

Happy Forgings

Estimate changes

TP change

Rating change



Bloomberg	HAPPYFOR IN
Equity Shares (m)	94
M.Cap.(INRb)/(USD\$)	103.7 / 1.2
52-Week Range (INR)	1124 / 813
1, 6, 12 Rel. Per (%)	14/-/-
12M Avg Val (INR M)	329

Consol. Financials & Valuations (INR b)

INR b	FY24	FY25E	FY26E
Sales	13.6	16.7	20.3
EBITDA	3.9	5.0	6.1
Adj. PAT	2.4	3.3	4.2
EPS (INR)	25.8	34.7	44.9
EPS Gr. (%)	10.6	34.6	29.5
BV/Sh. (INR)	171	200	237

Ratios

RoE (%)	18.7	18.7	20.6
RoCE (%)	17.0	17.7	19.7
Payout (%)	15.5	17.0	17.0

Valuations

P/E (x)	42.6	31.7	24.5
P/BV (x)	6.4	5.5	4.6
Div. Yield (%)	26.8	20.8	16.7
FCF Yield (%)	0.4	0.5	0.7

Shareholding pattern (%)

As On	Mar-24	Dec-23
Promoter	78.6	78.6
DII	16.9	5.8
FII	1.1	2.1
Others	3.4	13.5

CMP: INR1,100

TP: INR1,260 (+15%)

Buy

Healthy performance despite weakness in core segments

Order book stands at INR6.5b, of which 60% is attributable to exports

- 4QFY24 results were operationally in line with our expectations, while higher 'other income' and lower tax led to PAT beat at INR658m (est. INR607m), up by 30% YoY. Happy Forgings (HFL) maintains its focus on diversifying into industrials and exports, which contributed ~12%/20% of FY24 revenue, compared to 4%/12% in FY23. Currently, exports constitute 60% of the company's order book.
- We raise FY25E/26E earnings by ~3.5%/4.8% to factor in for better-than-expected outlook for underlying industries, new order wins, and higher other income. We remain upbeat on HFL's strategy to grow beyond its core segments, which is further complemented by its recent order wins, especially in PVs and exports. Given its consistent new order wins and huge growth opportunities ahead, we raise our target multiple to 28x from 26x earlier. Reiterate BUY with a TP of INR1,260.

Margin improvement driven by higher share of machining and better product mix

- 4QFY24 revenue/EBITDA/Adj. PAT grew ~14%/13%/30% YoY to INR3.4b/0.97b/0.66b (est. INR3.5b/0.98b/0.61b). FY24 revenue/EBITDA/Adj. PAT grew 16%/22%/27% YoY, adjusted for government grants of INR237.5m received in FY23.
- Revenue growth during the quarter is attributable to ~4% YoY volume growth to 13.5k MT and ~9% YoY growth in realizations to INR255/kg.
- Gross margin improved ~160bp YoY/100bp QoQ to 56.5%, led by better mix. This resulted in EBITDA margin of 28.3% (-10bp YoY/+50bp QoQ) against our estimate of 28%.
- While operating performance was in line, Adj. PAT came in higher, led by higher other income and lower tax.
- CFO declined to INR1.89b in FY24 from INR2.1b in FY23, led by increase in working capital. This, coupled with an increase in capex, led to negative FCF of INR46m vs +350m in FY23.
- The Board of Directors have recommended a dividend of INR4 per share for FY24, which translates into 15% payout.

Highlights from the management interaction

- The management is confident of achieving 15-20% growth in the coming years, driven by increasing utilization, ongoing capacity expansion, and addition of new customers. The current order book stands at INR6.5b, of which, 60% is for exports. This is executable over the next 18-24 months.
- The company expects low single-digit YoY growth for the underlying CV industry and 8-10% YoY growth for the tractor industry in FY25. However, it is more confident about gaining market share in these segments.

Amber Shukla - Research analyst (Amber.Shukla@MotilalOswal.com)

Research analyst: Aniket Mhatre (Aniket.Mhatre@MotilalOswal.com) | **Aniket Desai** (Aniket.Desai@motilaloswal.com)

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

Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

- PV segment- Expect to achieve 8-10% revenue mix over the next two years from 1% in FY24. The ramp-up of the new orders is scheduled for FY25. New lines for crankshaft orders have been set up, with testing completed, and ramp-up is scheduled to begin in June. Additionally, ramp-up of E-axle exports orders is anticipated in the last quarter.
- Capex- INR2.5b is planned for FY25. It plans to add 11k ton of machining capacity in FY25, taking the overall capacity to 62k MT, with production ramp-up expected this year. About 50% of the capacity increase is projected to come online in 2Q. The current utilization stands at 80-90%.

Valuation & view

- Driven by new order wins in the Auto segment, we expect HFL to continue outperforming the core auto segments. Further, its healthy order wins in the Industrials and Exports segments would help drive an improved mix. HFL's superior financial track record relative to peers serves as a testament of its inherent operational efficiencies and is likely to be a key competitive advantage going forward.
- We raise FY25E/26E earnings by ~3.5%/4.8% to factor in for better-than-expected outlook for underlying industries, new order wins, and higher other income. We forecast a 22%/25%/32% CAGR in standalone revenue/ EBITDA/PAT during FY24-26E. We reiterate our BUY rating on the stock with a TP of INR1,260 (based on 28x FY26E EPS).

Quarterly (Standalone)

							(INR M)	
	FY23		FY24				FY23	FY24
	3Q	4Q	1Q	2Q	3Q	4Q		
Net operating income	2,943	3,025	3,298	3,431	3,420	3,433	11,965	13,582
Change (%)					16.2	13.5		
RM/Sales (%)	48.9	45.1	43.0	44.7	44.5	43.5	46.3	43.9
Staff Cost (%)	7.9	8.1	7.5	8.5	9.0	8.6	7.3	8.4
Other Exp. (%)	18.3	18.4	18.7	19.5	18.7	19.6	18.1	19.1
EBITDA	732	859	1,015	938	952	971	3,376	3,875
EBITDA Margins (%)	24.9	28.4	30.8	27.3	27.8	28.3	28.2	28.5
Non-Operating Income	19	17	22	7	33	72	58	134
Interest	34	53	27	44	38	9	125	118
Depreciation	155	143	155	162	171	160	542	647
PBT after EO items	561	678	855	738	777	875	2,767	3,244
Tax	145	171	214	185	198	217	713	814
Tax Rate (%)	25.9	25.3	25.1	25.1	25.5	24.8	25.8	25.1
Adj. PAT	416	507	640	553	579	658	2,087	2,430
Change (%)					39.2	29.7		16.4

E: MOFSL Estimates

Highlights from the management interaction

Powertrain segment:

■ Business performance and outlook

- The management is confident of achieving 15-20% growth in the coming years, driven by increasing utilization, ongoing capacity expansion, and addition of new customers.
- The current order book stands at INR6.5b. This is executable over the next 18-24 months.

■ CV segment- Company expects low single-digit YoY growth for the CV industry for FY25. It would continue to gain market share on the back of its new order wins.

■ Farm Equipment- Expect 8-10% YoY growth for the industry in FY25.

- It has 38-40% market share in the segment. The industry has been under pressure over the last 12-14 months. However, the company expects demand to revive post elections and expects the industry to grow at 8.5% volume CAGR over FY24-29.
- M&M order- Expect 20-25% SOB from the new M&M orders and the ramp-up of these orders is expected this year.
- HFL maintains its focus on adding more customers in the segment, which should drive up its market share.

■ Industrials- The share of industrials, including off-highway, is expected to rise to 30% of revenue from the current 25%. The addition of 14k-ton press line will enable the company to fulfill new orders such as wind turbines and other heavy parts weighing up to 250kgs. Also, the company will be supplying crankshafts for a 19-L application in the marine segment, with execution slated to commence from 3Q.

■ PV segment- Expect to achieve 8-10% revenue mix from this segment over the next two years from 1% in FY24. The ramp-up of the new orders is scheduled for FY25. New lines for crankshaft orders have been set up, with testing completed, and ramp-up is scheduled to begin in June. Additionally, ramp-up of E-axle exports orders is anticipated in the last quarter.

■ Exports- Currently contributing 20% of the revenue, the segment is expected to reach 28-30% over the next two years. CVs account for 40-45% of the exports mix, with the remainder from industrials. Export orders, largely from EU and NA regions, contribute 60% of the new order book.

■ Capex- INR2.5b is planned for FY25. Overall outflow will be INR2b as INR0.5b has already been paid as advances.

- It plans to add 11k ton of machining capacity in FY25, taking the overall machining capacity to 62k MT, with production ramp-up expected this year. About 50% of the capacity increase is projected to come online in 2Q. The current machining utilization stands at 80-90%.
- The company is adding 3k tons and 6k tons press lines. The 6k line is expected to start from 3QFY25.

■ Subsidiaries- Company is currently in the process of acquiring land for its new subsidiary, formed for machining to be sold largely in domestic market. It would invest around INR 2b, inclusive of land and building costs in this subsidiary. The capex will be incurred in two phases, with eligibility from the government expected to take two to three quarters. As a result, the bulk of the capex will likely be invested in the next year.

Exhibit 1: SA Revenue trend

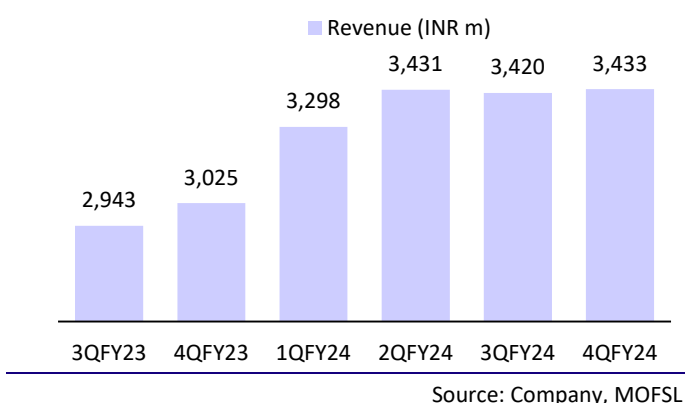


Exhibit 2: SA gross margins trend

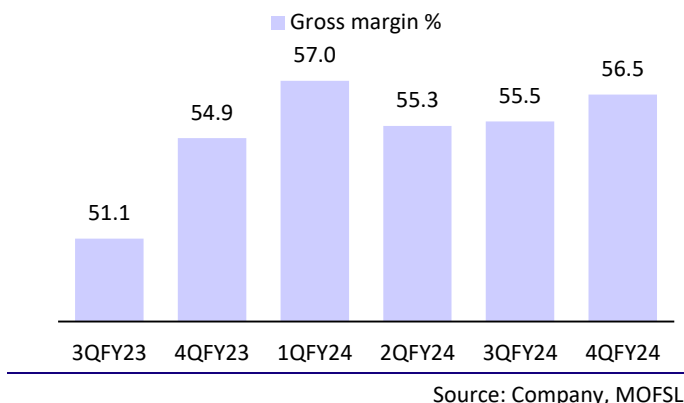


Exhibit 3: EBITDA and margin trend

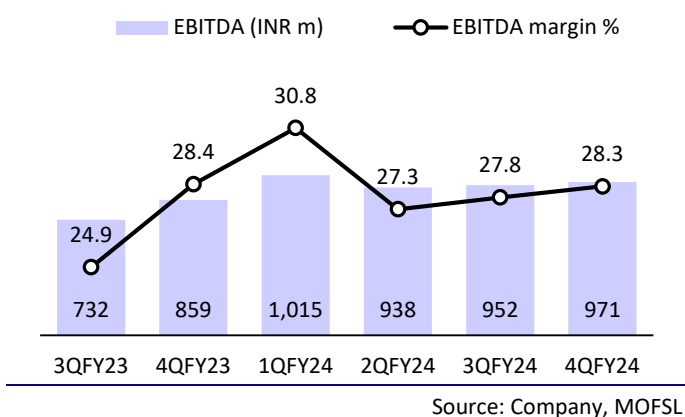
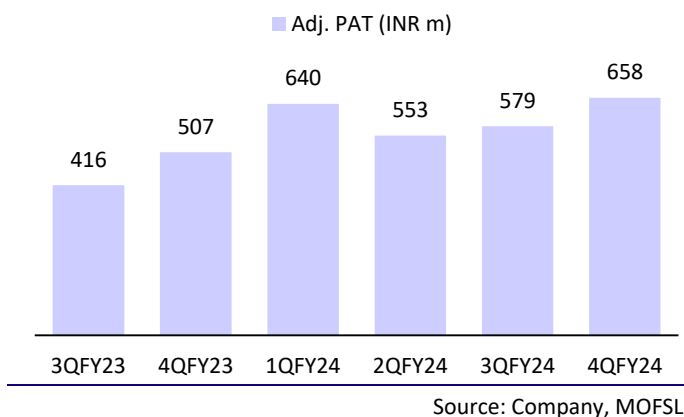


Exhibit 4: Adj. PAT trend over the quarters



Valuation and view

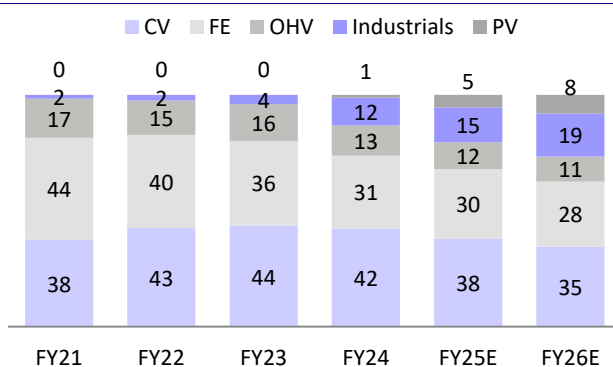
- Ability to deliver safety-critical, complex forged and machined products:** HFL embarked on its journey by manufacturing basic forged components and evolved to manufacture complex and safety-critical products with tight tolerances. This transformation involved expanding capabilities in both light and heavy forgings, as well as machining processes. It is the second company in India to have 14,000 ton forging press and one of the four companies to have 8,000 ton or higher press. It is a supplier to each of the top five Indian OEMs in the M&HCV industry. Addition of the 14,000 ton press line in 3QFY23 has enabled the company to forge heavier, safety-critical parts, weighing up to 250Kgs, while also expanding its capabilities across various industries. Transitioning from solely a forgings player, HFL has now evolved into a fully machined player, with its machining mix increasing to 84% in FY24 from 53% in FY14.
- Well-diversified mix to help offset cyclical uncertainty:** Over the years, HFL has successfully diversified its user industry across segments and customers. Its exports have surged to 20% in FY24 from just 13% in FY23. Additionally, its Industrials segment contribution has increased to 12% for FY24 from just 4% in FY23. This diversified customer base has helped HFL reduce cyclicity to its core segments, such as CVs and tractors. A case in point is the fact that despite weak demand in CVs and tractors, HFL has been able to deliver healthy revenue growth of ~13.5% YoY, due to a strong performance in the Industrials (non-tractor) segment.

- **New orders to drive near-term weakness in core Autos:** The major share of revenue for HFL is attributed to CV and Farm Equipment, constituting 42% and 31%, respectively, in FY24. While the near-term demand outlook for both the CV and tractor industry appears subdued, we believe structural drivers are in place for a recovery in H2FY25. Further, we understand that HFL has won new orders for new CV products from major CV OEMs and also in the tractor segment. HFL has already secured orders from both domestic and global PV OEMs. These new order wins are expected to help drive its outperformance to its core auto segments. We expect HFL's CV/tractor segment revenue to register a CAGR of 10%/15% over FY24-26, well ahead of our industry forecasts.
- **Industrials and exports to be the key growth drivers for HFL:** Following the successful installation of its 14k MT press, HFL experienced a major influx of new orders from the Industrials segment. This led to a spike in the segment's revenue contribution, which has risen to 12% for FY24 from just 4% in FY23. Further, due to its relatively low manufacturing costs and favorable government policies promoting localization, India is now emerging as the key beneficiary of this trend. Like its peers, HFL is also emerging as one of the beneficiaries of this trend. This is evident from its 60% share of exports in the order book. Accordingly, management expects exports contribution to rise to 25% by FY25 from the current level of 20%.
- **Valuation & view:** Driven by new order wins in the Auto segment, we expect HFL to continue outperforming the core auto segments. Further, its healthy order wins in the Industrials and Exports segments would help drive an improved mix. We forecast a 22%/25%/32% CAGR in standalone revenue/EBITDA/PAT during FY24E-26. HFL's superior financial track record relative to peers serves as a testament of its inherent operational efficiencies and is likely to be a key competitive advantage going forward. We reiterate our BUY rating on the stock with a TP of INR1,260 (based on 28x FY26E EPS).

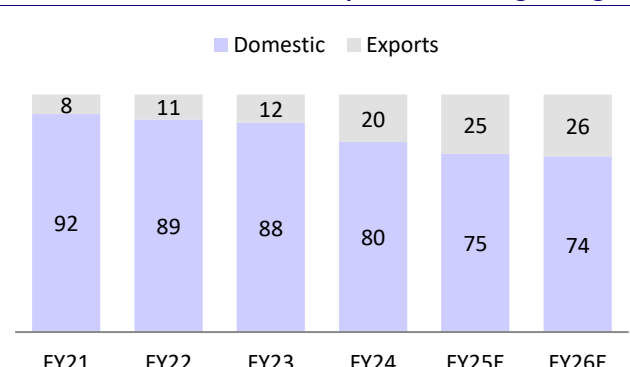
Exhibit 5: Revised forecast

(INR b)	FY25E			FY26E		
	Rev	Old	Chg (%)	Rev	Old	Chg (%)
Net Sales	16.7	16.5	1.1	20.3	20.0	1.6
EBITDA Margin (%)	29.6	29.2	40bp	30.0	30.0	10bp
PAT	3.3	3.2	3.5	4.2	4.0	4.8
EPS (Rs)	34.7	33.6	3.5	44.9	42.9	4.8

Key operating indicators

Exhibit 6: Revenue mix % – Share of industrials to rise

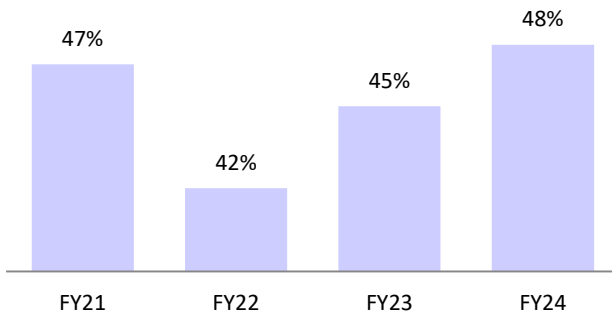
Source: Company, MOFSL

Exhibit 7: Revenue share % of exports has been growing

Source: Company, MOFSL

Exhibit 8: Crankshaft contribution at ~48% of revenues

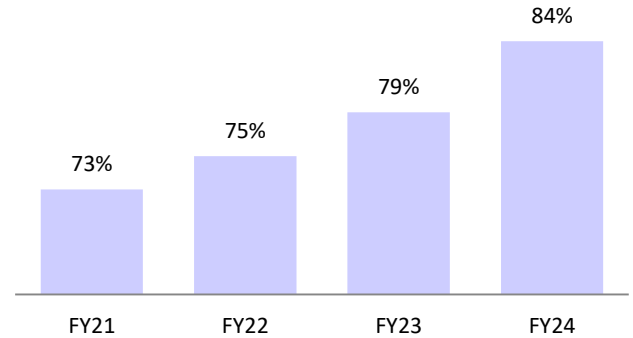
■ Share % of revenue from crankshaft



Source: Company, MOFSL

Exhibit 9: Focusing on increasing the machining mix

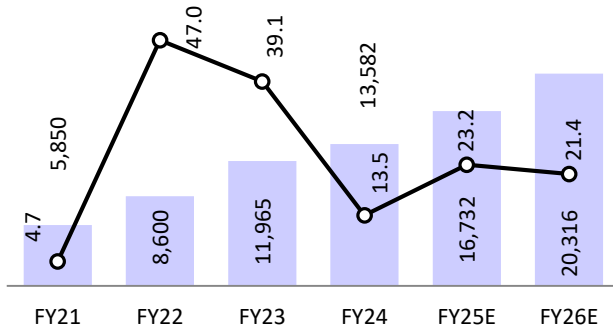
■ Machining mix % in overall revenue



Source: Company, MOFSL

Exhibit 10: Revenue to register ~22% CAGR over FY24-26E

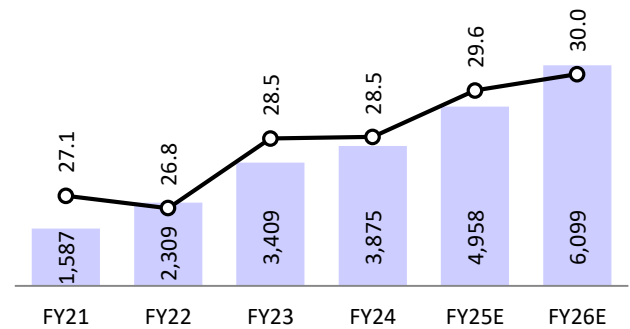
■ Revenue (INR m) — Growth YoY %



Source: Company, MOFSL

Exhibit 11: EBITDA margin to expand ~150bp over FY24-26E

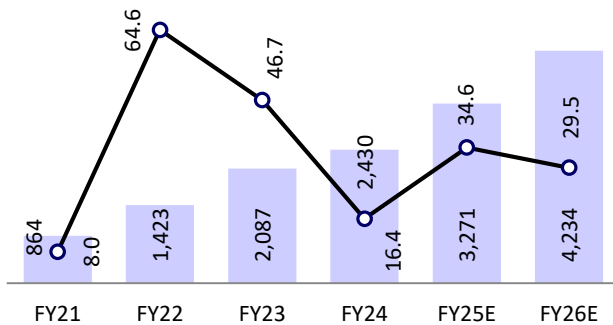
■ EBITDA (INR m) — EBITDA margin %



Source: Company, MOFSL

Exhibit 12: PAT to register ~32% CAGR over FY24-26E

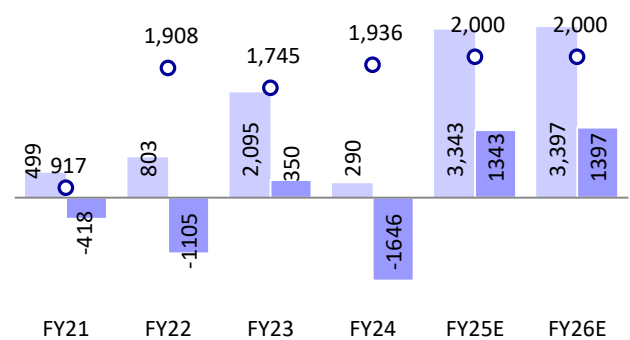
■ Adj PAT (INR m) — Growth YoY %



Source: Company, MOFSL

Exhibit 13: FCF/OCF expected to increase over the years

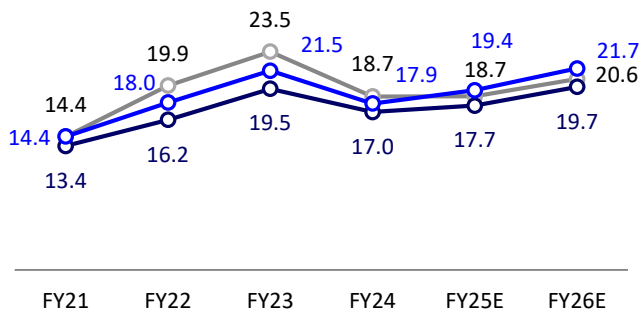
■ OCF ■ FCF ● Capex



Source: Company, MOFSL

Exhibit 14: Returns to improve steadily over next three years

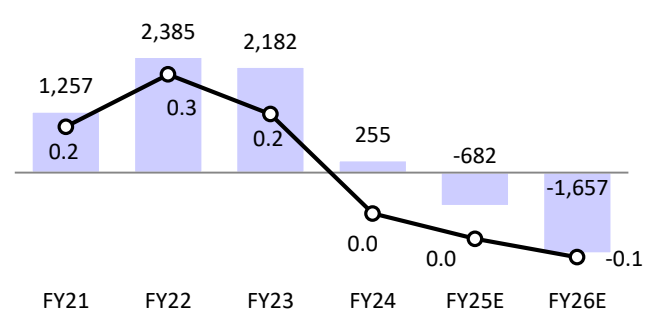
— ROE % — ROCE % — ROIC %



Source: Company, MOFSL

Exhibit 15: HFL has almost become net cash in FY24

■ Net debt (INR m) — Net D/E (x)



Source: Company, MOFSL

Financials and valuations

Income Statement						(INR M)
Y/E March	FY21	FY22	FY23	FY24	FY25E	FY26E
Net Sales	5,850	8,600	11,965	13,582	16,732	20,316
Change (%)	4.7	47.0	39.1	13.5	23.2	21.4
EBITDA	1,587	2,309	3,409	3,875	4,958	6,099
Margin (%)	27.1	26.8	28.5	28.5	29.6	30.0
Depreciation	358	377	542	647	719	825
EBIT	1,230	1,931	2,868	3,228	4,240	5,274
Int. and Finance Charges	118	72	125	118	80	62
Other Income	59	61	58	134	231	360
PBT after EO Exp.	1,171	1,920	2,800	3,244	4,391	5,572
Current Tax	316	471	685	748	1,120	1,337
Deferred Tax	-10	27	29	65.67	-	-
Tax Rate (%)	26.2	25.9	25.5	25.1	25.5	24.0
Reported PAT	864	1,423	2,087	2,430	3,271	4,234
Adj PAT	864	1,423	2,087	2,430	3,271	4,234
Change (%)	8	65	47	16	35	29

Balance Sheet						(INR M)
Y/E March	FY21	FY22	FY23	FY24	FY25E	FY26E
Equity Share Capital	90	179	179	188	188	188
Total Reserves	6,362	7,697	9,704	15,937	18,651	22,166
Net Worth	6,452	7,876	9,883	16,125	18,840	22,354
Deferred Liabilities	202	229	230	316	316	316
Total Loans	1,535	2,404	2,185	1,430	1,230	1,030
Capital Employed	8,188	10,509	12,299	17,871	20,386	23,701
Gross Block	5,066	5,858	8,591	9,891	11,891	13,891
Less: Accum. Deprn.	919	1,296	1,807	2,454	3,173	3,998
Net Fixed Assets	4,147	4,562	6,784	7,437	8,718	9,893
Capital WIP	404	2,123	748	1,267	1,267	1,267
Total Investments	0	4	0	1	201	701
Curr. Assets, Loans&Adv.	4,214	4,610	5,730	10,155	11,396	13,282
Inventory	1,216	1,840	1,696	2,242	2,425	2,945
Account Receivables	1,658	2,220	3,081	3,569	4,096	4,973
Cash and Bank Balance	278	15	3	1,174	1,711	1,986
Loans and Advances	1,062	535	950	3,170	3,163	3,378
Curr. Liability & Prov.	576	790	963	988	1,196	1,442
Creditors	379	442	477	555	636	772
Other Current Liabilities	178	321	448	388	515	625
Provisions	19	27	38	45	45	45
Net Current Assets	3,638	3,821	4,767	9,167	10,200	11,840
Appl. of Funds	8,188	10,509	12,299	17,871	20,386	23,701

E: MOFSL Estimates

Financials and valuations

Ratios

Y/E March	FY21	FY22	FY23	FY24	FY25E	FY26E
Basic (INR)						
EPS	19.3	15.9	23.3	25.8	34.7	44.9
Cash EPS	27.3	20.1	29.4	32.7	42.4	53.7
BV/Share	144.2	88.0	110.4	171.2	200.0	237.3
DPS	-	-	-	4.0	5.9	7.6
Payout (%)	-	-	-	15.5	17.0	17.0
Dividend Yield (%)	-	-	-	0.4	0.5	0.7
FCF per share	-9.3	-12.4	3.9	-17.5	14.3	14.8
Valuation (x)						
P/E	56.9	69.2	47.2	42.6	31.7	24.5
Cash P/E	40.3	54.7	37.4	33.7	26.0	20.5
P/BV	7.6	12.5	10.0	6.4	5.5	4.6
EV/Sales	8.6	11.7	8.4	7.6	6.2	5.0
EV/EBITDA	31.8	43.7	29.5	26.8	20.8	16.7
Return Ratios (%)						
RoE	14.4	19.9	23.5	18.7	18.7	20.6
RoCE (Post-tax)	13.4	16.2	19.5	17.0	17.7	19.7
RoIC	14.4	18.0	21.5	17.9	19.4	21.7
Working Capital Ratios						
Fixed Asset Turnover (x)	1.2	1.5	1.4	1.4	1.4	1.5
Inventory (Days)	62	65	54	53	51	48
Debtor (Days)	95	82	81	89	84	81
Creditor (Days)	37	17	14	14	13	13
Working Capital (Days)	169	152	131	171	180	165
Leverage Ratio (x)						
Net Debt/Equity	0.2	0.3	0.2	0.0	0.0	-0.1

Cash Flow Statement

Y/E March	FY21	FY22	FY23	FY24	FY25E	FY26E
Operating PBT	1,171	1,921	2,800	3,244	4,391	5,572
Depreciation	358	377	542	647	719	825
Interest/Div paid	-118	-72	-125	118	80	62
Direct Taxes Paid	-399	-431	-638	-839	-1,120	-1,337
(Inc)/Dec in WC	-825	-1,088	-779	-2,830	-496	-1,365
Other items	312	96	295	-50	-231	-360
CF from Operations	499	803	2,095	290	3,343	3,397
(inc)/dec in FA	-917	-1,908	-1,745	-1,936	-2,000	-2,000
Free Cash Flow	-418	-1,105	350	-1,646	1,343	1,397
(Pur)/Sale of Investments	288	230	15	-1,170	-200	-500
Others	41	21	5	12	231	360
CF from Investments	-587	-1,657	-1,725	-3,094	-1,969	-2,140
Issue of Shares	-	-	-	3,810	-	-
Inc/(Dec) in Debt	351	895	-251	-755	-200	-200
Interest Paid	-254	-68	-119	-130	-80	-62
Dividend Paid	-	-	-	-116	-556	-720
CF from Fin. Activity	97	825	-370	2,809	-836	-982
Inc/Dec of Cash	8	-29	-0	5	537	275
Add: Beginning Balance	20	29	0	0	1,174	1,711
Closing Balance	29	0	0	5	1,711	1,986

E: MOFSL Estimates

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

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") (UEN 201129401Z), which is a holder of a capital markets services license and an exempt financial adviser in Singapore. This report is distributed solely to persons who (a) qualify as "institutional investors" as defined in section 4A(1)(c) of the Securities and Futures Act of Singapore ("SFA") or (b) are considered "accredited investors" as defined in section 2(1) of the Financial Advisers Regulations of Singapore read with section 4A(1)(a) of the SFA. Accordingly, if a recipient is neither an "institutional investor" nor an "accredited investor", they must immediately discontinue any use of this Report and inform MOCMSPL.

In respect of any matter arising from or in connection with the research you could contact the following representatives of MOCMSPL. In case of grievances for any of the services rendered by MOCMSPL write to grievances@motilaloswal.com.

Nainesh Rajani

Email: nainesh.rajani@motilaloswal.com

Contact: (+65) 8328 0276

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 alternations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, nor 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.

This report is meant for the clients of Motilal Oswal only.

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

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 - 71934200 / 71934263; 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.:022-40548085.

Grievance Redressal Cell:

Contact Person	Contact No.	Email ID
Ms. Hemangi Date	022 40548000 / 022 67490600	query@motilaloswal.com
Ms. Kumud Upadhyay	022 40548082	servicehead@motilaloswal.com
Mr. Ajay Menon	022 40548083	am@motilaloswal.com

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; 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 dpgrievances@motilaloswal.com.