

# Bharat Heavy Electricals | BUY

## Behemoth to Live On

With the opening up of 60GW of opportunities amidst limited competition, BHEL is poised for the next cycle of growth and performance, a situation previously seen during the first decade of the 2000s. The concurrent emergence of non-thermal power opportunities (pumped-hydro, nuclear, spares) and gradual scaling up of the industry business kills the commonly held view of zero-terminal value of the thermal business and its implications for the company. Changing our valuation methodology to SOTP-based considering the tapering of thermal business beyond 2030 and industry business – following growth in the non-power business – we expect the company to deliver Revenue/EBITDA/PAT CAGR of 35%/127%/145% over FY23-26E supported by healthy ordering, improving execution and the benefit of operating leverage. We maintain a BUY rating on the stock with an SOTP-based TP of INR 225, indicating a potential upside of 15% from current levels.

- How big and real are the current opportunities?** The demand for power in India continues to grow (7MFY24: energy/peak, 8.5%/12.7%) - significantly higher than all earlier growth rates (FY05-15/FY15-20: energy/peak, (6.1%/5.4%)/(3.9%/4.4%)). Amidst this, supplies remain constrained, leading to a rebalancing of energy strategy between energy security and sustainability. Presently 27GW of thermal power projects are under construction, 12GW have been bid out, 19GW are under clearances and another 30GW are at the planning stage with a target of adding 88GW by FY32.
- Is BHEL the only player in the market?** In the earlier cycle, in addition to BHEL, other manufacturers had a combined capacity of 9-11GW. However, in the recent bids ( 2x800 MW NTPC Singrauli-III, 3x800 MW NLC Talabira STPS, 1x800 MW DBCR TPP Ext, Yamunanagar, Haryana), BHEL is the only bidder as per the industry sources.
- What is the best-case scenario for capacity addition?** India will need to add 6-7GW of capacities every year for a net addition of 87,910MW of power generation capacity by FY32. BHEL commissioned a maximum of 12,215 MW of thermal power projects in FY16.
- What is the visibility of improvement in margins?** The company has INR 70-80bn of fixed expenses, constituting the cost of manpower, part of miscellaneous expenses and others. With increasing execution rate, we believe that the high operating leverage and limited competition will improve EBIT margin in the power business from FY25 onwards – from 8% in FY23 to 18%/ 21% in FY26/ FY29 – like it did in the earlier cycle (22%/ 25%/ 24% in FY06/ FY08/ FY10).
- Is the terminal value of the power sector zero?** By 2030, 50GW of thermal capacities will exceed their design life requiring retirement/ replacement/ major R&M. Further, scalable opportunities in non-thermal power – pumped-hydro power (akin to hydropower, where BHEL has around 45% market share); nuclear power (48% market share; likely to play an active role in Small & Modular Reactor technology) and spares & services (to grow at least 2x by FY30) – are likely to significantly compensate gradual tapering of thermal opportunities.
- When will the account receivables moderate and cash position improve?** Trade receivables/ contract assets were at INR 74.93bn/INR 301bn as of 30<sup>th</sup> Sep'23 vs. INR 65.44bn/INR 297bn as on 31<sup>st</sup> Mar'23. With the commissioning of 20GW of under-construction projects in the next 12-18 months, we believe stress on receivables will ease Mar'25 onwards. The decrease in debtor days along with better payment terms (minimum 10% advance) will translate into 44% CAGR in the cash balance during FY23-26 vs. -10% CAGR during the preceding 5 years.



Sudhanshu Bansal  
sudhanshu.bansal@jmfl.com | Tel: (91 22) 66303128

Dhananjay Jain  
dhananjay.jain@jmfl.com | Tel: (91 22) 62241879

### Recommendation and Price Target

Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	225
Upside/(Downside)	15.3%
Previous Price Target	165
Change	36.3%

### Key Data – BHEL IN

Current Market Price	INR195
Market cap (bn)	INR679.2/US\$8.2
Free Float	27%
Shares in issue (mn)	3,482.1
Diluted share (mn)	3,482.1
3-mon avg daily val (mn)	INR5,297.9/US\$63.7
52-week range	205/66
Sensex/Nifty	71,848/21,659
INR/US\$	83.2

### Price Performance

%	1M	6M	12M
Absolute	12.1	124.5	146.3
Relative*	7.4	104.6	107.9

\* To the BSE Sensex

### Related report

[Bharat Heavy Electricals Ltd: Steam blowing, again](#)

JM Financial Research is also available on:  
Bloomberg - JMFR <GO>,  
Thomson Publisher & Reuters,  
S&P Capital IQ, FactSet and Visible Alpha

Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

Financial Summary					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	2,01,533	2,21,363	2,53,944	3,39,231	5,65,657
Sales Growth (%)	23.7	9.8	14.7	33.6	66.7
EBITDA	7,377	7,166	1,638	19,740	83,335
EBITDA Margin (%)	3.5	3.1	0.6	5.6	14.3
Adjusted Net Profit	4,635	4,774	613	16,310	69,835
Diluted EPS (INR)	1.3	1.4	0.2	4.7	20.1
Diluted EPS Growth (%)	0.0	3.0	-87.2	2,561.0	328.2
ROIC (%)	1.8	1.8	-0.4	7.7	39.5
ROE (%)	1.7	1.8	0.2	5.9	22.9
P/E (x)	146.5	142.2	1,107.8	41.6	9.7
P/B (x)	2.6	2.5	2.5	2.4	2.1
EV/EBITDA (x)	88.8	93.0	369.3	28.8	6.2
Dividend Yield (%)	0.2	0.2	0.0	0.7	3.1

Source: Company data, JM Financial. Note: Valuations as of 04/Jan/2024

## Behemoth to Live On

### How big and real are the current opportunities?

- The demand for power in India continues to grow (7MFY24: energy/peak, 8.5%/12.7%); it is significantly higher than all earlier growth rates (FY05-15/FY15-20: energy/peak, (6.1%/5.4%)/(3.9%/4.4%)) and the generation target set by Ministry of Power (7.2% YoY). Amidst this, supplies remain constrained. The capacity addition (actual generation, more so) from renewables is below expectations (target/actual) and likely to take more time to scale up and address the grid-reliability challenges (% curtailment from IEA), compelling the government to refocus on rebuilding thermal capacities.

#### Exhibit 1. Power generation capacity

Technology (MW)	Existing generation capacity	Under construction	Capacity addition anticipated by FY32
Thermal (coal, gas, diesel)	239,073	27,180 + 12GW under bidding + 19GW under clearances	87,910
Hydropower	46,880	18,034	42,014
Nuclear	7,480	8,000	12,200
Renewable	132,699	78,935	3,22,000
<b>Total</b>	<b>426,132</b>	<b>1,32,148.5</b>	<b>4,64,124</b>

Source: MoP, CEA, MNRE, JM Financial

- Presently 27,180MW of thermal capacity is under construction, 12GW has been bid, 19GW is under clearances and another 30GW is at the conceptualisation stage with a target of adding 87,910MW by FY32.

#### Exhibit 2. Pipeline of thermal power projects

Project status	Total capacity	Projects
Under bidding	11,160 MW	2x800 MW NTPC Singrauli-III 1x800 MW NTPC Sipta-III 3x800 MW NLC Talabira STPS 1x800 MW DBCR TPP Ext, Yamunanagar, Har 2x660 MW DVC Raghunathpur 2x800 MW DVC Koderma 1x660 MW Amarkantak, MP 1x660 MW Satpura TPP, MP 2x660 MW NLC Neyveli TPS-II 2nd Expn, Cuddalore
Under clearances	17,140 MW	1x800 MW NTPC Darlipali-II 1x800 MW DVC Durgapur 3x800 MW NTPC Meja-II 1x800 MW NLC Talabira STPS 2x660 MW Korba, CG 2x660 MW OPGC Extn, IB Valley Stage-III, Odisha 2x800 MW UPRVUNL, Obra-D TPS 2x800 MW UPRVUNL, Anpara-D TPS 3x660 MW NTPC Nabinagar TPS 1x800 MW Singareni, Telangana 2x660 MW Koradi, Mah 3x800 MW NTPC Telangana Ph-II
Under planning	10,360 MW	2x800 MW MBPP Sundergarh TPS 2x800 MW KTPCL Godhna TPS 1x660 MW SJVNL Buxar Extn. 1x660 MW Chandrapur, Mah 1x800 MW Ukai, Guj 2x660 MW Chhabra, Raj 1x800 MW Kalisindh, Raj 1x660 MW SECL Amarkantak 2x800 MW MCL Sundargarh
More to come as per GOI's plan	22,070 MW	Under process

Source: Industry, JM Financial

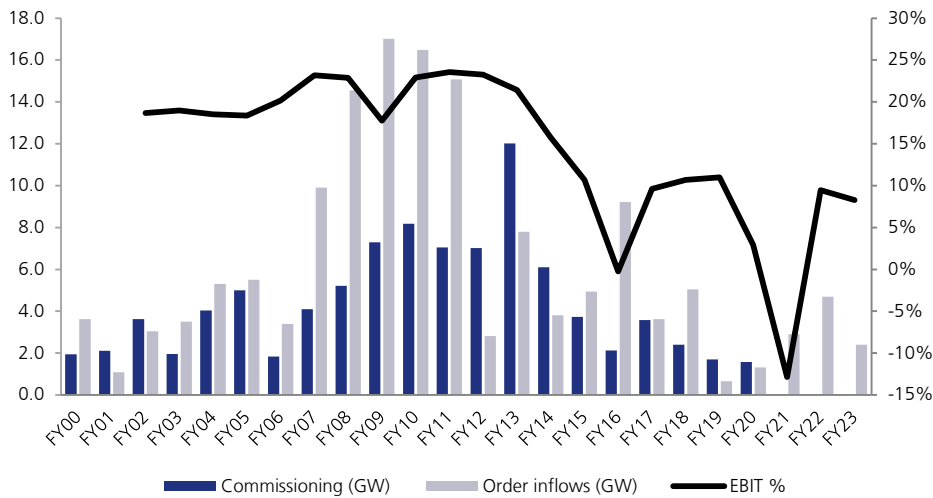
### Is BHEL the only player in the market?

- In the earlier cycle, in addition to BHEL, Alstom Bharat Forge, BGR Energy, Dossan HI, JSW-Toshiba, L&T-MHI, and Thermax-B&W were active in the Indian market with a combined manufacturing capacity of 9-11GW. But because of its scale and depth in manufacturing, BHEL used to command 70-80% market share. However, in the recent bids ( 2x800 MW NTPC Singrauli-III, 3x800 MW NLC Talabira STPS, 1x800 MW DBCR TPP Ext, Yamunanagar, Haryana), BHEL is the only bidder as per the industry sources. It is understood that the government is in discussion with some of the dormant industry players to execute a few projects, given the urgency of capacity addition before the general elections in 2029. Going forward, 1-2 industry players might enter the fray. Nevertheless, we believe BHEL will continue to garner a minimum 70% market share in the current cycle.

### What is the best-case scenario for capacity addition?

- Ministry of Power has targeted to add 87,910MW of power generation capacity by FY32 out of which 27,180MW of projects are under construction and likely to be commissioned by FY26. So, India will need to add around 6-7GW of capacities every year up to FY32.
- Given the complexities of a thermal power project, typically it takes little less than 5 years from conception of the project to commission it, with execution peaking in the third year. As observed during the last 2 decades, the performance of the company improved gradually in the sequence of order inflows, margin improvement and project commissioning. BHEL commissioned a maximum of 12,215MW of thermal power projects in FY16 with the best-ever EBIT margin of 23.3% in FY12.

**Exhibit 3. EBIT margin vis-à-vis capacity addition**

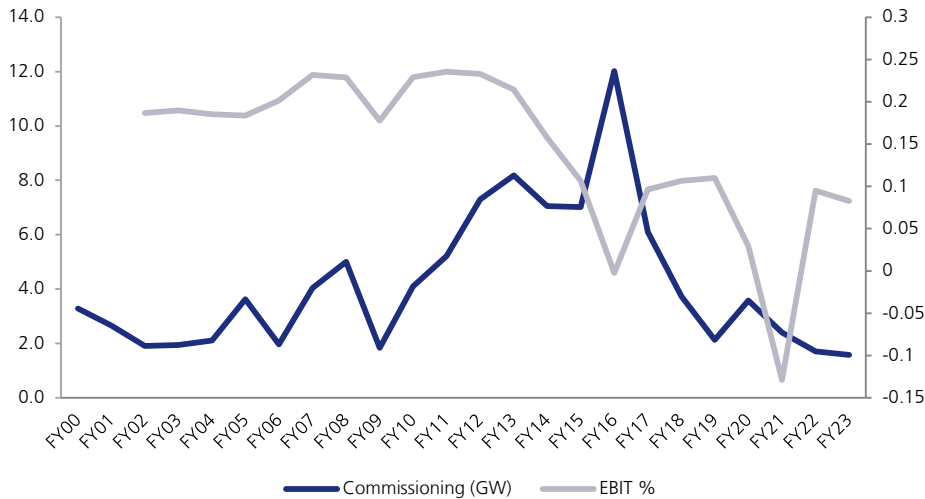


Source: Company, JM Financial

## What is the visibility of improvement in margins?

- The company has INR 70bn-80bn of fixed expenses, constituting cost of manpower, part of miscellaneous expenses and others. With increasing execution rate, we believe that the high operating leverage and limited competition will improve EBIT margin in the power business FY25 onwards – from 8% in FY23 to 18% and 21% in FY26 and FY29 – just as it did in the earlier cycle, i.e., 22%, 25% & 24% in FY06, FY08 and FY10.

### Exhibit 4. Project commissioning and EBIT margins



Source: Company, JM Financial

## Is the terminal value of the power sector zero?

- Central Electricity Authority (CEA) in Jan'23 and Jul'23 issued an advisory to all the thermal power utilities not to retire or repurpose their coal-based power stations before 2030 and ensure the availability of thermal units after carrying out R&M activities, if required, keeping in view the expected energy demand scenario and availability of capacity.
- By 2030, coal-fired power plants with capacities of more than 50GW will be exceeding their design life of 25 years and will be under consideration for retirement/ replacement. In a scenario of no new coal-fired plants, progressive replacement or major R&M (renovation and modernisation) of these capacities will be required to maintain the generation level that will exist in 2030.
- Further, scalable opportunities emerging in non-thermal power – pumped hydro power (akin to hydropower, where BHEL has around 45% market share in electro-mechanical equipment); nuclear power (48% market share on the secondary side; likely to play an active role in bringing Small & Modular Reactor technology to India) and spares & services (high margin stable business likely to grow at least 2x by FY30) – are likely to partially compensate for the gradual tapering of thermal opportunities.

## When will the account receivables see moderation?

- The trade receivables were at INR 74.93bn as of 30<sup>th</sup> Sep'23 (INR 65.44bn as of 31<sup>st</sup> Mar'23) and Contract Assets stood at INR 301bn as of 30<sup>th</sup> Sep'23 (INR 297bn as of 31<sup>st</sup> Mar'23).
- Contract assets (deferred debts and unbilled revenue) represent the amount not yet due for payment as per contract terms / agreed schedule with customers. The same will be contractually due on completion of related activities/milestones. Thus, contract assets mainly include event-based milestone-related payments, viz., payments due on obtaining material receipt certificates, project-related finished goods ready for dispatch, etc.
- The increase in receivables during recent years is mainly on account of skewed payment terms in contracts (e.g., 3x800MW Patratu) under execution, which resulted in a higher

accumulation of deferred debts that are payable on completion of intermediate and final milestones.

- Currently, 20GW of projects are under construction by BHEL, which are likely to be commissioned in the next 12-18 months, giving us the confidence that the stress on receivables will ease from Mar'25 onwards.

#### Exhibit 5. Thermal power projects under construction

Project	MW	Overall progress (% completion)	Likely trial run
Telangana TPP, St-I, Unit- 1&2 (2x800 MW)	1,600	Almost completed	Unit-1 commissioned/ Unit-2 soon
North Karanpura TPP, Unit- 2&3 (2x660 MW)	1,320	Unit-2 - 92%/ Unit-3 - 81%	Unit-1 - Nov'23/ Unit-2 - Jun'24
Patratu TPP, Unit- 1, 2 & 3 (3x800 MW)	2,400	Unit-1 - 67%/ Unit—2 - 64%/ Unit—3 - 48%	Unit 1 - Jul'24/ Unit 2 - Dec'24/ Unit 3 - Mar'25
Talcher TPP, St-III, Unit- 1 & 2 (2x660 MW)	1,320	Recently started	Unit-1 - Nov'26/ Unit-2 - May'27
Khurja STPP, Unit- 1 & 2 (2x660 MW)	1,320	Unit-1 - 73%/ Unit-2 - 63%	Unit 1 - Feb'24/ Unit 2 - Aug'24
N. Chennai STPP, Stage-III, Unit-1 (1x800 MW)	800	Unit 1 – 94%	Expected anytime
Ennore SEZ STPP, Unit- 1 & 2 (2x660 MW)	1,320	Unit-1 - 65%/ Unit-2 - 66%	Unit 1 - Apr'25/ Unit 2 - Jul'25
Udangudi STPP, Unit- 1&2 (2x660 MW)	1,320	Unit-1 - 72%/ Unit-2 - 69%	Unit 1 - Sep'24/ Unit 2 - Jan'25
Jawaharpur STPP, Unit- 1 & 2 (2x660 MW)	1,320	Unit-1 - 91%/ Unit-2 - 86%,	Unit-1 - Sep'23/ Unit - 2 - Jan'24
Obra-C TPP, Unit- 1 & 2 (2x660 MW)	1,320	Unit 1 - 90%/ Unit 2 - 75%	Unit-1 - Sep'23/ Unit -2 - Apr'24
Panki TPP Ext., Unit- 1 (1x660 MW)	660	Unit-1 - 79%	Unit-1 - Sep'24
Dr. Narla Tata Rao TPS, Unit- 8 (1x800 MW)	800	Unit- 8 - 86%	Unit 8 - Jul'23
Yadadri TPP, Unit- 1,2,3,4&5 (5x800 MW)	4,000	Various units 80-90%	All units in FY25
Bhusawal SCTPP, Unit- 1 (1x660 MW)	660	Unit-1 - 90%	Dec'23
Sagardighi TPP, St-III, Unit- 1 (1x660 MW)	660	Unit-1 - 53%	Jan'25

Source: CEA, Industry, JM Financial

## Valuation

#### Exhibit 6. SOTP valuation

Particulars	Rationale	Multiple (x)	Equity Value (INR mn)	Value per Share
Power	DCF	-	5,02,513	144
Industry	P/E multiple on FY26 EPS	40	2,80,760	81
<b>Total</b>			<b>7,83,273</b>	<b>225</b>

Source: Company, JM Financial

## Financial Tables (Consolidated)

Income Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Net Sales	2,01,533	2,21,363	2,53,944	3,39,231	5,65,657	
Sales Growth	23.7%	9.8%	14.7%	33.6%	66.7%	
Other Operating Income	10,577	12,286	12,901	14,191	15,610	
<b>Total Revenue</b>	<b>2,12,110</b>	<b>2,33,649</b>	<b>2,66,845</b>	<b>3,53,422</b>	<b>5,81,267</b>	
Cost of Goods Sold/Op. Exp	1,47,938	1,63,007	1,86,903	2,40,854	3,78,990	
Personnel Cost	55,168	57,006	58,146	59,891	62,286	
Other Expenses	0	0	0	0	0	
<b>EBITDA</b>	<b>7,377</b>	<b>7,166</b>	<b>1,638</b>	<b>19,740</b>	<b>83,335</b>	
EBITDA Margin	3.5%	3.1%	0.6%	5.6%	14.3%	
EBITDA Growth	0.0%	-2.9%	-77.1%	1,105.5%	322.2%	
Depn. & Amort.	3,141	2,603	2,726	2,861	3,009	
EBIT	4,237	4,562	-1,088	16,880	80,327	
Other Income	3,678	5,447	5,991	6,590	7,249	
Finance Cost	3,547	5,214	4,164	3,820	3,438	
PBT before Excep. & Forex	4,368	4,794	738	19,650	84,138	
Excep. & Forex Inc./Loss(-)	0	0	0	0	0	
PBT	4,368	4,794	738	19,650	84,138	
Taxes	-267	21	126	3,341	14,304	
Extraordinary Inc./Loss(-)	0	0	0	0	0	
Assoc. Profit/Min. Int.(-)	0	0	0	0	0	
Reported Net Profit	4,635	4,774	613	16,310	69,835	
<b>Adjusted Net Profit</b>	<b>4,635</b>	<b>4,774</b>	<b>613</b>	<b>16,310</b>	<b>69,835</b>	
Net Margin	2.2%	2.0%	0.2%	4.6%	12.0%	
Diluted Share Cap. (mn)	3,482.1	3,482.1	3,482.1	3,482.1	3,482.1	
<b>Diluted EPS (INR)</b>	<b>1.3</b>	<b>1.4</b>	<b>0.2</b>	<b>4.7</b>	<b>20.1</b>	
Diluted EPS Growth	0.0%	3.0%	-87.2%	2,561.0%	328.2%	
Total Dividend + Tax	1,393	1,393	184	4,893	20,950	
Dividend Per Share (INR)	0.4	0.4	0.1	1.4	6.0	

Source: Company, JM Financial

Cash Flow Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Profit before Tax	4,370	4,496	738	19,650	84,138	
Depn. & Amort.	3,141	2,514	2,726	2,861	3,009	
Net Interest Exp. / Inc. (-)	3,547	5,214	4,164	3,820	3,438	
Inc (-) / Dec in WCap.	5,861	-11,059	62,781	26,387	3,782	
Others	-14,405	-9,685	-5,991	-6,590	-7,249	
Taxes Paid	4,089	1,104	-126	-3,341	-14,304	
<b>Operating Cash Flow</b>	<b>6,603</b>	<b>-7,416</b>	<b>64,293</b>	<b>42,787</b>	<b>72,814</b>	
Capex	-2,243	-1,806	-3,191	-3,510	-3,861	
Free Cash Flow	4,360	-9,222	61,102	39,277	68,953	
Inc (-) / Dec in Investments	-3,573	254	-1,000	-1,000	-1,000	
Others	1,060	16,357	5,991	6,590	7,249	
<b>Investing Cash Flow</b>	<b>-4,756</b>	<b>14,805</b>	<b>1,800</b>	<b>2,080</b>	<b>2,388</b>	
Inc / Dec (-) in Capital	0	0	0	0	0	
Dividend + Tax thereon	-2,039	-1,392	-184	-4,893	-20,950	
Inc / Dec (-) in Loans	-240	5,902	-3,590	-5,026	-4,523	
Others	4,955	-17,011	-4,164	-3,820	-3,438	
<b>Financing Cash Flow</b>	<b>2,676</b>	<b>-12,500</b>	<b>-7,938</b>	<b>-13,739</b>	<b>-28,912</b>	
<b>Inc / Dec (-) in Cash</b>	<b>4,522</b>	<b>-5,111</b>	<b>58,155</b>	<b>31,128</b>	<b>46,291</b>	
Opening Cash Balance	67,015	71,537	66,426	1,24,581	1,55,709	
Closing Cash Balance	71,537	66,426	1,24,581	1,55,709	2,02,000	

Source: Company, JM Financial

Balance Sheet		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Shareholders' Fund	2,65,066	2,68,280	2,68,709	2,80,126	3,29,010	
Share Capital	6,964	6,964	6,964	6,964	6,964	
Reserves & Surplus	2,58,102	2,61,316	2,61,745	2,73,162	3,22,046	
Preference Share Capital	0	0	0	0	0	
Minority Interest	0	0	0	0	0	
Total Loans	47,450	53,850	50,260	45,234	40,711	
Def. Tax Liab. / Assets (-)	-35,301	-34,226	-34,226	-34,226	-34,226	
<b>Total - Equity &amp; Liab.</b>	<b>2,77,215</b>	<b>2,87,904</b>	<b>2,84,743</b>	<b>2,91,134</b>	<b>3,35,495</b>	
Net Fixed Assets	27,587	27,533	27,998	28,648	29,500	
Gross Fixed Assets	63,309	66,210	69,401	72,911	76,772	
Intangible Assets	87	93	93	93	93	
Less: Depn. & Amort.	39,946	42,122	44,848	47,709	50,717	
Capital WIP	4,223	3,446	3,446	3,446	3,446	
Investments	0	0	0	0	0	
Current Assets	4,99,464	5,31,846	5,81,147	6,71,019	9,16,694	
Inventories	65,602	67,559	73,839	97,796	1,60,844	
Sundry Debtors	3,31,686	3,62,839	3,43,609	3,67,946	4,77,753	
Cash & Bank Balances	71,537	66,426	1,24,581	1,55,709	2,02,000	
Loans & Advances	2,983	3,622	4,386	5,810	9,555	
Other Current Assets	27,656	31,400	34,732	43,758	66,542	
Current Liab. & Prov.	2,49,922	2,71,568	3,24,495	4,08,625	6,10,792	
Current Liabilities	1,20,942	1,46,957	1,71,444	2,18,614	3,42,752	
Provisions & Others	1,28,980	1,24,611	1,53,051	1,90,011	2,68,040	
Net Current Assets	2,49,542	2,60,278	2,56,652	2,62,394	3,05,902	
<b>Total - Assets</b>	<b>2,77,215</b>	<b>2,87,904</b>	<b>2,84,743</b>	<b>2,91,134</b>	<b>3,35,495</b>	

Source: Company, JM Financial

Dupont Analysis		FY22A	FY23A	FY24E	FY25E	FY26E
Y/E March						
Net Margin		2.2%	2.0%	0.2%	4.6%	12.0%
Asset Turnover (x)		0.4	0.4	0.5	0.5	0.7
Leverage Factor (x)		2.0	2.0	2.2	2.4	2.7
RoE		1.7%	1.8%	0.2%	5.9%	22.9%

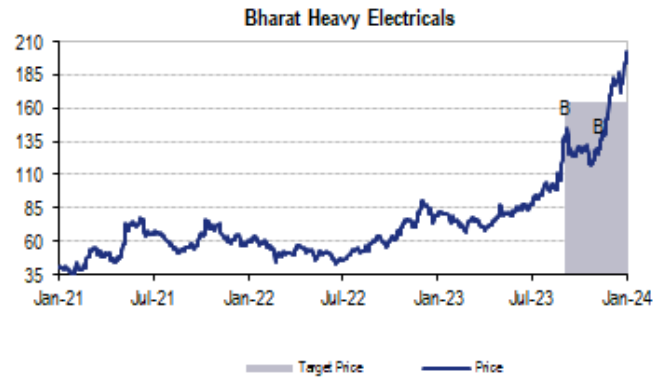
Key Ratios		FY22A	FY23A	FY24E	FY25E	FY26E
Y/E March						
BV/Share (INR)		76.1	77.0	77.2	80.4	94.5
ROIC		1.8%	1.8%	-0.4%	7.7%	39.5%
ROE		1.7%	1.8%	0.2%	5.9%	22.9%
Net Debt/Equity (x)		-0.1	0.0	-0.3	-0.4	-0.5
P/E (x)		146.5	142.2	1,107.8	41.6	9.7
P/B (x)		2.6	2.5	2.5	2.4	2.1
EV/EBITDA (x)		88.8	93.0	369.3	28.8	6.2
EV/Sales (x)		3.1	2.9	2.3	1.6	0.9
Debtor days		571	567	470	380	300
Inventory days		113	106	101	101	101
Creditor days		176	195	200	211	232

Source: Company, JM Financial

History of Recommendation and Target Price

Date	Recommendation	Target Price	% Chg.
4-Sep-23	Buy	165	
9-Nov-23	Buy	165	0.0

Recommendation History



## APPENDIX I

## JM Financial Institutional Securities Limited

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd. and National Stock Exchange of India Ltd.

SEBI Registration Nos.: Stock Broker - INZ000163434, Research Analyst - INH000000610

Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.

Board: +91 22 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com

Compliance Officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: sahil.salastekar@jmfl.com

Grievance officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: instcompliance@jmfl.com

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

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 10% for stocks with market capitalisation in excess of INR 200 billion and REITs* and more than 15% for all other stocks, over the next twelve months. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 10% upside from the current market price for stocks with market capitalisation in excess of INR 200 billion and REITs* and in the range of 10% downside to 15% upside from the current market price for all other stocks, over the next twelve months.
Sell	Price expected to move downwards by more than 10% from the current market price over the next twelve months.

\* REITs refers to Real Estate Investment Trusts.

**Research Analyst(s) Certification**

The Research Analyst(s), with respect to each issuer and its securities covered by them in this research report, certify that:

All of the views expressed in this research report accurately reflect his or her or their personal views about all of the issuers and their securities; and

No part of his or her or their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

**Important Disclosures**

This research report has been prepared by JM Financial Institutional Securities Limited (JM Financial Institutional Securities) to provide information about the company(ies) and sector(s), if any, covered in the report and may be distributed by it and/or its associates solely for the purpose of information of the select recipient of this report. This report and/or any part thereof, may not be duplicated in any form and/or reproduced or redistributed without the prior written consent of JM Financial Institutional Securities. This report has been prepared independent of the companies covered herein.

JM Financial Institutional Securities is registered with the Securities and Exchange Board of India (SEBI) as a Research Analyst and a Stock Broker having trading memberships of the BSE Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE). No material disciplinary action has been taken by SEBI against JM Financial Institutional Securities in the past two financial years which may impact the investment decision making of the investor. Registration granted by SEBI and certification from the National Institute of Securities Market (NISM) in no way guarantee performance of JM Financial Institutional Securities or provide any assurance of returns to investors.

JM Financial Institutional Securities renders stock broking services primarily to institutional investors and provides the research services to its institutional clients/investors. JM Financial Institutional Securities and its associates are part of a multi-service, integrated investment banking, investment management, brokerage and financing group. JM Financial Institutional Securities and/or its associates might have provided or may provide services in respect of managing offerings of securities, corporate finance, investment banking, mergers & acquisitions, broking, financing or any other advisory services to the company(ies) covered herein. JM Financial Institutional Securities and/or its associates might have received during the past twelve months or may receive compensation from the company(ies) mentioned in this report for rendering any of the above services.

JM Financial Institutional Securities and/or its associates, their directors and employees may; (a) from time to time, have a long or short position in, and buy or sell the securities of the company(ies) mentioned herein or (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) covered under this report or (c) act as an advisor or lender/borrower to, or may have any financial interest in, such company(ies) or (d) considering the nature of business/activities that JM Financial Institutional Securities is engaged in, it may have potential conflict of interest at the time of publication of this report on the subject company(ies).

Neither JM Financial Institutional Securities nor its associates or the Research Analyst(s) named in this report or his/her relatives individually own one per cent or more securities of the company(ies) covered under this report, at the relevant date as specified in the SEBI (Research Analysts) Regulations, 2014.

The Research Analyst(s) principally responsible for the preparation of this research report and their immediate relatives are prohibited from buying or selling debt or equity securities, including but not limited to any option, right, warrant, future, long or short position issued by company(ies) covered under this report. The Research Analyst(s) principally responsible for the preparation of this research report or their immediate relatives (as defined under SEBI (Research Analysts) Regulations, 2014); (a) do not have any financial interest in the company(ies) covered under this report or (b) did not receive any compensation from the company(ies) covered under this report, or from any third party, in connection with this report or (c) do not have any other material conflict of interest at the time of publication of this report. Research Analyst(s) are not serving as an officer, director or employee of the company(ies) covered under this report.



While reasonable care has been taken in the preparation of this report, it does not purport to be a complete description of the securities, markets or developments referred to herein, and JM Financial Institutional Securities does not warrant its accuracy or completeness. JM Financial Institutional Securities may not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This report is provided for information only and is not an investment advice and must not alone be taken as the basis for an investment decision.

This research report is based on the fundamental research/analysis conducted by the Research Analyst(s) named herein. Accordingly, this report has been prepared by studying/focusing on the fundamentals of the company(ies) covered in this report and other macro-economic factors. JM Financial Institutional Securities may have also issued or may issue, research reports and/or recommendations based on the technical/quantitative analysis of the company(ies) covered in this report by studying and using charts of the stock's price movement, trading volume and/or other volatility parameters. As a result, the views/recommendations expressed in such technical research reports could be inconsistent or even contrary to the views contained in this report.

The investment discussed or views expressed or recommendations/opinions given herein may not be suitable for all investors. The user assumes the entire risk of any use made of this information. The information contained herein may be changed without notice and JM Financial Institutional Securities reserves the right to make modifications and alterations to this statement as they may deem fit from time to time.

This report is neither an offer nor solicitation of an offer to buy and/or sell any securities mentioned herein and/or not an official confirmation of any transaction.

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 JM Financial Institutional Securities and/or its affiliated company(ies) 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 a certain category of investors. Persons in whose possession this report may come, are required to inform themselves of and to observe such restrictions.

**Additional disclosure only for U.S. persons:** JM Financial Institutional Securities has entered into an agreement with JM Financial Securities, Inc. ("JM Financial Securities"), a U.S. registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") in order to conduct certain business in the United States in reliance on the exemption from U.S. broker-dealer registration provided by Rule 15a-6, promulgated under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC") (together "Rule 15a-6").

This research report is distributed in the United States by JM Financial Securities in compliance with Rule 15a-6, and as a "third party research report" for purposes of FINRA Rule 2241. In compliance with Rule 15a-6(a)(3) this research report is distributed only to "major U.S. institutional investors" as defined in Rule 15a-6 and is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research report and are not a major U.S. institutional investor, you are instructed not to read, rely on, or reproduce the contents hereof, and to destroy this research or return it to JM Financial Institutional Securities or to JM Financial Securities.

This research report is a product of JM Financial Institutional Securities, which is the employer of the research analyst(s) solely responsible for its content. The research analyst(s) preparing this research report is/are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore, the analyst(s) are not subject to supervision by a U.S. broker-dealer, or otherwise required to satisfy the regulatory licensing requirements of FINRA and may not be subject to the Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Any U.S. person who is recipient of this report that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, must contact, and deal directly through a U.S. registered representative affiliated with a broker-dealer registered with the SEC and a member of FINRA. In the U.S., JM Financial Institutional Securities has an affiliate, JM Financial Securities, Inc. located at 1325 Avenue of the Americas, 28th Floor, Office No. 2821, New York, New York 10019. Telephone +1 (332) 900 4958 which is registered with the SEC and is a member of FINRA and SIPC.

**Additional disclosure only for U.K. persons:** Neither JM Financial Institutional Securities nor any of its affiliates is authorised in the United Kingdom (U.K.) by the Financial Conduct Authority. As a result, this report is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the matters to which this report relates may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This report is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons.

**Additional disclosure only for Canadian persons:** This report is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities described herein in Canada or any province or territory thereof. Under no circumstances is this report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the registration requirement in the relevant province or territory of Canada in which such offer or sale is made. This report is not, and under no circumstances is it to be construed as, a prospectus or an offering memorandum. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. If you are located in Canada, this report has been made available to you based on your representation that you are an "accredited investor" as such term is defined in National Instrument 45-106 Prospectus Exemptions and a "permitted client" as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada nor should it be construed as being tailored to the needs of the recipient. Canadian recipients are advised that JM Financial Securities, Inc., JM Financial Institutional Securities Limited, their affiliates and authorized agents are not responsible for, nor do they accept, any liability whatsoever for any direct or consequential loss arising from any use of this research report or the information contained herein.