

Oil & Gas Sector

29 September 2022

Retail losses easing; GRMs remain choppy

Losses on Indian OMCs' Retail segment margins on MS/HSD are likely to ease following the recent decline in oil price - Brent is down 8.5% MoM and 12% QoQ. However, the high HSD-crude spread (US\$30-35/bbl) is likely to keep HSD pump margins negative unless OMCs are able to raise diesel prices. At the current Brent price of US\$85/bbl and diesel spread range of US\$33/bbl, OMCs have to increase HSD pump prices by Rs2/litre to break even and increase MS/HSD prices by Rs3/litre each (excluding the impact of VAT) to earn blended margin of at least Rs1.5/litre (indicative estimates).

Lower crude can reverse the pain on retail margins: At US\$80/bbl and US\$75/bbl crude, the implied blended retail margin is positive at Rs0.9 per litre and Rs3.4 per litre, respectively; based on improved implied margins on fuels: MS - plus Rs8.5/Rs11 per litre and on Diesel at minus Rs1.7/plus Rs0.9 per litre. And any decline in spreads under falling crude price can add to the upside in retail margins.

Volatile refining margins to revive on strong diesel demand and spreads: The Singapore hydrocracker margins are down in the second fortnight of Sept'22 at US\$3.4/bbl vs 2QFY23/1QFY23 average of US\$12.1/US\$16.2. As on date, this reading has recovered to US\$6/bbl, although it is still 50% below the 2QFY23 average. Woodmac and other third-party research agencies believe that GRMs are likely to revive in the coming winter months, based on: (a) tight supplies and low stocks of diesel, especially in the EU, aggravated by the surge in ATF demand (reduces diesel yield) and (b) substitution of expensive gas (US\$350-360 per boe) with cheaper diesel (~US\$120/bbl) - 1.4-1.5mbpd of substitution demand for diesel, including 0.6mbpd of incremental demand expected in the next 6 months. Diesel spreads are sustaining at US\$33/bbl as on date compared to the average of US\$38-39/bbl in 1HFY23.

Demand from the CGD segment has seen YoY increase of 25.9%/19.9% in Aug'22/YTD'23. CGD segment's share in overall Indian gas demand pie is also on an increasing trend, up 479bps at 21.7% in Aug'22 YoY and up 422bps YTD'23. Overall, monthly gas demand is down 1.9% YoY at 160.2mmscmd in Aug'22 as demand from Power/Refining and to a lesser extent Fertilizer sectors has been hit due to the spike in LNG prices. YTD growth is down 3.2% at 158.1mmscmd. LNG imports are down by 18.9%/16% YoY for Aug'22/YTD'23. This has resulted in LNG's share in the Indian gas consumption basket falling from 51.3% in Aug'21 to 44% in Aug'22 and from 55.5% YTD'FY22 to 48.2% YTD'FY23.

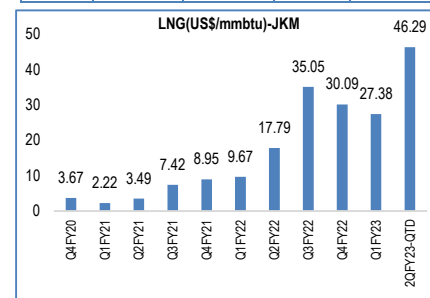
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Stock	EPS Sept'24E Rs	PE Sept'24E (x)	TP Rs	Rating
BPCL	65.03	4.7	390	Buy
HPCL	58.97	3.7	295	Buy



Source: Bloomberg, Nirmal Bang Institutional Equities Research

Exhibit 1: Retail Margin Analysis

	2QFY23	Aug'22	Sep'22 FN1	Sep'22 FN2
	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl
Oil price	98.5	95	92.5	89.1
MS Crack spread	16.8	10	7.3	8.2
HSD Crack spread	39.4	51.0	38.9	29.8
MS/HSD retail margin Rs/litre				
MS	-4.0	1.2	3.9	4.3
HSD	-12.2	-16.2	-9.1	-3.9
Blended margin Rs/litre	-10.19	-11.84	-5.81	-1.87

Source: Bloomberg, Nirmal Bang Institutional Equities Research

Exhibit 2: Retail margin scenarios vs pump price hike

	Latest	Price hike -1	Price hike -2	Price hike -3
	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl
Oil price	84.6	84.6	84.6	84.6
MS crack spread	8.3	8.3	8.3	8.3
HSD crack spread	33.1	33.1	33.1	33.1
MS/HSD retail margin Rs/litre				
MS	6.1	6.1	6.1	9.1
HSD	-4.0	-3.0	-2.0	-1.0
Change in price Rs/litre				
MS	0.0	0.0	0.0	3.0
HSD	0.0	1.0	2.0	3.0
Blended margin Rs/litre	-1.44	-0.69	0.06	1.56

Source: Bloomberg, Nirmal Bang Institutional Equities Research

Retail losses decline as petrol margins turn positive

Petrol margin turned positive at the end of Aug'22 and increased to ~Rs4/litre in Sept'22 till date, touching Rs6/litre as on Sept'28, 2022. Despite this, blended margin is a negative Rs1.4/litre, although the loss has reduced from ~Rs10/Rs12 per litre we had estimated for 2QFY23 and end-Aug'22 (as per our indicative estimates).

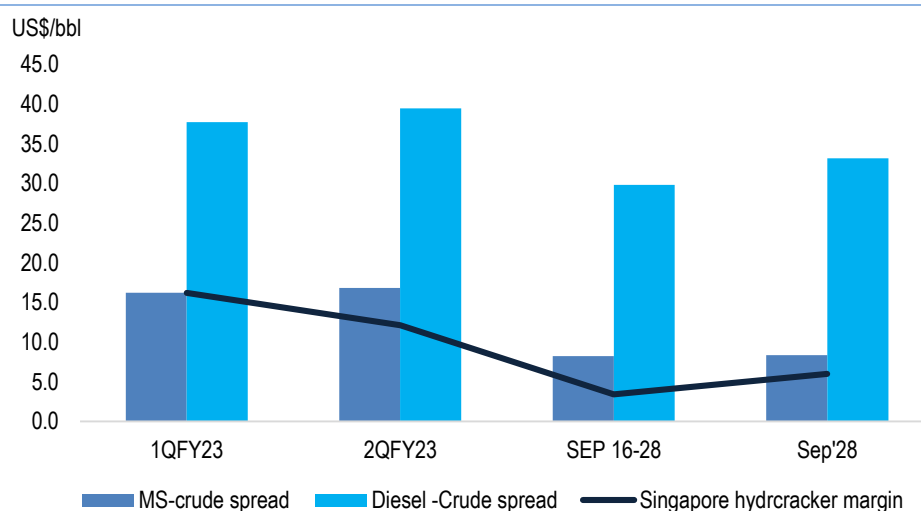
Key moving parts that impact retail margins:

Oil price increase adds to the cost push for refined products assuming spreads remain unchanged. Increase in product prices over and above the rise in crude price results in increase in product spreads over crude – this increases the ex-refinery price, which sets the cost of purchase for marketing MS/HSD. As the crude price and spreads increase - the US\$/bbl cost of marketing petrol and diesel increases in tandem; this will get enhanced by the import duty in % terms before adding the specific excise duty and advalorem VAT rates levied by states.

Hit on pump margins under rising crude and product spread:

- (1) US\$1/bbl increase in crude implies – Rs0.50/litre hit
 - (2) US\$1/bbl increase in MS/HSD spread - Rs0.50/litre hit. Both 1 and 2 taken together lead to a larger hit of Rs1/litre
 - (3) USD-INR depreciation impact: Rs1 depreciation implies Rs0.75 hit on pump margins.
- 1, 2 and 3 taken together imply an even larger hit of Rs1.75/litre

Exhibit 3: Singapore complex refining margin and fuel spread trend



Source: Bloomberg, Nirmal Bang Institutional Equities Research

LNG price to sustain above US\$35/mmbtu post surge sparked by cut in Russian gas

Gas prices are expected to stay elevated as piped gas supply from Russia to Germany through Nord Stream 1 pipeline has now been completely cut from 167mmcmd to nil.

Europe's gas storage levels are reported to be comfortable at more than 80%, but may fall short if the winter is colder than expected. Another gas pipeline Nord Stream 2 (Russia to Germany) is reported to have developed an under-sea gas leak, off the coast of Denmark. This pipeline's approval had been withheld by German regulator, but it is reported to be filled with gas that is leaking following an explosion. This is alleged to be an act of sabotage by the Western nations.

The stoppage of Freeport LNG operation (20% of US LNG exports) that reduced exports from US to Europe has exacerbated the gas shortage in the EU. This LNG facility is likely to start partial operation in Nov'22. One LNG train in Cove Point, USA is also reported to be shut down. The availability of US LNG for exports, which has suffered a decline of ~20%, is likely to revive once these two LNG plants resume operations.

The silver lining on the demand side is that two of the leading LNG importers, Japan and South Korea, are reported to have comfortable stocks of gas. China's demand for spot LNG is likely to remain subdued until the covid lockdowns are eased and the economy revives from the reported slowdown following the crisis in its property market.

However, a revival in the Chinese economy, coupled with a colder-than-expected winter could again tighten the LNG market and lead to the spot LNG prices staying elevated.

Contracts for LNG from existing as well as new projects being executed by CY25 are all tied up. Hence, in the absence of material destruction in gas demand, the spot LNG market is likely to remain bullish in the foreseeable future. There are already signs of spot LNG consumption declining YoY in China and India, according to S&P commodity research.

Indian Petroleum and Natural Gas data in charts

Exhibit 4: India segment-wise monthly gas consumption trend – mmscmd

Segment	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Fertiliser	51.1	47.8	50.4	52.3	52.9	47.9	43.9	50.5	50.9	55.5	52.4	55.3	54.3
Power	31.9	27.9	28.7	21.8	20.1	18.9	19.5	20.1	18.5	20.2	20.4	21.3	21.2
City gas	27.6	35.5	34.4	36.1	37.5	35.9	37.5	38.3	34.3	33.7	35.4	34.8	34.8
Refinery	13.5	14.0	13.5	12.3	11.5	10.2	12.2	12.7	12.8	11.9	12.8	12.2	11.5
Petchem	3.7	7.9	7.8	7.8	8.3	7.9	7.9	5.5	2.9	6.1	2.9	6.2	4.0
Other+ losses	34.2	36.1	35.7	34.8	34.0	33.9	33.5	31.2	30.3	33.2	30.6	35.4	34.5
Total	163.3	169.1	170.5	165.1	164.4	154.6	154.5	158.3	149.8	160.7	154.5	165.1	160.2

Source: PPAC, Nirmal Bang Institutional Equities Research

Exhibit 5: India segment-wise monthly gas consumption growth rate YoY (%)

Segment Growth YoY %	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Fertiliser	7.2	4.2	0.5	1.2	3.6	-3.4	-7.7	16.3	3.4	25.1	1.2	10.4	6.3
Power	3.2	-4.6	-7.6	-24.5	-32.9	-33.9	-36.0	-26.4	-34.3	-26.1	-26.8	-20.6	-33.6
City gas	32.7	31.7	21.2	24.6	18.8	10.7	14.9	19.4	16.1	28.5	22.2	8.9	25.9
Refinery	-36.3	-33.5	-38.3	-37.7	-37.0	-33.4	-37.0	-32.9	-33.5	-23.7	-29.0	-33.7	-14.4
Petchem	-62.1	48.4	-17.1	-3.7	7.1	11.9	-11.6	-45.4	-70.2	-13.2	-35.3	-25.2	8.8
Other+ losses	83.4	139.6	80.9	78.3	73.0	55.2	40.9	21.2	7.8	3.1	-16.3	0.9	0.8
Total	9.7	17.9	6.2	5.2	3.8	-0.1	-5.1	0.4	-7.6	4.3	-6.9	-4.4	-1.9

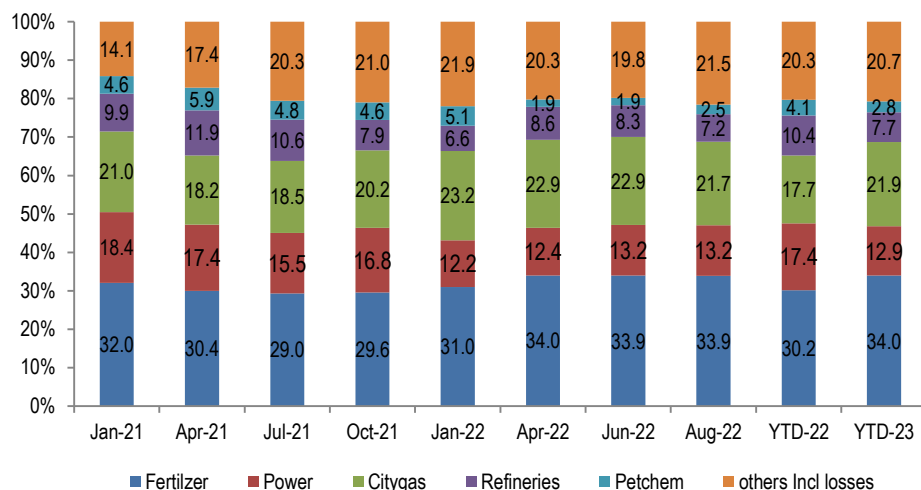
Source: PPAC, Nirmal Bang Institutional Equities Research

Exhibit 6: Trend in Indian gas demand across segments

Segment	Vol. (mmscmd)		Growth YoY	Segment share %	
	YTD FY22	YTD FY23		YTD FY22	YTD FY23
Fertilizer	49.3	53.7	8.9	30.2	34.0
Power	28.4	20.3	-28.5	17.4	12.9
Citygas	28.8	34.6	19.9	17.7	21.9
Refinery	16.9	12.2	-27.7	10.4	7.7
Petchem	6.6	4.5	-33.0	4.1	2.8
Other+ losses	33.2	32.8	-1.2	20.3	20.7
Total	163.4	158.1	-3.2	100.0	100.0

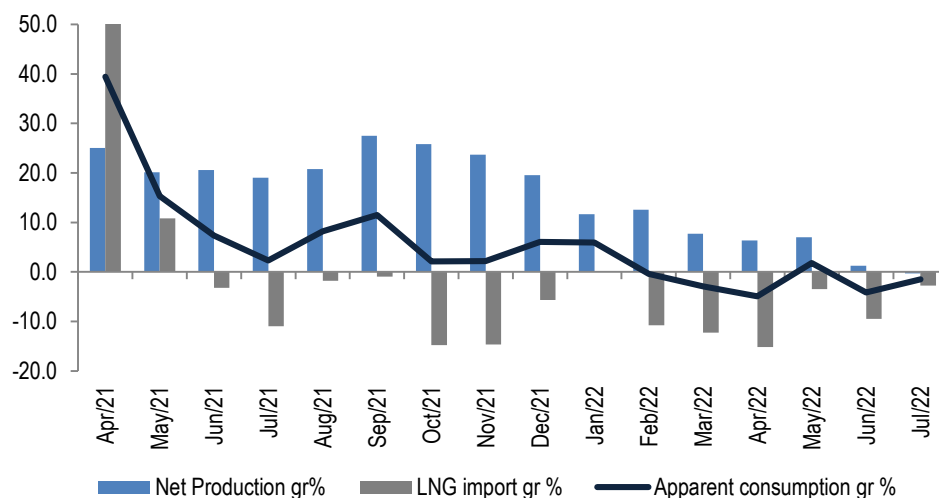
Source: PLNG, Nirmal Bang Institutional Equities Research

Exhibit 7: Trend in Indian monthly gas demand pie



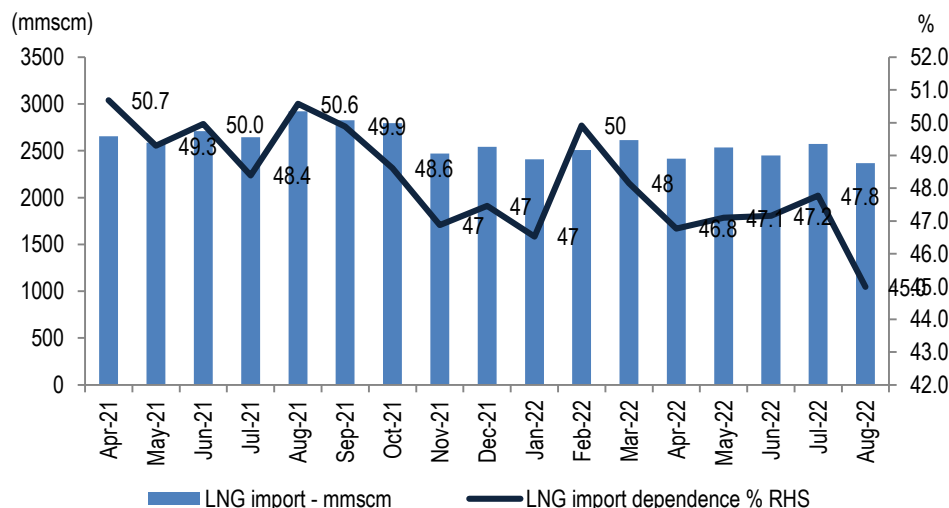
Source: PPAC, Nirmal Bang Institutional Equities Research

Exhibit 8: YoY growth in India's monthly gas production, consumption and LNG imports



Source: PPAC, Nirmal Bang Institutional Equities Research

Exhibit 9: Import dependence



Source: PPAC, Nirmal Bang Institutional Equities Research; Note: based on gross imports data- this is different from the total LNG used as per segment consumption detail from PPAC

Petroleum data
Exhibit 10: Indian petroleum demand trend – latest month and YTD

Products ('000 tonnes)	Aug'22	Chg YoY %	Chg MoM %	Chg/Aug-20 %	YTD FY23	Chg YoY %	Chg vs YTD FY 20 %
LPG	2394	3.1	-0.6	-0.3	11365	1.3	9.6
Naphtha	1157	13.6	1.5	-15.3	5308	-10.4	-4.7
MS	3005	11.6	7.0	16.7	14596	20.5	12.9
ATF	596	57.1	2.5	-10.6	2919	78.9	-11.5
SKO	32	-75.5	35.8	-86.3	240	-62.3	-80.1
HSD	6338	13.1	-4.5	3.6	35142	16.6	-1.1
LDO	67	-19.1	10.2	5.6	291	-32.1	10.6
Lubricants & Greases	340	-9.7	-1.2	9.5	1762	3.6	11.3
FO & LSHS	601	16.1	7.3	24.9	2756	14.3	8.3
Bitumen	471	17.5	6.9	104.2	3075	6.1	18.2
Petroleum coke	1240	-5.2	-7.8	-30.3	6351	10.6	-33.6
Others	1569	45.5	24.5	72.8	6734	38.6	37.6
TOTAL	17810	11.9	1.1	4.0	90539	13.6	0.2

Source: PPAC, Nirmal Bang Institutional Equities Research

Exhibit 11: Indian petroleum demand trend – YTD and quarterly trend

		Ch YoY%											
	2QFY23 (QTD) (000'tonne)	2QFY23 (QTD)	Q1FY23	1QFY22	2QFY22	3QY22	4QFY22	FY22 (000'tonnes)	Ch YoY%	FY21 ch YoY%	FY20 ch YoY%	CAGR % FY17-22	CAGR % FY10-20
LPG	4804	2.4	0.5	0.8	3.7	0.0	6.1	28335	2.7	4.8	5.7	5.6	7.3
Naphtha	2297	2.9	-18.4	19.9	-4.4	-7.4	-7.0	14217	-0.7	0.3	1.0	1.4	3.5
MS	5813	9.2	29.4	35.0	11.7	2.3	1.9	30850	10.5	-6.8	6.0	5.4	8.9
ATF	1177	69.4	86.0	141.8	37.3	31.8	6.1	5007	35.1	-53.7	-3.6	-6.5	5.6
SKO	55	-78.8	-50.9	-19.9	-14.5	-14.3	-18.3	1494	-16.8	-25.1	-30.7	-22.7	-12.7
HSD	12976	10.5	20.4	22.3	8.8	-3.8	0.0	76666	5.4	-12.0	-1.1	0.2	3.9
LDO	127	-20.3	-39.1	68.0	33.3	11.4	-6.1	1021	21.1	34.3	5.0	17.9	3.2
Lubricants & Greases	684	-3.0	8.4	73.6	9.7	21.0	26.7	4524	28.0	-7.8	4.5	5.4	4.2
FO & LSHS	1161	18.0	11.7	11.2	1.6	-2.4	3.3	6174	3.0	-4.9	-4.0	-2.9	-5.9
Bitumen	912	9.1	4.8	35.1	10.9	-9.2	12.1	7848	10.5	5.7	0.2	5.7	3.1
Petroleum coke	2585	-1.5	20.8	-33.5	-13.9	-22.4	-14.1	14443	-21.0	-15.7	1.7	-9.6	12.7
Others	2830	25.6	49.8	21.0	23.5	27.1	12.2	13078	20.9	-4.8	-3.1	14.7	7.7
TOTAL	35421	9.0	16.8	15.5	6.4	-1.5	1.1	203657	4.6	-9.1	0.4	0.9	4.5

Source: PPAC, Nirmal Bang Institutional Equities Research

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