

# Petro policy

## IMPACT ANALYSIS

### Price hike and duty cuts: Bold but not beautiful

#### Summary

On June 4, 2008, the government announced an increase in the prices of petrol, diesel and LPG by Rs 5 per litre, Rs 3 per litre and Rs 50 per cylinder, respectively. It also announced the abolishment of import duty on crude oil and a reduction of import duty on MS and HSD from the current 7.5 per cent to 2.5 per cent and all other petroleum products with 10 per cent import duty to 5 per cent.

CRISIL Research expects these measures to only partly offset the marketing losses incurred by the industry on the retail sale of auto and cooking fuels in the domestic market. They would still be heavily dependant on the assistance from upstream companies in the form of subsidy on oil and the issuance of oil bonds from the government to bail them out in 2008-09.

The duty cut announcements, along with the share it has presumed in the total loss envisaged, will incur huge revenue loss for the government this fiscal (2008-09).

**June 2008**

#### Contents

##### Sections

Price hike and duty cuts: Delayed but imperative for the industry 1

##### Figures

Movement in crude oil prices over the last 5 years 3  
 Movement in the rupee-dollar exchange rate over the last 3 years 5

##### Tables

Synopsis of the impact of these measures (2008-09) 1  
 Impact of import duty changes on refining profitability in 2008-09 7  
 Impact of import duty changes, price hike and excise duty reduction on marketing profitability in 2008-09 8  
 Impact of changes on the industry profitability in 2008-09 9  
 Our estimate of loss sharing in 2008-09 10  
 Impact on upstream companies 11  
 Impact on the government revenue in 2008-09 on account of changes in duties 11  
 Impact on the government revenue in 2008-09 12

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## Price hike and duty cuts: Delayed but imperative for the industry

On June 4, 2008, the government, after finally giving in to the petitions of Oil Marketing Companies (OMCs), announced a series of measures to address their concerns.

### Key changes announced

1. Customs duty on crude, diesel and petrol, other petroleum products, reduced to nil, 2.5 and 5.0 per cent, respectively.
2. Price hike in motor spirit (MS)/petrol, high speed diesel (HSD)/diesel and liquefied petroleum gas (LPG) by Rs 5 per litre, Rs 3 per litre and Rs 50 per cylinder, respectively
3. Excise duty reduced by Re 1 per litre on petrol and diesel.

However, it has not undertaken the required, but politically difficult move of upward revision of domestic superior kerosene oil (SKO) prices. The note assesses the impact of the current price hike and duty reduction on the profitability of the industry.

### Synopsis of the impact of these measures (2008-09)

Average crude oil prices per barrel		95.11	100.00	110.00	120.00	130.00	140.00	150.00
GRM	(\$/bbl)	1.54	1.63	1.81	1.99	2.17	2.35	2.53
<b>Increase in refining profits for the industry - A</b>	<b>(Rs billion)</b>	<b>85.85</b>	<b>90.73</b>	<b>100.82</b>	<b>110.92</b>	<b>121.01</b>	<b>131.03</b>	<b>141.13</b>
<b>Marketing margin</b>								
MS	Rs/litre	6.12	6.17	6.28	6.38	6.49	6.60	6.70
HSD	Rs/litre	4.65	4.71	4.83	4.95	5.07	5.19	5.30
<b>Subsidy under-recovery</b>								
LPG	Rs/cylinder	48.54	48.54	48.54	48.54	48.54	48.54	48.54
SKO	Rs/litre	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS	(Rs billion)	94.22	95.04	96.68	98.32	99.96	101.63	103.27
HSD	(Rs billion)	229.75	232.66	238.54	244.42	250.30	256.23	262.11
LPG	(Rs billion)	32.02	32.02	32.02	32.02	32.02	32.02	32.02
SKO	(Rs billion)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Reduction in marketing losses for the industry - B</b>	<b>(Rs billion)</b>	<b>355.99</b>	<b>359.72</b>	<b>367.24</b>	<b>374.76</b>	<b>382.28</b>	<b>389.88</b>	<b>397.40</b>
<b>Net impact on the industry (A + B)</b>	<b>Rs billion</b>	<b>441.83</b>	<b>450.44</b>	<b>468.06</b>	<b>485.68</b>	<b>503.30</b>	<b>520.91</b>	<b>538.53</b>

### Revenue loss for the government

Average crude oil prices per barrel		95.11	100.00	110.00	120.00	130.00	140.00	150.00
Abolishment of customs duty on crude oil	(Rs billion)	-123.82	-130.12	-143.00	-155.88	-168.76	-181.65	-194.53
Reduction by 1 Re excise duty on diesel and petrol	(Rs billion)	-64.44	-64.44	-64.44	-64.44	-64.44	-64.44	-64.44
<b>Total impact</b>	<b>(Rs billion)</b>	<b>-188.26</b>	<b>-194.56</b>	<b>-207.44</b>	<b>-220.32</b>	<b>-233.20</b>	<b>-246.09</b>	<b>-258.97</b>

Note:

Base case

1) Exchange rate assumed is Rs 41/\$

2) Assumed that the reduction in excise duty would not be passed on to the final consumer, but retained by the OMCs

3) Figures pertain to impact on operating profits of the segment

4) Impact of import duty exemption on crude oil excludes imports for export purposes

Source: CRISIL Research

### CRISIL Research's forecast of Indian Basket in 2008-09

Our forecast indicates crude prices to average at about \$96-99 per barrel for the current fiscal (2008-09) as compared to the average of the first 2 months (Dated Brent – April-May average – \$117.06 per barrel). We believe that the dollar exchange rate, oil and product stock positions, speculative activity in commodity markets like oil would be key aspects influencing the average crude oil price during this period apart from the fundamental factors like demand, supply and cost. Our crude oil price forecast desists from taking any view on an exchange estimate or short-term supply disruptions or speculative activity. We have assumed a constant dollar-euro exchange rate of \$1.5 per Euro (\$/Euro average for April – May is \$1.57 per Euro). Given our opinion on the various fundamental factors affecting crude oil prices, we believe crude oil prices should average as shown below:-

#### CRISIL crude price forecast (Dated Brent)

	2007-08	2008-09F
<b>Crude oil price forecast</b>		
<b>Euro/bbl</b>	<b>58.01</b>	<b>64-66</b>
\$/Euro	1.42	1.5
<b>\$/bbl</b>	<b>82.37</b>	<b>96-99</b>

F: Forecast

Source: CRISIL Research, Bloomberg

CRISIL forecasts a fall in spread from \$4.92 per barrel in 2007-08 to \$3.89 per barrel in 2008-09 between heavy and light crude oil, due to increased supply of the latter. Assuming a proportion of 61.4 per cent and 38.6 per cent of heavy and light crude in the Indian basket, the price of this basket will average around \$95.11 per barrel for 2008-09.

#### CRISIL crude price forecast (Indian basket)

(\$/bbl)	2007-08	2008-09F
<b>Crude oil price forecast</b>		
Light crude oil (Dated Brent)	82.37	97.50
<b>Less: Spread between light and heavy crude oil</b>	<b>4.92</b>	<b>3.89</b>
Heavy crude oil (average of Oman and Dubai crude oil)	77.45	93.61
<b>Indian basket of crude oil</b>	<b>79.35</b>	<b>95.11</b>

F: Forecast

Note:

\$97.5 per barrel is the average of \$96 per barrel and \$99 per barrel of crude oil

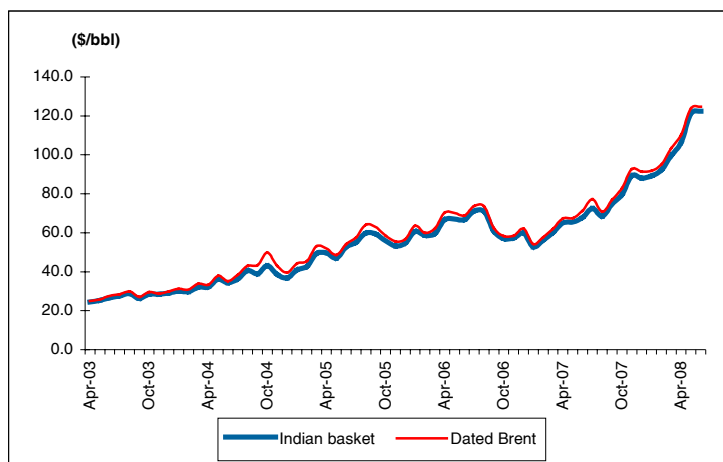
Source: CRISIL Research, Bloomberg

In order to aid the reader in comparing the impact of the above-mentioned measures of the government, we have done a sensitivity analysis across different average prices of the Indian basket as well.

## First of all, what necessitated this spate of measures in oil and petroleum products?

International crude oil prices, the input to all petroleum products, have increased several times over the last 5 years. This has led to a similar impact on the prices of its derivatives like MS, HSD, LPG and SKO in the international market. India, which imports over 75 per cent of its crude requirements, has had to resort to different measures for dealing with this climb in crude oil. It had to bring in changes in the tax structure; a decline in the tax rates on petroleum products and lastly, increase final consumer prices of petroleum products.

### Movement in crude oil prices over the last 5 years



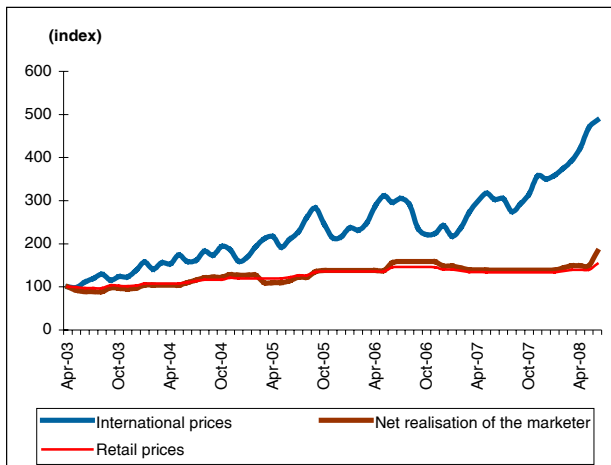
Source: Bloomberg, CRISIL Research

The government had previously increased the domestic retail prices of MS and HSD about 4 months back, on February 14, 2008, by Rs 2/litre and Re 1/litre, respectively. However, it still did not increase the domestic retail prices of LPG and SKO, which remained unchanged.

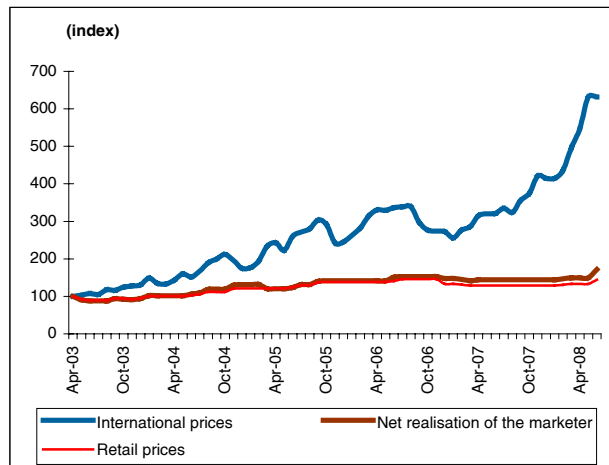
Although the government raised the prices of auto fuels (MS and HSD); they were still inadequate for enabling OMCs to earn any profit on the retail sale of these products in the domestic market. The situation is grave on the cooking fuels (LPG and SKO) front as well, where, for LPG, the previous increase, by Rs 20 per cylinder, took place in November 2004, and for SKO in March 2002, by Rs 1.5 per litre.

The procurement cost of marketing these products in the domestic market is based on import parity. Hence, non-alignment of final retail selling prices with the concurrent increase in international prices of these products leads to marketing losses in the industry.

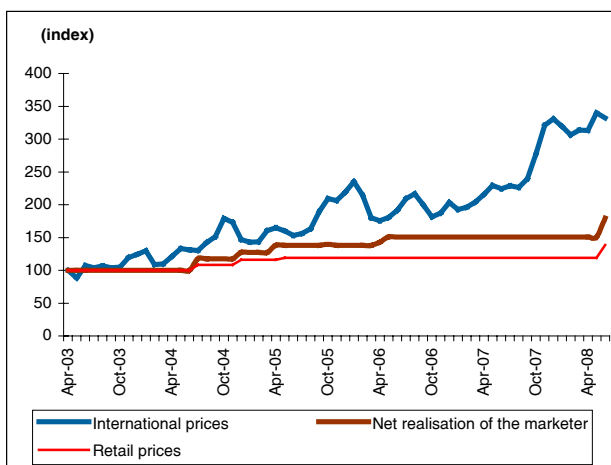
**Comparison of movement in international prices, net realisation of marketing companies and retail prices of petrol over the last 5 years**



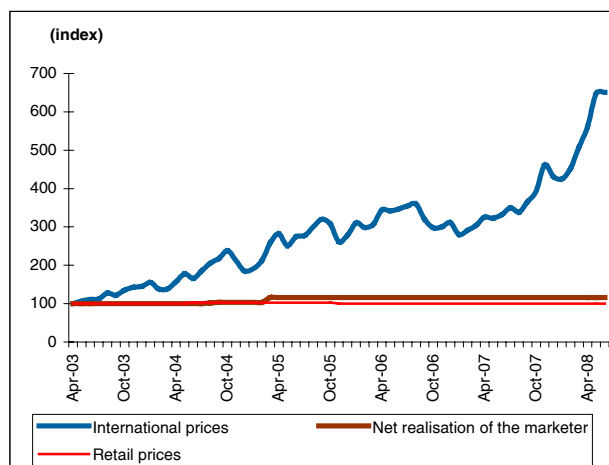
**Comparison of movement in international prices, net realisation of marketing companies and retail prices of diesel over the last 5 years**



**Comparison of movement in international prices, net realisation of marketing companies and retail prices of LPG over the last 5 years**



**Comparison of movement in international prices, net realisation of marketing companies and retail prices of SKO over the last 5 years**



Note:

The difference between net realisation of the marketer and the retail prices is due to excise duties, sales tax and dealer commissions.

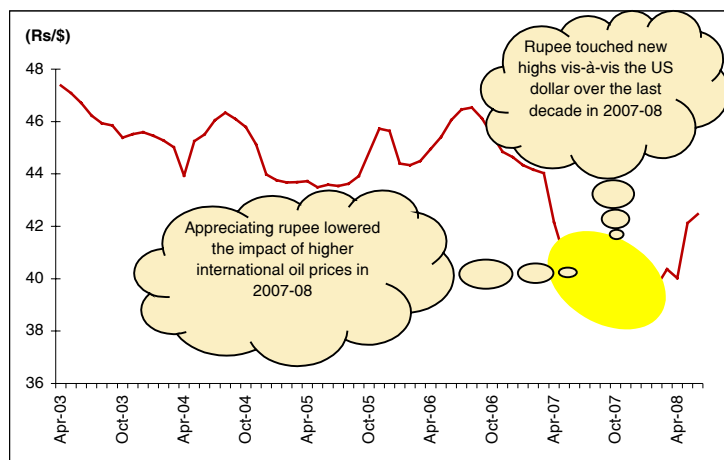
Source: CRISIL Research, Industry

As crude surpassed the \$100 per barrel mark, the marketing losses suffered by the OMCs became insurmountable, which led to the government announcing these measures.

### Depreciating rupee further aggravates the industry's marketing losses

The rupee began appreciating against the dollar in the beginning of 2007-08, touching decadal highs during the year. The rupee-dollar exchange rate averaged around Rs 40.27/\$ in 2007-08, while the average range was around Rs 42.15 – 39.37. A stronger rupee leads to lower price of crude and petroleum products in the domestic currency, thereby lowering the losses made by OMCs.

### Movement in the rupee-dollar exchange rate over the last 3 years



Source: Bloomberg

However, post April 2008, the rupee has again started depreciating against the US dollar. This has aggravated the marketing losses of the OMCs that were, by now, pressurised by the rising oil and petroleum product prices in the international market.

Here we look at the impact of rupee-dollar exchange rates on the marketing losses of the OMCs, considering the government had not announced the current policy measures.

### Estimated marketing losses in 2008-09 (pre change) at different exchange rates

Average crude oil price (\$/bbl)	95.11	100	110	120	130	140	150
<b>Exchange rate (Rs/\$)</b>	<b>Rs billion</b>						
37	-953.51	-1,124.13	-1,296.01	-1,525.00	-1,753.99	-1,985.17	-2,214.16
38	-1,021.21	-1,196.44	-1,372.96	-1,608.14	-1,843.32	-2,080.74	-2,315.93
39	-1,088.90	-1,268.75	-1,449.91	-1,691.28	-1,932.65	-2,176.32	-2,417.69
40	-1,156.60	-1,341.05	-1,526.86	-1,774.42	-2,021.98	-2,271.90	-2,519.46
41	-1,224.29	-1,413.36	-1,603.81	-1,857.56	-2,111.31	-2,367.48	-2,621.23
42	-1,291.99	-1,485.67	-1,680.76	-1,940.70	-2,200.64	-2,463.05	-2,722.99
43	-1,359.68	-1,557.97	-1,757.71	-2,023.84	-2,289.97	-2,558.63	-2,824.76

Base case

### Impact of change in exchange rate on marketing losses as against the base case

Average crude oil price (\$/bbl)	95	100	110	120	130	140	150
<b>Exchange rate (Rs/\$)</b>	<b>Decrease/(increase) in marketing losses (Rs billion)</b>						
37	270.78	289.23	307.81	332.56	357.32	382.31	407.07
38	203.09	216.92	230.85	249.42	267.99	286.73	305.30
39	135.39	144.61	153.90	166.28	178.66	191.16	203.53
40	67.70	72.31	76.95	83.14	89.33	95.58	101.77
41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	-67.70	-72.31	-76.95	-83.14	-89.33	-95.58	-101.77
43	-135.39	-144.61	-153.90	-166.28	-178.66	-191.16	-203.53

Note:

Figures pertain to impact on operating profits of the segment

Source: CRISIL Research

Thus, the measures announced by the government were critical in addressing the almost desperate situation of the industry.

### Change in the import duty structure increases duty protection, augmenting refining profits

The government completely rearranged the duties of oil and petroleum products. As aforementioned, it abolished the duty on crude oil, reduced the customs duty on petrol and diesel from 7.5 per cent to 2.5 per cent respectively, and similarly, lowered the customs duty on all remaining petroleum products from 10 per cent to 5 per cent. CRISIL Research expects these measures on import duty to result in an increase in the duty protection for domestic refiners from 0.4 per cent to 2.5 per cent.

#### Impact of decline in custom duties on the Indian refineries

	Pre April 2006	From April 2006	From June 2006	From April 2008	From June 2008
Crude	5.0%	5.0%	5.0%	5.0%	0.0%
<b>Products</b>					
LPG	0.0%	0.0%	0.0%	0.0%	0.0%
MS (gasoline)	10.0%	10.0%	7.5%	7.5%	2.5%
Naphtha	5.0%	1.0%	1.0%	4.0%	4.0%
ATF	10.0%	10.0%	10.0%	10.0%	5.0%
SKO	0.0%	0.0%	0.0%	0.0%	0.0%
HSD	10.0%	10.0%	7.5%	7.5%	2.5%
FO/LSHS	10.0%	10.0%	10.0%	10.0%	5.0%
Bitumen	10.0%	10.0%	10.0%	10.0%	5.0%
Others	10.0%	10.0%	10.0%	10.0%	5.0%
<b>Duty protection</b>	<b>2.2%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>0.4%</b>	<b>2.5%</b>

Note:

1) The duty on naphtha was 5 per cent for all sectors till April 2006.

However, the Union Budget for 2006-07, changed this duty structure as - nil for fertiliser and petrochemicals sector and 5 per cent for all other sectors. In the Union Budget for 2008-09, duty on naphtha for petrochemicals was again brought back to 5 per cent from nil, leaving just naphtha for fertiliser segment at nil.

2) The duty considered for naphtha, post April 2006, is as per the weighted average of the end-use segments.

3) Pricing of MS and HSD is based on trade parity basis - 80:20 of import parity and export parity prices.

Source: CRISIL Research



This rise in the domestic refiners' duty protection is expected to improve their profitability in the form of higher GRMs, illustrated in the table below: -

#### Impact of import duty changes on refining profitability in 2008-09

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
<b>Refining</b>								
<b>Refining GRMs</b>								
Pre change	(\$/bbl)	8.80	8.84	8.82	8.81	8.79	8.83	8.82
Post change	(\$/bbl)	10.34	10.47	10.63	10.79	10.96	11.18	11.34
<b>Impact</b>	(\$/bbl)	<b>1.54</b>	<b>1.63</b>	<b>1.81</b>	<b>1.99</b>	<b>2.17</b>	<b>2.35</b>	<b>2.53</b>
<b>Refining profits/(losses) for the industry</b>								
Pre change	(Rs billion)	435.49	437.45	436.50	435.54	434.58	437.10	436.15
Post change	(Rs billion)	521.34	528.18	537.32	546.46	555.60	568.14	577.27
<b>Impact due to change in duties of crude oil and petroleum products</b>	(Rs billion)	<b>85.85</b>	<b>90.73</b>	<b>100.82</b>	<b>110.92</b>	<b>121.01</b>	<b>131.03</b>	<b>141.13</b>

Note:

Base case

1) Exchange rate assumed is Rs 41/\$

2) Figures pertain to impact on operating profits of the segment

Source: CRISIL Research

#### Hike in price and reduction in excise duty to only reduce marketing losses and not completely offset it

Increase in MS and HSD prices and a simultaneous reduction in excise duty, is likely to provide some reprieve to the OMCs.

The Re 1 per litre reduction, in the excise duty of petrol and diesel, remains aligned with the government's trend, followed in recent times. The government started following a two-pronged approach for guarding the final consumer from the increasing domestic prices and their cascading effect. It has either reduced the ad-vaolrem rates of excise on these two products or convert them from ad-vaolrem to specific duty.

#### Changes in excise duties on MS and HSD over the last few years

	Apr-04	Jun-04	Aug-04	Mar-05	Mar-07	Mar-08
MS	30% + Rs 7.5 per ltr	26% + Rs 7.5 per ltr	23.5% + Rs 7.65 per ltr	8.2% + Rs 13.26 per ltr	6.2% + Rs 13.39 per ltr	Rs 14.81 per ltr
HSD	14% + Rs 1.5 per ltr	11% + Rs 1.5 per ltr	8.2% + Rs 1.53 per ltr	8.2% + Rs 3.32 per ltr	6.2% + Rs 3.35 per ltr	Rs 4.77 per ltr

Source: CRISIL Research

Reduction in excise duties will not benefit the final consumer, as the OMCs will retain them for further reducing their marketing losses on the retail sale of these products in the domestic market.

Given the high crude oil and petroleum product prices in the international market and the non-alignment of domestic retail selling prices of MS, HSD, LPG and SKO, these measures are expected to only reduce the amount of under-recoveries and not completely offset it.

**Impact of import duty changes, price hike and excise duty reduction on marketing profitability  
in 2008-09**

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
<b>Marketing</b>								
<b>Marketing margin</b>								
MS								
Pre change	Rs per litre	-11.64	-13.04	-15.85	-18.67	-21.48	-24.33	-27.14
Post change	Rs per litre	-5.52	-6.87	-9.58	-12.28	-14.99	-17.73	-20.44
<b>Impact</b>	<b>Rs per litre</b>	<b>6.12</b>	<b>6.17</b>	<b>6.28</b>	<b>6.38</b>	<b>6.49</b>	<b>6.60</b>	<b>6.70</b>
<b>HSD</b>								
Pre change	Rs per litre	-12.98	-14.54	-17.68	-20.82	-23.96	-27.13	-30.27
Post change	Rs per litre	-8.33	-9.83	-12.85	-15.87	-18.90	-21.94	-24.97
<b>Impact</b>	<b>Rs per litre</b>	<b>4.65</b>	<b>4.71</b>	<b>4.83</b>	<b>4.95</b>	<b>5.07</b>	<b>5.19</b>	<b>5.30</b>
<b>Subsidy under-recovery</b>								
LPG								
Pre change	Rs per cylinder	-260.18	-376.82	-322.53	-364.19	-405.86	-447.96	-489.62
Post change	Rs per cylinder	-211.64	-328.28	-273.98	-315.65	-357.31	-399.41	-441.08
<b>Impact</b>	<b>Rs per cylinder</b>	<b>48.54</b>	<b>48.54</b>	<b>48.54</b>	<b>48.54</b>	<b>48.54</b>	<b>48.54</b>	<b>48.54</b>
<b>SKO</b>								
Pre change	Rs per litre	-24.62	-26.08	-29.01	-31.94	-34.88	-37.84	-40.78
Post change	Rs per litre	-24.62	-26.08	-29.01	-31.94	-34.88	-37.84	-40.78
<b>Impact</b>	<b>Rs per litre</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Marketing profits/(losses) for the industry</b>								
<b>Pre change</b>								
MS	Rs billion	-179.24	-200.83	-244.17	-287.52	-330.87	-374.78	-418.13
HSD	Rs billion	-641.45	-718.28	-873.55	-1,028.82	-1,184.09	-1,340.64	-1,495.91
LPG	Rs billion	-171.61	-248.55	-212.73	-240.21	-267.69	-295.46	-322.94
SKO	Rs billion	-231.99	-245.71	-273.36	-301.01	-328.66	-356.59	-384.24
<b>Total</b>	<b>Rs billion</b>	<b>-1,224.29</b>	<b>-1,413.36</b>	<b>-1,603.81</b>	<b>-1,857.56</b>	<b>-2,111.31</b>	<b>-2,367.48</b>	<b>-2,621.23</b>
<b>Post change</b>								
MS	Rs billion	-85.02	-105.79	-147.49	-189.20	-230.91	-273.15	-314.86
HSD	Rs billion	-411.70	-485.62	-635.01	-784.40	-933.79	-1,084.41	-1,233.80
LPG	Rs billion	-139.59	-216.53	-180.71	-208.19	-235.68	-263.44	-290.93
SKO	Rs billion	-231.99	-245.71	-273.36	-301.01	-328.66	-356.59	-384.24
<b>Total</b>	<b>Rs billion</b>	<b>-868.30</b>	<b>-1,053.64</b>	<b>-1,236.57</b>	<b>-1,482.80</b>	<b>-1,729.03</b>	<b>-1,977.60</b>	<b>-2,223.83</b>
<b>Impact</b>								
MS	Rs billion	94.22	95.04	96.68	98.32	99.96	101.63	103.27
HSD	Rs billion	229.75	232.66	238.54	244.42	250.30	256.23	262.11
LPG	Rs billion	32.02	32.02	32.02	32.02	32.02	32.02	32.02
SKO	Rs billion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Reduction in losses due to increase in retail prices and reduction in excise duty</b>		<b>355.99</b>	<b>359.72</b>	<b>367.24</b>	<b>374.76</b>	<b>382.28</b>	<b>389.88</b>	<b>397.40</b>

**Note:** Base case

- 1) Exchange rate assumed is Rs 41/\$
- 2) Figures pertain to impact on operating profits of the segment

**Source:** CRISIL Research

## Overall industry profitability to remain dependant on oil bonds and upstream subsidy

On a combined basis, the industry will continue to remain in the red in 2008-09 in spite of these measures increasing the refining profits of the industry and reducing its marketing losses (this excludes profits from export sales, bulk marketing sales, profit from other businesses and the subsidy contribution from upstream companies as well as the government's share of loss through issuance of oil bonds).

### Impact of changes on the industry profitability in 2008-09

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
Pre change	Rs billion	-788.80	-975.91	-1,167.32	-1,422.02	-1,676.73	-1,930.37	-2,185.08
Post change	Rs billion	-346.97	-525.46	-699.25	-936.34	-1,173.43	-1,409.46	-1,646.55
<b>Reduction in losses due to policy change</b>	<b>Rs billion</b>	<b>441.83</b>	<b>450.44</b>	<b>468.06</b>	<b>485.68</b>	<b>503.30</b>	<b>520.91</b>	<b>538.53</b>

Note:

Base case

- 1) Exchange rate assumed is Rs 41/\$
- 2) Figures pertain to impact on operating profits of the refining and marketing segments
- 3) Excludes expected subsidy under-recovery share of upstream companies and bonds received from the government
- 4) Excludes industry export sales, profits on bulk marketing sales and profits from other businesses

Source: CRISIL Research

Hence, the industry would continue to depend on the upstream assistance and oil bonds from the government in this fiscal as well.

### Government's plan to fund its estimated oil deficit – Reported figures

The government has estimated the total loss on account of high global oil and petroleum prices to be in the tune of Rs 2,453.05 billion.

#### Government's plan

Rs billion	2008-09
Estimated marketing loss of the industry	2,453.05
Less: Covered by duty cuts	226.60
Less: Covered by price hike	211.23
<b>Remaining loss to be borne</b>	<b>2,015.22</b>
By	
- OMCs themselves	200.00
- Upstream companies	450.00
- Oil bonds issued by the government	1,365.22

Note:

- 1) The losses are pegged at a crude oil price of \$120-130 per barrel (Indian basket)
- 2) The government's share is taken as the balancing figure as it is paid at the end of every quarter.
- 3) Figures pertain to operating losses of the segment

Source: Publications

### Our estimate of loss sharing in 2008-09

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
Pre change marketing losses of the industry	Rs billion	-1,224.29	-1,413.36	-1,603.81	-1,857.56	-2,111.31	-2,367.48	-2,621.23
Reduction in losses due to changes announced	Rs billion	355.99	359.72	367.24	374.76	382.28	389.88	397.40
<b>Remaining losses to be borne</b>	<b>Rs billion</b>	<b>-868.30</b>	<b>-1,053.64</b>	<b>-1,236.57</b>	<b>-1,482.80</b>	<b>-1,729.03</b>	<b>-1,977.60</b>	<b>-2,223.83</b>
By								
- Upstream companies	Rs billion	193.89	235.28	276.13	331.11	386.09	441.60	496.58
- Oil bonds issued by the government	Rs billion	588.24	713.80	837.72	1,004.53	1,171.34	1,339.73	1,506.54
<b>Post change marketing losses of the industry (A)</b>		<b>-86.17</b>	<b>-104.57</b>	<b>-122.72</b>	<b>-147.16</b>	<b>-171.60</b>	<b>-196.27</b>	<b>-220.70</b>
<b>Post change refining profits of the industry (B)</b>	<b>Rs billion</b>	<b>521.34</b>	<b>528.18</b>	<b>537.32</b>	<b>546.46</b>	<b>555.60</b>	<b>568.14</b>	<b>577.27</b>
<b>Total industry profitability (A + B)</b>	<b>Rs billion</b>	<b>435.16</b>	<b>423.61</b>	<b>414.60</b>	<b>399.30</b>	<b>384.00</b>	<b>371.87</b>	<b>356.57</b>

Note: Base case

- 1) Exchange rate assumed is Rs 41/\$
- 2) Figures pertain to impact on operating profits of the refining and marketing segments
- 3) Excludes industry export sales, profits on bulk marketing sales and profits from other businesses
- 4) The upstream companies share is maintained at the proportion of the reported figure to total loss post announced measures
- 5) The industry's share is maintained at the proportion of the reported figure to total loss post announced measures
- 6) The government's share is taken as the balancing figure as it is paid at the end of every quarter.

Source: CRISIL Research, Publications

CRISIL Research estimates the share of burden to be similar at different crude oil prices. This is due to the proportion borne by the upstream companies and by the industry itself has been indicated up-front; while the amount of oil bonds (although provided for up-front) is issued every quarter based on the losses incurred by the industry as a whole in that quarter.

### Upstream companies: Higher crude oil prices negate both the impact of removal of custom duty on crude oil and the need to bear higher subsidies (in absolute terms)

The removal of customs duty on crude oil is expected to be negative for upstream oil producers as they sell crude to domestic refiners on import parity basis. This move would thereby reduce their gross realisation. This, together with their higher subsidy share for 2008-09 in absolute terms (refer to table above) as compared to the previous year, may seem to strain their profitability of upstream companies this year.

#### Subsidy share of upstream companies

(Rs billion)	2005-06	2006-07	2007-08
<b>ONGC</b>	71.88	118.82	208.00
<b>GAIL</b>	35.96	41.62	13.14
<b>OIL</b>	39.98	44.62	35.94
<b>TOTAL</b>	<b>147.82</b>	<b>205.06</b>	<b>257.08</b>

Source: Industry

However, higher crude oil prices could negate this impact and help upstream companies earn higher net realisations as compared to the previous year, even after adjusting for the removal of custom duty.

### Impact on upstream companies

	2007-08	2008-09E							
<b>Oil production by oil producers who are party to the subsidy sharing mechanism</b> (mn tonnes)	<b>29.04</b>	<b>31.55</b>							
ONGC (mn tonnes)	25.94	28							
OIL (mn tonnes)	3.1	3.55							
<b>Oil production</b> (mn bbl)	<b>212.9</b>	<b>231.3</b>							
<b>Price of dated Brent</b> (\$/bbl)	<b>82.4</b>	<b>97.5</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>140</b>	<b>150</b>	
Handling charges (\$/bbl)	1	1	1	1	1	1	1	1	1
	83.4	98.5	101	111	121	131	141	151	
Custom duty per cent	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Gross realisation of upstream oil producers</b> (\$/bbl)	<b>87.57</b>	<b>98.5</b>	<b>101</b>	<b>111</b>	<b>121</b>	<b>131</b>	<b>141</b>	<b>151</b>	
Discount per barrel of crude oil given to OMCs (\$/bbl)	28.46	19.40	23.55	27.63	33.14	38.64	44.19	49.70	
<b>Net realisation</b> (\$/bbl)	<b>59.11</b>	<b>79.10</b>	<b>77.45</b>	<b>83.37</b>	<b>87.86</b>	<b>92.36</b>	<b>96.81</b>	<b>101.30</b>	
<b>Discount borne by oil producers (ONGC and OIL) Rs billion</b>	<b>243.94</b>	<b>183.98</b>	<b>223.26</b>	<b>262.02</b>	<b>314.19</b>	<b>366.36</b>	<b>419.03</b>	<b>471.21</b>	
Exchange rate Rs/\$	40.27	41.00							

E: Estimate

Base case

Note:

1) Subsidy share of oil producers was around 95 per cent of total subsidy outflow from upstream companies in 2007-08.

We have assumed a similar proportion in 2008-09

Source: Bloomberg, Industry and CRISIL Research

### Abolishment of import duty on crude oil together with reduction in excise duty to takeaway a huge source of revenue for the government...

The import duty on crude oil has been an important source of revenue for the government (Central) all these years, even more in an increasing price scenario as the duty is on an ad valorem basis. The abolishment of custom duty on crude oil, together with the reduction in excise duty on auto fuels, is expected to take away a huge source of revenue for the government this year.

### Impact on the government revenue in 2008-09 on account of changes in duties

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
Abolishment of customs duty on crude oil (Rs billion)		-123.82	-130.12	-143.00	-155.88	-168.76	-181.65	-194.53
Reduction by 1 Re excise duty on diesel and petrol (Rs billion)		-64.44	-64.44	-64.44	-64.44	-64.44	-64.44	-64.44
<b>Total impact</b> (Rs billion)		<b>-188.26</b>	<b>-194.56</b>	<b>-207.44</b>	<b>-220.32</b>	<b>-233.20</b>	<b>-246.09</b>	<b>-258.97</b>

Note:

Base case

1) Exchange rate assumed is Rs 41/\$

2) Impact of import duty exemption on crude oil excludes imports for export purposes

Source: CRISIL Research

### ... while continuing marketing losses will burn a big hole in the government's pocket this fiscal

Besides the loss on revenue, due to the abolishment of customs duty on crude oil, and the reduction in excise duty on petrol and diesel, it would also have to bear a portion of the marketing losses incurred by the industry.

### Impact on the government revenue in 2008-09

Average crude oil prices per barrel		\$95	\$100	\$110	\$120	\$130	\$140	\$150
Abolishment of customs duty on crude oil	(Rs billion)	-123.82	-130.12	-143.00	-155.88	-168.76	-181.65	-194.53
Reduction by 1 Re excise duty on diesel and petrol	(Rs billion)	-64.44	-64.44	-64.44	-64.44	-64.44	-64.44	-64.44
<b>Total impact on the government revenue on account of changes in duties</b>	<b>(Rs billion)</b>	<b>-188.26</b>	<b>-194.56</b>	<b>-207.44</b>	<b>-220.32</b>	<b>-233.20</b>	<b>-246.09</b>	<b>-258.97</b>
- Share of marketing losses through issue of oil bonds	(Rs billion)	-588.24	-713.80	-837.72	-1,004.53	-1,171.34	-1,339.73	-1,506.54
<b>Total impact on the government</b>	<b>(Rs billion)</b>	<b>-776.49</b>	<b>-908.35</b>	<b>-1,045.16</b>	<b>-1,224.85</b>	<b>-1,404.54</b>	<b>-1,585.82</b>	<b>-1,765.51</b>

**Note:**

**Base case**

- 1) Exchange rate assumed is Rs 41/\$
- 2) Figures pertain to impact on operating profits of the refining and marketing segments
- 3) Excludes industry export sales, profits on bulk marketing sales and profits from other businesses
- 4) The upstream companies share is maintained at the reported figure as it is adjusted against sales on a weekly basis
- 5) The industry's share is maintained at the reported figure assuming the government wants it to bear that much.
- 6) The government's share is taken as the balancing figure as it is paid at the end of every quarter.

**Source: CRISIL Research, Publications**

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