

Estimate change	↔
TP change	↔
Rating change	↔

Motilal Oswal values your support in the **Asiamoney Brokers Poll 2021** for India Research, Sales, Corporate Access and Trading team. We [request your ballot](#).



Bloomberg	BHEL IN
Equity Shares (m)	3,482
M.Cap.(INRb)/(USDb)	207 / 2.8
52-Week Range (INR)	80 / 27
1, 6, 12 Rel. Per (%)	-10/51/22
12M Avg Val (INR M)	3469

#### Financials & Valuations (INR b)

Y/E Mar	2021	2022E	2023E
Sales	173.1	218.2	247.1
EBITDA	-31.4	-4.6	10.3
PAT	-27.2	-6.9	4.2
EBITDA (%)	-18.1	-2.1	4.2
EPS (INR)	-7.8	-2.0	1.2
EPS Gr. (%)	NA	NA	NA
BV/Sh. (INR)	76.1	74.1	74.4
<b>Ratios</b>			
Net D/E	-0.1	-0.1	0.0
RoE (%)	-10.3	-2.7	1.6
RoCE (%)	-8.8	-1.5	2.6
Payout (%)	(0.0)	-	70.0
<b>Valuations</b>			
P/E (x)	NA	NA	49.1
P/BV (x)	0.8	0.8	0.8
EV/EBITDA (x)	NA	NA	19.6
Div Yield (%)	0.0	-	1.4
FCF Yield (%)	1.5	(0.8)	(4.4)

#### Shareholding pattern (%)

As On	Jun-21	Mar-21	Jun-20
Promoter	63.2	63.2	63.2
DII	12.4	12.5	18.1
FII	4.7	4.5	5.1
Others	19.8	19.9	13.6

FII Includes depository receipts

**CMP: INR59**

**TP: INR40 (-33%)**

**Sell**

#### Another loss making quarter as execution disappoints

##### No respite in sight, land monetization may not be feasible

- BHEL reported another loss-making 1QFY22, with revenue coming in 12% below our expectation. It reported a net loss of INR4.5b, slightly higher than our expected loss of INR4.3b. If not for the provision reversal of INR1.8b, reported losses would have been even higher.
- Of the total order book of INR1.02t, the executable order book stands at INR708b. BHEL is favorably placed in a few L1 orders. However, these orders are yet to finalize into final awarding. With commodity prices surging since BHEL was declared L1 in these orders, we see a higher chance of margin turning adverse in new orders as well.
- Higher fixed cost continues to dent operating performance. The company is yet to show a significant improvement in pending receivables, with total debtors at INR309b in 1QFY22 (v/s INR313b at the end of last year). In spite of the management's ongoing efforts, we expect receivables to remain elevated in the near future. The **management revealed that BHEL only has right to use its land bank and can't monetize the same directly**. This leaves out the land monetization option value for any upside case in BHEL. We maintain our estimates, TP of INR40/share, as well as our Sell rating.

#### Operating performance disappoints

- **Losses continue:** Revenue grew 46% YoY to INR29b and was 12% below our expectation. Gross margin declined by 90bp to 33.2%. Other expenses stood at just 2.8% of sales, on a provision reversal of INR1.8b. Despite lower other expenses, operating loss stood at INR4.7b, slightly higher than our estimate. Net loss came in at INR4.5b v/s our expectation of INR4.3b.
- **Segmental highlights:** a) **Power:** Revenue rose 89% YoY to INR21.2b in 1QFY22. Operating loss stood at INR1.8b (v/s a loss of INR5.7b YoY). **Industry:** Revenue fell 22% YoY to INR6.1b in 1QFY22. Operating loss stood at INR1.2b (v/s a loss of INR2.5b YoY).
- Order book fell 6% YoY INR1,021b, with an order book-to-revenue ratio of ~6x. Segment-wise order book is as follows: Power – INR846b, Industry – INR112b, and international orders – INR63b.
- Order inflows stood ~INR32.5b in 1QFY22 (Power – INR25b, Industry – INR6.9b, and international orders – INR0.6b).

#### Highlights from the management commentary

- BHEL is favorably placed in: a) 2\*660MW NTPC Talcher main plant package, b) steam generators (700MW, 12 units) for nuclear Power plants based on PHWR technology, and c) a number of FGD, boiler modifications, and emission control orders. It is L1 in NPCIL tender for the 6\*700 MW turbine island package (~INR108b).
- Total receivable stood at INR309b v/s INR313b at the end of FY21, with Centre/state/private/export forming 36%/43%/13%/8%.

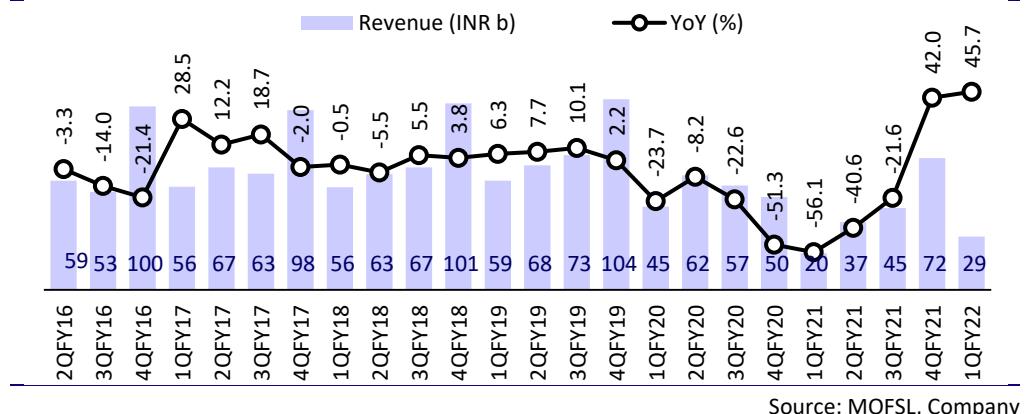
- The management said the land parcels are not owned by the company, but has the right to use these land parcels. This implies that the company can't monetize its land bank directly as the ownership is with state governments.
- Of the INR1.02t order book, the executable order book stands at INR708b. BHEL is working hard to bring down the breakeven revenue level to INR300b. In our view, even a revenue base of INR300b is difficult to achieve with its current order book and ordering pipeline.

### Valuation and view

- BHEL continues to struggle with: **a)** a weak ordering environment in the Power sector, **b)** higher receivables (over INR300b), and **c)** huge FY21 employee cost (~31% of sales). In FY21, working capital stood elevated ~101% of sales (99%/63% of sales FY20/FY19), weighed by a higher inventory and receivables, and poor execution.
- We maintain our earnings estimate (FY22E to be loss making) and our TP of INR40 (FY23E EV/EBITDA multiple of 12x) on the stock. We see further downside risk to order inflow and our revenue assumption for FY23E/FY24E. We maintain our Sell rating.

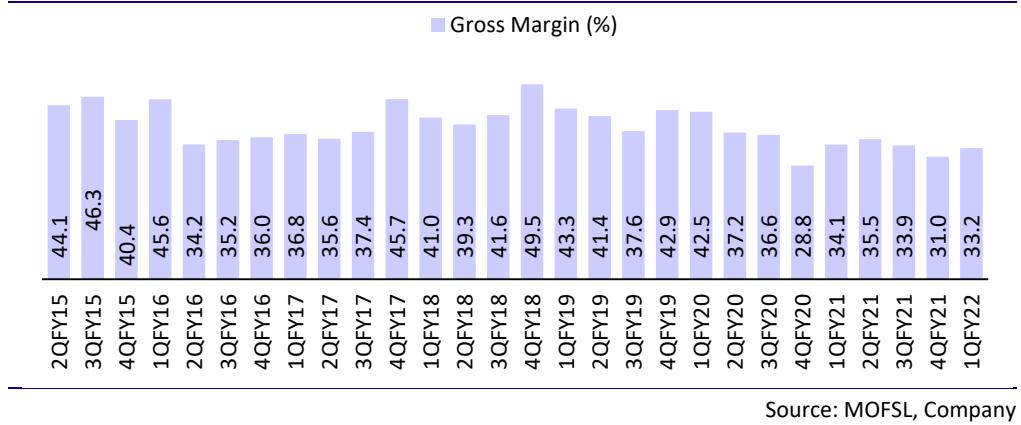
Quarterly performance		(INR b)											
Y/E March		FY21				FY22E				FY21	FY22E	FY22E	Var.
		1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE				
<b>Sales (Net)</b>		<b>19.9</b>	<b>37.0</b>	<b>44.5</b>	<b>71.7</b>	<b>29.0</b>	<b>46.5</b>	<b>52.0</b>	<b>90.7</b>	<b>173.1</b>	<b>218.2</b>	<b>33.0</b>	<b>-12.1%</b>
Change (%)		-56.1	-40.6	-21.6	42.0	45.7	25.8	16.8	26.5	-19.4	26.1	65.8	
<b>EBITDA</b>		<b>-10.6</b>	<b>-6.3</b>	<b>-1.8</b>	<b>-12.6</b>	<b>-4.7</b>	<b>-1.8</b>	<b>-1.2</b>	<b>3.3</b>	<b>-31.4</b>	<b>-4.6</b>	<b>-4.4</b>	<b>NA</b>
Change (%)		NA	-337.0	-154.6	NA	NA	NA	NA	NA	NA	NA	NA	
As a percentage of Sales		-53.2	-17.1	-4.0	-17.6	-16.3	-4.0	-2.4	3.6	-18.1	-2.1	-13.4	
Interest		1.1	0.9	0.9	0.8	0.8	0.9	0.9	1.1	3.7	3.7	0.9	
Depreciation		1.2	1.2	1.1	1.3	1.1	1.2	1.2	1.3	4.7	4.8	1.2	
Other Income		1.0	1.0	0.9	0.8	0.7	0.9	0.9	1.3	3.7	3.9	0.8	
<b>PBT</b>		<b>-12.0</b>	<b>-7.4</b>	<b>-2.9</b>	<b>-13.8</b>	<b>-5.9</b>	<b>-3.0</b>	<b>-2.4</b>	<b>2.2</b>	<b>-36.1</b>	<b>-9.2</b>	<b>-5.7</b>	<b>NA</b>
Tax		-3.0	-1.8	-0.6	-3.5	-1.5	-0.8	-0.6	0.5	-8.9	-2.3	-1.4	
Effective Tax Rate (%)		25.0	24.6	21.1	25.4	25.0	25.2	25.2	24.7	24.8	25.2	25.2	
<b>Reported PAT</b>		<b>-9.0</b>	<b>-5.6</b>	<b>-2.3</b>	<b>-10.3</b>	<b>-4.5</b>	<b>-2.3</b>	<b>-1.8</b>	<b>1.6</b>	<b>-27.2</b>	<b>-6.9</b>	<b>-4.3</b>	<b>NA</b>
Change (%)		NA	-569.0	-245.4	NA	NA	NA	NA	NA	NA	NA	NA	
<b>Adj. PAT</b>		<b>-9.0</b>	<b>-5.6</b>	<b>-2.3</b>	<b>-10.3</b>	<b>-4.5</b>	<b>-2.3</b>	<b>-1.8</b>	<b>1.6</b>	<b>-27.2</b>	<b>-6.9</b>	<b>-4.3</b>	<b>NA</b>
Change (%)		NA	-569.0	-245.4	NA	NA	NA	NA	NA	NA	NA	NA	

Exhibit 1: Revenue grew 46% YoY in 1QFY22 on a soft base



Source: MOFSL, Company

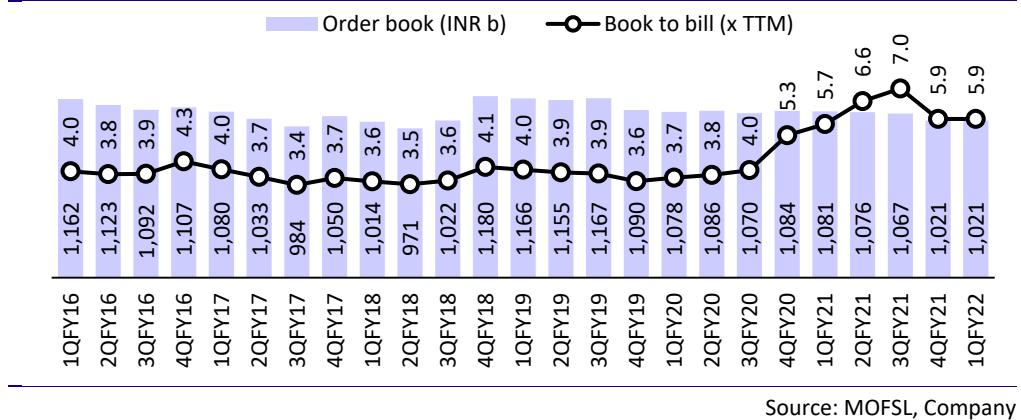
## Exhibit 2: Gross margin moderates by 90bp YoY in 1QFY22, but increases by 220bp QoQ



## Order book at INR1t; book-to-bill ~6x in 1QFY22

- Order book declined by 6% YoY to INR1t. Segment-wise order book is as follows: Power – INR846b, Industry – INR112b, and international orders – INR63b.

## Exhibit 3: Order book fell 6% YoY, with lower execution leading to a book-to-bill of ~6x



## Segmental performance: Revenue hit across segments

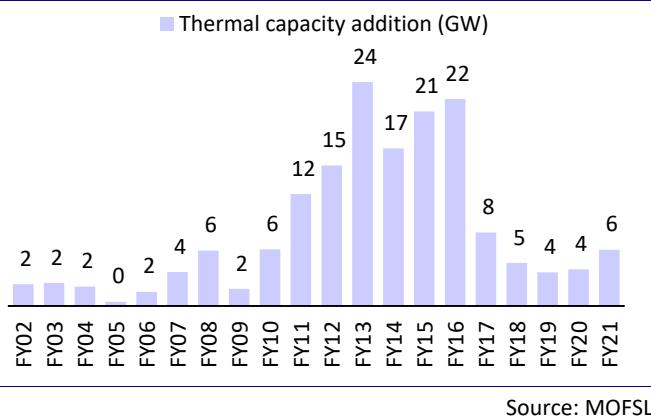
- Power:** Revenue rose 89% YoY to INR27.2b in **1QFY22**. Operating loss stood at INR1.8b (v/s a loss of INR5.7b YoY).
- Industry:** Revenue fell 22% YoY to INR6.1b in **1QFY22**. Operating loss stood at INR1.2b (v/s a loss of INR2.5b YoY).

## Exhibit 4: Segmental revenue and margin

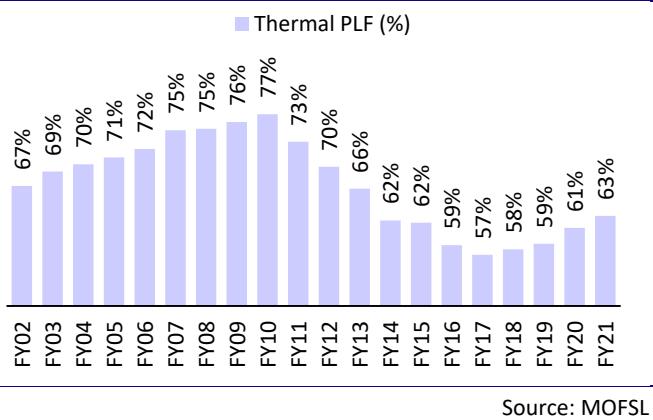
INR m	FY20					FY21					FY22	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<b>Revenues</b>	<b>44.1</b>	<b>60.3</b>	<b>54.6</b>	<b>45.9</b>	<b>19.0</b>	<b>34.4</b>	<b>42.0</b>	<b>67.5</b>	<b>27.2</b>			
Power	34.9	42.2	40.7	31.7	11.2	24.9	29.9	47.9	21.2			
Growth (%)	(24.7)	(18.1)	(26.1)	(60.8)	(67.9)	(41.0)	(26.7)	50.9	89.1			
Industry	9.2	18.1	13.9	14.2	7.8	9.5	12.2	19.6	6.1			
Growth (%)	(20.4)	24.3	(13.6)	(18.1)	(15.4)	(47.3)	(12.1)	38.4	(21.9)			
<b>EBIT</b>	<b>(0.2)</b>	<b>4.9</b>	<b>5.1</b>	<b>(3.8)</b>	<b>(8.2)</b>	<b>(4.6)</b>	<b>(0.0)</b>	<b>(8.1)</b>	<b>(3.0)</b>			
Power	(0.5)	4.3	4.3	(0.1)	(5.7)	(3.7)	1.1	(4.2)	(1.8)			
Growth (%)	(111.1)	1.9	(26.9)	(100.6)	NA	(185.7)	(73.6)	NA	NA			
Industry	0.3	0.5	0.8	(3.7)	(2.5)	(0.9)	(1.2)	(3.9)	(1.2)			
Growth (%)	(40.3)	(21.5)	36.1	(246.5)	NA	(264.9)	(256.3)	NA	NA			
<b>EBIT margin (%)</b>	<b>(0.4)</b>	<b>8.1</b>	<b>9.3</b>	<b>(8.3)</b>	<b>(43.3)</b>	<b>(13.4)</b>	<b>(0.1)</b>	<b>(12.0)</b>	<b>(11.2)</b>			
Power	(1.6)	10.3	10.6	(0.2)	(50.7)	(14.9)	3.8	(8.8)	(8.5)			
Industry	3.8	3.0	5.5	(26.2)	(32.5)	(9.5)	(9.7)	(19.8)	(20.5)			

Source: Company, MOFSL

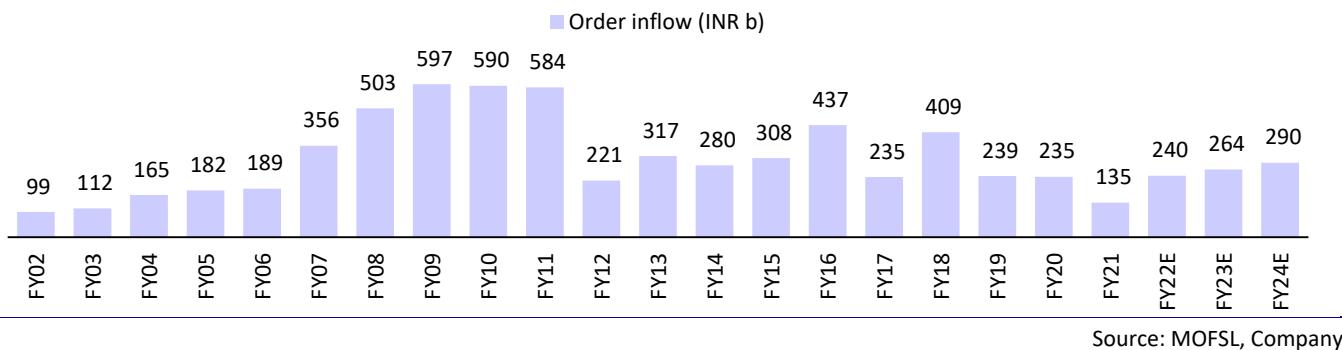
**Exhibit 5: Thermal capacity averages ~18GW over FY13-17, but drops to ~5GW over FY18-21**



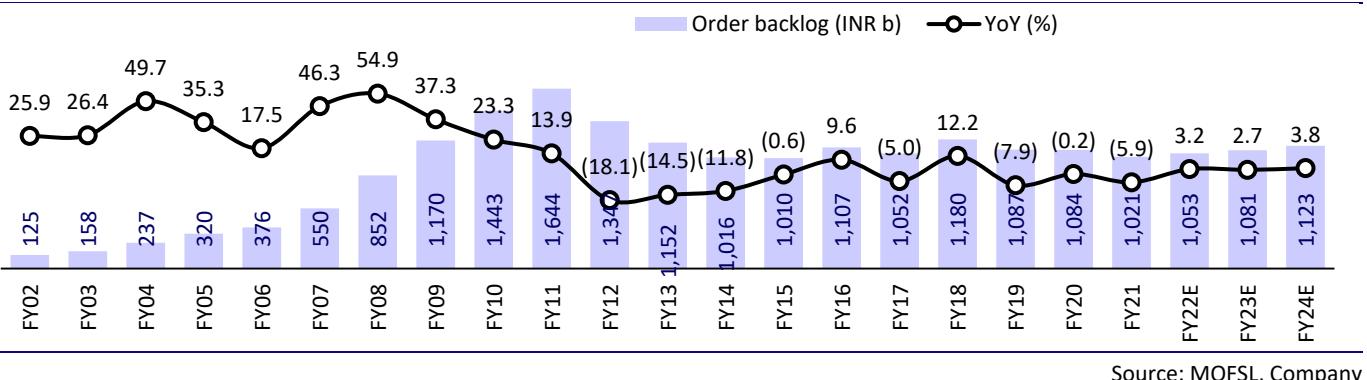
**Exhibit 6: Thermal PLF was on a rapid decline post FY10, but is recovering gradually post FY17**



**Exhibit 7: Order inflows average INR550b over FY08-11, while lower thermal PLF leads to a significant decline in ordering thereafter**



**Exhibit 8: Order backlog declines post FY11 on lower inflows. It stood at INR1t in FY21 from a peak of INR1.6t in FY11**



**Exhibit 9: Revenue CAGR at -11% over FY14-21 due to lower order inflow and weak execution**

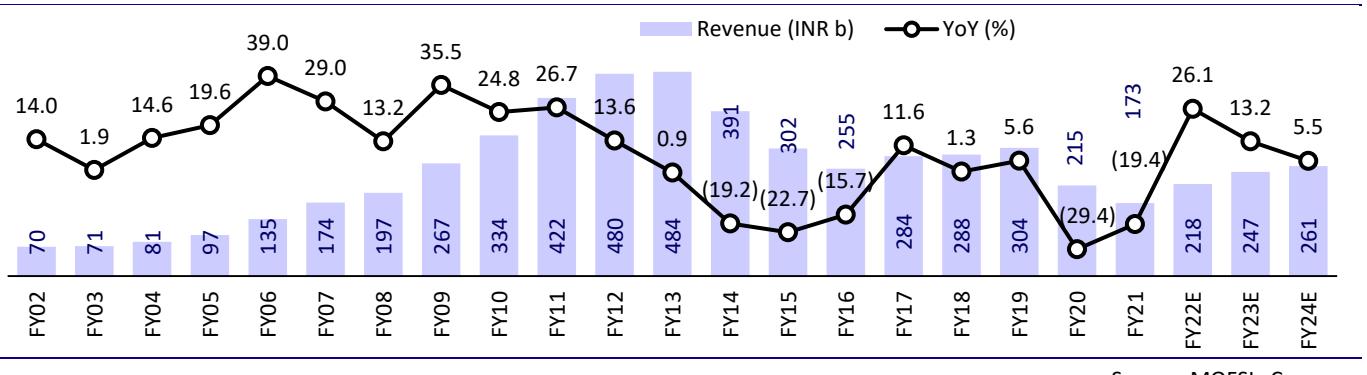
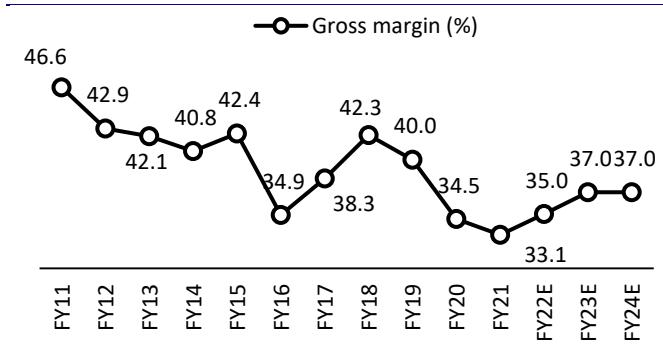
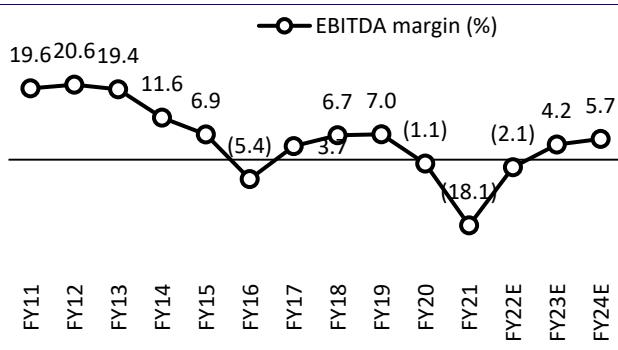


Exhibit 10: Gross margin on a decline since FY18...



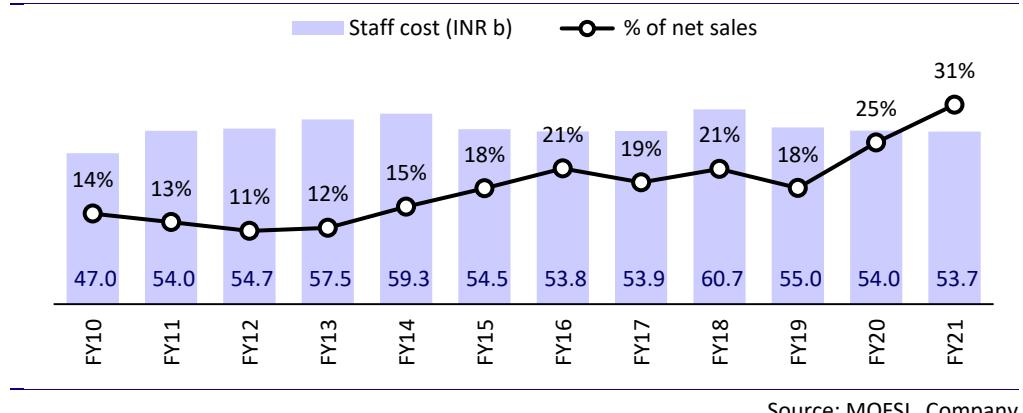
Source: MOFSL, Company

Exhibit 11: ...with lower absorption of fixed cost, leading to operating level loss in FY21



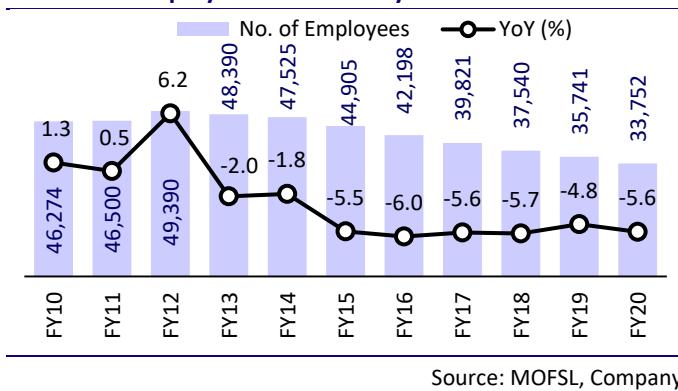
Source: MOFSL, Company

Exhibit 12: Staff cost, as a percentage of sales, stands at 31%, a key challenge for BHEL



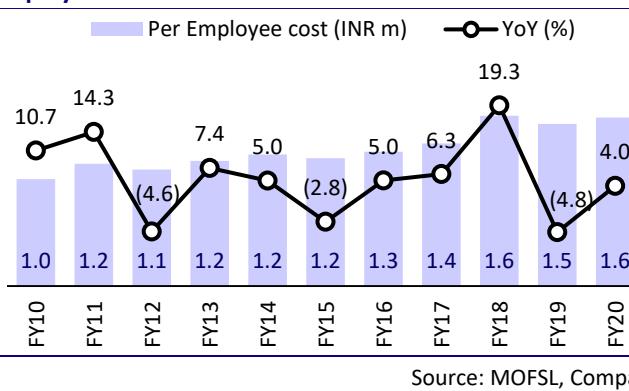
Source: MOFSL, Company

Exhibit 13: Employee count steadily declines since FY12



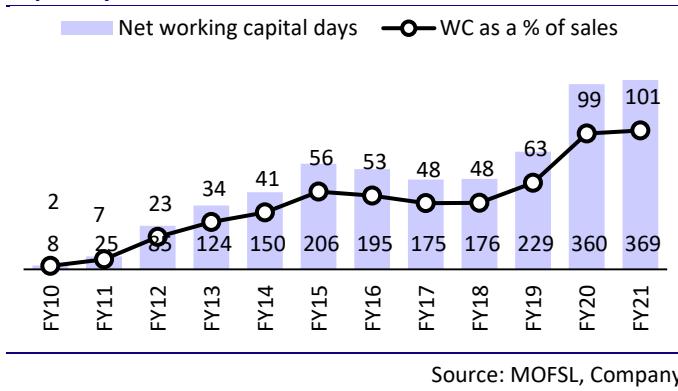
Source: MOFSL, Company

Exhibit 14: However, wage inflation leads to a rise in per employee cost from FY15



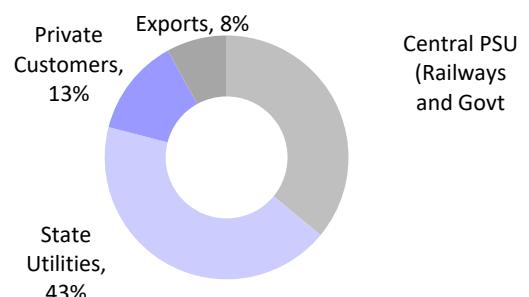
Source: MOFSL, Company

Exhibit 15: Rise in debtors led to an elongated working capital cycle...



Source: MOFSL, Company

Exhibit 16: ...with state utilities forming 43% of total debtors at the end of 1QFY22



Source: MOFSL, Company

### Valuation and view

- BHEL continues to struggle with: **a)** a weak ordering environment in the Power sector, **b)** higher receivables (over INR300b), and **c)** huge FY21 employee cost (~31% of sales). In FY21, working capital stood elevated ~101% of sales (99%/63% of sales FY20/FY19), weighed by a higher inventory and receivables, and poor execution.
- We maintain our earnings estimate (FY22E to be loss making) and our TP of INR40 (FY23E EV/EBITDA multiple of 12x) on the stock. We see further downside risk to order inflow and our revenue assumption for FY23E/FY24E. We maintain our Sell rating.

## Financials and valuations

Income Statement						(INR b)
Y/E March	FY19	FY20	FY21	FY22E	FY23E	FY24E
<b>Total Revenue</b>	<b>304</b>	<b>215</b>	<b>173</b>	<b>218</b>	<b>247</b>	<b>261</b>
Change (%)	5.6	-29.4	-19.4	26.1	13.2	5.5
Staff cost	55	54	54	53	51	50
Manufacturing expenses	183	141	116	142	156	164
Other Expenses	45	23	35	28	30	31
<b>EBITDA</b>	<b>21</b>	<b>-2</b>	<b>-31</b>	<b>-5</b>	<b>10</b>	<b>15</b>
Change (%)	10.4	-110.9	NA	NA	NA	43.6
Margin (%)	7.0	-1.1	-18.1	-2.1	4.2	5.7
Depreciation	5	5	5	5	5	5
Interest	3	5	4	4	4	4
Other income	7	6	4	4	4	3
<b>PBT</b>	<b>20</b>	<b>-7</b>	<b>-36</b>	<b>-9</b>	<b>6</b>	<b>9</b>
Tax	8.4	8.1	(8.9)	(2.3)	1.4	2.3
Rate (%)	41.0	-122.5	24.8	25.2	25.2	25.2
<b>Reported PAT</b>	<b>12</b>	<b>-15</b>	<b>-27</b>	<b>-7</b>	<b>4</b>	<b>7</b>
<b>Adjusted PAT</b>	<b>12</b>	<b>-15</b>	<b>-27</b>	<b>-7</b>	<b>4</b>	<b>7</b>
Change (%)	49.8	-221.9	NA	NA	NA	65.3

Balance Sheet						(INR b)
Y/E March	FY19	FY20	FY21	FY22E	FY23E	FY24E
Share Capital	7	7	7	7	7	7
Reserves	307	285	258	251	252	254
<b>Net Worth</b>	<b>314</b>	<b>292</b>	<b>265</b>	<b>258</b>	<b>259</b>	<b>261</b>
Loans	25	50	49	49	49	49
Deferred Tax Liability	(35)	(28)	(37)	(37)	(37)	(37)
<b>Capital Employed</b>	<b>305</b>	<b>314</b>	<b>278</b>	<b>271</b>	<b>272</b>	<b>274</b>
Gross Fixed Assets	60	63	65	67	69	71
Less: Depreciation	30	35	40	45	49	54
<b>Net Fixed Assets</b>	<b>30</b>	<b>28</b>	<b>25</b>	<b>22</b>	<b>19</b>	<b>16</b>
Capital WIP	2	3	4	4	4	4
Investments	7	7	7	7	7	7
<b>Curr. Assets</b>	<b>570</b>	<b>547</b>	<b>485</b>	<b>544</b>	<b>588</b>	<b>612</b>
Inventory	78	89	72	60	68	71
Debtors	158	124	72	120	129	136
Cash and Bank Balance	75	64	67	66	54	48
Loans and Advances	2	2	-	-	-	-
Other Assets	256	268	274	299	338	357
<b>Current Liab. and Prov.</b>	<b>304</b>	<b>271</b>	<b>243</b>	<b>306</b>	<b>347</b>	<b>366</b>
Creditors	121	99	86	108	122	129
Other Liabilities	104	89	86	109	123	130
Provisions	79	83	71	89	101	107
<b>Net Current Assets</b>	<b>266</b>	<b>276</b>	<b>242</b>	<b>238</b>	<b>242</b>	<b>247</b>
<b>Application of Funds</b>	<b>305</b>	<b>314</b>	<b>278</b>	<b>271</b>	<b>272</b>	<b>274</b>

## Financials and valuations

Ratios						
Y/E March	FY19	FY20	FY21	FY22E	FY23E	FY24E
<b>Basic (INR)</b>						
Adj. EPS	3.5	-4.2	-7.8	-2.0	1.2	2.0
Cash EPS	4.8	-2.8	-6.4	-0.6	2.6	3.4
Book Value	90.3	83.8	76.1	74.1	74.4	75.0
DPS	1.9	1.2	0.0	0.0	0.8	1.4
Payout (incl. Div. Tax.)	65.1	NA	0.0	0.0	70.0	70.0
<b>Valuation (x)</b>						
P/E	17.1	NA	NA	NA	49.1	29.7
Cash P/E	12.3	NA	NA	NA	23.1	17.5
EV/EBITDA	7.4	NA	NA	NA	19.6	14.0
EV/Sales	0.5	0.9	1.1	0.9	0.8	0.8
Price/Book Value	0.7	0.7	0.8	0.8	0.8	0.8
Dividend Yield (%)	3.2	2.0	0.0	0.0	1.4	2.4
<b>Profitability Ratios (%)</b>						
RoE	3.8	-5.0	-10.3	-2.7	1.6	2.7
RoCE	4.5	-1.1	-8.8	-1.5	2.6	3.6
ROIC	4.4	-6.8	-13.3	-3.5	2.0	3.4
<b>Turnover Ratios</b>						
Debtors (Days)	190	210	152	200	190	190
Inventory (Days)	94	151	152	100	100	100
Creditors (Days)	145	168	180	180	180	180
Asset Turnover (x)	9.5	6.9	6.0	8.3	10.5	12.6
<b>Leverage Ratio</b>						
Net Debt/Equity (x)	-0.2	0.0	-0.1	-0.1	0.0	0.0

Cash Flow Statement <span style="float: right;">(INR b)</span>						
Y/E March	FY19	FY20	FY21	FY22E	FY23E	FY24E
<b>PBT before EO Items</b>						
	20	(7)	(36)	(9)	6	9
Depreciation	5	5	5	5	5	5
Direct Taxes Paid	(4)	(3)	(2)	2	(1)	(2)
(Inc.)/Dec. in WC	(76)	(26)	26	3	(16)	(10)
<b>CF from Operations</b>	<b>(39)</b>	<b>(29)</b>	<b>6</b>	<b>0</b>	<b>(7)</b>	<b>2</b>
(Inc.)/Dec. in FA	(4)	(4)	(2)	(2)	(2)	(2)
<b>Free Cash Flow</b>	<b>(43)</b>	<b>(33)</b>	<b>3</b>	<b>(2)</b>	<b>(9)</b>	<b>0</b>
(Pur.)/Sale of Investments	6	6	4	4	4	3
<b>CF from Investments</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>
(Inc.)/Dec. in Net worth	(16)	0	(0)	-	-	-
(Inc.)/Dec. in Debt	25	25	(2)	-	-	-
Dividend Paid	8	5	0	-	3	5
<b>CF from Fin. Activity</b>	<b>(0)</b>	<b>17</b>	<b>(4)</b>	<b>(4)</b>	<b>(7)</b>	<b>(9)</b>
<b>Inc./Dec. in Cash</b>	<b>(37)</b>	<b>(11)</b>	<b>3</b>	<b>(1)</b>	<b>(12)</b>	<b>(5)</b>
Add: Beginning Balance	112	75	64	67	66	54
<b>Closing Balance</b>	<b>75</b>	<b>64</b>	<b>67</b>	<b>66</b>	<b>54</b>	<b>48</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 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://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

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

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

A graph of daily closing prices of securities is available at [www.nseindia.com](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 of 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 warranty, 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 alterations 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, 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.