

Estimate changes	
TP change	
Rating change	

Bloomberg	AMRJ IN
Equity Shares (m)	171
M.Cap.(INRb)/(USDb)	88.8 / 1.1
52-Week Range (INR)	714 / 438
1, 6, 12 Rel. Per (%)	1/-13/-27
12M Avg Val (INR M)	386

Financials & Valuations (INR b)

Y/E March	2022	2023E	2024E
Sales	87.0	106.9	118.6
EBITDA	10.2	13.0	14.9
Adj. PAT	5.1	7.0	8.0
EPS (INR)	29.9	41.2	47.1
EPS Gr. (%)	-21.0	37.6	14.3
BV/Sh. (INR)	266	293	325
Ratios			
RoE (%)	11.7	14.7	15.2
RoCE (%)	11.8	14.6	15.1
Payout (%)	15.0	36.4	31.9
Valuations			
P/E (x)	17.4	12.6	11.0
P/BV (x)	2.0	1.8	1.6
Div. Yield (%)	0.9	2.9	2.9
FCF yield (%)	-1.4	1.9	4.5

Shareholding pattern (%)

As On	Sep-22	Jun-22	Sep-21
Promoter	28.1	28.1	28.1
DII	10.0	10.8	14.5
FII	18.5	18.3	20.8
Others	43.5	42.8	36.6

FII Includes depository receipts

CMP: INR520
TP: INR590 (+14%)
Neutral
Earnings beat led by lower RM costs
Sets up a wholly owned subs for li-ion cell and pack manufacturing

- AMRJ's 2QFY23 earnings were led by softening of RM costs coupled with volume growth across segments. The recent moderation in lead prices will aid margin recovery. Volumes should see an upward trajectory in both automotive and industrial segments.
- We raise FY23E/FY24E EPS by 28%/14% to factor in the recovery in the automobile segment and exports coupled with the benefit from softening RM costs. We reiterate our **Neutral** rating with a TP of INR590 (12x Sep'24E EPS).

EBITDA beat driven by improving gross margin

- Revenue/EBITDA/Adj.PAT grew 19%/34%/40% YoY to INR27b/INR3.6b/INR2b in 2QFY23 (v/s est. INR25.4b/INR2.65b/INR1.3b). 1HFY23 revenues/ EBITDA/ Adj. PAT grew 28%/20%/24.5% YoY.
- Overall volumes grew 10% YoY with similar growth witnessed in autos and industrial segment.
- Gross margins improved 60bp YoY (390bp QoQ) at 30.5% (v/s est. 27.5%), led by a 9% YoY decline (down 6.5% QoQ) in spot lead prices. Price hikes (2-2.5% QoQ) and soft lead prices boosted gross margins.
- Higher gross margins led to a 150-bp YoY improvement in EBITDA margin (up 340bp QoQ) to 13.3% (v/s est 10.5%). EBITDA grew 34% YoY (up 38% QoQ) to INR3.6b (v/s est.INR2.65b) in 2QFY23.
- Further, tax diluted adj. PAT grew 40% YoY/54% QoQ to INR2b (v/s est. INR1.3b) in 2QFY23.
- CFO for 1HFY23 was at INR6.7b (v/s INR4.5b in 1HFY22). Capex for the period was INR2.6b (v/s INR3b in 1HFY22). FCFF improved to INR4.1b (v/s INR1.5b in 1HFY22) due to lower capex and better operating performance
- The company announced an interim dividend of INR2.9 for FY23YTD.

Highlights from the management commentary

- 4W volumes grew 13-14% YoY, driven by strong growth in OEMs, ~10% growth in replacement, and 18-19% growth in exports. 2W volumes grew 10% YoY, with 11-12% growth in replacement, and 7-8% YoY growth in OEMs. Home inverter volumes declined 10% YoY.
- Industrial segment grew ~10% YoY, with ~15% growth in Telecom, and 8-10% growth in other segments.
- It has incorporated wholly owned subs for li-ion cell and pack manufacturing. It plans to start investing for the new energy venture from 2HFY23 onwards.
- Capex in lead acid business for FY23 is expected to be at INR5-6b for capacity expansion, solar power, and recycling plant. Investment in li-ion will be over and above it.

Valuation and view

- The stock trades at 12.6x/11x FY23E/FY24E EPS. We reiterate our **Neutral** rating with a TP of INR590 (12x Sep'24E EPS) as the expectation of better earnings growth balances out the increasing threat of lithium chemistry to the Auto and Industrial businesses.

Quarterly Performance

Y/E March (INR m)	(INR Million)										
	FY22				FY23E				FY22	FY23E	FY23E
	1Q	2Q	3Q	4Q	1Q	2Q	3QE	4QE			2QE
Net Sales	18,859	22,642	23,651	21,807	26,200	26,995	26,489	27,249	86,958	1,06,933	25,359
YoY Change (%)	63.8	17.0	20.7	3.7	38.9	19.2	12.0	25.0	21.6	23.0	12.0
RM Cost (% of sales)	68.9	70.1	70.3	72.1	73.4	69.5	70.0	69.9	70.4	70.7	72.5
Staff Cost (% of sales)	6.3	5.8	5.5	5.5	5.1	5.6	5.7	5.3	5.7	5.4	5.2
Other Exp (% of sales)	11.6	12.2	12.3	12.3	11.5	11.6	11.7	12.0	12.1	11.7	11.8
EBITDA	2,499	2,689	2,840	2,199	2,609	3,602	3,347	3,487	10,226	13,046	2,656
Margins (%)	13.2	11.9	12.0	10.1	10.0	13.3	12.6	12.8	11.8	12.2	10.5
Depreciation	963	986	1,021	987	963	1,019	1,030	1,080	3,957	4,092	980
Interest	32	36	38	46	46	54	50	50	151	200	40
Other Income	166	264	190	160	170	237	180	163	780	750	160
PBT after EO	1,670	1,932	1,971	1,325	1,770	2,765	2,447	2,521	6,898	9,503	1,796
Tax	431	491	524	340	455	744	641	668	1,786	2,471	460
Tax Rate (%)	25.8	25.4	26.6	25.6	25.7	26.9	26.2	26.5	25.9	26.0	25.6
Adj PAT	1,239	1,441	1,447	985	1,315	2,022	1,806	1,853	5,113	7,032	1,336
YoY Change (%)	97.7	-28.5	-25.1	-48.0	6.1	40.3	24.9	88.1	-21.0	37.6	-7.3

E: MOFSL Estimates

Key exhibits

Exhibit 1: Trend in revenue and growth

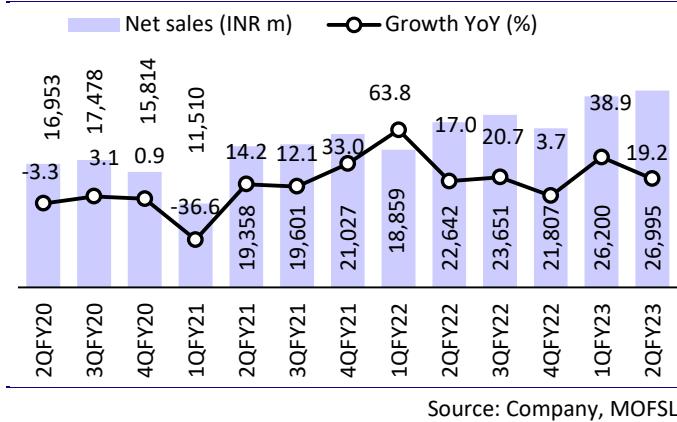


Exhibit 2: Gross margin adversely impacted by RM cost inflation

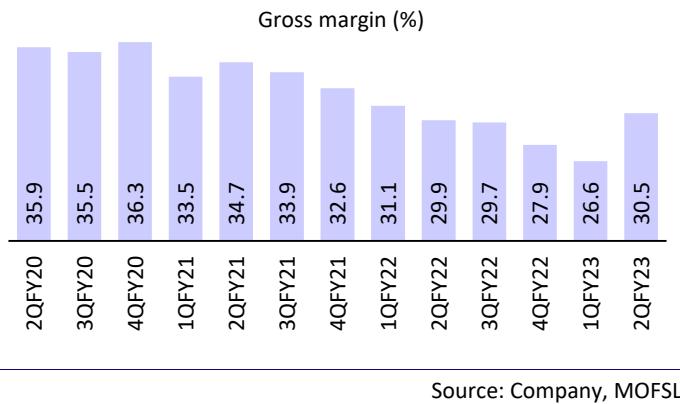


Exhibit 3: Trend in EBITDA and EBITDA margin

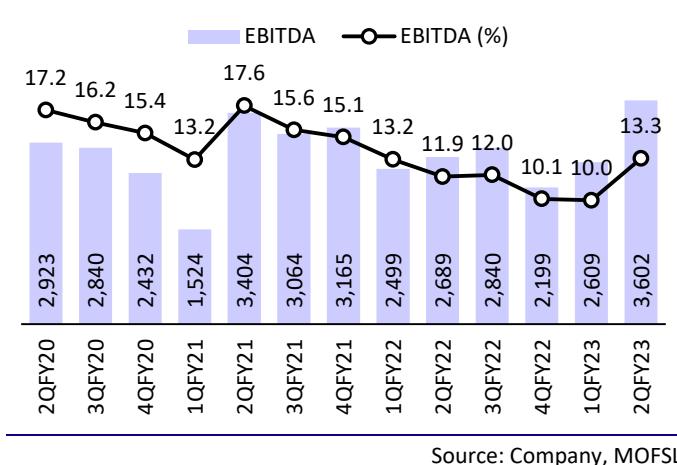


Exhibit 4: PAT and growth trend

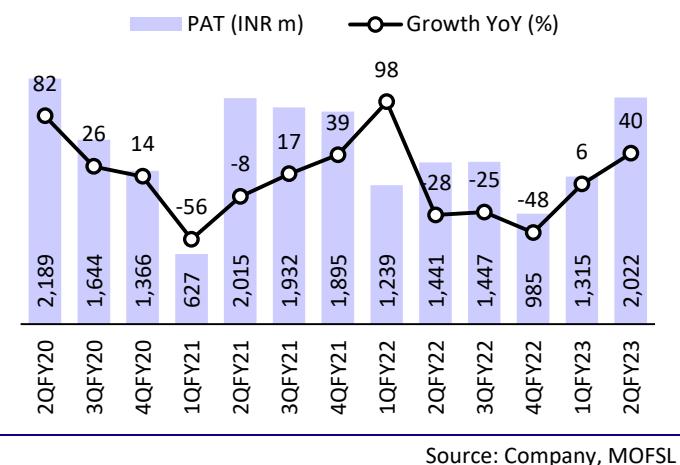
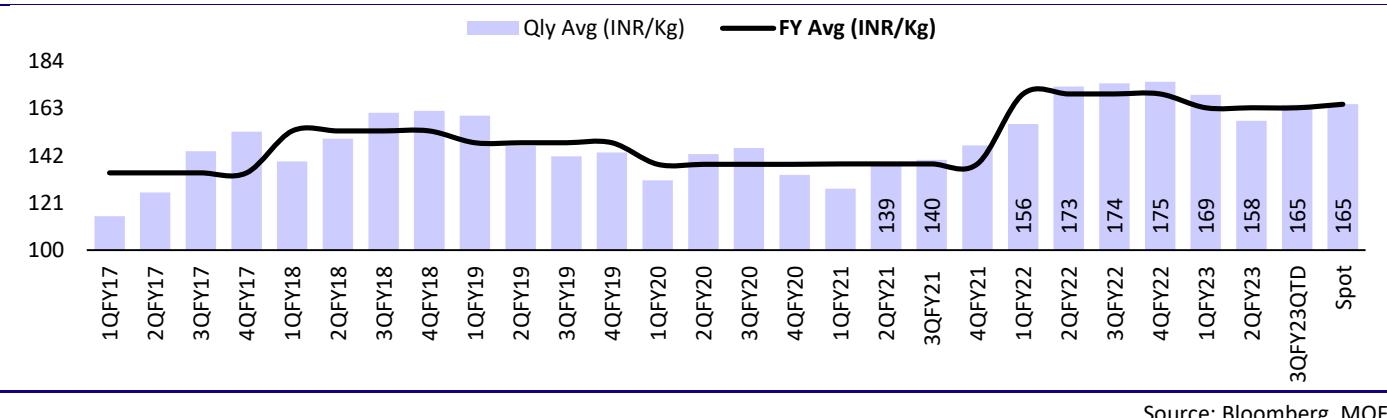


Exhibit 5: Trend in spot lead prices (INR/kg)



Valuation and view

- **Industry structure remains a duopoly, but AMRJ strong in second position:** While the industry structure largely remains a duopoly, AMRJ has emerged as a formidable challenger to leader EXID, with market leadership in Telecom (55% share in 4QFY20) and UPS (32–35%) segments. Over FY04-16, it clocked 34%/68% CAGR in net sales/PAT, exceeding EXID's 20% CAGR each in net sales and PAT. This was driven by a combination of technological innovation (first to introduce maintenance-free, factory-charged, extended-warranty batteries), witty advertising, and a unique distribution model (franchisee-based), supported by operational efficiency-led competitive pricing.
- **Gearing up to lead:** AMRJ is gearing up to be a leader by: a) consolidation in existing areas; b) undertaking new business opportunities within the Battery space, mainly Home UPS, Solar, and Motive Power; and c) undertaking capacity and network expansion. In the Telecom segment, the management expects to maintain its market share at its current levels (~55%).
- **Li-ion technology poses a risk to Auto and Industrial segments:** The declining cost of lithium batteries poses a threat to the Auto and the Industrial Batteries business. e-2Ws/e-3Ws do not require a lead acid battery as an auxiliary battery. This will in turn impact 15-20% of revenue of lead acid battery players. At USD100/KwHr, lithium can offer competition to a lead acid battery (LAB) in the Industrial segment – particularly Telecom, UPS, and other nascent, but growth-driving businesses such as Motive Power and Solar. Any further development in this direction will potentially lead to the de-rating of the P/E multiple (due to the decline in terminal growth).
- **Strategic initiatives to drive growth:** AMRJ is focusing on maximizing its core LAB business and foraying into the New Energy business (in the form of li-ion cells and battery packs, EV charging products, energy storage solutions, etc.). While the LAB business will go global, the New Energy business will focus on opportunities in India. While growth in LAB will recover strongly, the delivery of 15-17% CAGR over the next five years depends on the successful execution of its export strategy. While its entry into the New Energy business is a step in the right direction, its success will depend on a technology partner, cost competitiveness, targeted segments, etc. For lithium cell manufacturing, it is targeting an 8-10GW capacity (requiring an investment of USD0.8-1b) to achieve global competitiveness. As the investment in the New Energy business will be spread over 5-10 years, it can fund the capex through free cash flows in the core business (average INR3-4b p.a.) as well as debt (currently net cash on the Balance Sheet).
- **Valuations fair, reiterate our Neutral rating:** We raise FY23E/FY24E EPS by 28%/14% to factor in the recovery in the automobile segment and exports coupled with the benefit from falling RM costs. We expect value migration to organized players (such as EXID and AMRJ) from unorganized ones in the Replacement segment, driven by tax reforms such as GST and lower corporate tax rates. Healthy replacement demand will lead to better capacity utilization and margins. However, its current margin performance may not sustain over the near term as volume recovery with OEMs will result in mean reversion of the mix and margin. Also, with the exit of Johnson Controls, promoters are expected to play a pivotal role in its long-term strategy as well as technology sourcing. The

stock trades at 12.6x/11x FY23E/FY24E EPS. We reiterate our **Neutral** rating, with a TP of INR590 (12x Sep'24E EPS) as the expectation of better earnings growth balances out the increasing threat of lithium chemistry to the Auto and Industrial businesses.

Exhibit 6: Revisions to our estimates

(INR M)	FY23E			FY24E		
	Rev	Old	Chg (%)	Rev	Old	Chg (%)
Net Sales	1,06,933	1,04,745	2.1	1,18,593	1,16,220	2.0
EBITDA (%)	12.2	10.6	170bp	12.6	11.7	90bp
Net Profit	7,032	5,501	27.9	8,040	7,076	13.6
EPS (INR)	41.2	32.2	27.9	47.1	41.4	13.6

Source: MOFSL

Story in charts

Exhibit 1: Significant additions in 2W capacity

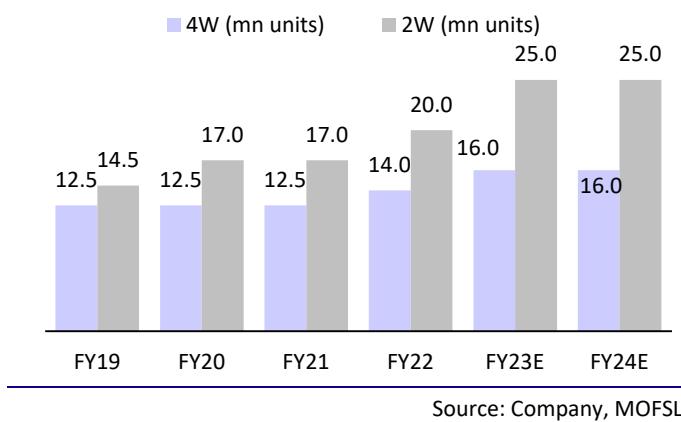


Exhibit 2: Trend in revenue

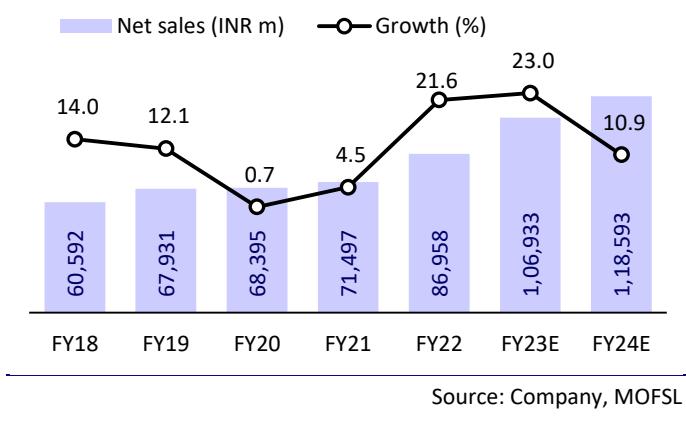


Exhibit 3: EBITDA and EBITDA margin trend

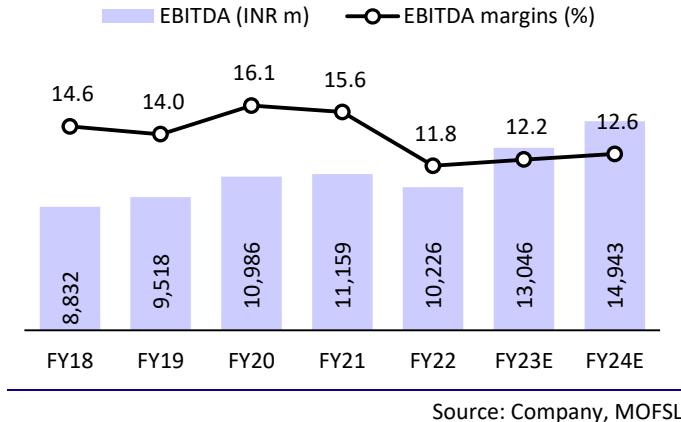


Exhibit 4: Earnings have bottomed out in FY22

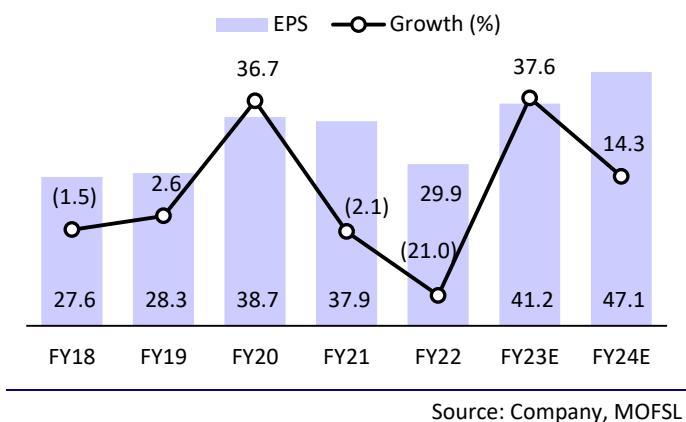


Exhibit 5: Trend in CFO, capex, and FCF

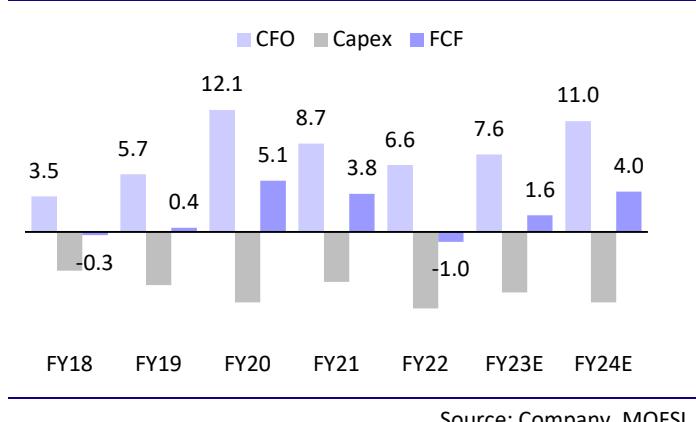
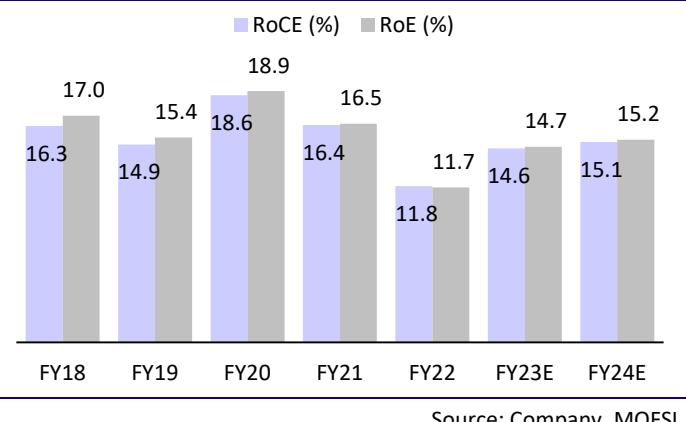


Exhibit 6: Return ratios to recover moderately



Financials and valuations

Standalone - Income Statement								(INR Million)
Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Net Sales	60,592	67,931	68,395	71,497	86,958	1,06,933	1,18,593	1,30,436
Change (%)	14.0	12.1	0.7	4.5	21.6	23.0	10.9	10.0
EBITDA	8,832	9,518	10,986	11,159	10,226	13,046	14,943	16,826
Margin (%)	14.6	14.0	16.1	15.6	11.8	12.2	12.6	12.9
Depreciation	2,303	2,612	3,007	3,192	3,957	4,092	4,678	5,282
EBIT	6,529	6,906	7,978	7,967	6,269	8,953	10,265	11,544
Int. and Finance Charges	51	70	122	105	151	200	200	200
Other Income - Rec.	664	468	551	874	780	750	800	800
PBT bef. EO Exp.	7,142	7,304	8,407	8,736	6,898	9,503	10,865	12,144
EO Expense/(Income)	0	0	0	0	0	0	0	0
PBT after EO Exp.	7,142	7,304	8,407	8,736	6,898	9,503	10,865	12,144
Tax Rate (%)	34.0	33.8	21.4	25.9	25.9	26.0	26.0	26.0
Reported PAT	4,713	4,835	6,608	6,470	5,112	7,032	8,040	8,987
PAT Adj for EO items	4,713	4,835	6,608	6,470	5,113	7,032	8,040	8,987
Change (%)	-1.5	2.6	36.7	-2.1	-21.0	37.6	14.3	11.8
Margin (%)	7.8	7.1	9.7	9.0	5.9	6.6	6.8	6.9

Standalone - Balance Sheet								(INR Million)
Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Equity Share Capital	171	171	171	171	171	171	171	171
Total Reserves	29,203	33,182	36,385	41,932	45,343	49,814	55,292	61,716
Net Worth	29,374	33,353	36,556	42,103	45,514	49,984	55,462	61,887
Deferred Liabilities	878	959	441	407	314	314	314	314
Total Loans	584	468	343	234	234	2,000	500	500
Capital Employed	30,836	34,780	37,341	42,744	46,062	52,298	56,276	62,701
Gross Block	22,529	26,165	29,269	38,628	42,498	53,794	60,794	67,794
Less: Accum. Deprn.	5,497	8,037	10,977	14,081	17,575	21,667	26,345	31,627
Net Fixed Assets	17,033	18,128	18,292	24,548	24,923	32,127	34,449	36,167
Capital WIP	2,264	3,147	8,270	3,993	8,297	3,000	3,000	3,000
Total Investments	351	205	1,562	2,805	778	778	778	778
Curr. Assets, Loans&Adv.	22,038	23,480	21,882	26,625	29,761	36,978	39,685	45,885
Inventory	10,497	10,614	11,427	14,382	18,038	20,508	21,119	23,228
Account Receivables	7,825	7,686	6,363	7,875	7,926	10,254	11,372	12,508
Cash and Bank Balance	1,113	502	326	967	536	1,940	2,450	4,932
Loans and Advances	2,603	4,678	3,766	3,401	3,262	4,277	4,744	5,217
Curr. Liability & Prov.	10,849	10,179	12,665	15,227	17,697	20,585	21,636	23,129
Account Payables	5,923	5,104	6,149	7,465	8,065	10,840	11,372	12,508
Other Current Liabilities	3,916	3,761	4,685	5,623	7,177	8,555	9,487	10,435
Provisions	1,011	1,314	1,832	2,140	2,455	1,191	776	187
Net Current Assets	11,189	13,301	9,217	11,398	12,064	16,393	18,049	22,756
Appl. of Funds	30,836	34,780	37,341	42,744	46,062	52,298	56,276	62,701

E: MOFSL Estimates

Financials and valuations

Ratios

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Basic (INR)								
EPS	27.6	28.3	38.7	37.9	29.9	41.2	47.1	52.6
Cash EPS	41.1	43.6	56.3	56.6	53.1	65.1	74.5	83.5
BV/Share	172.0	195.3	214.0	246.5	266.5	292.6	324.7	362.3
DPS	4.2	7.1	11.0	11.0	4.5	15.0	15.0	15.0
Payout (%)	18.1	30.0	34.1	29.0	15.0	36.4	31.9	28.5
Valuation (x)								
P/E	18.8	18.4	13.4	13.7	17.4	12.6	11.0	9.9
Cash P/E	12.7	11.9	9.2	9.2	9.8	8.0	7.0	6.2
P/BV	3.0	2.7	2.4	2.1	2.0	1.8	1.6	1.4
EV/Sales	1.5	1.3	1.3	1.2	1.0	0.8	0.7	0.6
EV/EBITDA	10.0	9.3	8.1	7.9	8.7	6.8	5.8	5.0
Return Ratios (%)								
RoE	17.0	15.4	18.9	16.5	11.7	14.7	15.2	15.3
RoCE	16.3	14.9	18.6	16.4	11.8	14.6	15.1	15.4
RoIC	17.6	15.8	21.6	19.0	13.0	16.0	15.7	16.4
Working Capital Ratios								
Gross Fixed Asset Turnover (x)	2.7	2.6	2.3	1.9	2.0	2.0	2.0	1.9
Inventory (Days)	63.2	57.0	61.0	73.4	75.7	70.0	65.0	65.0
Debtor (Days)	46	41	34	40	33	35	35	35
Creditor (Days)	36	27	33	38	34	37	35	35
Working Capital Turnover (Days)	61	69	47	53	48	49	48	50
Leverage Ratio (x)								
Current Ratio	2.0	2.3	1.7	1.7	1.7	1.8	1.8	2.0
Debt/Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Standalone - Cash Flow Statement

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Net P/L Before Tax and E/O Items	7,142	7,304	8,407	8,733	6,898	9,503	10,865	12,144
Depreciation	2,303	2,612	3,007	3,192	3,957	4,092	4,678	5,282
Interest & Finance Charges	-5	42	122	105	151	-550	-600	-600
Direct Taxes Paid	2,443	2,417	2,364	1,995	1,993	2,471	2,825	3,157
(Inc)/Dec in WC	-3,475	-1,843	2,892	-1,301	-2,406	-2,925	-1,146	-2,225
CF from Operations	3,522	5,698	12,065	8,734	6,607	7,650	10,972	11,444
Others	-306	-284	-296	-714	-277	0	0	0
CF from Operating incl EO	3,216	5,413	11,769	8,020	6,329	7,650	10,972	11,444
(inc)/dec in FA	-3,853	-5,282	-6,999	-4,964	-7,598	-6,000	-7,000	-7,000
Free Cash Flow	-637	131	4,770	3,056	-1,268	1,650	3,972	4,444
Others	19,117	10,904	13,305	13,212	16,219	750	800	800
CF from Investments	-2,442	-4,629	-8,497	-6,350	-4,819	-5,250	-6,200	-6,200
(Inc)/Dec in Debt	-89	-51	-275	-321	-3,776	1,766	-1,500	0
Interest Paid	-7	-11	-52	-40	-67	-200	-200	-200
Dividend Paid	-1,285	-855	-3,311	-854	1,708	-2,562	-2,562	-2,562
CF from Fin. Activity	-1,382	-916	-3,638	-1,215	-2,135	-996	-4,262	-2,762
Inc/Dec of Cash	-607	-131	-365	455	-624	1,404	510	2,482
Add: Beginning Balance	3,251	2,644	2,512	512	967	343	1,747	2,257
Closing Balance	2,644	2,512	2,147	967	343	1,747	2,257	4,739

E: MOFSL Estimates

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall be 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, Depository participant services & distribution of various financial products. MOFSL is a listed public company, the details in respect of which are available on 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, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg. No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co. Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report or date of the public appearance.
- received compensation/other benefits from the subject company in the past 12 months
- 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.
- 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.
- Served subject company as its clients during twelve months preceding the date of distribution of the research report.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and 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.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 71881000. Details of Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-71881085.

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN.: 146822. IRDA Corporate Agent – CA0579. Motilal Oswal Financial Services Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Insurance, Bond, NCDs and IPO products. Customer having any query/feedback/ clarification may write to query@motilaloswal.com. In case of grievances for any of the services rendered by Motilal Oswal Financial Services Limited (MOFSL) write to grievances@motilaloswal.com, for DP to dpgrivances@motilaloswal.com.