

BSE SENSEX  
 48,944

 S&P CNX  
 14,341


Bloomberg	BHARTI IN
Equity Shares (m)	5,456
M.Cap.(INRb)/(USDb)	2934.4 / 39.3
52-Week Range (INR)	623 / 394
1, 6, 12 Rel. Per (%)	2/3/-46
12M Avg Val (INR M)	12118
Free float (%)	44.2

### Financials & Valuations (INR b)

Y/E March	FY21E	FY22E	FY23E
Sales	1,018.6	1,143.8	1,271.8
EBITDA	461.7	557.0	639.0
Adj. PAT	4.6	24.7	42.9
EBITDA Margin. %	45.3	48.7	50.2
Adj. EPS (INR)	0.8	4.5	7.9
EPS Gr. (%)	-111.3	435.8	73.8
BV/Sh. (INR)	115.9	120.4	128.3

### Ratios

Net D:E	2.0	1.9	1.3
RoE (%)	0.7	3.8	6.3
RoCE (%)	13.6	6.8	8.8
Payout (%)	0.0	0.0	0.0

### Valuations

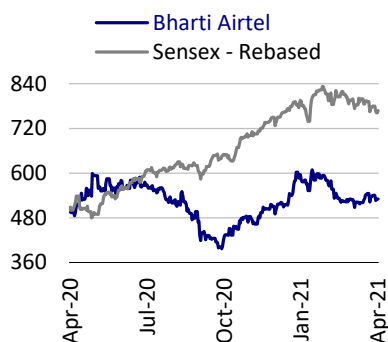
EV/EBITDA (x)	8.9	7.4	6.1
P/E (x)	NM	115.3	66.4
P/BV (x)	4.5	4.3	4.1
Div. Yield (%)	0.0	0.0	0.0

### Shareholding pattern (%)

As On	Mar-21	Dec-20	Mar-20
Promoter	55.9	56.2	59.0
DII	20.4	21.8	15.8
FII	18.6	17.8	20.3
Others	5.2	4.2	4.9

FII Includes depository receipts

### Stock Performance (1-year)


**CMP: INR534**
**TP: INR720 (+35%)**
**Buy**

## Insulated from COVID woes

### Expect steady growth irrespective of price hike

BHARTI has been an underperformer despite elevated expectations around business potential/growth. In this note, we highlight our key arguments as to why we believe it offers a good risk-reward equation

- Despite the COVID woes, Bharti has delivered estimated EBITDA growth of 28% and the trend should continue in FY22E with estimated consol. EBITDA growth of 21%.
- This should be on the back of steady market share gains; we think, irrespective of a tariff hike, earnings growth should continue to be strong.
- FCF generation and deleveraging have been a concern for the past 4–6 quarters. However, we are now seeing a more focused approach to drive healthy INR233b FCF (in FY23E) and corresponding deleveraging benefits.
- The stock looks attractively valued at EV/EBITDA of 6x – as it does not capture the potential tariff hikes and garners 8% FCF yield on an FY23 basis. Maintain Buy, with TP of INR720.

### Limited COVID impact

In the past year, even as most businesses were severely impacted by the COVID-led lockdown, Bharti's consolidated revenue/EBITDA is estimated to have grown 17%/28% in FY21, with the India Wireless business revenue/EBITDA up ~21%/44%. Wireless EBITDA grew 3% QoQ even during the strict lockdown in 1QFY21, when telcos were offering free validity to low-ARPU subscribers – this underscores the inherent strength of the company. Thus, the company does not face any imminent risks from the ongoing second wave of COVID. The lack of physical recharges / new SIM card availability in the ongoing lockdown may have a minimal impact on the company as an increase in the number of online recharges (50% currently estimated) and data subscribers should offset the impact (as seen in the previous lockdown).

### Steady market share gains; price hikes irrelevant

Although the Telecom industry awaits a price hike, since the previous one taken about five quarters ago, Bharti has delivered steady revenue/EBITDA growth (of 10%/35% YoY in 4QFY21E) in the Wireless business – on the back of healthy market share gains. Subscriber/revenue market share gains of 180bp/550bp (33.7%/35.3%) over 9MFY21 are commendable, with gross/active subscribers adds of 3%/4%. Wins in the 4G market have been a key factor in improving ARPU – it added 30.1m 4G subscribers of the total 56.8m industry adds, implying incremental market share of 53%. One of the key factors is its superior data experience, reflected in its data usage, which is just one-third that of Rjio's despite the similar network capability. Thus, irrespective of a price hike, Bharti has the ability to deliver 2–3% ARPU growth on average and 1–2% subscriber adds quarterly, which should drive annual revenue growth of 12–13%. Assuming 65% incremental market share, EBITDA should grow at a 21% CAGR over FY21–23E.

 Research Analyst: **Aliasgar Shakir** (Aliasgar.Shakir@motilalosal.com)

 Suhel Shaikh (Suhel.Ahmad@MotilalOswal.com); **Anshul Aggarwal** (Anshul.Aggarwal@motilalosal.com)

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

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

### FCF generation to improve

In the last six quarters, despite healthy EBITDA growth, Bharti has been unable to garner high FCF generation – which could be utilized to deleverage the balance sheet. The exponential data growth during the lockdown required intensification of the network, which kept FY21E capex high (similar to FY20 levels), contrary to the management guidance for a capex reduction. Additionally, Bharti spent a) INR28.8b for 4.94% additional stake in Indus, b) INR31b for the buyback of Warburg Pincus' 20% stake in the DTH business, and c) INR187b (INR70b in 4QFY21 as an upfront payment) on the spectrum auction. Furthermore, continued one-offs/extraordinary provisions of INR164b resulted in a net loss position in FY21. This has been a key dampener as the high EBITDA growth has not reflected in the form of FCF improvement or the return of net profit. However, going forward, capex should reduce as more spectrum acquisitions would reduce site additions. Moreover, with the management's focus on FCF and deleveraging, it should refrain from utilizing OCF in other avenues. Subsequently, we expect FCF (post-interest) at ~INR233b in FY23 (at EBITDA of INR639b).

### RoCE turning relevant

Over the last 10 years, BHARTI's RoCE was barely in the mid-single digits due to a hyper-competitive landscape and its continued capex for technological advancements, spectrum renewals, and investments in Africa. Now with benign competition and the limited possibility of a new player's entry, ARPU could be determined to at least cover WACC. In our view, at EBITDA of INR639b in FY23E, BHARTI could garner pre-tax RoCE of ~12%.

### Risk of capex intensity

We do not see any material investments in 5G to happen over the next 2–3 years as a) new use cases for 5G are few and far between and b) the incremental consumer benefit is limited – as data speed could be easily dealt with through 4G investments. Furthermore, unlike in the past – when 4G investments were inevitable due to the entry of a new player – we do not see any pressure on technology or spectrum investments.

### Valuation and view

In the last year, the stock has given ~5% returns after much oscillation in its stock price – it slipped ~13% from the peak of INR602 as high capex hurt FCF and deleveraging expectations. With improving FCF potential, the stock would certainly command better multiples. Our estimates factor in the AGR liability of INR260b. However, they do not capture the corresponding potential upside for BHARTI from incremental ARPU growth or potential market share gains from the AGR liability being fulfilled. This could garner an incremental EBITDA opportunity of ~INR100b. Even without this, the valuation seems compelling at FY23E EBITDA of INR639b, implying 8% FCF yield (post-interest). We maintain our **Buy** rating, with SOTP-based TP of INR720, assigning 10x (to capture the incremental earnings upside) to the India Wireless EBITDA and 6x to Africa.

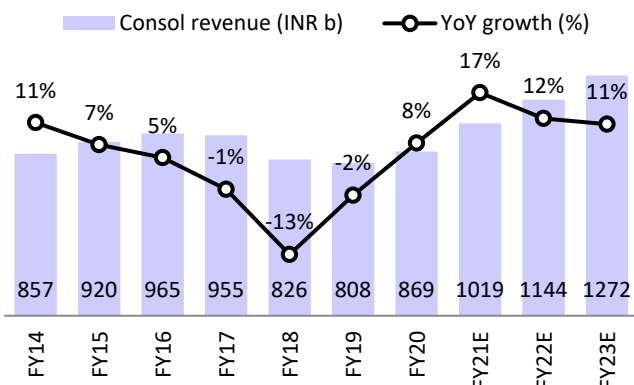
**Exhibit 1: Bharti's FY23E-based SOTP**

	EBITDA (INR b)	Ownership (%)	Proportionate EBITDA (INR b)	EV/EBITDA	Fair Value (INR b)	Value/Share
India SA business (excl. towers)	447	100	447	10	4,679	858
Tower business (15% discount to fair value)		41.0			230	42
Africa business	192	55.2	106	6	683	125
Less net debt					1661	305
<b>Total Value</b>					<b>3930</b>	<b>720</b>
Shares o/s (b)	5.5					
CMP						534
<b>Upside (%)</b>						<b>35</b>

Source: MOFSL

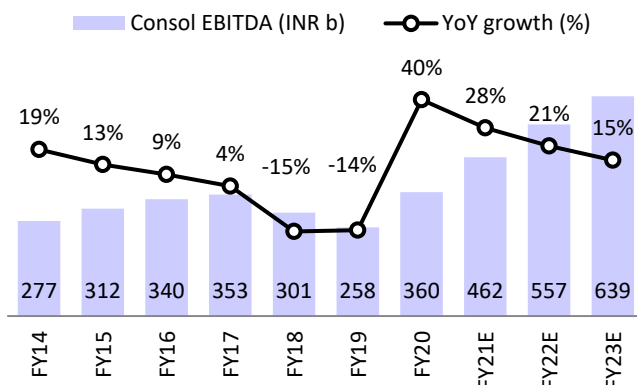
## Key exhibits

**Exhibit 2: Bharti to clock 14% revenue CAGR over FY20–23E...**



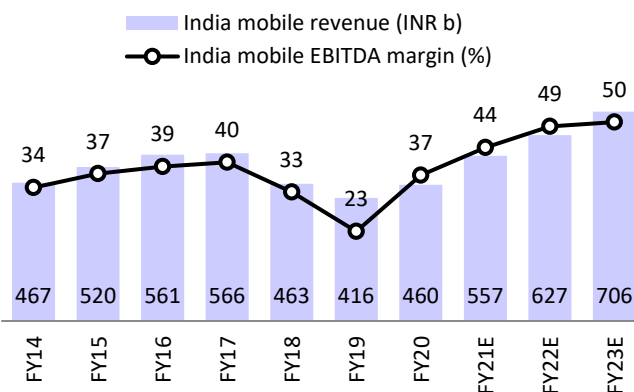
Source: Company, MOFSL

**Exhibit 3: ...EBITDA to grow at 21% over this period**



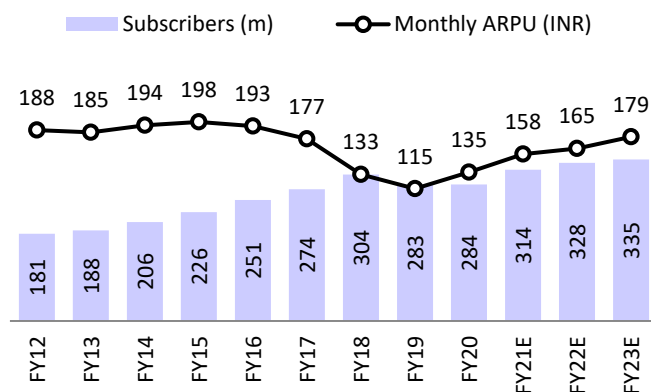
Source: Company, MOFSL

**Exhibit 4: India Wireless EBITDA margin to expand 1,340bps**



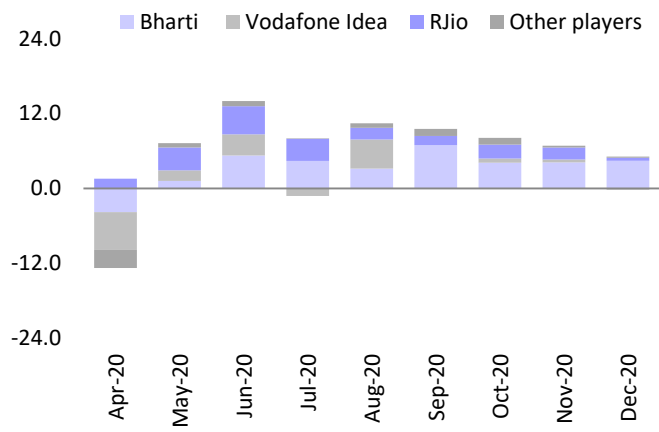
Source: Company, MOFSL

**Exhibit 5: APRU/subs to continue to grow**



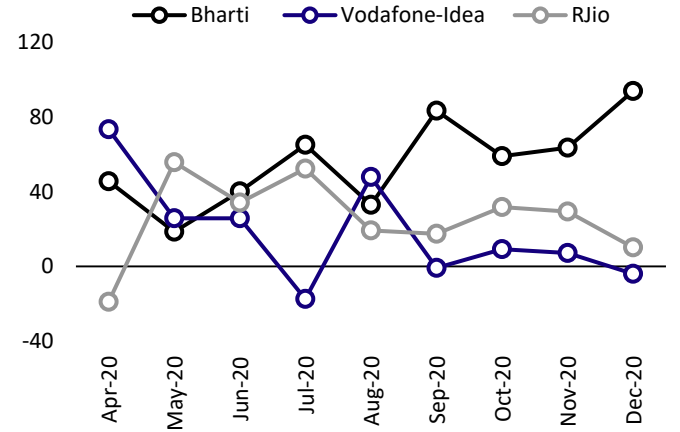
Source: Company, MOFSL

**Exhibit 6: Telcos' MBB adds over 9MFY21**



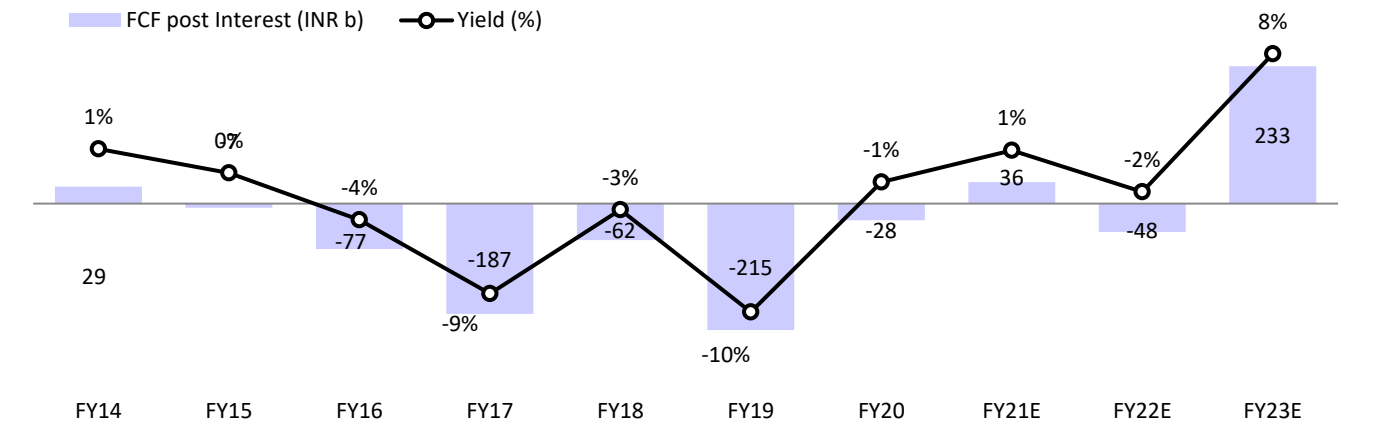
Source: TRAI, MOFSL

**Exhibit 7: Bharti captures majority incremental MBB share**



Source: TRAI, MOFSL

**Exhibit 8: FCF post-interest yield at 8% in FY23E**



Source: MOFSL, Company

## Financials and valuations

Consolidated - Income Statement							(INR b)		
Y/E March	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
<b>Total Income from Operations</b>	<b>920</b>	<b>965</b>	<b>955</b>	<b>826</b>	<b>808</b>	<b>869</b>	<b>1,019</b>	<b>1,144</b>	<b>1,272</b>
Change (%)	7.3	4.9	-1.1	-13.4	-2.2	7.6	17.2	12.3	11.2
<b>Total Expenditure</b>	<b>608</b>	<b>625</b>	<b>601</b>	<b>526</b>	<b>550</b>	<b>509</b>	<b>557</b>	<b>587</b>	<b>633</b>
% of Sales	66.1	64.8	63.0	63.6	68.1	58.6	54.7	51.3	49.8
<b>EBITDA</b>	<b>312</b>	<b>340</b>	<b>353</b>	<b>301</b>	<b>258</b>	<b>360</b>	<b>462</b>	<b>557</b>	<b>639</b>
Margin (%)	33.9	35.2	37.0	36.4	31.9	41.4	45.3	48.7	50.2
Depreciation	155	174	198	192	213	276	305	351	387
<b>EBIT</b>	<b>157</b>	<b>165</b>	<b>156</b>	<b>108</b>	<b>44</b>	<b>85</b>	<b>157</b>	<b>206</b>	<b>252</b>
Int. and Finance Charges	48	69	77	81	96	135	142	142	130
Other Income	7	11	10	13	5	16	6	14	14
<b>PBT bef. EO Exp.</b>	<b>115</b>	<b>107</b>	<b>89</b>	<b>41</b>	<b>-47</b>	<b>-34</b>	<b>22</b>	<b>79</b>	<b>137</b>
EO Items	-8	22	-12	-8	29	-402	-164	0	0
<b>PBT after EO Exp.</b>	<b>107</b>	<b>128</b>	<b>77</b>	<b>33</b>	<b>-17</b>	<b>-437</b>	<b>-142</b>	<b>79</b>	<b>137</b>
Total Tax	54	60	35	11	-34	-123	92	32	55
Tax Rate (%)	50.4	46.3	45.1	33.2	197.4	28.2	-64.8	40.0	40.0
Minority Interest	1	8	4	11	13	15	10	23	39
<b>Reported PAT</b>	<b>52</b>	<b>61</b>	<b>38</b>	<b>11</b>	<b>4</b>	<b>-322</b>	<b>-139</b>	<b>25</b>	<b>43</b>
<b>Adjusted PAT</b>	<b>56</b>	<b>49</b>	<b>44</b>	<b>14</b>	<b>-35</b>	<b>-41</b>	<b>5</b>	<b>25</b>	<b>43</b>
Change (%)	102.7	-12.0	-9.5	-68.6	-350.3	16.6	-111.3	435.8	73.8
Margin (%)	6.1	5.1	4.7	1.7	-4.3	-4.7	0.5	2.2	3.4

Consolidated - Balance Sheet							(INR b)		
Y/E March	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
Equity Share Capital	20	20	20	20	20	27	27	27	27
Total Reserves	600	648	655	675	694	744	605	630	673
<b>Net Worth</b>	<b>620</b>	<b>668</b>	<b>675</b>	<b>695</b>	<b>714</b>	<b>771</b>	<b>632</b>	<b>657</b>	<b>700</b>
Minority Interest	49	55	69	88	135	250	260	282	322
Total Loans	807	1,005	1,073	1,113	1,254	1,176	1,391	1,220	1,048
Lease liabilities						306	306	306	306
Deferred Tax Liabilities	-44	-34	-17	-22	-83	-263	-263	-263	-263
<b>Capital Employed</b>	<b>1,431</b>	<b>1,693</b>	<b>1,799</b>	<b>1,875</b>	<b>2,021</b>	<b>2,241</b>	<b>2,326</b>	<b>2,203</b>	<b>2,113</b>
<b>Net Fixed Assets</b>	<b>1,501</b>	<b>1,780</b>	<b>1,891</b>	<b>1,589</b>	<b>1,684</b>	<b>1,690</b>	<b>1,994</b>	<b>2,045</b>	<b>1,873</b>
<b>Right of use assets</b>						259	259	259	259
<b>Total Investments</b>	<b>170</b>	<b>120</b>	<b>182</b>	<b>180</b>	<b>176</b>	<b>278</b>	<b>141</b>	<b>141</b>	<b>141</b>
<b>Curr. Assets, Loans&amp;Adv.</b>	<b>227</b>	<b>311</b>	<b>234</b>	<b>327</b>	<b>382</b>	<b>724</b>	<b>1,058</b>	<b>915</b>	<b>1,029</b>
Inventory	1	2	0	1	1	2	1	2	2
Account Receivables	67	55	47	59	43	46	58	59	71
Cash and Bank Balance	12	37	13	48	62	136	417	239	311
Loans and Advances	146	217	173	219	276	541	581	615	644
<b>Curr. Liability &amp; Prov.</b>	<b>468</b>	<b>518</b>	<b>507</b>	<b>602</b>	<b>641</b>	<b>1,097</b>	<b>1,125</b>	<b>1,156</b>	<b>1,187</b>
Account Payables	459	508	497	577	621	621	649	673	705
Provisions	8	10	10	25	20	476	476	482	483
<b>Net Current Assets</b>	<b>-241</b>	<b>-207</b>	<b>-273</b>	<b>-275</b>	<b>-259</b>	<b>-373</b>	<b>-67</b>	<b>-241</b>	<b>-159</b>
<b>Appl. of Funds</b>	<b>1,431</b>	<b>1,693</b>	<b>1,799</b>	<b>1,875</b>	<b>2,021</b>	<b>2,241</b>	<b>2,326</b>	<b>2,203</b>	<b>2,113</b>

E: MOFSL Estimates

## Financials and valuations

### Ratios

Y/E March	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
<b>Basic (INR)</b>									
<b>EPS</b>	<b>14.0</b>	<b>12.3</b>	<b>11.1</b>	<b>3.5</b>	<b>-8.7</b>	<b>-7.5</b>	<b>0.8</b>	<b>4.5</b>	<b>7.9</b>
Cash EPS	52.8	55.9	60.6	51.6	44.7	43.1	56.7	68.8	78.7
BV/Share	155.0	168.8	168.8	173.9	178.7	141.4	115.9	120.4	128.3
DPS	2.2	1.4	1.0	1.0	0.0	0.0	0.0	0.0	0.0
Payout (%)	19.9	10.8	12.7	43.8	0.0	0.0	0.0	0.0	0.0
<b>Valuation (x)</b>									
P/E	37.4	42.5	47.0	149.4	NM	NM	NM	115.3	66.4
Cash P/E	9.9	9.3	8.6	10.1	11.7	12.1	9.2	7.6	6.6
P/BV	3.4	3.1	3.1	3.0	2.9	3.7	4.5	4.3	4.1
EV/Sales	3.1	3.2	3.3	3.8	4.1	4.8	4.1	3.6	3.1
EV/EBITDA	9.2	9.0	8.9	10.5	12.7	11.6	8.9	7.4	6.1
Dividend Yield (%)	0.4	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0
<b>Return Ratios (%)</b>									
RoE	9.2	7.6	6.6	2.0	NM	NM	0.7	3.8	6.3
RoCE	5.8	6.1	5.3	4.6	NM	3.7	13.6	6.8	8.8
RoIC	6.5	6.4	5.4	4.5	NM	3.5	14.6	6.9	8.7
<b>Working Capital Ratios</b>									
Asset Turnover (x)	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6
Debtor (Days)	27	21	18	26	19	19	21	19	20
<b>Leverage Ratio (x)</b>									
Net Debt/Equity	1.0	1.3	1.3	1.3	1.4	1.5	2.0	1.9	1.3

### Consolidated - Cash Flow Statement

(INR b)

Y/E March	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
OP/(Loss) before Tax	107	128	77	33	-17	-428	-37	79	137
Depreciation	155	174	198	192	213	277	305	351	387
Interest & Finance Charges	73	85	95	93	110	137	142	142	130
Direct Taxes Paid	-46	-47	-32	-14	-12	-23	-92	-32	-55
(Inc)/Dec in WC	-2	-4	-27	6	-55	-166	-24	-4	-10
<b>CF from Operations</b>	<b>288</b>	<b>338</b>	<b>311</b>	<b>311</b>	<b>239</b>	<b>-203</b>	<b>293</b>	<b>536</b>	<b>588</b>
Others	-12	-58	-19	-12	-39	384	0	0	0
<b>CF from Operating incl EO</b>	<b>276</b>	<b>279</b>	<b>292</b>	<b>299</b>	<b>201</b>	<b>181</b>	<b>293</b>	<b>536</b>	<b>588</b>
(Inc)/Dec in FA	-210	-271	-384	-267	-305	-221	-222	-402	-215
(Pur)/Sale of Investments	-12	68	-1	-33	1	-88	138	0	0
Others	14	61	69	40	28	10	5	5	5
<b>CF from Investments</b>	<b>-207</b>	<b>-142</b>	<b>-316</b>	<b>-260</b>	<b>-277</b>	<b>-300</b>	<b>-79</b>	<b>-397</b>	<b>-210</b>
Issue of Shares	0	1	1	0	99	462	0	0	0
Inc/(Dec) in Debt	-72	-118	9	40	106	-180	214	-170	-172
Interest Paid	-34	-33	-59	-44	-76	-110	-142	-142	-130
Dividend Paid	-21	-15	-9	-33	-47	-18	0	0	0
Others	31	47	53	56	13	37	0	0	0
<b>CF from Fin. Activity</b>	<b>-97</b>	<b>-118</b>	<b>-4</b>	<b>19</b>	<b>95</b>	<b>191</b>	<b>73</b>	<b>-312</b>	<b>-302</b>
<b>Inc/Dec of Cash</b>	<b>-28</b>	<b>19</b>	<b>-28</b>	<b>58</b>	<b>19</b>	<b>73</b>	<b>287</b>	<b>-173</b>	<b>77</b>
Opening Balance	40	-1	18	-10	41	54	131	412	234
<b>Closing Balance</b>	<b>12</b>	<b>37</b>	<b>13</b>	<b>48</b>	<b>62</b>	<b>136</b>	<b>417</b>	<b>239</b>	<b>311</b>
Less Bank OD	13	-19	-23	7	-8	-5	-5	-5	-5
<b>Closing Cash Balance (with OD)</b>	<b>-1</b>	<b>18</b>	<b>-10</b>	<b>41</b>	<b>54</b>	<b>131</b>	<b>412</b>	<b>234</b>	<b>306</b>

E: MOFSL Estimates



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 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, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd., (PIMPL). MOFSL is a listed public company, the details in respect of which are available on [www.motilaloswal.com](http://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://online-reports.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](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 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") (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 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
- 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 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.

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.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website [www.motilaloswal.com](http://www.motilaloswal.com) CIN no.: L67190MH2005PLC153397. Correspondence Office Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad(West), Mumbai-400 064. Tel No: 022 7188 1000.

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)\*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579;PMS:INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: [na@motilaloswal.com](mailto:na@motilaloswal.com), Contact No.:022-71881085.

\* 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.