

BSE SENSEX  
38,095

S&P CNX  
11,462

**CMP: INR360**

**TP: INR348(-3%)**

**Neutral**



**GAIL (India) Limited**

**Stock Info**

Bloomberg	GAIL IN
Equity Shares (m)	2,255
M.Cap.(INRb)/(USD\$b)	808.9 / 11.7
52-Week Range (INR)	399 / 296
1, 6, 12 Rel. Per (%)	5/-3/-7
12M Avg Val (INR M)	1691
Free float (%)	46.9

**Financials Snapshot (INR b)**

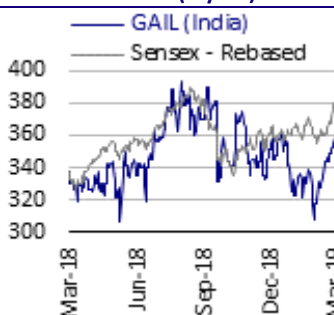
Y/E Mar (INR b)	2019E	2020E	2021E
Sales	743.1	762.3	804.1
EBITDA	107.2	104.9	108.8
Adj. PAT	67.0	66.3	69.7
Adj. EPS (INR)	29.7	29.4	30.9
EPS Gr. (%)	45.7	-1.0	5.1
BV/Sh.(INR)	200.8	219.3	238.7
RoE (%)	15.9	14.2	13.7
RoCE (%)	13.6	12.1	11.8
Payout (%)	37.1	37.3	37.3
<b>Valuations</b>			
P/E (x)	12.1	12.2	11.6
P/BV (x)	1.8	1.6	1.5
EV/EBITDA (x)	7.4	7.3	7.0
Div. Yield (%)	2.6	2.5	2.7

**Shareholding pattern (%)**

As On	Dec-18	Sep-18	Dec-17
Promoter	53.1	53.1	53.6
DII	21.7	23.7	23.8
FII	21.4	19.3	17.7
Others	3.8	4.0	4.9

FII Includes depository receipts

**Stock Performance (1-year)**



**Awaiting last of the triggers...**

...amid rising concerns on LPG, petrochem and trading segments

- The Petroleum & Natural Gas Regulatory Board (PNGRB) is expected to announce a tariff hike for the Hazira-Vijaipur-Jagdishpur (HVJ) and expansion pipelines soon.
- After these, however, there are no significant positive triggers for GAIL in the medium term.
- We highlight how LPG, petrochem and trading segments could disappoint in the future.

**HVJ and HVJ up-gradation account for a large part of the gas transmission**

- HVJ accounted for 29.5mmscmd and HVJ upgradation accounted for 35.9mmscmd of transmission volume, ~62% of the total transmission in FY18.
- GAIL charges levelized tariff of INR25.46/mmBtu on HVJ and INR53.65/mmBtu on HVJ upgradation; it has now proposed for both to be increased to INR175.2/mmBtu and INR88.09/mmBtu, respectively, or an integrated tariff of INR97.04/mmBtu (existing INR34.7/mmBtu) for both pipelines.
- We estimate that if both are approved, it would increase the EPS of GAIL by 81% in FY20. However, in the recent revisions in Sept'18, PNGRB's approved tariffs were ~60% lower than what was proposed. We estimate that ~40% increase in tariff of HVJ and HVJ up-gradation would increase GAIL's EPS by 15% only.

**LPG over-supply to hurt**

- Since 2010, an abundance has been observed in shale Natural Gas Liquids (NGLs) in the US, this has resulted in 8.7% CAGR production growth of LPG from shale to 2.1mnbopd in 2018.
- Shale gas-based LPG is cheaper than refinery-based LPG, and therefore, LPG prices are under stress, with global LPG trade flows changing in favor of US LPG.
- LPG and liquids form 27% of GAIL's EBITDA and we expect weakening LPG prices to have an adverse impact on the same.

**Petrochem expected to witness narrowing margins over next two years**

- PE-naphtha margin is 24% lower than the 5-year average.
- A total of 6mmtpa of PE capacity was added in 2017/18. Supply glut is expected to rise in 2019 with 7mmtpa of incremental capacity coming on stream.
- In line with the global economic slowdown in 2019, demand of polymers is expected to be weak in 2019, resulting in weaker margins.

**US LNG contracts to remain a pain**

- Against incremental capacity of 35mmtpa in 2018 globally, incremental LNG demand stood at 26mmtpa, thus weakening LNG prices. Incremental capacity addition of 30mmtpa is expected in 2019; while demand is expected to be even lower than that in 2018.

Swarnendu Bhushan – Research Analyst (Swarnendu.Bhushan@MotilalOswal.com); +91 22 6129 1529

Sarfraz Bhimani – Research Analyst (Sarfraz.Bhimani@MotilalOswal.com); +91 22 61291566

**Investors are advised to refer through important disclosures made at the last page of the Research Report.**

Motilal Oswal research is available on [www.motilaloswal.com/Institutional-Equities](http://www.motilaloswal.com/Institutional-Equities), Bloomberg, Thomson Reuters, Factset and S&P Capital.

- We also expect the new Final Investment Decision of 211mtpa liquefaction capacity in 2019. On the demand side, the largest consumer of LNG, Japan, is expected to reduce its LNG consumption from 82mmt in 2018 to 62mmt in 2030.
- The expanding glut in supply would weaken the slope to oil, thus making import of US LNG to India uneconomical. The 20 year take-or-pay contract would have an adverse bearing on the trading segment's profitability.

#### Valuation and recommendation

- The only positive in the medium term is the possible tariff hike for HVJ and upgradation pipelines. However, concerns remain on (a) the LPG segment's profitability due to the expanding glut globally, (b) expected weakening in petrochemical segment due to upcoming global expansions, and (c) profitability of long-term US contracts due to declining spot LNG prices.
- GAIL is trading at 12.2x FY20 EPS of INR29.4 and 7.3x FY20 EV/EBITDA. Due to concerns on LPG, trading and petrochem segments, we value the stock at 9x FY21 EPS while adding contribution from the investment to arrive at a target price of INR348. We reiterate **Neutral** rating on the stock.

#### Tariff hike would have a limited impact

- For HVJ and upgradation pipelines, we estimate that if GAIL's proposal is implemented, it would raise its FY20 EPS by 81%.
- However, PNGRB has been awarding much lower tariffs than proposed. We estimate that a 40% rise in tariff of both pipelines would increase FY20 EPS by 15%.
- This would be the last of the positive triggers for the stock in the long run.

#### Exhibit 1: Impact of tariff change on HVJ & HVJ upgradation

	Transmission volume, FY18 (mmscmd)	Tariff (INR/mmBtu)		Increase in EBITDA (INRmn) / EPS (INR)			
		Existing	Proposed	As per GAIL's proposal	20%	40%	60%
HVJ	29.52	25.46	175.2	64,025	2,177	4,354	6,532
HVJ upgradation	35.92	53.65	88.09	17,918	5,582	11,165	16,747
<b>Total change in EBITDA</b>				<b>81,943</b>	<b>7,760</b>	<b>15,519</b>	<b>23,279</b>
<b>Change in PAT</b>				<b>54,574</b>	<b>5,168</b>	<b>10,336</b>	<b>15,504</b>
Change in EPS				24.2	2.3	4.6	6.9
Base FY20 EPS					29.4		
<b>% change in FY20 EPS</b>				<b>81.0</b>	<b>7.7</b>	<b>15.3</b>	<b>23.0</b>

Source: PNGRB, Company, MOFSL

**Exhibit 2: Actual flows through major pipelines of GAIL**

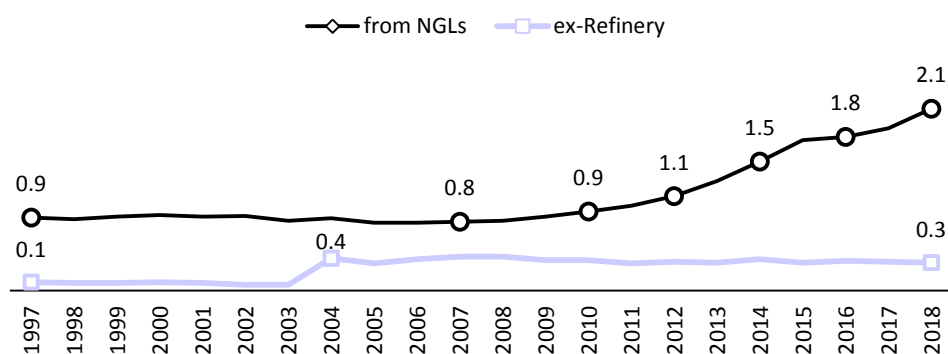
Pipeline name	Flow FY18 (mmscmd)
Hazira-Vijaipur-Jagdishpur pipeline/Dahej-Vijaipur pipeline & spur /Vijaipur-Dadri Pipeline	29.52
DVPL-GREP upgradation (DVPL-II & VDPL)	35.92
Chhainsa-Jhajjar-Hissar pipeline (CJPL)	1.01
Dahej-Uran-Panvel pipeline (DUPL/ DPPL)	13.94
Dadri- Bawana-Nangal pipeline (DBPL)	5.49
Dabhol-Bengaluru pipeline	1.27
Kochi-Kootanad-Bengaluru-Mangalore	2.29
Tripura (Agartala)	1.30
Gujarat	4.37
Rajasthan (Focus Energy)	1.35
Mumbai (Uran-Thal-Usar & Trombay-RCF)	6.43
KG Basin (including RLNG+RIL)	5.40
Cauvery Basin	3.25

Source: PPAC, MOFSL

**LPG segment could be adversely impacted due to increasing glut**

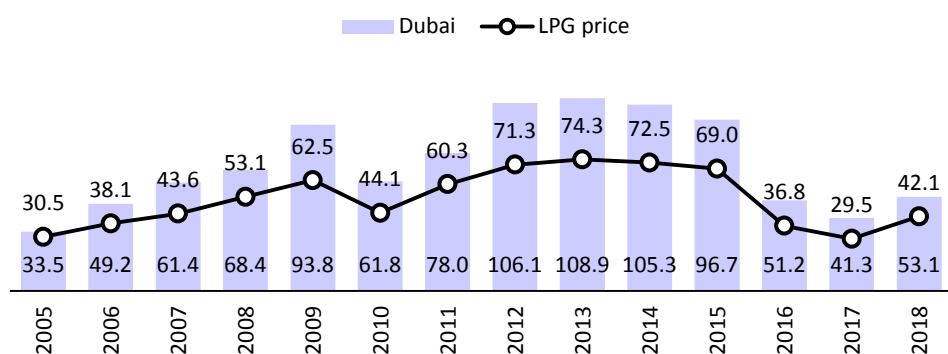
- Since 2010, LPG production in the US has increased by a CAGR of 8.7% due to abundant supply of shale-based NGLs to 2.1mnbopd. Comparatively, refinery-based production has been stagnant at 0.3mnbopd.
- Due to low production cost, shale-based LPG has been pushing down LPG prices. Global trade has also been shifting in favor of the US, pushing down LPG prices ex-Mid East.

**Exhibit 3: Production of LPG from NGLs in the US recorded at 8.7% CAGR since 2010 (mnbopd)**



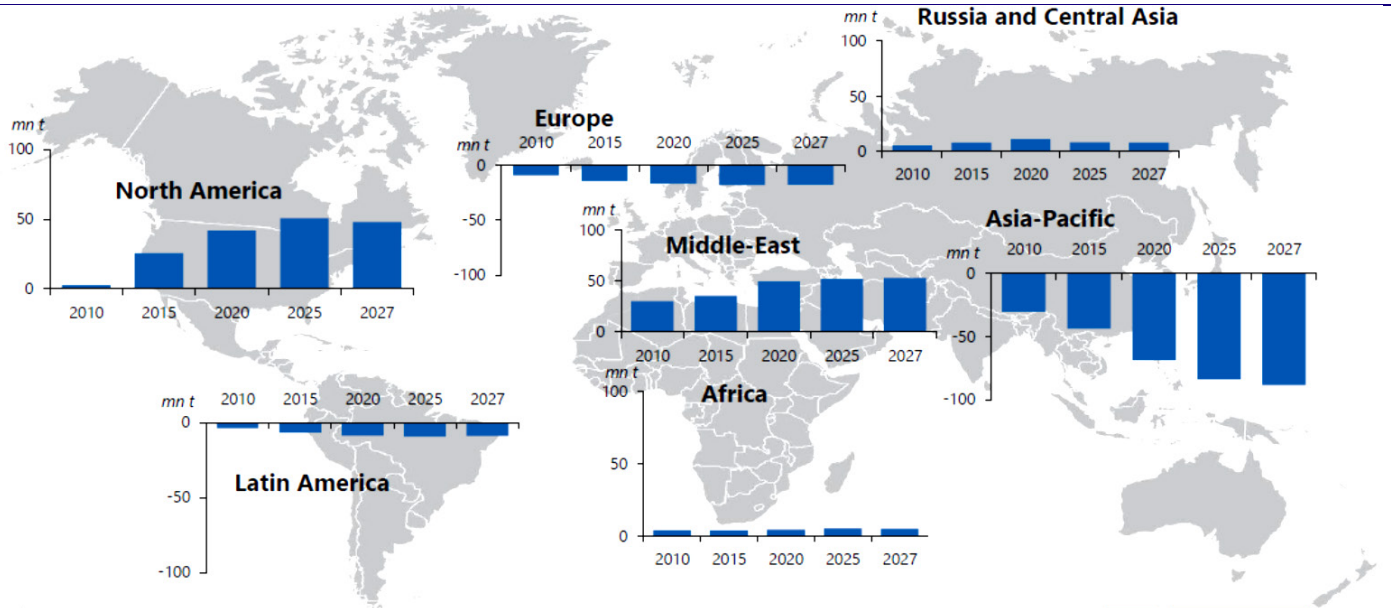
Source: EIA, MOFSL

**Exhibit 4: LPG prices are likely to be subdued due to the excess supply (USD/bbl)**



Source: Bloomberg, MOFSL

**Exhibit 5: Export ex-US likely to increase based on rising shale production**

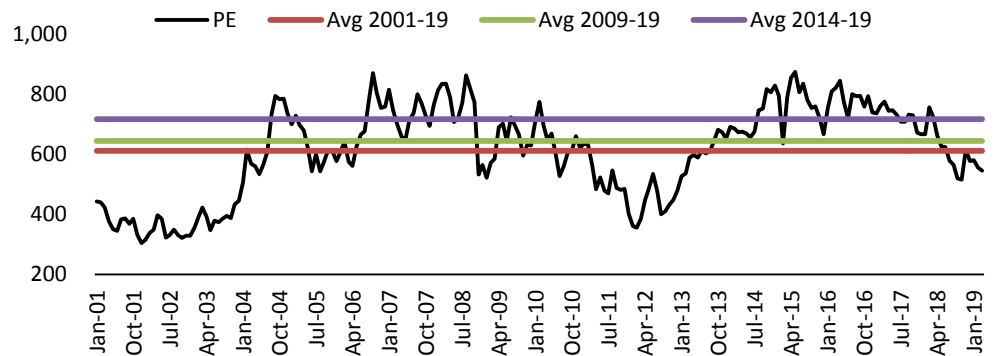


Source: Argus, MOFSL

**Expanding glut in petrochemicals could further weaken margins**

- During 2017-18, global PE capacity increased by ~6mmtpa. In 2019 itself, ~6-7mmtpa of additional capacity is likely to be added.
- Against this, a poor global economy is likely to keep demand under check, thereby affecting petrochemical margins adversely.
- We have already witnessed PE-naphtha margin declining by 24% over 5-year average.

**Exhibit 6: PE-naphtha margins 24% lower than 5-year average**



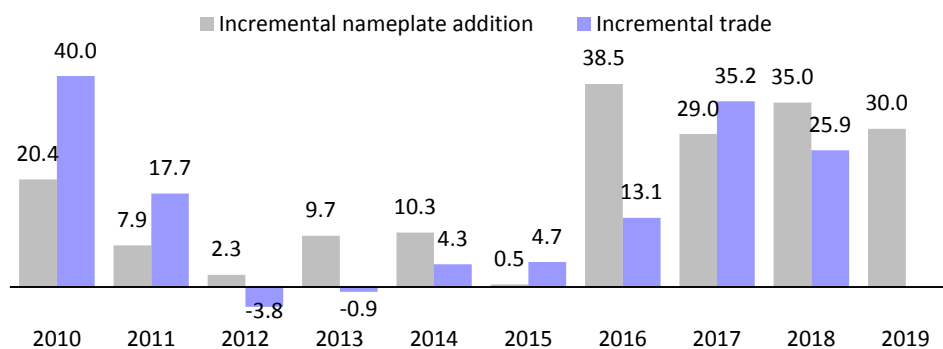
Source: Bloomberg, MOFSL

**US LNG to remain a pain in the long term**

- In 2018, incremental LNG capacity stood at 35mmtpa while demand was only 26mmtpa. In 2019 also, we expect incremental capacity addition of 30mmtpa. Demand in 2019 is likely to be lower as Japan is ramping up its nuclear reactors.
- We expect Japan, the largest importer, to reduce its consumption from 82mmtpa in 2018 to 62mmtpa by 2030. Against this, India and China would continue to increase their LNG consumption.
- However, in 2019 itself, supply projects with a total capacity of 211mmtpa are expected to achieve FID. We expect this to keep LNG prices subdued.

- Due to rising supply, spot LNG prices have remained subdued over the last four months. We estimate GAIL’s US contracts to be ~20% more expensive than spot LNG prices in Asia Pacific. This may result in subdued trading margins for the company.

**Exhibit 7: LNG supply glut expected to expand (mmt)**



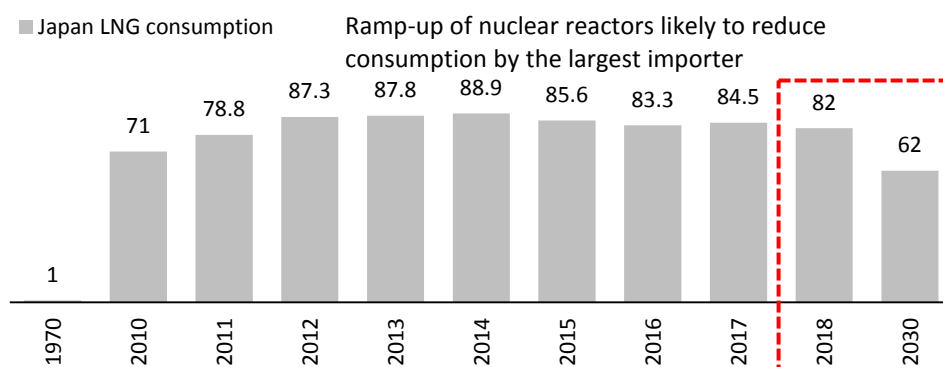
Source: Bloomberg, MOFSL

**Exhibit 8: A total of 211mmtpa capacity expected to achieve financial closure in 2019**

List of FIDs in 2019	Location	Capacity (mmtpa)
Freeport LNG T4	US	5
Sabine Pass LNG T6	US	5
Calcasieu Pass LNG	US	10
Driftwood LNG	US	28
Golden Pass LNG	US	16
Jordan Cove LNG	US	8
Magnolia LNG	US	8
Rio Grande LNG	US	27
Goldboro LNG	Canada	10
Woodfibre LNG	Canada	2
Mozambique LNG (Area 1 - Anadarko-led)	Mozambique	13
Mozambique LNG (Area 4 - Exxon/Eni-led)	Mozambique	15
Nigeria LNG T7	Nigeria	8
BP Senegal/Tortue FLNG	Senegal	3
Arctic LNG 2	Russia	20
Sakhalin 2 expansion	Russia	5
Qatargas expansion	Qatar	30
<b>Total</b>		<b>211</b>

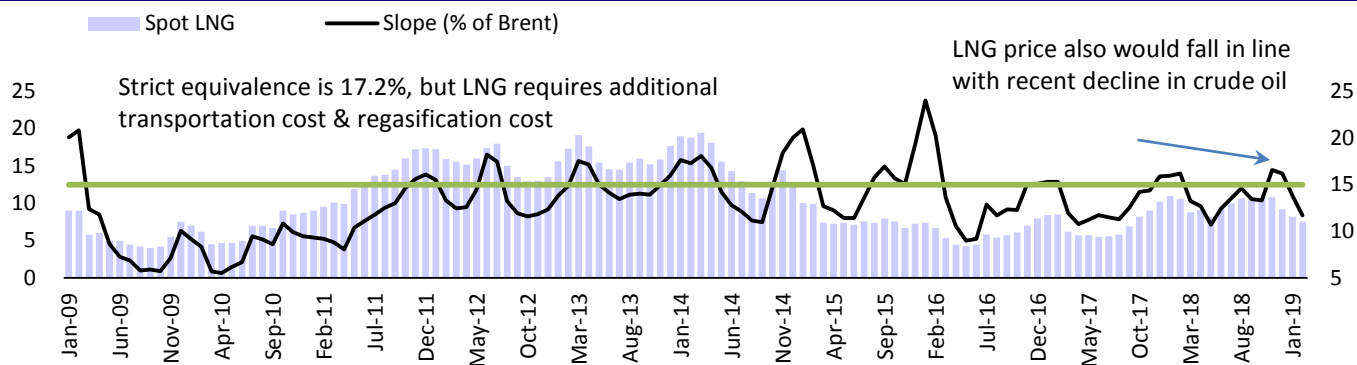
Source: Bloomberg, MOFSL

**Exhibit 9: Largest importer likely to reduce demand drastically (mmtpa)**



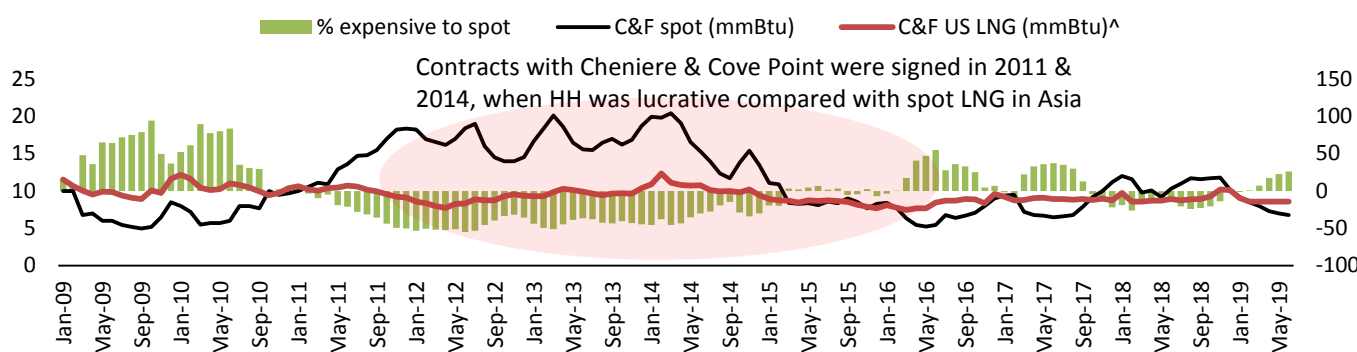
Source: Bloomberg, MOFSL

**Exhibit 10: Spot LNG prices to remain structurally weak (USD/mmBtu)**



Source: Bloomberg, MOFSL

**Exhibit 11: US contracts ~20% expensive than spot LNG prices over the next few months**



^Assuming shipping cost of USD2.5/mmBtu from US to India

Source: Bloomberg, MOFSL

**Valuation and recommendation**

- We acknowledge that in the near term, GAIL’s transmission segment may get a boost when PNGRB revises tariff upwards for HVJ and upgradation pipelines.
- However, we remain concerned on all other segments of the company. LPG segment would suffer from lower LPG prices due to excess supply. Petrochem would also suffer from poorer margins as incremental supply in 2019 far outweighs incremental demand amidst poor global economic growth.
- Trading segment is also likely to suffer due to excess supply of LNG, which is expected to keep spot LNG prices lower than landed US LNG volumes.
- GAIL is trading at 12.2x FY20 EPS of INR29.4 and 7.3x FY20 EV/EBITDA. Due to concerns on LPG, trading and petrochem segments, we value the stock at 9x FY21 EPS while adding contribution from the investment to arrive at a target price of INR348. We reiterate **Neutral** rating on the stock.

**Exhibit 12: Key assumptions**

	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Brent crude (USD/bbl)	107.8	86.0	47.5	49.0	55.6	70.2	70.0	70.0
Exchange Rate (INR/USD)	60.6	61.1	65.5	67.1	64.6	70.4	73.1	74.2
Subsidy (INRb)	19.0	10.0	-	-	-	-	-	-
<b>Natural Gas Transmission</b>								
Total (mmscmd)	97	93	93	100	105	107	107	115
Adj. Average Tariff (INR/mscm)	1,169	997	1,181	1,257	1,295	1,395	1,491	1,452
<b>LPG Transmission</b>								
Volume ('000 MT)	3,030	3,094	2,819	3,363	3,721	3,981	4,181	4,306
Change (%)	-5%	2%	-9%	19%	11%	7%	5%	3%
Average Tariff (INR/MT)	1,329	1,424	1,724	1,530	1,532	1,532	1,532	1,532
<b>Trading</b>								
Volume (mmscmd)	79	72	74	81	86	91	93	96
Margin (INR/mscm)	546	213	519	446	402	836	722	882
<b>Petrochemicals</b>								
Capacity ('000 MT)	450	450	800	800	800	800	800	800
Utilization (%)	100%	98%	42%	72%	84%	90%	90%	100%
Sales ('000 MT)	445	441	334	578	673	720	720	800
Realization (USD/MT)	1,703	1,801	1,420	1,468	1,362	1,292	1,290	1,328
<b>LPG &amp; liq. HC</b>								
Sales ('000 MT)	1,308	1,279	1,087	1,095	1,275	1,250	1,250	1,250
LPG realization (USD/MT)	936	784	468	435	526	598	596	596
<b>EPS (INR/sh)</b>	<b>18.3</b>	<b>13.3</b>	<b>9.9</b>	<b>16.9</b>	<b>20.4</b>	<b>29.7</b>	<b>29.4</b>	<b>30.9</b>

Source: Company, MOFSL

**Exhibit 13: SOTP-based target price stands at INR385/share**

Business	INR/sh	Remarks
PE Multiple (x)	9x	
FY21 adj. EPS	29.2	
Core Business	266	
Listed Investments	70	20% discount to CMP/target price
Unlisted investments	11	30% discount to book value
<b>Target price</b>	<b>348</b>	

Source: MOFSL, Company

## Financials and Valuations

Income Statement										(INR m)
Y/E March	2013	2014	2015	2016	2017	2018	2019E	2020E	2021E	
<b>Net Sales</b>	<b>473,327</b>	<b>572,451</b>	<b>567,420</b>	<b>516,143</b>	<b>480,743</b>	<b>536,612</b>	<b>743,102</b>	<b>762,273</b>	<b>804,126</b>	
Change (%)	17.5	20.9	-0.9	-9.0	-6.9	11.6	38.5	2.6	5.5	
<b>EBITDA</b>	<b>62,792</b>	<b>67,012</b>	<b>46,962</b>	<b>38,960</b>	<b>63,152</b>	<b>76,339</b>	<b>107,182</b>	<b>104,905</b>	<b>108,769</b>	
% of Net Sales	13.3	11.7	8.3	7.5	13.1	14.2	14.4	13.8	13.5	
Depreciation	9,809	11,762	9,743	13,131	13,968	14,151	14,338	14,729	14,741	
Interest	1,950	3,662	3,613	6,400	4,794	2,751	1,425	1,508	1,508	
Other Income	9,545	8,985	8,609	11,576	12,705	9,870	9,308	10,332	11,517	
EO Items (net)		3,450	629		-2,987	277				
<b>PBT</b>	<b>60,578</b>	<b>64,023</b>	<b>42,844</b>	<b>31,005</b>	<b>54,108</b>	<b>69,584</b>	<b>100,728</b>	<b>99,000</b>	<b>104,037</b>	
Tax	20,356	20,271	12,452	8,739	19,079	23,400	33,417	32,670	34,332	
Rate (%)	33.6	31.7	29.1	28.2	35.3	33.6	33.2	33.0	33.0	
<b>Reported PAT</b>	<b>40,222</b>	<b>43,753</b>	<b>30,392</b>	<b>22,266</b>	<b>35,029</b>	<b>46,183</b>	<b>67,311</b>	<b>66,330</b>	<b>69,705</b>	
<b>Adjusted PAT</b>	<b>40,222</b>	<b>41,310</b>	<b>29,947</b>	<b>22,266</b>	<b>38,167</b>	<b>45,976</b>	<b>66,994</b>	<b>66,330</b>	<b>69,705</b>	
Change (%)	10.1	8.8	-30.5	-26.7	57.3	31.8	45.7	-1.5	5.1	

Balance Sheet										(INR m)
Y/E March	2013	2014	2015	2016	2017	2018	2019E	2020E	2021E	
Share Capital	12,685	12,685	12,685	12,685	16,913	22,551	22,551	22,551	22,551	
Reserves	229,593	258,039	278,510	338,261	364,581	380,731	423,073	464,682	508,407	
<b>Net Worth</b>	<b>242,278</b>	<b>270,723</b>	<b>291,195</b>	<b>350,946</b>	<b>381,494</b>	<b>403,281</b>	<b>445,623</b>	<b>487,232</b>	<b>530,958</b>	
Loans	83,645	95,261	80,483	68,457	38,186	17,517	45,000	45,000	45,000	
Deferred Tax	23,001	25,664	33,087	40,714	46,559	46,309	46,309	46,309	46,309	
<b>Capital Employed</b>	<b>348,924</b>	<b>391,648</b>	<b>404,765</b>	<b>460,116</b>	<b>466,239</b>	<b>467,108</b>	<b>536,933</b>	<b>578,542</b>	<b>622,267</b>	
Gross Fixed Assets	311,490	340,563	413,893	433,777	452,646	469,633	488,046	516,387	545,206	
Less: Depreciation	114,415	125,797	215,047	149,107	167,584	181,736	196,074	210,802	225,544	
<b>Net Fixed Assets</b>	<b>197,075</b>	<b>214,766</b>	<b>198,845</b>	<b>284,670</b>	<b>285,062</b>	<b>287,898</b>	<b>291,972</b>	<b>305,585</b>	<b>319,663</b>	
Capital WIP	89,778	97,279	122,352	34,202	38,034	55,140	56,101	56,101	56,101	
Investments	37,190	41,030	43,224	85,847	95,096	99,531	99,531	99,531	99,531	
<b>Current Assets</b>										
Inventory	15,353	22,548	20,811	16,094	16,984	19,195	26,467	27,149	28,640	
Debtors	25,513	28,120	30,945	38,095	38,282	40,515	59,041	60,564	63,889	
Cash & Bank Balance	23,579	26,510	11,416	17,939	13,419	25,294	44,772	73,819	105,760	
Loans/Adv. & Other Assets	58,353	67,861	101,339	81,127	75,823	99,558	99,558	99,558	99,558	
<b>Current Liab. &amp; Prov.</b>										
Liabilities	79,970	87,935	107,610	86,355	81,327	145,740	126,226	129,482	136,591	
Provisions	17,949	18,530	16,558	11,503	15,133	14,283	14,283	14,283	14,283	
<b>Net Current Assets</b>	<b>24,881</b>	<b>38,573</b>	<b>40,344</b>	<b>55,397</b>	<b>48,047</b>	<b>24,539</b>	<b>89,329</b>	<b>117,326</b>	<b>146,973</b>	
Misc. Expenses										
<b>Application of Funds</b>	<b>348,924</b>	<b>391,648</b>	<b>404,765</b>	<b>460,116</b>	<b>466,239</b>	<b>467,108</b>	<b>536,933</b>	<b>578,542</b>	<b>622,267</b>	

E: MOFSL Estimates



## Financials and Valuations

### Ratios

Y/E March	2013	2014	2015	2016	2017	2018	2019E	2020E	2021E
<b>Basic (INR)</b>									
EPS	17.8	18.3	13.3	9.9	16.9	20.4	29.7	29.4	30.9
Cash EPS	22.2	24.6	17.8	15.7	21.7	26.8	36.2	35.9	37.4
Book Value	107.4	120.1	129.1	155.6	169.2	182.1	200.8	219.3	238.7
DPS	5.4	5.9	3.4	3.1	6.5	6.3	9.2	9.1	9.6
Payout (incl. dvd tax)	35.3	35.3	30.1	37.7	50.1	37.1	37.1	37.3	37.3
<b>Valuation (x)</b>									
P/E	20.2	19.7	27.1	36.5	21.3	17.7	12.1	12.2	11.6
Adj. P/E (for investments)	15.6	15.2	21.0	28.2	16.4	13.7	9.4	9.5	9.0
Cash P/E	16.2	14.6	20.2	22.9	16.6	13.5	9.9	10.0	9.6
EV / EBITDA	7.6	7.4	10.4	10.8	9.0	10.0	7.4	7.3	7.0
EV / Sales	1.2	1.0	1.0	1.1	1.4	1.6	1.2	1.1	1.1
Price / Book Value	3.4	3.0	2.8	2.3	2.1	2.0	1.8	1.6	1.5
Dividend Yield (%)	1.5	1.6	0.9	0.9	1.8	1.8	2.6	2.5	2.7
<b>Profitability Ratios (%)</b>									
RoE	17.5	17.1	10.8	6.9	9.6	11.8	15.9	14.2	13.7
RoCE	13.1	11.9	8.2	6.2	8.7	10.2	13.6	12.1	11.8
RoIC	19.7	17.8	11.6	6.7	9.9	13.6	19.9	17.6	17.7
<b>Turnover Ratios</b>									
Debtors (No. of Days)	20	18	20	27	29	28	29	29	29
Fixed Asset Turnover (x)	1.4	1.5	1.4	1.1	1.0	1.1	1.4	1.3	1.3
<b>Leverage Ratio</b>									
Net Debt / Equity (x)	0.25	0.25	0.24	0.14	0.06	-0.02	0.0	-0.1	-0.1

### Cash Flow Statement

Y/E March	2013	2014	2015	2016	2017	2018	2019E	2020E	2021E
<b>(INR m)</b>									
OP/(Loss) before Tax	60,578	64,023	42,844	31,005	54,108	69,584	100,728	99,000	104,037
Depreciation	9,809	11,762	9,743	13,131	13,968	14,151	14,338	14,729	14,741
Misc	0	0	0	0	0	0	0	0	0
Tax paid	-20,356	-20,271	-12,452	-8,739	-19,079	-23,400	-33,417	-32,670	-34,332
Change in deferred tax liability	5,314	2,663	7,423	7,627	5,845	-250	0	0	0
(Inc)/Dec in Wkg. Capital	-1,280	-10,762	-16,864	-8,531	2,830	35,383	-45,312	1,050	2,293
<b>CF from Op. Activity</b>	<b>54,065</b>	<b>47,416</b>	<b>30,693</b>	<b>34,493</b>	<b>57,672</b>	<b>95,468</b>	<b>36,337</b>	<b>82,109</b>	<b>86,739</b>
(Inc)/Dec in FA & CWIP	-58,661	-36,954	-18,895	-10,805	-10,000	-16,026	-19,373	-28,341	-28,819
<b>Free Cash Flow</b>	<b>-4,596</b>	<b>10,462</b>	<b>11,798</b>	<b>23,688</b>	<b>47,672</b>	<b>79,442</b>	<b>16,964</b>	<b>53,768</b>	<b>57,920</b>
(Pur)/Sale of Investments	-1,701	-3,840	-2,194	-42,624	-9,249	-4,434	0	0	0
<b>CF from Inv. Activity</b>	<b>-60,362</b>	<b>-40,794</b>	<b>-21,089</b>	<b>-53,429</b>	<b>-19,249</b>	<b>-20,461</b>	<b>-19,373</b>	<b>-28,341</b>	<b>-28,819</b>
Issue of Shares	0	0	0	0	0	0	0	0	0
Others	22	130	-771	45,883	4,862	-25,327	0	0	0
Inc / (Dec) in Debt	34,752	11,616	-14,778	-12,026	-30,270	-20,669	27,483	0	0
Dividends Paid	-14,211	-15,437	-9,148	-8,399	-17,535	-17,135	-24,969	-24,721	-25,979
<b>CF from Fin. Activity</b>	<b>20,563</b>	<b>-3,692</b>	<b>-24,698</b>	<b>25,458</b>	<b>-42,943</b>	<b>-63,132</b>	<b>2,514</b>	<b>-24,721</b>	<b>-25,979</b>
<b>Inc / ( Dec) in Cash</b>	<b>14,266</b>	<b>2,930</b>	<b>-15,093</b>	<b>6,522</b>	<b>-4,520</b>	<b>11,875</b>	<b>19,478</b>	<b>29,047</b>	<b>31,941</b>
Add: Opening Balance	9,313	23,579	26,510	11,416	17,939	13,419	25,294	44,772	73,819
<b>Closing Balance</b>	<b>23,579</b>	<b>26,510</b>	<b>11,416</b>	<b>17,939</b>	<b>13,419</b>	<b>25,294</b>	<b>44,772</b>	<b>73,819</b>	<b>105,760</b>

E: MOFSL Estimates

## NOTES

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 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 Securities Ltd. (MOSL)\* is a SEBI Registered Research Analyst having registration no. INH000000412. MOSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a listed public company, the details in respect of which are available on [www.motilaloswal.com](http://www.motilaloswal.com). 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 (MCX) & National Commodity & Derivatives Exchange Ltd. (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) & National Securities Depository Limited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOSL 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 MOSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOSL 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 MOSL 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 Securities 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](http://www.nseindia.com), [www.bseindia.com](http://www.bseindia.com). Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOSL 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 MOSL & 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 Securities Limited (MOSL) 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 MOSL 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 MOSL, 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., MOSL 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") (Co.Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

#### Specific Disclosures

- 1 MOSL, 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 MOSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOSL, 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 MOSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOSL has not engaged in market making activity for the subject company

The associates of MOSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company
- received compensation/other benefits from the subject company in the past 12 months
- 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 MOSL 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.

The associates of MOSL 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 MOSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOSL 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 MOSL 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 MOSL. 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. MOSL 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. MOSL, 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 MOSL. 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 MOSL 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 MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOSL 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.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 3080 1000. Compliance Officer: Neeraj Agarwal, Email Id: [na@motilaloswal.com](mailto:na@motilaloswal.com), Contact No.:022-38281085.

Registration details: MOSL: SEBI Registration: INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) offers wealth management solutions. \*Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. \*Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. \* Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products.

\* MOSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench. The existing registration no(s) of MOSL would be used until receipt of new MOFSL registration numbers.