crude stocks were too high for July, there was indeed a downward end-July correction of 2.0 mb.

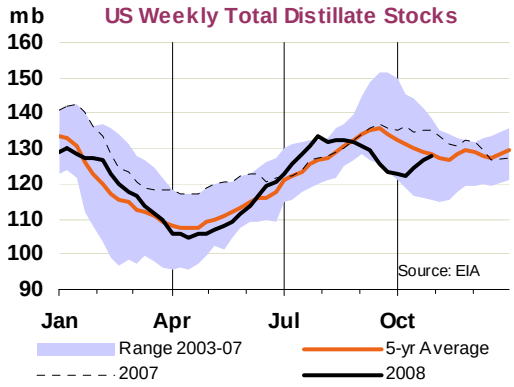
OECD Industry Stock Changes in September 2008

OECD North America

After disruption to the oil supply chain caused by hurricanes Gustav and Ike, September draws in OECD North American oil stocks, at 10.7 mb, were not quite as steep as expected. Regional crude stocks actually rose by 9.3 mb in September. In the US, lower crude runs neutralised the negative stock impact of production outages and disrupted imports. At the same time, there was a colossal spike of 10.4 mb (over 50%) in Mexican crude stocks, in line with lower crude exports to the US.

OECD North American product stocks were hit harder by the hurricanes, falling by 21.4 mb in September for the region, including a drop of 24.3 mb in the US. The latter included dips of 6.9 mb in gasoline to 190.6 mb (shallower than expected due to a steep late-month rebound from a mid-month low of 178.7 mb), 13 mb in distillates and 4.7 mb in 'other products'. US product draws were the result of lower refinery throughput both in the Gulf, as a direct result of hurricane disruption, and inland (PADDs 1 and 2), due to closures of crude pipelines originating in the affected area around Houston. Equally, product pipelines (e.g., the Colonial) that also start near Houston faced temporary closures, contributing further to inland product draws. Weekly data show that US refinery runs had recovered to pre-hurricane levels (relative to seasonality) by early October and that, by mid-October, gasoline stocks had rebounded to over 196 mb. Distillate stocks also appear to have recovered in October according to EIA weekly data, although tightness is still evident in PADD 1, the region consuming by far the most heating oil.



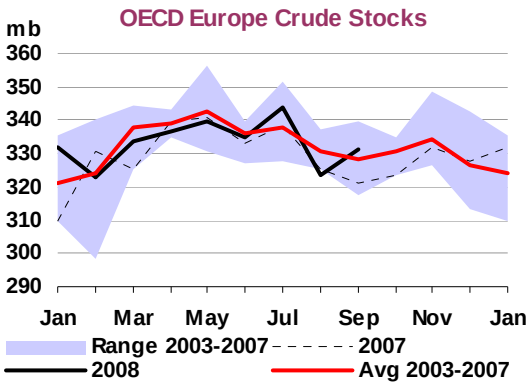


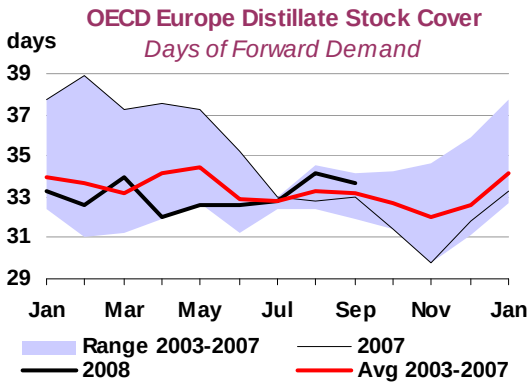
Mexican product stocks built sharply in September, by 2.9 mb, countering the gentle declines usually seen at this time of the year. This build included 1.0 mb in gasoline and 0.8 mb in distillates and took Mexican product stock cover back close to the five-year average, having been below range for the whole of the year to date. With Mexican refinery activity only down slightly on the month, the product build suggests a fall in product exports (the majority of which are naphtha or jet kerosene cargoes heading to the US).

OECD Europe

A seasonal September draw of 6.1 mb in OECD European total oil inventory disguised the product-specific detail, namely that regional crude stocks built atypically, by 7.6 mb, while product stocks dropped sharply, by 12.8 mb. In terms of forward demand cover, the counter-seasonal crude build was more influential than the product draw, causing total regional stock cover to rise by 0.8 days to 61.8 days.

The September build in European crude stocks was led by increases of 4.4 mb and 3.3 mb in the Netherlands and France. With only minor changes in refinery runs in both of these countries, higher imports were necessarily responsible. Preliminary tanker data confirm increased arrivals into both countries of Saudi Arabian and North and West African grades.

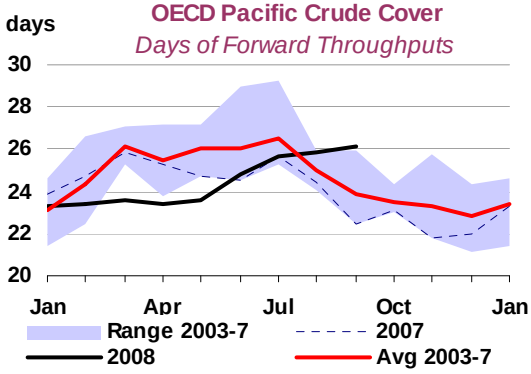


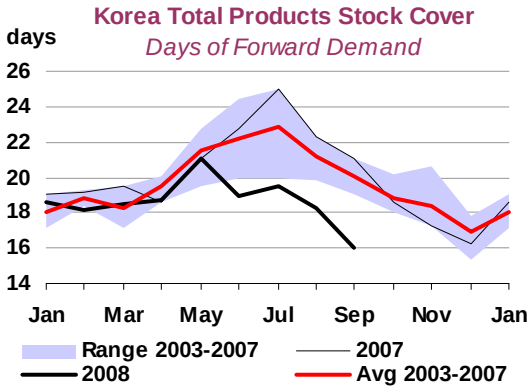


OECD Europe product stocks drew by 12.8 mb, led by a distillate draw of 10.6 mb. Decreases of 2.6 mb and 1.9 mb were observed in French and German distillate stocks respectively on higher domestic demand (the fill level of German consumer tanks of heating oil apparently increased from 55% to 60% in September). However, an upwardly revised August base kept regional distillate cover healthy. European gasoline inventory took an unseasonal hit of 1.9 mb, as extra cargoes moved across the Atlantic to a hurricane-ravaged US market. For this reason, gasoline stocks in Germany and the Netherlands, two of the main transatlantic 'mogas' suppliers to the US, both fell by 0.8 mb. ARA independent stock data show an October recovery in gasoline stocks at the margin, with US data confirming an easing in imports, overshadowing the impact of extra cargoes heading to West Africa to mitigate refinery outages in Nigeria. ARA data reflect a notable tightening in October independent gasoil stocks, although Euroilstock data imply that distillate stocks in EU-16 countries may in fact resist the seasonal decline.

OECD Pacific

OECD Pacific oil stocks were flat in September, consistent with seasonal expectations. This masked a slight improvement in crude inventory, *vis-à-vis* the five-year average, boosting forward throughput cover, and a mild dip in products.

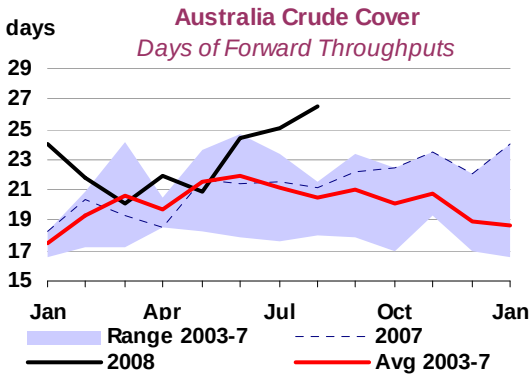




Pacific crude stocks rose by 1.3 mb in September. In Japan, an upward revision of 4.6 mb to end-August crude stocks plus a 7.1 mb provisional build in September has improved forward cover (in terms of throughputs) considerably. Weekly data show that Japanese throughputs fell to an autumn low of 3.4 mb/d by the early October, down from 3.9 mb/d at the end of August. Although directionally anticipated, this trough was very low in absolute terms and below the five-year average. With imports only off by 0.1 mb/d (with a notable drop in Iranian arrivals), crude inventory was allowed to build. This offset a sharp, atypical draw of 5.8 mb in Korean crude stocks in September, caused by a hike in refinery runs of 140 kb/d, with imports only marginally firmer (up 36 kb/d, to 2.30 mb/d).

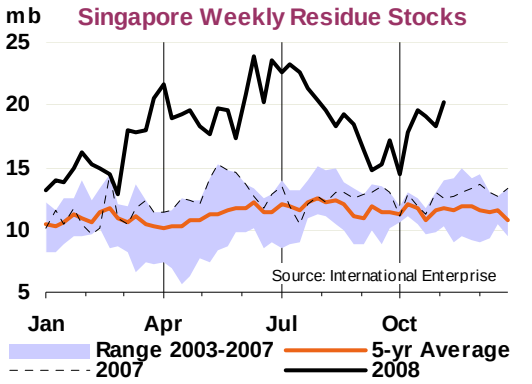
OECD Pacific product inventories dipped by 2.3 mb in September with a notable draw of 2.5 mb in Korean distillate stocks. Despite higher refinery activity, Korean gasoline stocks also failed to rise in line with seasonality, while fuel oil stocks dropped by 0.5 mb amid reports of higher spot export allocations to profit from a tight Asian residual market. Korean product stock cover is now at its lowest level since December 2005. In Japan, a 2.4 mb hike in 'other product' stocks (related to slack naphtha demand) offset smaller draws in gasoline and fuel oil. An observed September rise of 1.2 mb in distillate stocks, in the face of seasonally low crude runs, suggest that Japanese distillate exports took a hit, which would tally with lower imports by China, Japan's key distillate export customer. Despite dropping in September, Japanese product stock cover remains above the five-year average after large builds in July and August.

Australian stock data *for August* showed a very slight counter-seasonal build, led by a 0.5 mb rise in gas liquids inventory. It is worth noting that while Australia product stock cover is below the five-year average, crude cover in terms of forward throughputs has rocketed through the top of the five-year range aided by the 2.25 mb jump seen in June. The fourth-quarter temporary closure of both BP's Kwinana and Shell's Clyde refineries has had a significant amplifying effect.



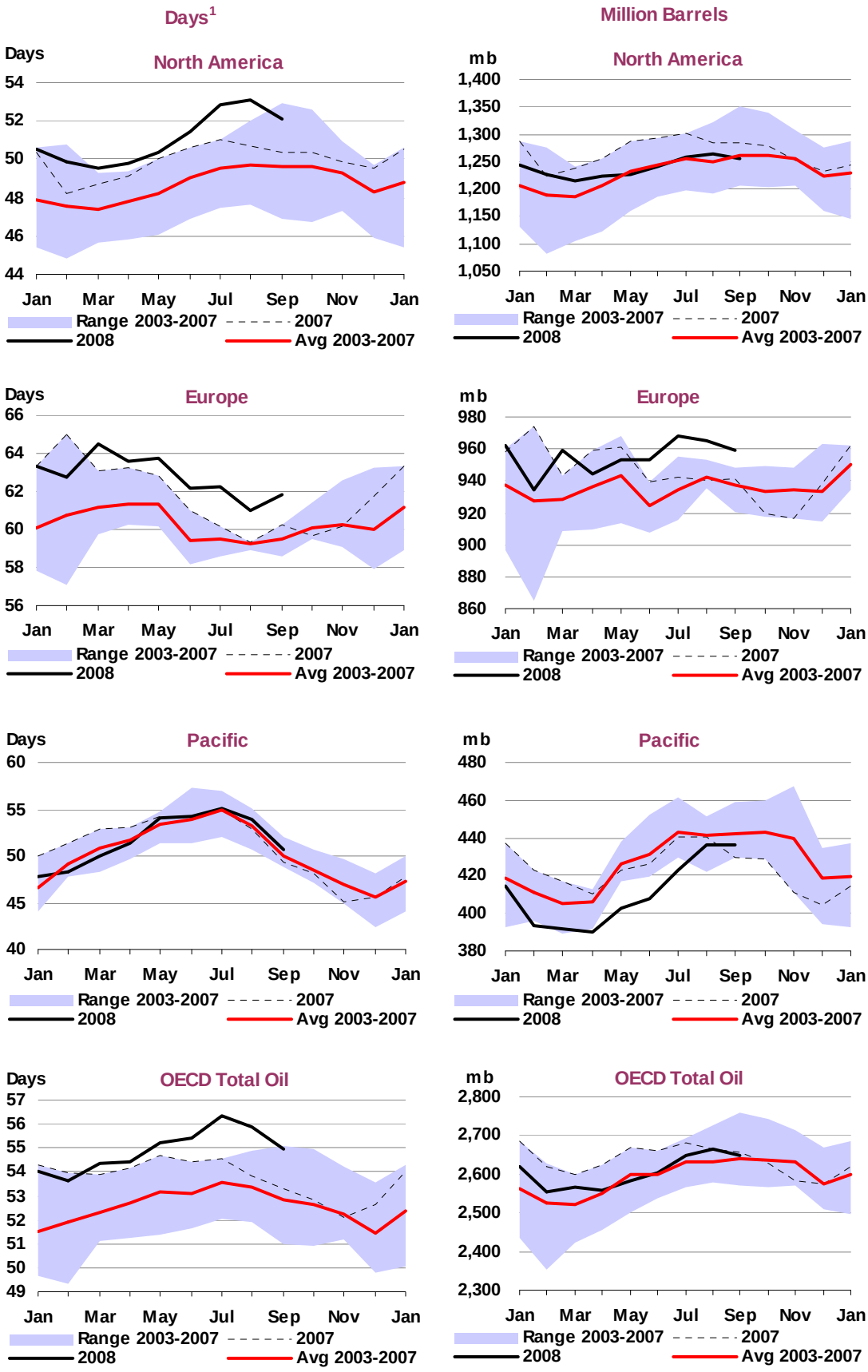
Recent Developments in Singapore Stocks

Lower Chinese imports have contributed to the recent easing in Asian product markets that has prompted October builds in product stocks held independently in Singapore. Fuel oil stocks saw the largest rise, of 4.0 mb over the month, as Korean refiners increased spot export allocations and Middle East domestic demand eased seasonally. High premia of Singapore fuel oil prices to Rotterdam in August and September probably encouraged some long-haul eastbound exports that are now arriving in Asia. Slackening bunker demand, in light of the broad drop in shipping volumes demonstrated by the collapse of the Baltic Dry Index, has also contributed to build in residual stocks. Middle distillate inventory rose by 0.7 mb on the month, while light distillate stocks saw a 1.4 mb build.



Regional OECD End-of-Month Industry Stocks

(in days of forward demand and millions barrels of total oil)

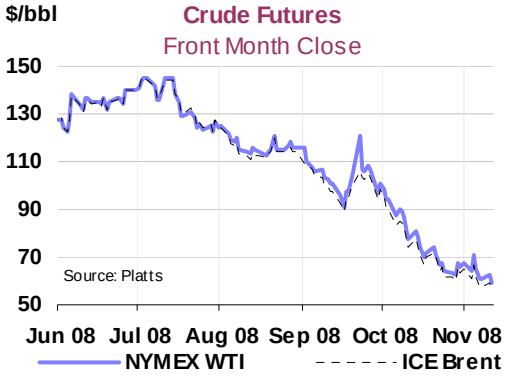


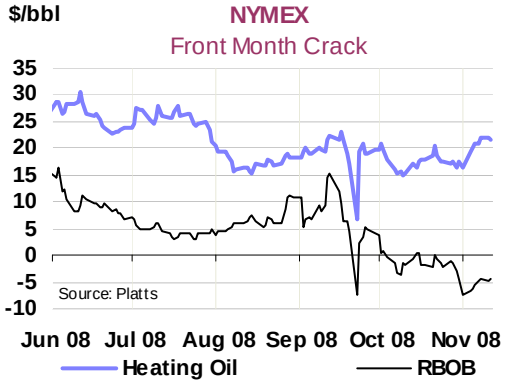
1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

- **Oil prices continued their slide from early-July highs throughout October and early November**, falling some $25 since last month's report, to just under $60/bbl at the time of writing. Lower actual demand, as well as the prospect of further weakening ahead amid global economic woes, appeared to offset the impact of OPEC's 24 October decision to cut output quotas and news that a substantial volume of US Gulf of Mexico crude could remain shut in until March 2009.
- **Crude prices fell on reduced refiner interest**, with negative gasoline and naphtha cracks weighing on refining margins. In the US, domestic sweet crudes such as LLS suffered as a consequence, and an overhang of heavier grades saw regular imports from Latin America diverted elsewhere. Russian Urals remains strong *vis-à-vis* Dated Brent on anticipated lower export volumes, despite a decision to cut previously prohibitive export duties from 1 November.
- **Refining margins fell across the board in October**, as lower (but still strong) distillate cracks failed to fully offset pronounced weakness for all other products. US Gulf Coast margins fell the most steeply (albeit from exceptionally high September levels), with cracking spreads turning negative over the course of October. Singapore refining margins are also depressed, but margins in Europe are more robust, thanks to higher distillate yields.
- **Refined product crack spreads all weakened** amid a general downturn in demand. This is especially true for gasoline, which is suffering due to lower consumption in the US, and naphtha, which is at an unprecedented discount to crude on depressed global petrochemical markets. Fuel oil has seen discounts to crude widen again, while only distillate cracks remained steady and relatively high.
- **Benchmark crude freight rates fell in October**, undermined by prospects of broadly lower demand and reduced supply, especially from the Middle East. Clean rates also eased on slackening naphtha demand and lower Chinese imports.





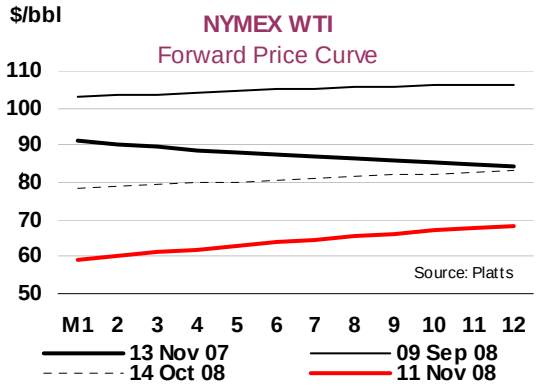
Overview

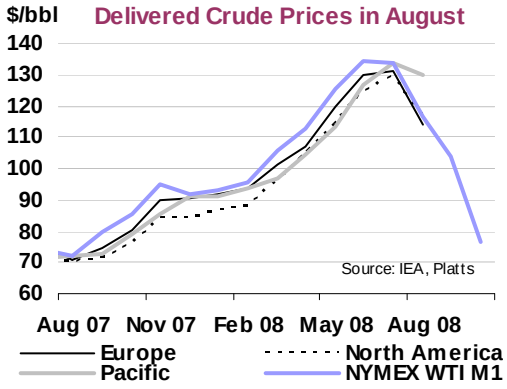
Oil prices have continued their steep downward slide in October and early November, with crude benchmarks down around $25/bbl since the last report. At the time of writing, WTI and Brent futures were near $59 and $56/bbl respectively – or around 60% lower than their early-July highs – and on a par with levels last seen in early 2007.

Weak observed demand is having a strongly bearish effect on oil prices, with this report again making a downward revision to demand estimates. The US is showing a contraction in demand, but this is also spreading across the globe and we have also revised down our China estimates, for this year and the next.

Generally speaking, as we observed last month, the actual and anticipated effects of the global economic crisis are outweighing the potentially supportive effects of still-constrained US Gulf crude output and OPEC's 24 October decision to curb crude allocations.

Arguably, something of a temporary price floor may have been reached in late October, when crude prices touched $60/bbl for the first time. Not only did this coincide with OPEC's meeting (though some would argue an anticipated cut had already been factored into prices), but also with broad and concerted efforts by central banks and governments to shore up the global economy. Indeed, that was the first instance of some positive market sentiment for some time, with a pick-up in stock markets and similar news. Having said this, markets remain hugely volatile, with daily price swings on average around $5/bbl for crude futures over the past month, and hindsight may prove this episode of price support to have been transient. Furthermore, WTI's November contract expiry on 21 October was unspectacular compared with the previous month, when prices briefly spiked by around $25/bbl, likely on intense short-covering.





Near-term market weakness is increasingly apparent in the WTI forward curve. The near end of the curve has moved to a deep discount to future months, reflecting weak demand for prompt crude, but also pointing towards anticipated tightness ahead. Prices reach $80/bbl in July 2011 and even around $85/bbl in the longer term (all NYMEX Light Sweet Crude). Somewhat unusually, the current contango is not seemingly encouraging stock building, with anecdotal reports that refiners are finding financing difficult in the current tight credit environment.

OPEC's announcement, at its Extraordinary Meeting on 24 October, of its intent to reduce output quotas by 1.5 mb/d, will likely take time to materialise in actual market supply, even though the lower allocations were to come into force from 1 November. But in any case, individual member pledges to reduce volumes to the market – mainly by curbing term contract volumes – appear to have influenced market sentiment. Potentially tighter supplies are also suggested by the fact that over 250 kb/d of US Gulf of Mexico production could remain offline, on average, until March next year due to pipeline repairs, and potentially lower Russian crude exports despite moves to cut export duties

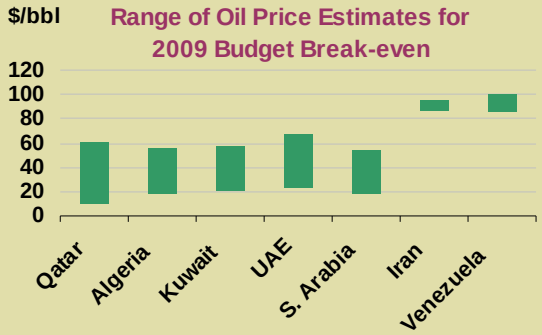
Product markets meanwhile are increasingly divergent, with still-strong distillate crack spreads not quite offsetting weakness in all other products and correspondingly lower refining margins. Naphtha cracks have plummeted to unprecedented discounts to crude (see *Is Naphtha the New Fuel Oil?*), while gasoline cracks also languish in negative territory. Fuel oil discounts to crude have widened in the meantime. Distillates' continued strength will to some extent depend upon winter temperatures, though the European Union and Australia's switch to 10 ppm maximum sulphur content diesel from 1 January 2009 may lend some additional support.

OPEC Members' Budgetary Requirements

Given OPEC's 24 October decision to reduce output allocations, much has been written recently about the average oil price members need in order to balance their budget and whether this influenced some members' positions. For this year, given previous high levels, most budgets should be safe – the average price of Brent futures in 2008 has been $107/bbl so far – but were prices to remain at their current level throughout next year – *ceteris paribus* – arguably some countries might fail to meet all their financial commitments.

Taking a range of external estimates for individual countries' needs, the average oil price for the group of OPEC producing countries selected here (on the basis of available data) is around $54/bbl – a threshold recently approached around the time of the group's meeting. Prices have subsequently stabilised at a slightly higher level, not least due to the market's assumption that OPEC will indeed curb output.

But what this average number hides is the starkly different price needed by different members, leading many commentators to resurrect the view of a hawk/dove divide within the group, one which admittedly does partly fit with statements surrounding the meeting. Estimates of average price 'requirements' range from $32/bbl for Qatar, around $42/bbl for the larger Arab Gulf producers and, most significantly, a price around $91/bbl for Venezuela and Iran.



Sources: Credit Suisse, Deutsche Bank, IIF, IMF, JP Morgan, Merrill Lynch, NBK, PFC, Sanford Bernstein

These numbers quoted here are themselves an average of a range of assumptions and should be taken with a degree of caution. Beyond assuming that all other conditions remain constant, i.e. crude production volumes, budgetary and fiscal conditions, GDP assumptions, debt repayment and exchange rates etc, there are also off-balance-sheet funds and income from non-oil sectors to consider. Most importantly perhaps, many OPEC countries have amassed large rainy-day funds, which could be and – in some cases, are already – being tapped. To illustrate to what degree price assumptions vary, calculations for Qatar range from $10-60/bbl and $18-55/bbl for Saudi Arabia. Countries such as Qatar, Kuwait and most of all the UAE benefit from large sovereign wealth funds and overseas investments – in other words they are not so susceptible to short-term fluctuations in oil-related income.

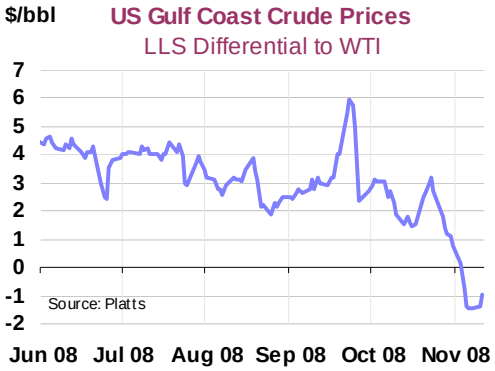
While some countries should fare reasonably well given conservative budgeting and a degree of fiscal flexibility – such as kingpin Saudi Arabia – others could, in theory, make economic concessions, raise efficiency or tighten belts. The recent rise in the dollar with respect to many currencies could also cushion the impact of lower prices on some OPEC country budgets. But a key group of members is arguably already losing out with prices at current levels – notably Venezuela, Iran and Nigeria. Though in Venezuela's case, President Chavez has reportedly made claims stating that his country's budget would balance even with prices around $55/bbl, many doubt these assumptions (he had previously stated prices more in the range of $80-90/bbl). The Nigerian oil minister recently was reported to have said his country would be 'comfortable' with $80/bbl.

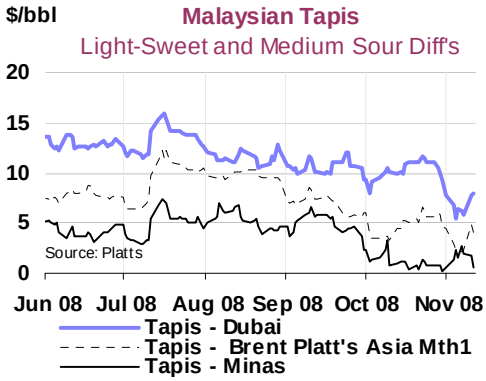
Does this mean that OPEC will collectively agree upon a price floor? This is far from certain, especially as members' needs diverge so starkly. Nor do public pronouncements necessarily coincide with apparent budgetary needs. Nigeria, with a price around $75/bbl needed to balance its budget, might be assumed to act more hawkishly to defend prices than Algeria with a lower $55/bbl or so required to balance its books this year. Yet Algeria has been the more forceful in suggesting that production needs to be reduced. Of course long-standing production outages partly underpin Nigeria's position. In the end however, OPEC's policy motivations are manifold and cannot simply be reduced to a formula – political, economic and other considerations surely all play a role.

Spot Crude Oil Prices

Falling cracks, especially for light distillates, as well as the weakening demand picture and difficulties in obtaining credit, are curbing refiners' appetite for prompt cargoes. This is evident in the widening near-term contango in crude futures, even while crude stock levels do not appear to be rising much beyond seasonality and post-hurricane refill. In the **US**, weak or even negative gasoline cracks are causing an overhang of light sweet grades, pressuring domestic LLS's spread to WTI into negative territory (and reducing its premium to sour grade Mars). Reduced refinery throughputs in the US Gulf have also caused the diversion of Latin American heavy grades such as Mexican Maya and Ecuadorean Oriente to Europe and Asia-Pacific.

In **Asia**, regional Tapis has been pressured due to its high naphtha yield, seeing its premium to Dated Brent reduced. Asian refiners too are in many cases reducing throughputs and purchases of West African grades for November delivery were down, largely due to less interest from India, which was reportedly receiving only around 350 kb/d in November, down from October's 580 kb/d. China's November imports look to remain steady at around 540 kb/d. Nigerian premia to Dated Brent have remained relatively steady in October and early November around $4-5/bbl. Meanwhile, medium sour Dubai and Oman are trading at parity to Brent, despite weakening fuel oil, as light distillate cracks plummeted.





Europe has seen Russian Urals again narrow its discount to Dated Brent to near-parity, especially in the Mediterranean. The prospect of lower export volumes in November is underpinning the crude's relative value. Until a recent decision to slash the export duty from 1 November, expectations had been that tariffs would be prohibitive, given its time-lagged calculation, and some exporters had threatened to curb volumes. After the reduction in duties from around $51 to around $39/bbl at the beginning of this month, some of those cargoes may be reinstated, though at the time of writing, pipeline operator Transneft had hinted that total volumes might be down by 25%. As for sweet grades, Mediterranean Azeri Light and Saharan Blend have seen premia to Brent narrow on gradually reinstated Azeri supplies and lower gasoline demand and reduced interest from US buyers.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, $/bbl)

	Aug	Sep	Oct	Oct-Sep Avg Change	%	Week Commencing: 13 Oct	20 Oct	27 Oct	03 Nov	10 Nov
Crudes										
Dated Brent	113.03	98.13	71.87	-26.26	-26.8	69.72	64.87	60.81	59.61	55.22
Brent (Asia) Mth1 adjusted	114.66	99.64	72.84	-26.79	-26.9	72.58	65.57	60.85	60.77	57.75
WTI (Cushing) Mth1 adjusted	116.58	103.61	76.62	-26.99	-26.1	75.23	68.24	65.45	64.31	60.88
Urals (Mediterranean)	112.16	97.60	70.51	-27.09	-27.8	68.09	63.75	60.33	59.56	54.33
Dubai Mth1 adjusted	112.86	95.90	67.42	-28.48	-29.7	67.06	60.07	56.70	57.04	54.30
Tapis (Dated)	124.40	106.54	77.56	-28.98	-27.2	77.47	71.35	66.07	63.17	62.21
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	3.55	5.48	4.75	-0.73		5.51	3.37	4.64	4.70	5.66
Urals (Mediterranean)	-0.87	-0.53	-1.36	-0.83		-1.64	-1.12	-0.48	-0.05	-0.89
Dubai Mth1 adjusted - Dated Brent	-0.17	-2.23	-4.45	-2.22		-2.66	-4.80	-4.11	-2.57	-0.92
Tapis (Dated)	11.37	8.41	5.69	-2.72		7.74	6.48	5.26	3.56	6.99
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	-1.43	-1.77	-1.52	0.24		-1.70	-1.58	-1.56	-2.29	-2.21
Forward WTI Cushing Mth1-Mth2 adj	-0.20	0.54	-0.17	-0.70		-0.37	-0.82	-0.54	-0.72	-0.88

Source: Platts

Refining Margins

Refining margins fell across the board in October as crack spreads for all products except some European distillates and some US and European fuel oils fell. In fact, were it not for distillates' relative strength, refining margins would be far weaker, with naphtha and gasoline now both negative and fuel oil seeing discounts to crude widening again. As a consequence, there have been reports of planned reductions in throughputs in the US, Europe, Japan and Asia.

The strongest falls were seen on the **US** Gulf Coast, though this was also distorted due to brief price spikes in September after Hurricane Ike hit the region's refining industry, forcing widespread shut-ins. Cracking margins in particular are now all negative again, as gasoline cracks plummeted and, in early November, in most instances turned negative. West Coast margins remain firmer, despite falling, as gasoline cracks remained stronger.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Aug 08	Sep 08	Oct 08	Oct 08-Sep 08	08 Oct	15 Oct	22 Oct	29 Oct	05 Nov
NW Europe	Brent (Cracking)	4.66	8.93	6.18	-2.75	7.93	6.71	5.62	4.98	3.19
	Urals (Cracking)	4.62	8.25	5.25	-2.99	7.66	5.99	4.47	3.64	1.54
	Brent (Hydroskimming)	-1.04	2.74	2.59	-0.15	3.14	3.03	2.45	2.16	0.55
	Urals (Hydroskimming)	-2.47	1.03	-0.55	-1.58	1.47	0.24	-0.91	-2.08	-4.37
Mediterranean	Es Sider (Cracking)	3.61	6.70	5.35	-1.35	6.81	5.77	5.03	4.78	1.41
	Urals (Cracking)	4.47	7.98	5.82	-2.16	7.71	6.27	5.69	4.86	0.91
	Es Sider (Hydroskimming)	-2.43	-0.05	1.55	1.60	1.80	2.22	1.62	1.46	-1.41
	Urals (Hydroskimming)	-3.48	0.11	-0.34	-0.44	1.57	0.38	-0.16	-1.67	-5.50
US Gulf Coast	Bonny (Cracking)	1.89	15.76	-1.04	-16.80	0.05	-1.03	-0.31	-3.86	-3.12
	Brent (Cracking)	2.69	16.97	0.01	-16.96	1.13	0.81	0.90	-3.24	-3.49
	LLS (Cracking)	3.05	14.76	-0.76	-15.53	-0.44	-0.02	-0.53	-2.37	-2.21
	Mars (Cracking)	1.40	10.65	-1.79	-12.44	-1.34	-1.27	-0.30	-3.35	-6.57
	Mars (Coking)	7.25	20.10	5.31	-14.79	4.48	5.73	7.14	4.15	2.53
	Maya (Coking)	4.67	21.98	6.50	-15.49	4.54	7.20	6.94	6.45	8.28
US West Coast	ANS (Cracking)	1.23	6.10	4.85	-1.25	6.88	7.34	5.76	1.56	-3.64
	Kern (Cracking)	10.50	11.21	8.96	-2.25	9.34	7.96	10.67	9.06	2.07
	Oman (Cracking)	0.34	7.96	4.24	-3.71	7.15	5.91	5.62	0.28	-5.06
	Kern (Coking)	14.14	19.25	16.57	-2.67	17.95	22.50	17.38	11.48	7.65
Singapore	Dubai (Hydroskimming)	-2.99	1.16	-0.50	-1.67	0.80	-0.56	-0.45	-0.74	-4.65
	Tapis (Hydroskimming)	-10.92	-5.35	-7.95	-2.60	-5.49	-8.11	-9.21	-9.09	-7.75
	Dubai (Hydrocracking)	-0.64	4.19	2.55	-1.65	3.35	2.23	2.66	2.66	0.04
	Tapis (Hydrocracking)	-9.97	-3.56	-5.56	-2.01	-3.40	-5.83	-6.70	-6.43	-4.81
China	Cabinda (Hydroskimming)	0.72	1.50	-4.21	-5.71	-2.83	-3.32	-4.57	-6.16	-6.03
	Daqing (Hydroskimming)	-2.49	1.22	-4.09	-5.31	-1.36	-4.22	-5.54	-5.39	-3.91
	Dubai (Hydroskimming)	-3.32	0.58	-0.91	-1.49	0.13	-1.04	-0.74	-0.97	-4.81
	Daqing (Hydrocracking)	-1.27	3.87	-0.19	-4.06	2.35	0.33	-1.29	-1.84	-0.70
	Dubai (Hydrocracking)	-0.94	3.57	2.01	-1.56	2.59	1.64	2.22	2.28	-0.30

For the purposes of this report, refining margins are calculated for various complexity configurations, each optimised for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

In **Europe**, margins fell too, but had some support from 50 ppm diesel prices, despite its imminent phase-out at the end of the year (Euro-5 specifications will require a maximum sulphur content of 10 ppm in road diesel). In October as an average, Brent hydroskimming margins remained positive, but the trend was a falling one throughout the month and into early November, and news reports indicate some economic shut-ins at marginal refineries. Urals hydroskimming margins meanwhile are now quite clearly negative on that crude's relative strength. In **Asia**, margins remain lowest, largely on a weaker distillate market, though in contrast to Europe, gasoline cracks remain higher.

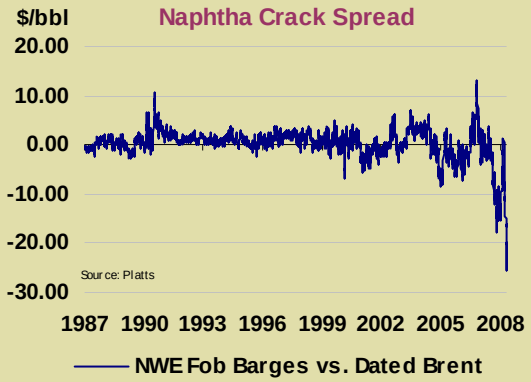
Spot Product Prices

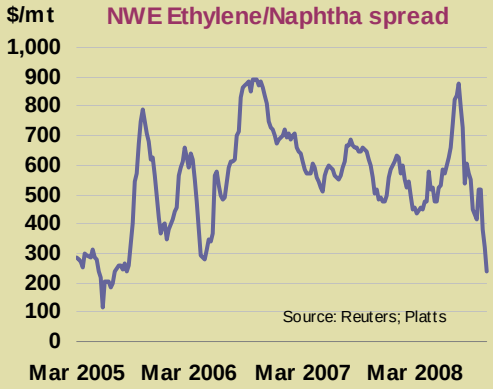
Light distillate cracks have fallen further in October and early November, dragging down refining margins and encouraging refinery run cuts. Relative to crude, gasoline went negative in late October in most regional markets on falling demand, especially in the US. This is having the usual carry-over effect in Europe, which has seen itself forced to divert some cargoes to West Africa and the Middle East. Naphtha cracks are even more dramatic, having fallen to around a $25/bbl discount to crude in early November on a depressed petrochemical market and stronger competition from alternative feedstocks (see below).

Is Naphtha the New Fuel Oil?

Naphtha crack spreads have been negative since the beginning of the year, but have declined sharply since September and, in early November, averaged nearly a $25/bbl discount to benchmark crudes – easily their lowest in over 20 years. Amid the global economic downturn, naphtha appears to be particularly badly hit, not least because it is seen as more sensitive to a GDP slowdown than more demand-inelastic transport fuels.

The development of naphtha as a petrochemical feedstock stems from the historical need to find alternative uses for structural surpluses in OECD Europe and Pacific. Although commonly referred to as a single product, in reality naphtha refers to a range of different hydrocarbons, which have varying properties. For gasoline production, those fractions containing a higher proportion of aromatic compounds are preferred, due to their higher octane rating, with catalytic reforming or isomerisation used to boost octane values further. Petrochemical use of naphtha requires higher paraffinic content, to ensure satisfactory yields of ethylene and minimise unwanted by-products. Alternative sources of feedstock more commonly used in North America and the Middle East include NGLs associated with gas production.

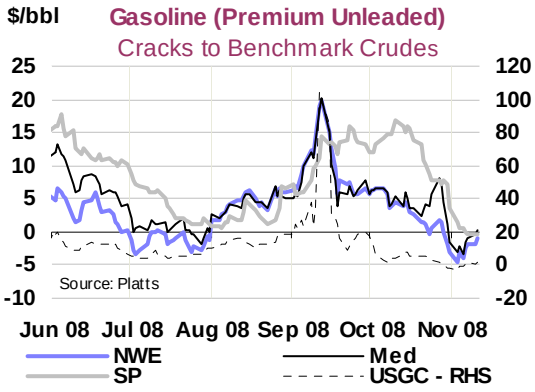


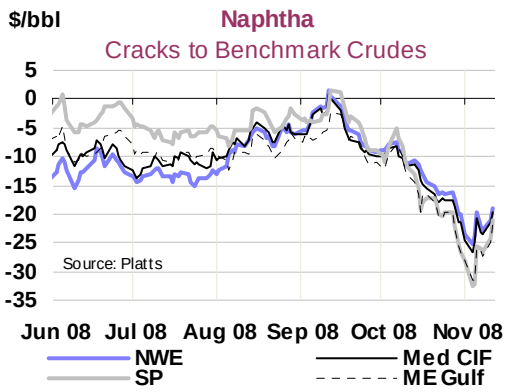


Naphtha is being hit predominantly by weak demand from the petrochemical industry, which in turn is affected by low ethylene prices as a result of the global economic malaise and lower demand for plastics and other petrochemical derivatives. Reports indicate that many naphtha crackers (which transform the feedstock into ethylene) are slowing output, bringing forward maintenance or even shutting in output temporarily as ethylene prices tumble by nearly 70% from their recent early-August high. As a petrochemical feedstock, naphtha is also seeing strong competition from natural gas liquids (NGLs), output volumes of which are growing in line with large new gas fields coming onstream.

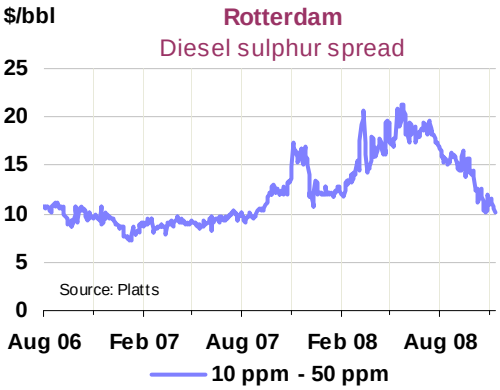
On the demand side, an alternative outlet for naphtha is generally speaking the gasoline pool. But with US and other demand for the motor fuel plunging in response to higher prices and the general economic malaise, this destination is also increasingly unattractive. With few other outlets, prices may well remain weak until the petrochemical industry picks up, leaving naphtha as the new laggard of the product slate.

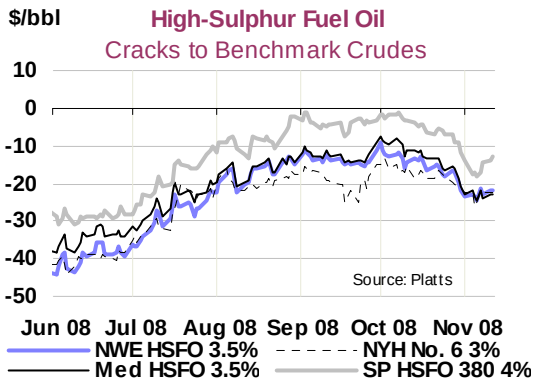
Distillate crack spreads in contrast remained relatively strong in October and early November, with demand holding up and supplies structurally more constrained. In Europe, heating oil sales were robust in September as consumers chose to restock after retail prices fell. The region will also see diesel sulphur specifications tighten further – to 10 ppm – from 1 January 2009, though the cleaner product has narrowed its premium to 50 ppm diesel in the last six months. In Asia, latest reported figures show that China did indeed import less gasoil in September – around 80 kb/d – and after reportedly no influx in October, is expected to forego imports in November on weaker demand. It is also expected to buy only around 80 kb/d of jet fuel in December, down from an earlier-expected October/November average of 100 kb/d. The Asian distillate market is the weakest, regionally speaking, also suffering from sharply above-average independent inventory volumes held in Singapore.





In contrast to September, **fuel oil** has seen its discounts to crude widen again, especially for high-sulphur product. Rather than a substantial change in supply volumes, demand has weakened, with the Singapore bunker market for example reporting sales down by 10% in September. China's independent, 'teapot' refineries are also showing little buying interest on unfavourable economics, while the Asian market continues to see an inflow of barrels from the west. Reportedly, 3.4 million tonnes of residue are expected to arrive in November and regional stocks remain high.





End-User Product Prices in October

In October, end-user product prices on average fell by 16.4%, in US dollars, ex-tax. A sluggish decrease of only 2.4% in Japan was in strong contrast to an 18% drop of retail product prices in other surveyed IEA countries. Gasoline prices dropped by 18.2% month on month, and they were even below October 2007 prices in Germany, Italy, Spain and Canada. For the entire product range, end-user prices were only 14% above October 2007 levels. Last month, consumers on average paid $3.05/gallon for gasoline ($0.837/litre) in the US, ¥163/litre ($1.629/litre) in Japan, £1.056/litre ($1.781/litre) in the UK, and in Europe from €1.348/litre in Germany ($1.789/litre) to €1.082/litre in Spain ($1.436/litre). Diesel prices on average fell by 13.3%, heating oil prices by 14.5% and fuel oil prices by 19.8%, in US dollars, ex-tax.

Spot Product Prices

(monthly and weekly averages, $/bbl)

	Aug	Sep	Oct	Oct-Sep		Week Commencing:					Aug	Sep	Oct
				Change	%	13 Oct	20 Oct	27 Oct	03 Nov	10 Nov			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	117.60	107.70	74.68	-33.02	-30.7	73.37	65.75	60.52	56.47	53.86	4.57	9.57	2.81
Naphtha	105.64	93.59	58.27	-35.32	-37.7	57.33	48.82	41.37	36.84	35.09	-7.39	-4.54	-13.60
Jet/Kerosene	143.00	129.34	98.92	-30.42	-23.5	97.03	92.85	87.23	89.01	85.01	29.97	31.21	27.05
ULSD 10ppm	139.60	128.95	100.11	-28.84	-22.4	98.60	92.23	88.28	88.73	84.92	26.57	30.82	28.24
Gasoil .1%	137.67	125.71	97.12	-28.59	-22.7	94.91	89.50	84.95	86.01	82.68	24.64	27.58	25.25
LSFO 1%	106.08	87.77	68.29	-19.48	-22.2	69.33	58.82	54.71	50.75	49.66	-6.95	-10.36	-3.58
HSFO 3.5%	96.34	84.70	56.45	-28.25	-33.4	55.59	48.61	41.11	36.61	33.35	-16.69	-13.43	-15.42
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	116.53	106.46	75.10	-31.36	-29.5	72.50	67.60	64.19	57.34	54.34	4.36	8.86	4.59
Naphtha	105.02	91.96	56.30	-35.66	-38.8	55.21	47.15	39.71	35.14	33.22	-7.14	-5.64	-14.21
Jet Aviation fuel	141.51	127.51	95.87	-31.63	-24.8	93.38	89.87	85.07	87.25	82.60	29.35	29.91	25.37
Gasoil .2%	136.53	121.43	92.23	-29.20	-24.0	90.81	85.93	80.76	81.55	78.42	24.37	23.83	21.72
LSFO 1%	101.00	86.45	63.75	-22.70	-26.3	62.59	56.82	52.51	48.40	48.88	-11.17	-11.16	-6.76
HSFO 3.5%	96.29	85.21	57.24	-27.96	-32.8	56.01	49.23	41.46	36.43	31.34	-15.87	-12.40	-13.27
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	130.11	133.70	88.38	-45.32	-33.9	89.31	80.08	73.70	68.71	63.60	13.53	30.09	11.76
Unleaded	121.39	117.24	79.38	-37.86	-32.3	80.41	73.01	65.44	60.56	57.25	4.81	13.63	2.77
Jet/Kerosene	138.57	138.10	101.46	-36.64	-26.5	99.49	93.36	88.02	89.50	87.88	21.99	34.49	24.84
No. 2 (Heating Oil)	132.93	122.07	93.54	-28.52	-23.4	91.65	87.00	82.79	84.17	82.00	16.35	18.46	16.93
LSFO 1%	95.97	83.15	59.05	-24.10	-29.0	57.58	51.90	47.41	43.88	42.13	-20.61	-20.46	-17.57
No. 6 3%	97.13	84.51	59.00	-25.51	-30.2	57.58	50.61	44.58	40.65	38.33	-19.45	-19.10	-17.62
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	115.49	107.10	79.50	-27.60	-25.8	82.35	70.21	63.07	57.53	54.07	2.64	11.20	12.08
Naphtha	108.37	91.97	51.12	-40.85	-44.4	50.54	40.90	31.15	28.47	31.77	-4.48	-3.93	-16.30
Jet/Kerosene	137.65	121.50	90.09	-31.41	-25.9	90.16	83.81	78.48	82.45	80.50	24.79	25.59	22.67
Gasoil .5%	132.17	118.93	83.98	-34.94	-29.4	81.55	77.16	74.13	76.11	72.26	19.31	23.02	16.56
LSWR Cracked	110.41	96.04	61.88	-34.15	-35.6	61.20	53.30	48.88	45.87	43.78	-2.45	0.13	-5.54
HSFO 180 CST	103.70	90.85	61.69	-29.17	-32.1	62.03	53.98	45.90	40.45	41.40	-9.16	-5.05	-5.74
HSFO 380 CST 4%	104.65	92.02	61.94	-30.08	-32.7	62.34	53.87	45.63	40.06	40.77	-8.20	-3.88	-5.48

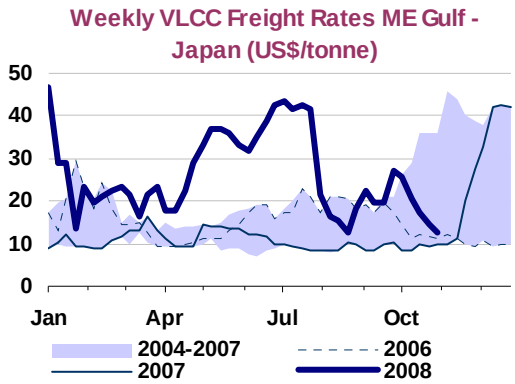
Source: Platts

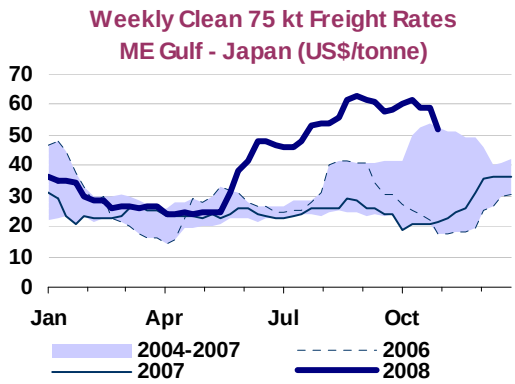
Freight

In spite of the looming winter uptick in crude runs, benchmark crude freight rates weakened throughout October, undermined by the prospect of broadly lower demand and reduced supply. Clean rates also eased on slackening naphtha demand and lower Chinese imports.

In the Middle East Gulf, VLCCs to Japan were chartering at $12.64/tonne by the end of October, down by a significant $13/tonne on the month. Prospective regional supplies (and, by extension, more immediate tanker chartering demand) were dented by field maintenance in the UAE, which started in October, and the implementation of reductions to OPEC production targets of 1.5 mb/d, effective 1 November. Tanker movement reports suggest that regional export volumes have indeed begun to decline through mid-November. Furthermore, as with the whole oil complex, bunker prices have fallen considerably in the last few months. This has also had a downward effect on freight rates as spot charter rates incorporate the cost of fuel.

After falling to a mid-month trough, Suezmax rates recovered strongly in the latter part of October. Accordingly, West Africa to US Atlantic coast rates (130 kmt) fell by $8.50/tonne in the first two weeks of October to a low of $17.15/tonne, before rebounding to $27/tonne by the end of the month. Flows were bolstered by a recovery in Angolan output after maintenance. Some incremental Suezmax liftings from Venezuela and Mexico may have also tightened the Atlantic vessel supply picture. A resumption of flows through the Baku-Supsa pipeline to the Black Sea may have lent support to tanker demand in the Mediterranean. Aframax rates in and around European waters firmed in October, as refinery throughputs rose seasonally.





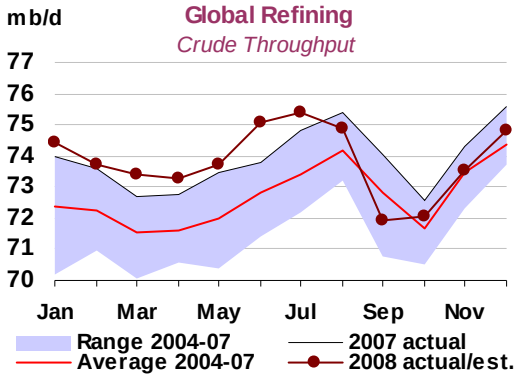
Reports of extremely weak naphtha demand in Asia (and a drop in naphtha prices, which has turned cracks negative) as well as an ongoing reformer outage in Saudi Arabia, weighed on eastbound trade flows in large clean vessels from the Middle East Gulf. However, reports of naphtha arbitrages to Europe opening up may have provided some offsetting long haul vessel demand. Korean product exports apparently rose in October, supporting intra-Asian clean tanker rates, although weaker Chinese import demand could have proved more influential, given that Singapore to Japan rates (30 kmt) eased from over $30/tonne early in October to under $27/tonne by end-month.

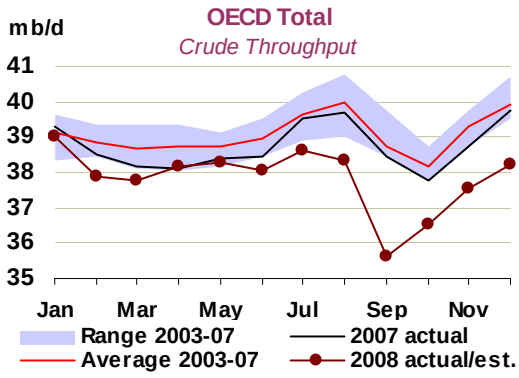
REFINING

Summary

- **Global 4Q08 crude throughput is forecast to average 73.5 mb/d during 4Q08,** 1.4 mb/d lower than last month's report. Weaker demand and the deteriorating margin outlook underpin this month's large downward revision. Lower Chinese, Russian and OECD Pacific and Europe crude throughput forecasts account for the majority of the adjustment. 4Q08 annual growth moves firmly negative, driven by the heavy decline in OECD throughput (-1.3 mb/d) and the collapse in growth in Chinese crude runs. A partial offset to these reductions comes from Saudi Arabia, where crude runs have significantly exceeded forecasts for two months running, leading to increased 4Q08 estimates.

- **The 3Q08 global crude throughput estimate is broadly unchanged,** at 74.1 mb/d, despite downward adjustments to reported Canadian and Japanese August crude throughput, and lower-than-expected throughputs in Iran, Russia, Thailand and Taiwan. Partially offsetting these declines were upward revisions to provisional reported August crude runs in Italy, Belgium and Spain, and above-forecast crude throughput in Egypt, Brazil and Saudi Arabia.





- **OECD crude throughput averaged 35.6 mb/d in September,** a capacity utilisation rate of just 78.9%. This represents the lowest monthly average level since October 1995. Lasting damage to US Gulf Coast refineries from Hurricanes Gustav and Ike appears minimal, with the last refineries restarting by mid-to-late October. The US DOE has lent just over 5 mb of crude from the SPR to assist refiners in supplying US demand for products. Elsewhere in the OECD regions, the temporary strength in refining margins appeared to offer little support to crude throughput levels.

Global Refinery Throughput

The deteriorating margin outlook, rising product stocks and weakening demand have all contributed to this month's large reduction to forecast 4Q08 crude throughput. Weaker-than-expected preliminary October data from the US, Japan and Russia have contributed to the 1.4 mb/d reduction in our crude throughput estimate. Furthermore, the announcement of economic run cuts from Japanese and Chinese refiners, among others, and the prospect of further cuts by refineries in Korea, Europe and the US reduce our November and December forecasts by 1.5 and 1.2 mb/d, respectively.

Financial market turmoil, falling profitability and slowing demand growth has led several refinery operators to reduce capital expenditure plans for 2009. US independent refiner Valero has reduced planned 2009 capex to $3.5 bn from the previously planned level of $4.0 bn, by deferring some 2009 projects into 2010 and 2011. In the longer term, the two planned joint-venture refineries in Saudi Arabia, with ConocoPhillips and Total, have both been postponed by at least six months, to allow time for likely construction costs to ease and for project sponsors to evaluate the changing economic outlook.

Preliminary data for October indicate that global crude throughput averaged 72.1 mb/d, 1.4 mb/d below last month's forecast of 73.5 mb/d. Lower-than-expected crude runs in Japan, the US and Russia account for much of the downward revision. In addition to the weaker margin environment, maintenance in several European countries, plus Brazil was heavier-than-anticipated, and reports of accelerated run cuts in China also contribute to this month's lower estimate.

The balance of 4Q08 is forecast to see global crude runs recover from current low levels, in line with the seasonal trend, as refiners return from maintenance in Europe, Russia and Brazil. Crude throughput is forecast to increase month-on-month by 1.5 mb/d in November and 1.3 mb/d in December, to an average of 73.5 mb/d and 74.8 mb/d, respectively. This level of crude throughput nevertheless represents downward revisions of 1.5 mb/d and 1.2 mb/d, respectively to our previous forecast.

Global Refinery Crude Throughput[1]

(million barrels per day)

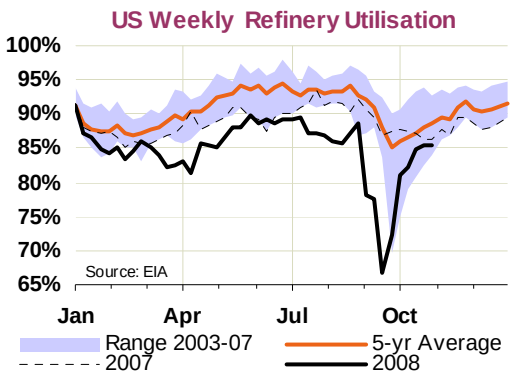
	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08
OECD									
North America	17.8	18.3	18.3	18.3	*17.7*	*15.7*	*17.3*	*17.9*	*18.1*
Europe	13.5	13.4	13.5	13.6	*13.8*	*13.3*	*12.8*	*13.2*	*13.5*
Pacific	6.9	6.6	6.3	6.8	*6.9*	*6.6*	*6.4*	*6.5*	*6.6*
Total OECD	38.2	38.3	38.0	38.6	*38.4*	*35.6*	*36.5*	*37.5*	*38.2*
NON-OECD									
FSU	5.7	5.8	6.2	6.0	*6.1*	*5.8*	*5.7*	*6.1*	*6.1*
Europe	0.8	0.8	0.8	0.8	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.7	6.5	7.2	7.1	*6.9*	*6.9*	*6.6*	*6.6*	*6.6*
Other Asia	8.4	8.3	8.3	8.5	*8.1*	*8.4*	*8.4*	*8.3*	*8.4*
Latin America	5.5	5.5	5.6	5.5	*5.6*	*5.4*	*5.4*	*5.5*	*5.6*
Middle East	5.9	6.1	6.4	6.3	*6.5*	*6.6*	*6.4*	*6.3*	*6.6*
Africa	2.2	2.5	2.6	2.5	*2.5*	*2.5*	*2.2*	*2.4*	*2.5*
Total Non-OECD	35.1	35.5	37.0	36.8	*36.5*	*36.4*	*35.5*	*36.0*	*36.6*
Total	73.3	73.7	75.1	75.4	*74.9*	*72.0*	*72.1*	*73.5*	*74.8*

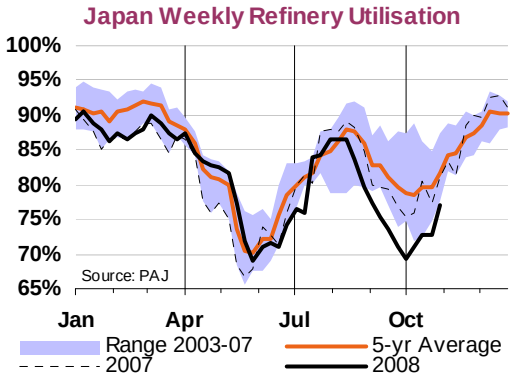
1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

OECD 4Q08 crude throughput is forecast to average 37.4 mb/d. As highlighted in last month's report, we remain concerned about the downside risks to our 4Q08 crude throughput forecast. This month's 0.9 mb/d reduction to our estimate is a direct consequence of these negative factors, namely weakening demand and deteriorating profitability, becoming a reality. Lower-than-anticipated October crude runs in Japan, and a slow recovery by US refineries in late October, suggest the weak margin environment is restricting activity levels in these two OECD countries. Furthermore, Nippon Oil, the largest Japanese refiner, has confirmed further run cuts in November and December, and reports suggest that other refiners in Japan have followed suit. Unless there is a significant pick-up in demand for kerosene, Japan is likely to see utilisation rates lag the five-year range through to the end of the year, as has been the case recently.

OECD North America crude throughput collapsed in September to an average of 15.7 mb/d, following the hurricane-related disruption to US Gulf Coast refining. Crude runs bounced back in October as refineries progressively restored operations to normal. ExxonMobil's Beaumont refinery, one of the most seriously affected by Hurricane Ike, was the last to complete its restart in late October.

Forecast December throughput remains broadly unchanged for now. However, November crude throughput has been trimmed by 0.3 mb/d, following the inability of US crude runs to move above 15 mb/d in the most recent EIA weekly data. This suggests that a further increase in crude throughput from the current level may require a stronger margin environment, essentially driven by stronger gasoline or heating oil cracks, which is difficult to envisage given the current economic uncertainties.





OECD Pacific crude runs dropped in September, as the start of autumn maintenance at Japanese refineries, increased offline capacity by an average of 0.4 mb/d. Conversely, Korean refiners reported higher runs during the month, as the return to service of distillation capacity at SK and GS Caltex refineries more than offset the impact of economic run cuts.

Refinery Crude Throughput and Utilisation in OECD Countries

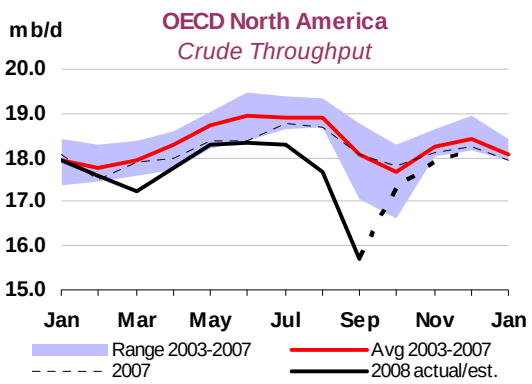
(million barrels per day)

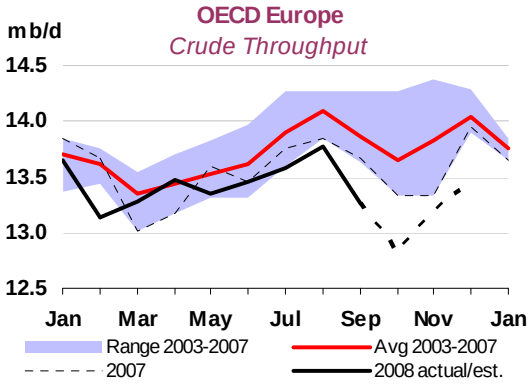
							Change from		Utilisation rate[1]	
	Apr 08	May 08	Jun 08	Jul 08	Aug 08	Sep 08	*Aug 08*	*Sep 07*	Sep 08	Sep 07
OECD North America										
US[2]	14.80	15.29	15.38	15.24	14.95	12.81	-2.13	-2.41	72.83	87.22
Canada	1.71	1.71	1.82	1.85	1.52	1.73	0.22	0.00	85.99	86.03
Mexico	1.26	1.28	1.11	1.22	1.23	1.15	-0.08	0.02	74.63	71.96
Total	17.77	18.28	18.31	18.30	17.70	15.70	-2.00	-2.39	74.22	86.10
OECD Europe										
France	1.70	1.67	1.73	1.72	1.79	1.77	-0.02	0.13	90.18	83.77
Germany	2.20	2.08	2.11	2.26	2.19	1.96	-0.24	-0.34	81.00	95.01
Italy	1.70	1.63	1.72	1.73	1.77	1.74	-0.03	-0.11	74.53	79.34
Netherlands	1.05	1.10	1.07	1.04	1.03	1.05	0.02	-0.03	86.85	89.29
Spain	1.21	1.18	1.11	1.12	1.18	1.17	-0.01	0.01	91.70	91.18
UK	1.59	1.56	1.66	1.59	1.62	1.65	0.03	0.08	87.35	83.32
Other OECD Europe	4.03	4.14	4.06	4.12	4.19	3.94	-0.26	-0.12	83.89	86.51
Total	13.48	13.36	13.46	13.58	13.78	13.27	-0.51	-0.40	84.11	86.62
OECD Pacific										
Japan	3.97	3.56	3.41	3.74	3.89	3.53	-0.37	-0.14	75.37	78.36
Korea	2.28	2.45	2.21	2.35	2.28	2.42	0.14	0.08	88.56	85.76
Other OECD Pacific	0.68	0.63	0.65	0.67	0.71	0.68	-0.03	0.00	84.75	84.77
Total	6.92	6.64	6.26	6.76	6.88	6.63	-0.25	-0.06	80.68	81.45
OECD Total	38.17	38.28	38.04	38.63	38.36	35.60	-2.76	-2.85	78.85	85.43

1 Expressed as a percentage, based on crude throughput and current operable refining capacity

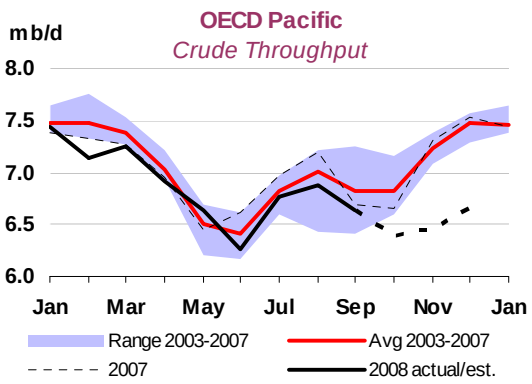
Forecast **4Q08** crude throughput for the region has been reduced following reports of heavy voluntary run cuts by Japanese refineries, including Tonen General, Nippon Oil and Cosmo Oil. Recent weekly Japanese data point to some refineries completing scheduled maintenance, but the weak margin environment continues to weigh on activity levels and it now appears unlikely that crude runs will move significantly above 4 mb/d, barring a recovery in refinery economics. Crude throughput in Korean refineries could also fall short of our previous expectations, based on their significant exposure to the heavily negative naphtha crack. Korean refiners have average naphtha yields of 17%, twice that of Japan and four times the OECD average. Consequently, we have lowered our forecast Korean crude throughput level by around 200 kb/d, about 8% lower than our previous forecast for 4Q08.

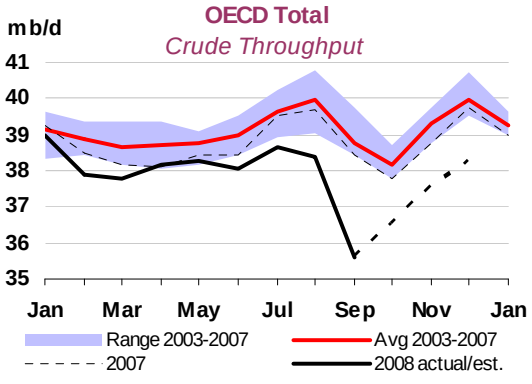
Furthermore, the planned shutdowns at BP Kwinana and Shell Clyde in Australia in November and December also reduce this month's 4Q08 forecast. The closure of the two Australian refineries for maintenance is partly due to the tighter sulphur specifications that will come into force in January 2009, although Shell's Clyde refinery has reportedly been suffering from reliability issues that may need up to three months work to rectify.





OECD Europe September crude throughput dipped as autumn refinery maintenance more than offset the impact of stronger margins. August crude throughput was revised upward by 0.3 mb/d to 13.8 mb/d with Italy, Belgium and Spain accounting for the majority of the increase. **4Q08** crude throughput is revised down by 0.4 mb/d, in light of the weaker margin environment, and heavier-than-forecast maintenance. Notably, Italian, UK and Turkish average crude throughput are each forecast to be 0.1 mb/d below last month's report.





Voluntary run cuts at the Petroplus Teesside refinery in the UK have been reported and similar moves are likely elsewhere in Northwest Europe, e.g. in Belgium, Germany, and the Mediterranean. Current forecasts envisage a seasonal trough in European crude runs in October with a gradual recovery through to the end of the year. A stronger margin outlook would enable us to raise forecasts in coming months, but the heavy turnaround work ahead of tighter sulphur limits in diesel and gasoline next January will likely cap overall activity levels.

The introduction of these tighter EU-wide 'Euro-V' diesel specifications has been well flagged and it would appear that very few European refineries are unprepared to meet them. Perhaps of greater concern is the ability of export refiners, who supply significant volumes of diesel to Europe, to meet the tighter specifications. However, forward price spreads for 10 ppm diesel in the OTC derivatives market do not appear to currently price in any shortfall in import volumes during 1Q09, although this may more generally reflect concerns about future European demand strength for diesel. It would therefore appear that refiners currently supplying 50 ppm diesel to Europe will be able to meet the tighter specification.

Refiners have several options available to them to meet the tighter specifications, depending on the timeframe considered. Refiners can invest in increased hydrotreating capacity over the longer term or perhaps in improved hydrotreating catalysts, which deliver ultra- low sulphur levels (as low as six ppm) in diesel from existing units. In the short term, operational changes include running sweeter crudes, or possibly running hydrotreaters more intensively. This last option comes at a cost, as refiners face a trade-off between minimising the yield reduction from meeting the tighter specification and the resultant shorter periods between maintenance and catalyst changes.

Forecast **4Q08 Non-OECD** crude throughput has been revised down this month by 0.5 mb/d. Weaker Chinese, Russian, Brazilian and Nigerian estimates account for the majority of the change. Year-on-year growth is now 0.6 mb/d in 4Q08, just over half the estimate in last month's report as slowing demand and weaker margins affect our forecasts. **Nigerian** crude runs for 4Q08 are reduced following the attack on crude pipelines feeding supplies to the Kaduna and Warri refineries. Uncertainty, over the exact timing of the restart of these supplies leads us to cut forecast crude runs by 0.1 mb/d for the quarter.

Chinese September crude runs were marginally ahead of our forecast at 6.9 mb/d, according to National Bureau of Statistics data. Subsequent reports of product de-stocking on slowing demand growth and planned run cuts by Sinopec and Petrochina result in a 0.3 mb/d downward revision to this month's 4Q08 forecast. Despite the return to profitability of processing imported crudes, this move by the state oil companies appears to reflect concern over future demand for products, rather than a response to weaker margins. Arguably, margins are currently looking healthier than has been the case for much of the year, although Sinopec has requested continued state subsidises for the next several months. Consequently, forecast 4Q08 crude throughput is now expected to average around 6.6 mb/d.

FSU 4Q08 crude throughputs are reduced by 0.2 mb/d, on heavier maintenance in Russia, lower expectations for Ukrainian throughputs, and reports of tighter credit markets forcing some refineries to cut crude runs. This despite Russian crude runs in September being marginally ahead of our forecasts, at 4.8 mb/d. However, during 4Q08, TNK-BP's 300 kb/d Ryazan refinery now appears to have been undergoing maintenance during October, and follows closely on work at Yaroslavl refinery in September. Furthermore, reports of the imminent restart of the 137 kb/d Kherson refinery in Ukraine appear premature, and we have removed this increase in crude runs from our November and December forecasts. Lastly, the combination of rapidly changing product export duties and the tougher credit market conditions seem to indicate that our previous forecast for continued strong Russian throughput is unlikely to materialise before the end of the year, and we have trimmed estimates accordingly

Middle East 4Q08 forecasts have been increased following the continued strong performance of Saudi Arabian refineries, despite some offset from operational issues in Kuwait during October. Saudi crude throughput has averaged 2.0 mb/d during August and September, well above previous highs and our forecasts and we have accordingly raised our forecasts for 4Q08 by an average of 0.1 mb/d. Kuwait's refineries suffered a total loss of power during part of the month of October and this is likely to have reduced crude runs by an average of almost 0.1 mb/d for the month, equivalent to about 10% of capacity.

Other Asian 4Q08 forecasts are unchanged this month however, a lack of news concerning the operational status of Reliance's 580 kb/d Jamnagar expansion suggests that we may see downward revisions in the coming months to our 4Q08 forecasts, having included progressively higher volumes for this project over the course of the quarter. Furthermore, export orientated merchant refiners in Singapore and Thailand may also be particularly exposed to the weaker economic outlook and margin environment.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.6	25.4	25.7	25.4	25.5	25.5	25.5	24.8	24.5	24.1	24.1	24.4	24.1	24.1	23.8	23.8	24.0
Europe	15.7	15.7	15.2	15.0	15.4	15.6	15.3	15.2	14.9	15.3	15.5	15.2	15.0	14.6	15.2	15.3	15.0
Pacific	8.6	8.5	8.9	7.9	7.9	8.7	8.3	8.9	7.8	7.5	8.6	8.2	8.7	7.7	7.5	8.5	8.1
Total OECD	49.8	49.6	49.8	48.2	48.8	49.8	49.2	48.9	47.2	47.0	48.2	47.8	47.9	46.3	46.5	47.6	47.1
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.4	4.3	4.2	4.2	4.2	4.5	4.5	4.3
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.0	8.1	7.9	7.9	8.2	8.2	8.2	8.3	8.2
Other Asia	8.8	9.0	9.2	9.3	9.1	9.4	9.3	9.7	9.7	9.2	9.5	9.5	9.8	9.9	9.3	9.7	9.7
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.9	6.0	6.0	5.9	5.9	6.1	6.2	6.2	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.2
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.1	3.0	3.1	3.1	3.2	3.2	3.0	3.2	3.1
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	38.0	38.6	38.5	38.4	38.4	39.2	39.6	39.4	39.6	39.5
Total Demand[1]	84.0	85.1	86.2	85.1	85.7	87.1	86.1	86.9	85.8	85.5	86.6	86.2	87.1	86.0	85.9	87.3	86.5
OECD SUPPLY																	
North America	14.1	14.2	14.3	14.4	14.1	14.1	14.2	14.2	14.1	13.6	14.0	14.0	14.3	14.0	13.9	14.2	14.1
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.8	4.4	4.6	4.7	4.5	4.2	4.0	4.2	4.3
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8
Total OECD	20.3	20.0	20.1	19.9	19.5	19.8	19.8	19.7	19.5	18.8	19.4	19.3	19.6	19.0	18.7	19.2	19.1
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	12.6	12.8	12.8	13.2	13.1	12.9	12.9	13.0
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Latin America[2]	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.0	4.1	4.0	4.3	4.3	4.3	4.3	4.3
Middle East	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5
Africa[2]	3.7	3.9	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.6	27.6	27.5	27.9	27.6	28.4	28.4	28.2	28.2	28.3
Processing Gains[3]	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[2]	50.4	51.2	50.5	50.2	49.7	50.1	50.1	49.9	49.8	48.9	50.1	49.7	50.9	50.2	49.8	50.3	50.3
Non-OPEC excl. Angola & Ecuador[2]	48.7	49.2	50.0	49.7	49.2	49.7	49.6	49.9	49.8	48.9	50.1	49.7	50.9	50.2	49.8	50.3	50.3
OPEC																	
Crude[5]	29.7	29.7	30.4	30.2	30.7	31.6	30.7	32.4	32.2	32.4							
NGLs	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.9	4.9	5.1	5.4	5.1	5.6	5.8	6.0	6.1	5.9
Total OPEC[2]	34.2	34.3	35.1	35.0	35.4	36.4	35.5	37.3	37.1	37.5							
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	36.0	36.8	35.9	37.3	37.1	37.5							
Total Supply[6]	84.7	85.5	85.5	85.2	85.1	86.5	85.6	87.1	86.9	86.5							
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	0.0	-0.9	-0.3	0.0	0.4	0.5							
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	-0.1							
Total	0.2	0.3	-0.7	0.7	0.1	-0.8	-0.2	0.0	0.4	0.4							
Floating Storage/Oil in Transit	-0.1	-0.1	0.1	0.0	-0.3	0.2	0.0	0.3	0.0	-0.3							
Miscellaneous to balance[7]	0.5	0.2	-0.1	-0.6	-0.5	0.0	-0.3	-0.1	0.8	0.9							
Total Stock Ch. & Misc	0.7	0.4	-0.7	0.0	-0.6	-0.7	-0.5	0.3	1.1	1.0							
Memo items:																	
Call on OPEC crude + Stock ch.[8]	29.1	29.3	31.0	30.2	31.3	32.2	31.2	32.1	31.1	31.4	31.1	31.4	30.6	29.9	30.1	30.8	30.4
Adjusted Call on OPEC + Stock ch.[9]	29.6	29.5	30.9	29.5	30.8	32.2	30.9	32.0	31.9	32.3	31.3	31.9	30.8	30.1	30.3	31.0	30.6
"Call" incl. Angola & Ecuador[2]	30.8	31.3	31.5	30.7	31.8	32.6	31.6	32.1	31.1	31.4	31.1	31.4	30.6	29.9	30.1	30.8	30.4
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.4	30.1	31.3	32.5	31.3	32.0	31.9	32.3	31.3	31.9	30.8	30.1	30.3	31.0	30.6

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 Ecuadorean production is reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
6 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
7 Includes changes in non-reported stocks in OECD and non-OECD areas.
8 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
9 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-0.2	-0.5	-0.2	-0.2	-	-0.3	-0.6	-0.3
Europe	-	-	-	-	-	-	-	-	-	0.1	-	-	-0.1	-	-	-0.1	-
Pacific	-	-	-	-	-	-	-	-	-	-0.2	-0.2	-0.1	-	-	-0.2	-0.2	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-0.3	-0.7	-0.3	-0.2	-	-0.5	-0.9	-0.4
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-0.1	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-0.2	-0.1	-	-0.1	-0.3	-0.2	-0.2
Other Asia	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	0.1	-	-0.3	-0.1	-0.1	-0.1	-0.4	-0.4	-0.3
Total Demand	-	-	-	-	-	-	-	-	0.1	-0.3	-1.0	-0.3	-0.3	-0.2	-0.9	-1.3	-0.7
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-0.4	-0.1	-0.1	-0.1	-0.2
Europe	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-0.2	-0.3	-0.1	-0.4	-0.2	-0.2	-0.2	-0.2
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	0.1	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Non-OECD	-	-	-	-	-	-	-	0.1	0.1	0.1	-0.1	-	0.1	0.1	0.1	0.1	0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	0.1	0.1	-0.1	-0.4	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	0.1	0.1	-0.1	-0.4	-0.1	-0.3	-0.1	-0.1	-0.1	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-0.1							
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-0.1							
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-0.1							
Total Supply	-	-	-	-	-	-	-	0.1	0.1	-0.2							
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-								
Government	-	-	-	-	-	-	-	-	-								
Total	-	-	-	-	-	-	-	-	-								
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-								
Miscellaneous to balance	-	-	-	-	0.1	0.1	-	0.1	-								
Total Stock Ch. & Misc	-	-	-	-	0.1	0.1	-	0.1	-	0.1							
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-	-	-0.1	-0.1	-	-0.1	-	-0.2	-0.6	-0.2	-	-0.1	-0.8	-1.2	-0.5
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-	-	0.7	-0.4	0.1	0.2	0.1	-0.6	-1.0	-0.3

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.42	25.68	25.40	25.54	25.49	25.53	24.84	24.53	24.12	24.07	24.39	24.14	24.06	23.83	23.81	23.96
Europe	15.68	15.23	14.95	15.41	15.62	15.30	15.20	14.88	15.35	15.51	15.23	15.01	14.61	15.15	15.30	15.02
Pacific	8.48	8.91	7.87	7.89	8.72	8.35	8.87	7.82	7.51	8.63	8.21	8.74	7.66	7.48	8.52	8.10
Total OECD	49.58	49.82	48.23	48.84	49.83	49.18	48.90	47.23	46.98	48.20	47.83	47.89	46.33	46.46	47.63	47.08
FSU	4.06	4.11	3.93	4.18	4.28	4.13	4.11	4.13	4.36	4.34	4.24	4.23	4.22	4.46	4.45	4.34
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.76	0.76	0.83	0.77	0.72	0.77	0.77
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.95	8.06	7.89	7.94	8.25	8.24	8.16	8.28	8.23
Other Asia	9.00	9.24	9.34	9.06	9.41	9.26	9.65	9.73	9.16	9.52	9.51	9.82	9.89	9.30	9.70	9.67
Latin America	5.33	5.41	5.59	5.73	5.73	5.62	5.66	5.88	5.96	5.96	5.87	5.86	6.08	6.16	6.17	6.07
Middle East	6.22	6.40	6.50	6.73	6.44	6.52	6.71	6.96	7.28	6.78	6.93	7.00	7.26	7.59	7.08	7.23
Africa	2.96	3.09	3.08	2.99	3.12	3.07	3.14	3.15	3.00	3.14	3.11	3.18	3.18	3.04	3.17	3.14
Total Non-OECD	35.52	36.40	36.91	36.91	37.31	36.89	37.96	38.55	38.53	38.39	38.36	39.18	39.65	39.41	39.62	39.46
World	85.11	86.22	85.13	85.75	87.15	86.06	86.86	85.78	85.52	86.59	86.19	87.06	85.98	85.87	87.25	86.54
of which:																
US50	*20.69*	*20.79*	*20.63*	*20.73*	*20.58*	*20.68*	*19.99*	*19.76*	*19.29*	*19.20*	*19.56*	*19.33*	*19.35*	*19.03*	*18.98*	*19.17*
Euro4	*8.23*	*7.87*	*7.70*	*7.89*	*8.02*	*7.87*	*7.79*	*7.65*	*7.98*	*7.91*	*7.83*	*7.71*	*7.44*	*7.84*	*7.76*	*7.69*
Japan	*5.20*	*5.43*	*4.64*	*4.70*	*5.25*	*5.01*	*5.41*	*4.59*	*4.31*	*5.11*	*4.86*	*5.26*	*4.40*	*4.25*	*4.97*	*4.72*
Korea	*2.18*	*2.36*	*2.12*	*2.06*	*2.31*	*2.21*	*2.33*	*2.09*	*2.07*	*2.35*	*2.21*	*2.34*	*2.11*	*2.09*	*2.37*	*2.23*
Mexico	*2.08*	*2.12*	*2.14*	*2.06*	*2.16*	*2.12*	*2.10*	*2.16*	*2.11*	*2.15*	*2.13*	*2.06*	*2.13*	*2.08*	*2.12*	*2.10*
Canada	*2.30*	*2.38*	*2.29*	*2.40*	*2.39*	*2.36*	*2.37*	*2.25*	*2.37*	*2.34*	*2.33*	*2.35*	*2.23*	*2.35*	*2.33*	*2.31*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.44*	*2.45*	*2.50*	*2.43*	*2.44*	*2.53*	*2.54*	*2.59*	*2.53*
India	*2.80*	*3.04*	*2.97*	*2.74*	*3.03*	*2.95*	*3.19*	*3.11*	*2.90*	*3.17*	*3.09*	*3.33*	*3.24*	*3.01*	*3.29*	*3.22*
Annual Change (% per annum)																
North America	-0.6	1.3	0.9	-0.4	-0.1	0.4	-3.3	-3.4	-5.6	-5.6	-4.5	-2.8	-1.9	-1.2	-1.1	-1.8
Europe	0.1	-4.9	-2.2	-1.7	-0.8	-2.4	-0.2	-0.5	-0.4	-0.7	-0.5	-1.3	-1.8	-1.3	-1.3	-1.4
Pacific	-1.4	-4.1	-0.5	-0.7	-1.0	-1.6	-0.5	-0.7	-4.7	-1.0	-1.7	-1.5	-2.1	-0.4	-1.2	-1.3
Total OECD	-0.5	-1.6	-0.3	-0.8	-0.5	-0.8	-1.8	-2.1	-3.8	-3.3	-2.7	-2.1	-1.9	-1.1	-1.2	-1.6
FSU	3.4	2.4	2.0	1.1	1.6	1.8	0.0	5.1	4.3	1.3	2.6	2.9	2.1	2.1	2.5	2.4
Europe	1.0	2.0	1.9	1.9	1.5	1.8	1.5	1.8	1.8	1.7	1.7	1.1	1.4	1.4	1.4	1.3
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	2.9	7.2	3.9	5.2	5.1	3.7	1.2	5.0	3.7
Other Asia	2.3	1.6	2.7	3.2	3.8	2.9	4.5	4.2	1.1	1.2	2.7	1.7	1.7	1.5	1.9	1.7
Latin America	4.6	4.6	5.1	5.5	5.9	5.3	4.6	5.2	4.0	4.1	4.4	3.5	3.4	3.3	3.4	3.4
Middle East	4.0	5.1	5.9	4.2	3.8	4.7	4.9	7.0	8.2	5.4	6.4	4.3	4.3	4.2	4.3	4.3
Africa	0.9	3.3	2.9	3.5	5.6	3.8	1.6	2.3	0.5	0.5	1.2	1.3	1.1	1.1	1.2	1.2
Total Non-OECD	4.0	3.5	4.0	3.7	4.1	3.8	4.3	4.5	4.4	2.9	4.0	3.2	2.8	2.3	3.2	2.9
World	1.3	0.5	1.5	1.1	1.4	1.1	0.7	0.8	-0.3	-0.6	0.1	0.2	0.2	0.4	0.8	0.4
Annual Change (mb/d)																
North America	-0.14	0.34	0.23	-0.10	-0.02	0.11	-0.84	-0.88	-1.42	-1.43	-1.14	-0.70	-0.46	-0.30	-0.26	-0.43
Europe	0.01	-0.78	-0.34	-0.26	-0.13	-0.38	-0.03	-0.07	-0.06	-0.11	-0.07	-0.19	-0.27	-0.19	-0.21	-0.22
Pacific	-0.12	-0.38	-0.04	-0.05	-0.09	-0.14	-0.04	-0.05	-0.37	-0.09	-0.14	-0.13	-0.16	-0.03	-0.10	-0.11
Total OECD	-0.25	-0.83	-0.15	-0.42	-0.23	-0.41	-0.91	-1.00	-1.85	-1.63	-1.35	-1.02	-0.89	-0.53	-0.57	-0.75
FSU	0.13	0.10	0.08	0.05	0.07	0.07	0.00	0.20	0.18	0.06	0.11	0.12	0.09	0.09	0.11	0.10
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.23	0.54	0.30	0.40	0.40	0.29	0.10	0.39	0.29
Other Asia	0.21	0.15	0.24	0.28	0.35	0.26	0.42	0.39	0.10	0.11	0.25	0.17	0.16	0.14	0.18	0.16
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.25	0.29	0.23	0.23	0.25	0.20	0.20	0.20	0.21	0.20
Middle East	0.24	0.31	0.36	0.27	0.24	0.29	0.31	0.46	0.55	0.35	0.42	0.29	0.30	0.31	0.29	0.30
Africa	0.03	0.10	0.09	0.10	0.16	0.11	0.05	0.07	0.01	0.02	0.04	0.04	0.03	0.03	0.04	0.04
Total Non-OECD	1.37	1.23	1.43	1.31	1.48	1.36	1.56	1.65	1.62	1.08	1.47	1.22	1.09	0.88	1.23	1.11
World	1.11	0.39	1.28	0.89	1.24	0.95	0.65	0.65	-0.23	-0.55	0.12	0.20	0.20	0.35	0.66	0.35
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	-0.03	0.00	-0.01	0.00	-0.01	-0.24	-0.50	-0.19	-0.19	0.00	-0.30	-0.59	-0.27
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.03	-0.06	-0.05	-0.01	-0.08	-0.05
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.21	-0.20	-0.10	0.02	0.00	-0.19	-0.19	-0.09
Total OECD	0.00	0.00	0.00	-0.03	0.00	-0.01	0.00	-0.01	-0.34	-0.71	-0.27	-0.23	-0.05	-0.50	-0.86	-0.41
FSU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	-0.07	0.00	-0.01	0.01	0.01	-0.08	-0.02
Europe	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.20	-0.06	-0.03	-0.12	-0.32	-0.24	-0.18
Other Asia	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.04	0.01	0.03	-0.01	0.03	0.01	-0.02	0.00
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.01	-0.01	0.00	-0.01	-0.04	-0.02	-0.02
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.03	-0.02	0.00	-0.04	-0.03	0.02	-0.03	-0.02
Africa	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	-0.03	-0.02	-0.01	0.00	-0.01	-0.03	-0.03	-0.02
Total Non-OECD	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.06	0.01	-0.31	-0.06	-0.11	-0.14	-0.36	-0.42	-0.26
World	0.00	0.00	0.00	-0.02	-0.01	-0.01	0.00	0.05	-0.34	-1.02	-0.33	-0.34	-0.18	-0.85	-1.29	-0.67
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	0.01	0.00	-0.02	-0.01	-0.01	0.00	0.05	-0.31	-1.00	-0.32	-0.34	-0.23	-0.52	-0.27	-0.34

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	2Q08	3Q08	4Q08	1Q09	2Q09	Aug 08	Sep 08	Oct 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.96	9.19				9.21	9.17	9.08
Iran	3.98			3.85	3.93				3.92	3.91	3.91
Iraq	2.09			2.47	2.32				2.33	2.16	2.29
UAE	2.52			2.66	2.63				2.61	2.65	2.55
Kuwait	2.16			2.33	2.33				2.32	2.33	2.36
Neutral Zone	0.56			0.58	0.58				0.59	0.56	0.55
Qatar	0.80			0.85	0.87				0.87	0.86	0.85
Angola[6]	1.66			1.90	1.83				1.85	1.74	1.82
Nigeria	2.13			1.82	1.99				1.98	1.98	1.94
Libya	1.71			1.74	1.68				1.65	1.70	1.73
Algeria	1.36			1.37	1.37				1.37	1.37	1.37
Ecuador[6]	0.04			0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.36	2.33				2.31	2.37	2.35
Indonesia	0.84			0.86	0.86				0.87	0.86	0.85
Total Crude Oil[6]	30.71			32.24	32.41				32.35	32.15	32.13
Total NGLs[1,6]	4.77	5.08	5.88	4.91	5.13	5.38	5.58	5.82	5.13	5.13	5.37
Total OPEC[6]	35.48			37.15	37.54				37.49	37.29	37.49
OPEC incl. Angola & Ecuador[6]	35.95			37.15	37.54				37.49	37.29	37.49
NON-OPEC[2]											
OECD											
North America	14.23	13.98	14.08	14.06	13.64	14.04	14.26	13.96	14.00	12.65	13.76
United States	7.44	7.54	7.82	7.78	7.27	7.46	7.71	7.90	7.59	6.41	7.24
Mexico	3.48	3.18	2.93	3.17	3.12	3.13	3.06	2.97	3.12	3.09	3.14
Canada	3.32	3.27	3.33	3.11	3.24	3.44	3.49	3.09	3.28	3.14	3.39
Europe	4.95	4.68	4.26	4.76	4.45	4.61	4.55	4.22	4.23	4.32	4.59
UK	1.66	1.53	1.37	1.64	1.35	1.50	1.51	1.37	1.19	1.40	1.45
Norway	2.56	2.42	2.20	2.41	2.38	2.39	2.33	2.15	2.32	2.20	2.42
Others	0.73	0.72	0.69	0.71	0.71	0.72	0.71	0.70	0.71	0.73	0.73
Pacific	0.63	0.69	0.78	0.66	0.69	0.78	0.80	0.78	0.68	0.72	0.75
Australia	0.55	0.58	0.64	0.56	0.59	0.65	0.66	0.65	0.58	0.61	0.64
Others	0.08	0.11	0.14	0.10	0.10	0.13	0.14	0.14	0.10	0.11	0.12
Total OECD	19.81	19.35	19.12	19.49	18.78	19.42	19.61	18.97	18.91	17.68	19.11
NON-OECD											
Former USSR	12.77	12.78	13.03	12.87	12.61	12.81	13.16	13.12	12.32	12.66	12.50
Russia	10.08	10.01	9.86	9.96	10.02	10.08	9.97	9.90	10.01	10.06	10.07
Others	2.69	2.76	3.18	2.91	2.59	2.73	3.18	3.22	2.31	2.61	2.43
Asia	6.39	6.47	6.63	6.43	6.43	6.57	6.62	6.63	6.39	6.40	6.55
China	3.73	3.81	3.89	3.82	3.79	3.88	3.89	3.89	3.77	3.78	3.88
Malaysia	0.74	0.77	0.81	0.74	0.77	0.80	0.81	0.81	0.77	0.75	0.80
India	0.81	0.81	0.81	0.82	0.82	0.81	0.81	0.81	0.80	0.80	0.82
Others	1.11	1.07	1.12	1.06	1.05	1.08	1.12	1.12	1.05	1.06	1.05
Europe	0.13	0.12	0.11	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12
Latin America	4.32	4.02	4.31	3.96	4.05	4.14	4.29	4.31	4.08	4.03	4.09
Brazil	2.14	2.28	2.52	2.26	2.28	2.37	2.50	2.52	2.29	2.27	2.32
Argentina	0.75	0.74	0.76	0.71	0.75	0.75	0.76	0.76	0.76	0.74	0.75
Colombia	0.54	0.58	0.60	0.58	0.60	0.59	0.60	0.60	0.60	0.59	0.59
Ecuador[6]	0.46										
Others	0.43	0.42	0.43	0.41	0.42	0.43	0.43	0.43	0.42	0.43	0.42
Middle East[3]	1.64	1.61	1.55	1.61	1.61	1.59	1.57	1.55	1.61	1.59	1.60
Oman	0.70	0.72	0.71	0.72	0.72	0.71	0.71	0.71	0.72	0.70	0.72
Syria	0.40	0.39	0.38	0.39	0.39	0.39	0.39	0.38	0.39	0.39	0.39
Yemen	0.34	0.31	0.27	0.31	0.30	0.30	0.28	0.27	0.30	0.30	0.30
Africa	2.55	2.63	2.66	2.62	2.65	2.66	2.66	2.65	2.65	2.65	2.66
Egypt	0.67	0.69	0.69	0.68	0.69	0.70	0.70	0.70	0.69	0.69	0.70
Gabon	0.23	0.23	0.24	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Others	1.65	1.71	1.72	1.70	1.72	1.72	1.72	1.72	1.73	1.72	1.73
Total Non-OECD	27.81	27.63	28.29	27.62	27.46	27.89	28.41	28.39	27.17	27.45	27.52
Processing Gains[4]	2.17	2.24	2.29	2.22	2.25	2.29	2.29	2.29	2.25	2.25	2.29
Other Biofuels[5]	0.33	0.46	0.58	0.46	0.46	0.52	0.55	0.58	0.46	0.46	0.52
TOTAL NON-OPEC	50.11	49.68	50.27	49.78	48.95	50.12	50.86	50.22	48.79	47.84	49.44
Non-OPEC excl. Angola & Ecuador[6]	49.64	49.68	50.27	49.78	48.95	50.12	50.86	50.22	48.79	47.84	49.44
TOTAL SUPPLY	85.59			86.92	86.49				86.28	85.13	86.94

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
5 Comprises fuel ethanol and biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	May2008	Jun2008	Jul2008	Aug2008	Sep2008*	Sep2005	Sep2006	Sep2007	4Q2007	1Q2008	2Q2008	3Q2008
North America												
Crude	439.7	434.8	438.9	439.6	448.9	433.2	461.2	449.8	-0.29	0.35	-0.22	0.15
Motor Gasoline	234.3	237.0	233.7	221.0	215.1	227.0	244.1	228.7	0.20	0.06	-0.13	-0.24
Middle Distillate	184.1	191.5	201.2	205.1	193.0	198.5	224.3	206.7	0.02	-0.33	0.14	0.02
Residual Fuel Oil	48.2	49.1	44.3	45.5	47.0	42.0	53.0	44.5	0.04	0.00	0.02	-0.02
Total Products[3]	640.4	655.2	661.3	660.1	638.7	662.7	723.6	671.6	-0.04	-0.45	0.35	-0.18
Total[4]	1226.8	1241.5	1258.6	1264.7	1254.0	1253.9	1351.3	1284.7	-0.58	-0.14	0.29	0.14
Europe												
Crude	339.7	334.6	343.7	323.6	331.2	339.8	329.5	321.3	0.07	0.07	0.01	-0.04
Motor Gasoline	111.8	107.7	104.7	109.4	107.5	103.7	102.6	104.4	0.11	0.05	-0.13	0.00
Middle Distillate	238.3	248.1	254.8	272.7	262.1	248.3	262.8	256.7	-0.18	0.06	0.02	0.15
Residual Fuel Oil	83.0	80.6	80.0	77.6	78.3	75.4	71.9	78.8	-0.04	0.08	-0.02	-0.03
Total Products[3]	538.8	544.7	549.4	570.9	558.1	527.7	545.2	545.8	-0.10	0.20	-0.11	0.15
Total[4]	953.3	953.4	967.8	965.1	959.0	941.5	947.9	941.3	-0.03	0.24	-0.07	0.06
Pacific												
Crude	156.6	167.9	169.5	166.1	167.4	168.1	175.0	161.2	-0.01	-0.04	0.13	-0.01
Motor Gasoline	26.4	24.2	22.8	24.0	22.4	22.8	23.5	21.6	0.01	0.05	-0.03	-0.02
Middle Distillate	58.7	59.8	66.0	76.0	74.7	77.9	85.9	77.5	-0.08	-0.14	0.03	0.16
Residual Fuel Oil	24.1	22.4	22.1	23.6	22.4	23.9	23.8	25.6	-0.05	-0.01	0.03	0.00
Total Products[3]	171.8	166.3	178.2	194.8	192.5	191.5	210.8	195.8	-0.23	-0.11	0.02	0.28
Total[4]	402.8	408.0	422.6	436.5	436.4	432.0	458.7	429.4	-0.27	-0.14	0.18	0.31
Total OECD												
Crude	936.0	937.3	952.2	929.3	947.4	941.0	965.6	932.3	-0.24	0.38	-0.08	0.11
Motor Gasoline	372.4	368.9	361.1	354.4	345.0	353.6	370.1	354.7	0.32	0.16	-0.29	-0.26
Middle Distillate	481.1	499.3	522.0	553.8	529.8	524.7	573.0	540.9	-0.23	-0.42	0.19	0.33
Residual Fuel Oil	155.3	152.1	146.3	146.8	147.7	141.3	148.7	148.9	-0.05	0.06	0.03	-0.05
Total Products[3]	1351.0	1366.2	1388.9	1425.8	1389.3	1381.9	1479.5	1413.2	-0.37	-0.36	0.26	0.25
Total[4]	2582.9	2603.0	2649.0	2666.3	2649.4	2627.5	2757.9	2655.4	-0.89	-0.04	0.40	0.50

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	May2008	Jun2008	Jul2008	Aug2008	Sep2008*	Sep2005	Sep2006	Sep2007	4Q2007	1Q2008	2Q2008	3Q2008
North America												
Crude	704.3	706.0	707.2	707.2	703.0	693.7	687.8	692.8	0.05	0.04	0.06	-0.03
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	181.6	181.8	180.0	178.5	178.5	166.4	175.5	177.4	0.08	0.00	-0.03	-0.04
Products	235.3	234.2	235.8	231.6	231.6	237.6	235.1	244.2	-0.09	0.02	-0.04	-0.03
Pacific												
Crude	385.0	384.7	384.2	384.2	384.2	382.1	381.5	385.1	0.00	0.00	0.00	-0.01
Products	18.9	18.9	18.9	19.2	19.2	11.2	11.8	17.9	0.01	0.00	0.00	0.00
Total OECD												
Crude	1270.8	1272.5	1271.5	1270.0	1265.7	1242.1	1244.8	1255.2	0.12	0.04	0.02	-0.07
Products	256.2	255.1	256.7	252.8	252.8	250.8	249.0	264.0	-0.08	0.02	-0.04	-0.02
Total[4]	1528.0	1528.5	1529.2	1523.8	1519.5	1493.8	1494.8	1520.2	0.04	0.07	-0.02	-0.10

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End September 2007		End December 2007		End March 2008		End June 2008		End September 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	195.4	82	195.7	83	193.8	86	195.1	-	-	-
Mexico	43.5	20	45.0	21	46.8	22	44.7	-	-	-
United States[4]	1718.5	84	1667.3	84	1655.1	84	1687.5	-	-	-
Total[4]	1979.5	78	1930.1	78	1917.7	78	1949.5	81	1958.9	81
Pacific										
Australia	36.8	37	35.6	37	34.3	35	37.6	-	-	-
Japan	629.6	120	621.0	115	610.0	133	619.1	-	-	-
Korea	157.4	68	143.5	62	142.8	68	146.6	-	-	-
New Zealand	8.4	53	8.3	49	8.4	55	8.4	-	-	-
Total	832.3	95	808.3	91	795.6	102	811.6	108	839.8	97
Europe[5]										
Austria	22.1	76	22.1	81	22.7	77	22.8	-	-	-
Belgium	27.8	42	26.1	38	31.3	50	28.5	-	-	-
Czech Republic	19.5	98	20.2	101	20.4	91	20.2	-	-	-
Denmark	18.8	96	17.1	95	16.4	89	19.0	-	-	-
Finland	29.7	129	27.1	128	30.5	135	25.5	-	-	-
France	175.3	87	179.9	91	177.5	93	176.6	-	-	-
Germany	276.5	108	274.6	110	281.5	115	273.1	-	-	-
Greece	34.8	73	37.4	80	34.9	92	36.3	-	-	-
Hungary	17.1	100	15.4	100	16.7	101	16.6	-	-	-
Ireland	12.6	62	10.6	55	12.1	63	10.4	-	-	-
Italy	134.2	77	132.9	82	130.9	82	136.7	-	-	-
Luxembourg	0.9	15	0.7	12	0.6	10	0.7	-	-	-
Netherlands	122.9	121	116.6	109	126.5	126	124.5	-	-	-
Norway	21.8	86	26.6	138	25.4	104	23.1	-	-	-
Poland	50.9	92	58.2	109	57.6	108	57.4	-	-	-
Portugal	23.2	77	23.6	82	24.9	86	25.3	-	-	-
Slovak Republic	7.7	87	7.9	99	9.0	112	9.1	-	-	-
Spain	136.7	84	133.9	84	134.2	87	135.0	-	-	-
Sweden	33.6	95	34.5	100	34.2	97	34.1	-	-	-
Switzerland	38.1	136	35.9	144	36.5	150	37.2	-	-	-
Turkey	61.1	92	60.3	90	59.0	92	58.9	-	-	-
United Kingdom	98.5	57	97.7	57	100.5	59	99.3	-	-	-
Total	1363.8	87	1359.3	89	1383.4	92	1370.4	89	1370.1	88
Total OECD	4175.6	84	4097.7	84	4096.7	87	4131.5	88	4168.9	86
DAYS OF IEA Net Imports[6]	-	121	-	122	-	122	-	123	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End June 2008 and September 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2585	80	29	51
1Q2006	4072	1487	2585	84	31	53
2Q2006	4141	1493	2648	84	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4167	1499	2668	84	30	54
1Q2007	4105	1507	2598	85	31	54
2Q2007	4166	1506	2659	85	31	54
3Q2007	4176	1520	2655	84	30	53
4Q2007	4098	1524	2574	84	31	53
1Q2008	4097	1530	2567	87	32	54
2Q2008	4131	1529	2603	88	33	55
3Q2008	4169	1520	2649	86	32	55

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 2Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	3Q07	4Q07	1Q08	2Q08	Jun 08	Jul 08	Aug 08	Year Earlier Aug 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.71	0.78	0.75	0.73	0.66	0.79	0.60	0.66	-0.06
Europe	0.90	0.78	0.70	0.74	0.68	0.67	0.65	0.72	0.65	0.85	0.79	0.06
Pacific	1.31	1.32	1.19	1.15	1.25	1.29	1.24	1.21	1.16	1.08	1.09	-0.02
Saudi Medium												
North America	0.81	0.64	0.56	0.59	0.57	0.58	0.62	0.63	0.76	0.64	0.65	-0.01
Europe	0.16	0.14	0.05	0.02	0.04	0.05	0.07	0.02	0.05	0.01	0.01	0.00
Pacific	0.26	0.35	0.34	0.31	0.38	0.43	0.36	0.37	0.47	0.38	0.33	0.05
Saudi Heavy												
North America	0.17	0.21	0.09	0.11	0.04	0.06	0.04	0.04	0.20	-	0.04	-
Europe	0.23	0.18	0.11	0.11	0.09	0.04	0.10	0.10	0.10	0.14	0.13	0.01
Pacific	0.25	0.23	0.20	0.20	0.23	0.22	0.24	0.19	0.23	0.22	0.17	0.05
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.64	0.45	0.74	0.60	0.51	0.65	0.59	0.61	-0.02
Europe	0.23	0.32	0.30	0.38	0.24	0.20	0.19	0.18	0.17	0.24	0.28	-0.04
Pacific	0.06	0.08	0.17	0.20	0.21	0.13	0.18	0.15	0.27	0.10	0.27	-0.17
Iraqi Kirkuk												
North America	-	0.00	-	-	-	0.04	0.11	0.22	0.16	0.13	-	-
Europe	0.05	0.01	0.11	0.06	0.32	0.21	0.28	0.18	0.26	0.26	0.05	0.21
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.27	0.21	0.24	0.23	0.31	0.21	0.20	0.28	-0.07
Pacific	0.15	0.13	0.09	0.07	0.11	0.11	0.06	0.02	0.05	0.07	0.12	-0.05
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.60	0.47	0.44	0.48	0.55	0.51	0.65	0.67	-0.02
Pacific	0.62	0.56	0.64	0.56	0.73	0.65	0.49	0.42	0.62	0.74	0.65	0.09
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.75	0.86	0.66	0.66	0.71	0.72	0.73	0.64	0.09
Europe	0.04	0.11	0.08	0.09	0.05	0.07	0.06	0.06	0.05	0.11	0.05	0.06
Pacific	-	-	0.01	-	0.02	-	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.76	0.68	0.60	0.59	0.66	0.70	0.67	0.80	-0.13
Europe	0.06	0.06	0.07	0.06	0.06	0.07	0.07	0.09	0.05	0.11	0.06	0.04
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.25	1.24	1.03	1.00	0.98	1.06	1.13	1.20	-0.07
Europe	0.17	0.16	0.14	0.18	0.15	0.14	0.18	0.21	0.17	0.16	0.12	0.04
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.01	0.00
Europe	0.03	0.01	0.02	-	0.02	0.00	0.01	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.01	0.01	0.01	0.10	0.19	0.14	0.14	-	-
Europe	1.77	1.68	1.86	1.90	1.73	1.89	1.95	1.88	1.95	1.77	1.81	-0.04
Pacific	0.00	0.00	0.00	-	0.01	-	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.87	0.82	0.85	0.77	0.84	0.48	0.66	0.85	-0.19
Europe	0.35	0.33	0.24	0.22	0.23	0.27	0.21	0.26	0.29	0.29	0.25	0.04
Pacific	0.05	0.04	0.01	-	0.01	-	-	-	-	-	-	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.22	0.31	0.31	0.27	0.24	0.21	0.43	0.25	0.18
Europe	0.07	0.10	0.07	0.08	0.11	0.09	0.20	0.26	0.09	0.16	0.05	0.11
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary. The Slovak Republic and Poland are excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	3Q07	4Q07	1Q08	2Q08	Jun-08	Jul-08	Aug-08	Year Earlier Aug-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8117	8267	7968	8087	8298	8612	8413	8351	7937	5%
Europe	9792	9784	9770	10056	9924	9769	9870	9937	9913	9794	10388	-6%
Pacific	6801	6815	6718	6576	7003	7100	6457	6251	6673	6530	6699	-3%
Total OECD	25050	24794	24605	24900	24895	24957	24625	24800	25000	24676	25404	-3%
LPG												
North America	18	14	27	38	41	27	15	31	42	31	42	-25%
Europe	248	264	276	244	291	307	246	262	274	236	221	7%
Pacific	527	578	557	502	572	599	632	537	663	558	554	1%
Total OECD	793	856	860	785	903	934	893	830	978	825	816	1%
Naphtha												
North America	115	71	39	33	60	25	54	44	60	43	20	113%
Europe	273	314	266	279	289	274	260	215	245	217	284	-24%
Pacific	746	754	794	768	758	796	734	701	854	863	762	13%
Total OECD	1133	1138	1099	1080	1108	1095	1048	960	1160	1122	1066	5%
Gasoline[3]												
North America	1034	1143	1123	1201	1048	888	1220	1373	1177	1071	1155	-7%
Europe	165	160	204	156	181	224	187	76	291	286	127	125%
Pacific	102	98	70	56	70	112	91	56	53	42	74	-43%
Total OECD	1301	1401	1397	1412	1299	1224	1498	1505	1520	1399	1356	3%
Jet & Kerosene												
North America	173	161	183	205	143	96	78	62	42	30	194	-84%
Europe	375	374	364	385	398	361	381	416	376	456	412	11%
Pacific	66	71	41	37	43	44	39	42	26	12	38	-69%
Total OECD	614	606	588	627	584	501	498	520	444	498	644	-23%
Gasoil/Diesel												
North America	143	175	129	143	106	99	46	50	41	18	174	-89%
Europe	845	967	780	745	827	914	665	733	950	777	718	8%
Pacific	79	81	94	90	105	102	135	134	150	115	99	16%
Total OECD	1067	1223	1003	978	1039	1116	846	917	1140	910	991	-8%
Heavy Fuel Oil												
North America	527	343	323	286	320	328	307	342	260	282	257	10%
Europe	491	476	434	457	400	478	391	413	469	432	526	-18%
Pacific	85	92	92	92	101	125	140	124	135	160	120	34%
Total OECD	1102	911	848	835	821	930	838	879	864	874	902	-3%
Other Products												
North America	1027	1121	1051	1035	934	1041	1085	1141	1082	1014	1023	-1%
Europe	781	929	869	923	831	741	765	661	743	776	1042	-26%
Pacific	248	245	254	264	284	290	267	277	293	389	234	66%
Total OECD	2056	2295	2174	2222	2049	2072	2118	2079	2118	2178	2299	-5%
Total Products												
North America	3037	3028	2875	2941	2652	2504	2804	3042	2704	2489	2864	-13%
Europe	3177	3484	3192	3190	3218	3299	2896	2775	3348	3181	3330	-4%
Pacific	1852	1919	1902	1809	1933	2068	2038	1872	2174	2138	1880	14%
Total OECD	8066	8430	7969	7940	7803	7872	7738	7689	8225	7808	8073	-3%
Total Oil												
North America	11493	11222	10992	11208	10620	10592	11102	11654	11117	10840	11181	-3%
Europe	12970	13268	12962	13246	13141	13068	12766	12712	13261	12975	13718	-5%
Pacific	8654	8734	8620	8385	8936	9169	8495	8123	8846	8668	8579	1%
Total OECD	33116	33223	32574	32840	32697	32829	32363	32489	33225	32484	33477	-3%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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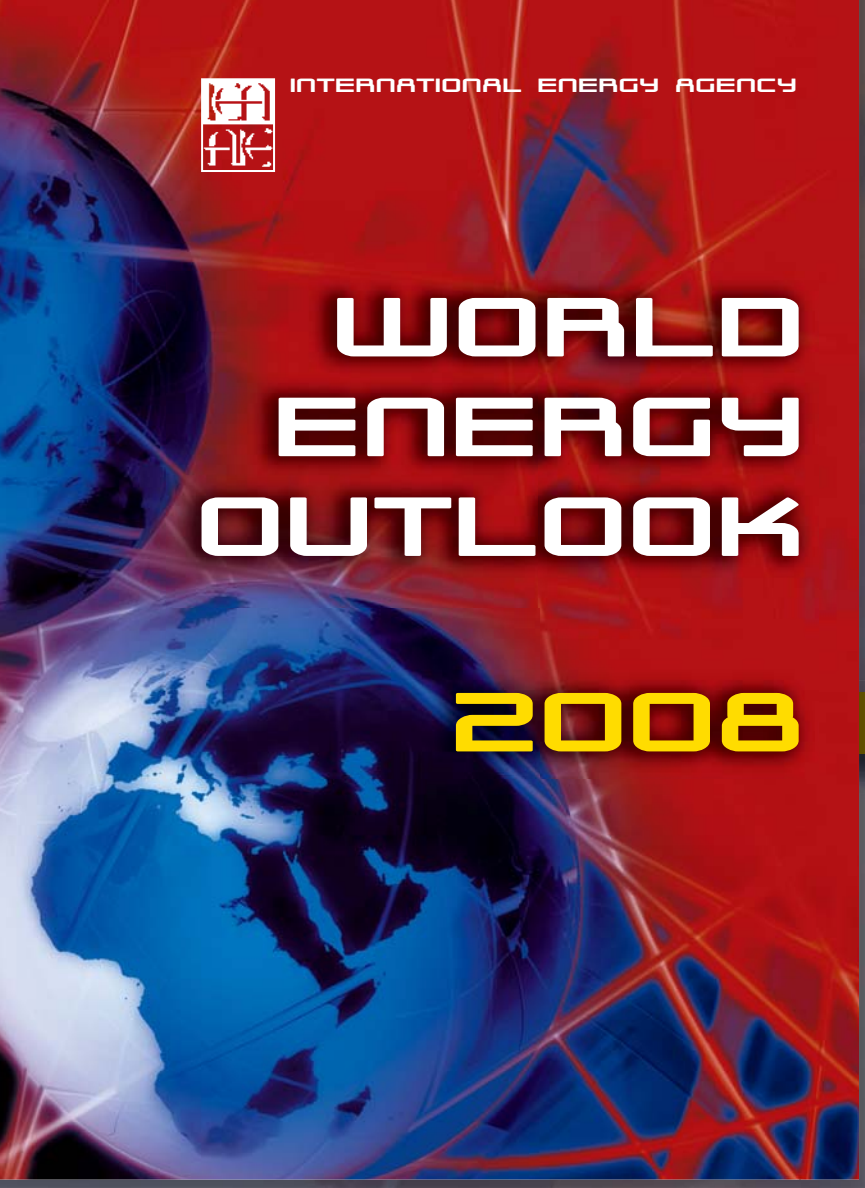

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User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (OMR)*, *Medium-Term Oil Market Report (MTOMR) and Annual Statistical Supplement* (current issue of the statistical supplement dated 12 August 2008), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2008 Platts - a division of McGraw-Hill Inc.).

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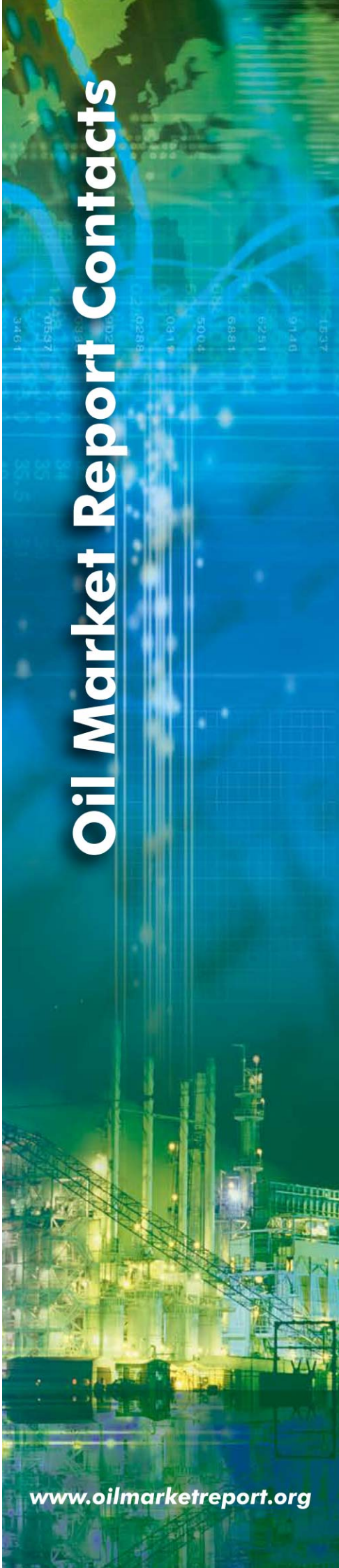

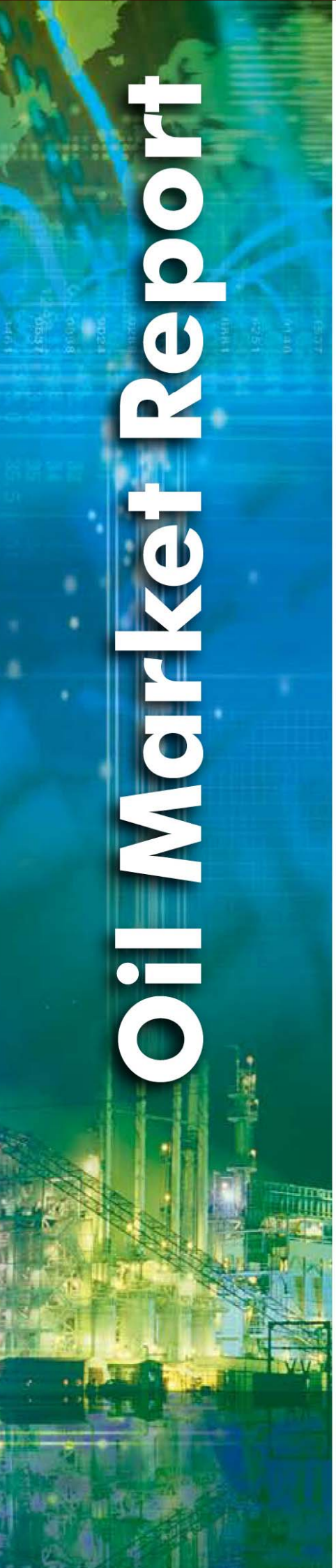

INTERNATIONAL ENERGY AGENCY

11 December 2008

HIGHLIGHTS

- **Global oil demand is now expected to contract in 2008** for the first time since 1983, shrinking by 0.2 mb/d, with the total this year revised down by 350 kb/d to 85.8 mb/d. 2009 demand will grow again to a downward-adjusted 86.3 mb/d. This forecast is based on the IMF assumption that the global economy will gradually recover from 2H09.
- **World oil supply growth slowed to 165 kb/d in November**, averaging 86.5 mb/d, with OPEC crude supply curbed by 760 kb/d to 31.3 mb/d on weakening demand. December supplies will likely be reduced further and OPEC Ministers meet on 17 December to mull further target cuts. The 'call on OPEC crude and stock change' for 2009 averages 30.7 mb/d, around 0.8 mb/d below 2008.
- **Non-OPEC output now averages 49.6 mb/d for 2008** and 50.1 mb/d for 2009, representing annualised changes of -85 kb/d and +480 kb/d respectively. But lower estimates are incorporated for 2009 Europe and the FSU (-0.2 mb/d), while the OPEC NGL forecast is also trimmed by 0.3 mb/d.
- **Crude oil prices dropped to nearly $40/bbl** in early December, amid continued signs of economic slowdown and OECD demand decline. Weak refining margins are causing economic run cuts and in turn a crude overhang, as seen in growing stocks and a widening contango.
- **Global 4Q08 refinery crude throughput should average 72.6 mb/d**, 0.8 mb/d lower than in last month's report, due to weaker demand and the poor margin outlook, particularly on the US Gulf Coast. Global 1Q09 crude runs are forecast to average 73.5 mb/d, a dip of 0.4 mb/d against 1Q08, driven by a 0.7 mb/d year-on-year decline in the OECD.
- **OECD industry stocks rose by 45.6 mb to 2,697 mb in October**, on weak demand and post-hurricane recovery in the US. Downward revisions to OECD demand increased end-October forward demand cover to 56.8 days, well above the five-year average. Preliminary November data point to another OECD stock build of 10.3 mb.

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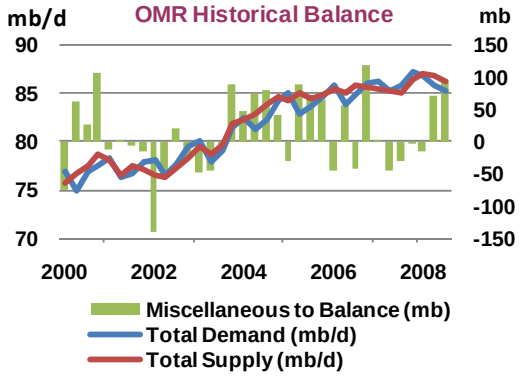
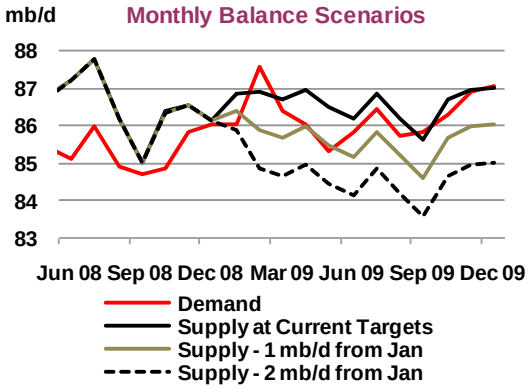
BEWARE OF HERDING

The groundswell of negative oil market sentiment has continued unabated in the past month. Spot prices are down by around $15/bbl since the last *OMR*, contango has widened, floating storage has become available to mop up barrels from an awash market and OECD economic news gets gloomier by the day. The extent of the price fall since July tells a tale of slumping OECD demand. In response, OPEC looks likely to cut supply significantly at its next meeting in Algerian 17 December, and in doing so will boost spare capacity. Our own supply/demand balances suggest a lower 'call on OPEC' in 2009 at 30.7 mb/d, versus 31.5 mb/d in 2008, a situation that would leave global inventory unchanged. November OPEC production stood at 31.3 mb/d, but liftings will fall further in December, even before the next OPEC decision. If more pessimistic economic forecasts are borne out, non-OECD demand and the 'call on OPEC' could move lower still.





OPEC can of course further amend early 2009 production levels, forcing a drawdown of what it sees as excessive levels of OECD stocks. Cover will always rise when OECD demand is contracting, but absolute OECD stock levels look nothing out of the ordinary at present. That said, in the face of 0.5% global demand growth and 2% growth in non-OPEC supply in 2009, OPEC cuts of between 1-2 mb/d could remove an average of 20-50 mb per month over the course of the year. But, as attempts to track prices these past five years have shown, OECD forward stock cover is not in itself an all-encompassing measure of the market. And there is the question of what is happening elsewhere (not least non-OPEC supply, which is again revised down this month).

In addition, no oil market balance is ever a perfect fit. The elements that cannot be clearly identified as supply, demand or OECD inventory are labelled 'miscellaneous to balance' and have grown sharply since early 2008. Currently strongly positive (1.0 mb/d for 3Q08), they imply a combination of non-OECD stock build, unaccounted demand, or overestimated supply. The vagaries of available data tend towards stocks or demand as the most likely culprits. We raise this apparent statistical 'irritant' merely to demonstrate the dangers of becoming too certain about any balance or any forecast. There will always be gaps in the balance, though moves to improve data visibility should help reduce the unknowns in time.

So, while it is tempting to roll-over and accept a supposedly 'inevitable' view that the market will collapse further, it is just possible that non-OECD demand, either end-user consumption or stockpiling, is faring better than people think. Our working scenario rests on assumed resilience outside of the OECD regions, albeit with slower growth than in the past five years and is based on IMF world GDP expectations. In addition, this month's report saw scant amendment to recent non-OECD demand data (in contrast to the OECD), and therefore we resist the temptation to jettison growth for 2009, despite weaker economic indicators in some cases. The stickiness of administered prices, even in the face of plummeting spot trends, only emphasises that OECD and non-OECD markets are different. Clearly, if we are now heading for a prolonged and *global* outright recession, then the 0.5% global oil demand growth we now envisage for next year may not materialise. But just as in hindsight some were wrong to merely extrapolate the recent up-cycle for crude markets, so it is premature to automatically assume a protracted down cycle.

DEMAND

Summary

- **Global oil demand** has been revised down in both 2008 and 2009, given a much starker contraction in the OECD than expected, and early signs of weakness in non-OECD countries, notably in Asia. World oil demand is forecast to average 85.8 mb/d in 2008 (-0.2% or -0.2 mb/d versus 2007 and roughly 350 kb/d lower than previously estimated) and 86.3 mb/d in 2009 (+0.5% or +0.4 mb/d versus 2008 and 260 kb/d lower when compared with our last report). The global demand contraction expected in 2008 will be the first since 1983.

- **Oil demand in the OECD** is seen averaging 47.5 mb/d in 2008 (-3.3% or -1.6 mb/d versus 2007) and 46.9 mb/d in 2009 (-1.4% or -0.7 mb/d on a yearly basis), about 290 kb/d and 210 kb/d lower, respectively, than previously estimated. Once again, 3Q08 and 4Q08 revisions to preliminary demand data in both North America (United States) and the Pacific (Japan) were significant, reflecting much weaker economic performance, and were carried through to 2009. It should be noted that this forecast assumes that OECD demand destruction will bottom out next year and that demand will begin to gradually recover in 2H09, in line with current IMF economic assumptions.

Global Oil Demand (2007-2009)

(million barrels per day)

	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Americas	31.1	31.0	31.3	31.2	31.1	30.5	30.4	29.8	29.6	30.1	29.8	30.0	30.0	29.9	29.9
Asia/Pacific	25.5	24.9	24.5	25.7	25.1	26.4	25.4	24.7	25.5	25.5	26.6	25.6	24.9	26.1	25.8
Europe	16.0	15.7	16.1	16.4	16.0	16.0	15.6	16.1	16.3	16.0	15.8	15.4	15.9	16.0	15.8
FSU	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.4	4.4	4.2	4.2	4.2	4.4	4.5	4.3
Middle East	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.2
World	**86.2**	**85.1**	**85.7**	**87.2**	**86.0**	**86.8**	**85.7**	**85.2**	**85.6**	**85.8**	**86.6**	**85.7**	**86.0**	**86.8**	**86.3**
Annual Chg (%)	0.4	1.5	1.1	1.5	1.1	0.8	0.7	-0.6	-1.8	-0.2	-0.2	0.0	0.9	1.3	0.5
Annual Chg (mb/d)	0.3	1.2	0.9	1.3	0.9	0.7	0.6	-0.5	-1.6	-0.2	-0.2	0.0	0.8	1.2	0.4
Changes from last OMR (mb/d)	-0.06	-0.03	0.00	0.01	-0.02	-0.02	-0.07	-0.29	-0.99	-0.35	-0.43	-0.26	0.14	-0.50	-0.26

- **Non-OECD oil demand** is now expected to average 38.3 mb/d in 2008 (+3.9% or +1.4 mb/d above 2007 and 60 kb/d lower than previously estimated) and 39.4 mb/d in 2009 (+2.9% or +1.1 mb/d compared with 2008 and 50 kb/d lower than in our last report). These revisions are related to both the economic slowdown and data reappraisals in several Asian countries, notably Malaysia, Taiwan and Thailand. Although demand in both China and India appears to be holding so far, non-OECD demand growth in 2008 will fail to offset the severe demand contraction in the OECD.

- **The fall in international oil prices has resulted in downward retail price adjustments in several Asian countries, which may help cushion the effects of the global financial turmoil upon their domestic economies.** Subsidies have not only become more affordable but are also politically expedient, as suggested by the recent end-user price cuts in India, Indonesia and Malaysia. Only China is seemingly taking advantage of the current low oil price environment to move towards market-based end-user prices – although the price reform proposal unveiled in early December hints that domestic caps will prevail if international oil prices rebound above $80/bbl.

OECD

OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) plunged by 6.0% year-on-year in October, according to preliminary data. All three regions recorded losses, providing further evidence of the worsening economic situation. In **OECD North America** (which includes US Territories), oil product demand contracted by 8.3% on an annual basis given a persistent weakness across all product categories, particularly transportation fuels. Demand in **OECD Europe** shrank by 0.9%,

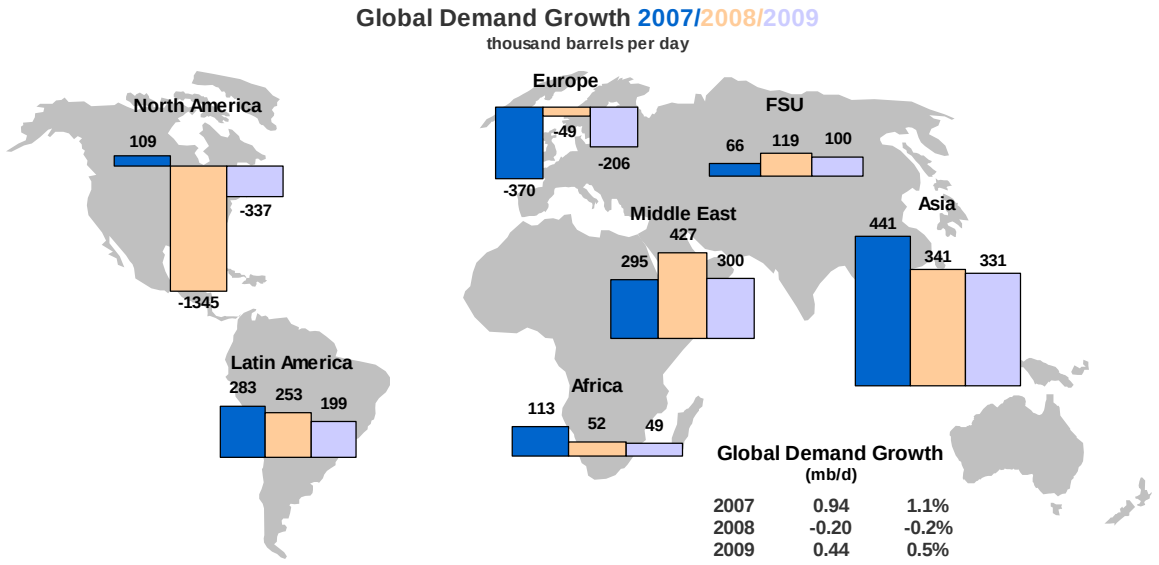
despite the continued strength of heating oil deliveries, also on the back of declining transportation fuel deliveries. In **OECD Pacific**, demand plummeted by 9.1%, dragged down by very feeble Japanese and Korean deliveries in virtually all product categories.

OECD Demand based on Adjusted Preliminary Submissions - October 2008
(million barrels per day)

	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.29**	**-5.0**	**1.69**	**-11.5**	**4.14**	**-1.3**	**0.88**	**-22.8**	**0.82**	**-27.4**	**5.49**	**-11.77**	**23.31**	**-8.3**
US50	8.70	-5.8	1.45	-12.7	3.57	-3.5	0.32	-36.7	0.40	-35.5	4.06	-14.3	18.51	-9.6
Canada	0.73	-1.6	0.12	-0.5	0.19	-4.1	0.39	-3.4	0.11	-1.7	0.76	-3.0	2.30	-2.5
Mexico	0.77	1.8	0.06	-11.5	0.31	5.7	0.13	5.7	0.19	-31.8	0.59	-5.4	2.05	-4.3
OECD Europe	**2.41**	**-5.1**	**1.34**	**-3.0**	**4.48**	**-1.4**	**2.35**	**8.9**	**1.67**	**-4.6**	**3.72**	**-0.5**	**15.96**	**-0.9**
Germany	0.49	-4.9	0.20	-1.7	0.71	1.9	0.70	57.4	0.20	13.9	0.60	-3.3	2.90	9.2
United Kingdom	0.37	-6.1	0.37	-2.9	0.40	-1.6	0.13	-4.0	0.08	-1.1	0.35	2.8	1.70	-2.2
France	0.21	-9.1	0.16	3.0	0.71	-1.6	0.38	-7.1	0.12	-15.6	0.48	-2.3	2.05	-4.2
Italy	0.30	-4.8	0.08	-13.2	0.58	-1.7	0.12	-4.6	0.22	-6.1	0.37	-7.6	1.68	-5.0
Spain	0.15	-7.8	0.12	-11.4	0.50	-8.6	0.22	-6.8	0.21	-6.8	0.33	-3.0	1.53	-7.1
OECD Pacific	**1.49**	**-5.6**	**0.65**	**-24.0**	**1.22**	**-7.5**	**0.44**	**-18.1**	**0.79**	**-19.4**	**2.87**	**-2.3**	**7.46**	**-9.1**
Japan	0.94	-7.0	0.38	-28.9	0.57	-8.0	0.30	-23.5	0.43	-22.8	1.65	-3.5	4.27	-11.5
Korea	0.16	-9.0	0.14	-26.4	0.25	-20.3	0.12	-4.3	0.31	-17.7	1.03	0.3	2.02	-9.0
Australia	0.33	-0.8	0.11	1.1	0.34	4.4	0.02	-1.2	0.04	-1.2	0.17	-3.3	1.01	0.6
OECD Total	**14.19**	**-5.1**	**3.68**	**-11.2**	**9.83**	**-2.2**	**3.67**	**-4.3**	**3.28**	**-15.0**	**12.09**	**-6.3**	**46.73**	**-6.0**

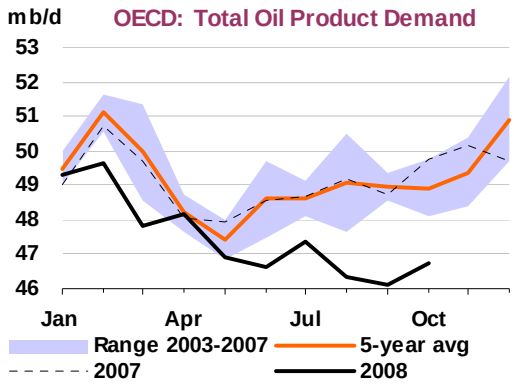
* Including US territories

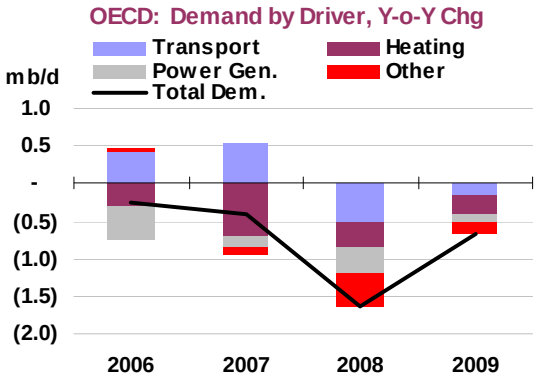
Once again, revisions to preliminary figures were huge, with September demand adjusted down by 1.1 mb/d, mostly on changes in North American figures. According to revised data, OECD demand fell by 5.4% during that month, instead of shrinking by 3.1%. This translates into a 380 kb/d downward adjustment for 3Q08, of which 370 kb/d came from OECD North America (mostly from the US). Moreover, the much weaker-than-expected preliminary data for October, notably for the US, Japan and Korea, has resulted in a 760 kb/d downward revision in 4Q08 (of which -440 kb/d in North America and -310 kb/d in the Pacific). This adjustment has been partially carried through to 2009 (not only in 4Q09 but in 1H09 as well, given the expected demand weakness by the end of 2008).



Overall, OECD demand is now expected to average 47.5 mb/d in 2008 (-3.3% or -1.6 mb/d versus 2007 and 290 kb/d lower than in our last report). The OECD contraction will in fact offset non-OECD growth, and as such global demand should contract by about 0.2 mb/d in 2008, for the first time since 1983. In 2009, OECD demand is seen contracting by only 1.4% on a yearly basis (roughly -0.7 mb/d) to 46.9 mb/d (210 kb/d lower on average when compared with our previous assessment), and global oil demand

growth should thus shift back to positive territory (+0.4 mb/d) next year. It is important to note that our 2009 forecast is based on two key assertions: 1) that OECD demand destruction will bottom out next year, and 2) that demand will begin to gradually recover in 2H09, on the basis of current IMF economic assumptions. Therefore, should the recession prove to be more prolonged than expected, this prognosis could be further revised down.





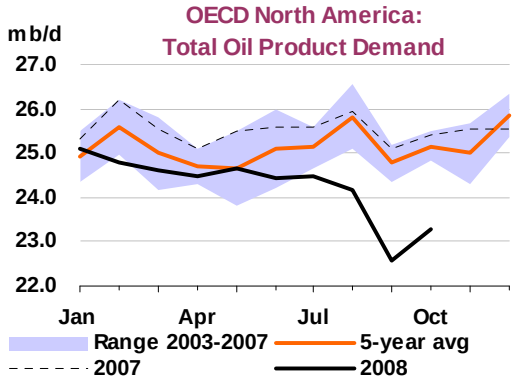
Total OECD Demand by Product
(million barrels per day)

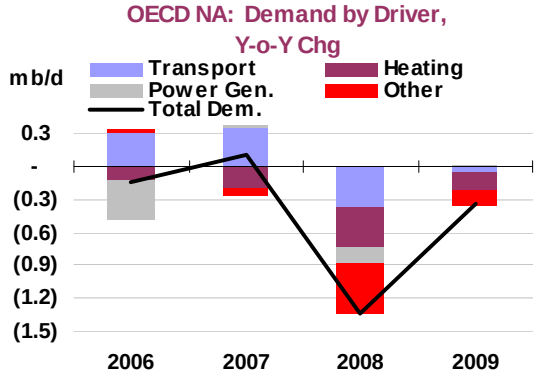
	2007	2008	3Q07	4Q07	1Q08	2Q08	Jul 08	Aug 08	Sep 08*	Latest month vs. Aug 08	Latest month vs. Sep 07
LPG & Ethane	4.82	4.68	4.45	4.93	5.16	4.58	4.52	4.42	4.02	-0.40	-0.33
Naphtha	3.24	3.15	3.18	3.27	3.28	3.00	3.01	3.10	2.92	-0.17	-0.23
Motor Gasoline	14.92	14.41	15.32	14.84	14.23	14.73	14.73	14.59	14.03	-0.56	-0.90
Jet & Kerosene	4.12	3.98	3.98	4.24	4.34	3.87	3.87	3.83	3.74	-0.09	-0.20
Gas/Diesel Oil	13.13	12.98	12.85	13.60	13.39	12.61	12.49	12.03	13.25	1.22	0.00
Residual Fuel Oil	3.96	3.65	3.83	3.95	3.87	3.61	3.68	3.45	3.41	-0.04	-0.42
Other Products	4.97	4.69	5.25	5.01	4.63	4.82	5.06	4.90	4.71	-0.19	-0.55
Total Products	**49.17**	**47.54**	**48.85**	**49.86**	**48.91**	**47.22**	**47.37**	**46.32**	**46.09**	**-0.23**	**-2.62**

* Latest official OECD submissions (MOS)

North America

Oil product demand in North America (including US Territories) tumbled by 8.3% year-on-year in October, according to preliminary data, falling for the tenth month in a row. Although this demand weakness continued to be mostly centred in the United States (-9.4% year-on-year), Canada and Mexico also posted losses (-2.7% and -4.3%, respectively). Revisions to September preliminary data, also largely driven by the US, were significant (-1.1 mb/d): demand in OECD North America actually contracted by 10.0% year-on-year during that month, almost twice as much as previously estimated. Regional oil demand is now projected at 24.2 mb/d in 2008 (-5.3% or -1.3 mb/d on a yearly basis and 200 kb/d lower when compared with our last assessment) and 23.8 mb/d in 2009 (-1.4% or -0.3 mb/d), 110 kb/d below our previous assessment.



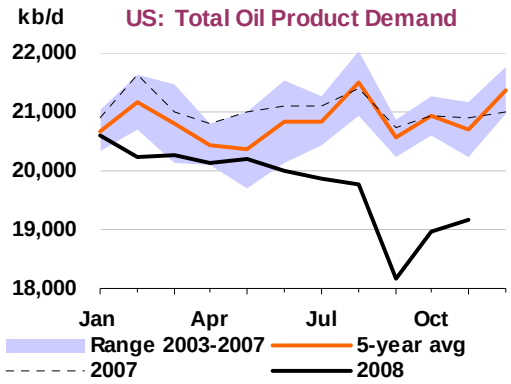


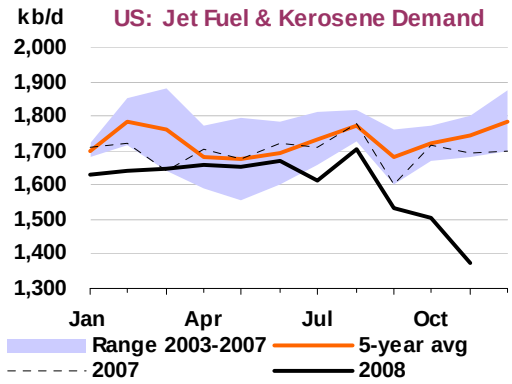
OECD North America Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Jul 08	Aug 08	Sep 08*	Latest month vs. Aug 08	Latest month vs. Sep 07
LPG & Ethane	2.92	2.74	2.70	2.97	3.10	2.63	2.70	2.70	2.20	-0.50	-0.50
Naphtha	0.41	0.38	0.42	0.41	0.36	0.37	0.41	0.30	0.31	0.01	-0.11
Motor Gasoline	10.84	10.52	11.07	10.84	10.47	10.74	10.74	10.72	10.05	-0.67	-0.73
Jet & Kerosene	1.89	1.78	1.91	1.90	1.84	1.84	1.84	1.89	1.71	-0.18	-0.09
Gas/Diesel Oil	5.24	5.01	5.13	5.24	5.29	4.96	4.76	4.71	4.84	0.13	-0.34
Residual Fuel Oil	1.25	1.11	1.21	1.18	1.14	1.22	1.22	1.07	0.90	-0.17	-0.26
Other Products	2.97	2.64	3.11	2.95	2.63	2.77	2.81	2.78	2.57	-0.21	-0.48
Total Products	**25.53**	**24.18**	**25.54**	**25.49**	**24.84**	**24.52**	**24.47**	**24.17**	**22.59**	**-1.58**	**-2.51**

* Latest official OECD submissions (MOS)

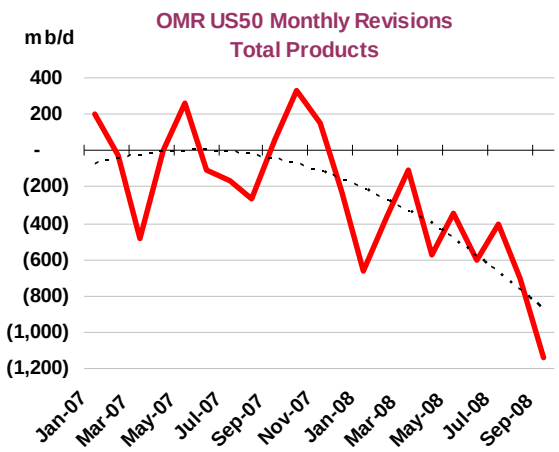
Adjusted preliminary data in the continental **United States** continue to depict an extremely gloomy picture of oil demand, which since last year has suffered successive blows: a financial crisis, high oil prices, devastating hurricanes and, to cap it all, an officially recognised economic recession – since December 2007, according to the National Bureau of Economic Research (NBER) – as consumer spending continues to contract in order to pay off debts and rebuild private savings. Inland deliveries– a proxy of oil product demand – fell by 8.6% year-on-year in November, with all product categories bar naphtha and diesel registering significant contractions. For example, jet fuel/kerosene deliveries plummeted by an unprecedented 19.3% year-on-year, while gasoline demand shrank by 5.3%. Residual fuel oil, meanwhile, plunged by 20.1% on an annual basis – this product, however, is once again becoming competitive vis-à-vis natural gas on a price basis and, as such, the month-on-month rebound reported in November could conceivably continue in the months ahead.

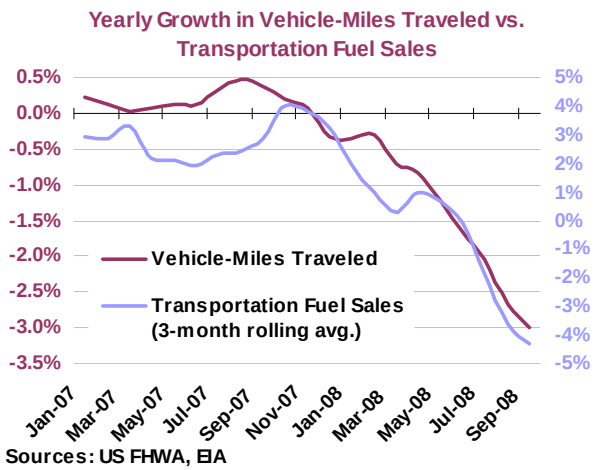




If that were not enough, preliminary weekly data were corrected down – for the twentieth month in a row – in September. The adjustment totalled an unprecedented 1.1 mb/d, implying an annual decline of 12.6% or -2.6 mb/d, almost twice as much as previously estimated. The revisions centred mostly on LPG, 'other products' and gasoline, in that order. Arguably, the weekly assessments had failed to capture some of the negative effects of both Hurricanes Gustav and Ike, while counting some gasoline volumes as 'supply' (a proxy of demand) rather than as exports. Moreover, the size of the weekly to monthly revisions to total US50 demand had tended to increase since mid-2007, despite this report's efforts to anticipate both monthly and annual EIA adjustments. Our current estimate of future revisions going forward, based on a three-month average, stands at roughly -800 kb/d.

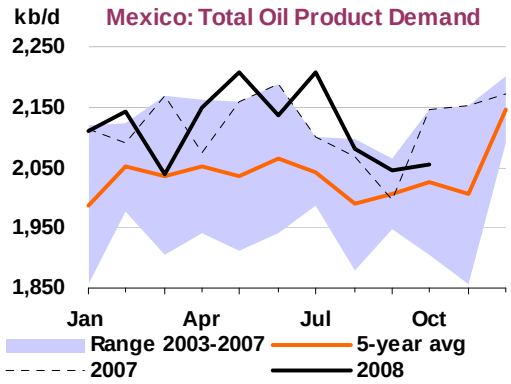
The weakness in gasoline demand was corroborated by low vehicle-miles travelled (VMT) readings. VMT, which are strongly correlated to transportation fuels (gasoline and diesel), fell by 3.0% year-on-year in September, a drop not seen since May 1980. Total average oil demand was the lowest since September 1996, while the year-on-year percentage decline was the largest since 1980. On the basis of these revisions, and assuming that demand destruction will bottom out in 2009, US oil demand is now expected to contract by 6.3% year-on-year in 2008 to 19.4 mb/d (some 180 kb/d less than our previous report) and by 1.4% in 2009 to 19.1 mb/d (about 60 kb/d less than previously anticipated).

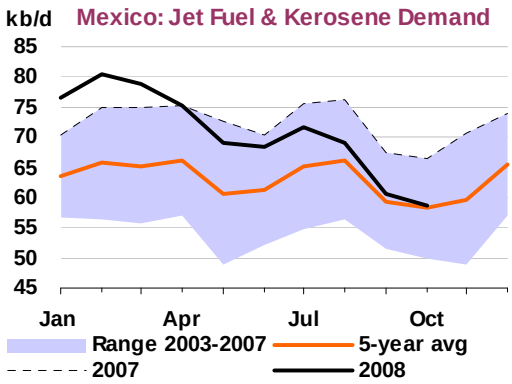




Sources: US FHWA, EIA

As noted earlier, **Mexican** oil product demand – which had so far proved more resilient than that of its North American peers – fell sharply (-4.3% year-on-year) in October, according to preliminary data. The contraction is largely driven by the structural decline in residual fuel oil use (-31.8% year-on-year), which is increasingly being replaced by natural gas. Nonetheless, there is some evidence that the economy has begun to slow down as a result of the woes in the US, thus denting consumer confidence. Indeed, gasoline demand grew by a paltry 1.8% in October, well below the monthly average from January to September (+5.2%). More significantly, perhaps, jet fuel/kerosene demand has fallen uninterruptedly since May, suggesting that air travel is weakening significantly. On these trends, total oil demand is set to stagnate in 2008 (-0.1% year-on-year), and contract by 2.1% to 2.1 mb/d in 2009, as the structural decline in LPG and residual fuel oil use is compounded by weaker transportation fuel demand.



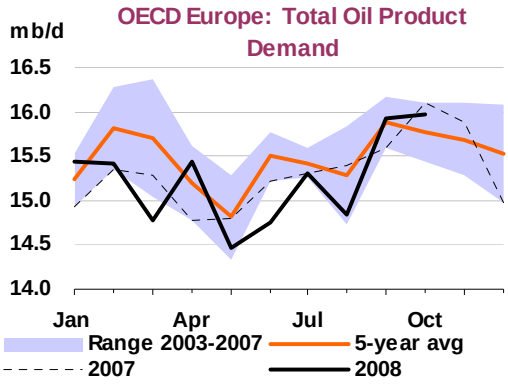


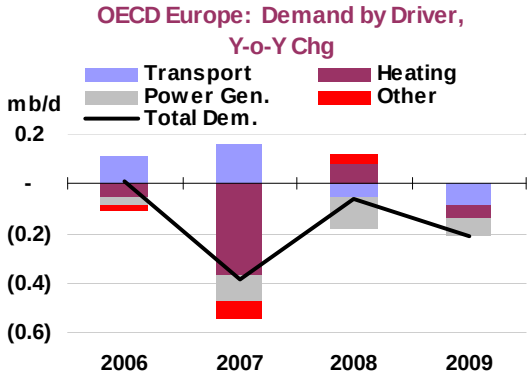
Looking further ahead, in mid December state-owned Pemex announced plans to introduce ethanol-blended gasoline in the country's three largest metropolitan areas – Guadalajara, Mexico City and Monterrey – over the next four years. Ethanol, to be purchased from domestic sugar cane producers, is intended to replace MTBE as a gasoline oxygenate. Pilot tests of the E6 fuel (containing 6% of ethanol) are set to begin in January 2009. Nevertheless, the volumes will be relatively modest. According to company estimates, ethanol demand in Mexico could average between 38 million and 180 million gallons/year by 2012 (roughly 2.5 kb/d and 11.7 kb/d, respectively).

Europe

Oil product demand in Europe fell by 0.9% year-on-year in October, according to preliminary inland delivery data. Continuous buoyant deliveries of heating oil (+8.9%) failed to offset losses in other product categories, notably gasoline (-5.1%), diesel (-1.4%), jet fuel/kerosene (-3.0%) and residual fuel oil (-4.6%). Revisions to September annual submissions, meanwhile, were negligible (-4 kb/d). Forecast

demand in OECD Europe is thus largely unchanged at 15.2 mb/d in 2008 and 15.0 mb/d in 2009, implying a year-on-year decline of 0.4% and 1.4%, respectively, as the continent's economic recession deepens.





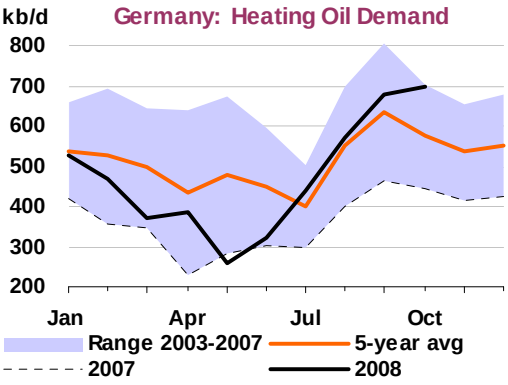
OECD Europe Demand by Product

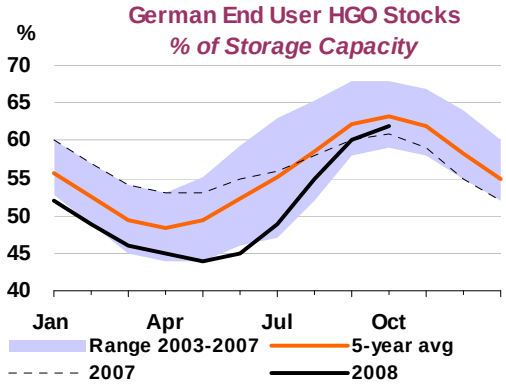
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Jul 08	Aug 08	Sep 08*	Latest month vs. Aug 08	Latest month vs. Sep 07
LPG & Ethane	0.95	0.97	0.85	0.98	1.06	0.98	0.89	0.82	0.89	0.07	0.07
Naphtha	1.17	1.14	1.13	1.20	1.23	1.07	0.99	1.17	1.06	-0.12	-0.07
Motor Gasoline	2.50	2.38	2.61	2.43	2.29	2.44	2.49	2.38	2.46	0.07	-0.06
Jet & Kerosene	1.31	1.31	1.42	1.30	1.25	1.31	1.42	1.39	1.40	0.00	0.00
Gas/Diesel Oil	6.10	6.25	6.04	6.49	6.30	5.93	6.14	5.85	6.75	0.90	0.44
Residual Fuel Oil	1.75	1.61	1.70	1.76	1.67	1.51	1.60	1.54	1.65	0.11	-0.07
Other Products	1.52	1.57	1.68	1.50	1.41	1.63	1.77	1.68	1.72	0.05	0.04
Total Products	**15.30**	**15.23**	**15.42**	**15.65**	**15.20**	**14.88**	**15.30**	**14.84**	**15.93**	**1.09**	**0.34**

* Latest official OECD submissions (MOS)

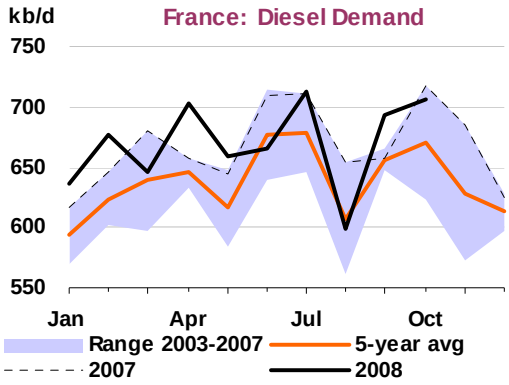
Inland deliveries in **Germany** soared by 9.2% year-on-year in October, according to preliminary estimates, given the continued firmness of heating oil (+57.4%) and diesel (+1.9%) deliveries. Heating oil consumer stocks averaged 62% of capacity by end-October, slightly higher when compared with both the previous month (60%) and the previous year (61% in October 2007). The heating oil stock build began in July, possibly on the realisation that household inventories had dwindled to levels that could prove insufficient to withstand a cold winter. More significantly, the trend accelerated sharply over the past three months, given the dramatic fall in German heating oil prices (about -35% from their July peak). It should be noted, though, that Germany is already in recession (if defined as a GDP contraction over two successive quarters), and as such oil demand excluding heating oil is bound to stagnate or even weaken in the months ahead.

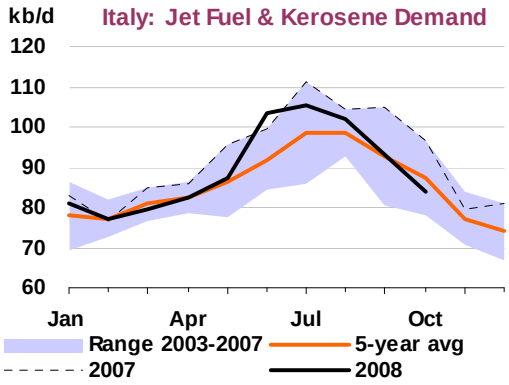




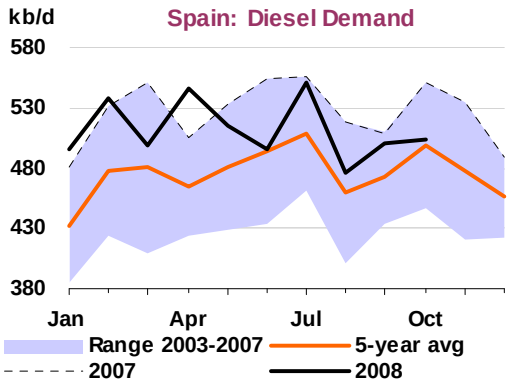
In **France**, by contrast, total oil demand fell by 4.2% year-on-year in October, weighed down by weaker deliveries of gasoline (-9.1%) and distillates (-3.6%). In particular, the contraction in diesel demand

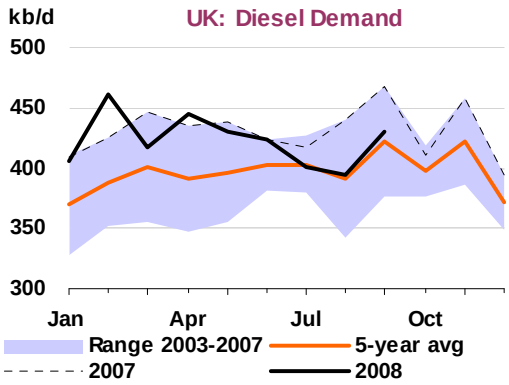
(-1.6%) may be indicative of gradually slowing economic activity (even though in 3Q08 France technically escaped recession, contrary to Europe's other large economies). In **Italy**, indeed, the economic contraction is well underway, with total oil product deliveries plummeting by 5.0% year-on-year in October. Diesel demand, which accounts for roughly 35% of the total, shrank by 1.7%. It is also worth noting that Italian jet fuel/kerosene deliveries dived by 13.2%, possibly reflecting the woes of state-owned carrier Alitalia, which is on the brink of bankruptcy.





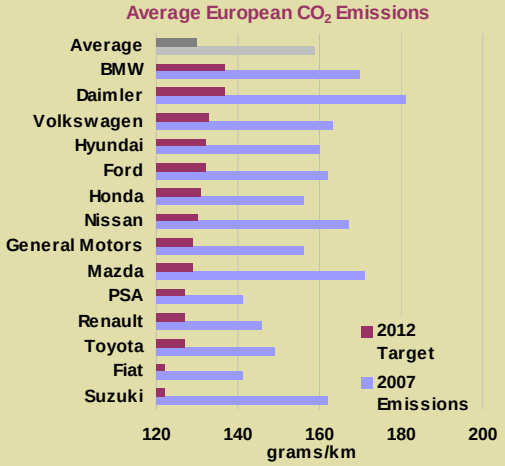
In **Spain**, which is also already in recession, oil demand plummeted by 7.1% year-on-year in October. All product categories declined sharply, most notably jet fuel/kerosene (-11.4%) and diesel (-8.6%). In the **United Kingdom** the oil demand picture is broadly similar (i.e., falling amid a contracting economy). However, deliveries only fell by 0.6% year-on-year in September, the last month for which data are available – after plunging by 10.2% in August. As elsewhere, diesel demand deliveries – a barometer of economic activity – shrank by 7.8% in September, but remain slightly above the five-year average.

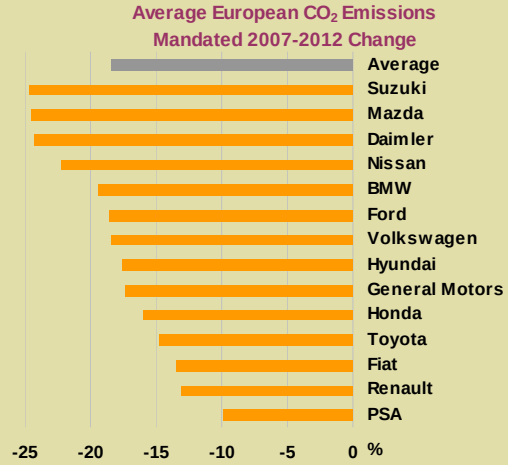




Europe's Car Industry: Fewer Emissions … and Lower Sales?

In early December, the European Union's authorities reached an agreement on the new legislation governing the amount of allowed CO_2 emissions from vehicles. The new text – formally approved by the representatives of the 27 countries on 3 December and due to be passed by the Euro deputies on 17 December – aims at reducing European emissions to 130 grams/kilometre by 2012, from 158 g/km in 2007, and sets sliding penalties for those manufacturers that fail to meet their target.

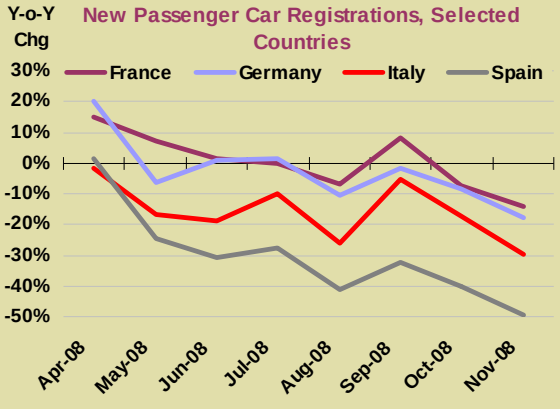




There are, however, several important caveats to the new legislation. First, in order to make the collective effort more palatable, the 2012 targets will be applied to only 65% of new vehicle production; this share will gradually increase over the following three years (75% in 2013, 80% in 2014 and 100% in 2015). Second, even though the targets for CO_2 emission reductions seem particularly ambitious in the case of manufacturers of larger vehicles, the brunt of the adjustment will actually fall upon those specialised in smaller cars, which will be required to achieve further emission reductions in order to attain a European *average* of 130 g/km.

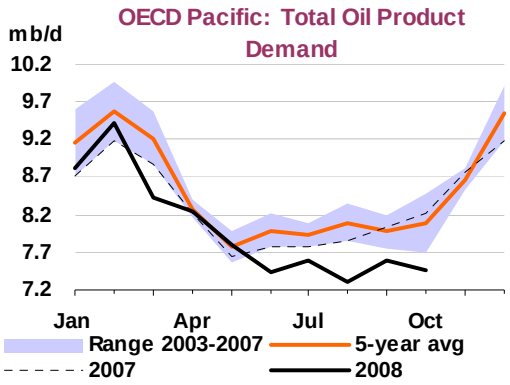
Nevertheless, the overall European vehicle fleet is poised to gradually become more efficient, so growth in transportation fuels demand should further slow in the medium to long term, even as the region's economy recovers. In addition, barring a major technological improvement, these efficiency gains will probably be met by diesel engines, which emit less CO_2 than gasoline engines – i.e., the 'dieselisation' of the European vehicle fleet should continue, despite the saturation in some large markets, posing significant challenges to refiners.

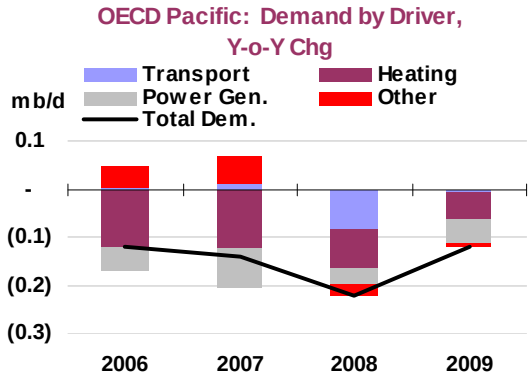
A most pressing question in the short term is whether European car manufacturers (as their US peers) can endure the current economic downturn. Sales of new vehicles in key domestic markets have declined since 2Q08, aside from a brief rebound in July and September. Being exposed to virtually every facet of the unfolding financial and economic crisis – from less access to credit to falling consumer confidence – all European carmakers have been forced to implement temporary plant closures, and some have even begun to cut jobs. The downturn has become a serious political issue, since job losses could cascade down through the supply chain, from the manufacturing sites to parts suppliers and dealerships. According to some estimates, the European car industry accounts for 27% of global vehicle production, with 2.3 million direct jobs and 10 million indirect jobs in related industries. As such, several countries, such as France, are working on rescue packages for the industry. In others, such as Belgium, dealers are attempting to dispose of costly stocks by offering two vehicles for the price of one.



Pacific

According to preliminary data, oil product demand in the OECD Pacific plunged by 9.1% year-on-year in October, given continued weakness in Japanese demand, compounded by a larger-than-expected contraction in Korea. Contrary to previous months, downward revisions to September preliminary data were minimal (-30 kb/d). Oil demand in the Pacific is now seen averaging 8.1 mb/d in 2008 (-2.7% or -220 kb/d on a yearly basis) and 8.0 mb/d in 2009 (-1.5% or -120 kb/d). These prognoses are down in both years by about 90 kb/d on average when compared with our last report, given the worsening outlook for the regional economies, notably Japan.



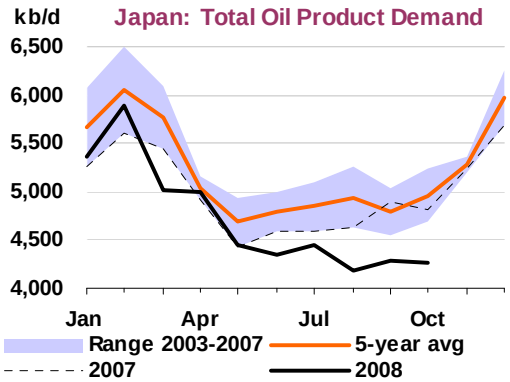


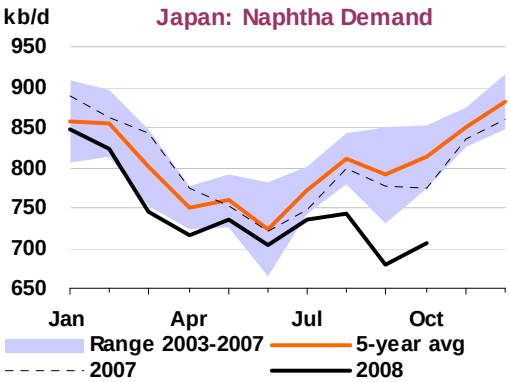
OECD Pacific Demand by Product
(million barrels per day)

	2007	2008	3Q07	4Q07	1Q08	2Q08	Jul 08	Aug 08	Sep 08*	Latest month vs. Aug 08	Latest month vs. Sep 07
LPG & Ethane	0.96	0.97	0.89	0.99	1.01	0.97	0.93	0.90	0.93	0.03	0.11
Naphtha	1.65	1.62	1.63	1.66	1.69	1.55	1.61	1.62	1.55	-0.07	-0.05
Motor Gasoline	1.57	1.52	1.64	1.57	1.48	1.55	1.51	1.49	1.53	0.04	-0.11
Jet & Kerosene	0.93	0.89	0.66	1.04	1.24	0.72	0.62	0.55	0.63	0.09	-0.10
Gas/Diesel Oil	1.80	1.72	1.68	1.87	1.80	1.72	1.59	1.47	1.66	0.19	-0.10
Residual Fuel Oil	0.96	0.92	0.92	1.01	1.06	0.89	0.86	0.83	0.86	0.02	-0.09
Other Products	0.48	0.49	0.46	0.56	0.59	0.42	0.48	0.45	0.42	-0.03	-0.11
Total Products	**8.35**	**8.12**	**7.89**	**8.72**	**8.87**	**7.82**	**7.60**	**7.31**	**7.58**	**0.27**	**-0.46**

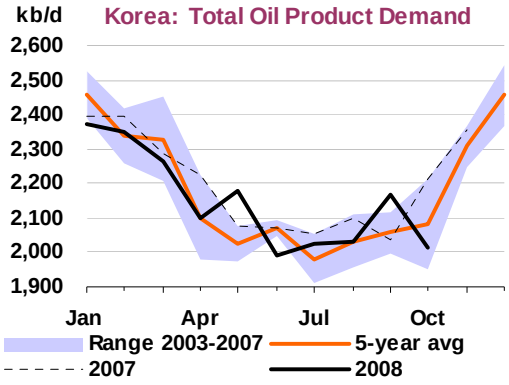
* Latest official OECD submissions (MOS)

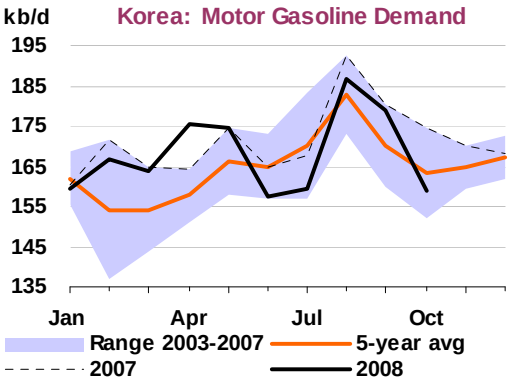
For the second month in a row, oil demand in **Japan** tumbled by double-digit figures (-11.5% year-on-year in October, after -12.3% in September). Demand has declined uninterruptedly since June, with deliveries falling across all product categories bar LPG in October, according to preliminary figures. The woes of the Japanese economy are indeed compounding the country's structural oil demand decline. Since the summer, demand for those products that are closely related to economic activity has been subdued, particularly naphtha (-8.8% year-on-year) and diesel (-8.0%). Oil demand is thus expected to contract by 4.2% to 4.8 mb/d in 2008, and by 2.8% to 4.7 mb/d in 2009.





Preliminary data indicate that oil demand in **Korea** contracted by 9.0% year-on-year in October, with lower deliveries for all product categories bar naphtha. As elsewhere in the OECD, the financial panic that gripped the markets that month took a toll on economic activity and consumer confidence. Gasoline demand, for example, had been relatively buoyant during the previous two months, before diving in October (-9.0%). Only demand for naphtha, roughly 40% of total demand, recorded strong growth (+9.0%), as the fall in international oil prices helped offset the effects of the won depreciation versus the dollar (which since early 2008 had rendered feedstock naphtha relatively expensive). Nevertheless, Korea's solid fiscal position, abundant foreign reserves (sufficient to cover short-term liabilities, despite their recent fall) and relatively limited export exposure suggest that the country is better equipped to weather the financial turmoil than most of its OECD and Asian peers. As such, oil demand should contract by only 1.0% in 2008, and remain flat in 2009 at 2.2 mb/d.

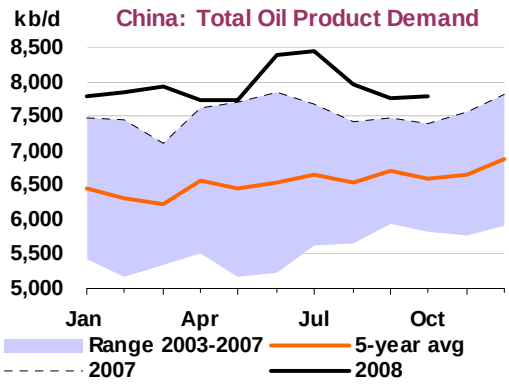


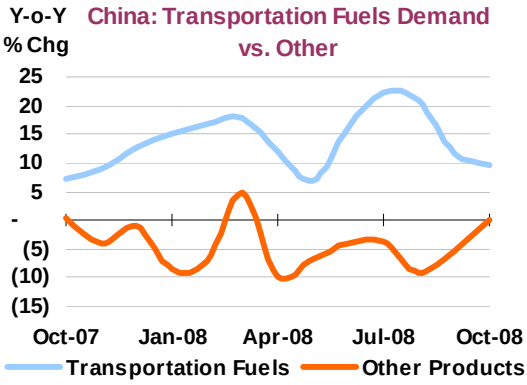


Non-OECD

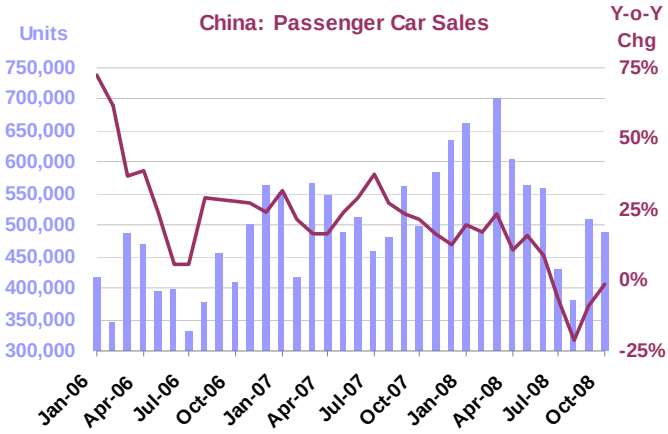
China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) rose by an estimated 5.4% year-on-year in October. Despite the often-repeated claims that Chinese oil product demand was inevitably bound to plunge after the Olympics, given the global economic deceleration and allegedly plentiful stocks, growth was notably higher than in September (+4.1%). Moreover, even though net oil product imports have continued to fall (-34.4% month-on-month), both net crude imports and refinery output actually increased when compared with September (+6.1% and +1.7%, respectively). Deliveries of two key products – gasoline and gasoil – also rose (+7.7% and +12.2%), suggesting that industrial activity, freight and road travel are holding despite concerns about the country's economic outlook.





Yet the Chinese economy is indeed slowing down, according to diverse indicators on manufacturing, power generation, retail sales and trade. For example, growth in passenger car sales has virtually stalled since last summer, after rising at double-digit rates for several years in a row. Jet fuel/kerosene deliveries, meanwhile, fell by 4.2% in October, despite a week-long holiday (when coastal migrant workers traditionally return home). Moreover, the pace of growth of both gasoline and gasoil demand has slowed, although the relative weakness in domestic distillate demand could also be partially related to smuggling from Hong Kong. Over the past two months, as international prices have fallen, the so-called 'red diesel' available to local industrial and shipping users in the island has become cheaper than in mainland China (where retail prices are currently about $0.77 per litre), thus reportedly triggering a wave of smuggling into southern China.



Aside from jet fuel/kerosene, only two other products showed year-on-year contractions in October: LPG (-8.6%), which is structurally declining as natural gas makes further inroads in urban areas with the development of pipeline networks, and residual fuel oil (-22.9%), partly because of lower electricity generation and limited use by 'teapot' refineries. Power generation has fallen on a yearly basis for the second month in a row, suggesting that manufacturing and industrial activity is indeed slowing. Moreover, the price of imported Russian M-100 fuel oil – the feedstock of choice for the teapots – was still too high in October relative to domestic wholesale prices. The slide in international oil prices over the past several weeks could thus augur a rebound in fuel oil use if the economics of teapot refineries becomes attractive again – provided, of course, that domestic retail prices remain high enough (see text box below) and that domestic demand does not plunge. Most teapots are based in two provinces – Shandong and Guangdong – where industrial and export-oriented activities are reportedly slowing down. However, Shandong teapots are arguably better equipped to respond to weaker oil product demand, having access to crude, featuring more sophisticated refining capacity and enjoying local government support. By contrast, their peers in Guangdong typically have simple refining units, are heavily dependent on residue and are virtually ignored by the provincial authorities.

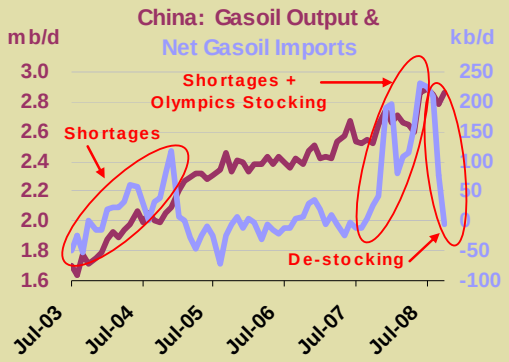
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	669	615	625	-54	10	-8.0	1.6
Naphtha	812	806	870	-6	64	-0.7	7.9
Motor Gasoline	1,257	1,453	1,515	196	62	15.6	4.3
Jet & Kerosene	280	296	314	16	18	5.8	6.1
Gas/Diesel Oil	2,576	2,907	3,000	331	92	12.8	3.2
Residual Fuel Oil	744	600	639	-144	39	-19.4	6.6
Other Products	1,204	1,266	1,262	62	-4	5.2	-0.3
Total Products	**7,542**	**7,943**	**8,225**	**402**	**282**	**5.3**	**3.5**

Overall, our Chinese oil demand prognoses are broadly unchanged versus the previous report (which featured significant downward revisions on the back of lower IMF assumptions). Oil demand is expected to rise by 5.3% to 7.9 mb/d in 2008 and by 3.5% to 8.2 mb/d in 2009. Nevertheless, we will continue to monitor China's economic and pricing policy developments. If the country's slowdown is more pronounced than currently anticipated, this could eventually prompt further downward revisions to our oil demand forecast.

A Price Reform on the Cards?

China's policy of capping domestic gasoline and gasoil retail prices helped insulate domestic users as international oil prices skyrocketed over the first half of this year. It also created supply shortages by rendering refining and marketing operations unprofitable, thus obliging the government to subsidise state-owned refiners in order to guarantee sufficient supplies, notably in the run-up to last summer's Olympics. Given the recent fall in international oil prices, this situation has been reversed: average domestic retail prices are now much higher than international benchmarks (about $0.70/litre for gasoline and $0.73/litre for gasoil). This helps explain the rise in both refining activity and in reported product smuggling into the country.



The fall in international oil prices also prompted a renewed wave of talk about an impending reform to China's administered price regime. According to some observers, such rumours actually contributed to the fall in gasoline and gasoil imports over the past two months, as refiners increased crude runs and curbed product stocks in anticipation of a retail price cut of as much as 20%. In the meantime, some consumers have loudly protested against the stickiness of domestic prices (for example, taxi drivers in Sichuan province's Chongqing, one the country's largest and most populous municipalities).

Although changes have often been anticipated in the past, this time around such expectations are arguably better grounded. On 5 December, the government released a joint reform proposal that will serve as a basis for public hearings, to be conducted until 12 December; the finalised proposal is to be implemented on 1 January 2009.

The draft proposal is sketchy, but the reform should broadly maintain the state's oversight. Price adjustments may become more frequent (the last one occurred in June), possibly monthly – especially if a 'refinery gate' price is established, based on a basket of crudes (Brent, Dubai and Minas) to which transportation costs and a 'reasonable' margin (around 4%) would be added. This would replace the current mechanism for setting the so-called domestic 'guidance' retail prices, which are theoretically based on product prices prevailing in New York, Rotterdam and Singapore. It is unclear, though, whether the retail tolerance band around guidance prices (currently +/-8%) may be broadened, or whether these may vary according to market conditions. Indeed, if the basket were to exceed a certain level (reportedly $80/bbl), the government will exercise 'appropriate control' over domestic prices – i.e., reimpose a cap.

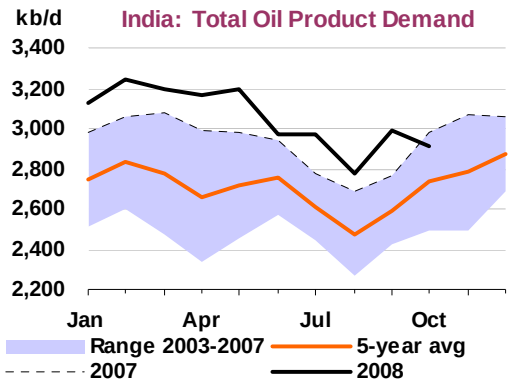
In addition, a much-touted fuel tax, which would be collected by the central government and replace the road tolls may finally be introduced. The fuel tax, by definition, would be levied on all fuel users (not just road users). However, it remains to be seen whether Chinese farmers and the military – two key constituencies currently exempted from paying road tolls – would accept the new tax (expected at roughly $0.13/litre on average). Their objections could be overcome if they were to be subsidised, which seems likely (other sectors will also allegedly qualify for subsidies). Furthermore, provincial governments, which collect the road tolls, would lose a sizable income stream, unless the central government were to share fuel tax revenues – a possibility that is reportedly being considered.

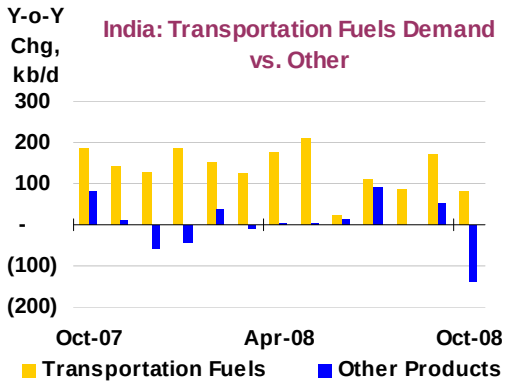
A reform based on international benchmarks would probably engineer an overall domestic price cut, even if a fuel tax is levied, given the extent to which international crude prices have fallen. This could conceivably unleash pent-up demand, notably for transportation fuels. Paradoxically, however, if the reform were to be delayed (and assuming that the government succeeded in stabilising GDP growth at around 8-8.5% in 2009 with the help of fiscal and monetary measures), the current price differential could also boost demand. Expectations of sustained economic growth would arguably help relaunch vehicle sales, while high domestic prices would boost supplies. Some answers to this Chinese riddle are likely to come over the next few weeks; we may then re-examine our outlook for the country's oil demand.

Other Non-OECD

According to preliminary data, **India's** oil product sales – a proxy of demand – contracted by 2.0% year-on-year in October, for the first time since December 2005. Although it would be tempting to ascribe the fall to the global financial turmoil and to slowing industrial output, as some observers have claimed, a closer examination suggests that the picture is less clear cut. The fall is largely related to a contraction in four product categories: 'other products', residual fuel, naphtha and LPG, in that order. The first category is notoriously volatile, and is often significantly revised; the latter three, meanwhile, are certainly related to economic activity but also to interfuel substitution and seasonal factors. Natural gas can replace fuel oil for power generation, as well as naphtha and LPG for fertiliser and petrochemical production. In fact, naphtha has reportedly become less available despite falling prices, since refiners have been diverting it to the export market, obliging petrochemical companies to purchase more LNG.

By contrast, both gasoline and gasoil, which account for over half of Indian oil demand, continue to post significant gains (+10.6% and +6.3% year-on-year, respectively). It should be noted that gasoil's relatively modest growth in October (compared with +17.2% in September) was largely due to a shift of the Diwali holidays (which fell in November last year). Overall, the outlook for India's oil demand is marginally lowered compared with our last report. Total demand is expected to average 3.1 mb/d in 2008 (+4.2% on a yearly basis) and 3.2 mb/d in 2009 (+4.0%).





The Indian government decided to lower domestic end-user prices on 5 December – with gasoline and gasoil prices falling by roughly 10% and 6%, respectively. The measure was somewhat surprising, given the government's earlier reluctance to implement a cut despite falling oil prices – presumably to allow state-owned oil companies to recoup some of the substantial losses they had incurred up until 3Q08 as a result of domestic retail caps amid rising international oil prices. Indeed, previous announcements that retail prices would be slashed if oil prices fell below a certain level had been ignored. When oil reached $67/bbl (the initial threshold), the rupee's depreciation (about 25% since early 2008) was invoked to postpone a cut. When oil fell below $61/bbl (the revised threshold), the government-cited regulations forbidding the introduction of policies that could influence voters after an election date has been set. As such, any adjustment to domestic retail prices would not be implemented before 25 December (a series of state polls that began early this month will be completed the day before).

The government presented the cuts as part of a fiscal and monetary package aimed at stimulating the country's economy amid the ongoing global financial turmoil. Moreover, India's Electoral Commission ruled in early December that the government had not violated campaign laws by announcing forthcoming price reductions, as the opposition Bharatiya Janata Party (BJP) had contented. Therefore, the new retail prices will stand (fuel prices are a particularly sensitive issue in India, and as such can have a substantial influence upon electoral results). In terms of oil demand, however, the retail price cuts are unlikely to have a substantial impact, since India's gasoline and gasoil demand is largely price-inelastic.

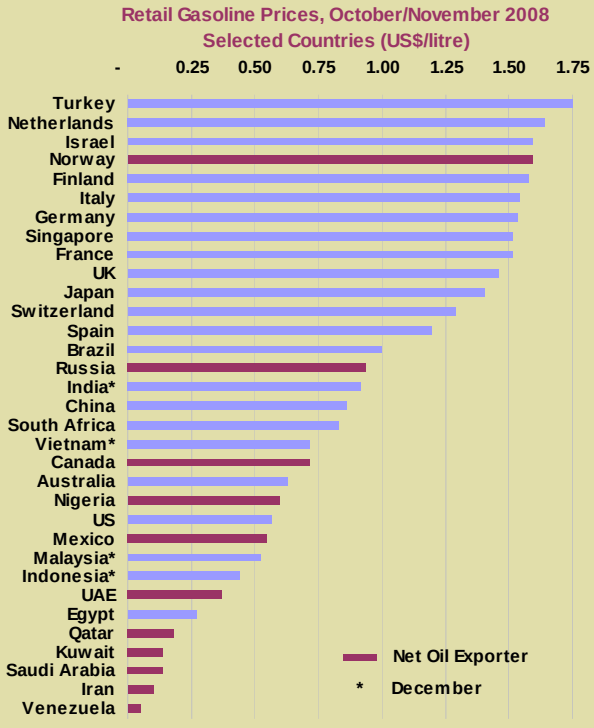
Another side-effect of the plunge of international oil prices has been the resumption of retailing operations by India's three private oil companies. Reliance Industries, which had closed all of its 1,432 service stations in March 2008 as the combination of rising crude prices and capped domestic product prices led to huge losses, has reportedly sought government approval to reopen most of them. Essar Oil, which had restricted operations to only 100 out of its 1,250 outlets, is also intent to reactivate its entire network by early 2009. Finally, Shell India, which has abandoned its expansion plans, may seek to increase its retail network beyond the 50 stations it currently owns.

Renewed Signs of Life in Administered Price Regimes?

The upward retail price adjustments several Asian countries in the run-up of international oil prices during the first half of this year led many observers to conclude that administered price regimes were bound to become a relic of the past. Subsidising end-user prices was not only inefficient – fuelling excessive oil demand and thus further feeding the price rise – but also extremely costly – the fiscal burden had indeed become untenable for most governments in the region earlier this year, forcing them to hike domestic end-user prices despite inflationary concerns.

However, the dramatic decline in oil prices over the past few months has not given way to fully market-based price movements, as many had hoped. In fact, several governments in the region have taken advantage of lower oil prices to reintroduce some degree of price controls – as these have not only become more affordable but also present undeniable political advantages. Malaysia and Indonesia, two of the region's largest consumers after China and India, are a case in point. The retail price cuts will arguably help to temper the negative effects of the global financial turmoil upon their domestic economies, but will also entail a significant fiscal cost.

Malaysia has gradually cut the price of gasoline since last summer (-5.6% in August, -3.1% in September, -6.1% in October, -7.0% in November and -5.0% in early December). This has partially reversed the massive June hike (+41%), which resulted in mass street protests and widespread calls for the government's resignation. The country's gasoline price currently stands on the low side of the international spectrum, at about $0.52/litre. Nevertheless, the government is actually collecting fuel sales taxes for the first time in many months, but these revenues will arguably be insufficient to recoup the massive subsidy cost incurred in 1H08 (estimated at about $15 billion, equivalent to over a third of the government's budget).

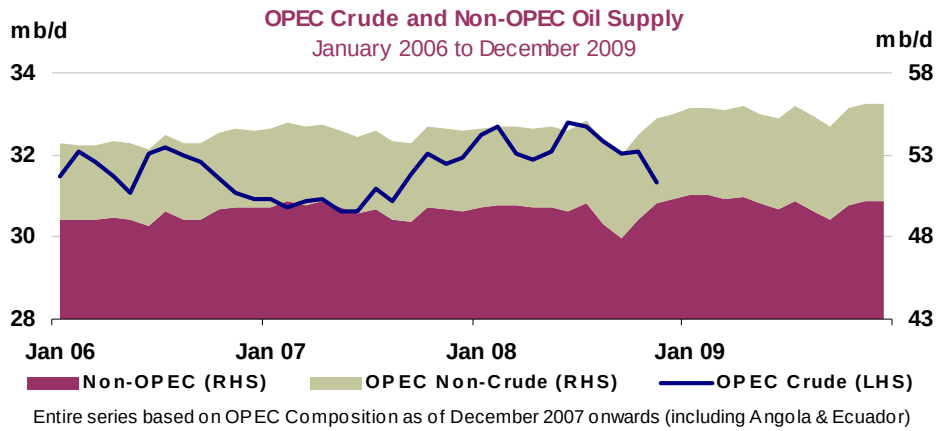


Indonesia, meanwhile, has gone a step further. In early December, the government cut the retail price of gasoline to $0.44/litre (from $0.55/bbl in early November), finally bowing to political pressure – Indonesia is due to hold a presidential election in 2009. With such a move, the government has partially reversed May's 28% hike, which had sparked street protests; Indonesia features once again the lowest gasoline price in Asia (the prices of subsidised diesel and kerosene remain unchanged, but they are likely to be lowered as well). Furthermore, contrary to Malaysia, Indonesia is still footing a substantial subsidy cost despite lower international prices; the subsidy for this year, which covers gasoline, gasoil and cooking kerosene, is estimated to total some $14 billion.

SUPPLY

Summary

- **Global monthly oil supply** growth slowed to 165 kb/d in November, output averaging 86.5 mb/d amid OPEC curbs in the face of weakening demand. OPEC's 760 kb/d reduction largely offset recovering non-OPEC output from the US GOM and from the Caspian. Global oil supply had been running 1.6mb/d ahead of 2007 levels during January-August, but the past three months have seen supplies curbed close to parity with those of a year ago, as voluntary and involuntary shut-ins alike have taken effect.
- **Forecast non-OPEC production** is trimmed by 290 kb/d for 4Q08 and 345 kb/d for 1Q09, then by around 150 kb/d for the remainder of 2009. Longer-than-expected outages affecting the GOM and Azerbaijan curb early 2009 supply, as do weaker expectations for the North Sea and Australasia. Forecast 2009 production from Russia and Canada is trimmed on fiscal and investment barriers and field underperformance, while weaker expectations also now prevail for Malaysia and Vietnam.
- **Non-OPEC output** now averages 49.6 mb/d for 2008 and 50.1 mb/d for 2009, representing annualised changes of -85 kb/d and +480 kb/d, respectively. Azerbaijan, the US, Australasia, Brazil, China and biofuels represent the cornerstones of 2009 growth, offset in part by declines elsewhere, notably from the North Sea, Mexico and Russia.
- **Projected OPEC NGL and condensate production** is cut sharply, by 105 kb/d for 2008 and by 255 kb/d for 2009 compared with last month's outlook, primarily due to reassessed Qatari and Saudi Arabian supplies. Project slippage and likely lower associated gas output through early 2009 affect the outlook. Nonetheless, total OPEC gas liquids grow by 205 kb/d in 2008 and 650 kb/d in 2009, averaging 5.0 mb/d and 5.6 mb/d, respectively.
- **November OPEC crude supply** averaged 31.3 mb/d, down 760 kb/d compared with October, with Saudi Arabia, the UAE, Kuwait, Iran and Nigeria seeing lower output and only Iraq bucking the declining trend to increase supply, despite northern pipeline outages. Apparent compliance with target cuts agreed on 24 October was around 55%, although further reductions are likely for scheduled December supplies. OPEC effective spare capacity has risen to 3.3 mb/d, its highest since late 2002, and OPEC Ministers meet in Algeria on 17 December amid widespread expectations of further output curbs.
- **The 'call on OPEC crude and stock change'** is cut by 0.5 mb/d for 4Q08 to an average of 30.7 mb/d, largely the result of demand now around 1.0 mb/d below earlier expectations. While 2009 demand is also curbed by 0.3 mb/d vs. the November report, supply revisions predominate next year, boosting the average call by 0.2 mb/d, to 30.7 mb/d, a level nonetheless 0.6-0.8 mb/d below the 2008 average.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

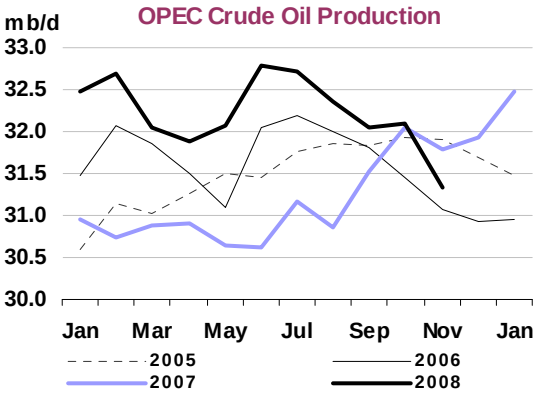
All world oil supply figures for November discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, and Russia are supported by preliminary November supply data.

OPEC Crude

November OPEC crude supply averaged 31.3 mb/d, a fall of 760 kb/d compared with October. Saudi Arabia, Kuwait, Iran, the UAE and Nigeria all saw markedly lower output last month, with the UAE and Nigerian reductions being in part due to field maintenance and renewed facility outages, respectively. Only Iraq bucked the declining trend to increase November supply, as exports from southern ports increased compared with October, and despite renewed outages affecting the northern export pipeline to Ceyhan.

We have also trimmed Iranian October supplies by some 60 kb/d to 3.85 mb/d, on evidence of weaker domestic refinery crude throughput. This, however, was offset by a 50 kb/d upward revision to Saudi Arabian supply to 9.4 mb/d, reflecting what we believe may have been a more gradual approach to curbing supply through November and December.

OPEC-11 production, excluding Iraq and Indonesia, fell by 825 kb/d in November, representing apparent compliance with the 1.5 mb/d cuts in target output agreed on 24 October of around 55%. However, as noted above, further reductions are also scheduled for December supply. OPEC Ministers gathered in Cairo on 29 November, ahead of their next scheduled meeting in Algeria on 17 December. In the end, no further decision on output policy was taken, due apparently to uncertainties over upcoming winter weather and the fact that it was too early to judge the impact of production curbs only put in place from 1 November. Despite clear indications ahead of the Cairo gathering that an output decision was likely to be deferred until December, the market took the lack of further immediate cuts as bearish. Our own market balances envisage a prevailing 'call' on OPEC crude of between 30.5-31.0 mb/d for much of 2009, albeit that would sustain inventory levels at close to recent levels.



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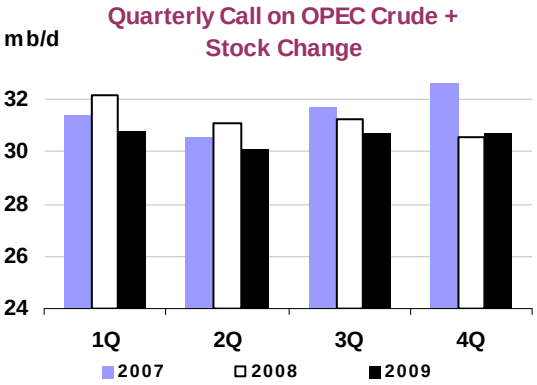


Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

OPEC effective spare capacity (net of producers who may struggle to raise short-term production) has risen to 3.3 mb/d, its highest since late 2002. Installed OPEC capacity now stands at 35.8 mb/d compared with 34.8 mb/d on an equivalent basis (including Ecuador) one year ago. Gains have come in recent months from Saudi Arabia (with start up of the Khursaniyah facilities within the AFK complex), Qatar (rising al-Shaheen field output), and with new field developments offshore Angola and Nigeria. Potentially another 1.0 mb/d of new OPEC crude capacity could come on stream in the next 12 months, largely the result of Saudi Arabia's ongoing AFK ramp-up, and with additions late in 2009 from Shaybah and Khurais. Smaller net additions in 2009 come from Angola, Nigeria, Iran, Kuwait, Qatar and the UAE.

How Much, Rather Than If?

Market sources now envisage OPEC will cut output targets when ministers meet in Oran, Algeria on 17 December. Perceived wisdom focuses on how much the reduction will be rather than whether it will occur. Saudi Arabia has indicated that reasonable compliance with the totality of existing planned cuts would be enough to trim forward OECD inventory cover, citing 52 days as a preferred target. Iranian representatives have countered with claims that a further cut of up to 2.0 mb/d may need to be agreed in Oran, providing an 'envelope' of possible cuts for those wishing to indulge in anticipating outcomes for 17 December. Official quota cuts so far in 2008 have comprised a collective cut of around 0.5 mb/d agreed on 9 September to regain long-dormant September 2007 targets, followed on 24 October by a cut of 1.5 mb/d, with individual reductions but no starting level specified.

OPEC Crude Production[1]

(million barrels per day)

	Sep 2008 Supply	Oct 2008 Supply	Nov 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Oct 2008 Supply	Previous Target	Cut from 1 November 2008	Implied November Target
Algeria	1.37	1.37	1.35	1.40	0.05	1.36	-0.07	1.29
Angola[1]	1.74	1.83	1.80	2.05	0.26	1.90	-0.10	1.80
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.52	-0.03	0.49
Iran	3.81	3.85	3.80	4.00	0.20	3.82	-0.20	3.62
Kuwait[3]	2.61	2.64	2.59	2.65	0.06	2.53	-0.13	2.40
Libya	1.70	1.73	1.71	1.80	0.10	1.71	-0.09	1.62
Nigeria[4]	1.98	1.94	1.90	2.65	0.75	2.16	-0.11	2.05
Qatar	0.86	0.85	0.83	0.90	0.07	0.83	-0.04	0.79
Saudi Arabia[3]	9.45	9.40	9.05	11.00	1.95	8.94	-0.47	8.48
UAE	2.65	2.54	2.30	2.87	0.57	2.57	-0.13	2.43
Venezuela[5]	2.37	2.35	2.35	2.60	0.25	2.47	-0.13	2.34
OPEC-11	**29.04**	**28.99**	**28.16**	**32.42**	**4.26**	**28.81**	**-1.50**	**27.31**
Indonesia	0.86	0.85	0.85	0.85	0.01			
Iraq	2.16	2.26	2.33	2.50	0.18			
Total OPEC	**32.05**	**32.09**	**31.33**	**35.77**	**4.44**			
(excluding Indonesia, Iraq, Nigeria, Venezuela					*3.26)*			

1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 530 kb/d in November.

The situation is complicated, however, by the fact that output levels before September, not least by Saudi Arabia, were running ahead of September 2007's indicated quotas. Purely taking November output as an indicator, core gulf countries shouldered most of the burden of cuts in proportional terms. Moreover, the Saudi King's statement that $75/bbl now represents a 'fair' price for oil may reflect a feeling within the Kingdom that prices have now fallen too far. But that is not to say that GCC producers will necessarily be willing to curb supply unilaterally without corresponding compliance from other producers, Iran and Venezuela having been mentioned in this context. Indeed, our own preliminary estimates show that reductions in supply from Ecuador, Venezuela, Libya and Iran were relatively limited in November. Interestingly, however, to attain a notional absolute target of 25.8 mb/d, these four producers would need to trim by a further 0.7 mb/d, compared with a further 1.0 mb/d for Saudi Arabia.

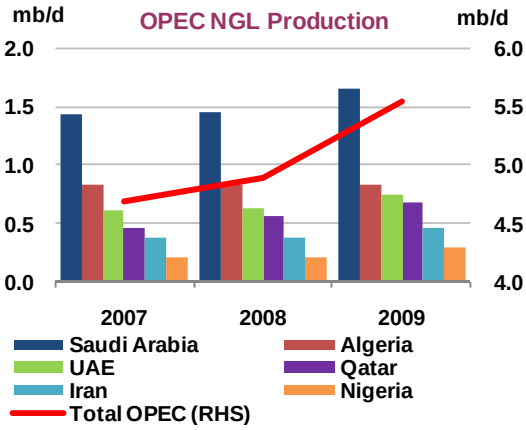
In the past OPEC has at times struggled to rein-in production when crude capacity is rising, a phenomenon that is now re-emerging in the face of weaker demand. There does not yet appear to be a clear internal consensus on the extent of any further cuts required in December, but that does not mean that OPEC will not find a compromise. Actual supplies are likely to fall further in December in any case, although gauging the extent of these may not be possible before January. Signals on January term supplies so far from Gulf producers are mixed, although here too there may be leeway to impose further curbs by limiting spot sales or deferring cargoes into succeeding months. Interestingly, increased calls are being made to non-OPEC producers, notably Russia, to assist in dealing with what OPEC sees as a clear market over-hang. For its part, Russia's will attend the Oran meeting and has reportedly submitted a draft accord for 'cooperation' with OPEC which will be discussed there.

OPEC NGLs

This month's report cuts anticipated OPEC condensate and gas liquids supplies for 2009 compared with our earlier forecast. OPEC gas liquids appear as a *quasi-non-OPEC* component of supply in our global balance, since they lie outside the market management mechanism OPEC applies to crude oil. They are however an important incremental source of supply, output of 'other liquids' from OPEC now exceeding 5.0 mb/d (including ethane, LPG, and condensate from gas fields and processing plants, but excluding output derived from crude refining). Data for NGL supply remain sketchy however, with volumes often obscured within total oil, crude oil or 'other oils' categories, or simply not reported consistently on a monthly basis at all. Our estimates derive from analysis of natural gas availability, and gas processing plant capacities.

Despite the uncertainties, rising global supplies of NGL, condensates and lighter crude at the expense of other feedstocks were identified in the *MTOMR Refining Supplement* earlier this month as a potential squeeze on global residue supplies. This potentially arises because of a need for sustained crude throughputs to meet middle distillate demand, and at the same time ambitious refinery upgrading investment plans, despite slowing demand and a credit crunch in the short term.

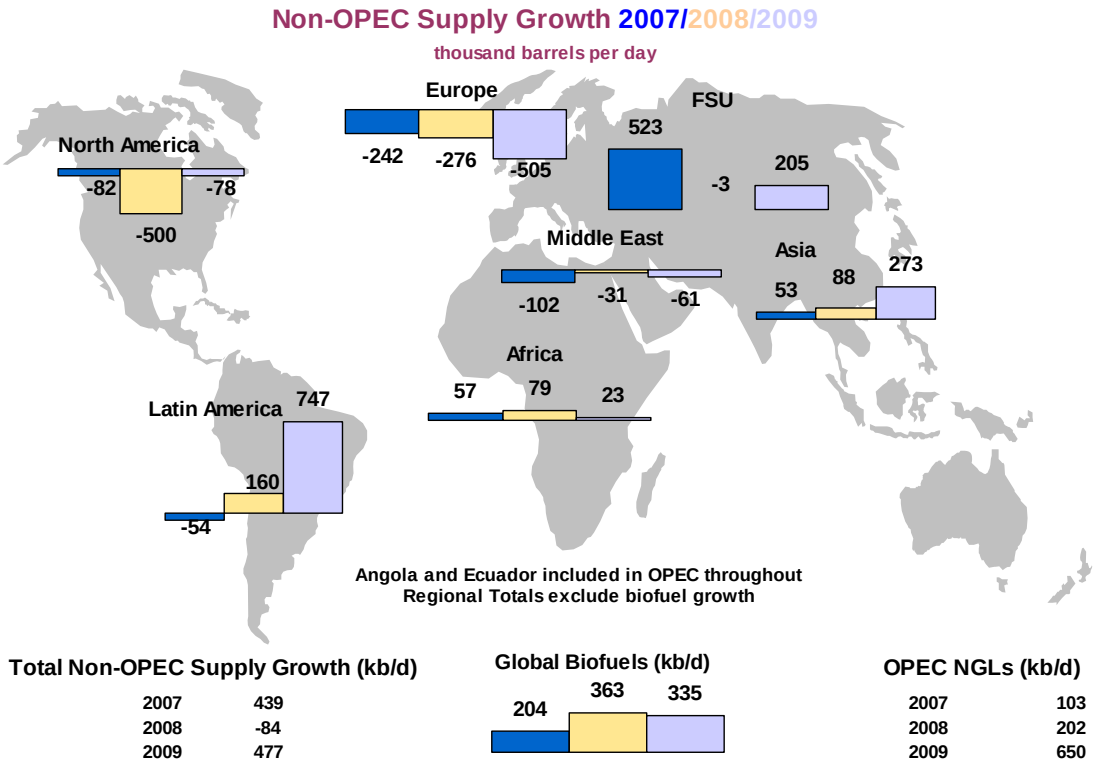
Despite this month's revisions, OPEC NGL growth remains substantial, at +0.2 mb/d in 2008, and a further +0.6 mb/d in 2009, reaching a total next year of 5.6 mb/d. However, 2009 growth has been scaled back from an earlier estimated +0.8 mb/d. A re-evaluation of prevailing supply in 2H08 cuts levels by around 165 kb/d from previous estimates, with weaker output now seen from Qatar and Saudi Arabia. Delays to the Qatargas phase II LNG project (trains 4&5) have pushed likely start up back to 2H09. Meanwhile, slower ramp up in supply from new processing facilities associated with the Khursaniyah field in Saudi Arabia has also played a role. For next year, around 130 kb/d is cut from the Saudi estimate, due again to slower Khursaniyah gas build up and a more general perception that crude oil output (as opposed to capacity) growth and, with it, associated gas supply could prove weaker in the first half of the year. Qatari estimates for 2009 are curbed by 80 kb/d, on Qatargas II and also now-planned maintenance at the Dolphin gas project early in the year. Iranian and Nigerian projected supply is also trimmed for 2009 (by around 20 kb/d each) on expectations of weaker early-year output. That said, OPEC producers still see strong gas and associated liquids growth in 2009, bearing in mind much of the increase in gas supplies is for domestic industry, power generation and oilfield reinjection purposes, that may prove more resilient to wider global economic slow-down. Saudi Arabia should see incremental NGL and condensate of 0.2 mb/d in 2009, with nearly 0.1 mb/d each from Qatar, UAE, Nigeria and Iran.



Non-OPEC Overview

Forecast non-OPEC production is adjusted down by 290 kb/d for 4Q08 and 345 kb/d for 1Q09, followed by a downward adjustment of around 150 kb/d for the remainder of 2009. OECD and FSU production accounts for the bulk of the reductions. Once more, longer than expected outages affecting the US GOM and Azerbaijan curb early 2009 supply, augmented by now-weaker expectations for the North Sea and for Australasia, the latter because of new project delays. Weaker expectations also now prevail for Malaysia and Vietnam. More generally, forecast 2009 production from Russia and Canada is trimmed (by 50 kb/d and 100 kb/d respectively) as companies begin to grapple with an unattractive fiscal regime (in the case of Russia) and curb spending plans in the face of weaker crude prices and the credit squeeze.

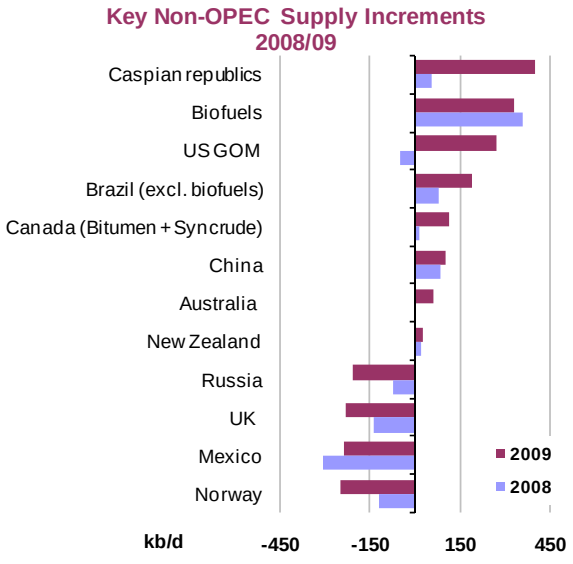
However, it will be some months before the full impact on medium-and-longer-term supply levels from the market's down-cycle can be assessed, which we hope to evaluate in the run-up to the 2009 *MTOMR*.



Non-OPEC output now averages 49.6 mb/d for 2008 and 50.1 mb/d for 2009, representing annualised changes of -85 kb/d and +480 kb/d, respectively. Disappointing performance in 2008 mirrors that seen in 2005, when major hurricane outages last affected the US Gulf. As noted in previous reports, the combined loss to 2008 production from Hurricanes Gustav and Ike, plus stoppages affecting Azeri supply, have amounted to around 140 mb. This is equivalent to 0.9 mb/d during the August-December period, or some 0.4 mb/d for 2008 as a whole. Unscheduled outages have however again been accompanied by a litany of slippage in new project start-ups throughout the year.

Assuming no repeat of 2008's exceptional weather in the US Gulf (we already incorporate a five-year average hurricane adjustment) and the prolonged outages affecting pipelines and production facilities in Azerbaijan, non-OPEC growth is expected to recover next year to around 0.5 mb/d.

Azerbaijan, the US, Australasia, Brazil, China and global biofuels represent the cornerstones of 2009 growth, offset in part by declines elsewhere, notably from the North Sea, Mexico and Russia.



Revisions to Non-OPEC Oil Supply
(million barrels per day)

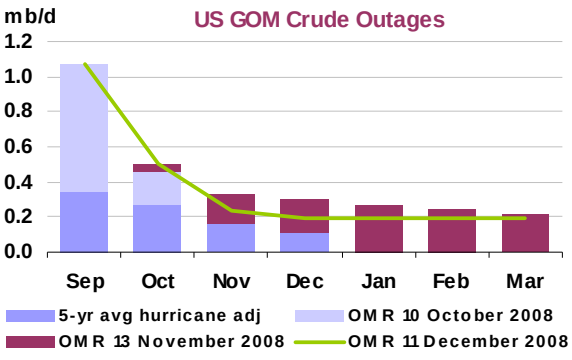
	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08	2008	2009	08 v 07	09 v 08
North America	13.98	14.08	-0.25	0.10	13.95	14.03	-0.32	0.08	-0.03	-0.05	-0.07	-0.01
Europe	4.68	4.26	-0.28	-0.42	4.69	4.19	-0.26	-0.49	0.01	-0.06	0.01	-0.08
Pacific	0.69	0.78	0.06	0.10	0.66	0.75	0.03	0.10	-0.03	-0.03	-0.03	0.00
Total OECD	**19.35**	**19.12**	**-0.46**	**-0.22**	**19.30**	**18.98**	**-0.55**	**-0.32**	**-0.05**	**-0.14**	**-0.09**	**-0.09**
Former USSR	12.78	13.03	0.01	0.25	12.77	12.97	0.00	0.20	-0.01	-0.06	-0.01	-0.05
Europe	0.12	0.11	-0.01	-0.01	0.12	0.11	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.81	3.89	0.08	0.08	3.81	3.92	0.09	0.11	0.00	0.03	0.00	0.03
Other Asia	2.65	2.74	-0.01	0.08	2.63	2.70	-0.03	0.07	-0.02	-0.03	-0.02	-0.01
Latin America*	4.02	4.31	0.17	0.29	2.63	2.66	0.08	0.02	-1.39	-1.65	-0.09	-0.26
Middle East	1.61	1.55	-0.03	-0.06	1.61	1.55	-0.03	-0.06	0.00	0.00	0.00	0.00
Africa*	2.63	2.66	0.08	0.02	4.02	4.32	0.17	0.30	1.39	1.66	0.09	0.27
Total Non-OECD*	**27.63**	**28.29**	**0.29**	**0.65**	**27.60**	**28.23**	**-0.20**	**0.63**	**-0.03**	**-0.06**	**-0.49**	**-0.02**
Processing Gains	2.24	2.29	0.07	0.04	2.24	2.29	0.07	0.04	0.00	0.00	0.00	0.00
Other Biofuels	0.46	0.58	0.13	0.12	0.46	0.58	0.13	0.12	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.68**	**50.27**	**0.03**	**0.60**	**49.60**	**50.08**	**-0.09**	**0.48**	**-0.08**	**-0.20**	**-0.12**	**-0.12**

OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

OECD

North America

US – November Alaska actual, others estimated: US oil production is on track to grow by a modest 60 kb/d in 2008, although all of the increase comes from non-crude liquids (largely NGL and ethanol). Outages in the US GOM have severely dented prospects for crude supply in 2008, and look likely to end up costing regional supply around 80 mb by end-December. Put another way, 525 kb/d of GOM regional oil supply has been lost during August-December, compared with our working assumption prior to the autumn hurricane season of around 180 kb/d. That said, November crude outages in the Federal waters offshore GOM did come in lower than we had assumed in last month's report, at 230 kb/d rather than 330 kb/d. Our working assumption here remains that prevailing outages in early December – 190 kb/d (or some 15% of regional output) – continue through March 2009, the reported likely limit for when pipeline repairs should allow output recovery. Clearly, upside potential for GOM supply exists if repairs are completed quicker than this.

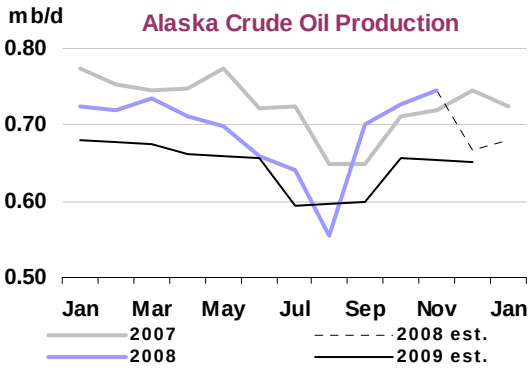


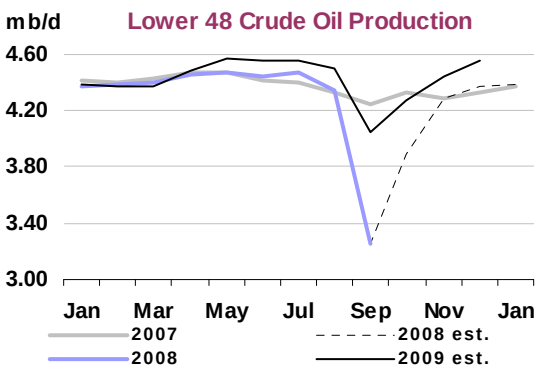
While the Federal GOM crude outage assumption is lowered, we have cut expected NGL supply through March 2009. This follows official September monthly supply data showing US NGL supplies dipped by 300 kb/d in the month, to 1.54 mb/d, rather than our assumed 200 kb/d reduction. Given still-extensive outages affecting regional gas production (1.5 bcf/d or 21% of normal supply on 3 December) 100 kb/d has been trimmed from the 4Q08 NGL forecast, followed by an 80 kb/d reduction for 1Q09. US NGL output only regains pre-hurricane levels of 1.8 mb/d again in April 2009 under the revised projection.

The final US Minerals Management Service Report on damage incurred by the 2008 hurricane season identified 60 oil and gas facilities as having been destroyed, amounting to some 14 kb/d of oil production and 96 million cf/d of gas supply (some 1% of regional output in both cases). A further 124 damaged facilities face repairs of between one to six months, with 75% likely to be operating again by end-2008.

Alaskan November crude production rose to 745 kb/d, its highest level since December 2007. BP's Prudhoe Bay field attained 400 kb/d at times during November, a level last seen in 2006 before extended

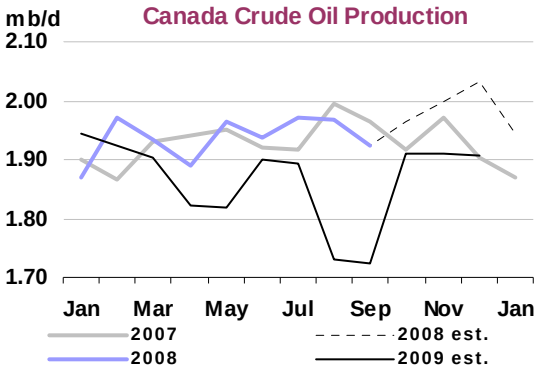
pipeline and maintenance outages restricted supply. Despite prospects for increased supply from smaller offshore fields however, we expect Alaskan production to slip further to around 650 kb/d in 2009 from 690 kb/d in 2008, compared with near-1.0 mb/d output seen in the early part of the decade.





While Alaskan and onshore crude output is expected to continue to decline in 2009 (to the tune of a collective 150 kb/d), overall US crude supply is forecast to rise by 120 kb/d to 5.1 mb/d, driven by an assumed recovery in GOM supply. For 2009 we revert to lower assumed hurricane outages on a five-year average basis (cutting around 230 kb/d from output in the second half of 2009). But offsets also derive from the ramp-up of production from new fields such as Thunder Horse, Blind Faith, Atlantis, Neptune and Genghis Khan, which collectively could add 300 kb/d of new supply in 2009 versus 2008 output. Our estimates of output from both Thunder Horse and the recently started Blind Faith field have been revised up since last month.

Canada – Newfoundland October actual, others September actual: Our forecast of Canadian total oil production has been cut by approximately 100 kb/d for the 4Q08-4Q09 period. Production of oil is now expected to average 3.2 mb/d in both years, with earlier prospects of Canada as a significant short-term source of non-OPEC growth having diminished. Conventional crude production, net of NGL and synthetic crude production comes in at around 2.0 mb/d in both years.



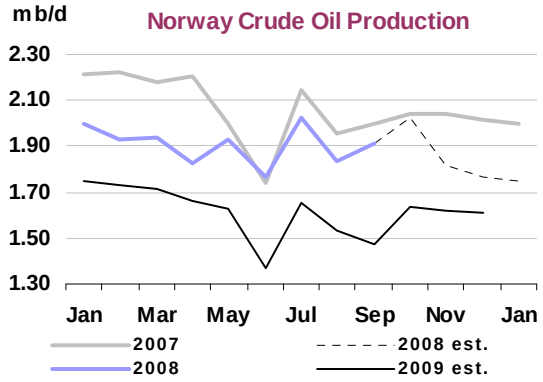
Albertan bitumen and offshore East Coast light crude production are curbed by a combined average of 55 kb/d for the forecast, with a similar adjustment applied to Albertan syncrude production (not shown as conventional crude in the graph below). We have pushed back the advent of significant volumes of new oil from CNRL's 70 kb/d Horizon oil sands project into 1Q09, as start-up appears to have slipped to end-2008 at the earliest. But over 100 kb/d of net growth in Albertan oil sands output is still expected for 2009, taking total production to 1.3 mb/d. That said, persistent operating problems are impeding production in the short term. Both Suncor and Shell's bitumen upgrading operations are affected by unscheduled stoppages for 4Q08. Meanwhile, widespread reports of investment budgets being curbed for 2009 and beyond will likely affect available Canadian supplies for the period through 2015. Again, this is something we aim to quantify in coming months ahead of the 2009 *MTOMR*.

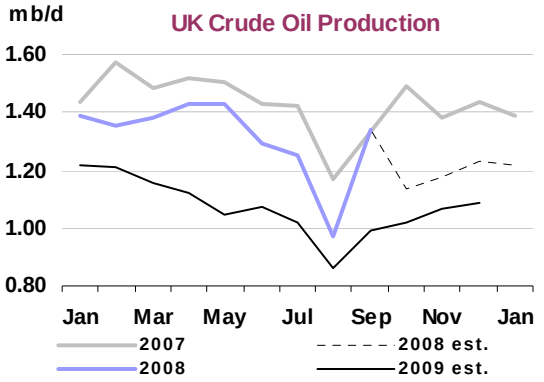
Estimates of production from the Hibernia and White Rose fields offshore Canada's eastern Newfoundland coast have also been cut after recent performance came in below our previous estimates. The two fields are now seen averaging 130 kb/d and 115 kb/d of production in 2009, respectively.

North Sea

Norway – September actual, October preliminary: Upward revisions to Norwegian oil output compared with our forecast amounted to 40 kb/d in September and 130 kb/d for October, but these are not carried through the forecast. The October adjustment largely derives from the removal for that month of our assumed field reliability adjustment factor (currently 160 kb/d), which attempts to capture the tendency observed over several years for mature OECD producing infrastructure to underperform versus capacity. Further short-term, downside offsets result from a five-day shut-in at the Snorre and Vigdis fields in November due to a gas leak. Statfjord North also began a maintenance shut down for pressure maintenance work in November and will likely be off for several months – here assumed until August 2009. Finally, scheduled December loadings, notably for the Statfjord/Gullfaks streams came in lower than expected, so we have cut December output accordingly.

With late 2008 adjustments balancing out, the forecast for Norwegian oil production remains largely unchanged from last month at 2.4 mb/d in 2008 and 2.2 mb/d in 2009 (including 1.9 mb/d and 1.6 mb/d respectively of crude oil as measured by the *OMR*). Annual declines in Norwegian oil output have averaged 185 kb/d since 2004. Potentially reflecting this, recent estimates from the government envisage higher upstream investment than previously expected in 2009 at around $20.2 billion, the increase largely deriving from increases at fields already in production.





UK – September actual: UK field-specific data for August and aggregate numbers for September paint a mixed picture for UK production. September's preliminary total came in around 170 kb/d above expectation (with again our field adjustment factor having proved overly aggressive that month). However, here too there are downside offsets to higher baseline production that keep forecast output on a downward trend:

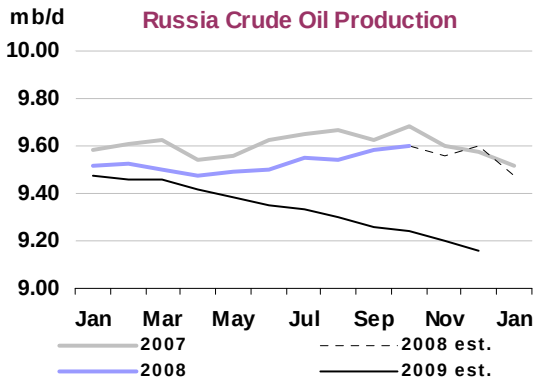
- liquids output from the Jura field is trimmed to 6 kb/d from a previous 30 kb/d;
- the Janice field is to be shut for two to six months from October for safety improvements;
- the previously included Affleck tie-in appears has been delayed to 2009 (Janice and Afflleck adjustments result in a cut of 10-15 kb/d from expected Fulmar system production) and;
- Schiehallion field production is now assumed at below 50% of the FPSO's 120 kb/d capacity for 2008 and 2009 until a revamp is completed (30 kb/d cut from forecast West Shetland output).

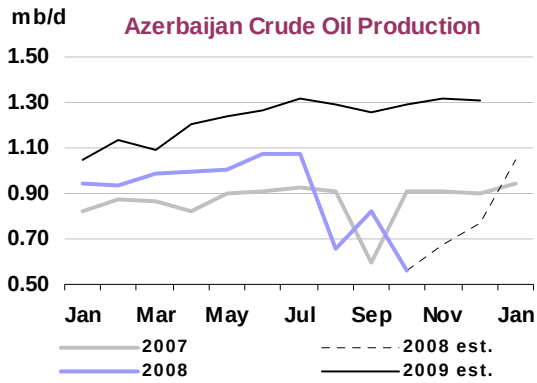
UK offshore crude output averages 1.3 mb/d in 2008 and an expected 1.1 mb/d in 2009, with onshore crude output and NGL taking total oil production to 1.5 mb/d this year and 1.3 mb/d next year.

In an attempt to maximise recovery from maturing assets, the UK government in November unveiled a series of tax break proposals for marginal fields which it is hoped will be included in the April 2009 budget. A value-based allowance will be suggested for new fields that fail to attract sufficient development funding, while change of use of North Sea infrastructure for gas or CO_2 storage is to be exempt from petroleum revenue tax. Petroleum revenue tax more generally is to be simplified and measures are to be introduced to encourage the transfer of idled assets to new operators.

Former Soviet Union (FSU)

Russia – October actual, November provisional: Preliminary November data show Russian oil production running around 50 kb/d below our forecast (at 10.0 mb/d), with output from Lukoil, TNK-BP, Surgutneftegaz and from the Sakhalin 2 project lagging our expectation. Amid growing anecdotal evidence of deteriorating upstream economics and stated plans by companies for lower upstream spending in 2009, and despite a proposed reduction in the mineral extraction tax from 1 January, we have extended the downward revision through the 2009 forecast. Total Russian oil output is now seen falling by 200 kb/d in 2009 from this year's average 10.0 mb/d to 9.8 mb/d. This follows a fall of 65 kb/d in 2008. Condensate and natural gas liquids are estimated to make up around 475 kb/d of total output in both years.





Azerbaijan – October preliminary: In light of latest available production data covering the August-October period, we have revised up Azerbaijan's production for 3Q08 by 40 kb/d but revised down 4Q08 and 1Q09 by 80 kb/d. August and September's outages on the BTC pipeline following first a pipeline explosion, and then the conflict in Georgia, thus look to have had less of an impact than we originally estimated. However, oilfield recovery offshore Azerbaijan at the Central Azeri field after a subsequent and separate gas leak is now taking longer to resolve than previously estimated. All told, pipeline outages, conflict and the later platform leak have reduced production from the ACG complex by some 60 mb during the August-December period, or nearly 400 kb/d on average. Full output of 0.9 mb/d is not now expected to be reinstated until early 2009.

October FSU net exports on average increased by 0.11 mb/d to 8.30 mb/d from 8.19 mb/d in September. Crude oil exports decreased by 0.7% month-on-month, reaching 5.93 mb/d in October. The drop in crude oil exports was more than offset by a 7% rise in product shipments to 2.42 mb/d. Residual fuel oil exports on average rose by 4% in October and gasoil exports grew by 12%.

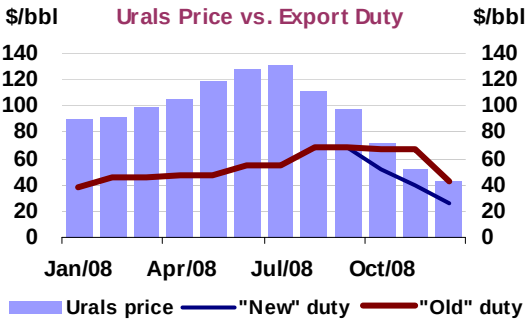
BTC pipeline crude supplies fell by 320 kb/d (almost 46%) as the addition of Kazakhstan's Tengiz crude at the end of the month was not enough to offset production problems at the Central and West Azeri oilfields, which provide the baseload supply for the pipeline. End-month maintenance of the Russian crude pipeline leading to Primorsk contributed to a 10% drop in Baltic October shipments. The crude was diverted to Black Sea ports, which saw shipments rebound by 18% (+340 kb/d) to 2.22 mb/d. Druzhba pipeline exports to the Czech Republic dropped by 30% month-on-month in October, but Russian companies signed agreements to switch to direct crude deliveries to Czech refiners to bypass a trading firm which Russia cites as reason for lower supplies since July. Druzhba exports to Slovakia and Germany increased by 36% and 27% in October while Russian crude oil exports to China via Kazakhstan's Atasu-Alashankou pipeline rose by 45%.

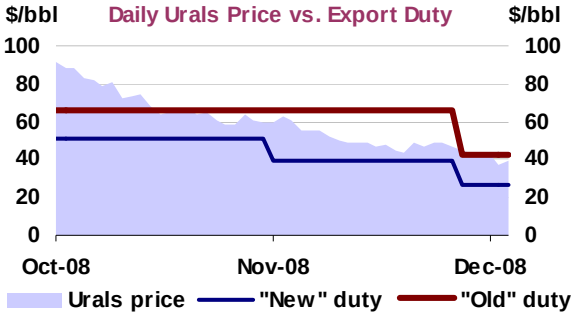
FSU Net Exports of Crude & Petroleum Products
(million barrels per day)

	2006	2007	4Q2007	1Q2008	2Q2008	3Q2008	Aug 08	Sep 08	Oct 08	Latest month vs. Sep 08	Latest month vs. Oct 07
Crude											
Black Sea	2.22	2.18	2.10	1.97	2.26	1.99	2.00	1.88	2.22	0.34	-0.03
Baltic	1.55	1.59	1.61	1.41	1.57	1.40	1.31	1.47	1.32	-0.15	-0.35
Arctic/FarEast	0.15	0.32	0.31	0.27	0.28	0.35	0.39	0.37	0.44	0.07	0.10
BTC	0.00	0.55	0.61	0.71	0.75	0.63	0.36	0.71	0.38	-0.32	-0.13
Crude Seaborne	4.07	4.63	4.62	4.35	4.86	4.38	4.06	4.43	4.36	-0.06	-0.40
Druzhba Pipeline	1.20	1.13	1.13	1.14	1.07	1.05	1.06	1.07	1.12	0.05	0.02
Other Routes	0.38	0.44	0.43	0.40	0.43	0.44	0.41	0.47	0.44	-0.03	0.02
Total Crude Exports	5.64	6.20	6.18	5.89	6.36	5.86	5.53	5.97	5.93	-0.04	-0.37
Of Which: Transneft	4.22	4.27	4.23	3.97	4.17	3.87	3.75	3.90	4.02	0.13	-0.34
Products											
Fuel oil	0.95	1.10	1.08	1.16	1.11	1.04	1.07	0.98	1.02	0.04	0.03
Gasoil	0.95	0.95	0.96	1.06	1.02	0.79	0.72	0.74	0.83	0.09	-0.14
Other Products	0.61	0.60	0.56	0.64	0.60	0.57	0.55	0.54	0.57	0.03	0.04
Total Product	2.51	2.65	2.60	2.86	2.73	2.40	2.34	2.26	2.42	0.16	-0.07
Total Exports	8.16	8.85	8.78	8.75	9.08	8.26	7.87	8.23	8.35	0.12	-0.44
Imports	0.04	0.04	0.04	0.05	0.03	0.05	0.07	0.04	0.05	0.00	0.01
Net Exports	8.12	8.82	8.74	8.71	9.05	8.21	7.80	8.19	8.30	0.11	-0.44

Sources: Petro-Logistics, IEA estimates
Note: Transneft data has been revised to exclude Russian CPC volumes.

While lower FSU crude exports can partly be attributed to *force majeure* on the BTC pipeline and elsewhere, tenuous export economics for Russian producers have also played a role in curbing supplies to international markets in recent months. Incentives to preferentially export products ahead of crude have been rising, as falling crude prices combined with an inflexible crude export duty regime make crude exports uneconomic. The previous export tax regime saw levels set in advance for two months, based on lagged Urals prices (e.g. June and July tax levels were determined by March and April crude prices). By mid-October, prevailing Russian crude export duties of $66/bbl set for October and November were clearly making crude exports uneconomic. According to preliminary November data Russian crude exports via the Transneft system decreased by 440 kb/d (10%) and were the lowest in nearly five years. Black Sea loadings fell by almost 20% while Baltic shipments and via Druzhba decreased more modestly.



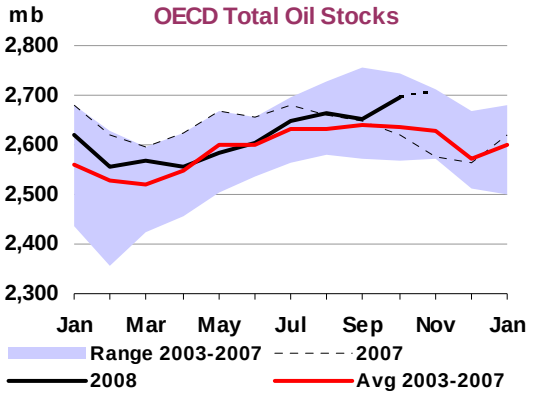


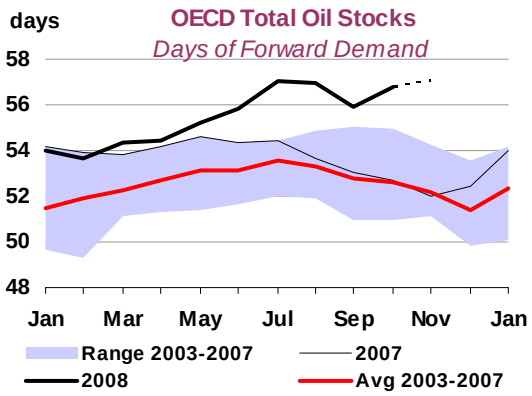
The government reacted by making extraordinary cuts in export taxes for October and November, but the move reportedly did not stop companies from cancelling or decreasing loadings in the second half of both months to prevent losses. New duty levels were set at $51/bbl for October, with a further cut to $39/bbl applicable from 1 November. December duties will fall to around $26/bbl under a new regime, in which average daily Urals prices for mid-October through mid-November set the tax for that month. Duties will also now reportedly be set monthly, instead of every two months.

OECD STOCKS

Summary

- **Total OECD industry stocks** built by 45.6 mb in October, as US crude and product stocks recovered after hurricane disruptions and continued weak demand added to product stockpiles. OECD European and Pacific crude stocks increased following higher crude production and relatively low refinery activity. Total OECD crude stocks saw a 26.2 mb build while products added 17.6 mb, of which 11.1 mb in gasoline and 7.8 mb in 'other products'. Inventories totalled 2,697 mb at end-month.
- Further downward revisions to OECD demand added to growing stockpiles, increasing **forward demand cover for end-October to 56.8 days,** 4.1 days higher than a year earlier and the five-year average. Regionally, stocks in terms of forward cover are high in North America and Europe, but close to their five-year average in the Pacific. In terms of absolute levels, however, stocks are only trending marginally above their five-year range in Europe following recent sharp builds in crude stocks and high distillate inventories.
- **Preliminary November data** point to another stock build of 10.3 mb in OECD industry stocks. US inventories are expected to be 13.2 mb higher, with increases of 8.4 mb of crude oil and 4.8 mb in products. Japanese product stocks on the other hand were falling seasonally (-6.1 mb), while European inventories were slightly higher (+3.3 mb).





OECD Inventory Position at End October and Revisions to Preliminary Data

Total OECD oil inventories built by 45.6 mb in October, closing the month at 2,697 mb, 78.4 mb above the same month last year. Both crude oil and product stocks increased and builds were seen in all OECD regions. The largest build was in North America, where US Gulf Coast refineries and port facilities resumed operations after hurricane-induced closures in September, while demand continued to lag levels of a year ago. Increasing crude oil stocks were also registered in Europe and the Pacific, outpacing regional product draws. Higher crude supplies from the North Sea and lower refinery operations due to maintenance, a slew of unscheduled outages as well as economic run cuts, underpinned stock movements.

Preliminary Industry Stock Change in October 2008 and Third Quarter 2008

	October (preliminary) *(million barrels)*				*(million barrels per day)*				Third Quarter 2008 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**9.1**	**14.8**	**2.3**	**26.2**	**0.29**	**0.48**	**0.07**	**0.85**	**0.13**	**0.00**	**-0.08**	**0.05**
Gasoline	12.1	-1.9	0.9	11.1	0.39	-0.06	0.03	0.36	-0.21	-0.08	-0.02	-0.31
Distillates	5.4	-3.9	-0.2	1.3	0.17	-0.12	-0.01	0.04	0.05	0.12	0.16	0.33
Fuel Oil	1.2	-1.5	-2.4	-2.6	0.04	-0.05	-0.08	-0.08	-0.02	-0.06	0.00	-0.08
Other Products	6.7	0.2	0.9	7.8	0.21	0.01	0.03	0.25	0.18	0.03	0.14	0.35
Total Products	**25.4**	**-6.9**	**-0.8**	**17.6**	**0.82**	**-0.22**	**-0.03**	**0.57**	**0.00**	**0.01**	**0.28**	**0.29**
Other Oils[1]	2.5	-0.9	0.0	1.7	0.08	-0.03	0.00	0.05	0.21	-0.04	0.03	0.19
Total Oil	**37.0**	**7.1**	**1.5**	**45.6**	**1.19**	**0.23**	**0.05**	**1.47**	**0.34**	**-0.03**	**0.23**	**0.53**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

The forward demand cover featured an even larger increase in October, as lower forecast OECD demand amplified the effect of higher inventories. Total oil stocks were 56.8 days at end-month, compared with 52.7 days in October last year. Regionally, forward demand cover came to 55.2 days for North America, 63.2 days in Europe and 49.7 days in the Pacific, compared with year-ago levels of 50.4, 59.1 and 48.1 days, respectively. Perceptions of the level of forward stock cover can of course change rapidly in the event of demand fluctuations caused by weather or economic events.

Revisions versus 13 November 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Aug 08	Sep 08	Aug 08	Sep 08	Aug 08	Sep 08	Aug 08	Sep 08
Crude Oil	**-1.4**	**-2.2**	**-0.3**	**3.2**	**0.2**	**-6.5**	**-1.6**	**-5.5**
Gasoline	-0.1	2.4	-0.2	-6.9	0.2	0.2	-0.1	-4.3
Distillates	0.3	3.1	0.9	-2.9	-0.2	-0.6	1.1	-0.4
Residual Fuel Oil	0.3	0.2	0.2	-3.1	0.1	-0.2	0.7	-3.0
Other Products	-0.1	10.6	0.1	0.5	0.0	-0.2	0.0	10.9
Total Products	**0.5**	**16.3**	**1.0**	**-12.4**	**0.1**	**-0.7**	**1.6**	**3.2**
Other Oils[1]	0.0	4.3	-0.3	0.4	0.1	-0.4	-0.3	4.3
Total Oil	**-1.0**	**18.4**	**0.3**	**-8.8**	**0.3**	**-7.6**	**-0.3**	**2.0**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

September data are only marginally upgraded since last month's report, as an 18.4 mb upward revision to North American inventories largely offset lower-than-estimated stocks in Europe and the Pacific. North American stocks were revised up for all categories bar crude oil. A 10.6 mb revision to 'other products' and a 4.3 mb revision to 'other oils' make up the bulk of the changes. Smaller changes to gasoline (+2.4 mb) and distillates (+3.1 mb) only slightly improve the US year-on-year deficit resulting from Hurricane Ike disruptions apparent in September data. Downward revisions totalling 8.8 mb were recorded for European inventories for September as higher crude oil stocks in Germany, Italy and the Netherlands failed to offset lower product stocks across the continent. Japanese crude oil stocks for end-September were also lower than indicated by preliminary data, reducing OECD Pacific crude oil stocks back below their five-year range.

Floating Storage Additions Further Augment Onshore Industry Stocks

Recent reports point to a significant increase in floating storage over the last few months. As many as 16 tankers have reportedly been hired for offshore temporary storage. The VLCCs, once filled, could add up to 26 mb according to industry and shipping sources, which would come in addition to onshore inventories reported in IEA statistics. *OMR* balances capture quarterly changes to floating storage and oil in transit in our Table 1, 'World Oil Supply and Demand Balance', but these latest developments -- occurring after the end of the third quarter -- do not show up in current balances.

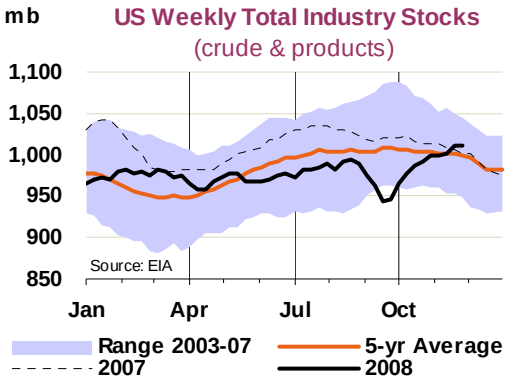
An equivalent major run-up in floating storage was last seen in spring 2008, when Iran reportedly held 20-30 mb offshore due to problems marketing heavy/sour crude. In this instance, several tankers are currently storing oil in the Gulf of Mexico, but reports also show increased short-term storage rentals for the North Sea, India and Malaysia.

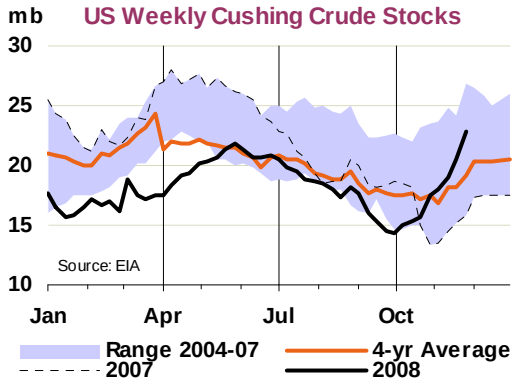
The increase in floating storage has developed as a result of abundant prompt supplies having a hard time finding customers, further supported by lower freight rates. The forward price structure, in both paper and physical markets, shows a strong forward premium, i.e. a contango, driven by prompt price weakness. This further encourages storage as the price premium covers the cost of storage. The cost of storing oil on a super tanker is by some shipping sources estimated to 90 cents per barrel per month, plus at least a further 30 cents a barrel to cover the cost of capital in addition to insurance and other costs.

OECD Industry Stock Changes in October 2008

OECD North America

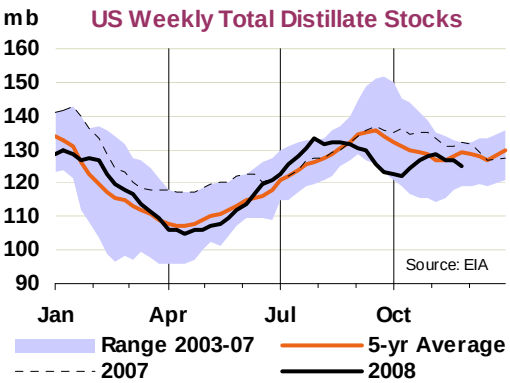
North American total oil stocks built by 37.0 mb in October as both crude and products moved higher. After severe hurricane disruptions to the US oil supply chain in September, October builds brought total stock levels back above historical averages.

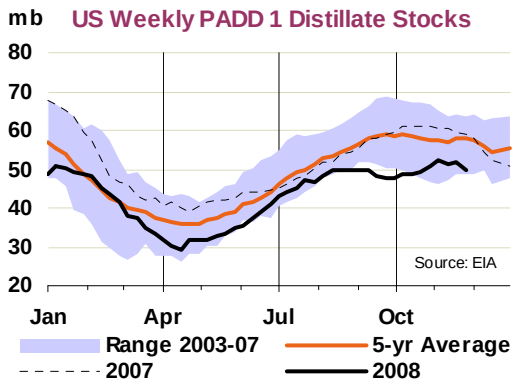




North American crude oil stocks increased by 9.1 mb in October, as higher US inventories offset lower Mexican stocks. US crude stocks built by 11.6 mb in the month, as a return to normal operations by port facilities on the Gulf Coast led to a sharp increase in imports. Crude oil imports into the Gulf averaged 6.2 mb/d in October, compared with 4.3 mb/d a month earlier and 5.5 mb/d last year. At the same time, refinery runs had almost recovered, averaging 82% of capacity for the month, after hitting all-time lows in September. Weekly data show US crude stocks continued to build in November, adding another 8.4 mb to tanks. Crude oil stocks at Cushing, the delivery point for NYMEX Light Sweet Crude, rose sharply in October and November, according to weekly data. From a low point of 14.4 mb reached in early October, stocks have risen to 22.9 mb. The sharp increase in stocks is, as for increased floating storage, indicative of abundant prompt supplies, as is the strong contango in the front month spread, which has increased sharply in recent months.

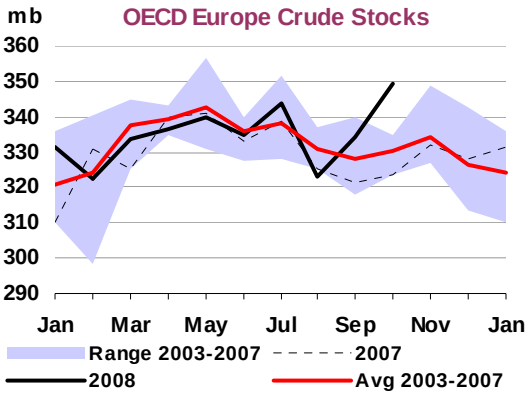
US product stocks saw significant builds during October, adding 24.8 mb to inventories following increased product supplies and weak domestic demand. Builds in US gasoline and distillate stocks of 11.6 mb and 5.3 mb respectively allowed product inventories to move back in line with five-year averages after falling to their lowest September level in eight years. However, distillate stocks in the US North East (PADD1), the main heating oil consuming region, are trending at the lower end of their five-year average just as winter demand is starting to pick up. US product inventories continued to build in November, adding 4.8 mb in total. In contrast to October, however, only 'other oils' and gasoline stocks increased, while all other product categories fell.

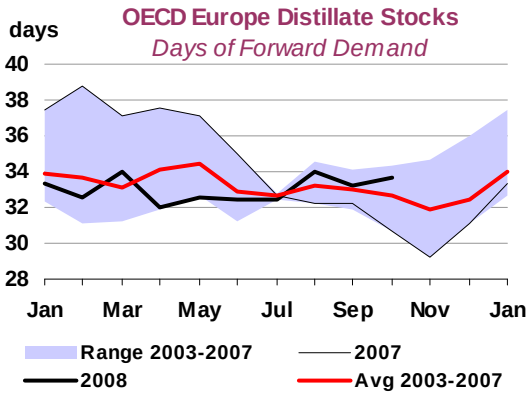




OECD Europe

European crude oil stocks continued to build during October, adding 14.8 mb to already ample supplies. The bulk of the increase came from Norway, where crude and condensate production picked up after maintenance and unscheduled outages seen in August and September. Stocks also increased on the continent due mostly to lower refinery activity. Outages and maintenance lowered refinery operations in the Netherlands, Italy and the UK, and a poor economic environment encouraged reduced runs elsewhere.



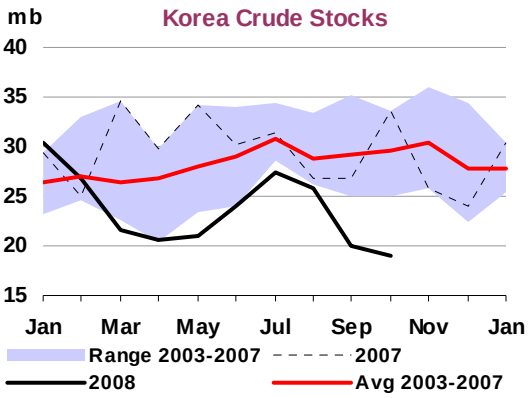


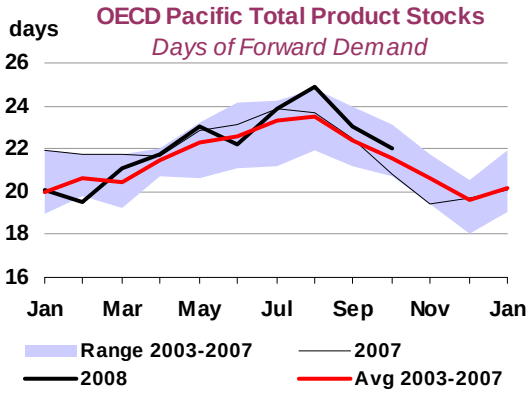
European total product inventories on the other hand were lower in October with draws in all product categories. Distillate stocks fell by 3.9 mb in the month, though stocks are still trending well above historical averages, both on a volumetric basis and in terms of forward demand cover. German distillates stocks were slightly higher (+0.8 mb) despite a sharp pick up in deliveries in October (+57.4% for heating oil and +1.9% diesel). German consumers continued to take advantage of lower prices to refill depleted heating oil stocks. During the July to October period, German consumers have added a total of 34 mb to household tanks, compared with only 12 mb last year and a 22 mb period average over the last five years. But at 62% of capacity, household stocks were still 1.1 percentage points below the recent five-year average. Elsewhere in Europe, demand continued to slide, leaving product available for storage.

Preliminary data from Euroilstock show that in November, EU16 inventories were 3.3 mb higher than the previous month. Stocks held in independent storage in the Amsterdam-Rotterdam-Antwerp area were higher in all categories in November. Fuel oil inventories in particular were higher, as rising FSU exports coincided with limited arbitrage opportunities to Asia following a slew of arrivals in Singapore over the October November period. Gains in other products were more modest, as inflows only marginally exceeded inland deliveries and exports out of the region.

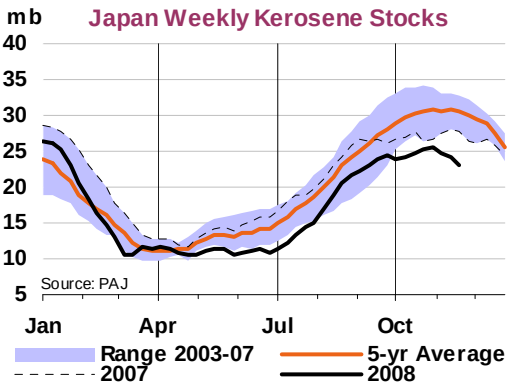
OECD Pacific

OECD Pacific crude oil stocks moved slightly higher in October as a build in Japanese inventories was partly offset by lower Korean stocks. Korean crude oil stocks fell on reduced imports, to their lowest level since at least January 1997 (from which point a consistent time series is available). Although crude prices have come down sharply since summer, the simultaneous depreciation of the Korean currency still makes crude very expensive for Korean refiners (the Won has depreciated by about 40% relative to the US dollar since the beginning of July). Japanese crude oil stocks, meanwhile, built due to higher imports and lower refinery runs.





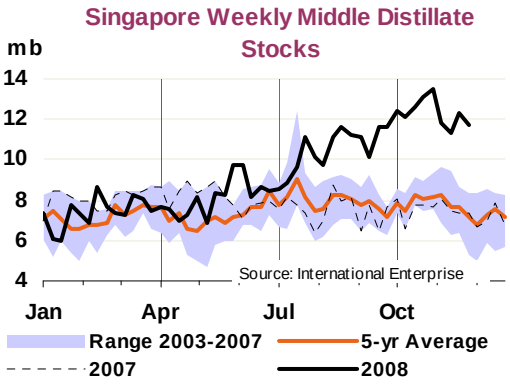
Product stocks were relatively unchanged in the region, as, again, higher Japanese inventories offset draws in Korea. Korean product stocks fell by 2.5 mb, mostly due to lower fuel oil stocks. Korean product stocks were down despite weak demand and higher year-on-year refinery runs, as product exports were higher. Fuel oil exports to Singapore in particular were supported by strong bunker demand. Japanese product stocks built by 1.7 mb, despite lower refinery throughputs. Product demand continued to lag levels of a year ago, and increased global supply availabilities/decreased regional demand made it harder for Japanese refiners to find buyers for excess production.

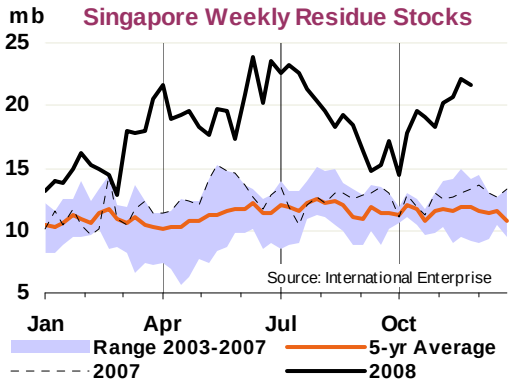


Weekly data from the Petroleum Association of Japan (PAJ) point to declining Japanese product stocks in November. Despite crude runs picking up quite sharply (from 73.1% utilisation in October to 81.7% in November), total throughputs were lower than last year. Because of the lower-than-normal refinery activity, kerosene stocks in particular have fallen below their recent five-year range at the onset of winter. Both gasoline and diesel/gasoil stocks, however, are still at comfortable levels as lower demand has more than offset the reduced refinery supplies.

Recent Developments in Singapore Stocks

Independent stocks held in Singapore, as measured by International Enterprise, were largely unchanged in November, as higher fuel oil stocks were offset by lower light and middle distillates. Middle distillates came down from recent record highs as buying by Indonesia and Vietnam increased somewhat, while fuel oil stocks built on large volumes of arbitrage material coming from Europe, the US West Coast and Latin America. It should be noted however that increasing storage capacity has been added in Singapore over the last year, in large part explaining higher recent stock levels.

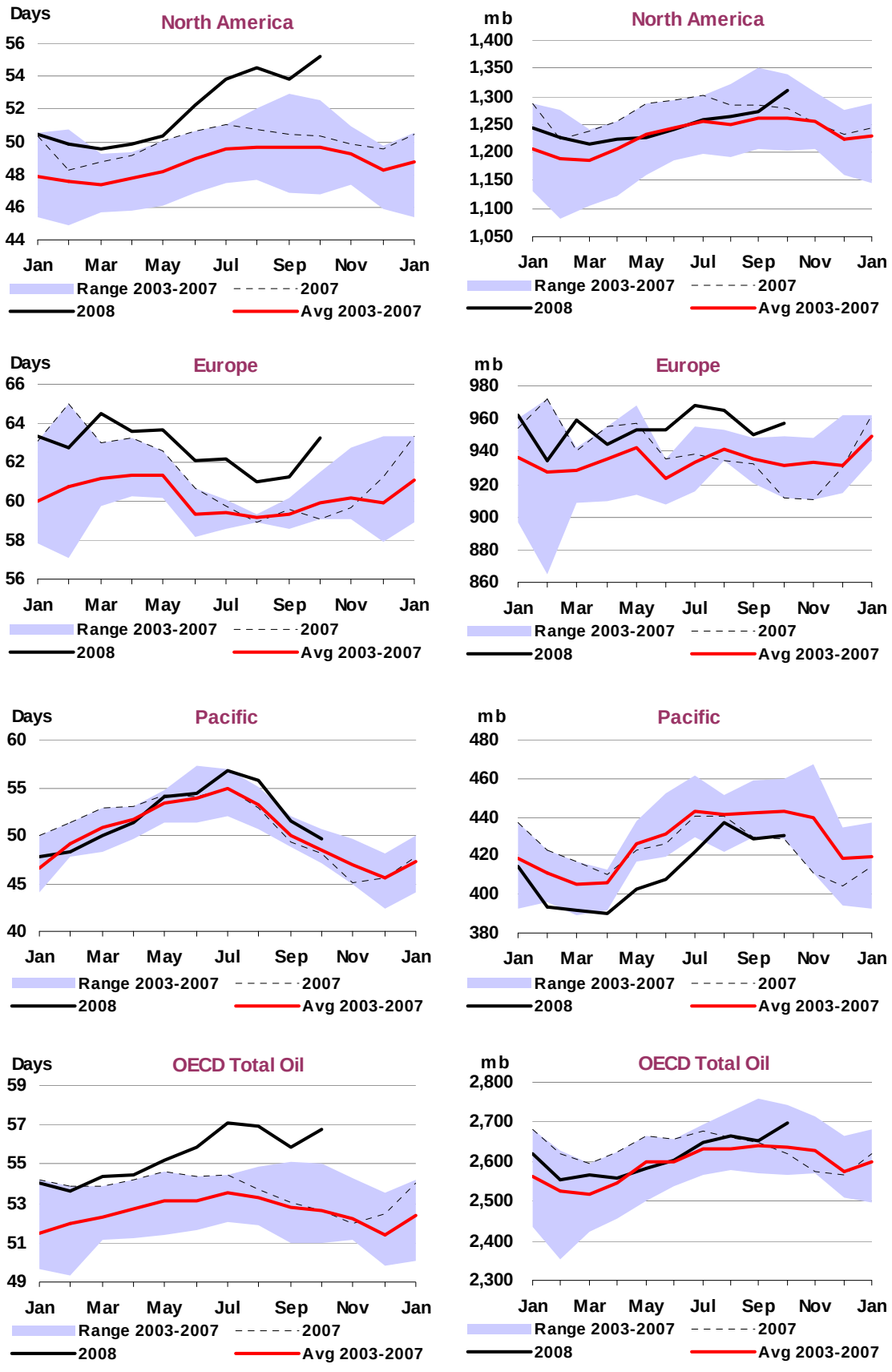




Regional OECD End-of-Month Industry Stocks

(in days of forward demand and millions barrels of total oil)

Days[1] Million Barrels



1 Days of forward demand are based on average demand over the next three months

PRICES

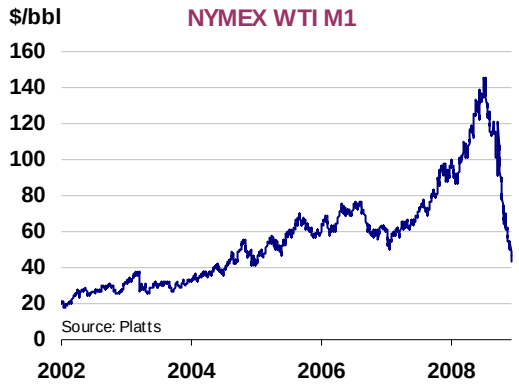
Summary

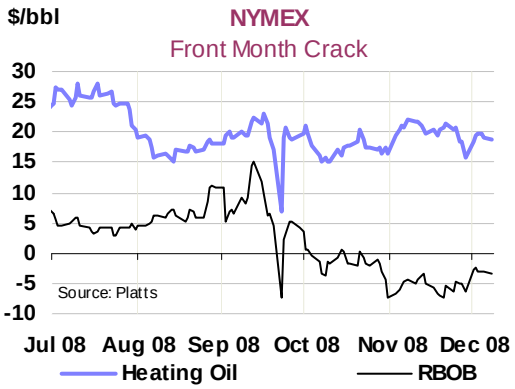
- **Crude oil prices dropped to nearly $40/bbl** by early December, amid continued signs of economic slowdown and OECD demand decline. Weak refining margins are causing economic run cuts and in turn a crude overhang, as manifested in growing stocks (also in floating storage) and a widening contango. Despite clear signs that any decision on output policy would be deferred to December, the absence of a new OPEC agreement to further curb output as the group met unofficially in Cairo in late November, was taken bearishly by the market.

- **Spot crude markets were hit by the widening contango**, growing stocks and weakening refining margins. The prevalent disparity between light/heavy products on the one hand and distillates on the other is narrowing crude quality differentials. Urals and Dubai have both briefly risen to parity with Dated Brent.

- **Refining margins fell in November and remain negative in many cases**. Distillate crack spreads were broadly steady, just managing to hold up margins in the light of negative gasoline and naphtha, which remains at a greater discount to crude than fuel oil. Compared with US and Singapore margins, European margins fared slightly better. News reports indicate widespread economic run cuts in Japan, Korea and perhaps even China.

- **Freight rates dipped for all routes** amid the generally weaker economic outlook and lower long-haul export volumes. OPEC trimmed output in November and early tanker-tracking reports indicate a further curb in exports in early December, pressuring VLCC rates on the benchmark Middle East Gulf-Japan route. Clean rates suffered too, with lower trade on the Atlantic and Far Eastern routes. Surplus vessel availability is contributing to temporarily attractive floating storage.



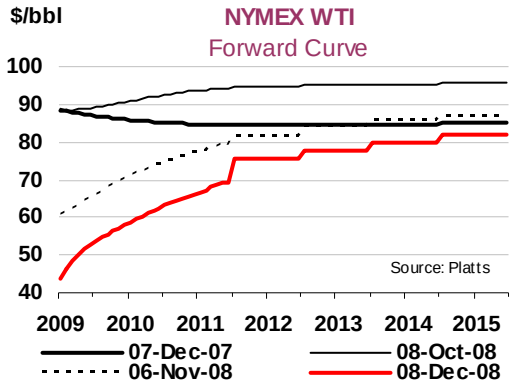


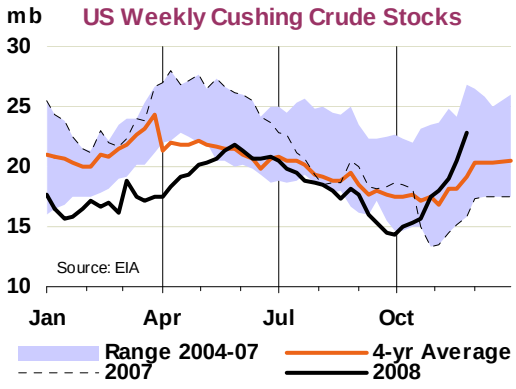
Overview

Increased evidence of a severe global economic slowdown put further downward pressure on prices throughout November and early December. Benchmark crude futures fell from around $55/bbl at the time of last month's report to currently just above $40/bbl, their lowest since early 2005. We now see global demand contracting in 2008, as weakness in OECD countries outweighs lingering strength in emerging markets. Mounting evidence of rising oil inventory, daily news about the extent of the economic malaise and shrinking refining margins all point towards weak product demand and an overhang of global crude. Despite clear signs that any decision on output policy would be deferred to December, the lack of a new OPEC agreement to curb output further as the group met unofficially in Cairo in late November, was taken bearishly by the market.

Latest data show even greater-than-anticipated demand weakness or contraction in many OECD countries, most notably the US. Our own analysis now shows a fall in global demand this year, as the world's economy slows down rapidly. Prices have continued to show strong volatility, often rallying sharply on news of further economic stimulus initiatives or interest rate cuts, both of which have been plentiful. But the rapid spread of economic contagion has blanketed out all other market signals, including even – so far – the fact that retail prices have also fallen sharply, e.g. gasoline in the US is back below $2/gallon at the pump, tumbling from a high around $4/gallon in the summer.

Statements by OPEC Ministers appear to make a further cut in quotas at the Algeria 17 December meeting likely. Specifically, the mention of a preferred level of OECD stock forward demand cover around 52-53 days and a 'fair' crude oil price of $75/bbl would bear out OPEC's intention to stem the price decline.





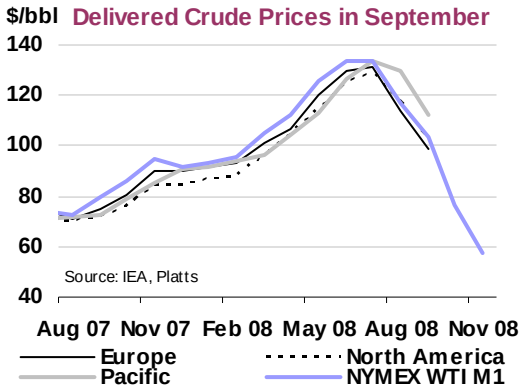
As a result, oil stocks are rising, with gains in OECD inventory measured in October, while preliminary data show a further increase in November, including at WTI's delivery point in Cushing, Oklahoma. Crude futures' contango has now widened to a point at which stockpiling is becoming economic, according to anecdotal reports, though credit and cash flow considerations may still weigh against this. News stories indicate a flurry of VLCC bookings for offshore storage, as freight rates are also depressed due to lower long-haul, mostly OPEC, loadings.

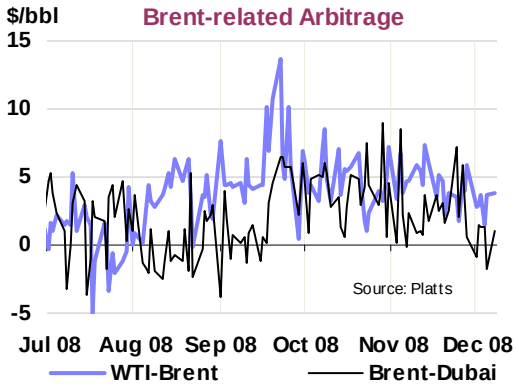
Product markets also confirm the current weaker fundamentals. Gasoline and naphtha crack spreads remained mostly negative in November and early December. NYMEX RBOB futures dipped below $1/gallon for the first time since they were first quoted in late 2005. Fuel oil discounts have narrowed again, but with a slight dip in distillate cracks, the latter's ability to prop up refining margins was strained and news reports indicate further planned economic run cuts at refineries. Distillate cracks in coming months will be influenced by both winter temperatures and the imminent start-up of India's huge Jamnagar refinery expansion, which is reported to be heavily weighted towards exporting high-quality distillates.

Spot Crude Oil Prices

Spot crude markets were marked by a growing overhang of prompt cargoes and weakening refining margins on the back of the still-wide divide between strong distillates on the one hand, and the weaker extremes of the barrel on the other. In **Europe**, Russian Urals once again rose to parity with Dated Brent on lower exports in November. European refinery runs are down, with margins sliding, and regional crude stocks rising sharply by the end of October. Furthermore, Russian crude export duties, which up until December have lagged crude price developments, were high to the point of making exports outright uneconomic. The government has since altered its price calculation, but it remains to be seen how this affects December exports.

Dated Brent also fell to a discount to Middle Eastern benchmarks Dubai and Oman, potentially affecting the arbitrage to **Asia**. Despite this, Asian imports from West Africa for December again fell and are now expected to total around 860 kb/d, down from November's 920 kb/d and far lower than last year's 1.2 mb/d. Japanese, Korean and Chinese refiners were all hinting at economic run cuts amid unprofitable margins, though similar pronouncements made by Chinese refiners last month were not reflected in official statistics (indeed, until the Chinese government changes its administered wholesale prices, most analysts reckon Chinese refiners are enjoying a period of unusual profitability). As for light sweet crudes, naphtha-rich Asian regional benchmark Tapis fell further compared with Dated Brent and Dubai, the latter development heralding a general narrowing of sweet-sour differentials.





In the **US**, where refining margins remain mostly depressed or negative due to weak gasoline, heavier, more sour crudes gained vis-à-vis light sweet WTI. The latter is possibly also pressured by high and rising stocks at Cushing, Oklahoma, the delivery point for the NYMEX Light Sweet Crude contract, as the ever-widening contango makes storage worthwhile. In addition, in theory, US domestic light sweet crudes benefit from the narrowing of the WTI-Brent spread.

Spot Crude Oil Prices and Differentials

(monthly and weekly averages, $/bbl)

	Sep	Oct	Nov	Nov-Oct Avg Change	%	Week Commencing: 10 Nov	17 Nov	24 Nov	01 Dec	08 Dec
Crudes										
Dated Brent	98.13	71.87	52.51	-19.36	-26.9	52.80	48.26	49.36	42.61	39.97
Brent (Asia) Mth1 adjusted	99.64	72.84	53.35	-19.50	-26.8	54.75	48.77	49.10	45.63	0.00
WTI (Cushing) Mth1 adjusted	103.61	76.62	57.41	-19.21	-25.1	58.65	52.16	52.60	45.51	43.73
Urals (Mediterranean)	97.60	70.51	51.79	-18.72	-26.6	51.70	47.21	48.68	42.22	39.24
Dubai Mth1 adjusted	95.90	67.42	49.84	-17.58	-26.1	51.20	45.58	45.55	42.34	0.00
Tapis (Dated)	106.54	77.56	56.70	-20.85	-26.9	58.99	52.51	52.14	46.79	0.00
Differential to Dated Brent										
WTI (Cushing) Mth1 adjusted	5.48	4.75	4.90	0.15		5.85	3.90	3.23	2.91	3.76
Urals (Mediterranean)	-0.53	-1.36	-0.72	0.64		-1.10	-1.05	-0.69	-0.39	-0.73
Dubai Mth1 adjusted - Dated Brent	-2.23	-4.45	-2.67	1.78		-1.59	-2.68	-3.81	-0.27	-39.97
Tapis (Dated)	8.41	5.69	4.20	-1.49		6.20	4.25	2.78	4.19	-39.97
Prompt Month Differential										
Forward Cash Brent Mth1-Mth2 adj.	-1.77	-1.52	-2.12	-0.60		-2.28	-2.06	-1.85	-2.34	-2.64
Forward WTI Cushing Mth1-Mth2 adj.	0.54	-0.17	-0.76	-0.60		-0.80	-0.59	-1.07	-1.61	-2.65

Source: Platts

Refining Margins

Refining margins mostly fell in November, as gasoline (and naphtha) weakness continued to weigh on spreads. The most pronounced fall last month was on the **US West Coast**, which was particularly hard hit by falling gasoline prices. As a result, margins there fell by around $10/bbl in November on average and, in the case of light/medium cracking, moved into negative territory. US Gulf Coast margins also remain depressed, mostly falling on the month. This was despite relatively pronounced gains in distillate cracks, in contrast with other regions.

European refining margins are still holding up, relatively speaking, with light sweet hydroskimming spreads increasing. Europe, as outlined in previous reports, is benefiting from its higher distillate yields and, on average, higher crack spreads for diesel. In **Asia**, Tapis margins rose on the grade's relative weakness, but overall, margins are mostly negative. Fuel oil discounts to crude narrowed in November on average, though they picked up trend-wise towards the end of the month on increased Chinese buying, which could yet come to the aid of Singapore margins. As mentioned above, news reports indicate widespread economic run cuts at Japanese, Korean and Chinese refineries.

Selected Refining Margins in Major Refining Centres

($/bbl)

		Monthly Average			Change	Average for week ending:				
		Sep 08	Oct 08	Nov 08	Nov 08-Oct 08	05 Nov	12 Nov	19 Nov	26 Nov	03 Dec
NW Europe	Brent (Cracking)	8.93	6.17	4.59	-1.59	3.18	5.45	5.52	3.89	4.04
	Urals (Cracking)	8.25	5.25	3.65	-1.59	1.53	3.91	4.97	3.34	3.58
	Brent (Hydroskimming)	2.74	2.59	3.02	0.44	0.54	3.78	4.20	2.92	2.60
	Urals (Hydroskimming)	1.03	-0.56	-1.42	-0.86	-4.37	-1.80	-0.11	-0.74	-0.74
Mediterranean	Es Sider (Cracking)	6.70	5.34	3.74	-1.60	1.40	4.66	5.28	3.10	2.29
	Urals (Cracking)	7.98	5.81	2.21	-3.60	0.90	2.73	3.13	1.68	1.86
	Es Sider (Hydroskimming)	-0.05	1.55	2.47	0.93	-1.42	3.32	4.43	2.46	1.41
	Urals (Hydroskimming)	0.11	-0.34	-3.46	-3.12	-5.51	-3.57	-2.53	-3.03	-3.00
US Gulf Coast	Bonny (Cracking)	15.79	-1.01	-1.14	-0.13	-3.09	-0.48	-0.25	-1.28	-1.99
	Brent (Cracking)	16.99	0.04	-1.41	-1.45	-3.47	-0.91	-0.78	-1.31	-2.26
	LLS (Cracking)	14.79	-0.73	-0.01	0.73	-2.19	1.39	-0.04	0.20	-1.22
	Mars (Cracking)	10.67	-1.76	-4.24	-2.48	-6.55	-4.04	-4.26	-3.22	-3.29
	Mars (Coking)	20.13	5.34	4.14	-1.20	2.35	5.38	4.05	4.34	3.06
	Maya (Coking)	22.02	6.54	9.25	2.70	7.88	11.06	9.47	8.35	6.26
US West Coast	ANS (Cracking)	6.14	4.89	-4.85	-9.74	-3.62	-3.15	-5.67	-5.56	-6.38
	Kern (Cracking)	11.24	9.00	0.76	-8.24	2.08	-0.11	-0.20	1.16	2.50
	Oman (Cracking)	7.99	4.28	-8.30	-12.59	-5.04	-6.93	-8.12	-10.07	-13.13
	Kern (Coking)	19.30	16.64	6.45	-10.18	7.63	7.58	5.24	5.01	4.73
Singapore	Dubai (Hydroskimming)	1.18	-0.49	-2.74	-2.25	-4.63	-3.82	-1.83	-1.36	-2.03
	Tapis (Hydroskimming)	-5.34	-7.94	-6.59	1.35	-7.74	-7.63	-6.29	-5.91	-5.20
	Dubai (Hydrocracking)	4.21	2.57	0.88	-1.68	0.06	0.11	1.68	1.59	0.41
	Tapis (Hydrocracking)	-3.54	-5.54	-4.02	1.52	-4.79	-5.01	-3.69	-3.57	-3.19
China	Cabinda (Hydroskimming)	1.51	-4.17	-4.97	-0.80	-5.95	-3.94	-4.28	-5.65	-4.54
	Daqing (Hydroskimming)	1.23	-4.07	-4.21	-0.15	-3.86	-4.08	-4.77	-4.71	-2.74
	Dubai (Hydroskimming)	0.59	-0.87	-2.96	-2.08	-4.73	-4.01	-2.03	-1.64	-2.37
	Daqing (Hydrocracking)	3.89	-0.11	-1.75	-1.64	-0.50	-1.27	-2.44	-2.70	-1.02
	Dubai (Hydrocracking)	3.58	2.08	0.59	-1.49	-0.13	-0.17	1.38	1.24	0.01

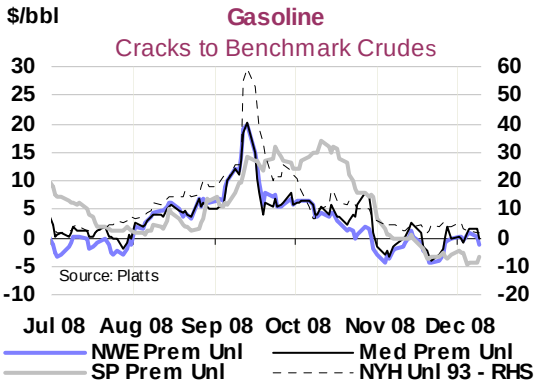
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimised for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

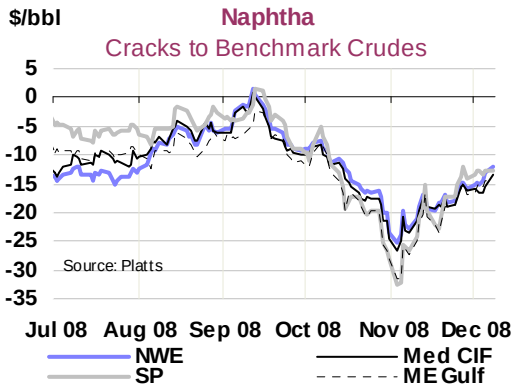
*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

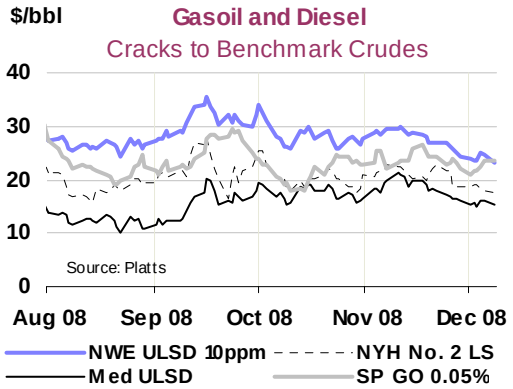
Spot Product Prices

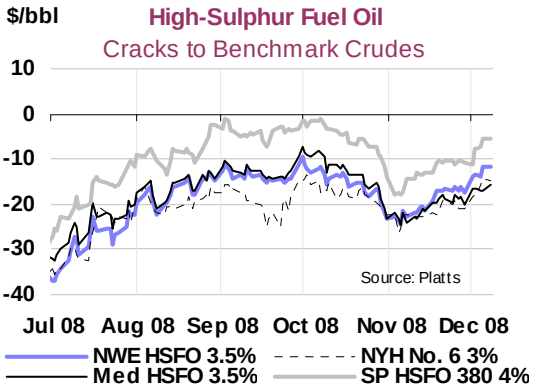
Gasoline prices remain unusually weak, with crack spreads largely negative throughout most of November and into early December in all markets. Refiners are scrambling to adapt yields towards more distillate output where they can, but demand weakness emanating from the US above all is proving difficult to deal with. Road transport and car sales statistics show a clear downward trend, though this may yet be affected by a sharp fall in gasoline pump prices since the summer. Europe is shipping some excess gasoline to West Africa, while the US is taking in less than normal, but lower demand is prompting European run cuts too. Meanwhile, naphtha's unprecedented discounts to crude have halved since our last report in early November, but remain in the $15/bbl range. Petrochemical demand has picked up somewhat after margins improved. Specifically, South Korean producers reportedly returned to the spot market for January cargoes after term deal renewal talks were delayed.





Distillate crack spreads trended slightly lower in November and early December, now on average hovering around the $20/bbl mark. In Europe, heating oil sales were again robust, with lower retail prices encouraging consumer stock building and, in Germany, ahead of a sales tax increase due in January 2009. Independent gasoil stocks held in the ARA region were down over the course of the month, but remain above average. In contrast, jet fuel stocks are well above their five-year range, reflecting the downturn in global air travel. At the time of writing, a strike by port workers at France's southern Fos-Lavera hub was hampering loading operations, but had not yet materially affected product flows or prices. Meanwhile, in Asia, distillate cracks came under pressure due to China reverting to net-exporter status. In December, China was expected to export 20-30 kb/d of gasoil, in sharp contrast to imports of over 200 kb/d seen during the summer.





Fuel oil discounts to crude narrowed over the course of the past month, with demand picking up slightly. Colder weather and lower relative prices have encouraged some fuel switching in the US for low-sulphur fuel oil (LSFO). In Asia, more attractive refining margins for so-called 'teapot' refineries in China have encouraged higher purchases of high-sulphur product. However, this is partly offset by higher volumes of fuel oil moving into the region. Some 2.5 million tonnes of fuel oil are expected to arrive in December, though less than November's record 3.6 million tonnes, after exports from Russia and the Caribbean were hiked. Meanwhile, Saudi Aramco has confirmed it will no longer sell term fuel oil volumes from 1Q09 due to higher domestic requirements, thus tightening future supply.

Spot Product Prices

(monthly and weekly averages, $/bbl)

	Sep	Oct	Nov	Nov-Oct		Week Commencing:					Sep	Oct	Nov
				Change	%	10 Nov	17 Nov	24 Nov	01 Dec	08 Dec			
Rotterdam, Barges FOB											**Differential to Brent**		
Premium Unleaded	107.70	74.68	50.50	-24.18	-32.4	52.59	45.29	47.63	42.93	40.24	9.57	2.81	-2.01
Naphtha	93.59	58.27	33.56	-24.70	-42.4	34.14	29.97	33.30	27.92	27.98	-4.54	-13.60	-18.94
Jet/Kerosene	129.34	98.92	80.19	-18.73	-18.9	81.97	75.80	73.98	63.84	59.46	31.21	27.05	27.68
ULSD 10ppm	128.95	100.11	80.36	-19.75	-19.7	81.97	75.77	74.98	66.80	63.30	30.82	28.24	27.86
Gasoil .1%	125.71	97.12	77.38	-19.74	-20.3	79.53	72.51	71.46	62.74	58.18	27.58	25.25	24.87
LSFO 1%	87.77	68.29	46.29	-22.00	-32.2	46.74	44.16	43.51	37.17	32.98	-10.36	-3.58	-6.22
HSFO 3.5%	84.70	56.45	32.91	-23.53	-41.7	31.55	30.91	32.58	29.28	28.15	-13.43	-15.42	-19.59
Mediterranean, FOB Cargoes											**Differential to Urals**		
Premium 50 ppm	106.46	75.10	50.90	-24.20	-32.2	53.04	45.14	48.10	42.56	40.84	8.86	4.59	-0.88
Naphtha	91.96	56.30	31.65	-24.64	-43.8	32.21	27.89	31.38	25.87	25.85	-5.64	-14.21	-20.13
Jet Aviation fuel	127.51	95.87	78.06	-17.81	-18.6	79.47	73.36	72.18	62.96	58.69	29.91	25.37	26.28
Gasoil .2%	121.43	92.23	72.84	-19.39	-21.0	74.83	67.79	67.16	58.97	54.36	23.83	21.72	21.05
LSFO 1%	86.45	63.75	45.40	-18.35	-28.8	46.15	44.10	42.95	38.96	35.92	-11.16	-6.76	-6.39
HSFO 3.5%	85.21	57.24	31.01	-26.24	-45.8	29.65	28.30	29.64	25.55	23.46	-12.40	-13.27	-20.78
New York Harbor, Barges											**Differential to WTI**		
Super Unleaded	133.70	88.38	61.19	-27.18	-30.8	61.98	55.48	56.87	49.22	45.44	30.09	11.76	3.78
Unleaded	117.24	79.38	53.74	-25.64	-32.3	55.41	47.79	49.49	42.84	38.87	13.63	2.77	-3.67
Jet/Kerosene	138.10	101.46	82.29	-19.17	-18.9	84.46	76.36	76.53	67.18	63.80	34.49	24.84	24.87
No. 2 (Heating Oil)	122.07	93.54	77.75	-15.80	-16.9	79.06	72.90	72.94	63.57	60.86	18.46	16.93	20.34
LSFO 1%	83.15	59.05	40.14	-18.91	-32.0	39.90	37.41	38.85	34.47	34.50	-20.46	-17.57	-17.27
No. 6 3%	84.51	59.00	35.44	-23.56	-39.9	35.90	31.46	32.63	28.74	28.90	-19.10	-17.62	-21.97
Singapore, Cargoes											**Differential to Dubai**		
Premium Unleaded	107.10	79.50	48.41	-31.09	-39.1	51.16	42.65	42.31	39.04	0.00	11.20	12.08	-1.43
Naphtha	91.97	51.12	29.09	-22.03	-43.1	31.33	25.45	31.10	29.39	0.00	-3.93	-16.30	-20.75
Jet/Kerosene	121.50	90.09	75.08	-15.01	-16.7	77.18	71.59	69.08	60.95	0.00	25.59	22.67	25.23
Gasoil .5%	118.93	83.98	68.77	-15.22	-18.1	69.79	65.82	63.33	59.29	0.00	23.02	16.56	18.92
LSWR Cracked	96.04	61.88	39.91	-21.98	-35.5	41.16	35.98	36.60	33.91	0.00	0.13	-5.54	-9.94
HSFO 180 CST	90.85	61.69	37.47	-24.21	-39.3	38.61	35.32	35.51	34.53	0.00	-5.05	-5.74	-12.37
HSFO 380 CST 4%	92.02	61.94	36.83	-25.11	-40.5	37.91	34.48	34.88	34.46	0.00	-3.88	-5.48	-13.01

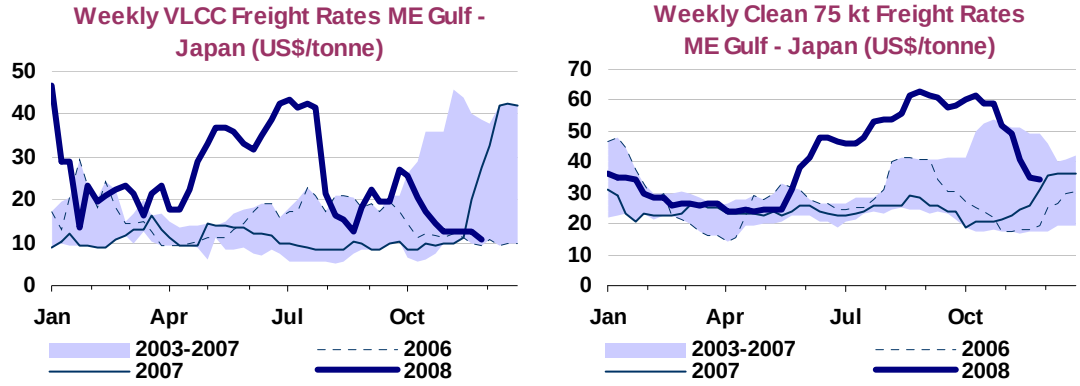
Source: Platts

End-User Product Prices in November

Retail product prices dropped by 23% month-on-month, in US dollars, ex-tax, in November, following plummeting benchmark oil prices. Gasoline prices on average fell by 28%, while diesel and heating oil prices were down by almost 19%. Low-sulphur fuel oil prices on average fell by 27%. Retail prices in all surveyed IEA countries were 22% below November 2007 levels, in US dollars, ex-tax, except diesel and heating oil retail prices in Japan, which were 15% higher than a year ago. Taking tax into consideration, last month US consumers on average paid $2.15/gallon for gasoline ($0.567/litre), Japanese consumers paid ¥136/litre ($1.398/litre), consumers in the UK £0.953/litre ($1.459/litre), and European consumers paid from €1.208/litre in Italy ($1.532/litre) to €0.94/litre in Spain ($1.192/litre).

Freight

Clean and dirty freight rates headed down in November, continuing to feel the impact of the weaker trading environment in the economy at large and for oil in particular. Latest tanker-tracking data show a further curb in December OPEC export volumes, which is hitting long-haul rates. Since last month's report, VLCC chartering costs on the benchmark Middle East Gulf-Japan route have slipped from around $12.50/tonne to near $10/tonne, also against many reports of Far Eastern refiners curbing runs on weak demand and a crude overhang. A similar downturn was visible for Aframaxes, making the journey from West Africa across the Atlantic, with rates tumbling from near $23/tonne to $18/tonne over the past month. However, low freight rates and an ever-widening contango in benchmark crude futures are beginning to attract the use of tankers for floating storage, despite persistent concerns over credit and cash flow. News reports indicate the booking of several VLCCs to hold crude off the US Gulf Coast and in the North Sea, though volumes could not be confirmed.



Clean freight rates' downturn was also pronounced as falling or weak demand growth discourages trade. Rates on the Middle East Gulf-Japan 75 kmt route slid from around $50/tonne one month ago to a current $35/tonne. Meanwhile, UK-US Atlantic Coast rates were steadier, hovering around $20/tonne, but had previously fallen sharply in September/October as the usual bustling transatlantic gasoline trade began to dry up on weaker US demand.

The oil tanker trade hit the headlines when the VLCC *Sirius Star*, owned by Saudi Aramco's tanker arm Vela, was captured by pirates off East Africa in mid-November. With around 2 mb of crude onboard, this is the largest ship ever held by pirates and brought the very real threat of piracy in some parts of the world home to oil and other markets. The fact that the *Sirius Star* was boarded several hundred miles offshore East Africa was also a departure from previous hijackings, which are common off Somalia, but mostly take place in coastal waters. In most cases, ships and crew are freed after the payment of a ransom, but this and other hijackings since could yet boost freight rates and insurance. Despite a beefed-up international naval presence in the area of risk off the Horn of Africa and in the Gulf of Aden, news reports indicate that shipping companies are choosing to divert their ships around the Cape of Good Hope rather than go through the Suez Canal – which potentially adds as many as 10-20 days to a journey, as well as increasing fuel costs.

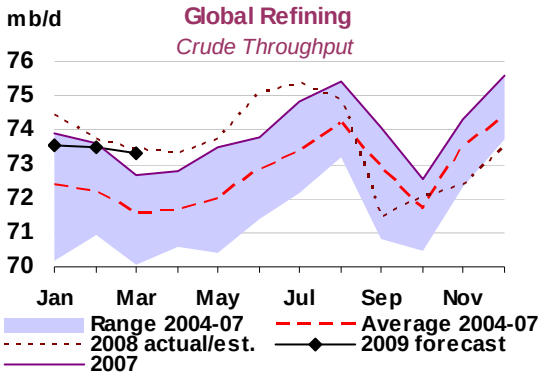
REFINING

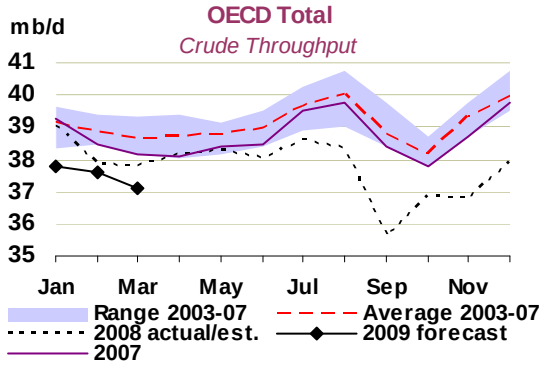
Summary

- **Global 4Q08 crude throughput is expected to average 72.6 mb/d,** 0.8 mb/d lower than forecast in last month's report. Factors contributing to this downward revision include the weaker demand now envisaged for the period and the poor margin outlook, particularly on the US Gulf Coast. Lower Asian and OECD North American crude throughput forecasts account for the majority of the decline.

- **October global crude throughput of 72.0 mb/d** was 0.1 mb/d below forecast according to provisional data. Crude runs in the OECD and China were 0.8 mb/d ahead of our forecasts, but this was offset by lower than expected crude runs in Saudi Arabia and India.

- **Global 1Q09 crude throughput is forecast to average** 73.5 mb/d, a decrease of 0.4 mb/d against 1Q08, driven by a 0.7 mb/d year-on-year decline in the OECD. Year-on-year growth in crude throughput still looks likely in the non-OECD regions, notably in the Middle East, China and the FSU, while weaker crude throughput in Other Asia and Africa depresses the overall non-OECD increase.





- **OECD crude throughput averaged 36.9 mb/d in October** as US refineries increased throughputs following the hurricane-related disruption in September. Despite crudes runs rebounding by 1.3 mb/d on the month, they remain 0.9 mb/d below levels of a year ago. Run cuts remain an issue for refineries in the US, particularly on the Gulf Coast, as well as in Japan and Korea. European refineries continue to enjoy the healthiest regional margin environment, with Brent hydroskimming margins of around $3/bbl, some $4/bbl above levels of a year ago.

- **The repercussions of the credit crunch continue to constrain refiners' ability to optimise operations.** Unconfirmed reports suggest some refiners are being forced to prepay for crude purchases, having been unable to secure letters of credit. Additionally, the inability for refineries to trade without credit constraints is likely to have distorted normal market practices and induced further run cuts as refiners balance operations against their contractual inland demand requirements, while shunning incremental export-related opportunities. As noted in our *MTOMR* refining supplement earlier in December, investment impacts will also likely be felt from the current market slump.

Global Refinery Throughput

Continued reports of weak demand and rising stocks in the OECD, combined with weak margins in the US and Asia continue to weigh on refinery utilisation levels. This report's estimate for global 4Q08 crude runs has been cut by 0.8 mb/d in line with the lower demand estimates, despite provisional October data for the OECD being slightly stronger than forecast. Run cuts remain a necessity for refineries in the US, Japan and

several Asian countries, as weak demand has translated into unwanted stocks. Nevertheless, our forecast could be subject to upward revision if demand picks up, due to colder weather, resulting in stronger middle distillate cracks.

Recent announcements by independent refiners suggest that capital expenditure plans for 2009 continue to be cut as refiners reposition their businesses and their balance sheets to weather the weaker demand, margin and economic environment they currently face. Furthermore, refiners are reported to be holding higher cash balances than previously to protect against the financial market turmoil. In addition, the prospect of increased working capital, due to factors such as the inability to secure letters of credit, is also altering the structure of their balance sheet. The lower oil price will however reduce working capital requirements, but does not offset the impact of having to pay for crude well in advance of previous arrangements.

The competition between European and US Gulf Coast refiners to move high quality gasoline to the US East Coast market in the face of slowing US demand, continues to depress Atlantic Basin and global gasoline cracks. However, the higher yield of distillates enjoyed by European refiners is currently supporting their crude runs at the expense of US Gulf Coast refineries. Recent comments highlight that an increasing number of Gulf Coast refiners have moved to cut throughput of fluid catalytic cracking units, (historically a major source of refining profitability), in addition to crude distillation units. The recent strength in hydroskimming margins, driven by a narrowing of fuel oil discounts and high middle distillate cracks appears to be leading a reversal of this industry trend, at least temporarily.

Global Refinery Crude Throughput[1]

(million barrels per day)

	Jul 08	Aug 08	Sep 08	Oct 08	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09
OECD									
North America	18.3	17.7	15.6	17.4	*17.4*	*17.7*	*17.2*	*17.1*	*17.2*
Europe	13.6	13.8	13.4	12.9	*12.9*	*13.4*	*13.4*	*13.4*	*13.0*
Pacific	6.8	6.9	6.6	6.5	*6.4*	*6.8*	*7.1*	*7.1*	*6.9*
Total OECD	38.6	38.4	35.6	36.9	*36.8*	*37.9*	*37.8*	*37.6*	*37.1*
NON-OECD									
FSU	6.0	6.1	5.8	5.8	*6.1*	*6.1*	*6.2*	*6.2*	*6.2*
Europe	0.8	0.8	0.8	0.8	*0.8*	*0.7*	*0.7*	*0.8*	*0.8*
China	7.1	6.9	6.9	7.0	*6.8*	*6.8*	*6.8*	*6.9*	*6.9*
Other Asia	8.5	8.1	8.0	8.1	*7.8*	*7.8*	*7.7*	*7.8*	*7.9*
Latin America	5.5	5.6	5.6	5.3	*5.5*	*5.5*	*5.7*	*5.6*	*5.6*
Middle East	6.3	6.5	6.3	5.9	*6.3*	*6.5*	*6.4*	*6.4*	*6.5*
Africa	2.5	2.6	2.5	2.2	*2.4*	*2.2*	*2.3*	*2.3*	*2.3*
Total Non-OECD	36.8	36.5	35.9	35.2	*35.6*	*35.6*	*35.8*	*35.9*	*36.2*
Total	75.4	74.9	71.5	72.0	*72.4*	*73.5*	*73.6*	*73.5*	*73.3*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

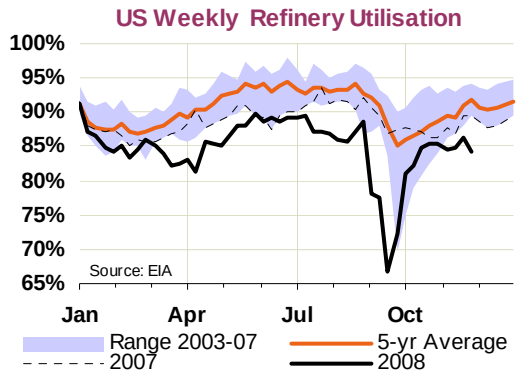
Preliminary data for November indicate that global crude throughput averaged 72.4 mb/d, 1.1 mb/d below last month's forecast of 73.5 mb/d. Lower-than-expected crude runs in the US, Mexico and India account for much of the downward revision. Weaker US crude throughput reflects the continued weak state of gasoline cracks and the impact they are having on US Gulf and East Coast crude runs, as discussed above. As highlighted last month, our forecast incorporates increasing volumes of crude throughput based upon the assumption that Reliance Petroleum's Jamnagar refinery expansion will start up during 4Q08. However, the lack of confirmation of the completion of commissioning also results in a downgrade to our November estimate.

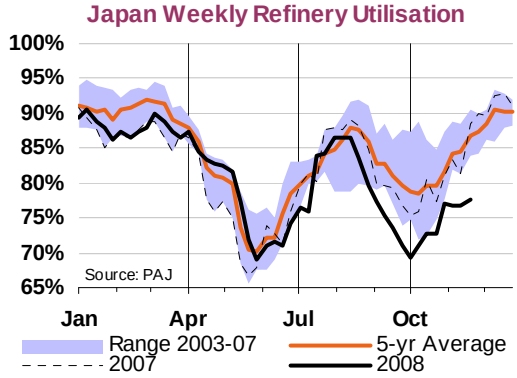
Estimated global 4Q08 crude throughput of 72.6 mb/d is 0.8 mb/d lower than last month's forecast, following further downward revisions to the demand estimates contained in this report. Reductions to forecast North American and Asian crude runs total 0.7 mb/d, with an increased prevalence of run cuts in both regions now incorporated into our estimates. A more muted seasonal increase in crude throughput is forecast for December, with global crude runs now expected to average 73.5 mb/d, a reduction of 1.3 mb/d to our previous forecast and 2.1 mb/d lower than the December 2007 level, as we largely discount the typical seasonal increase in crude throughput under the current market outlook.

We have rolled over our forecasts to cover **1Q09** and assume that the weak crude throughput patterns currently visible in several regions will continue next quarter. As such, forecast global throughput is 73.5 mb/d, 0.4 mb/d below 1Q08. Furthermore, the seasonal increase in maintenance work, particularly in the US, will further reduce crude runs for OECD North America to an average of 17.2 mb/d, down 0.3 mb/d quarter-on-quarter and 0.4 mb/d lower than in 1Q08. Elsewhere, we have omitted the ramp-up in runs from new capacity starting in China, ahead of more clarity on new refinery start dates and have included only partial crude throughput volumes from Reliance's Jamnagar refinery expansion. Lastly, we have maintained the assumption that run cuts continue throughout the quarter.

OECD 4Q08 crude throughput is forecast to average 37.2 mb/d, 0.3 mb/d below last month's report. Many of the factors previously highlighted in this report as presenting a downside risk to our forecasts have materialised, and OECD crude throughput during the quarter, notably in the US are consequently lower. This downward revision occurs in spite of a promising start to the quarter, with provisional October data suggesting that crude runs were 0.3 mb/d ahead of expectations. Some European countries may be subject to further upward revisions next month when official data were submitted, if our assumptions about refinery maintenance are proved wrong.

OECD North America crude throughput bounced back in October, to an average of 17.4 mb/d, following the recovery from hurricane-related disruption to US Gulf Coast refining in September. However, US crude throughput has struggled to move above 15 mb/d since the hurricanes disrupted operations, with industry reports citing weak margins rather than knock-on storm effects as being the root cause. November regional throughput is 0.5 mb/d below last month's forecast, at 17.4 mb/d with unplanned outages on the US Gulf Coast and Mexico adding to the low throughput level. North American December throughput is forecast to remain below seasonal norms at 17.7 mb/d with only the prospect of stronger gasoline or gasoil cracks likely to boost runs significantly.





OECD Pacific October crude runs were broadly unchanged when compared with September, despite the recovery of Japanese crude runs over the course of the month from the seasonal low seen at the end of September. Nevertheless, OECD Pacific crude runs also remain subject to curtailment from voluntary run cuts. A host of Japanese refiners, including, Nippon Oil, Showa Shell, Toyo Oil and Idemitsu Kosan have all announced cuts of as much as 20% for December.

Furthermore, some refiners reported that planned November run cuts were doubled during the month to offset weak demand. We continue to assume that Japanese refinery utilisation rates will increasingly lag the five-year range through to the end of the year, but note that the lower Japanese crude throughput has resulted in kerosene stocks dropping below the five-year range. This offers the potential for an increased supply requirement, were demand to spike on the back of colder weather.

Refinery Crude Throughput and Utilisation in OECD Countries

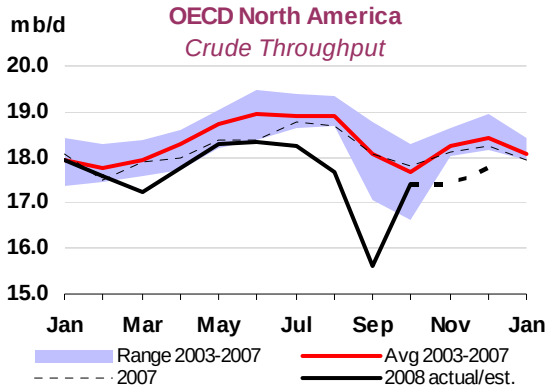
(million barrels per day)

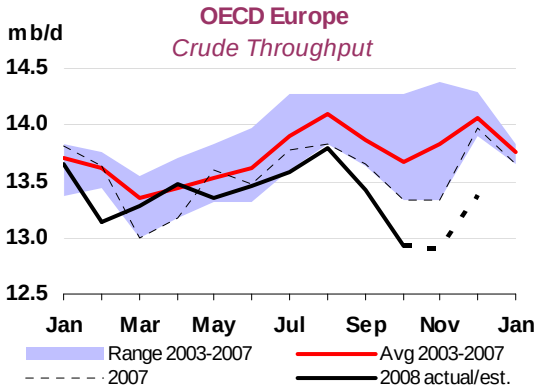
	May 08	Jun 08	Jul 08	Aug 08	Sep 08	Oct 08	Change from Sep 08	Change from Oct 07	Utilisation rate[1] Oct 08	Utilisation rate[1] Oct 07
OECD North America										
US[2]	15.29	15.38	15.24	14.95	12.76	14.50	1.74	-0.43	82.34	85.55
Canada	1.71	1.82	1.80	1.51	1.72	1.73	0.01	0.10	85.63	80.50
Mexico	1.28	1.11	1.22	1.23	1.15	1.20	0.05	-0.06	78.05	71.96
Total	18.28	18.31	18.26	17.69	15.63	17.43	1.80	-0.38	82.35	84.79
OECD Europe										
France	1.67	1.73	1.72	1.79	1.77	1.78	0.02	0.24	91.15	78.78
Germany	2.08	2.11	2.26	2.19	1.96	2.15	0.19	-0.10	88.88	92.86
Italy	1.63	1.72	1.73	1.77	1.73	1.53	-0.20	-0.29	65.50	77.86
Netherlands	1.10	1.07	1.04	1.03	1.05	0.84	-0.21	-0.18	69.39	83.95
Spain	1.18	1.11	1.12	1.18	1.24	1.18	-0.06	0.10	92.44	84.82
UK	1.56	1.66	1.59	1.62	1.66	1.54	-0.12	-0.08	81.85	86.05
Other OECD Europe	4.14	4.06	4.12	4.20	4.01	3.90	-0.11	-0.10	83.10	85.19
Total	13.36	13.46	13.58	13.79	13.42	12.92	-0.49	-0.40	81.93	84.46
OECD Pacific										
Japan	3.56	3.41	3.74	3.89	3.48	3.42	-0.07	-0.28	73.07	78.96
Korea	2.45	2.21	2.35	2.28	2.42	2.40	-0.02	0.10	87.79	84.07
Other OECD Pacific	0.63	0.65	0.67	0.71	0.65	0.68	0.03	0.01	84.41	83.29
Total	6.64	6.26	6.76	6.88	6.55	6.50	-0.05	-0.16	79.08	81.08
OECD Total	38.28	38.04	38.59	38.36	35.60	36.85	1.25	-0.94	81.61	84.00

1 Expressed as a percentage, based on crude throughput and current operable refining capacity

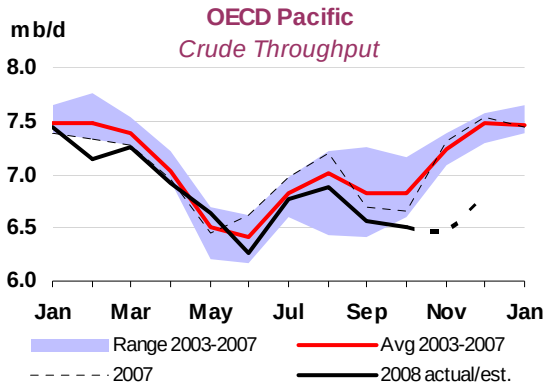
2 US50

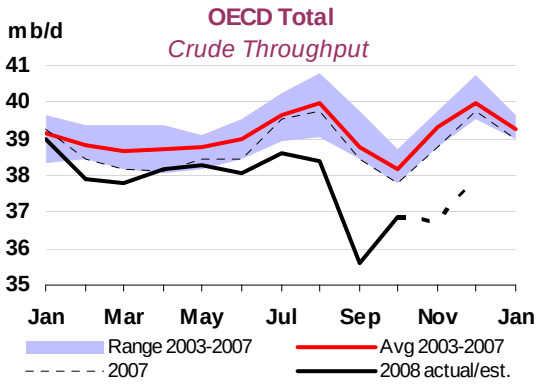
Despite the announcement of additional run cuts by Japanese refineries, forecast **4Q08** OECD Pacific crude throughput is revised up by 0.1 mb/d as last month's reduction broadly captured these effects for the region. In addition, provisional data for October crude runs were 0.1 mb/d ahead of expectations. Nevertheless, we retain our cautious stance on the outlook for Japanese crude runs and would still see a move significantly above 4 mb/d, (excluding the processing of condensates by some Japanese refineries), as requiring significantly stronger refinery economics.





OECD Europe crude throughput fell further in October, based on preliminary data. Maintenance at refineries in Italy, Portugal and the Netherlands all contributed to the lower estimate of 12.9 mb/d. November crude runs are expected to remain flat month-on-month, but the region's improved light sweet crude hydroskimming margins, particularly in the Mediterranean, may result in runs exceeding our expectations during the month. That said, the restart of capacity following a heavy maintenance season in October and November (partly driven by the need to meet the tighter European Union product specifications for gasoline and diesel at the beginning of 2009) is likely to weigh on margins during December. However, the credit-constrained trading arrangements currently in place and the introduction of 10 ppm diesel at the beginning of next year could partially offset this impact.





Forecast **4Q08 non-OECD** crude throughput has been revised down this month by 0.6 mb/d to 35.5 mb/d. Weaker crude runs result from heavier assumed economic run cuts for Singapore, Chinese Taipei and Thailand, amongst others. Lastly, we have extended our more cautious outlook for **Nigerian** crude runs through until the end of 4Q08, on reports that the Warri and Kaduna refineries remain effectively offline.

Chinese October crude runs were significantly ahead of our forecast at 7.0 mb/d, according to National Bureau of Statistics data. Consequently, we have partially reversed last month's reduction to forecast crude throughput and increased November and December by nearly 0.2 mb/d. Slowing demand growth, due to the global financial crisis, has been greater than originally anticipated, and is likely to weigh on future refinery activity levels, but the impact of this will be countered by the rapidly improving refinery economics, in light of the lower world oil prices. However, the impact of a more liberalised product price has yet to be incorporated into our forecasts, pending clarification of exactly how it will work for independent and teapot refineries. **1Q09** crude throughput is assumed to average 6.9 mb/d, as we exclude the impact of new refining capacity additions, pending confirmation of start dates and ramp-up timeframes, following industry reports of delays to several projects.

Middle East 4Q08 crude throughput is lower this month following a very weak reported October level for Saudi Arabia of 1.6 mb/d, almost 0.4 mb/d below our forecast and September's level. Similarly, Iranian crude throughputs were weaker than forecast during September and October, but we have not yet altered our forecasts for the balance of the quarter on the back of this data.

Forecasts **4Q08 Other Asia** crude throughputs are 0.5 mb/d lower this month, on the back of much more aggressive run cut assumptions for the region and lower Indian forecast awaiting the start-up of Reliance's 580 kb/d Jamnagar expansion. As highlighted last month, we see the merchant refineries such as those in Singapore as being exposed to the weaker economic outlook and margin environment. However, lower crude throughputs is also likely elsewhere in the region if demand weakens and refiners choose to cut runs rather than export potentially unprofitable product cargoes, or if credit risks make such trade unattractive.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	25.6	25.4	25.7	25.4	25.5	25.5	25.5	24.8	24.5	23.8	23.6	24.2	23.9	23.9	23.8	23.8	23.8
Europe	15.7	15.7	15.2	14.9	15.4	15.6	15.3	15.2	14.9	15.3	15.5	15.2	15.0	14.6	15.2	15.3	15.0
Pacific	8.6	8.5	8.9	7.9	7.9	8.7	8.3	8.9	7.8	7.5	8.3	8.1	8.6	7.7	7.5	8.2	8.0
Total OECD	49.8	49.6	49.8	48.2	48.8	49.9	49.2	48.9	47.2	46.6	47.4	47.5	47.5	46.2	46.5	47.3	46.9
NON-OECD DEMAND																	
FSU	3.9	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.1	4.4	4.4	4.2	4.2	4.2	4.4	4.5	4.3
Europe	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.7	7.2	7.3	7.7	7.5	7.6	7.5	7.9	8.0	8.1	7.9	7.9	8.2	8.2	8.1	8.3	8.2
Other Asia	8.8	9.0	9.2	9.3	9.1	9.4	9.3	9.6	9.6	9.1	9.3	9.4	9.7	9.7	9.3	9.5	9.6
Latin America	5.1	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.9	6.0	5.9	5.9	5.9	6.1	6.2	6.1	6.1
Middle East	6.0	6.2	6.4	6.5	6.7	6.4	6.5	6.7	7.0	7.3	6.8	6.9	7.0	7.3	7.6	7.1	7.2
Africa	2.9	3.0	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.0	3.1	3.1	3.2	3.2	3.1	3.2	3.2
Total Non-OECD	34.2	35.5	36.4	36.9	36.9	37.3	36.9	37.9	38.5	38.6	38.2	38.3	39.1	39.5	39.5	39.5	39.4
Total Demand[1]	84.0	85.1	86.2	85.1	85.7	87.2	86.0	86.8	85.7	85.2	85.6	85.8	86.6	85.7	86.0	86.8	86.3
OECD SUPPLY																	
North America	14.1	14.2	14.4	14.4	14.2	14.1	14.3	14.2	14.1	13.6	13.9	14.0	14.1	13.9	13.9	14.2	14.0
Europe	5.6	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.8	4.5	4.6	4.7	4.5	4.1	4.0	4.2	4.2
Pacific	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7
Total OECD	20.3	20.0	20.2	19.9	19.5	19.8	19.8	19.7	19.5	18.8	19.3	19.3	19.4	18.8	18.6	19.1	19.0
NON-OECD SUPPLY																	
FSU	11.8	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	12.6	12.7	12.8	13.1	13.1	12.9	12.9	13.0
Europe	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.8	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.9
Other Asia	2.7	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7
Latin America[2]	4.3	4.4	4.4	4.4	4.3	4.2	4.3	3.9	4.0	4.1	4.1	4.0	4.3	4.3	4.3	4.3	4.3
Middle East	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5
Africa[2]	3.7	3.9	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7
Total Non-OECD	28.0	28.8	27.9	27.8	27.7	27.7	27.8	27.6	27.6	27.5	27.8	27.6	28.3	28.4	28.2	28.1	28.2
Processing Gains[3]	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
Other Biofuels[4]	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Total Non-OPEC[2]	50.4	51.2	50.5	50.3	49.7	50.1	50.1	49.9	49.7	48.9	49.8	49.6	50.5	50.1	49.6	50.1	50.1
Non-OPEC excl. Angola & Ecuador[2]	48.7	49.2	50.0	49.8	49.2	49.7	49.7	49.9	49.7	48.9	49.8	49.6	50.5	50.1	49.6	50.1	50.1
OPEC																	
Crude[5]	29.7	29.7	30.4	30.2	30.7	31.6	30.7	32.4	32.2	32.4							
NGLs	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.8	4.9	5.0	5.2	5.0	5.3	5.5	5.7	5.9	5.6
Total OPEC[2]	34.2	34.3	35.1	35.0	35.4	36.4	35.5	37.2	37.1	37.4							
OPEC incl. Angola & Ecuador[2]	36.0	36.3	35.6	35.5	36.0	36.8	35.9	37.2	37.1	37.4							
Total Supply[6]	84.7	85.5	85.6	85.2	85.2	86.5	85.6	87.1	86.8	86.3							
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.2	-0.8	0.7	-0.1	-0.9	-0.3	0.0	0.4	0.5							
Government	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	-0.1							
Total	0.2	0.3	-0.7	0.7	0.1	-0.8	-0.2	0.1	0.4	0.5							
Floating Storage/Oil in Transit	-0.1	-0.1	0.1	0.0	-0.3	0.2	0.0	0.3	0.0	-0.3							
Miscellaneous to balance[7]	0.5	0.2	0.0	-0.5	-0.3	-0.1	-0.2	-0.2	0.8	1.0							
Total Stock Ch. & Misc	0.7	0.4	-0.6	0.1	-0.6	-0.7	-0.4	0.2	1.1	1.1							
Memo items:																	
Call on OPEC crude + Stock ch.[8]	29.1	29.3	30.9	30.1	31.2	32.3	31.1	32.1	31.1	31.3	30.6	31.3	30.8	30.1	30.7	30.7	30.6
Adjusted Call on OPEC + Stock ch.[9]	29.6	29.5	30.9	29.6	30.9	32.2	30.9	31.9	31.9	32.2	30.8	31.7	31.1	30.4	30.9	31.0	30.8
"Call" incl. Angola & Ecuador[2]	30.8	31.2	31.4	30.6	31.7	32.6	31.6	32.1	31.1	31.3	30.6	31.3	30.8	30.1	30.7	30.7	30.6
"Adjusted Call" incl. Angola & Ecuador[2]	31.4	31.5	31.4	30.1	31.4	32.5	31.4	31.9	31.9	32.2	30.8	31.7	31.1	30.4	30.9	31.0	30.8

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 Ecuadorean production is reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
6 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
7 Includes changes in non-reported stocks in OECD and non-OECD areas.
8 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
9 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2005	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-0.4	-0.4	-0.2	-0.2	-0.2	-	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-0.3	-0.1	-0.1	-	-	-0.3	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-0.4	-0.8	-0.3	-0.3	-0.2	-	-0.4	-0.2
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-0.1	-	-0.3	-0.1	-0.1	-0.1	-	-0.2	-0.1
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-0.1	0.1	-0.2	-0.1	-0.1	-0.1	0.1	-0.1	-0.1
Total Demand	-	-	-0.1	-	-	-	-	-	-0.1	-0.3	-1.0	-0.3	-0.4	-0.3	0.1	-0.5	-0.3
OECD SUPPLY																	
North America	-	-	0.1	-	0.1	-	-	-	-	-	-0.1	-	-0.1	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	0.1	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-	-
Total OECD	-	-	0.1	0.1	0.1	-	-	-	-	-	-0.2	-0.1	-0.3	-0.1	-0.1	-0.1	-0.2
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-0.1	-	-0.1	-	-	-0.1	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	0.1	0.1	0.1	-	-	-	-	-	-0.3	-0.1	-0.4	-0.2	-0.2	-0.2	-0.2
Non-OPEC excl. Angola & Ecuador	-	-	0.1	0.1	0.1	-	-	-	-	-	-0.3	-0.1	-0.4	-0.2	-0.2	-0.2	-0.2
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-							
NGLs	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-0.3	-0.3	-0.2	-0.2	-0.3
Total OPEC	-	-	-	-	-	-	-	-	-	-0.2							
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-0.2							
Total Supply	-	-	0.1	0.1	0.1	-	-	-	-0.1	-0.2							
STOCK CHANGES AND MISCELLANEOUS																	
REPORTED OECD																	
Industry	-	-	-	-	-0.1	-	-	0.1	-	-							
Government	-	-	-	-	-	-	-	-	-	-							
Total	-	-	-	-	-0.1	-	-	0.1	-	-							
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	-	-	-							
Miscellaneous to balance	-	-	0.1	0.1	0.1	-	0.1	-0.1	-	0.1							
Total Stock Ch. & Misc	-	-	0.1	0.1	0.1	-	0.1	-	-	0.1							
Memo items:																	
Call on OPEC crude + Stock ch.	-	-	-0.1	-0.1	-0.1	-	-0.1	-	-	-0.2	-0.5	-0.2	0.2	0.2	0.5	-0.1	0.2
Adjusted Call on OPEC + Stock ch.	-	-	-	-	0.1	-	-	-0.1	-	-0.1	-0.5	-0.2	0.2	0.2	0.6	-0.1	0.2

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Demand (mb/d)																
North America	25.42	25.68	25.40	25.54	25.49	25.53	24.84	24.52	23.76	23.63	24.18	23.90	23.91	23.82	23.75	23.85
Europe	15.68	15.18	14.93	15.42	15.65	15.30	15.20	14.88	15.35	15.50	15.23	15.01	14.62	15.18	15.26	15.02
Pacific	8.48	8.91	7.87	7.89	8.72	8.35	8.87	7.82	7.50	8.31	8.12	8.63	7.66	7.49	8.25	8.00
Total OECD	49.58	49.77	48.20	48.85	49.86	49.17	48.91	47.22	46.60	47.44	47.54	47.54	46.18	46.49	47.26	46.87
FSU	4.06	4.11	3.93	4.17	4.28	4.12	4.11	4.12	4.35	4.37	4.24	4.23	4.22	4.43	4.48	4.34
Europe	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.76	0.71	0.76	0.76	0.83	0.77	0.72	0.77	0.77
China	7.21	7.33	7.73	7.52	7.59	7.54	7.85	7.95	8.06	7.91	7.94	8.25	8.24	8.12	8.30	8.23
Other Asia	9.00	9.23	9.33	9.06	9.40	9.26	9.64	9.64	9.14	9.25	9.42	9.73	9.75	9.35	9.53	9.59
Latin America	5.33	5.41	5.59	5.73	5.73	5.62	5.66	5.88	6.00	5.94	5.87	5.86	6.08	6.19	6.13	6.07
Middle East	6.22	6.40	6.50	6.73	6.44	6.52	6.71	6.96	7.32	6.79	6.95	7.00	7.26	7.63	7.09	7.24
Africa	2.96	3.09	3.08	2.99	3.12	3.07	3.14	3.17	3.04	3.13	3.12	3.20	3.22	3.09	3.18	3.17
Total Non-OECD	35.52	36.39	36.90	36.90	37.30	36.88	37.94	38.49	38.62	38.16	38.30	39.10	39.54	39.52	39.49	39.41
World	85.11	86.16	85.10	85.75	87.16	86.04	86.84	85.71	85.22	85.60	85.84	86.64	85.72	86.01	86.75	86.28
of which:																
US50	*20.69*	*20.79*	*20.63*	*20.73*	*20.58*	*20.68*	*19.99*	*19.76*	*18.91*	*18.83*	*19.37*	*19.14*	*19.23*	*19.06*	*19.00*	*19.11*
Euro4	*8.23*	*7.84*	*7.65*	*7.87*	*8.03*	*7.85*	*7.79*	*7.65*	*7.94*	*7.97*	*7.84*	*7.71*	*7.45*	*7.82*	*7.78*	*7.69*
Japan	*5.20*	*5.43*	*4.64*	*4.70*	*5.25*	*5.01*	*5.41*	*4.59*	*4.30*	*4.88*	*4.80*	*5.18*	*4.40*	*4.28*	*4.79*	*4.66*
Korea	*2.18*	*2.36*	*2.12*	*2.06*	*2.31*	*2.21*	*2.33*	*2.09*	*2.07*	*2.28*	*2.19*	*2.31*	*2.10*	*2.07*	*2.28*	*2.19*
Mexico	*2.08*	*2.12*	*2.14*	*2.06*	*2.16*	*2.12*	*2.10*	*2.16*	*2.11*	*2.09*	*2.12*	*2.06*	*2.11*	*2.06*	*2.06*	*2.07*
Canada	*2.30*	*2.38*	*2.29*	*2.40*	*2.39*	*2.36*	*2.37*	*2.25*	*2.37*	*2.32*	*2.33*	*2.31*	*2.22*	*2.33*	*2.31*	*2.29*
Brazil	*2.19*	*2.22*	*2.26*	*2.34*	*2.42*	*2.31*	*2.35*	*2.44*	*2.51*	*2.49*	*2.45*	*2.44*	*2.53*	*2.60*	*2.58*	*2.54*
India	*2.80*	*3.04*	*2.97*	*2.74*	*3.03*	*2.95*	*3.19*	*3.11*	*2.91*	*3.06*	*3.07*	*3.33*	*3.24*	*3.02*	*3.17*	*3.19*
Annual Change (% per annum)																
North America	-0.6	1.3	0.9	-0.4	-0.1	0.4	-3.3	-3.5	-7.0	-7.3	-5.3	-3.8	-2.5	0.3	0.5	-1.4
Europe	0.1	-5.2	-2.4	-1.6	-0.6	-2.4	0.1	-0.3	-0.5	-0.9	-0.4	-1.3	-1.8	-1.1	-1.6	-1.4
Pacific	-1.4	-4.1	-0.5	-0.7	-1.0	-1.6	-0.5	-0.7	-5.0	-4.6	-2.7	-2.8	-2.1	-0.1	-0.8	-1.5
Total OECD	-0.5	-1.7	-0.4	-0.8	-0.4	-0.8	-1.7	-2.0	-4.6	-4.8	-3.3	-2.8	-2.2	-0.2	-0.4	-1.4
FSU	3.4	2.3	1.8	1.0	1.4	1.6	0.1	5.0	4.3	2.3	2.9	2.8	2.3	1.8	2.5	2.4
Europe	1.0	2.0	1.9	1.9	1.5	1.8	1.5	1.8	1.8	1.7	1.7	1.1	1.4	1.4	1.4	1.3
China	7.8	4.5	5.1	4.1	4.6	4.6	7.1	2.9	7.2	4.2	5.3	5.1	3.6	0.7	4.9	3.5
Other Asia	2.3	1.6	2.6	3.2	3.8	2.8	4.4	3.3	0.9	-1.6	1.7	1.0	1.1	2.2	3.0	1.8
Latin America	4.6	4.6	5.1	5.5	5.9	5.3	4.6	5.2	4.6	3.7	4.5	3.5	3.4	3.3	3.3	3.4
Middle East	4.0	5.1	5.9	4.2	3.8	4.7	4.9	7.0	8.8	5.4	6.6	4.3	4.3	4.2	4.4	4.3
Africa	0.9	3.3	2.9	3.5	5.6	3.8	1.6	3.1	1.7	0.4	1.7	1.6	1.5	1.7	1.5	1.6
Total Non-OECD	4.0	3.5	4.0	3.6	4.1	3.8	4.3	4.3	4.7	2.3	3.9	3.0	2.7	2.3	3.5	2.9
World	1.3	0.4	1.5	1.1	1.5	1.1	0.8	0.7	-0.6	-1.8	-0.2	-0.2	0.0	0.9	1.3	0.5
Annual Change (mb/d)																
North America	-0.14	0.34	0.23	-0.10	-0.02	0.11	-0.84	-0.88	-1.79	-1.87	-1.35	-0.93	-0.62	0.07	0.13	-0.34
Europe	0.01	-0.83	-0.37	-0.25	-0.10	-0.38	0.02	-0.05	-0.07	-0.14	-0.06	-0.19	-0.26	-0.17	-0.24	-0.22
Pacific	-0.12	-0.38	-0.04	-0.05	-0.09	-0.14	-0.04	-0.05	-0.39	-0.40	-0.22	-0.24	-0.17	-0.01	-0.06	-0.12
Total OECD	-0.25	-0.88	-0.17	-0.40	-0.21	-0.41	-0.87	-0.97	-2.25	-2.41	-1.63	-1.37	-1.04	-0.11	-0.18	-0.67
FSU	0.13	0.09	0.07	0.04	0.06	0.07	0.00	0.20	0.18	0.10	0.12	0.12	0.09	0.08	0.11	0.10
Europe	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
China	0.52	0.31	0.38	0.29	0.33	0.33	0.52	0.23	0.54	0.32	0.40	0.40	0.29	0.05	0.39	0.28
Other Asia	0.21	0.14	0.24	0.28	0.34	0.25	0.40	0.31	0.09	-0.15	0.16	0.09	0.11	0.20	0.28	0.17
Latin America	0.23	0.24	0.27	0.30	0.32	0.28	0.25	0.29	0.26	0.21	0.25	0.20	0.20	0.20	0.20	0.20
Middle East	0.24	0.31	0.36	0.27	0.24	0.29	0.31	0.46	0.59	0.35	0.43	0.29	0.30	0.31	0.30	0.30
Africa	0.03	0.10	0.09	0.10	0.16	0.11	0.05	0.10	0.05	0.01	0.05	0.05	0.05	0.05	0.05	0.05
Total Non-OECD	1.36	1.22	1.42	1.30	1.46	1.35	1.55	1.59	1.73	0.85	1.43	1.16	1.05	0.90	1.33	1.11
World	1.11	0.34	1.24	0.90	1.25	0.94	0.68	0.61	-0.52	-1.56	-0.20	-0.21	0.01	0.79	1.15	0.44
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.37	-0.44	-0.20	-0.23	-0.15	0.00	-0.06	-0.11
Europe	0.00	-0.04	-0.03	0.01	0.02	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.01	0.03	-0.04	0.00
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.31	-0.08	-0.11	0.00	0.01	-0.27	-0.10
Total OECD	0.00	-0.04	-0.03	0.01	0.02	-0.01	0.00	0.00	-0.38	-0.76	-0.29	-0.35	-0.15	0.03	-0.37	-0.21
FSU	0.00	-0.01	0.00	-0.01	-0.01	-0.01	0.00	-0.01	-0.01	0.03	0.00	0.00	0.00	-0.02	0.03	0.00
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	-0.04	0.02	-0.01
Other Asia	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	-0.09	-0.02	-0.27	-0.10	-0.09	-0.14	0.05	-0.17	-0.09
Latin America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.02	0.00	0.00	0.00	0.04	-0.03	0.00
Middle East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.04	0.01	0.01
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.02	0.01	0.04	0.05	0.01	0.03
Total Non-OECD	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	-0.07	0.09	-0.23	-0.06	-0.08	-0.11	0.11	-0.14	-0.05
World	0.00	-0.06	-0.03	0.00	0.01	-0.02	-0.02	-0.07	-0.29	-0.99	-0.35	-0.43	-0.26	0.14	-0.50	-0.26
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	0.00	-0.05	-0.04	0.00	0.01	-0.02	0.04	-0.04	-0.29	-1.01	-0.33	-0.41	-0.19	0.43	0.49	0.08

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2007	2008	2009	2Q08	3Q08	4Q08	1Q09	2Q09	Sep 08	Oct 08	Nov 08
OPEC											
Crude Oil											
Saudi Arabia	8.48			8.96	9.19				9.17	9.12	8.78
Iran	3.98			3.85	3.90				3.81	3.85	3.80
Iraq	2.09			2.47	2.32				2.16	2.26	2.33
UAE	2.52			2.66	2.63				2.65	2.54	2.30
Kuwait	2.16			2.33	2.33				2.33	2.36	2.31
Neutral Zone	0.56			0.58	0.58				0.56	0.56	0.55
Qatar	0.80			0.85	0.87				0.86	0.85	0.83
Angola[6]	1.66			1.90	1.83				1.74	1.83	1.79
Nigeria	2.13			1.82	1.99				1.98	1.94	1.90
Libya	1.71			1.74	1.68				1.70	1.73	1.71
Algeria	1.36			1.37	1.37				1.37	1.37	1.35
Ecuador[6]	0.04			0.50	0.50				0.50	0.50	0.50
Venezuela	2.39			2.36	2.33				2.37	2.35	2.35
Indonesia	0.84			0.86	0.86				0.86	0.85	0.85
Total Crude Oil[6]	30.71			32.24	32.38				32.05	32.09	31.33
Total NGLs[1,6]	4.77	4.97	5.62	4.86	5.01	5.18	5.31	5.52	5.01	5.17	5.17
Total OPEC[6]	35.48			37.10	37.38				37.06	37.26	36.50
OPEC incl. Angola & Ecuador[6]	35.95			37.10	37.38				37.06	37.26	36.50
NON-OPEC[2]											
OECD											
North America	14.27	13.95	14.03	14.06	13.60	13.95	14.14	13.94	12.56	13.57	14.09
United States	7.48	7.53	7.86	7.78	7.23	7.48	7.72	7.96	6.28	7.13	7.62
Mexico	3.48	3.17	2.94	3.17	3.12	3.13	3.07	2.98	3.08	3.12	3.13
Canada	3.32	3.24	3.23	3.11	3.25	3.34	3.36	3.01	3.20	3.32	3.34
Europe	4.95	4.69	4.19	4.76	4.51	4.59	4.47	4.15	4.53	4.65	4.56
UK	1.66	1.53	1.30	1.64	1.41	1.42	1.44	1.30	1.57	1.38	1.42
Norway	2.56	2.44	2.20	2.41	2.39	2.44	2.32	2.14	2.24	2.54	2.41
Others	0.73	0.72	0.70	0.71	0.71	0.73	0.72	0.70	0.73	0.73	0.73
Pacific	0.63	0.65	0.74	0.64	0.65	0.72	0.74	0.74	0.64	0.71	0.72
Australia	0.55	0.55	0.61	0.54	0.55	0.61	0.62	0.61	0.56	0.60	0.61
Others	0.08	0.10	0.13	0.10	0.09	0.11	0.11	0.13	0.09	0.11	0.11
Total OECD	19.85	19.29	18.97	19.46	18.76	19.26	19.35	18.83	17.74	18.93	19.37
NON-OECD											
Former USSR	12.77	12.77	12.97	12.87	12.64	12.73	13.05	13.09	12.66	12.52	12.75
Russia	10.08	10.01	9.81	9.96	10.02	10.07	9.94	9.86	10.06	10.08	10.04
Others	2.69	2.76	3.16	2.91	2.62	2.66	3.11	3.23	2.61	2.44	2.72
Asia	6.39	6.45	6.62	6.41	6.40	6.53	6.62	6.64	6.39	6.44	6.57
China	3.73	3.81	3.92	3.82	3.79	3.89	3.92	3.93	3.79	3.85	3.91
Malaysia	0.74	0.76	0.79	0.74	0.77	0.76	0.79	0.80	0.75	0.73	0.77
India	0.81	0.80	0.81	0.80	0.79	0.81	0.81	0.81	0.80	0.82	0.81
Others	1.11	1.07	1.10	1.06	1.04	1.07	1.10	1.11	1.04	1.04	1.08
Europe	0.13	0.12	0.11	0.12	0.12	0.12	0.12	0.11	0.12	0.12	0.12
Latin America	4.32	4.03	4.32	3.96	4.07	4.13	4.31	4.33	4.09	4.02	4.16
Brazil	2.14	2.28	2.52	2.26	2.29	2.34	2.50	2.53	2.31	2.24	2.38
Argentina	0.75	0.74	0.77	0.71	0.76	0.76	0.77	0.77	0.76	0.76	0.76
Colombia	0.54	0.58	0.60	0.58	0.60	0.59	0.60	0.60	0.59	0.59	0.60
Ecuador[6]	0.46										
Others	0.43	0.42	0.43	0.41	0.42	0.43	0.43	0.43	0.43	0.42	0.43
Middle East[3]	1.64	1.61	1.55	1.61	1.61	1.59	1.57	1.55	1.59	1.60	1.59
Oman	0.70	0.72	0.71	0.72	0.72	0.71	0.71	0.71	0.70	0.72	0.71
Syria	0.40	0.39	0.38	0.39	0.39	0.39	0.39	0.38	0.39	0.39	0.39
Yemen	0.34	0.31	0.27	0.31	0.30	0.30	0.28	0.27	0.30	0.30	0.30
Africa	2.55	2.63	2.66	2.62	2.65	2.66	2.66	2.65	2.65	2.66	2.66
Egypt	0.67	0.69	0.69	0.68	0.69	0.70	0.70	0.70	0.69	0.70	0.70
Gabon	0.23	0.23	0.24	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Others	1.65	1.71	1.72	1.70	1.72	1.72	1.72	1.72	1.72	1.73	1.72
Total Non-OECD	27.81	27.60	28.23	27.60	27.49	27.76	28.32	28.37	27.50	27.36	27.85
Processing Gains[4]	2.17	2.24	2.29	2.22	2.25	2.29	2.29	2.29	2.25	2.29	2.29
Other Biofuels[5]	0.33	0.46	0.58	0.46	0.46	0.52	0.55	0.58	0.46	0.52	0.52
TOTAL NON-OPEC	50.15	49.59	50.07	49.73	48.95	49.82	50.51	50.07	47.95	49.10	50.03
Non-OPEC excl. Angola & Ecuador[6]	49.68	49.59	50.07	49.73	48.95	49.82	50.51	50.07	47.95	49.10	50.03
TOTAL SUPPLY	85.63			86.83	86.33				85.01	86.37	86.53

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
5 Comprises fuel ethanol and biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jun2008	Jul2008	Aug2008	Sep2008	Oct2008*	Oct2005	Oct2006	Oct2007	4Q2007	1Q2008	2Q2008	3Q2008
North America												
Crude	434.8	437.6	438.2	446.7	455.8	450.1	473.4	449.6	-0.29	0.35	-0.22	0.13
Motor Gasoline	237.0	233.5	220.8	217.5	229.6	231.1	233.0	227.2	0.20	0.06	-0.13	-0.21
Middle Distillate	191.5	201.3	205.4	196.0	201.4	197.9	216.4	206.5	0.02	-0.33	0.14	0.05
Residual Fuel Oil	49.1	44.1	45.9	47.2	48.5	43.3	51.4	47.4	0.04	0.00	0.02	-0.02
Total Products[3]	655.2	661.5	660.6	655.0	680.4	664.2	701.3	666.5	-0.04	-0.45	0.35	0.00
Total[4]	1241.5	1257.4	1263.7	1272.4	1309.3	1275.8	1338.8	1277.8	-0.58	-0.14	0.29	0.34
Europe												
Crude	334.6	343.7	323.3	334.4	349.2	334.1	334.6	323.4	0.07	0.06	0.01	0.00
Motor Gasoline	107.7	104.7	109.2	100.6	98.7	107.8	104.2	101.8	0.10	0.07	-0.13	-0.08
Middle Distillate	248.1	254.7	273.6	259.2	255.4	252.4	255.3	235.3	-0.17	0.12	0.02	0.12
Residual Fuel Oil	80.5	80.0	77.8	75.2	73.7	76.8	76.9	71.8	-0.04	0.09	-0.02	-0.06
Total Products[3]	544.7	549.4	572.0	545.7	538.8	539.1	540.6	513.1	-0.09	0.28	-0.11	0.01
Total[4]	953.4	967.8	965.5	950.2	957.2	948.8	944.6	911.7	-0.02	0.32	-0.07	-0.03
Pacific												
Crude	167.9	169.5	166.2	160.9	163.2	174.6	178.0	172.0	-0.01	-0.04	0.13	-0.08
Motor Gasoline	24.2	22.8	24.2	22.6	23.5	24.4	23.8	22.0	0.01	0.05	-0.03	-0.02
Middle Distillate	59.8	65.8	75.8	74.1	73.9	84.5	87.4	72.6	-0.08	-0.14	0.03	0.16
Residual Fuel Oil	22.4	22.1	23.7	22.3	19.9	24.0	23.5	21.8	-0.05	-0.01	0.03	0.00
Total Products[3]	166.3	178.0	194.9	191.8	191.0	202.1	209.6	186.0	-0.23	-0.11	0.02	0.28
Total[4]	408.0	422.4	436.8	428.8	430.3	452.4	459.6	429.0	-0.27	-0.14	0.18	0.23
Total OECD												
Crude	937.3	950.9	927.6	941.9	968.2	958.8	986.0	945.0	-0.24	0.37	-0.08	0.05
Motor Gasoline	368.9	361.0	354.3	340.7	351.8	363.3	361.0	351.1	0.31	0.17	-0.29	-0.31
Middle Distillate	499.3	521.7	554.9	529.4	530.7	534.8	559.1	514.4	-0.22	-0.36	0.19	0.33
Residual Fuel Oil	152.0	146.2	147.4	144.7	142.1	144.1	151.8	141.0	-0.05	0.07	0.03	-0.08
Total Products[3]	1366.2	1388.8	1427.4	1392.5	1410.1	1405.4	1451.5	1365.6	-0.36	-0.27	0.26	0.29
Total[4]	2602.9	2647.5	2666.0	2651.3	2696.9	2677.0	2743.0	2618.5	-0.88	0.04	0.40	0.53

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Jun2008	Jul2008	Aug2008	Sep2008	Oct2008*	Oct2005	Oct2006	Oct2007	4Q2007	1Q2008	2Q2008	3Q2008
North America												
Crude	706.0	707.2	707.2	702.4	701.3	685.2	688.6	694.1	0.05	0.04	0.06	-0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	181.8	180.0	178.5	179.6	179.6	166.4	174.7	180.6	0.08	0.00	-0.03	-0.02
Products	234.2	235.8	231.6	233.1	233.1	236.9	234.7	234.7	-0.09	0.02	-0.04	-0.01
Pacific												
Crude	384.7	384.2	384.2	384.3	384.6	381.1	381.5	385.0	0.00	0.00	0.00	-0.01
Products	18.9	18.9	19.2	19.2	19.2	11.1	11.8	18.4	0.01	0.00	0.00	0.00
Total OECD												
Crude	1272.5	1271.5	1270.0	1266.3	1265.5	1232.7	1244.8	1259.7	0.12	0.04	0.02	-0.07
Products	255.1	256.7	252.8	254.2	254.2	250.0	248.5	255.1	-0.08	0.02	-0.04	-0.01
Total[4]	1528.5	1529.2	1523.8	1521.5	1520.7	1483.6	1494.3	1515.8	0.04	0.07	-0.02	-0.08

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End September 2007		End December 2007		End March 2008		End June 2008		End September 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	195.4	82	195.7	83	193.8	86	195.1	82	191.7	-
Mexico	43.5	20	45.0	21	46.8	22	44.7	21	55.7	-
United States[4]	1718.5	84	1667.3	84	1655.1	84	1687.5	90	1707.3	-
Total[4]	1979.5	78	1930.1	78	1917.7	78	1949.5	82	1976.8	84
Pacific										
Australia	36.8	37	35.6	37	34.3	35	37.6	39	37.0	-
Japan	629.6	120	621.0	115	610.0	133	619.1	144	646.2	-
Korea	157.4	68	143.5	62	142.8	68	146.6	71	141.2	-
New Zealand	8.4	53	8.3	49	8.4	55	8.4	58	7.9	-
Total	832.3	95	808.3	91	795.6	102	811.6	108	832.2	100
Europe[5]										
Austria	22.1	76	22.1	81	22.7	78	22.8	77	21.9	-
Belgium	27.8	42	26.1	38	31.3	50	28.4	47	29.9	-
Czech Republic	19.5	98	20.2	101	20.4	91	20.2	89	19.1	-
Denmark	18.8	96	17.1	95	16.4	89	19.0	107	17.6	-
Finland	29.7	129	27.1	128	30.5	135	25.5	115	30.1	-
France	175.3	87	179.9	91	177.5	93	176.6	92	176.6	-
Germany	276.5	108	274.6	110	281.5	115	273.1	99	271.7	-
Greece	34.8	73	37.4	80	34.9	92	36.3	87	39.2	-
Hungary	17.1	100	15.4	100	16.7	101	16.6	100	15.5	-
Ireland	12.6	62	10.6	55	12.1	63	10.4	57	10.5	-
Italy	134.2	77	132.9	82	130.9	82	136.7	83	130.3	-
Luxembourg	0.9	15	0.7	12	0.6	10	0.7	12	0.6	-
Netherlands	122.9	121	116.6	109	126.5	126	124.5	120	117.1	-
Norway	21.8	86	26.6	138	25.4	104	23.1	119	26.5	-
Poland	50.9	92	58.2	109	57.6	108	57.4	105	58.8	-
Portugal	23.2	77	23.6	82	24.9	86	25.3	87	25.0	-
Slovak Republic	7.7	87	7.9	99	9.0	112	9.1	99	8.0	-
Spain	136.7	84	133.9	84	134.2	87	135.0	87	135.8	-
Sweden	33.6	95	34.5	100	34.2	97	34.1	94	36.8	-
Switzerland	38.1	136	35.9	144	36.5	150	37.2	141	37.8	-
Turkey	61.1	90	60.3	90	59.0	92	58.9	82	59.4	-
United Kingdom	89.7	52	89.9	52	100.5	59	99.3	61	95.7	-
Total	1355.0	86	1351.6	88	1383.4	92	1370.3	89	1363.8	88
Total OECD	4166.8	83	4090.0	84	4096.7	87	4131.4	89	4172.8	88
DAYS OF IEA Net Imports[6]	-	121	-	121	-	122	-	123	-	124

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End September 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
3Q2005	4121	1494	2627	82	30	52
4Q2005	4072	1487	2585	80	29	51
1Q2006	4072	1487	2585	84	31	53
2Q2006	4141	1493	2648	84	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4165	1499	2667	84	30	54
1Q2007	4102	1507	2595	85	31	54
2Q2007	4162	1506	2655	85	31	54
3Q2007	4167	1520	2647	83	30	53
4Q2007	4090	1524	2566	84	31	53
1Q2008	4097	1530	2567	87	32	54
2Q2008	4131	1529	2603	89	33	56
3Q2008	4173	1522	2651	88	32	56

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 2Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	4Q07	1Q08	2Q08	3Q08	Jul 08	Aug 08	Sep 08	Year Earlier Sep 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.78	0.75	0.73	0.71	0.79	0.60	0.75	0.79	-0.04
Europe	0.90	0.78	0.70	0.68	0.67	0.65	0.82	0.65	0.85	0.97	0.73	0.24
Pacific	1.31	1.32	1.19	1.25	1.29	1.24	1.10	1.16	1.08	1.06	1.11	-0.05
Saudi Medium												
North America	0.81	0.64	0.56	0.57	0.58	0.62	0.68	0.76	0.61	0.69	0.56	0.13
Europe	0.16	0.14	0.05	0.04	0.05	0.07	0.03	0.05	0.01	0.03	0.04	0.00
Pacific	0.26	0.35	0.34	0.38	0.43	0.36	0.40	0.47	0.38	0.34	0.39	-0.05
Saudi Heavy												
North America	0.17	0.21	0.09	0.04	0.06	0.04	0.14	0.20	-	0.23	0.27	-0.04
Europe	0.23	0.18	0.11	0.09	0.04	0.10	0.12	0.10	0.14	0.12	0.04	0.08
Pacific	0.25	0.23	0.20	0.23	0.22	0.24	0.26	0.23	0.22	0.31	0.23	0.08
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.45	0.74	0.60	0.57	0.65	0.59	0.47	0.76	-0.29
Europe	0.23	0.32	0.30	0.24	0.20	0.19	0.23	0.17	0.24	0.28	0.42	-0.14
Pacific	0.06	0.08	0.17	0.21	0.13	0.18	0.18	0.27	0.10	0.16	0.24	-0.09
Iraqi Kirkuk												
North America	-	0.00	-	-	0.04	0.11	0.10	0.16	0.13	-	-	-
Europe	0.05	0.01	0.11	0.32	0.21	0.28	0.23	0.26	0.26	0.18	0.10	0.08
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.21	0.24	0.23	0.21	0.21	0.20	0.21	0.24	-0.02
Pacific	0.15	0.13	0.09	0.11	0.11	0.06	0.06	0.05	0.07	0.05	0.04	0.01
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.47	0.44	0.48	0.60	0.51	0.65	0.65	0.57	0.08
Pacific	0.62	0.56	0.64	0.73	0.65	0.49	0.67	0.62	0.74	0.66	0.39	0.26
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.86	0.66	0.66	0.67	0.72	0.73	0.56	0.85	-0.28
Europe	0.04	0.11	0.08	0.05	0.07	0.06	0.06	0.05	0.11	0.01	0.06	-0.06
Pacific	-	-	0.01	0.02	-	-	-	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.68	0.60	0.59	0.67	0.70	0.67	0.63	0.70	-0.07
Europe	0.06	0.06	0.07	0.06	0.07	0.07	0.07	0.05	0.11	0.05	0.06	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.24	1.03	1.00	0.98	1.06	1.13	0.75	1.18	-0.43
Europe	0.17	0.16	0.14	0.15	0.14	0.18	0.14	0.17	0.16	0.08	0.22	-0.13
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.00	0.01	0.00
Europe	0.03	0.01	0.02	0.02	0.00	0.01	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.01	0.01	0.10	0.10	0.14	0.14	0.02	-	-
Europe	1.77	1.68	1.86	1.73	1.89	1.95	1.75	1.95	1.77	1.52	1.81	-0.29
Pacific	0.00	0.00	0.00	0.01	-	-	-	-	-	-	-	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.82	0.85	0.77	0.52	0.48	0.66	0.43	1.02	-0.59
Europe	0.35	0.33	0.24	0.23	0.27	0.21	0.33	0.29	0.29	0.40	0.19	0.22
Pacific	0.05	0.04	0.01	0.01	-	-	-	-	-	-	-	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.31	0.31	0.27	0.26	0.21	0.43	0.14	0.26	-0.11
Europe	0.07	0.10	0.07	0.11	0.09	0.20	0.13	0.09	0.16	0.13	0.03	0.10
Pacific	0.01	0.00	0.01	-	-	-	-	-	-	-	-	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary. The Slovak Republic and Poland is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	4Q07	1Q08	2Q08	3Q08	Jul-08	Aug-08	Sep-08	Year Earlier Sep-07	Year Earlier % change
Crude Oil												
North America	8457	8194	8117	7968	8087	8298	7875	8383	8351	6860	8148	-16%
Europe	9792	9784	9743	9835	9769	9870	9950	9913	9801	10142	9693	5%
Pacific	6801	6815	6718	7003	7100	6457	6461	6672	6530	6171	6205	-1%
Total OECD	25050	24794	24578	24806	24957	24625	24286	24968	24682	23172	24364	-5%
LPG												
North America	18	14	27	41	27	15	38	42	31	43	56	-25%
Europe	248	264	276	291	307	246	255	274	232	260	248	5%
Pacific	527	578	557	572	599	632	582	663	558	524	450	17%
Total OECD	793	856	860	903	934	893	876	978	822	827	754	10%
Naphtha												
North America	115	71	39	60	25	54	58	60	43	71	25	187%
Europe	273	314	269	289	274	260	231	245	217	230	286	-20%
Pacific	746	754	794	758	796	734	886	854	863	943	867	9%
Total OECD	1133	1138	1103	1108	1095	1048	1174	1160	1122	1244	1178	6%
Gasoline[3]												
North America	1034	1143	1122	1048	888	1220	1180	1181	1099	1264	1163	9%
Europe	165	160	203	181	224	187	260	291	287	202	159	27%
Pacific	102	98	70	70	112	91	56	53	43	73	45	63%
Total OECD	1301	1401	1396	1299	1224	1498	1497	1525	1428	1539	1366	13%
Jet & Kerosene												
North America	173	161	183	143	96	78	40	42	30	47	190	-75%
Europe	375	374	370	404	361	381	399	376	456	364	383	-5%
Pacific	66	71	41	43	44	39	22	26	12	27	43	-36%
Total OECD	614	606	594	590	501	498	461	444	498	438	616	-29%
Gasoil/Diesel												
North America	143	175	129	106	99	46	47	41	19	82	68	21%
Europe	845	967	779	834	914	664	891	949	778	948	793	20%
Pacific	79	81	94	104	102	135	128	150	115	119	88	35%
Total OECD	1067	1223	1002	1045	1116	845	1066	1140	912	1150	950	21%
Heavy Fuel Oil												
North America	527	343	323	320	328	307	243	267	287	173	270	-36%
Europe	491	476	433	399	478	391	442	469	432	425	460	-8%
Pacific	85	92	92	101	125	140	143	135	160	134	70	90%
Total OECD	1102	911	848	820	930	838	828	871	879	732	801	-9%
Other Products												
North America	1027	1121	1051	934	1041	1085	1061	1080	1012	1092	946	15%
Europe	781	929	860	799	741	765	782	744	776	828	849	-2%
Pacific	248	245	254	284	290	267	318	293	388	272	295	-8%
Total OECD	2056	2295	2165	2017	2072	2118	2161	2116	2176	2191	2090	5%
Total Products												
North America	3037	3028	2875	2652	2504	2804	2667	2713	2522	2771	2717	2%
Europe	3177	3484	3190	3198	3299	2895	3261	3348	3177	3256	3178	2%
Pacific	1852	1919	1902	1932	2068	2038	2135	2174	2138	2093	1859	13%
Total OECD	8066	8430	7967	7782	7872	7737	8063	8234	7838	8120	7754	5%
Total Oil												
North America	11493	11222	10992	10620	10592	11102	10543	11095	10873	9631	11184	-14%
Europe	12970	13268	12933	13033	13068	12765	13211	13261	12979	13398	12871	4%
Pacific	8654	8734	8620	8935	9169	8495	8596	8846	8668	8264	8064	2%
Total OECD	33116	33223	32545	32588	32829	32362	32350	33203	32520	31292	32119	-3%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.
2 Excludes intra-regional trade
3 Includes additives

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Next Issue: 16 January 2009

