

Managing Volatility & Growth : A New Energy Paradigm

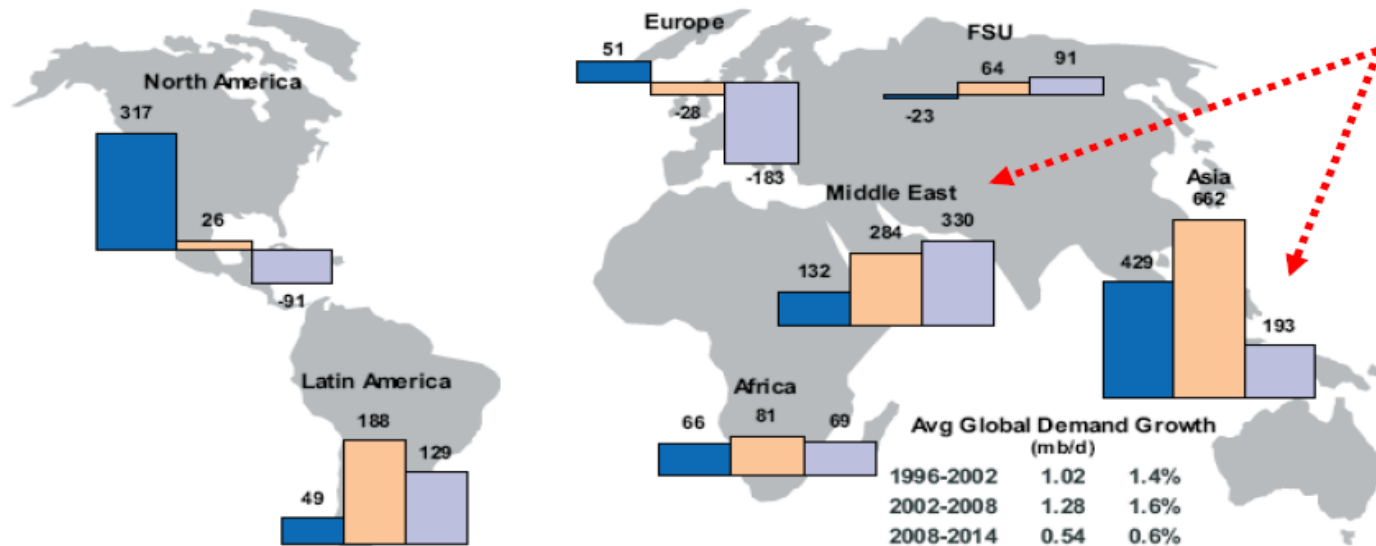
P Raghavendran

Date: 24.11.09

Demand Growth Shift

	Mbpd (2008)	Growth % per annum in 08-14
North America	24.3	(0.4)
OECD Europe	15.2	(1.3)
OECD Pacific	8.0	(3.3)
Asia	17.5	2.3
Middle East	7.0	4.3
Latin America	5.9	2.1
FSU	4.2	2.1
Global	82.1	0.5

Average Global Demand Growth 1996-2002/2002-2008/2008-2014
thousand barrels per day



Source: IEA June 2009

Demand Growth shifting to developing markets with Asia and Middle East as main growth Markets

India: Growth of Petroleum Products

In % age

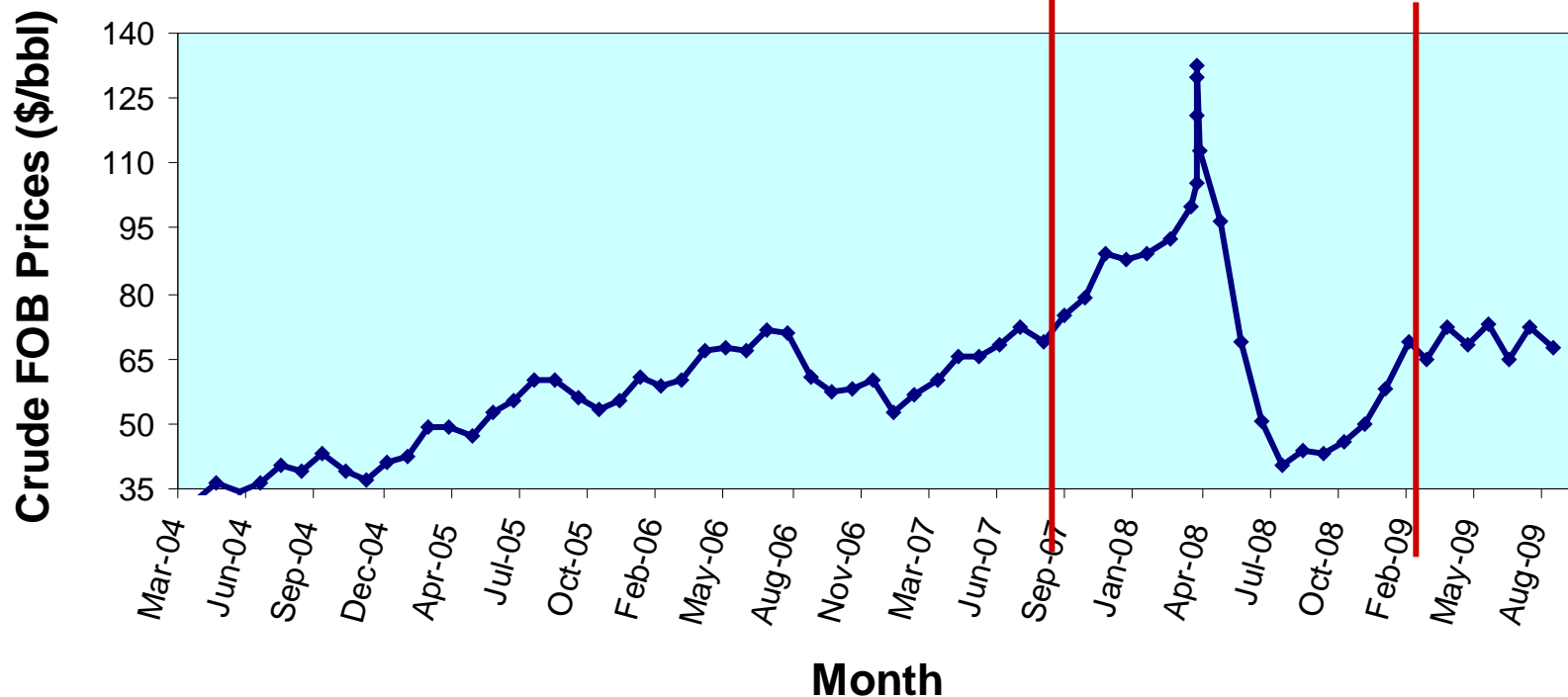
Products	Annual Growth Rates*			2009 - 2010
	2006 - 2007	2007 - 2008	2008 - 2009	YTD Oct'09
MS	7.6	11.1	9.0	15.3
HSD	7.3	11.1	8.4	9.0
LPG	5.1	7.5	0.2	4.9
ATF	21.5	13.7	(2.2)	0.9
All Petroleum Products	9.2	7.7	3.8	7.1

* Growth rates over corresponding period last year

Recession barely made a dent in the inexorable growth rate in consumption of petroleum products in India

Unprecedented volatility

Indian Basket Crude FOB Prices (\$/bbl)

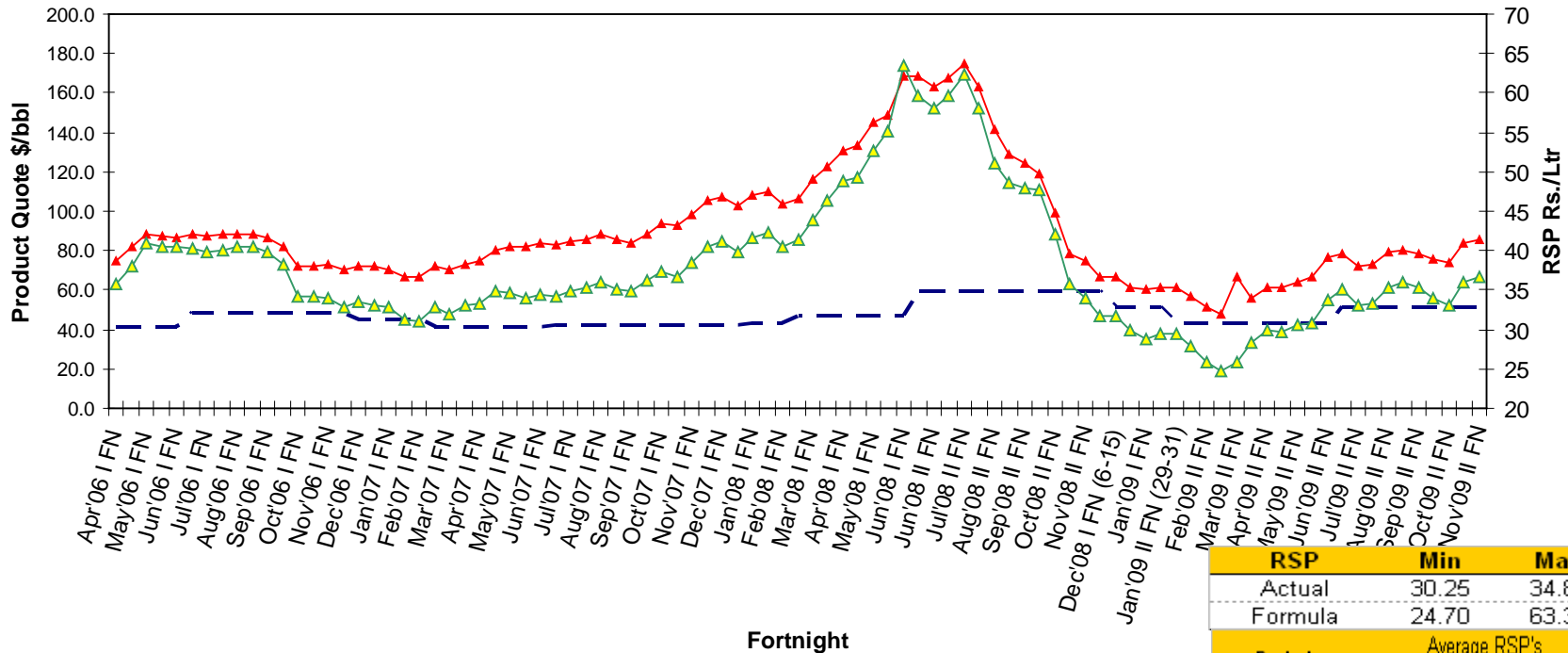


Source: PPAC

We entered an era of extreme volatility, global recession driven by financial crisis and a tentative recovery.

Indian Policy Response

Gasoil 500ppm Vs HSD RSP @ Delhi

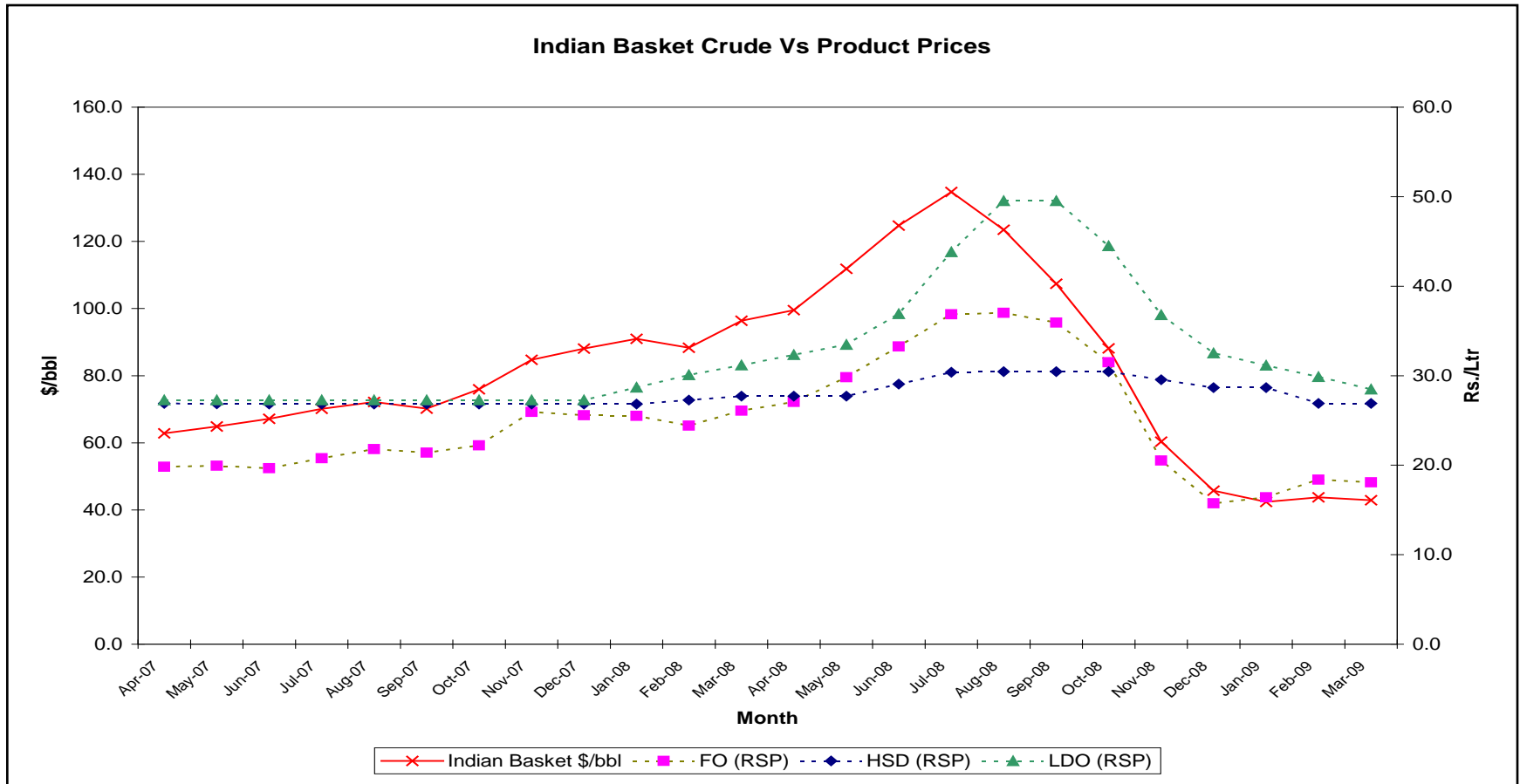


▲ Gasoil 0.05 % S (2006/09)
 — Actual RSP
 ▲ Formula RSP: Avg of Previous FN

RSP	Min	Max
Actual	30.25	34.80
Formula	24.70	63.36
Period	Average RSP's	
	Actual	Formula
Apr06 - Oct07	31.04	35.82
Nov07 - Nov08	32.81	47.78
Dec08 - Oct09	32.10	31.40
		(0.70)

Consumer largely kept insulated from burden of rising energy prices. OMCs/ GOI have been acting as shock absorbers.

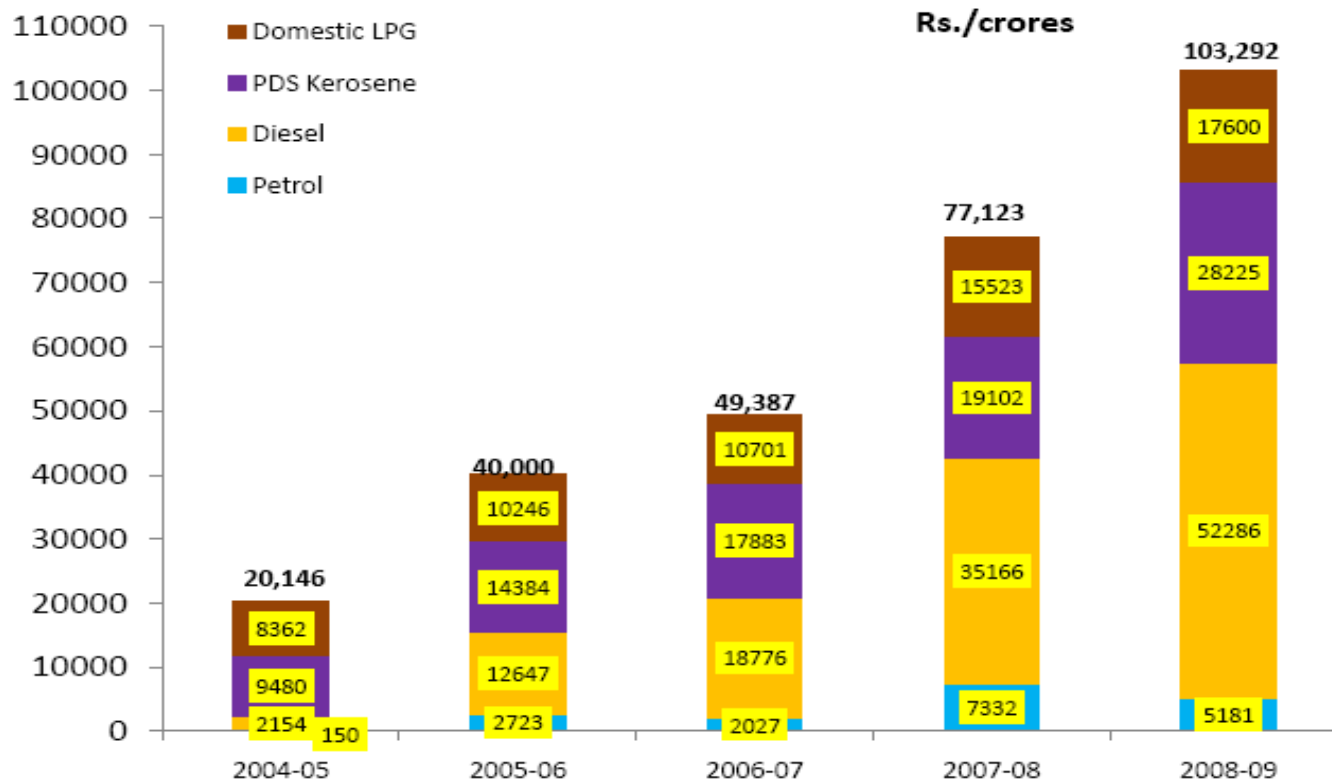
Implications of Pricing Anomalies



Price control on HSD often meant that inferior fuels such as FO & LDO with no price control were often higher priced leading to abnormal growth in HSD

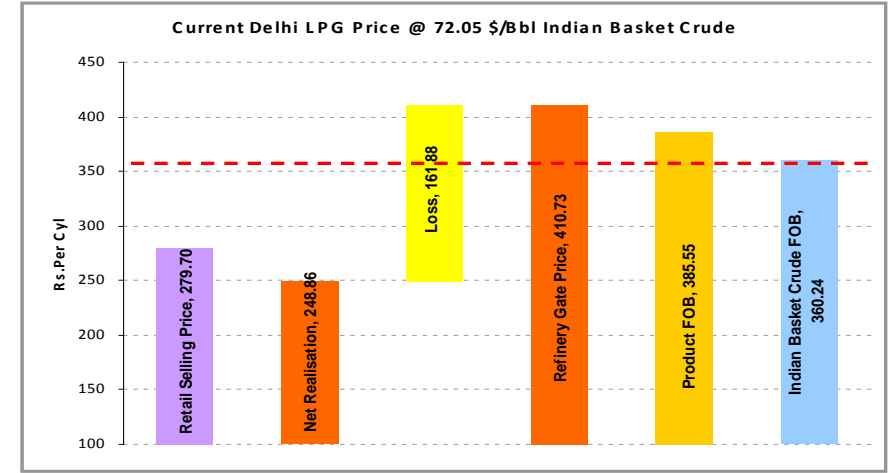
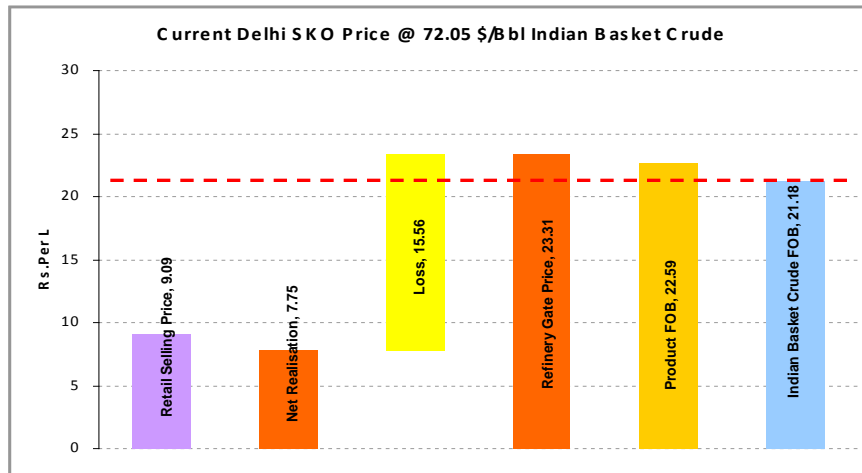
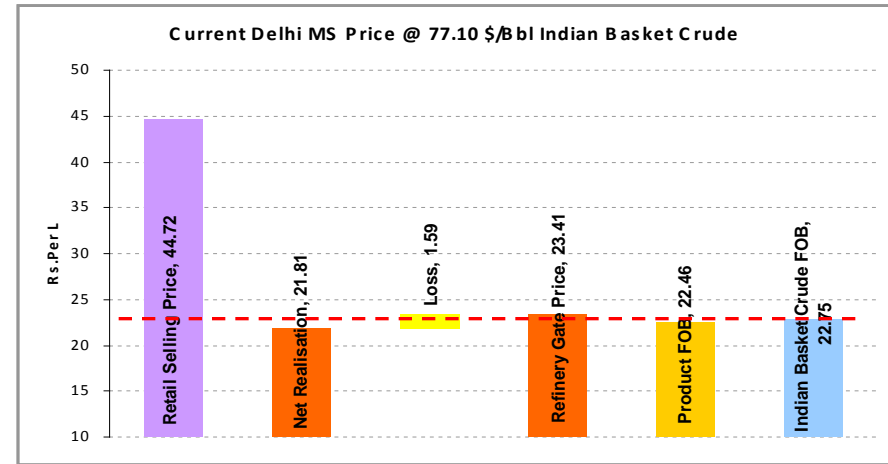
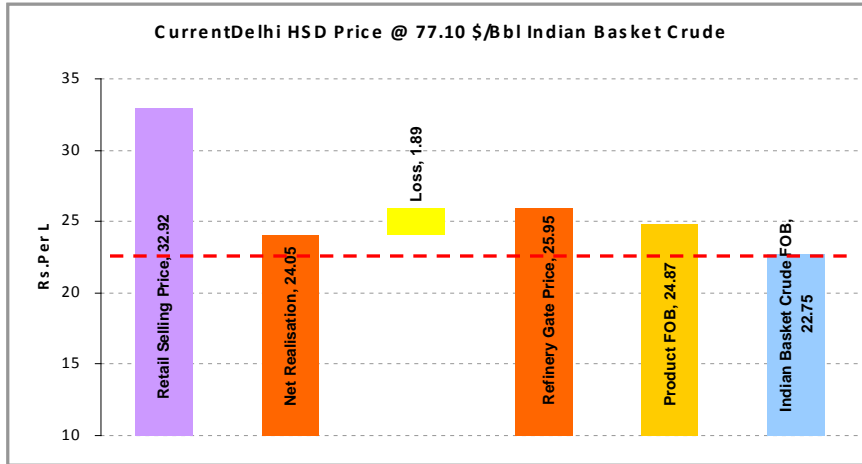
Under Recoveries in Sensitive Petroleum Products

Under Recoveries of Sensitive Petroleum Products



- Since Prices have not been revised in line with international trend Under-Recoveries have grown.
- Petrol and diesel have been included in burden sharing mechanism which was earlier restricted to SKO & LPG.
- Private sector was had to curtail investments and driven out of the market abandoning competitive change in the sector that was beginning to happen

Imperfections in Price BuildUp:



Pricing Period: MS/HSD – Nov II FN SKO/LPG – Nov'09

Product Prices today don't even cover the crude cost.

Pricing and Tax Reforms in China w.e.f 01.01.2009

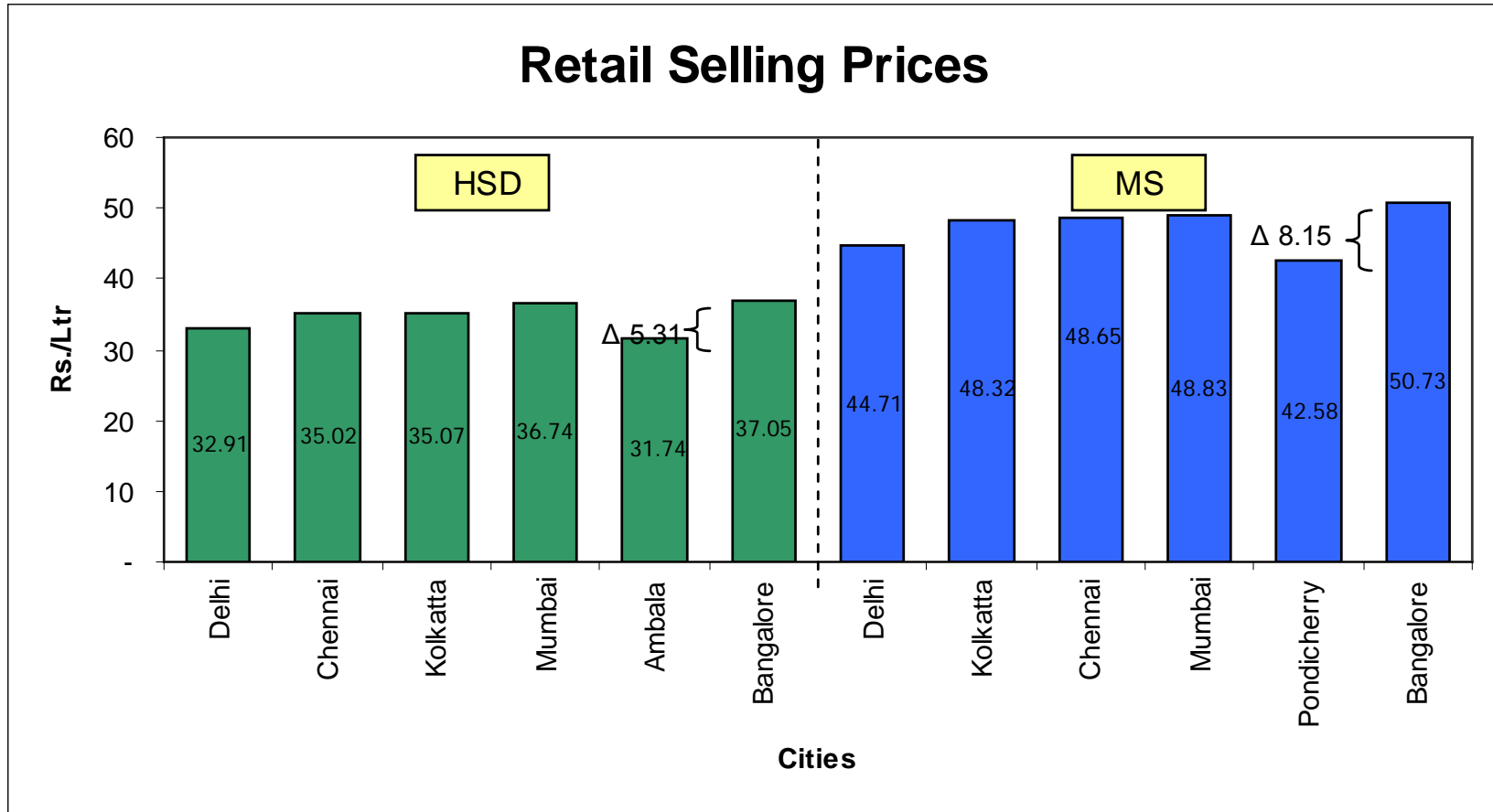
Date	Indian Crude Basket \$/bbl	Indian Response		Chinese Response			
		Retail Selling Price @ Delhi		Price Change		Price	
		MS - Rs./Ltr	HSD - Rs./Ltr	MS - Yuan/Ton	HSD Yuan/Ton	MS - Yuan/Ton	HSD Yuan/Ton
Dec-08	40.6	45.6	32.9	(900)	(1100)	5580	4970
Jan-09	44.0	40.6	30.9	(140)	(160)	5440	4810
Mar-09	46.0	40.6	30.9	290	180	5730	4990
Jun-09	58.0	40.6	30.9	400	400	6130	5390
Jun-09	69.1	40.6	30.9	600	600	6730	5990
Jul-09	64.8	44.6	32.9	(220)	(220)	6510	5770
Sep-09	72.0	44.6	32.9	300	300	6810	6070
Sep-09	67.7	44.6	32.9	(190)	(190)	6620	5880
Nov-09	73.1	44.6	32.9	480	480	7100	6360

Energy deficit (import dependent) nations have moved to price the fuel at economic price to consumer to get desired demand side response and avoid unsustainable burden on exchequer

Realising importance to pass on economic cost of energy to customers, In December 2008, China announced a new pricing system, allowing price adjustment when crude-oil costs change more than 4% over 22 working days.

China has aligned prices with change in international prices 9 time vis-à-vis only twice by India

Retail Selling Prices Variation across the Country



Source: PetroMag: RSP w.e.f 26.10.09

Wide range of prices due to variance in taxes and freight equalisation.

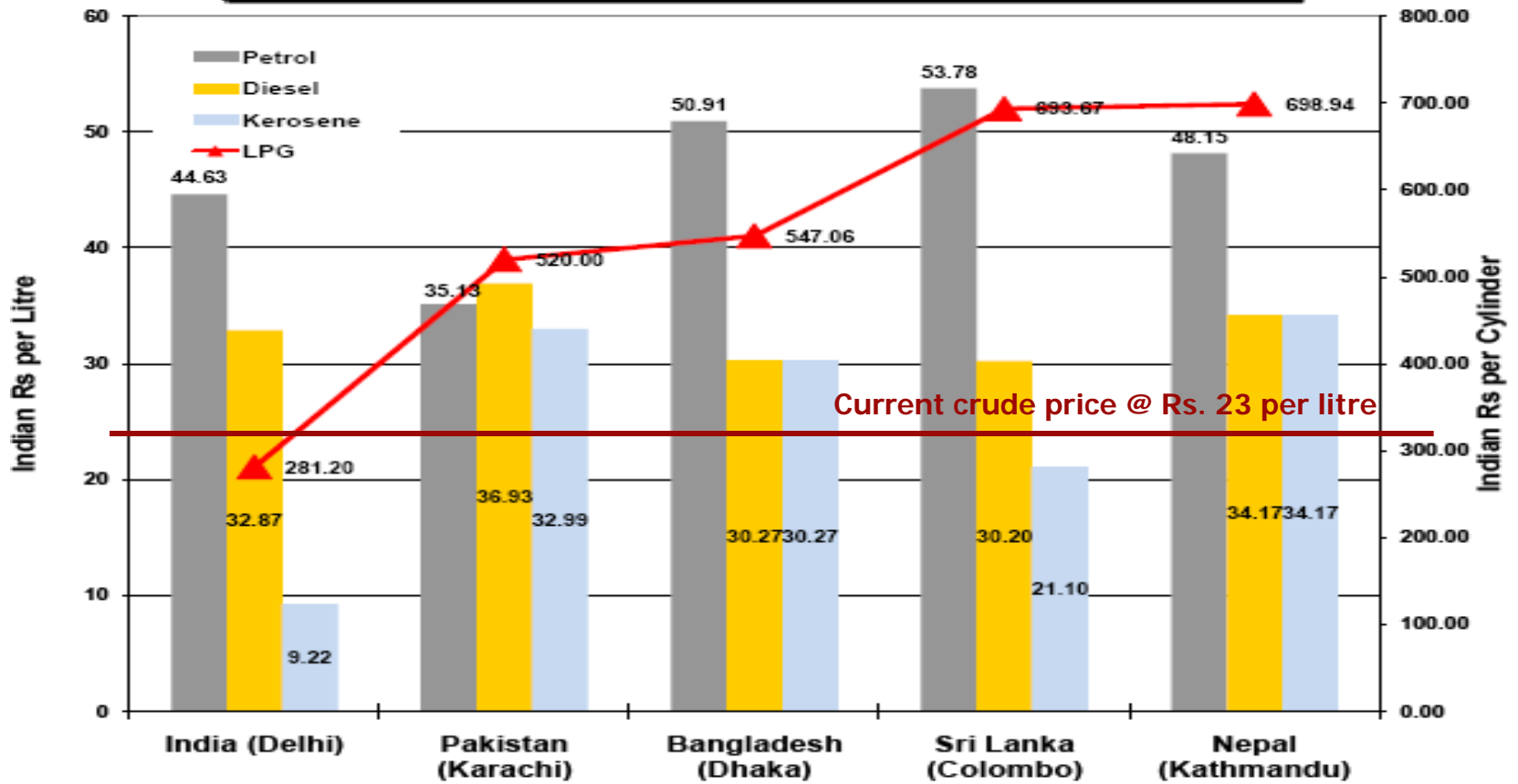
Customer resistance to price increases is perhaps an over-estimated myth.



Thank you ...

Comparison of Retail Selling Prices:

Retail price comparison with Neighbouring Countries - Oct'09



Exchange rate per USD considered as on 05.10.09

Pakistan: Rs 83.35, Bangladesh: Taka 89.07, Sri Lanka: Rs 114.86, Nepal: Rs 78.48 & India: Rs 47.62

Source: PPAC

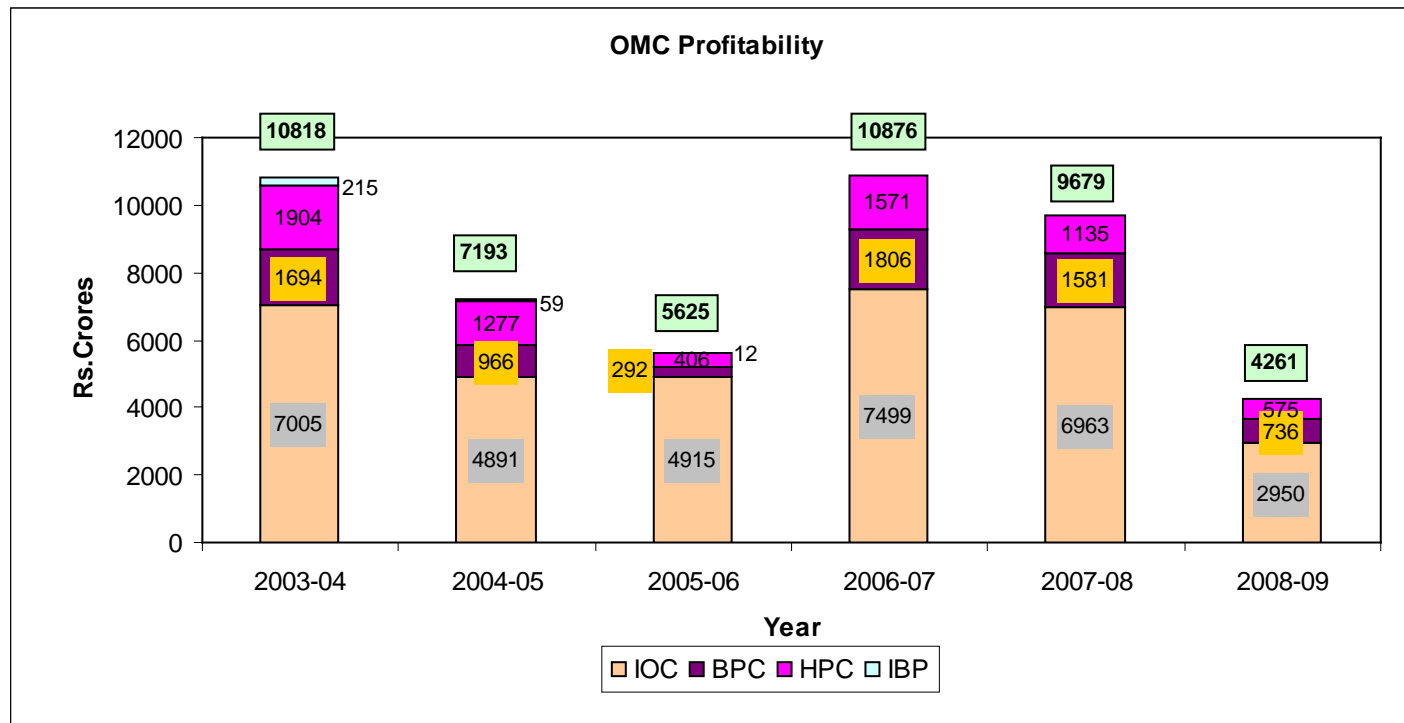
Price levels in India are low compared to the world and neighbouring countries.

Pricing and Tax Reforms in China w.e.f 01.01.2009

- Retail prices will be pegged to a basket of Brent, Dubai & Minas and adjusted at intervals of at least 10 days.
- Retail prices will guarantee a minimum of 4% profit to refineries.
- Cap on price changes at 800 yuan per MT (19 \$/bbl) within one month and 1600 yuan per MT (38 \$/bbl) within 3 months.
- Gasoline consumption tax increased from 0.2 yuan to 1 yuan (15cents) per litre and diesel consumption tax from 0.1 yuan to 0.8 yuan (12 cents) per litre to take advantage of drop in international prices and to encourage conservation.
- Tax stated to be revenue neutral as it will replace a number of other fees such as road tolls, airline maintenance and water taxes.
- Since Chinese retail prices are currently above international price levels, government expects no significant change in retail prices as a result of consumption tax.

China has also now finally taken steps towards market driven prices taking advantage of the low international prices.

Profitability of Oil Marketing Companies:

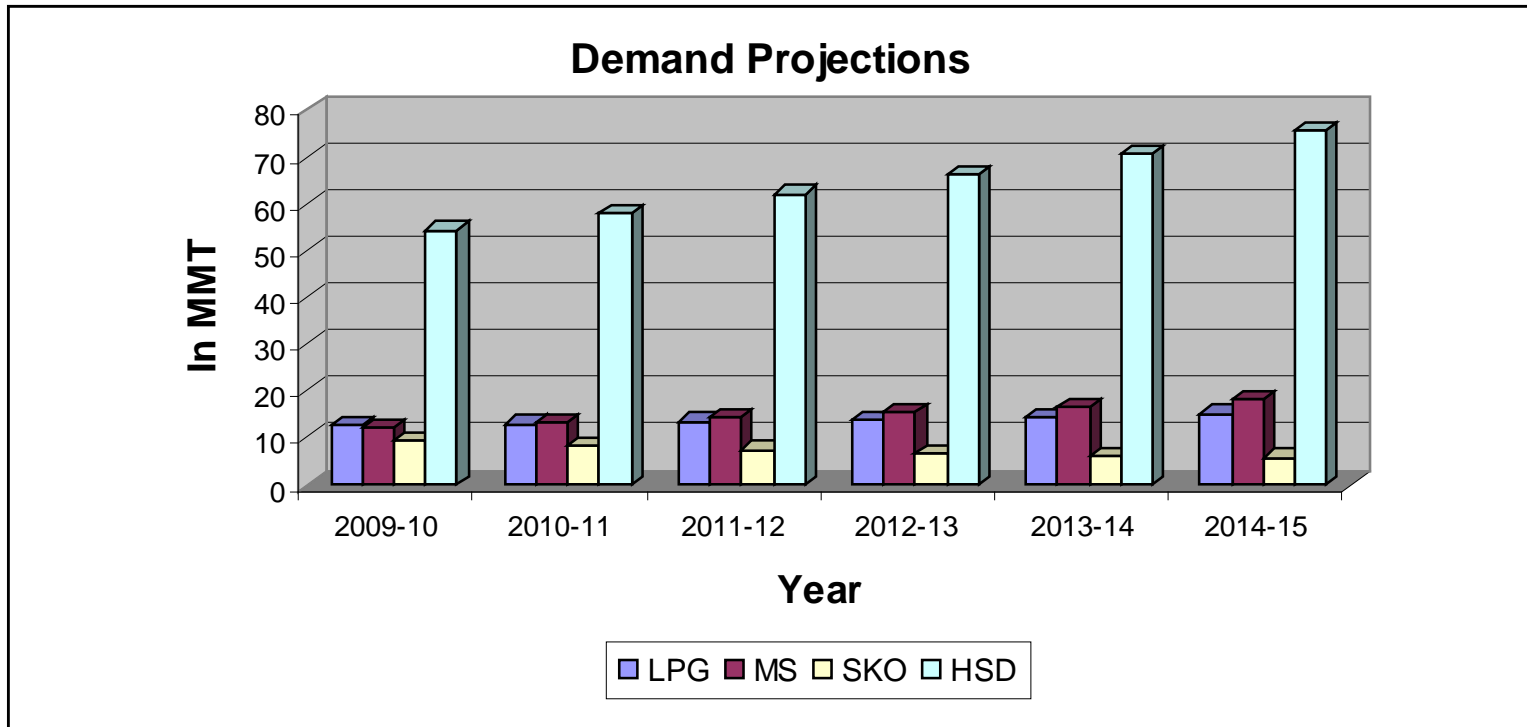


Source: Infraline

- During 2006-07, OMCs profits was marginally higher on account of IOG selling its share-holding in ONGC, there by adding Rs. 3225 crore (43%) to its net profit to avoid steep fall in profits.

The Combined profit in the year 2008-09 has been the lowest since deregulation effective from April' 2002.

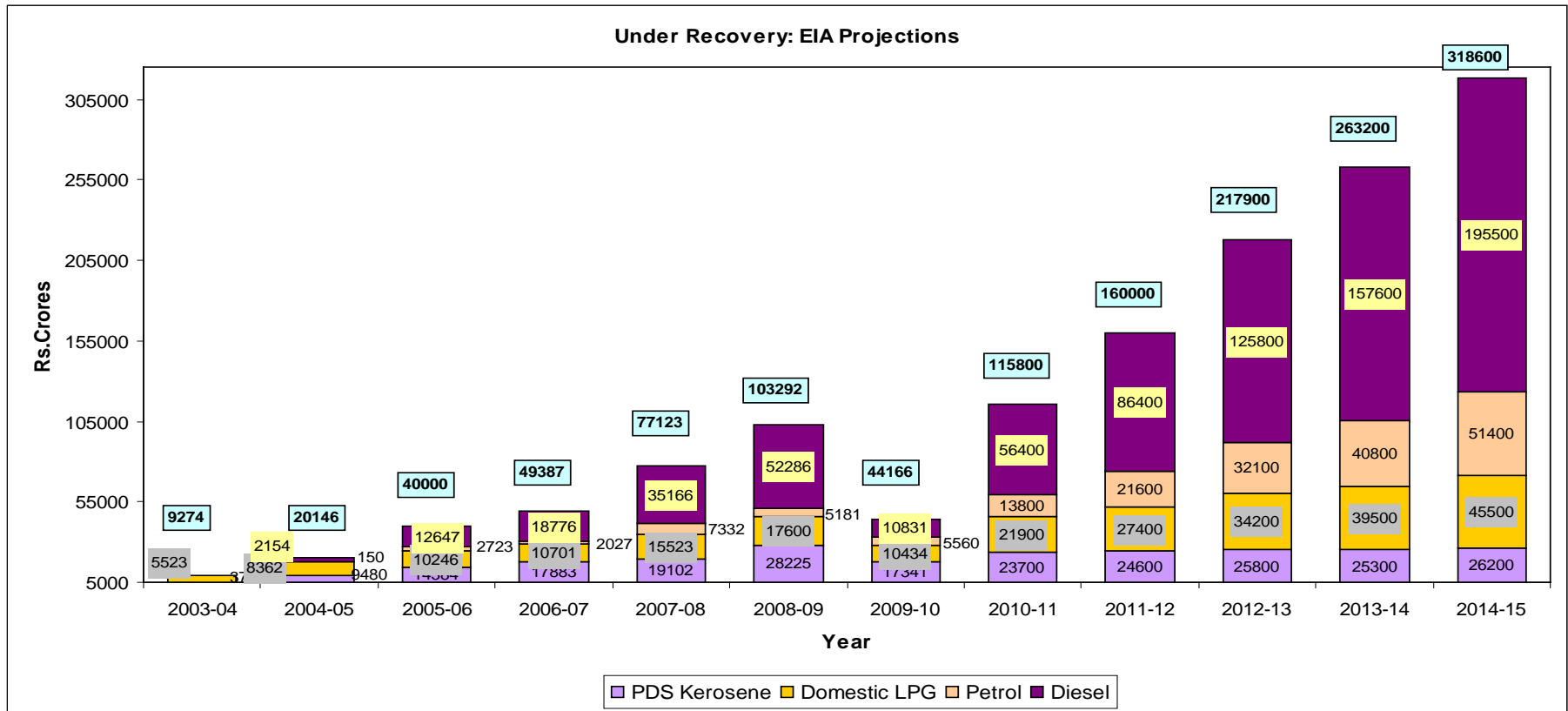
Demand Projections: 2009 - 2015



Source: Infraline

- 2009-10 estimates are based on projections done by PPAC in consultation with industry/SLCs. From 2010-11 the CARG growth rates of last four years (2005-06 to 2008-09) have been applied.
- Kerosene projections are based on assumption that PDS allocation would be restricted to BPL families only and others would be charged market price of Kerosene. Moreover, increasing rural electrification and LPG penetration also reduces demand of SKO by rural household.
- For LPG the growth rate has been reduced by 0.5% every year from 2010-11 to incorporate impact of Piped Natural Gas.

Under Recoveries Projections:



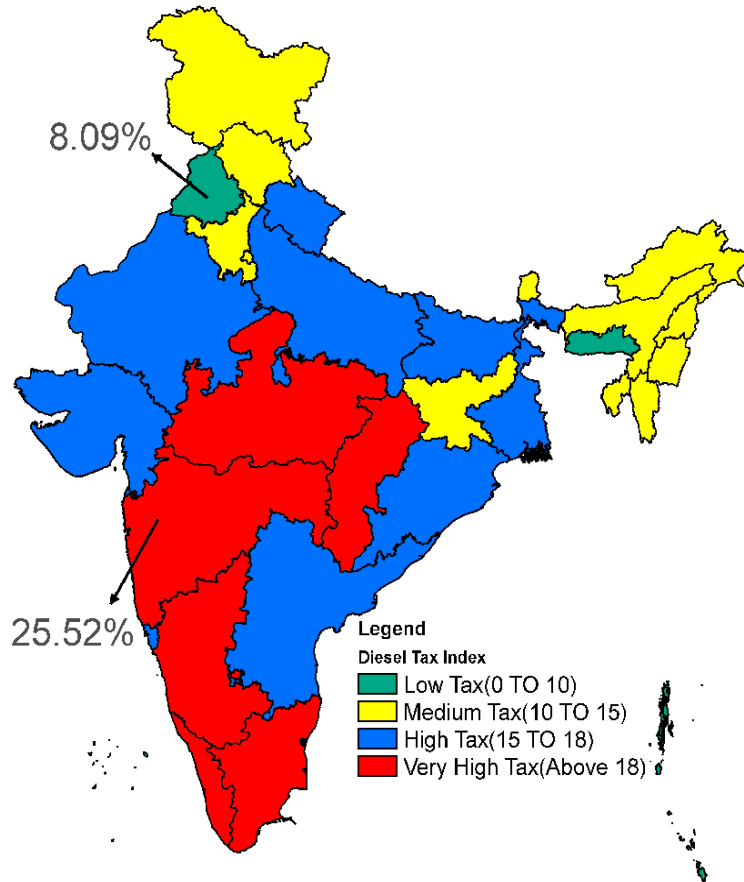
Prices based on EIA estimates (March 2009)

Source: Infraline

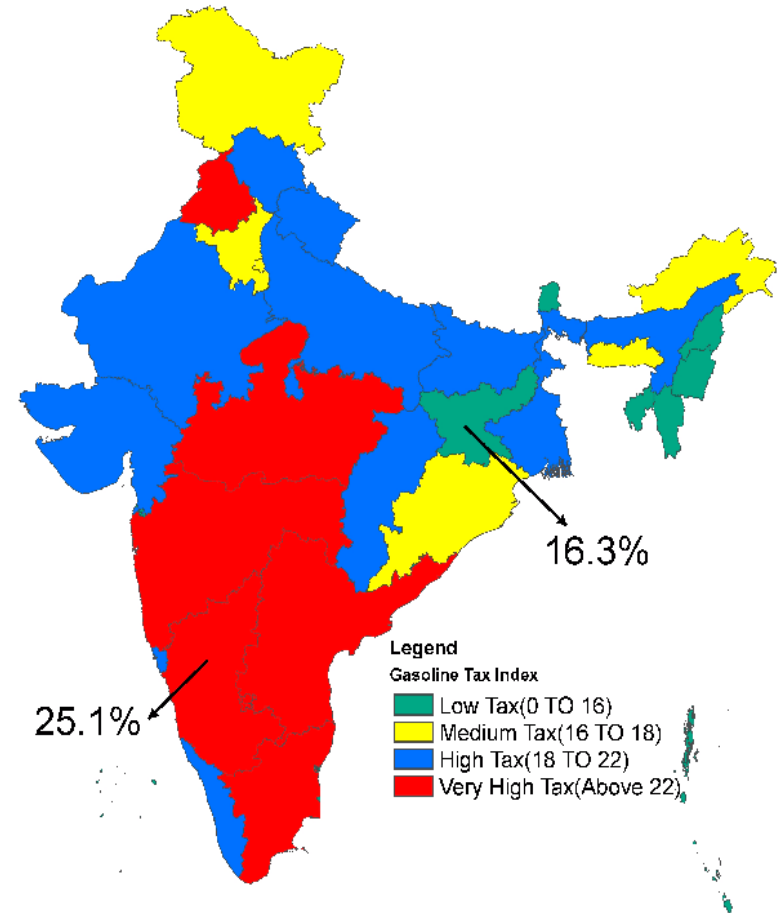
Economic and financial cost of inaction can be alarmingly high.

State taxes in India as percentage of Consumer Price:

State Taxes As Percentage Of Consumer Price - Diesel



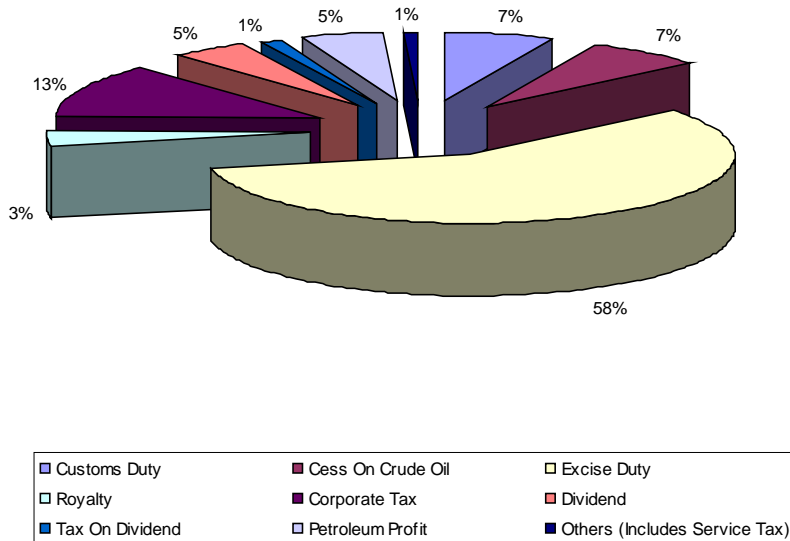
State Taxes As Percentage Of Consumer Price - Gasoline



State taxes in India vary widely and are high

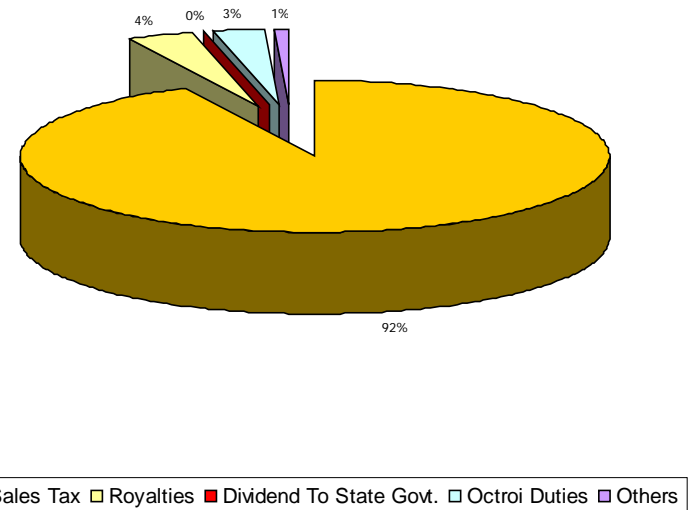
Contribution of Taxes to Exchequer:

Central Taxes: 2008-09 (Provisional)



Central Taxes: 2008 09 Provisional = Rs.93513 Crores

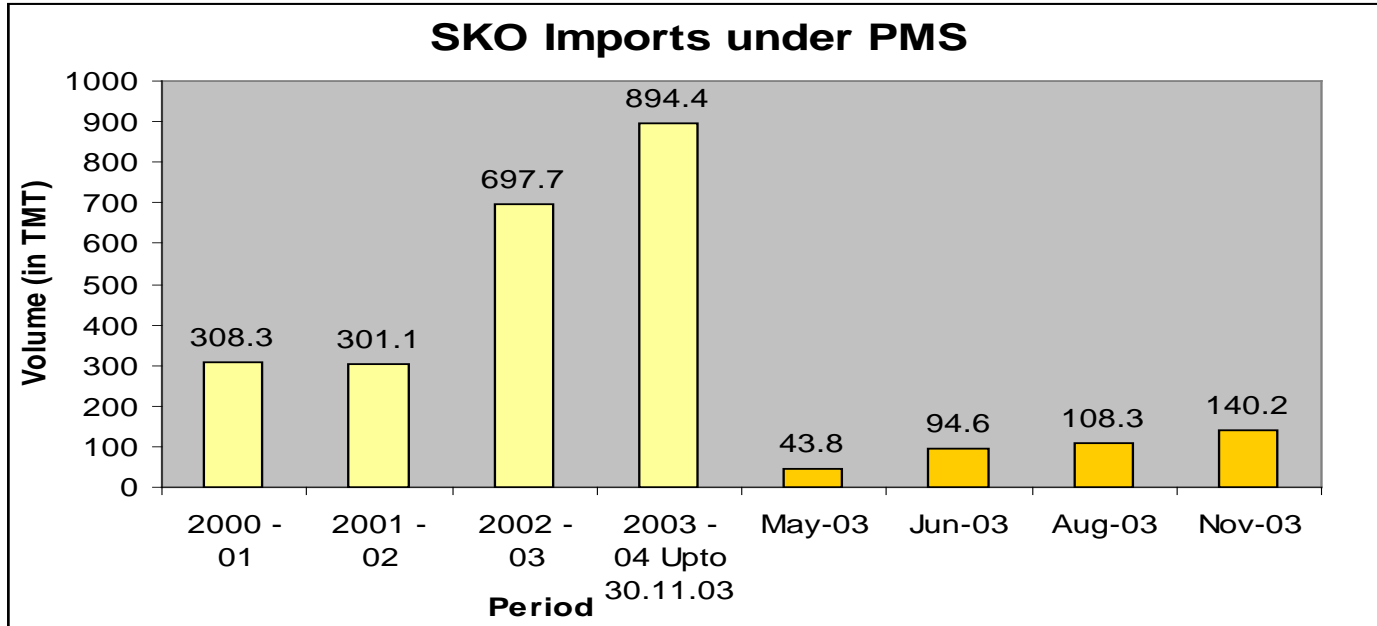
State Taxes: 2008-09 (Provisional)



State Taxes: 2008 09 Provisional = Rs.68285 Crores

Excise Duty and Sales Tax are the major revenue boosters for the Center and State Government respectively.

SKO – Imports under PMS: Firm Policy Action



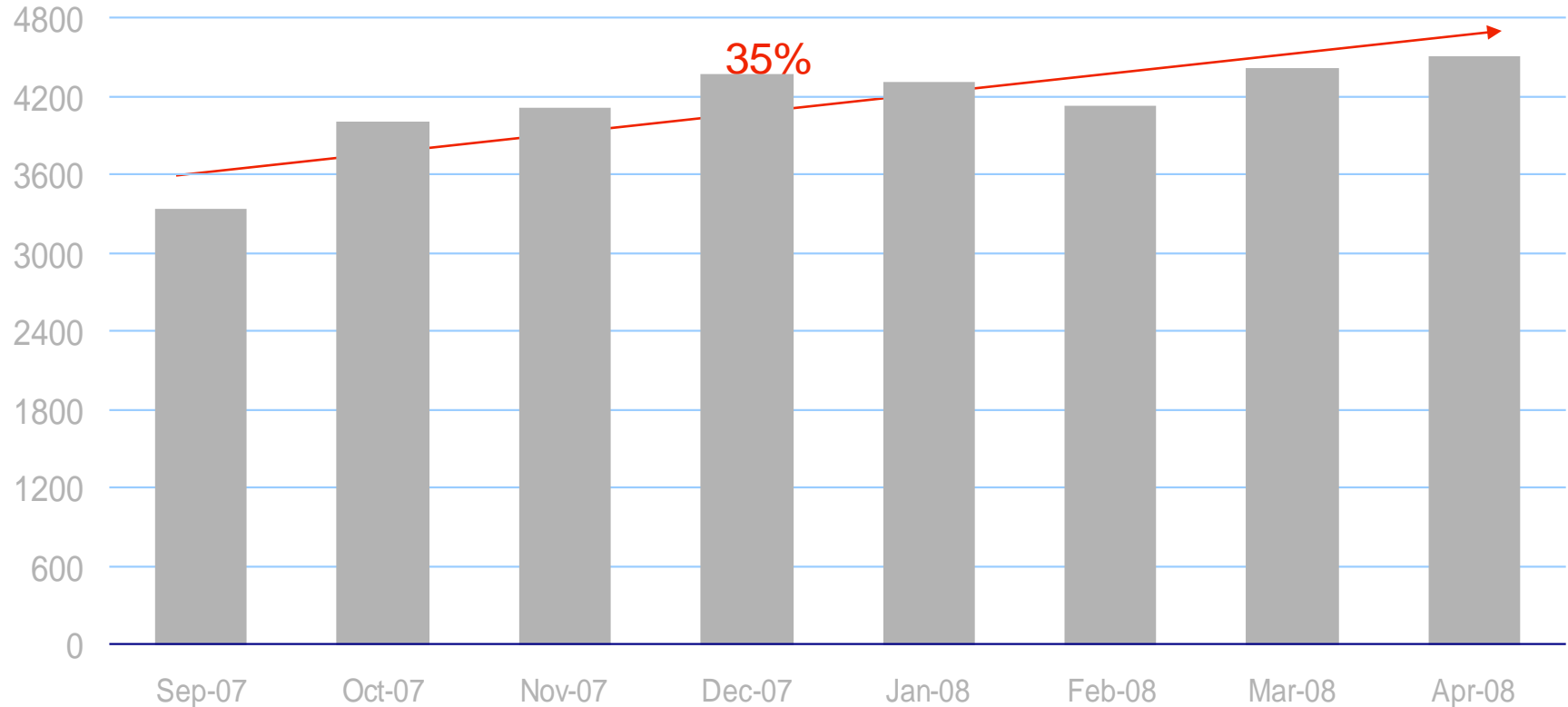
Source: Indianpetro.com

- If SKO imports had continued @ 140 TMT, SKO imports @ 1.7 MMT could have been diverted for adulteration.
- Exim policy was amended on 25.11.03 allowing SKO imports through State Trading Enterprises such as IOC, BPC and HPC.
- Subsequent to above amendment, **NO IMPORTS** have been made by 124 parallel marketers of SKO.

Firm Policy action can result in correct product management and help avoid diversion.

Diversion effects of Pricing: HSD Vs FO

Diesel Sales [TMT]



Diesel consumption in just few months went up, clearly demonstrating diversion to power generation.