

# Mahanagar Gas

BSE SENSEX	S&P CNX
35,593	10,652
Bloomberg	MAHGL IN
Equity Shares (m)	99
M.Cap.(INRb)/(USDb)	90.9 / 1.3
52-Week Range (INR)	1133 / 757
1, 6, 12 Rel. Per (%)	4/2/-9
12M Avg Val (INR M)	507
Free float (%)	57.5

## Financials & Valuations (INR b)

Y/E March	2019E	2020E	2021E
Sales	28.4	31.7	35.8
EBITDA	9.2	9.3	10.1
Adj. PAT	5.6	5.9	6.6
Adj. EPS (INR)	57.1	59.8	66.8
EPS Gr. (%)	18.1	4.7	11.6
BV/Sh.(INR)	244.5	278.4	316.2
RoE (%)	25.0	22.9	22.5
RoCE (%)	25.0	22.9	22.5
Payout (%)	43.3	43.3	43.3
<b>Valuation</b>			
P/E (x)	15.8	15.1	13.5
P/BV (x)	3.7	3.2	2.8
EV/EBITDA (x)	9.1	8.4	7.3
Div. Yield (%)	2.3	2.4	2.7

Estimate change



TP change



Rating change


**CMP: INR920**
**TP: INR1300 (+41%)**
**Buy**

## Volume growth impressive; EBITDA/scm outperformance driven by Fx

- Against our expectation of +6% volume growth, MAHGL's total volume growth came in at +8% YoY for 3QFY19. INR appreciation helped the company to increase its EBITDA/scm from INR8.1 in 2QFY19 to INR8.8 in the quarter. Led by higher volumes and margins, EBITDA came in at INR2.4b (est. INR2.2b, +19% YoY, +8% QoQ), while PAT came in at INR1.5b (est. INR1.3b, +20% YoY, +9% QoQ).
- CNG segment** grew at 8% YoY while total PNG growth stood at 7%. Within PNG, domestic volume grew at 13% YoY, 6% QoQ. MAHGL's total sales volume stood at 2.96mmscmd, a growth of 8% YoY, flat sequentially.
- EBITDA/scm:** After EBITDA/scm of INR8.1 in 1HFY19, the same grew to INR8.8 in the quarter. The last price hike taken reflected a much higher INR and appreciation in the same resulted in margin expansion.

## Valuation and view

- MAHGL's performance has been encouraging in terms of volume growth. However, its EBITDA/scm is the highest among listed players and looks unsustainable in the long term. We increase our EBITDA/scm assumption to INR8.5 for FY19, but retain our earlier assumption of INR7.9 for FY20 and INR7.8 for FY21.
- With 9MFY19 EPS at INR41.8, we raise our FY19 EPS estimate from INR53.7 to INR57.1. EPS estimates for FY20 and FY21 have been marginally raised. Against estimated 10% volume growth in FY19, we expect volume growth of ~9% in FY20 and FY21. We believe that the government's focus on reducing pollution would enable better incentives for adoption of CNG in transportation as well as in industrial/commercial segments. The stock trades at 15.1x FY20E EPS of INR59.8. We value MAHGL at 20x Dec'20 EPS to arrive at a fair value of INR1,300/share, implying an upside of 41%. Maintain **Buy**.

## Standalone - Quarterly Earning Model

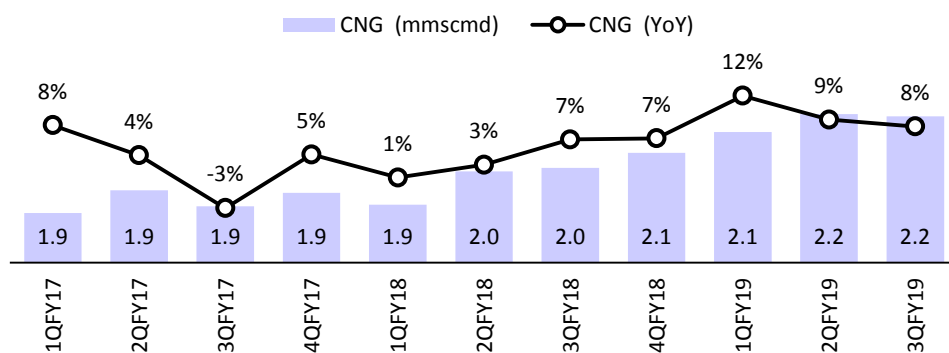
Y/E March	FY18				FY19				(INR Million)			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	FY18	FY19E	FY19	Var. vs Est.
Net Sales	5,309	5,338	5,814	5,870	6,193	6,965	7,527	7,788	22,330	28,436	6,845	10%
YoY Change (%)	9.8	2.5	15.3	11.7	16.7	30.5	29.5	32.7	9.8	27.3	28.2	
Total Expenditure	3,276	3,335	3,805	4,108	4,084	4,750	5,136	5,336	14,524	19,275	4,679	10%
EBITDA	2,033	2,003	2,009	1,762	2,109	2,215	2,391	2,451	7,806	9,160	2,166	10%
EBITDA/SCM	8.7	8.1	8.0	7.0	8.1	8.1	8.8	8.8	7.9	8.5	8.1	8%
Margins (%)	38.3	37.5	34.6	30.0	34.1	31.8	31.8	31.5	35.0	32.2	31.6	
Depreciation	246	259	268	339	295	308	328	458	1,112	1,388	356	-8%
Interest	2	0	0	1	1	1	1	0	3	3	0	
Other Income	120	139	141	174	153	182	204	303	574	842	162	26%
PBT	1,904	1,883	1,883	1,595	1,967	2,087	2,266	2,297	7,265	8,611	1,972	15%
Tax	661	635	643	548	684	724	783	779	2,487	2,970	668	17%
Rate (%)	34.7	33.7	34.1	34.3	34.8	34.7	34.6	33.9	34.2	34.5	33.9	
Reported PAT	1,243	1,248	1,240	1,048	1,283	1,363	1,483	1,518	4,779	5,641	1,303	14%
Adj PAT	1,243	1,248	1,240	1,048	1,283	1,363	1,483	1,518	4,779	5,641	1,303	14%
YoY Change (%)	34.1	22.1	25.2	5.3	3.2	9.2	19.6	44.9	21.5	18.1	4.4	
Margins (%)	23.4	23.4	21.3	17.8	20.7	19.6	19.7	19.5	21.4	19.8	19.0	
<b>Sales Volumes (mmscmd)</b>												
CNG	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.0	2.2	2.1	3%
PNG - Domestic	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	3%
PNG - Industry/ Commercial	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	-5%
PNG - Total	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.7	0.8	0.8	-1%
Total Volumes	2.6	2.7	2.7	2.8	2.9	3.0	3.0	3.1	2.7	3.0	2.9	2%

E: MOSL Estimates

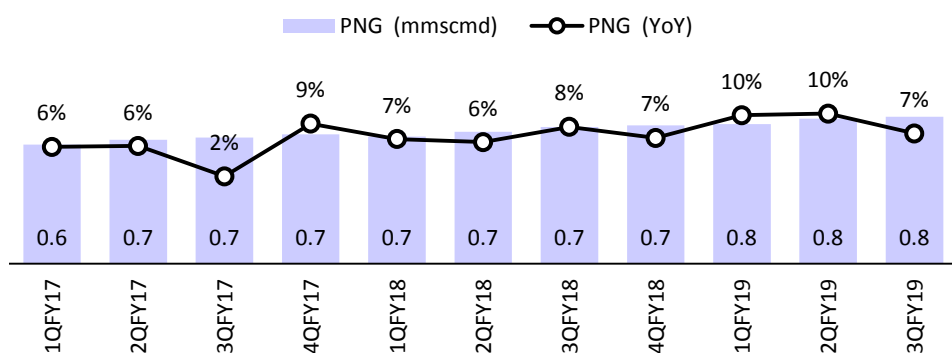
Swarnendu Bhushan – Research analyst (Swarnendu.Bhushan@MotilalOswal.com); +91 22 6129 1529

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

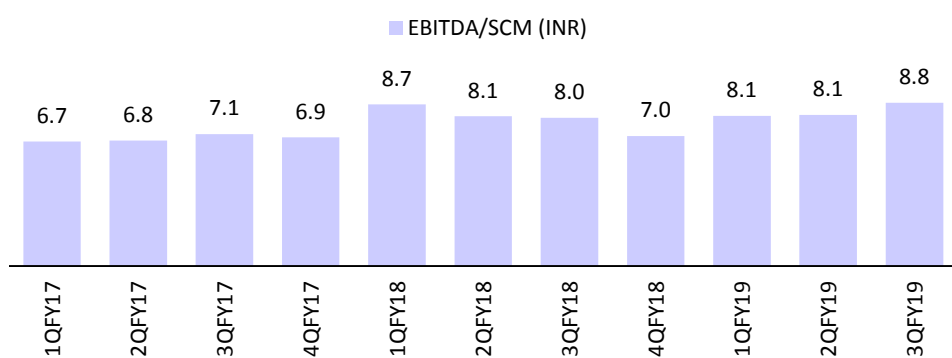
Motilal Oswal research is available on [www.motilaloswal.com/Institutional-Equities](http://www.motilaloswal.com/Institutional-Equities), Bloomberg, Thomson Reuters, Factset and S&P Capital.

**Exhibit 1: CNG volumes increase 8% YoY in 3QFY19**

Source: Company, MOSL

**Exhibit 2: PNG volumes were up 7% YoY to 0.8mmscmd**

Source: Company, MOSL

**Exhibit 3: EBITDA/scm stood at INR8.8**

Source: Company, MOSL

**Valuation and view**

- MGL's performance has been encouraging in terms of volume growth. EBITDA/scm has also improved primarily due to INR appreciation. However, its margin is the highest among listed players. We believe that such high margins are not sustainable in the long term.
- We raise our FY19 EPS estimate from INR53.7 to INR57.1. This reflects both the higher volume and higher margin registered in the quarter. We have also raised our margin estimates for 4QFY19, while EPS estimates for FY20 and FY21 are marginally raised. Its volume growth appears to be the highest since FY14. Due to focus on pollution and implementation of BS-VI from 2020, we believe that ~9% volume growth is sustainable for the next 2-3 years. The stock trades at 15.1x FY20E EPS of INR59.8. We value MAHGL at 20x Dec'20 EPS to arrive at a fair value of INR1,300/share, implying an upside of 41%. Maintain **Buy**.

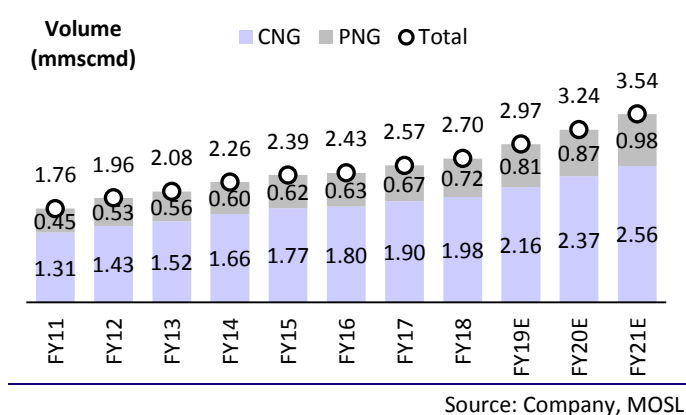
**Exhibit 4: We value MGL at 20x Dec'20 EPS to arrive at a fair value of INR1,300/share**

PE Multiple (x)	18	20	22.5	25
Dec'20 EPS (INR)	65.0	65.0	65.0	65.0
<b>Target Price (INR)</b>	<b>1,170</b>	<b>1,300</b>	<b>1,463</b>	<b>1,626</b>
CMP (INR)	920	920	920	920
Upside/Downside (%)	27%	41%	59%	77%

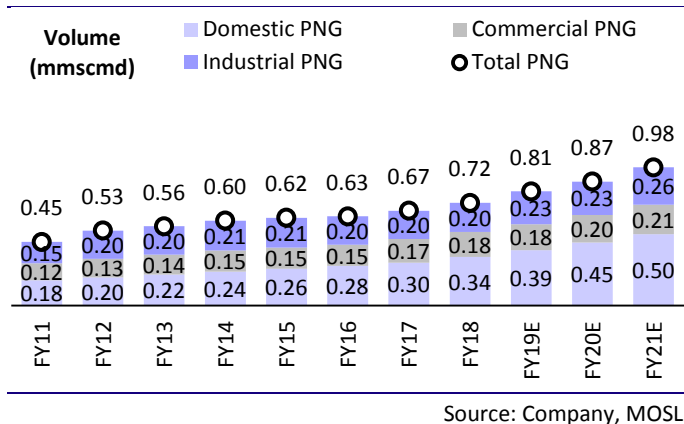
Source: Company, MOSL

## Story in charts

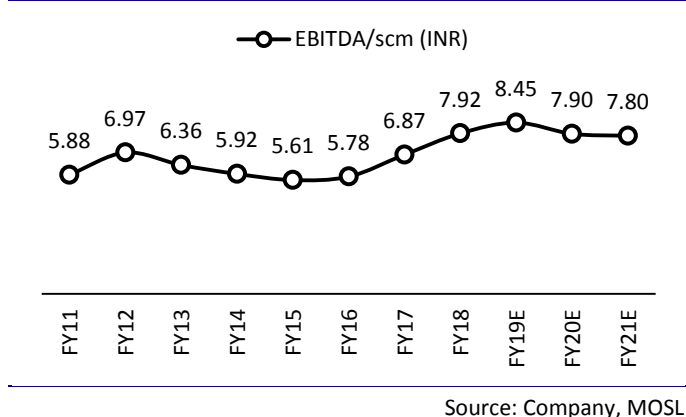
**Exhibit 5: Volume growth to continue, CNG to lead**



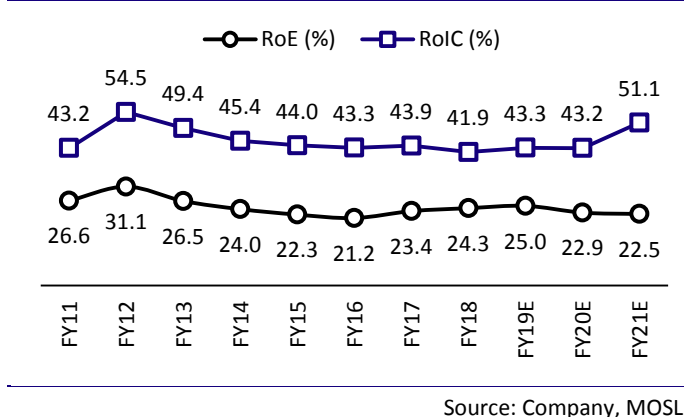
**Exhibit 6: Domestic and commercial volumes to drive PNG volumes**



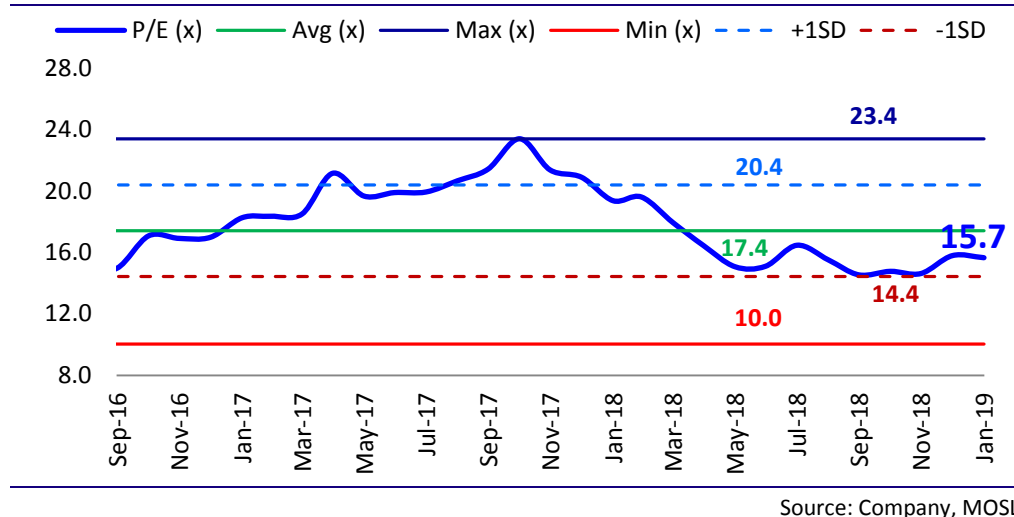
**Exhibit 7: EBITDA/scm to stabilize at approx. INR8.0**



**Exhibit 8: Return ratios to remain strong**



**Exhibit 9: MAHGL – one-year forward P/E**



## Financials and Valuations

Standalone - Income Statement								(INR m)
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
<b>Total Income from Operations</b>	<b>18,852</b>	<b>20,949</b>	<b>20,783</b>	<b>20,340</b>	<b>22,330</b>	<b>28,436</b>	<b>31,699</b>	<b>35,758</b>
Change (%)	24.5	11.1	-0.8	-2.1	9.8	27.3	11.5	12.8
Raw Materials	11,443	12,957	12,297	10,184	10,291	14,203	16,935	19,781
Employees Cost	598	691	563	600	670	737	805	878
Other Expenses	1,928	2,404	2,830	3,114	3,563	4,335	4,613	5,032
<b>Total Expenditure</b>	<b>13,970</b>	<b>16,053</b>	<b>15,690</b>	<b>13,898</b>	<b>14,524</b>	<b>19,275</b>	<b>22,353</b>	<b>25,691</b>
% of Sales	74.1	76.6	75.5	68.3	65.0	67.8	70.5	71.8
<b>EBITDA</b>	<b>4,882</b>	<b>4,897</b>	<b>5,093</b>	<b>6,442</b>	<b>7,806</b>	<b>9,160</b>	<b>9,346</b>	<b>10,067</b>
Margin (%)	25.9	23.4	24.5	31.7	35.0	32.2	29.5	28.2
Depreciation	807	799	826	951	1,112	1,388	1,557	1,647
<b>EBIT</b>	<b>4,075</b>	<b>4,098</b>	<b>4,267</b>	<b>5,490</b>	<b>6,694</b>	<b>7,772</b>	<b>7,788</b>	<b>8,420</b>
Int. and Finance Charges	2	12	22	10	3	3	0	0
Other Income	345	407	472	527	574	842	1,226	1,628
<b>PBT bef. EO Exp.</b>	<b>4,418</b>	<b>4,493</b>	<b>4,716</b>	<b>6,007</b>	<b>7,265</b>	<b>8,611</b>	<b>9,014</b>	<b>10,048</b>
EO Items	0	0	0	0	0	0	0	0
<b>PBT after EO Exp.</b>	<b>4,418</b>	<b>4,493</b>	<b>4,716</b>	<b>6,007</b>	<b>7,265</b>	<b>8,611</b>	<b>9,014</b>	<b>10,048</b>
Total Tax	1,445	1,483	1,607	2,072	2,487	2,970	3,106	3,453
Tax Rate (%)	32.7	33.0	34.1	34.5	34.2	34.5	34.5	34.4
<b>Reported PAT</b>	<b>2,972</b>	<b>3,010</b>	<b>3,109</b>	<b>3,934</b>	<b>4,779</b>	<b>5,641</b>	<b>5,908</b>	<b>6,595</b>
<b>Adjusted PAT</b>	<b>2,972</b>	<b>3,010</b>	<b>3,109</b>	<b>3,934</b>	<b>4,779</b>	<b>5,641</b>	<b>5,908</b>	<b>6,595</b>
Change (%)	-0.4	1.3	3.3	26.5	21.5	18.1	4.7	11.6
Margin (%)	15.8	14.4	15.0	19.3	21.4	19.8	18.6	18.4

Standalone - Balance Sheet								(INR m)
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
Equity Share Capital	893	893	893	988	988	988	988	988
Total Reserves	12,076	13,181	14,386	17,413	19,966	23,163	26,511	30,248
<b>Net Worth</b>	<b>12,970</b>	<b>14,075</b>	<b>15,280</b>	<b>18,400</b>	<b>20,954</b>	<b>24,151</b>	<b>27,499</b>	<b>31,236</b>
Total Loans	80	156	138	27	12	0	0	0
Deferred Tax Liabilities	887	1,027	1,181	1,376	1,748	1,748	1,748	1,748
<b>Capital Employed</b>	<b>13,937</b>	<b>15,258</b>	<b>16,599</b>	<b>19,804</b>	<b>22,714</b>	<b>25,899</b>	<b>29,247</b>	<b>32,984</b>
Gross Block	15,176	16,714	18,450	14,775	18,159	21,512	22,982	24,076
Less: Accum. Deprn.	5,261	6,074	6,854	1,727	2,839	4,228	5,785	7,432
<b>Net Fixed Assets</b>	<b>9,915</b>	<b>10,640</b>	<b>11,596</b>	<b>13,047</b>	<b>15,320</b>	<b>17,284</b>	<b>17,197</b>	<b>16,644</b>
Capital WIP	3,454	3,796	4,289	4,115	3,566	1,213	743	649
<b>Total Investments</b>	<b>3,421</b>	<b>3,715</b>	<b>3,882</b>	<b>4,667</b>	<b>6,877</b>	<b>6,877</b>	<b>6,877</b>	<b>6,877</b>
<b>Curr. Assets, Loans&amp;Adv.</b>	<b>2,904</b>	<b>3,505</b>	<b>3,797</b>	<b>4,413</b>	<b>4,340</b>	<b>9,993</b>	<b>15,051</b>	<b>20,831</b>
Account Receivables	1,093	962	893	945	914	1,163	1,297	1,463
Cash and Bank Balance	888	1,449	1,721	1,361	919	5,624	10,165	15,312
Loans and Advances	765	920	1,003	1,869	2,268	2,888	3,219	3,631
<b>Curr. Liability &amp; Prov.</b>	<b>5,757</b>	<b>6,398</b>	<b>6,964</b>	<b>6,439</b>	<b>7,389</b>	<b>9,468</b>	<b>10,620</b>	<b>12,016</b>
Account Payables	1,064	1,120	1,119	1,201	1,100	1,460	1,693	1,946
Other Current Liabilities	2,710	3,238	3,809	5,031	6,089	7,754	8,644	9,751
Provisions	1,984	2,041	2,036	207	199	253	282	319
<b>Net Current Assets</b>	<b>-2,853</b>	<b>-2,893</b>	<b>-3,167</b>	<b>-2,026</b>	<b>-3,049</b>	<b>525</b>	<b>4,431</b>	<b>8,815</b>
<b>Appl. of Funds</b>	<b>13,937</b>	<b>15,258</b>	<b>16,599</b>	<b>19,804</b>	<b>22,714</b>	<b>25,899</b>	<b>29,247</b>	<b>32,985</b>

E: MOSL Estimates

## Financials and Valuations

### Ratios

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
<b>Basic (INR)</b>								
<b>EPS</b>	<b>30.1</b>	<b>30.5</b>	<b>31.5</b>	<b>39.8</b>	<b>48.4</b>	<b>57.1</b>	<b>59.8</b>	<b>66.8</b>
Cash EPS	38.3	38.6	39.8	49.5	59.6	71.2	75.6	83.4
BV/Share	131.3	142.5	154.7	186.3	212.1	244.5	278.4	316.2
DPS	15.8	15.8	15.8	18.7	17.4	20.6	21.5	24.0
Payout (%)	61.5	62.5	60.5	56.6	43.3	43.3	43.3	43.3
<b>Valuation (x)</b>								
P/E		30.2	29.2	23.1	19.0	16.1	15.4	13.8
Cash P/E		23.9	23.1	18.6	15.4	12.9	12.2	11.0
P/BV		6.5	5.9	4.9	4.3	3.8	3.3	2.9
EV/Sales		4.3	4.3	4.4	4.0	3.0	2.5	2.1
EV/EBITDA		18.3	17.5	13.9	11.5	9.3	8.6	7.5
Dividend Yield (%)	1.7	1.7	1.7	2.0	1.9	2.2	2.3	2.6
FCF per share	22.4	23.2	20.7	68.0	31.0	64.0	59.5	64.6
<b>Return Ratios (%)</b>								
RoE	24.0	22.3	21.2	23.4	24.3	25.0	22.9	22.5
RoCE	23.8	22.1	21.1	23.3	24.3	25.0	22.9	22.5
RoIC	45.4	44.0	43.3	43.9	41.9	43.3	43.2	51.1
<b>Working Capital Ratios</b>								
Fixed Asset Turnover (x)	1.2	1.3	1.1	1.4	1.2	1.3	1.4	1.5
Asset Turnover (x)	1.4	1.4	1.3	1.0	1.0	1.1	1.1	1.1
Inventory (Days)	3	3	3	4	4	4	4	4
Debtor (Days)	21	17	16	17	15	15	15	15
Creditor (Days)	21	20	20	22	18	19	19	20
<b>Leverage Ratio (x)</b>								
Current Ratio	0.5	0.5	0.5	0.7	0.6	1.1	1.4	1.7
Interest Cover Ratio	1,940.4	338.6	192.2	533.0	2,574.7	2,878.5	NA	NA
Net Debt/Equity	-0.3	-0.4	-0.4	-0.3	-0.4	-0.5	-0.6	-0.7

### Standalone - Cash Flow Statement

(INR m)

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY21E
OP/(Loss) before Tax	4,418	4,493	4,687	6,007	7,265	8,611	9,014	10,048
Depreciation	807	799	841	951	1,112	1,388	1,557	1,647
Interest & Finance Charges	2	12	30	-516	-571	-839	-1,226	-1,628
Direct Taxes Paid	-1,286	-1,390	-1,501	-2,072	-2,487	-2,970	-3,106	-3,453
(Inc)/Dec in WC	301	660	471	-1,502	581	1,131	636	762
<b>CF from Operations</b>	<b>4,243</b>	<b>4,574</b>	<b>4,527</b>	<b>2,868</b>	<b>5,900</b>	<b>7,321</b>	<b>6,876</b>	<b>7,376</b>
Others	-266	-307	-273	0	0	0	0	0
<b>CF from Operating incl EO</b>	<b>3,976</b>	<b>4,267</b>	<b>4,254</b>	<b>2,868</b>	<b>5,900</b>	<b>7,321</b>	<b>6,876</b>	<b>7,376</b>
(Inc)/Dec in FA	-1,768	-1,974	-2,210	3,848	-2,835	-1,000	-1,000	-1,000
<b>Free Cash Flow</b>	<b>2,208</b>	<b>2,293</b>	<b>2,044</b>	<b>6,716</b>	<b>3,066</b>	<b>6,321</b>	<b>5,876</b>	<b>6,376</b>
(Pur)/Sale of Investments	-400	-278	-127	-785	-2,210	0	0	0
Others	271	307	269	527	574	842	1,226	1,628
<b>CF from Investments</b>	<b>-1,897</b>	<b>-1,945</b>	<b>-2,068</b>	<b>3,590</b>	<b>-4,471</b>	<b>-158</b>	<b>226</b>	<b>628</b>
Issue of Shares	0	0	0	94	0	0	0	0
Inc/(Dec) in Debt	-19	-18	-18	-111	-15	-12	0	0
Interest Paid	-4	-8	-2	-10	-3	-3	0	0
Dividend Paid	-1,829	-1,829	-1,882	-2,226	-2,071	-2,444	-2,560	-2,857
Others	0	94	-13	-4,565	217	0	0	0
<b>CF from Fin. Activity</b>	<b>-1,852</b>	<b>-1,761</b>	<b>-1,914</b>	<b>-6,818</b>	<b>-1,871</b>	<b>-2,459</b>	<b>-2,560</b>	<b>-2,857</b>
<b>Inc/Dec of Cash</b>	<b>228</b>	<b>561</b>	<b>272</b>	<b>-360</b>	<b>-442</b>	<b>4,705</b>	<b>4,542</b>	<b>5,147</b>
Opening Balance	660	888	1,449	1,721	1,361	919	5,624	10,165
<b>Closing Balance</b>	<b>888</b>	<b>1,449</b>	<b>1,721</b>	<b>1,361</b>	<b>919</b>	<b>5,624</b>	<b>10,165</b>	<b>15,312</b>



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 becomes inconsistent with the investment rating legend, the Research Analyst shall within 28 days of the inconsistency, 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 alterations 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, nor 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.