

Bharat Heavy Electricals | BUY

Today's miss, Tomorrow's beat

BHEL reported consol net revenue of INR 55bn (+9.6% YoY, -10% JMFe) during 1QFY25. It reported an EBITDA of INR -1.7bn in 1QFY25 vs. INR -1.8bn/ INR 0.6bn in 1QFY24/ JMFe missing estimates due to lower revenue and higher other expenses. Adj. PAT stood at INR -2.1bn in 1QFY25 vs. INR -2.0bn/INR -0.2bn in 1QFY24/ JMFe. With a growing and executable order book of INR 1350bn, sustained momentum in the tendering of new thermal power projects, and a limited competitive environment, we anticipate the company to gradually regain its growth trajectory starting from 3QFY25. We continue to maintain the BUY rating on the stock with a TP of INR 361 (40x FY26EPS).

- **A world of opportunities:** The government plans to add 93GW of thermal power projects by FY32 including 27GW under construction projects. Out of remaining 66GW, eight projects (12.8GW) were awarded to BHEL during FY24 and 1QFY25; fourteen projects (18.88GW) are under tendering, and rest are expected in 2 years. The company, during 4QFY24 ConCall guided for 10-12GW of annual ordering during next few years. (Exhibit 3)
- **Competition:** The Ministry of Power has been encouraging other EPC/equipment players, such as L&T, Thermax, JSW-Toshiba, and GE Power, to participate in tenders. However, BHEL has been the sole bidder in all recent tenders. Despite this, our estimates are based on 70-80% market share for BHEL in the total 66 GW opportunities.
- **Orders booked:** The company received orders worth INR 95bn (INR 85bn power, INR 9bn industry, INR 1bn exports) during 1QFY25. Major orders include 2x800 MW Raipur Phase-II power project and 2x800 MW Mirzapur Phase-I power project from Adani Power. In Industry segment received orders for supply of transformers, compressors, well heads, and other industrial products. With this the order book stands at INR 1350bn as of 30 Jun'24 (INR 1,011bn Power, INR 304bn Industry, INR 38bn exports).
- **Projects execution:** Company completed synchronisation of 135 MW STG of 370 MW Yelahanka combined-cycle power plant, 59.3 MW Gas Turbine Generator (GTG) of HPCL's Visakhapatnam refinery, 15MW GTG of ONGC Uran. Full load was achieved for 800 MW North Chennai Stage-III. It also delivered 'Main fractionator column' for HPCL Barmer refinery. [Steam blowing, again.](#)
- **Transmission opportunities:** The company is actively pursuing upcoming four HVDC transmission projects. It has already submitted bid for first ±800kV HVDC line between the Bhadla (HVDC) and Fatehpur (HVDC) terminal stations. Bid for another +/-800kV 6,000MW HVDC terminals, at Khavda and Nagpur has been issued. It has tied up with a global OEM for these projects. Earlier, the company has successfully implemented +/- 800 kV, 6,000 MW UHVDC Raigarh-Pugalur transmission line in collaboration with ABB.
- **Segment performance:** Power/ Industry segment reported revenue of INR 41bn/ INR 14bn (+4%/+30% YoY) in 1QFY25. EBIT for 1QFY25 for Power/Industry segment is INR -540mn/ INR 633mn (1QFY24 INR 498mn/ INR -269mn) and the EBIT Margin for Power/ Industry segment came at -1.3%/ +4.7%.
- **Change in a/c policy:** The company has restated its financials in line with change in accounting policy by the company in FY24 with respect to factoring time value of money while calculating Expected Credit Losses in respect of Contract Assets. Impact of the adjustment is reduction in other expenses by INR 1.86bn and increase in Tax expenses by INR 0.46bn in Q1FY24.



Sudhanshu Bansal

sudhanshu.bansal@jmf.com | Tel: (91 22) 66303128

We acknowledge the support of **Krishnakant Phafat** in the preparation of this report

Recommendation and Price Target

Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	361
Upside/(Downside)	14.5%
Previous Price Target	353
Change	2.3%

Key Data – BHEL IN

Current Market Price	INR315
Market cap (bn)	INR1,097.7/US\$13.1
Free Float	28%
Shares in issue (mn)	3,482.1
Diluted share (mn)	3,482.1
3-mon avg daily val (mn)	INR9,916.6/US\$118.4
52-week range	335/95
Sensex/Nifty	81,741/24,951
INR/US\$	83.7

Price Performance

%	1M	6M	12M
Absolute	4.8	38.1	203.0
Relative*	1.9	21.1	146.3

* To the BSE Sensex

Financial Summary

Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E
Net Sales	2,01,533	2,21,363	2,29,205	3,09,231	4,15,897
Sales Growth (%)	23.7	9.8	3.5	34.9	34.5
EBITDA	7,377	9,528	6,126	10,776	38,365
EBITDA Margin (%)	3.5	4.1	2.6	3.4	9.0
Adjusted Net Profit	4,635	6,542	2,823	7,039	31,225
Diluted EPS (INR)	1.3	1.9	0.8	2.0	9.0
Diluted EPS Growth (%)	0.0	41.1	-56.9	149.4	343.6
ROIC (%)	1.8	2.7	1.7	3.1	19.2
ROE (%)	1.7	2.6	1.2	2.9	12.0
P/E (x)	236.7	167.7	388.6	155.8	35.1
P/B (x)	4.1	4.5	4.5	4.4	4.0
EV/EBITDA (x)	145.4	113.7	183.4	94.3	25.1
Dividend Yield (%)	0.1	0.1	0.1	0.2	0.9

Source: Company data, JM Financial. Note: Valuations as of 31/Jul/2024

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.

Exhibit 1. 1QFY25 results summary

Particulars	1QFY25	1QFY24	YoY %	4QFY24	QoQ %	JMFe	% Var
Net sales	54,849	50,034	9.6%	82,603	-34%	61,042	-10.1%
Expenditure	56,543	51,815	9%	75,324	-25%	60,495	-7%
Raw material expense	38,776	35,478		55,206		43,950	
Employee expense	14,349	14,200		14,847		14,345	
Other expenditure	3,418	2,137		5,271		2,200	
EBITDA	(1,694)	(1,781)		7,279		547	
EBITDA margins	-3.1%	-3.6%		8.8%		0.9%	
Other income	1,111	1,299		1,702		1,754	
Depreciation	590	600		684		684	
Interest	1,617	1,680		1,933		1,933	
PBT	(2,790)	(2,762)		6,363		(316)	
Tax	(676)	(715)		1,467		(73)	
PAT	(2,114)	(2,047)		4,896		(243)	
Adjusted PAT	(2,114)	(2,047)		4,896		(243)	
EPS	(0.6)	(0.6)		1.4		(0.1)	

Source: Company, JM Financial

Exhibit 2. Major orders received in 1QFY25

Segments	Particulars
Power Segment	<ul style="list-style-type: none"> 2 X 800MW Raipur Phase-II Power Project from Adani Power Ltd. for supply of BTG and supervision of E&C. 2 X 800MW Mirzapur Phase-I power project from Mirzapur Thermal Energy (Subsidiary of Adani Power Ltd) for supply of BTG and supervision of E&C.
Industry Segment	<ul style="list-style-type: none"> Supply of transformers from Railways for locomotives Supply of Propylene Refrigerant compressor from Petrochem company Supply & supervision of E&C of 1x60 MW STG from steel manufacturer Supply of Well Heads & X-Mas trees from crude oil extraction company Heat Exchangers & ECS Water Injectors for Tejas Mk2 aircraft from the Aeronautical Development Agency, Bengaluru Supply of various rating transformers from Transmission companies
Export Market	<ul style="list-style-type: none"> Supply of 2 nos. of 175 MW Air cooled Synchronous Generators for Mmamabula Thermal Power Project, Botswana Inspection & refurbishment order for Gas Turbines and accessories from UAE

Source: Company, JM Financial

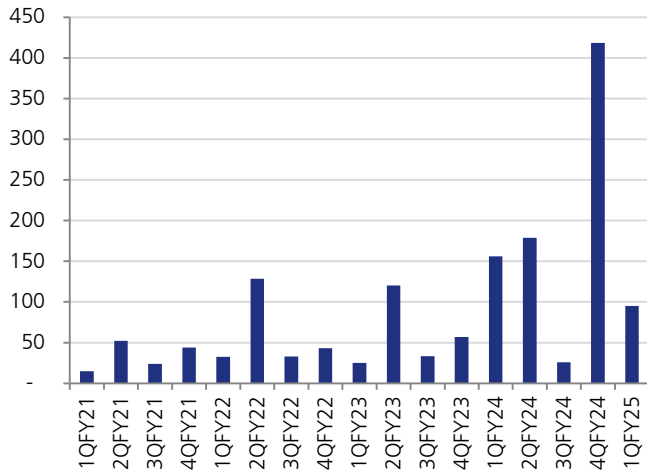
Exhibit 3. Ordering of new thermal power projects

Projects where orders are placed	MW
FY23	
2x660 MW NTPC Talcher	1,320
Total	1,320
FY24	
2x800MW Adani Power Raigarh	1,600
2x800MW NTPC Singrauli	1,600
3x800MW NLC Talabira	2,400
1x800MW HPGCL Yamuna Nagar	800
2x800 MW NTPC Lara	1,600
2x800 MW Adani Power Bandhaura	1,600
Total	9,600
YTFY25	
2x800MW Adani Power Raipur	1,600
2x800MW Mirzapur Thermal Energy Mirzapur	1,600
Total	3,200
Total	14,120
Projects where tenders are issued	
1x800 MW NTPC Sipta-III	800
2x660 MW DVC Raghunathpur (only TG)	1,320
2x800 MW DVC Koderma	1,600
1x800 MW NTPC Darlipali-II	800
3x800 MW NTPC Meja-II	2,400
2x660 MW Korba, CG	1,320
1x660 MW Amarkantak, MP	660
1x660 MW Satpura TPP, MP	660
1x800 MW Mancherial, Singareni, Telangana	800
2x660 MW Koradi, Mah (BTG EPC)	1,320
1x800 MW Ukai, Guj Unit-7	800
3x800 MW NTPC Nabinagar TPS	2,400
3x800 MW NTPC Telangana Ph-II	2,400
2x800 MW NTPC Gadarwara, Phase-II	1,600
Total	18,880
Projects where tenders are expected	
2x660 MW NLC Neyveli TPS-II Second Exprn, Cuddalore	1,320
1x800 MW DVC Durgapur	800
1x660 MW SJVNL Buxar Extn.	1,320
1x660 MW SECL Amarkantak (CIL)	660
2x800 MW MCL Sundargarh (CIL)	1,600
2x660 MW OPGC Extn, IB Valley Stage-III, Odisha	1,320
1x660 MW Chandrapur, Mah	660
2x660 MW Chhabra, Raj	1,320
1x800 MW Kalisindh, Raj	800
1x800 MW NLC Talabira STPS	800
2x800 MW MBPP Sundergarh TPS	1,600
2x800 MW KTPCL Godhna TPS	1,600
2x800 MW UPRVUNL, Obra-D TPS	1,600
2x800 MW UPRVUNL, Anpara-D TPS	1,600
2x660 MW Tenughat Extn (CIL, JH govt JV)	1,320
2x800 MW NTPC Patratu, Phase-II	1,600
Total	19,920
Grand total	52,920

Source: Industry, JM Financial

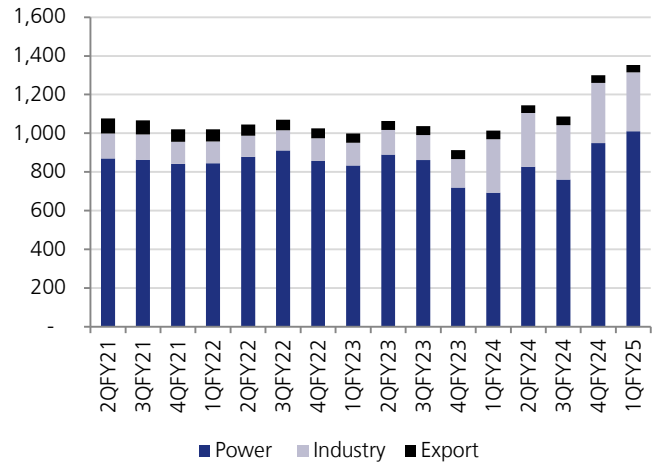
Key Charts

Exhibit 4. Order inflows (INR bn)



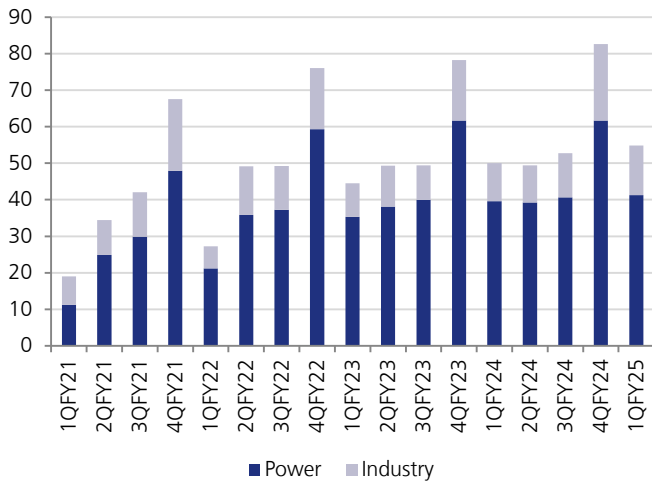
Source: Company, JM Financial

Exhibit 5. Order book (INR bn)



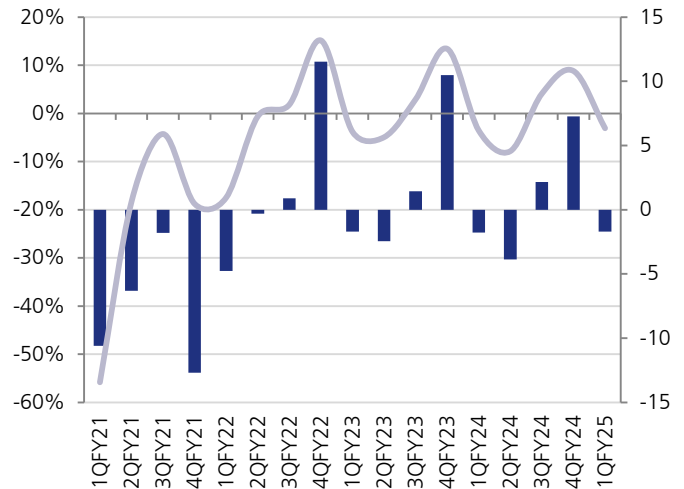
Source: Company, JM Financial

Exhibit 6. Revenue (INR bn)



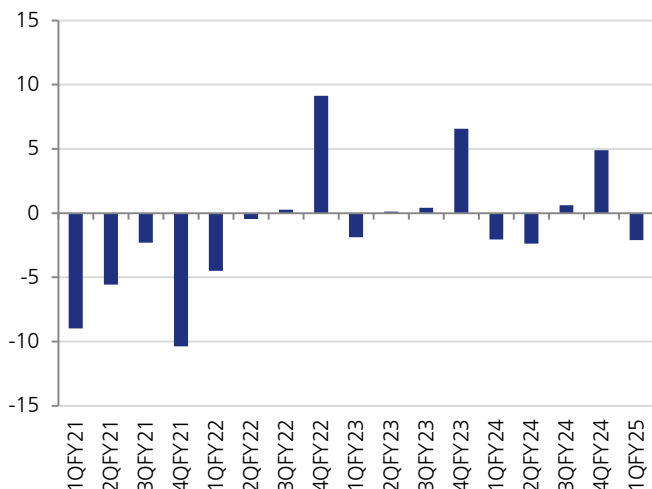
Source: Company, JM Financial

Exhibit 7. EBITDA (INR bn) & EBITDA margin



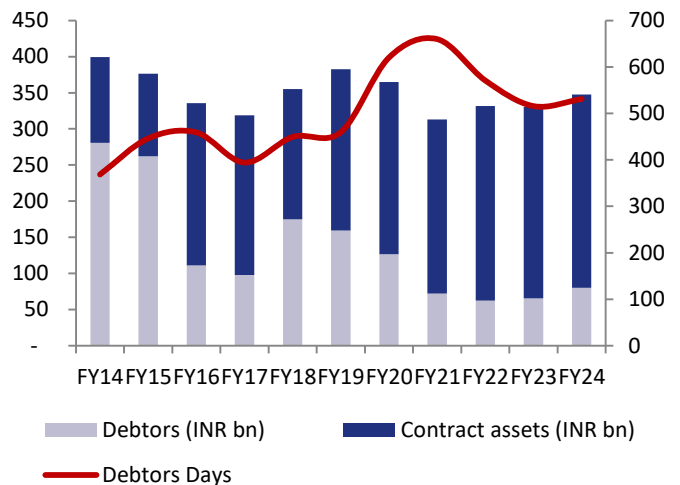
Source: Company, JM Financial

Exhibit 8. Adj PAT (INR bn)



Source: Company, JM Financial

Exhibit 9. Sundry debtors trend (INR bn)



Source: Company, JM Financial

Valuation

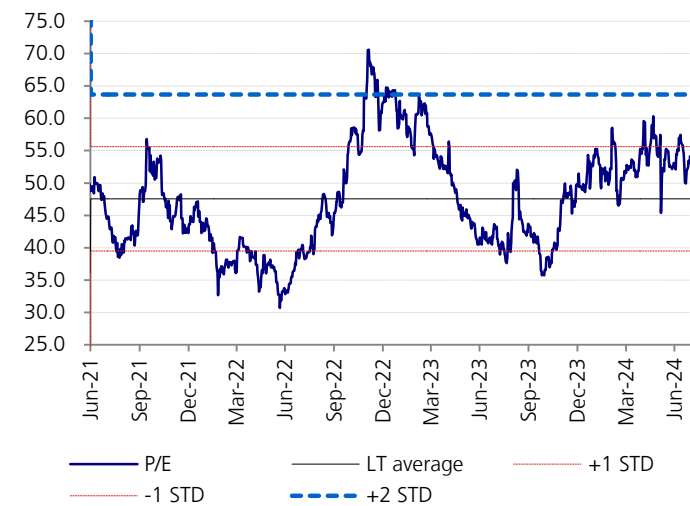
Exhibit 10. SOTP Valuation

Particulars	Value
Mar'26 EPS	9.0
P/E multiple	40
TP (INR)	361
CMP	315
% upside	15%

Source: Company, JM Financial

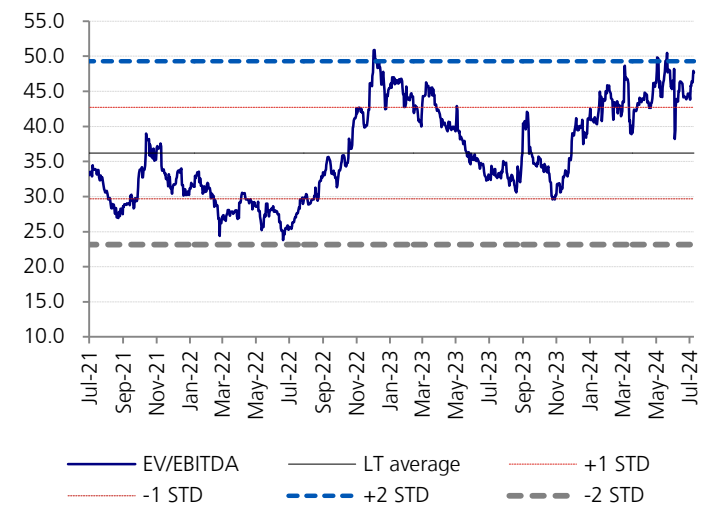
Valuation Bands

Exhibit 11. P/E



Source: Company, JM Financial

Exhibit 12. EV/EBITDA



Source: Company, JM Financial

Financial Tables (Consolidated)

Income Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E	
Net Sales	2,01,533	2,21,363	2,29,205	3,09,231	4,15,897	
Sales Growth	23.7%	9.8%	3.5%	34.9%	34.5%	
Other Operating Income	10,577	12,286	9,723	10,695	11,764	
Total Revenue	2,12,110	2,33,649	2,38,928	3,19,926	4,27,661	
Cost of Goods Sold/Op. Exp	1,47,938	1,63,007	1,68,071	2,19,554	2,86,969	
Personnel Cost	55,168	57,006	56,288	57,977	60,296	
Other Expenses	0	0	0	0	0	
EBITDA	7,377	9,528	6,126	10,776	38,365	
EBITDA Margin	3.5%	4.1%	2.6%	3.4%	9.0%	
EBITDA Growth	0.0%	29.1%	-35.7%	75.9%	256.0%	
Depn. & Amort.	3,141	2,603	2,489	2,619	2,791	
EBIT	4,237	6,924	3,637	8,157	35,575	
Other Income	3,678	5,447	6,103	7,018	8,071	
Finance Cost	3,547	5,214	7,313	6,694	6,025	
PBT before Excep. & Forex	4,368	7,157	2,427	8,481	37,621	
Excep. & Forex Inc./Loss(-)	0	0	0	0	0	
PBT	4,368	7,157	2,427	8,481	37,621	
Taxes	-267	615	-396	1,442	6,396	
Extraordinary Inc./Loss(-)	0	0	0	0	0	
Assoc. Profit/Min. Int.(-)	0	0	0	0	0	
Reported Net Profit	4,635	6,542	2,823	7,039	31,225	
Adjusted Net Profit	4,635	6,542	2,823	7,039	31,225	
Net Margin	2.2%	2.8%	1.2%	2.2%	7.3%	
Diluted Share Cap. (mn)	3,482.1	3,482.1	3,482.1	3,482.1	3,482.1	
Diluted EPS (INR)	1.3	1.9	0.8	2.0	9.0	
Diluted EPS Growth	0.0%	41.1%	-56.9%	149.4%	343.6%	
Total Dividend + Tax	1,393	1,393	1,395	2,112	9,368	
Dividend Per Share (INR)	0.4	0.4	0.4	0.6	2.7	

Source: Company, JM Financial

Cash Flow Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E	
Profit before Tax	4,370	7,157	2,427	8,481	37,621	
Depn. & Amort.	3,141	2,603	2,489	2,619	2,791	
Net Interest Exp. / Inc. (-)	3,547	5,214	7,313	6,694	6,025	
Inc (-) / Dec in WCAP.	5,861	-7,966	-34,446	97,279	33,167	
Others	-14,405	-15,519	-17,133	-7,018	-8,071	
Taxes Paid	4,089	1,104	2,222	-1,442	-6,396	
Operating Cash Flow	6,603	-7,406	-37,129	1,06,614	65,137	
Capex	-2,243	-1,806	-2,236	-4,784	-4,756	
Free Cash Flow	4,360	-9,213	-39,365	1,01,829	60,381	
Inc (-) / Dec in Investments	-3,573	13,842	11,135	-1,000	-1,000	
Others	1,060	2,769	4,410	7,018	8,071	
Investing Cash Flow	-4,756	14,805	13,309	1,233	2,315	
Inc / Dec (-) in Capital	0	0	0	0	0	
Dividend + Tax thereon	-2,039	-1,392	-1,395	-2,112	-9,368	
Inc / Dec (-) in Loans	-240	5,830	33,840	-8,808	-7,927	
Others	4,955	-3,548	-5,888	-6,694	-6,025	
Financing Cash Flow	2,676	890	26,557	-17,614	-23,319	
Inc / Dec (-) in Cash	4,522	8,288	2,737	90,233	44,132	
Opening Cash Balance	67,015	71,537	66,981	69,718	1,59,951	
Closing Cash Balance	71,537	66,981	61,575	1,59,951	2,04,083	

Source: Company, JM Financial

Balance Sheet		(INR mn)				
Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E	
Shareholders' Fund	2,65,066	2,43,783	2,44,387	2,49,314	2,71,172	
Share Capital	6,964	6,964	6,964	6,964	6,964	
Reserves & Surplus	2,58,102	2,36,819	2,37,422	2,42,350	2,64,208	
Preference Share Capital	0	0	0	0	0	
Minority Interest	0	0	0	0	0	
Total Loans	47,450	53,850	88,080	79,272	71,345	
Def. Tax Liab. / Assets (-)	-35,301	-42,465	-42,013	-33,870	-33,870	
Total - Equity & Liab.	2,77,215	2,55,167	2,90,454	2,94,717	3,08,647	
Net Fixed Assets	27,587	28,206	28,564	30,729	32,695	
Gross Fixed Assets	63,309	66,882	70,352	75,136	79,892	
Intangible Assets	87	93	260	260	260	
Less: Depn. & Amort.	39,946	42,122	44,611	47,230	50,021	
Capital WIP	4,223	3,446	2,823	2,823	2,823	
Investments	0	0	0	0	0	
Current Assets	4,99,464	4,98,437	5,19,218	6,38,439	7,45,406	
Inventories	65,602	67,559	72,206	1,00,799	1,34,743	
Sundry Debtors	3,31,686	3,30,099	3,47,581	3,33,074	3,51,502	
Cash & Bank Balances	71,537	66,981	61,575	1,59,951	2,04,083	
Loans & Advances	2,983	0	0	0	0	
Other Current Assets	27,656	33,798	37,857	44,615	55,078	
Current Liab. & Prov.	2,49,922	2,71,568	2,57,588	3,74,711	4,69,714	
Current Liabilities	1,20,942	1,48,570	1,54,412	2,17,074	2,75,181	
Provisions & Others	1,28,980	1,22,997	1,03,176	1,57,637	1,94,533	
Net Current Assets	2,49,542	2,26,869	2,61,630	2,63,727	2,75,692	
Total - Assets	2,77,215	2,55,167	2,90,454	2,94,717	3,08,647	

Source: Company, JM Financial

Dupont Analysis						
Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E	
Net Margin	2.2%	2.8%	1.2%	2.2%	7.3%	
Asset Turnover (x)	0.4	0.4	0.4	0.5	0.6	
Leverage Factor (x)	2.0	2.1	2.2	2.5	2.8	
RoE	1.7%	2.6%	1.2%	2.9%	12.0%	

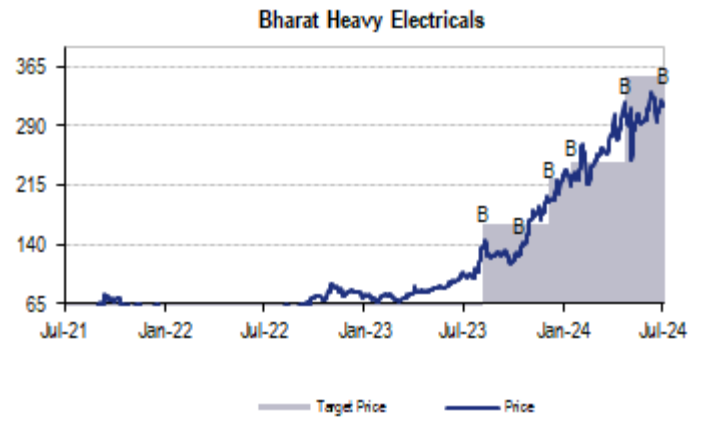
Key Ratios						
Y/E March	FY22A	FY23A	FY24A	FY25E	FY26E	
BV/Share (INR)	76.1	70.0	70.2	71.6	77.9	
ROIC	1.8%	2.7%	1.7%	3.1%	19.2%	
ROE	1.7%	2.6%	1.2%	2.9%	12.0%	
Net Debt/Equity (x)	-0.1	-0.1	0.1	-0.3	-0.5	
P/E (x)	236.7	167.7	388.6	155.8	35.1	
P/B (x)	4.1	4.5	4.5	4.4	4.0	
EV/EBITDA (x)	145.4	113.7	183.4	94.3	25.1	
EV/Sales (x)	5.1	4.6	4.7	3.2	2.3	
Debtor days	571	516	531	380	300	
Inventory days	113	106	110	115	115	
Creditor days	176	195	172	204	216	

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
4-Jan-24	Buy	225	36.5
14-Feb-24	Buy	243	8.1
22-May-24	Buy	353	45.1
31-Jul-24	Buy	361	2.4

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.