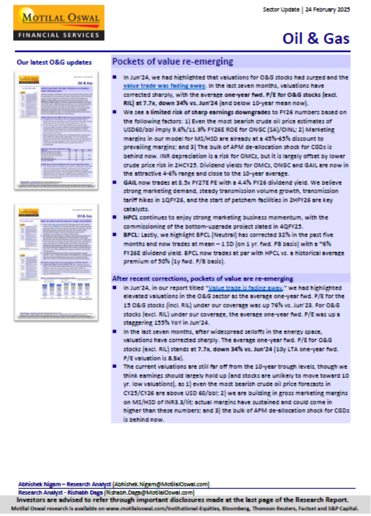
Oil & Gas

Our latest O&G updates


Sector Update | 24 February 2025
Oil & Gas
Our latest O&G updates
Pockets of value re-emerging

Marketing sub-sector favored; turning bullish on CGDs

- **In Feb'25, we noted that valuations for O&G stocks appeared inexpensive (Pockets of value re-emerging) and highlighted HPCL, BPCL, GAIL and MAHGL as our top picks. In the last two-and-half months, HPCL/BPCL have delivered a return of 26%/25%, aided by super-normal marketing profitability. GAIL has had a strong run (+15%) on the back of tariff-related announcements, while APM de-allocation concerns have weighed on MAHGL.**
- **Marketing remains preferred sub-sector; turning positive on CGDs for first time since Nov'23: Our positive stance on retail marketing is driven by: 1) our negative bias for crude oil prices (FY26E: USD65/bbl), 2) we do not see sharp cuts in retail prices of MS/HSD. These factors, along with healthy ~4% marketing volume CAGR, should drive robust marketing profitability. We are now turning positive on the city gas distribution (CGD) sector for the first time since Nov'23 (link) as we see potential for margin expansion. In the last 18 months, when CGD was not our preferred sub-sector, IGL/MAHGL/GUJGA delivered a return of +2%/+30%/+3%.**
- **Refining performance to remain lackluster, in our view: We have a cautious stance on refining over FY26-1HFY28 amid strong net refinery capacity additions of 0.6mb/0.9mb per day over CY25/CY26 (substantial portion of this is from India). Even after assuming a six-month delay in the commissioning of IOCL's ~347kb/d refinery expansions, net refinery capacity additions globally remain heavy at ~0.4mb/0.95mb per day in CY25/ CY26. Moreover, IEA recently downgraded its global oil demand growth forecast for CY25 by 300mb/d.**
- **Upstream remains our relatively less preferred sector despite cheap valuations: We forecast Brent to average USD65/bbl in FY26/FY27 but believe downside risks remain to both oil and gas realizations. Every USD1/bbl decline in Brent prices leads to a ~2% decline in FY26E/FY27E PAT for both ONGC SA and OINL SA. While valuations look cheap at 0.8x/1.1x FY27E PB for ONGC SA/OINL SA, we remain on the sidelines and prefer marketing/CGD. Our FY26/FY27 EPS estimates are 15%/11% below consensus for ONGC SA and 12%/15% below consensus for OINL SA.**
- **Our top picks: HPCL & MAHGL: At 1.3x FY27E consol. P/B, HPCL remains our preferred pick among OMCs, given its leverage toward marketing. Falling raw material costs, coupled with a robust CNG volume growth outlook, should drive earnings for CGDs. MAHGL remains our preferred pick among CGDs.**

Marketing remains our preferred sub-sector within O&G

- **Weak crude price outlook beneficial for marketing margins:** MS/HSD marketing margins have remained robust over the past 10 months and averaging INR13.6/12.3 per lit in 4QFY25. While Brent crude prices averaged ~USD75.8/ 67.7 per bbl in 4QFY25/Apr'25, we forecast Brent to average USD65/bbl in FY26/FY27 (earlier: USD70/bbl).
- Recently, US EIA, in its short-term energy outlook for Arp'25, decreased its Brent crude price forecast for CY25/CY26 by USD6/USD7 per bbl to USD68/61 per bbl, driven by rising uncertainty around global oil demand growth and potential for additional supply by OPEC+.
- We estimate every USD1/bbl change in global MS/HSD prices affects MS/HSD gross marketing margins by INR0.5/INR0.5 per lit (6%/12% vs. current levels).

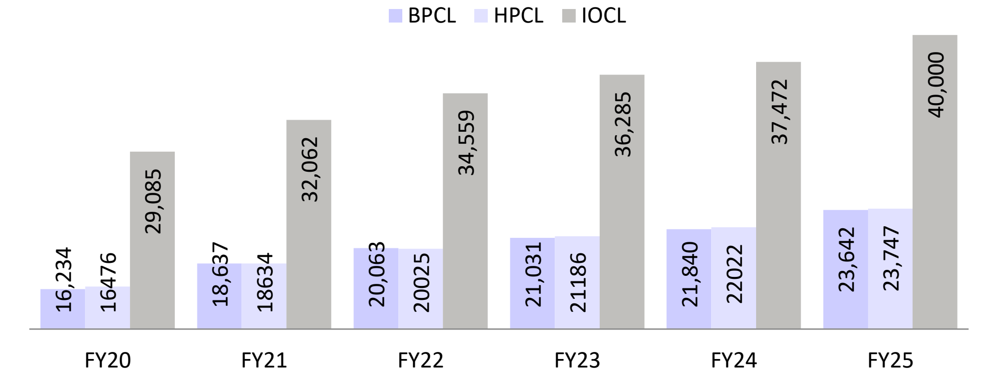
Abhishek Nigam – Research Analyst (Abhishek.Nigam@MotilalOswal.com)
Research Analyst - Rishabh Daga (Rishabh.Daga@MotilalOswal.com)

- W.e.f. 8th Apr'25, the government has increased excise duty on both MS and HSD by INR2/lit. While the increase in excise duty will affect OMCs' marketing margins, we do not expect any impact on our earnings estimates as the current marketing margins, averaging above ~INR12/lit, are significantly above our assumption of INR3.3/lit for both MS/HSD. Further, upside risks to OMC earnings persist even after this excise duty hike.

IOCL/BPCL/HPCL added retail outlets at 7%/8%/8% CAGR over last five years

- **Retail outlet expansion by OMCs continues at a steady pace:** IOCL/BPCL/HPCL have added retail outlets at a CAGR of 7%/8%/8% over the last five years. HPCL/IOCL aim to establish 26,000/44,000 retail outlets by FY28/FY26.
- **Private players doubling down on marketing:** According to a recent news article, in order to take advantage of robust marketing margins, private players saw a 19.7% YoY increase in their combined domestic diesel and petrol retail sales in FY25. In contrast, state-run companies saw a 0.6% decline in diesel sales, while petrol sales rose by 6.4%. Overall, the combined sales growth for both private and public retailers stood at 7.5% for petrol and 1.2% for diesel.

Exhibit 1: PSU OMCs' retail outlets



Source: Company, MOFSL

Weaker crude and lower slope – the twin emerging tailwinds for CGDs

- As highlighted in our recent note on GUJGA, we believe that a weak crude price outlook, together with a lower pricing slope for natural gas (given the impending LNG glut), will drive down gas costs.
- While Brent crude prices averaged ~USD75.8/bbl in 4QFY25, current Brent price is ~USD62/bbl. We forecast Brent to average USD65/bbl in FY26/FY27 (earlier: USD70/bbl). We estimate every USD10/bbl decline in Brent prices reduces the landed cost of natural gas by USD2.3/mmbtu.
- Further, according to our discussions with the listed and unlisted Indian CGD companies, new long-term gas contracts are already being signed for a 1.0-1.3% lower slope given the expected surge in LNG supply in 2HFY26 and beyond.
- **We do not foresee sharp cuts in MS/HSD retail prices:** While crude oil prices have seen a sharp correction recently, we believe that the government will increase excise duty on MS/HSD instead of any sharp MS/HSD retail price cuts.
  - The government has already increased excise duty on MS/HSD by INR2/lit recently. Previously, excise duty on MS/HSD was increased by INR10/INR13 per lit in May'20 (link). However, later in Nov'21 and May'22, the government reduced excise duty on MS/HSD cumulatively by INR13/INR16 per lit (link).
  - Hence, we think the risk of CNG prices being under pressure due to declining MS/HSD prices is overblown.

Exhibit 1: Margin improvement driven by lower Brent price and pricing slope % for long-term contracts

Particulars	Unit	Scenario 1	Scenario 2
Brent price	USD/bbl	75.0	65.0
Pricing slope	%	13.5	12.5
LNG price	USD/mmbtu	10.1	8.1
LNG Price post import duty	**USD/mmbtu**	**10.4**	**8.3**
Regasification charges	USD/mmbtu	0.8	0.8
Transportation tariff	USD/mmbtu	0.9	0.9
N Gas price pre tax	**USD/mmbtu**	**12.1**	**10.1**
VAT @ 15%	USD/mmbtu	1.8	1.5
LNG landed cost	**USD/mmbtu**	**13.9**	**11.6**
LNG landed cost	**INR/scm**	**44.4**	**36.9**

Source: Company, MOFSL

Exhibit 2: Margin improvement fueled by the decline in spot LNG prices

Particulars	Unit	Scenario 1	Scenario 2
LNG price	USD/mmbtu	14.5	13.5
LNG Price post import duty	USD/mmbtu	14.9	13.8
Regasification charges	USD/mmbtu	0.8	0.8
Transportation tariff	USD/mmbtu	0.9	0.9
N Gas price pre tax	USD/mmbtu	16.6	15.6
VAT @ 15%	USD/mmbtu	2.5	2.3
LNG landed cost	**USD/mmbtu**	**19.1**	**17.9**
LNG landed cost	**INR/scm**	**60.9**	**57.1**

Source: Company, MOFSL

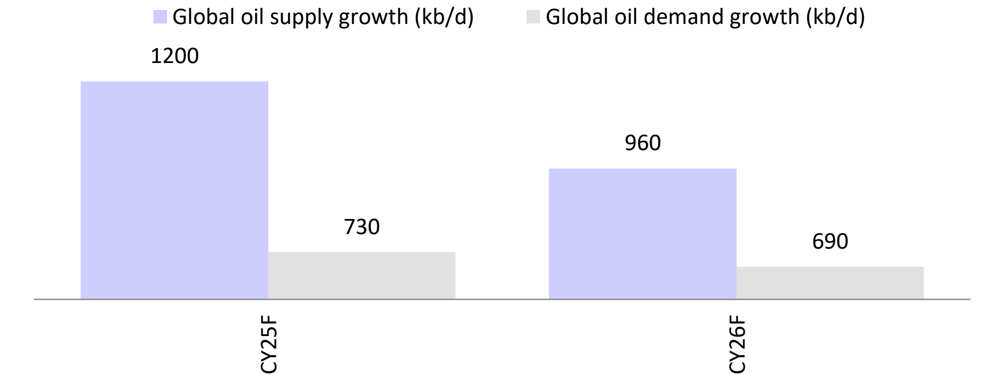
Oversupply in crude market likely to continue amid ongoing uncertainties

- In its Apr'25 oil market report (link), IEA cut its CY25 oil demand growth forecast to ~0.7mb/d (~1mb/d earlier) and estimated global oil supply to exceed demand by ~470kb/270kb per day in CY25/CY26. We also highlight that while OPEC+ surplus crude oil production capacity has declined over the last six months from a 30-month high of 6.3mb/d in Sep'24, it still remained high at 5.6mb/d in Mar'25.
  - **CY25 demand estimate downgraded by ~300kb/d:** IEA reduced its global crude oil demand projection for CY25 by ~300kb/d to 730kb/d amid rising trade tensions that have dampened the economic outlook. In CY26, IEA estimates oil demand growth to slow down further to 690kb/d.
  - **Global oil supply to exceed demand by ~470kb/270kb per day in CY25/CY26:** IEA reduced its global crude oil supply projection for CY25 by ~260kb/d to 1.2mb/d, as a result of reduced production in the US and Venezuela. In CY26, IEA estimates oil supply growth of 960kb/d.
  - **Restricting supply from OPEC+ members currently overproducing to counter the un-winding of voluntary cuts:** As per IEA, while the unexpected move by eight OPEC+ members to triple their planned output increases for May'25 to 411kb/d will widen the oil supply-demand gap, the actual rise in production may be significantly lower, as several countries, including Kazakhstan, the UAE, and Iraq, are already producing well above their assigned targets. Notably, Kazakhstan's crude oil production hit a record 1.8mb/d, driven by the launch of the Chevron-operated Tengiz oilfield expansion project. This places the country ~390kb/d above its OPEC+ production quota.
  - **Global crude run forecast lowered; refining margins show mixed trends:** Global crude runs are projected to average 83.2mb/d in CY25 and demand growth forecasts are lowered, reducing the expected annual increase by 230kb/d to

340kb/d. In CY26, throughput is anticipated to rise by 360kb/d to 83.6mb/d. Refining margins showed mixed trends in Mar'25, declining in the Atlantic Basin but improving for sour crude processing in Singapore. The drop in profitability was largely driven by weaker middle distillate cracks.

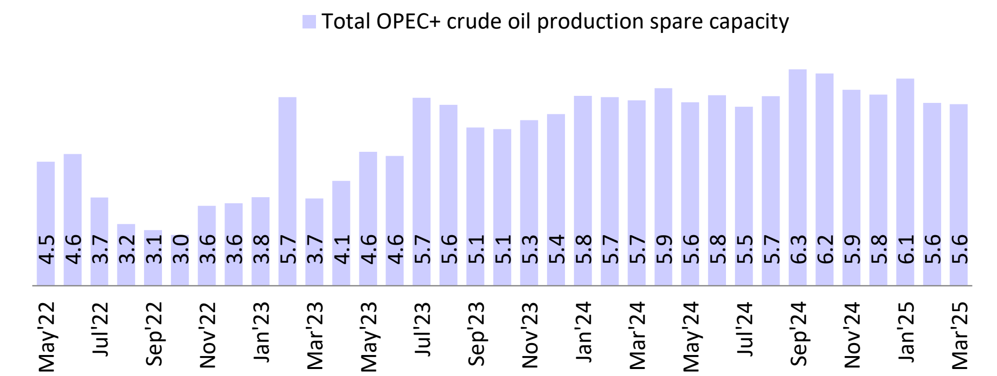
- **Inventories rise in Feb'25:** Global oil inventories increased by 21.9mb in Feb'25. Crude, NGLs, and feedstocks rose by 41.2mb, with OECD onshore inventories contributing 14.1mb to the increase. Meanwhile, oil product stocks declined by 19.2mb, as a 34.2mb drop in the OECD offset gains in oil held on water. Preliminary data suggests that global oil inventories continued to rise in Mar'25, driven by crude stock builds in non-OECD regions and higher volumes of oil on water.

Exhibit 2: Global oil supply to exceed demand by ~470kb/270kb per day in CY25/CY26



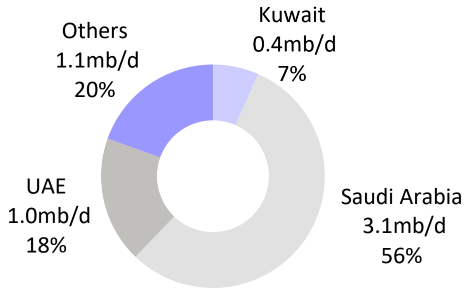
Source: IEA, MOFSL

Exhibit 3: OPEC+ surplus crude oil production capacity (mb/d)



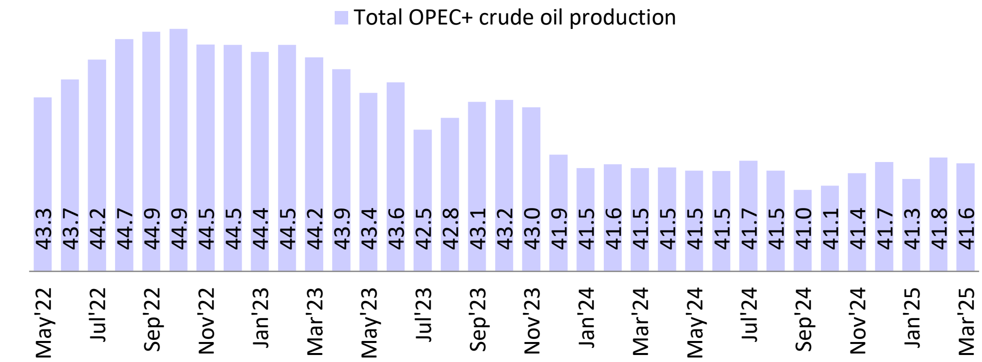
Source: IEA, MOFSL

Exhibit 4: OPEC+ Mar'25 crude production spare capacity break-up (5.6mb/d)



Source: IEA, MOFSL

Exhibit 5: OPEC+ crude oil production (mb/d)



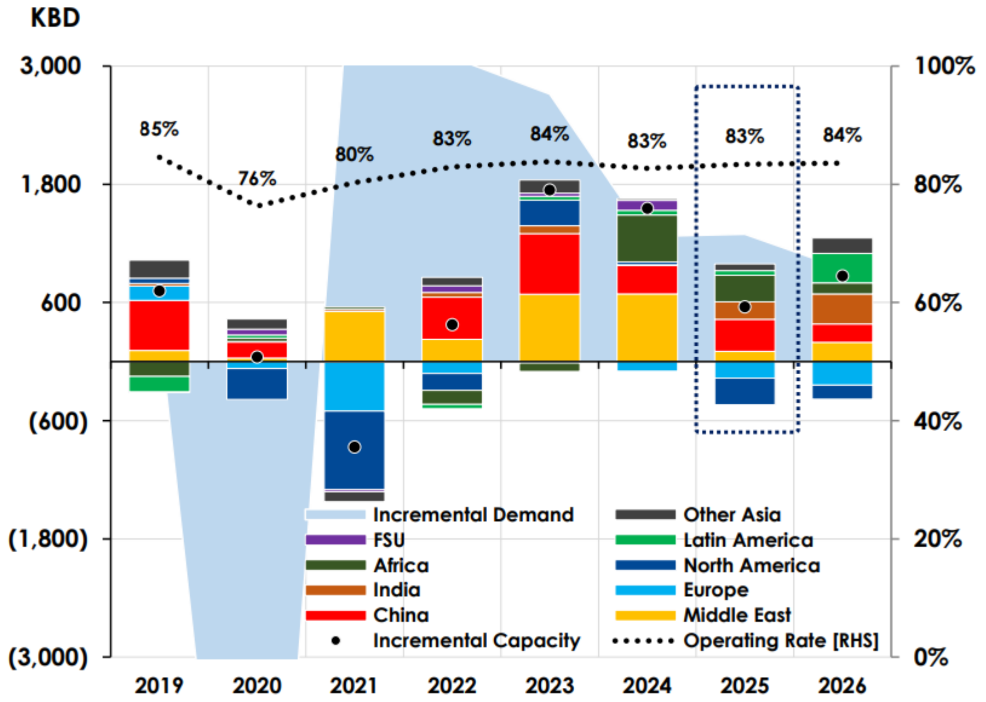
Source: IEA, MOFSL

~1.5mb/d net refining capacity additions over CY25-26

Even after assuming a six-month delay in the commissioning of IOCL's ~347kb/d refinery expansions, net refinery capacity additions globally remain heavy at ~0.4mb/0.95mb per day in CY25/ CY26.

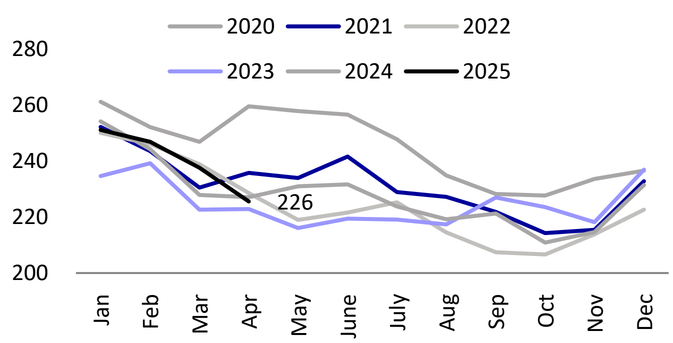
- Thai Oil expects ~1.5mb/d net additions and expansions in refining capacity globally over CY25-26 (FY24: ~1.6mb/d). Capacity additions will be led by Asia: 1) 320kb/d Aramco-Norinco Panjin refinery, expected to be commissioned in 2HCY26, 2) 100kb/d Pertamina Balikpapan modernization, to be fully complete in CY26, and 3) India's 180kb/d HPCL Barmer, 201kb/d IOCL Panipat refinery expansion, 86kb/d IOCL Gujarat refinery expansion and 60kb/d IOCL Barauni refinery expansion. However, ~347kb/d capacity addition led by IOCL, slated for commissioning in CY25 and CY26 are expected to get delayed by six months.
- While global oil demand inched up by ~0.9mb/d in CY24, IEA global oil demand is expected to grow by ~0.7mb/d both in CY25/26.

Exhibit 6: Global net refining capacity additions vs. additional demand



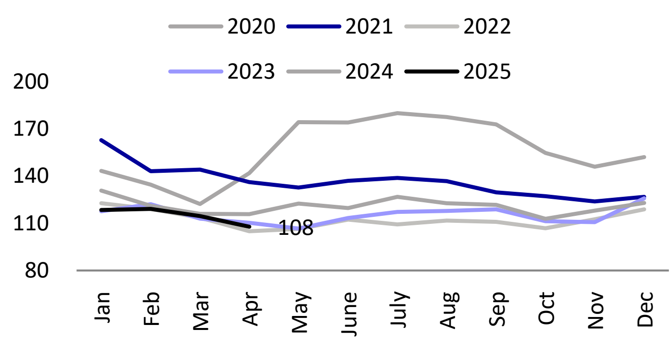
Source: Thai Oil, MOFSL

Exhibit 7: US gasoline inventory (mb)



Source: Reuters, MOFSL

Exhibit 8: US gasoil inventory (mb)

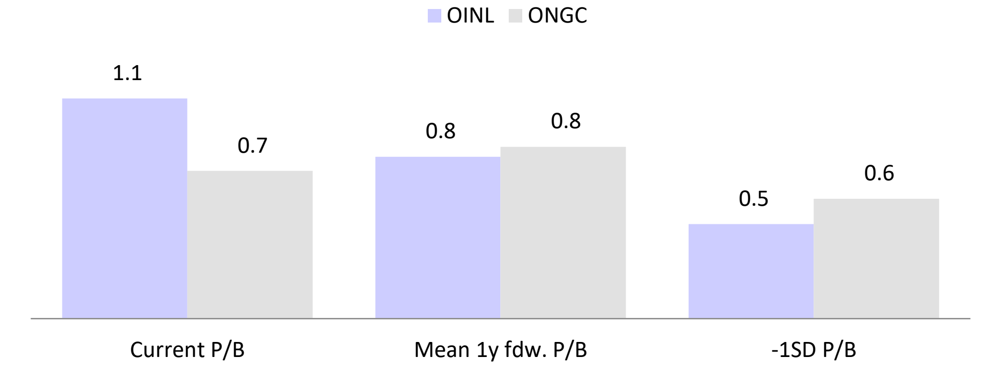


Source: Reuters, MOFSL

Valuations attractive for ONGC/OINL at 0.7x/1.1x 1-yr fwd. P/B

- ONGC/OINL have corrected 14%/19% over the past 4 months and now trade at 0.8x/1.2x 1-yr fwd P/B. While OINL still above its 1-yr fwd mean +1SD P/B, ONGC now trades at par with its LTA 1-yr fwd P/B. At current prices, ONGC/OINL have a dividend yield of ~5%/~3.5%.
- While modelling upstream companies, we forecast Brent to average USD65/bbl in FY26/FY27. However, crude prices could potentially slip lower if global real GDP growth worsens, as tariff-related macroeconomic challenges linger. We estimate every USD1/bbl decline in Brent prices leads to a ~2% decline in FY26/FY27 PAT for ONGC/OINL.
  - Additionally, any decline in crude oil prices below USD65/bbl may lead to a fall in APM/NW gas realizations, which are priced at 10%/12% slope to Brent.
- While valuations look cheap at 0.7x/1.1x FY27E PB for ONGC/OINL SA, earnings could face further downside risks. Our FY26/FY27 EPS estimates are 15%/11% below consensus for ONGC SA and 12%/15% below consensus for OINL SA.

Exhibit 9: ONGC/OINL trades at par with LTA/mean + 1 S.D. 1yr fwd. P/B



Source: Company, MOFSL

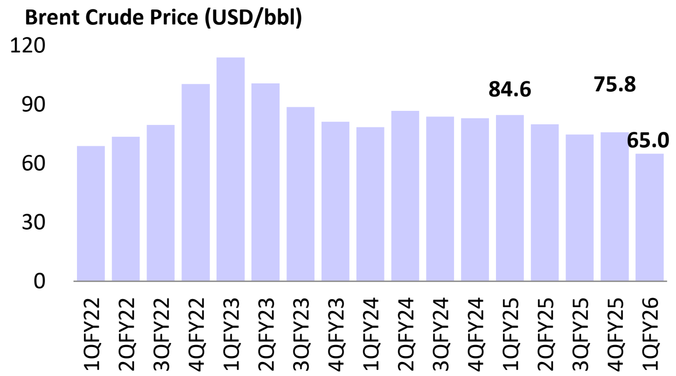
Our top picks: HPCL and MAHGL

- **HPCL** remains our preferred pick among the three OMCs. We model a marketing margin of INR3.3/lit for both MS and HSD in FY26/27, while the current MS and HSD marketing margins are above INR10/lit, respectively. We view the following as key catalysts for the stock: 1) the de-merger and potential listing of the lubricant business, 2) the commissioning of its bottom upgrade unit in 2QCY26, 3) the start of its Rajasthan refinery in FY26, and 4) LPG under-recovery compensation.
  - HPCL currently trades at 1.5x FY26E P/B, which we believe offers a reasonable margin of safety as we estimate FY26E RoE of 17.3%. We value the stock at our SoTP-based TP of INR455/sh. Reiterate BUY.
- **MAHGL:** We expect a 10% CAGR in volume over FY25-27, driven by multiple initiatives implemented by the company, such as collaborating with OEMs to drive conversions of commercial CNG vehicles and providing guaranteed price discounts to new I/C-PNG customers.
  - The stock trades at 12.6x FY26E EPS of INR111.5. We value it at 15x FY27E EPS to arrive at our TP of INR1,760. Reiterate BUY.

Exhibit 10: HPCL's SoTP-based valuation

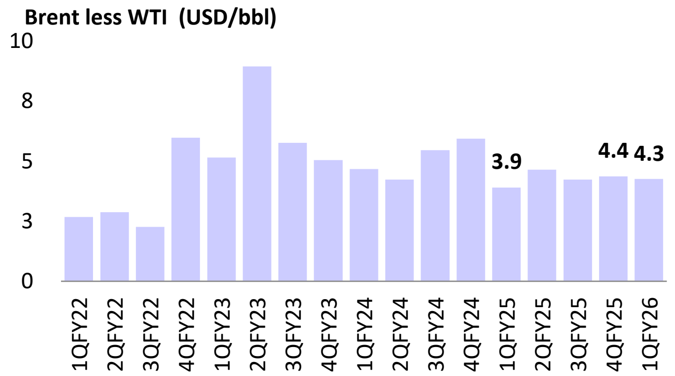
Particulars	Earning metric		Val metric	Multiple	Amount (INR m)
HPCL standalone	Dec'26E EBITDA	2,02,715	EV/EBITDA	6.0	12,23,388
(-) Standalone FY27E Net Debt					6,18,331
Standalone Market Cap					**6,05,057**
+ Lubricant business- value unlocking	FY24 EBITDA	10,000	EV/EBITDA	8.0	80,000
+ MRPL	MOFSL TP	35,650			35,650
+ HMEL	FY24 PAT	9,310	P/E	10.0	93,100
+ Chhara terminal	Book Value	12,232	P/B	1.0	12,232
+ HRRL	Equity invested till date		P/B	0.5	1,40,000
SoTP					**9,66,038**
(/) shares outstanding					**2,128**
TP (INR/share)					**455**

Exhibit 11: Brent crude price (USD/bbl)



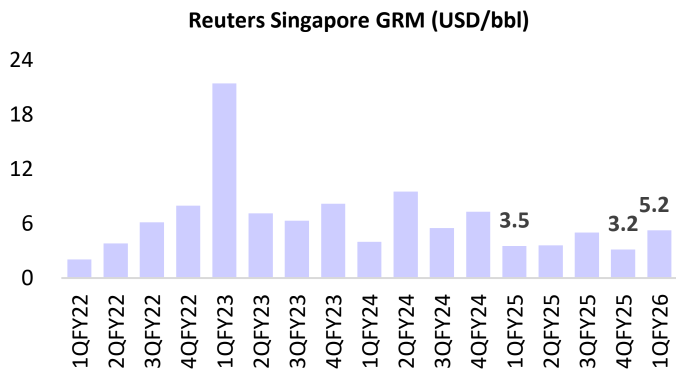
Source: Reuters, MOFSL

Exhibit 12: Brent less WTI (USD/bbl)



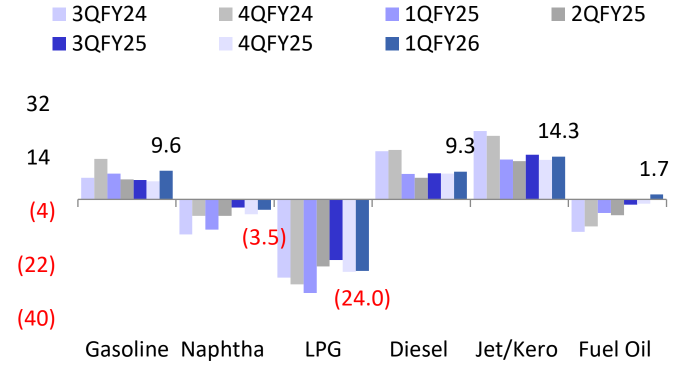
Source: Reuters, MOFSL

Exhibit 13: Singapore GRM (USD/bbl)



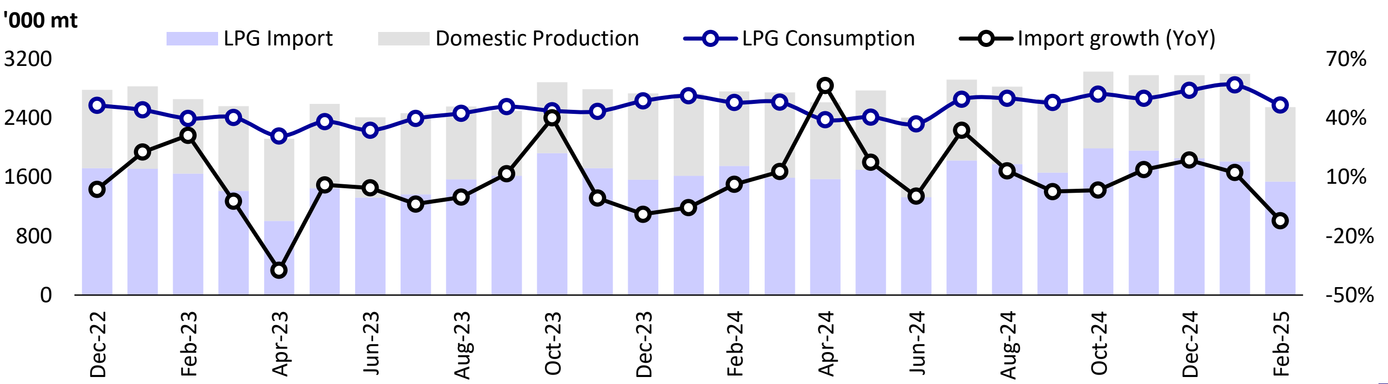
Source: Reuters, MOFSL

Exhibit 14: Various product cracks over Dubai crude (USD/bbl)



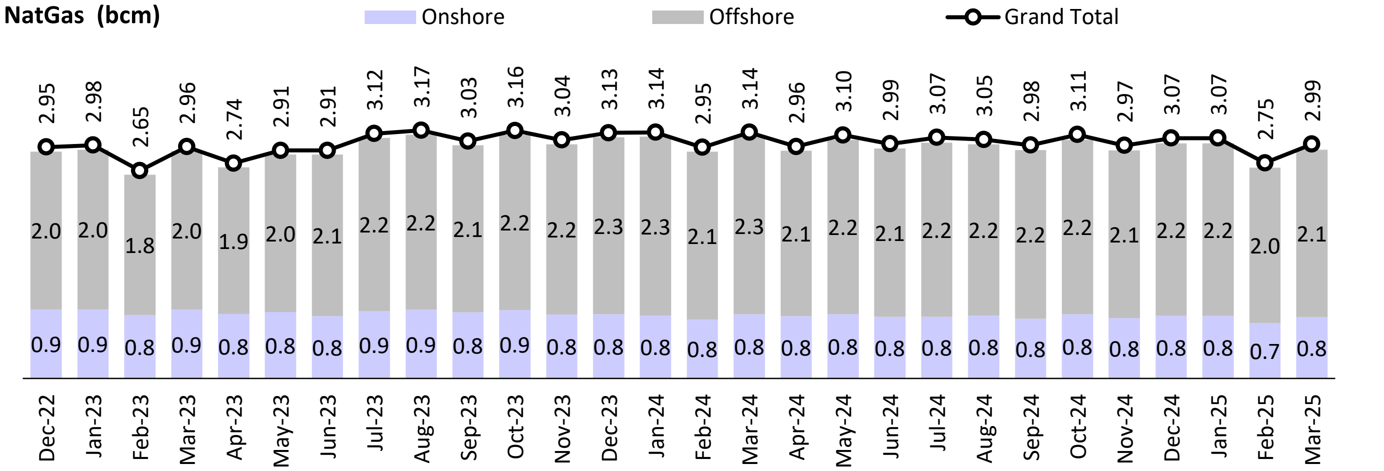
Source: Reuters, MOFSL

Exhibit 15: LPG import, production and consumption trends



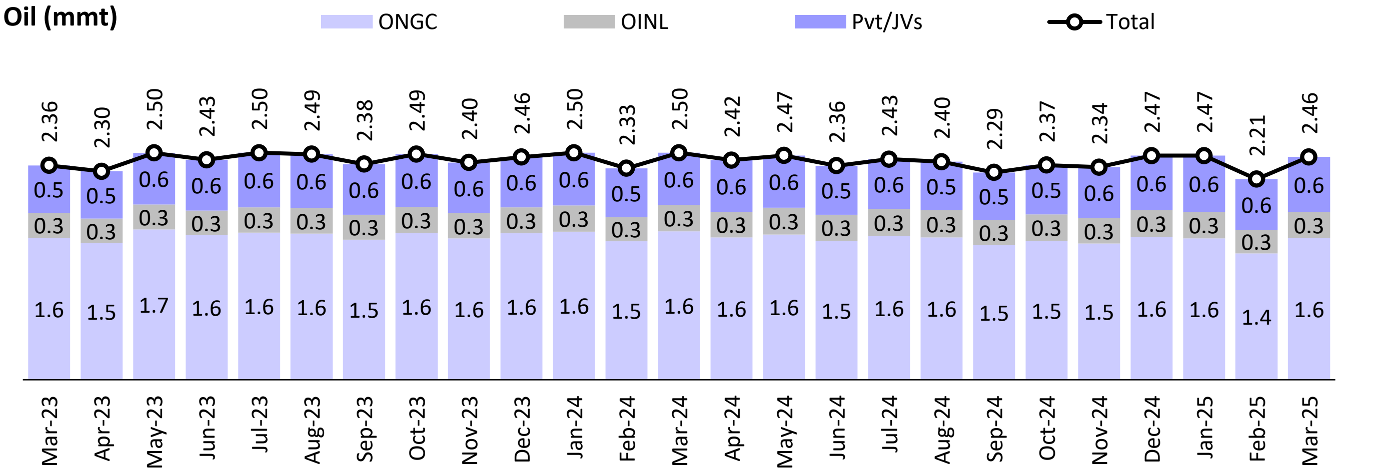
Source: PPAC, MOFSL

Exhibit 16: India's natural gas production



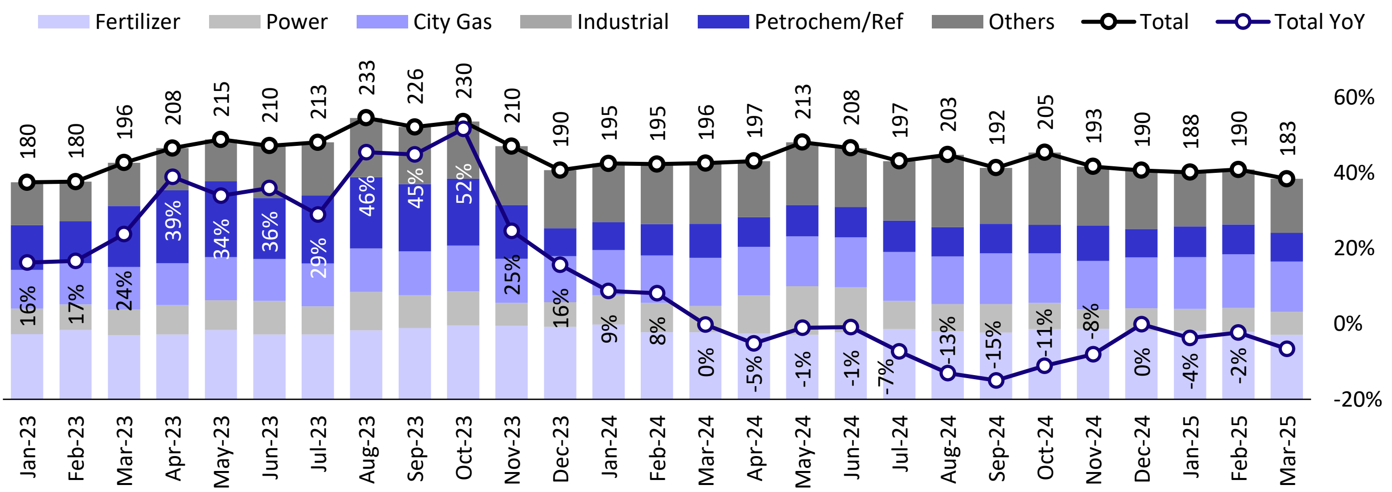
Source: PPAC, MOFSL

Exhibit 17: India's crude oil production



Source: PPAC, MOFSL

Exhibit 18: Sector-wise natural gas consumption in India (mmscmd)



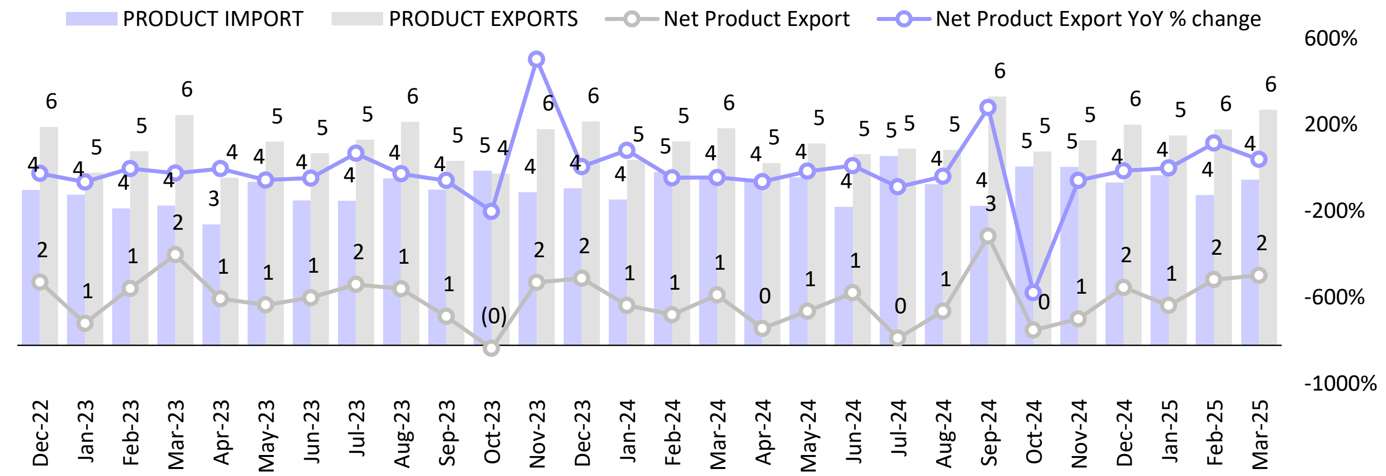
Source: PPAC, MOFSL

Exhibit 19: Sector-wise domestic gas vs. LNG consumption in India (mmscmd)

	Domestic Gas			LNG			Total		
	Mar-25	Mar-24	Feb-25	Mar-25	Mar-24	Feb-25	Mar-25	Mar-24	Feb-25
Fertilizer	9.4	7.4	8.6	44.2	48.1	47.3	53.5	55.5	55.9
Power	15.4	17.0	16.3	3.5	4.9	3.5	18.9	21.9	19.8
City Gas	28.6	27.2	30.6	13.2	12.7	14.0	41.7	39.9	44.6
Industrial	-	-	-	-	-	-	-	-	-
Petrochem/Ref	8.3	7.8	8.2	15.4	20.3	16.5	23.7	28.1	24.6
Others	32.3	37.7	32.1	12.5	12.6	13.4	44.8	50.3	45.5
Total	**93.9**	**97.1**	**95.8**	**88.8**	**98.6**	**94.6**	**182.7**	**195.7**	**190.4**

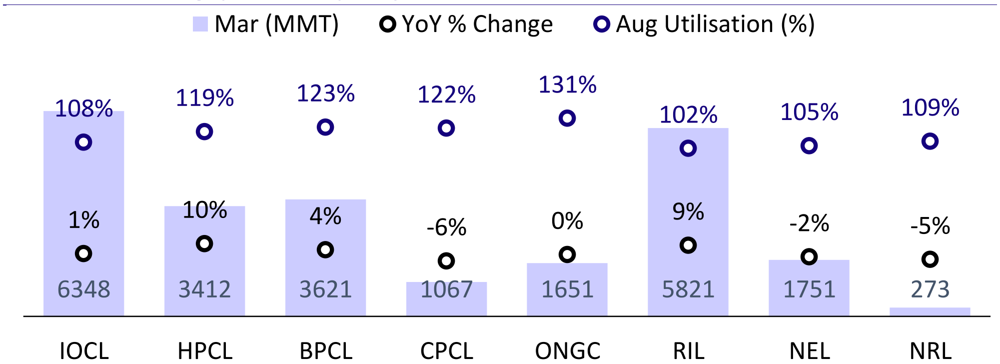
Source: PPAC, MOFSL

Exhibit 20: Refined products – import and export (mmt)



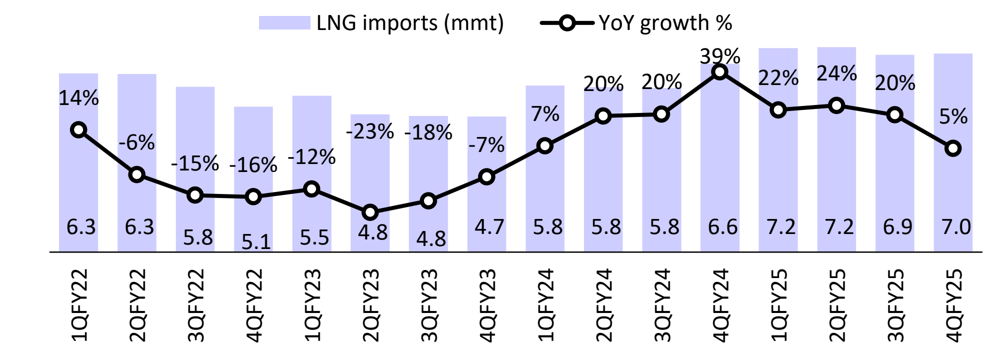
Source: PPAC, MOFSL

Exhibit 21: Throughput and capacity utilization – Indian refiners



Source: PPAC, MOFSL

Exhibit 22: India's LNG import trend



Source: PPAC, MOFSL
Note: Mar'25 data unavailable

Financials and valuations: HPCL (Target Price: INR455) BUY

Financial Snapshot									(INR b)
Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Sales	2,755	2,691	2,332	3,499	4,407	4,339	4,341	3,332	3,409
EBITDA	115	57	160	102	-72	249	166	193	204
Adj. PAT	67	36	107	73	-70	160	67	94	94
Adj. EPS (INR)	31	17	50	34	-33	75	32	44	44
EPS Gr. (%)	-7	-46	193	-32	PL	LP	-58	39	1
BV/Sh.(INR)	143	146	179	195	152	220	240	269	298
Ratios									
Net D:E	0.8	1.3	1.1	1.1	2.1	1.3	1.3	1.1	1.0
RoE (%)	23.9	11.9	30.9	18.4	-19.0	40.4	13.7	17.3	15.6
RoCE (%)	12.9	12.0	14.9	8.3	-7.8	15.9	8.2	9.1	9.0
Payout (%)	43.0	76.0	30.3	27.2	0.0	27.9	33.2	34.1	35.4
Valuations									
P/E (x)	12.6	23.2	7.9	11.6	-12.1	5.3	12.5	9.0	9.0
P/BV (x)	2.8	2.7	2.2	2.0	2.6	1.8	1.7	1.5	1.3
EV/EBITDA (x)	9.6	21.8	7.9	12.6	-20.9	5.9	9.1	7.6	7.2
Div. Yield (%)	2.7	1.6	3.8	2.4	0.0	5.3	2.6	3.8	3.9
FCF Yield (%)	-3.2	-9.9	7.4	4.5	-15.2	16.5	5.7	12.9	7.8

Key Assumptions- HPCL

Particulars	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Exchange Rate (INR/USD)	70.0	70.9	74.3	74.5	80.4	82.8	84.6	86.0	86.2
Brent Crude (USD/bbl)	70.1	61.2	44.4	80.5	96.1	83.0	78.6	65.0	65.0
Market Sales (MMT)	38.7	39.6	36.6	39.1	43.5	46.8	49.8	51.6	53.7
YoY (%)	5	2	(8)	7	11	8	6	4	4
GRM (USD/bbl)	**5.0**	**1.0**	**3.9**	**7.2**	**12.1**	**9.1**	**5.7**	**6.2**	**6.5**
Singapore GRM (USD/bbl)	4.9	3.2	0.5	5.0	10.7	6.6	3.8	5.0	5.0
Prem/(disc) (USD/bbl)	0	(2)	3	2	1	2	2	1.2	1.5
Total Refinery throughput (MMT)	18.4	17.2	16.4	14.0	19.1	22.3	25.3	27.0	27.0
YoY (%)	1%	-7%	-4%	-15%	37%	17%	13%	7%	0%
Refining capacity utilization (%)	**117%**	**109%**	**104%**	**88%**	**85%**	**91%**	**103%**	**110%**	**110%**
Blended marketing margin incld inventory (INR/lit)	**4.3**	**4.0**	**6.3**	**4.3**	**(0.8)**	**5.5**	**4.4**	**4.5**	**4.5**
Consolidated EPS	**31.4**	**17.1**	**50.1**	**34.3**	**-32.8**	**75.2**	**31.6**	**44.0**	**44.2**

Financials and valuations: MAHGL (Target Price: INR1,760) BUY

Financial & Valuation Summary (INR b)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Sales	27.9	29.7	21.5	35.6	63.0	62.4	69.2	74.6	81.6
EBITDA	8.9	10.5	9.3	9.2	11.8	18.4	15.1	16.3	17.8
Adj. PAT	5.5	7.9	6.2	6.0	7.9	12.9	10.4	11.0	12.0
Adj. EPS (INR)	55.3	80.3	62.7	60.4	80.0	130.5	105.8	111.5	121.0
EPS Gr. (%)	14.3	45.2	-21.9	-3.6	32.3	63.2	-18.9	5.4	8.5
BV/Sh.(INR)	242.8	298.9	327.2	364.2	418.5	520.6	596.2	663.1	735.7
Ratios									
Net D:E	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0
RoE (%)	24.3	29.7	20.0	17.5	20.4	27.8	18.9	17.7	17.3
RoCE (%)	24.3	29.8	20.1	17.5	20.5	27.8	19.0	17.8	17.4
Payout (%)	43.5	52.4	36.7	38.1	32.5	40.0	28.4	40.0	40.0
Valuation									
P/E (x)	25.5	17.6	22.5	23.3	17.6	10.8	13.3	12.6	11.7
P/BV (x)	5.8	4.7	4.3	3.9	3.4	2.7	2.4	2.1	1.9
EV/EBITDA (x)	15.4	13.0	14.4	14.6	11.6	7.4	9.0	8.4	7.7
Div. Yield (%)	1.4	2.5	1.6	1.6	1.8	3.7	2.1	3.2	3.4
FCF Yield (%)	2.3	4.0	3.3	1.8	1.8	5.7	2.1	1.7	2.4

Explanation of Investment Rating	
Investment Rating	**Expected return (over 12-month)**
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall be within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL),NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Limited are available on the website at http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf

MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.

MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions. Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg. No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the"1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets (Singapore) Pte. Ltd. ("MOCMSPL") (UEN 201129401Z), which is a holder of a capital markets services license and an exempt financial adviser in Singapore.This report is distributed solely to persons who (a) qualify as "institutional investors" as defined in section 4A(1)(c) of the Securities and Futures Act of Singapore ("SFA") or (b) are considered "accredited investors" as defined in section 2(1) of the Financial Advisers Regulations of Singapore read with section 4A(1)(a) of the SFA. Accordingly, if a recipient is neither an "institutional investor" nor an "accredited investor", they must immediately discontinue any use of this Report and inform MOCMSPL .

In respect of any matter arising from or in connection with the research you could contact the following representatives of MOCMSPL. In case of grievances for any of the services rendered by MOCMSPL write to grievances@motilaloswal.com.

Nainesh Rajani
Email: nainesh.rajani@motilaloswal.com
Contact: (+65) 8328 0276

.

Specific Disclosures

1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
5 Research Analyst has not served as director/officer/employee in the subject company
6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report or date of the public appearance.
- received compensation/other benefits from the subject company in the past 12 months
- any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months

- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.
- Served subject company as its clients during twelve months preceding the date of distribution of the research report.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

This report is meant for the clients of Motilal Oswal only.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 - 71934200 / 71934263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 71881000. Details of Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-40548085.

Grievance Redressal Cell:

Contact Person	Contact No.	Email ID
Ms. Hemangi Date	022 40548000 / 022 67490600	query@motilaloswal.com
Ms. Kumud Upadhyay	022 40548082	servicehead@motilaloswal.com
Mr. Ajay Menon	022 40548083	am@motilaloswal.com

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412 . AMFI: ARN .: 146822. IRDA Corporate Agent – CA0579. Motilal Oswal Financial Services Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Insurance, Bond, NCDs and IPO products.

Customer having any query/feedback/ clarification may write to query@motilaloswal.com. In case of grievances for any of the services rendered by Motilal Oswal Financial Services Limited (MOFSL) write to grievances@motilaloswal.com, for DP to dpgrievances@motilaloswal.com.