



International
Energy Agency

PETROLEUM PRICES, TAXATION AND SUBSIDIES IN INDIA

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The current Indian system of effectively subsidised petroleum product prices has significant implications for the emergence of India as a major global energy consumer, for the integrity of India's Central Government budget and for investment in India's growing oil and petroleum sector. This paper is part one of a broader study that looks at the current system of petroleum pricing and the macroeconomic, microeconomic, regional and global effects of this system.

A) Introduction

The Secretariat is in the process of conducting a study on downstream petroleum product pricing in India. The study examines the current pricing mechanism and taxation and subsidy regime on four key petroleum products (petroleum, diesel, domestic kerosene and domestic LPG). In the study, the implications of current arrangements in each of these markets for central and state government revenues and expenditures, for India's macro-economic positioning as well for upstream and downstream sector development are to be examined in detail.

The present study is worthy of consideration for a number of reasons:

1. India as a globally significant oil consumer: In 2008, India was the world's fifth largest consumer of crude oil and petroleum products, with product consumption growing by over 5 per cent. India is forecast to become the world's fourth largest oil consumer by 2025, although per capita consumption rates are expected to remain well below typical OECD rates. *Given the growing significance of India as a crude consumer, it is important to understand and analyse the pricing and regulatory regime governing India's petroleum sector.* This regime will, to a large extent, shape domestic supply and consumption patterns currently and into the future, impacting factors such as the scope for demand-side management and energy efficiency, the incidence of fuel adulteration, the alleviation of energy poverty and others. *These factors will in turn largely determine the nature of India's involvement in global crude markets.*
2. The impact of oil-sector expenditures on budgetary stability: In fiscal year 2008-2009, 'under-recoveries' accruing to India's state-owned Oil Marketing Companies (OMCs) – similar to the losses accumulated on product sold below cost – are expected to exceed \$US40 billion.¹ In order to uphold the solvency of OMCs, these under-recoveries will be absorbed to a large extent by the issuance of 'oil bonds' to OMCs by the Indian Central Government, as has occurred at a growing rate since 2004.

In March, ratings agency Standard & Poor's threatened to downgrade India's sovereign credit rating to 'junk' status as a result of the ballooning of the Central budget deficit for 2008-2009 to 11.4 per cent of GDP (double the nominal 2007-2008 deficit), largely as a result of the Government's large-scale 'off-budget' issuance of oil bonds. Current energy policy in India, therefore, has contributed tangibly to increased fragility and instability in India's Central Government finances. This illustrates *the huge impact of petroleum product pricing on the health of India's national budget and on India's macroeconomic stability as a whole.* With India the world's fourth largest economy (in purchasing power

¹ US dollar conversions are based on the average dollar-rupee exchange rate for fiscal year 2008-2009 of 45.53Rs/\$. Note, the India fiscal year runs from 1 April to 31 March. Data sourced primarily from the Indian Government's Petroleum Planning and Analysis Cell (PPAC).

parity terms), macroeconomic instability of this kind is of global concern. With the onset of global recession, local economists have begun to worry about India's emerging 'twin deficits' (i.e., simultaneous structural budget and current account deficits) – a domestic situation which last culminated in India's 'Gulf War' balance-of-payments crisis in the early 1990s.

3. Implications for reliability, adequacy and investment in India's oil sector: India's current petroleum product pricing and taxation regime has for several years systemically produced large losses for downstream marketing companies, significantly restricted their cash flows and liquidity, as well as placed a significant financial burden on upstream companies. Clearly, this regime has implications for the incidence of well-placed and timely investment by OMCs and throughout the entire oil value chain.

In particular, in its 11th 5-year Plan, the Indian Government states its aims to support the development over the long-term of a world-competitive private-sector refined product export industry, based on the Singaporean model – a process exemplified by Reliance and Essar's refinery expansions in Jamnagar, Gujarat, as well as elsewhere. *The emergence of India in this role has the potential to add significant depth and diversity to global and regional markets for refined products, especially in South-east Asia.* In addition to current global economic conditions, however, heavy-handed regulation and significant policy uncertainty threaten to undermine the incentive to invest in additional export capacity.

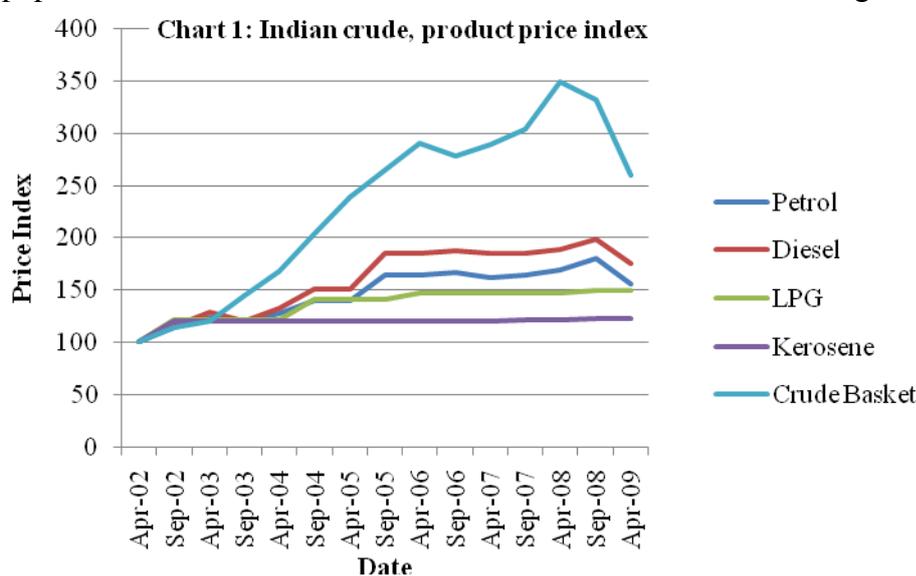
B) Scope of this Paper

This paper covers some of the preliminary findings of the study being undertaken by the Secretariat, and identifies areas of interest emerging from initial work. It briefly describes petroleum product pricing practices as they have evolved since 2002, and looks at the impact of managed prices since crude oil prices began (until recently) climbing steadily, in terms of growing under-recoveries to OMCs. It then examines the two methods by which the Central Government has dealt with mounting under-recoveries. First, the mass issuance of 'oil bonds' to OMCs, and the bond market processes surrounding this. Second, the Central Government's efforts at petroleum product tax rationalisation. The current paper finishes with an examination of the key implications of the current pricing regime especially for India's macroeconomic health and fiscal health. The consequences of the current regulatory framework for the commercial functioning of key petroleum sector firms – especially for willingness and ability of firms to make timely investments – are noted below although not examined in detail. This microeconomic, firm-level analysis will be the key focus of further work in this area.

C) Petroleum Product Pricing since the end of the Administered Pricing Mechanism

In April 2002 India abolished the Administrative Pricing Mechanism (APM) controlling the domestic price of petroleum products in India. Under the APM, product prices were directly administered by India's Central Government based on an opaque and complex 'cost of operating capital plus' formula.

Under the new regime, OMCs would be free to set retail product prices based on an import parity pricing formula, under the supervision of a petroleum sector regulator. The domestic refining and retail sector was also opened to private sector firms – leading to the emergence of a significant private sector retailing presence in India consisting of firms such as Reliance. Because of the importance of LPG and kerosene as cooking fuels to poorer strata of India's population, flat-rate subsidies funded from the Government's budget were renewed, however



these were to be phased out between 2005 and 2007 (they are yet to be phased out). Under the new pricing regime, it was expected that retail prices for petroleum products (including prices for domestic kerosene and LPG) would therefore fluctuate with changes in the

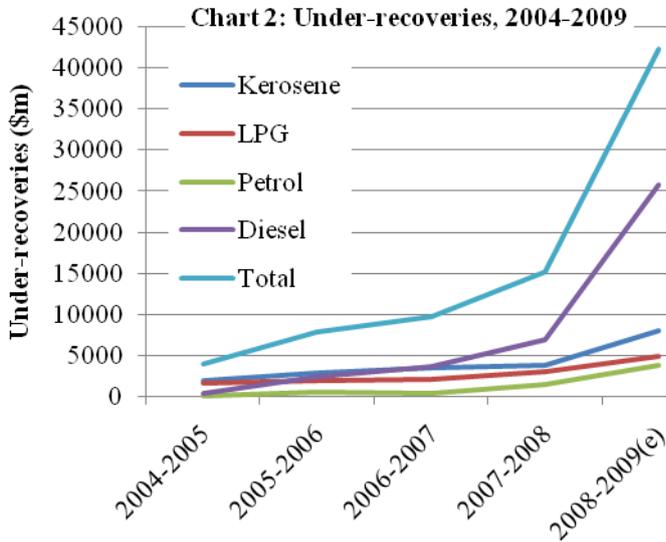
price of India's crude basket. As depicted in Chart 1, however, this has not been the case. While, until recently, international crude prices have risen sharply, retail prices for the products examined have increased slowly, and in the case of LPG and kerosene, have hardly increased at all, especially in recent years.

In reality, the post-APM product pricing regime beginning in 2002 was adhered to only very briefly by the Indian Central Government and OMCs. With the sustained rise in crude prices beginning in 2004, the Central Government increasingly looked to restrict the ability of OMCs to increase prices, in order to protect Indian consumers. By mid-2004, the post-APM model of product pricing had been effectively abandoned, with the Central Government once again centrally sanctioning upward price revisions. Since 2004, retail prices for petrol and diesel have been revised upward less than ten times by the Central Government, while LPG and kerosene prices have remained effectively fixed.²

² By implication, the private sector retail operations that had been rapidly set up in the aftermath of the dismantling of the APM were gradually made uneconomical with the return of administered pricing. Reliance and Essar, for example, were forced to mothball their significant investments in retail outlets across India.

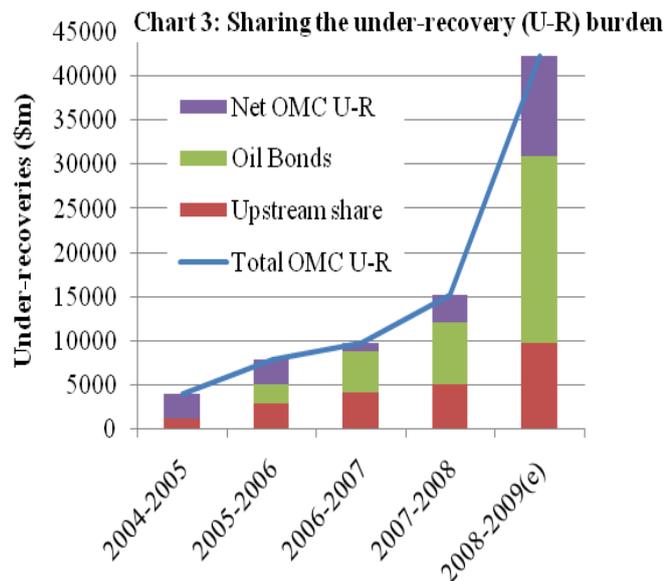
D) The Cost of ‘Effective’ Subsidies: Under-recoveries to Oil Marketing Companies

The effect of significantly lower product prices than input prices – a large ‘effective subsidy’ – has been the increasing accumulation of ‘under-recoveries’ by OMCs. Under-recoveries are a notional measure representing the difference



product paid by OMCs and their realised sale price.³ In fact, the actual refinery-gate prices paid by OMCs (which change frequently depending on a number of factors) are not necessarily congruent with trade-parity prices as formally calculated – meaning under-recoveries cannot be isolated as an actual category on the balance sheets of OMCs.⁴ They are a indictative measure of the rate of effective subsidisation.

There has been significant debate within India over the appropriateness of ‘under-recoveries’ as a category for measuring the burden of current pricing policy on OMCs. It is argued that the refinery-gate prices paid by OMCs (some of whom are vertically-integrated refiners) are actually less than trade-parity prices, as currently calculated – meaning the actual effect of managed prices is less than that suggested by under-recovery figures. However, this debate is not of great significance here. The key fact is that Indian domestic product prices have not risen in line with the sharp increase in international crude prices that has occurred until recently since 2004-2005, and, as such, have placed a significant subsidy burden on OMCs. Under-recoveries as a category provide a notional indication of the extent of this burden. In addition, the measure



³ Under-recoveries on LPG and kerosene are calculated over and above the (relatively insignificant) on-budget rate of subsidisation.

⁴ In the same way, it is important to note that under-recoveries and balance-sheet *losses* are not congruent. Losses are a balance-sheet measure which take into account alternative income streams such as dividend income, pipeline income, inventory changes, profit from freely priced product and refinery margins in the case of integrated companies.

continues to be used by the Central Government to inform key policy decisions.

As Chart 2 shows, under-recoveries have escalated alarmingly in recent years, from approximately US\$10 billion in 2006-2007 to an expected total of over US\$40 billion in 2008-2009.⁵ International crude prices of over US\$100/barrel between April-September 2008 were particularly damaging, leaving, according to OMCs, a significant under-recovery overhang into 2009, despite steeply falling international prices since mid-2008. The mounting burden of under-recoveries has seriously affected the operational functioning and financial health of OMCs. Between April and December 2008, India's three key OMCs lost between 43 per cent and 25 per cent of their total net worth – a period in which they also collectively lost over US\$2.7 billion.

By 2005, it was recognised that OMCs could not function sustainably under the weight of building under-recoveries, shrinking liquidity and significantly impaired corporate flexibility. In order to lessen the burden of under-recoveries, the Central Government developed the Equitable Burden Sharing Mechanism (EBSM). Under this system, it was agreed that India's upstream public oil companies (Oil and Natural Gas Corporation (ONGC), Oil India Limited (OIL)) would shoulder one-third of the burden of under-recoveries. This total was to be appropriated by the Central Government through suitable adjustment of the 'cess' surcharge borne by ONGC and OIL.⁶

In practice, however, as Chart 3 shows, the Government has been increasingly unwilling to burden ONGC and OIL with one-third of rapidly escalating under-recovery costs. Instead, it has looked to issue off-budget 'oil bonds' to OMCs to paper over the systemic financial and commercial problems reproduced within the current product pricing regime.

D) Dealing with Under-recoveries

1. Oil Bonds

Chart 3 shows the tendency of Central Government to increasingly issue off-budget 'oil bonds' as a means to address the impact of current product pricing practices on OMCs. Given the significant losses sustained by OMCs in the first half of 2008 effectively eroded their ability to absorb the impact of under-recoveries, the Central Government absolved these firms of their responsibilities under the EBSM. With the Government also reluctant to burden upstream companies with one-third of rapidly increasing under-recoveries, oil bonds have, since 2007-2008, become the key fiscal tool for 'solving' the petroleum pricing issue. In 2008-2009, the Indian Government is expected to issue just over \$US20 billion in oil bonds to OMCs.

⁵ This is based on an expected yearly average Indian Crude basket price for 2008-2009 of US\$80/barrel.

⁶ 'Cess' refers to a variable tax levied on major public-sector companies such as ONGC by the Executive Government, the adjustment of which does not require the mandate of Indian Parliament.

The oil bonds issued by the Central Government typically have maturities ranging between 5-7 years (meaning the first oil bonds issued by the Government will begin to reach maturity from 2010), and vary in their status of tradeability. Tradeable bonds are typically sold on bond markets immediately by OMCs to generate liquidity. Non-tradeable bonds can otherwise be used by OMCs as collateral to raise cash, although both OMCs and Indian banks have shown a strong preference for tradeability. Indian oil bonds have not been given Statutory Liquidity Ratio (SLR) status by the Central Government – that is, they cannot be counted as verifiable liquid assets on the balance sheets of Indian banks to make up requisite commercial SLRs, which has implications for their tradeability on secondary bond markets (see below).

Aside from the significant fiscal consequences for the Central Government implied by the mass issuance oil bonds (which will be examined below), this process has also not proved to be the commercial panacea for OMCs' financial problems, as hoped. Despite a climate of falling interest rates and increasingly risk averse financial practices – conditions which, *ceteris paribus*, should support the face value of existing sovereign debt – OMCs have had great difficulty liquidating oil bonds for the full value of the coupon as issued. There are two key reasons for this:

- (a) Saturated bond markets: Several years of massive oil, farm and fertiliser bond issuance by the Central Government has created a significant bond market glut in India. OMCs have therefore had to compete in buyers' bond markets to sell their mounting fixed-yield assets, leading to rapidly falling bond prices.
- (b) Non-SLR Status: The Central Government has intentionally precluded oil bonds from SLR status in order to protect demand for its own borrowings. This non-SLR status has meant that, in the context of bond market over-supply, Indian banks and financial institutions have shown little enthusiasm for mass acquisition of fixed-yield oil bonds as they have been issued, forcing OMCs to discount bond values.

Indian policymakers have begun to take ad hoc steps to reform the current conditions under which OMCs liquidate oil bonds in open markets. In particular, the Central Government has sought to agree arrangements with the Reserve Bank of India (RBI) under which the RBI would 'mop-up' excess oil bond supply. In particular – with OMCs struggling to generate the foreign exchange (forex) liquidity necessary to purchase imported inputs – the Government has asked the RBI to make bond-for-forex swaps at prevailing market rates. As the situation stands, however, the losses made by OMCs on bond values only serve to heighten the fiscal impact of India's current petroleum pricing regime. As bond values fall and OMCs ability to use these assets to absorb the impact of under-recoveries lessens, the Central Government is inevitably forced into yet further rounds of debt issuance.

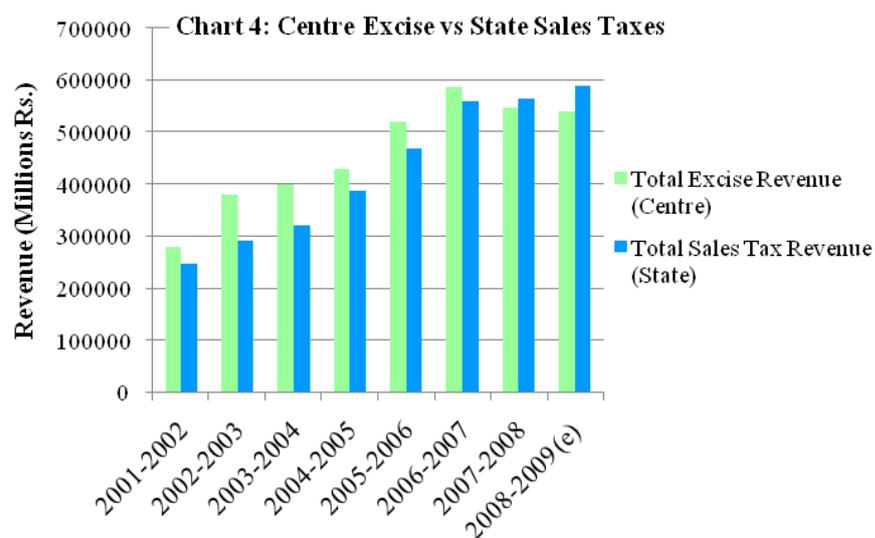
2. Rationalisation of Taxes and Duties

In order to lessen the under-recovery burden on OMCs, the Central Government has looked to rationalise the complex system of taxes and duties on petroleum products, in tandem with large-scale bond issuance. Clearly, given a centrally administered retail price for petroleum products, a reduction in the proportion of realised prices that are made up by tax will reduce the under-recovery accruing to OMCs.⁷

For example, therefore, by June 2008, the Central Government had brought excise tax on petrol down from 26 per cent ad valorem plus Rs.7.50 per litre (as at end-2004) to a flat rate of Rs.13.35 per litre, and excise on diesel had been reduced by a similar magnitude. Excise on LPG and kerosene was reduced from 8 per cent and 16 per cent respectively in 2004 to nil by mid-2008.

Between 2004 and June 2008, the Central Government also reduced the customs duty on imported petrol and diesel from 20 per cent ad valorem to 2.5 per cent. This is after abolishing custom duties on LPG and kerosene in early-2005. Customs duty on imported crude oil was reduced to nil in June 2008.

Across levels of Indian government, however, the rationalisation of petroleum product taxes and duties has been considerably unbalanced and uneven. While the Central Government has shown a willingness to cut into revenues to help deal with petroleum pricing issues, State Governments have been mostly unwilling to undermine this reliable, inelastic source of revenues. While States have almost uniformly moved from an ad valorem sales taxation structure to a flat-rate structure (in order to reduce pressure on prices in times of rapidly increasing crude costs), they have aimed to ensure that total revenue has not been undermined. Thus, as Chart 4 shows, since 2005-2006, the Central



Government's excise revenues have plateaued and even declined marginally as excise tax rates have fallen, while total sales tax revenues have shown strong growth.

⁷ As reported in 2006, the tax collected on petroleum products significantly outweighs the (budgeted) subsidies on these products, and represents a significant source of revenue for both Central and State Governments. The rate of taxation has kept Indian retail prices relatively comparable (although still lower for all key products) to neighbouring countries such as Pakistan and Bangladesh.

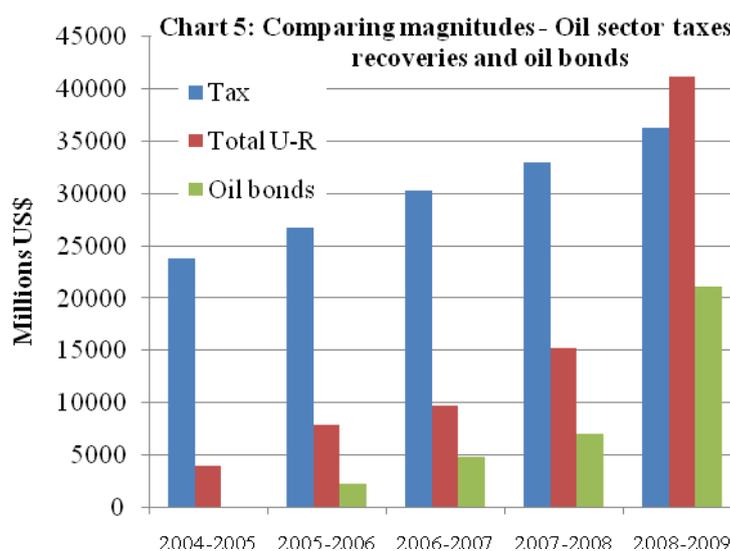
There is thus an emerging issue of ‘vertical fiscal imbalance’ within India’s system of petroleum market regulation. On the one hand, the Central Government is forcefully cutting taxation revenues while rapidly increasing outlays in the form of oil bonds to deal with inherent petroleum pricing issues. On the other hand, State Governments continue to reap tax revenues from the petroleum sector, while offering no fiscal support for the financially crippling current system of effective subsidies.

Clearly, under-recoveries suffered by OMCs would have been larger in the last several years had the Central Government not sought to reduce tax on petroleum products. Nevertheless, simply cutting taxation rates cannot solve the underlying issue of lacking cost-reflectivity in product markets. By cutting taxes the Central Government therefore risks undermining a crucial source of revenue – which may be spent in support of basic developmental programs – while providing only a very partial and incomplete solution to the issue of petroleum pricing in India. In fact, by cutting taxes it at once undermines its ability to fund the rapidly increasing outlays required to support the subsidies regime – an idea looked at below. Lastly, reducing taxes now will make it very difficult for successive Indian Governments to raise taxation rates on petroleum products again – depriving policymakers of a key demand-side management and environmental policy tool.

E) Implications of developments in India’s Oil and Petroleum sectors

1. Indian fiscal and macroeconomic instability

Large-scale under-recoveries accruing to OMCs and the massive oil bond issuance used to combat this outcome are highly destabilising to the Indian Central Government’s finances, and for India’s macroeconomic health in general. As Chart 5 shows, in 2008-2009, under-recoveries are expected to exceed total tax collected (by State *and* Central Governments) from the oil and petroleum sector for the first time. This is not surprising – as has been discussed, while under-recoveries have risen at an almost-exponential rate, the Central Government has forcefully cut petroleum product taxation. With rising expenditure obligations and falling revenues, the net ability of the petroleum sector itself to fund current pricing and institutional



arrangements is therefore rapidly being eroded – forcing the Central Government to consolidate spending in other areas of its budget, or rather, as it has shown itself willing to do, to issue significant quantities of off-budget debt.

Lower international crude prices have, to some extent, eased this situation. In fact, private-sector refiner-retailers such as Reliance and Essar have begun re-opening previously mothballed retail outlets across India. In contrast to official intransigence to sanction upward price revisions under conditions of rising prices, however, the Central Government has quickly and appreciably revised down product prices in late-2008 and early-2009 as crude prices have fallen. As recent commercial data shows, OMCs are not therefore significantly better-off. Large under-recoveries, and therefore the necessity for oil bond issuance, remain a key feature of product markets.

Mounting oil bond debt has led a period of considerable budgetary excess in India. With tax revenues falling; stimulus and ‘pork-barrel’ spending emerging; and off-budget debt issuance increasing rapidly, ratings agency Standard & Poor’s (S&P) expects India’s Central Government deficit (including off-budget components) to more-than-double in nominal terms from 5.7 per cent of GDP in fiscal year 2007-2008 to 11.4 per cent in fiscal year 2008-2009. Total State and Central Government debt is estimated at 82 per cent of GDP. As S&P are keen to highlight, the key factor in this fiscal ‘blow-out’ is the rapid increase in off-budget debt issuance, and in particular oil bond issuance.

According to Standard & Poor’s, “India’s fiscal deficit is entirely unsustainable in the medium-term”, it has warned that without tangible signs of fiscal tightening, it will downgrade India’s sovereign credit from BBB- (its lowest investment grade) to ‘junk’ status – although it is widely acknowledged that such a downgrade is almost inevitable in the near future. A downgrade of India’s sovereign credit rating will only worsen the effect of large-scale oil bond issuance on the health of Government finances. As a result of several years of accumulated off-budget debt issuance, interest payments on government debt already consume around 24 per cent of general government revenue. Sovereign ‘junk’ status will typically force investors to demand higher interest rates on Indian government paper, both for oil bonds and general government borrowings – which itself will increase the proportion of Central Government’s revenues devoted simply to interest payments on debt. Further, if, as expected, oil bonds are increasingly given greater SLR status, general government borrowings will have to compete with these securities for buyers – again putting upward pressure on government paper interest rates.

This situation of serious budgetary instability is currently combined with cyclical weakness in the Indian economy. After averaging close to 9 per cent GDP growth between 2003 and 2007, growth is expected to fall to between 5-5.5 per cent in 2009. With Indian exports hit hard by falling demand in key markets, India’s current account deficit has widened appreciably to 3.7 per cent of GDP in 2008-2009. The emergence of ‘twin deficits’ in India, especially of a large fiscal deficit, has caused countless

commentators to compare India's current situation with that experienced in the lead-up to the 'Gulf War' balance-of-payments crisis in 1991. In fact, India's current economic positioning is quite different to that experienced in the late-1980s – not least in the relative resilience of India's external position. Under current economic conditions, however, recent fiscal profligacy *is* likely to limit the Central Government's options regarding further direct economic stimulus, as well as to put significant downward pressure on the rupee. India's position is therefore in contrast to the fiscal situation of China, which – despite considerable stimulus spending in the recent past – is robust enough to provide scope for further domestic stimulus in the future, if necessary.

2. *Timely investment within the Indian liquid fuels sector*

Current policies within India's downstream petroleum sector clearly have implications for investment decisions within this sector. Under the current system, OMCs and integrated marketer-refiners are largely dependent on indirect hand-outs from the Central Government for working capital – the repeated extension of which is the result of a range of complex and uncertain political processes. This clearly affects the willingness and ability of OMCs to invest in additional capacity and technology and or, in fact, even to conduct productive long-term planning. It is not only OMCs who are affected by administered product prices – the current ad hoc, opaque means of setting retail prices pricing has consequences for investment decisions throughout the oil value-chain, beginning with upstream companies such as ONGC. Such barriers to timely and well-placed investment throughout the value-chain have crucial implications for the way that India, as a large and growing oil consumer, will interact in energy markets into the future.

As flagged above, this briefing paper does not attempt extensive analysis of the investment decisions facing firms under current institutional arrangements, or under alternative policy scenarios. Such analysis, however, will be the key focus of further IEA work on Indian petroleum product markets.

F) Further Work

This paper lays out the macroeconomic framework governing Indian petroleum product markets and some of the broad economic and fiscal consequences of this framework. As indicated, further work will concentrate on the microeconomic or commercial decisions facing key firms within the regulatory environment described in this paper, and the implications of this for evolution of the Indian petroleum sector. Key areas that will be examined in particular will be:

1. International Refiners: What are the prospects for large-scale investments in export-oriented refining capacity, on the model of Jamnagar II, in the future in the current regulatory environment? To what extent is the situation complicated by the global economic recession? Is a declining sovereign credit rating likely to impact on India's status as destination for investment?

2. Oil Marketing Companies: Does the current regulatory framework provide OMCs with enough incentive and ability to make timely investments? How well placed are public-sector OMCs under current conditions to fulfil their prescribed public role in allowing for rapidly growing domestic petroleum demand and in providing downstream market growth and dynamism?
3. Upstream Companies: What is the impact of downstream pricing practices on upstream oil companies such as ONGC? What are the implications of this for the commercial functioning, operations and investments of companies such as ONGC?

G) Political Context

Since international crude prices began to moderate in the second half of 2008, the Indian Central Government has been largely preoccupied by the May 2009 general election. There has thus been little opportunity to take advantage of lower crude prices to begin a potential process of reform to pricing practices in India's oil and petroleum sector. With the formation of a new Government post-May 2009, the policymaking process is likely to re-emerge with renewed vigour. Indian policymakers should view the current global economic downturn – and the lower energy prices this entails – as an opportunity to proceed with important energy policy reforms, while the social impact of these is muted. Any such developments will be examined as part of further work in this area.