

APL Apollo Tubes

Estimate change	↔
TP change	↔
Rating change	↔

CMP: INR1,686 **TP: INR2,000 (+19%)** **Buy**

Margin recovery on track

Operating performance in line with our estimates

- APL Apollo Tubes (APAT) showed a healthy recovery in operating performance in 1QFY26 despite weaker macroeconomic conditions, higher employee costs (incl. one-off ESOP cost) and geopolitical headwinds. EBITDA grew 23% YoY, led by volume growth of 10% YoY and EBITDA/MT of INR4,683 (up 12% YoY).
- We expect the growth momentum to improve ahead, led by capacity expansion and demand recovery from railways, aviation and real estate infra projects. For FY26, management has guided for volume growth of 10-15% and EBITDA/MT of INR4,600-5,000.
- We largely maintain our FY26E/FY27E earnings and value the stock at 35x FY27E EPS to arrive at our TP of INR2,000. **Reiterate BUY.**

Healthy volume and better margins boost EBITDA

- Consol. revenue grew 4% YoY (down 6% QoQ) to INR51.7b (in line), led by sales volume growth of 10% YoY (down 7% QoQ) to ~794KMT. VAP mix stood at 61% in 1QFY26 vs. 60%/58% in 1QFY25/4QFY25.
- Gross profit/MT was up 2% YoY/4% QoQ at INR9,938. EBITDA/MT rose 12% YoY (down 4% QoQ) to INR4,683 (est. INR4,837). EBITDA grew 23% YoY (down 10% QoQ) to INR3.7b (in line).
- Adj. PAT jumped 23% YoY but declined 19% QoQ to INR2.4b (in line).

Highlights from the management commentary

- **Outlook:** APAT has lowered its FY26 volume growth guidance to 10-15% from 15-20% earlier. It has revised its EBITDA/MT range to INR4,600-5,000 per ton vs. ~INR5000/MT previously.
- **Divestment in Shankara:** In the last 3-3.5 years, Shankara has quadrupled and the company now does not see any point in holding its investment in it. APAT divested its complete stake in the same.
- **Expansion plans:** APAT plans to expand via four key levers: expansions in key markets (East India, South India, and Dubai), new product segments, exports, and sustaining its brand premium. APAT expects capex of INR15b in the next three years to raise capacity from 4.5MT to 6.8MT by FY28.

Valuation and view

- We expect volume growth to improve further, led by capacity expansion in key markets, new product additions, and higher exports. Margin will also improve, driven by cost optimization, increased automation, and a rising mix of value-added products, driving steady growth in EBITDA/MT.
- We expect the growth momentum to further improve, led by demand recovery from railways, aviation and real estate infra projects and capacity expansion.
- We expect a CAGR of 19%/37%/44% in revenue/EBITDA/PAT over FY25-27E. We value the stock at 35x FY27 EPS to arrive at a TP of INR2,000. **Reiterate BUY.**

Bloomberg	APAT IN
Equity Shares (m)	278
M.Cap.(INRb)/(USDb)	468 / 5.4
52-Week Range (INR)	1936 / 1253
1, 6, 12 Rel. Per (%)	-6/-1/11
12M Avg Val (INR M)	958

Financials & Valuations (INR b)

Y/E Mar	FY25	FY26E	FY27E
Sales	206.9	246.1	294.0
EBITDA	12.0	17.5	22.6
PAT	7.6	11.6	15.7
EBITDA (%)	5.8	7.1	7.7
EPS (INR)	27.3	41.9	56.6
EPS Gr. (%)	3.4	53.5	35.0
BV/Sh. (INR)	151.7	187.7	238.2

Ratios

Net D/E	0.0	0.0	-0.1
RoE (%)	19.4	24.7	26.6
RoCE (%)	18.0	23.9	26.7
Payout (%)	21.1	14.3	10.6

Valuations

P/E (x)	61.9	40.3	29.8
EV/EBITDA (x)	39.1	26.7	20.4
Div Yield (%)	0.3	0.4	0.4
FCF Yield (%)	1.2	0.3	2.0

Shareholding Pattern (%)

As on	Jun-25	Mar-25	Jun-24
Promoter	28.3	28.3	28.3
DII	16.8	16.8	14.9
FII	33.1	31.8	31.6
Others	21.8	23.2	25.2

Note: FII includes depository receipts

Research Analyst: **Sumant Kumar** (Sumant.Kumar@MotilalOswal.com) | **Meet Jain** (Meet.Jain@MotilalOswal.com)

Research Analyst: **Nirvik Saini** (Nirvik.Saini@MotilalOswal.com) | **Yash Darak** (Yash.darak@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.

Consolidated - Quarterly Earning Model

(INRm)

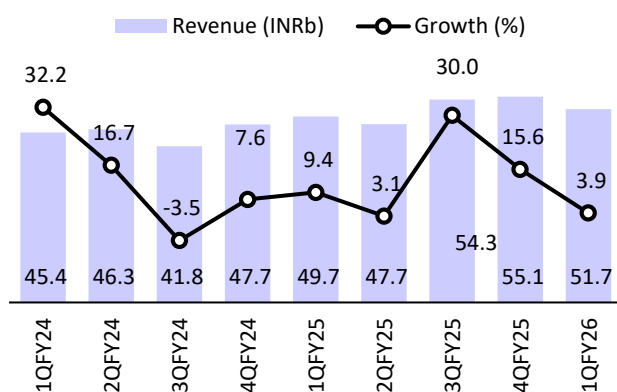
Y/E March	FY25				FY26				FY25	FY26E	FY26E 1E	Var %
	1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE				
Gross Sales	49,743	47,739	54,327	55,086	51,698	60,133	65,812	68,477	2,06,895	2,46,120	52,607	-2
YoY Change (%)	9.4	3.1	30.0	15.6	3.9	26.0	21.1	24.3	14.2	19.0	5.8	
Total Expenditure	46,727	46,359	50,872	50,949	47,978	55,880	61,165	63,575	1,94,906	2,28,598	48,765	
EBITDA	3,016	1,381	3,456	4,137	3,720	4,253	4,648	4,901	11,990	17,522	3,842	-3
Margins (%)	6.1	2.9	6.4	7.5	7.2	7.1	7.1	7.2	5.8	7.1	7.3	
Depreciation	465	469	503	576	544	580	585	596	2,013	2,305	580	
Interest	278	364	368	323	333	250	150	117	1,333	850	200	
Other Income	247	148	217	349	256	270	300	340	961	1,166	273	
PBT before EO expense	2,520	696	2,801	3,587	3,099	3,693	4,213	4,528	9,604	15,532	3,335	
PBT	2,520	696	2,801	3,587	3,099	3,693	4,213	4,528	9,604	15,532	3,335	
Tax	589	158	631	656	728	929	1,060	1,192	2,034	3,910	840	
Rate (%)	23.4	22.7	22.5	18.3	23.5	25.2	25.2	26.3	21.2	25.2	25.2	
Reported PAT	1,932	538	2,170	2,931	2,372	2,763	3,152	3,336	7,571	11,623	2,496	
Adj PAT	1,932	538	2,170	2,931	2,372	2,763	3,152	3,336	7,571	11,623	2,496	-5
YoY Change (%)	-0.2	-73.5	31.1	72.0	22.8	413.5	45.3	13.8	3.4	53.5	12.7	
Margins (%)	3.9	1.1	4.0	5.3	4.6	4.6	4.8	4.9	3.7	4.7	4.7	

Key performance indicators

Y/E March	1QFY25	2QFY25	3QFY25	4QFY25	1QFY26	YOY	QOQ
Segment Volumes ('000 MT)							
Apollo Structural							
Big Section	58	52	67	70	59	2%	-15%
Super Heavy Section	11	11	13	12	12	15%	4%
Light Structures	110	127	143	143	129	18%	-10%
General Structures	288	338	360	353	308	7%	-13%
Apollo Z - Rust-proof structures	168	150	166	185	191	13%	3%
Apollo Z- Coated Products	52	51	46	55	63	23%	15%
Apollo Galv - Agri/Industrial	34	29	34	33	31	-9%	-6%
TOTAL	721	758	828	850	794	10%	-7%
Value-added Products	433	420	468	497	486	12%	-2%
Segment EBITDA/MT (INR/MT)							
Apollo Structural							
Big Section	7,901	5,541	8,179	8,482	8,691	10%	2%
Super Heavy Section	9,425	7,069	9,553	9,958	10,368	10%	4%
Light Structures	5,169	2,899	5,226	5,752	5,996	16%	4%
General Structures	1,944	-24	1,970	2,897	2,527	30%	-13%
Apollo Z - Rust-proof structures	4,958	2,567	5,199	5,715	5,553	12%	-3%
Apollo Z- Coated Products	5,757	3,395	5,921	6,312	6,333	10%	0%
Apollo Galv - Agri/Industrial	5,698	3,340	5,805	5,423	5,869	3%	8%
Cost Break-up							
RM Cost (% of sales)	86%	89%	86%	85%	85%	-111bps	-53bps
Employee Cost (% of sales)	2%	2%	2%	1%	2%	19bps	43bps
Other Cost (% of sales)	6%	6%	6%	6%	6%	-21bps	41bps
Gross Margins (%)	14%	11%	14%	15%	15%	111bps	53bps
EBITDA Margins (%)	6.1%	2.9%	6.4%	7.5%	7.2%	113bps	-31bps

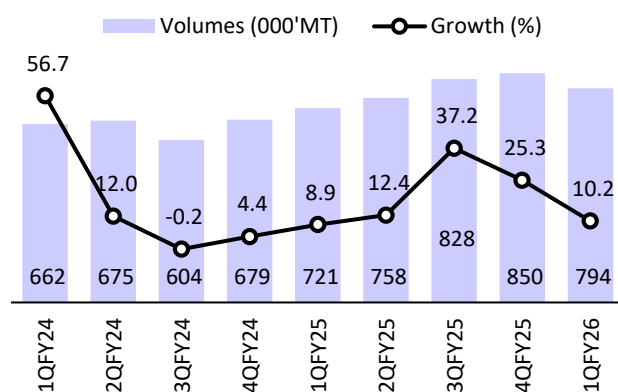
Key Exhibits

Exhibit 1: Consolidated revenue trend



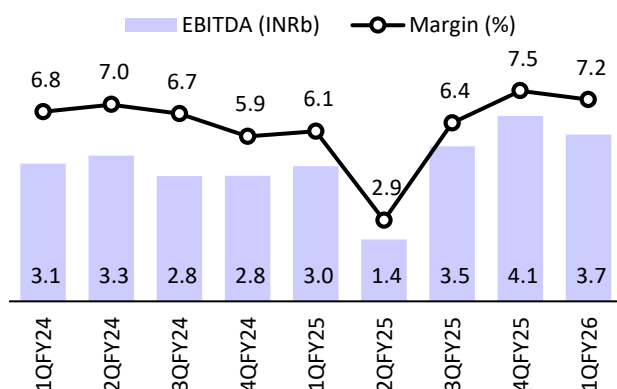
Source: Company, MOFSL

Exhibit 2: Volume trend



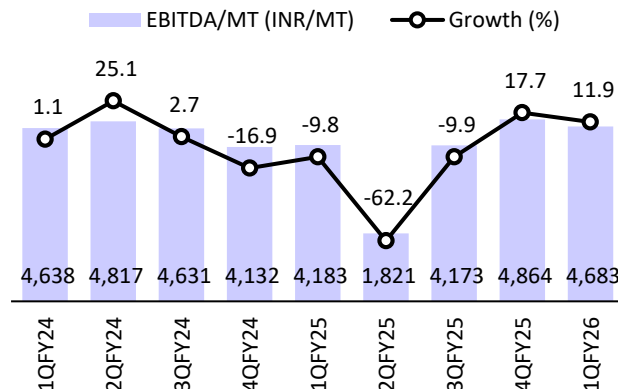
Source: Company, MOFSL

Exhibit 3: Consolidated EBITDA trend



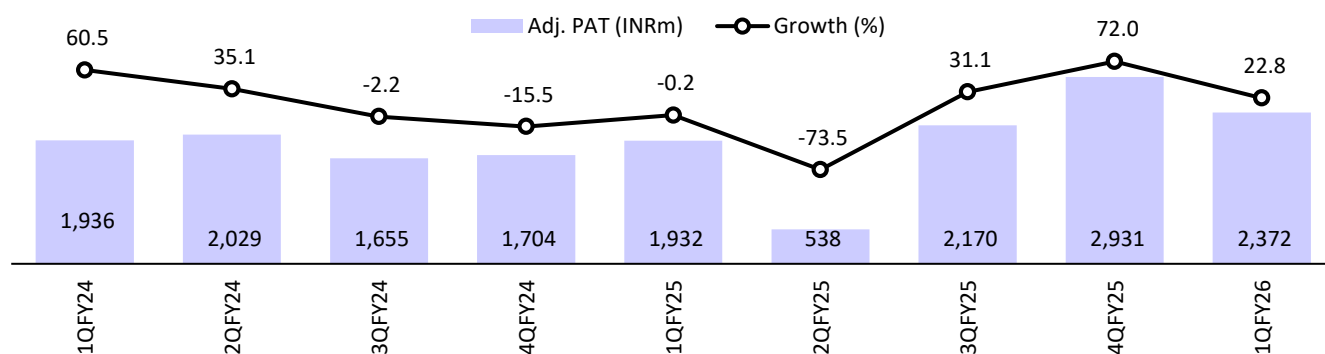
Source: Company, MOFSL

Exhibit 4: EBITDA/MT trend



Source: Company, MOFSL

Exhibit 5: Consolidated Adj. PAT trend



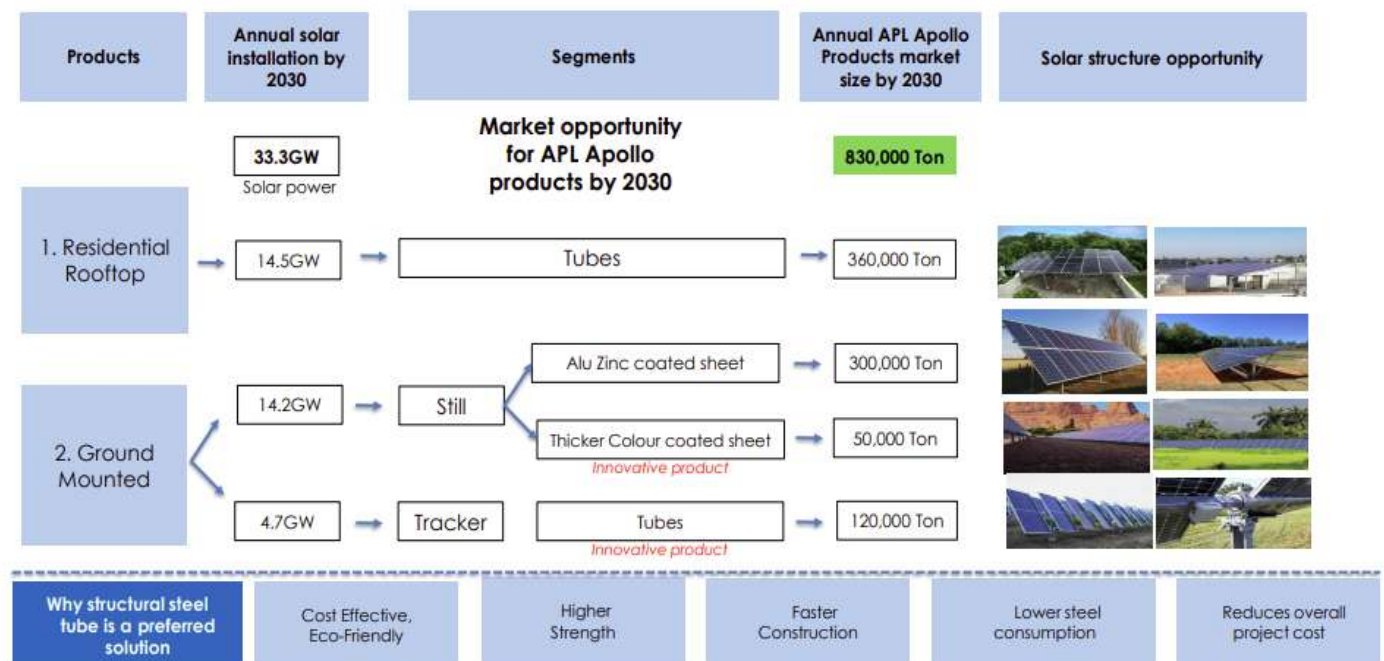
Source: Company, MOFSL

Exhibit 6: New proposed plants for higher market penetration

	Existing capacity	+	Brownfield expansion	+	Greenfield expansion	+	Speciality tubes
Capacity	4.5 Mn Ton		0.8 Mn Ton		1.0 Mn Ton		0.5 Mn Ton
Location			+ International: Dubai 200,000 Ton + Raipur: Roofing sheets 500,000 Ton + Raipur: Heavy 100,000 Ton		+ East: Gorakhpur 200,000 Ton + East: Kolkata 300,000 Ton + West: Bhuj 300,000 Ton + South: New Malur 360,000 Ton - Shifting of existing lines: 160,000 Ton		<ul style="list-style-type: none">New expansion for speciality tubesMajor application in Structural /Oil & gas /Water/ Mechanical sectors
Capex			Rs 15Bn in next 3 years				
<div>Total capacity by FY28: 6.8 Mn Ton</div>							

Source: Company, MOFSL

Exhibit 7: Solar structure opportunity for structural tubes



Source: Company, MOFSL



Highlights from the management commentary

Operating performance

- Sales volume was lower due to a continuous slowdown in the macro environment, elevated geopolitical tensions (Indo-Pak and Israel-Iran conflicts), an early onset of monsoon, and softer money supply in the system leading to a reduction in buying power of customers.
- EBITDA spreads were down due to lower volume and one-time ESOP expenses, which led to an increase in employee costs.
- Currently, 72% of power consumption is based on renewable energy, which the company aims to increase to 80-85% in the next 2-3 years.
- APAT sees good traction in exports from its Dubai plant and will start exports from the Bhuj plant as well.
- EBITDA was lower QoQ due to INR100/MT impact of notional ESOP (INR60m); however, the total impact QoQ was INR300/MT due to adverse operating leverage. About INR870-880m will be sustainable quarterly employee costs going ahead. Further, no discounting was done this quarter.

Guidance and outlook

- Due to a muted show in 1Q, management has lowered its FY26 volume growth target to 10-15% from ~20% earlier.
- EBITDA/MT could be in the range of INR4,600-5,000 in FY26 due to operating leverage.
- Volume recovery will happen from industrial tailwinds in 2H, with orders resuming from aviation, Indian railways, real estate infrastructure, etc.
- 2Q is also expected to be a soft quarter.
- FY27 growth could be much higher than 15-20% in FY26, due to a low base impact of FY26.

Capacity and capex

- The company plans to expand its capacity from 4.5MT currently to 7MT in the next 2-3 years.
- The Dubai plant operates at 60%+ capacity and the Raipur plant operates at a bit less than 60%.
- Out of the 2.3MT capacity expansion, 0.8MT will be brownfield expansion (Dubai 200k tons, Raipur 500k tons in roofing sheets, and another 100k tons in heavy pipes).
- The company plans a greenfield expansion of 1MT – Gorakhpur (200k tons), Kolkata (300k tons), Bhuj (300k tons), and new Malur (360k tons) with a shift of the existing line of 160k tons
- APAT is currently working on a 0.5MT capacity in specialty tubes as well.

Others

- The company divides its cash usage into four buckets: payment of tax, capex, shareholder rewards in the form of dividend or buyback, and paying off liabilities.
- In the last 3-3.5 years, Shankara has quadrupled, and the company sees no point in holding its shares any further.

- The company does not foresee any other ESOP costs in the next 1-2 years.
- It is open to inorganic opportunities. However, it is not looking to acquire secondary steel companies. Except in India, demand for secondary steel is low.
- There is a good opportunity to increase the export mix. It is building a plant in Bhuj, which will focus on exports.
- **General structures** have seen improved EBITDA/MT, led by improved pricing, which is well absorbed in the market. (not competitive challenge), and increased contribution from the Dubai plant, which also sells general structures but margins are much higher there (~INR4000-5000/MT).
- Dubai plant accounted for 6% of total volumes (flat QoQ). It was supposed to increase volumes in 1Q, but it did not happen due to geopolitical concerns. However, it is doing well now.
- In general category products, EBITDA spreads have increased from below INR2,000 to around INR2,800 per ton over the last two quarters. The company aims to achieve EBITDA spreads of INR5,500-6,000 per ton.
- APAT has efficient inventory management, turning over inventory 15 times per year with 20-25 days of inventory.
- Dealers have been maintaining light inventory levels since Oct'23, with no significant restocking, except for a brief period in Mar-Apr'25, when steel tariffs were imposed.
- APAT focuses on gross ROC, which considers inventory plus debtors and excludes creditors.

Exhibit 8: Revisions to our estimates

Earnings change (INRm)	Old		New		Change	
	FY26E	FY27E	FY26E	FY27E	FY26E	FY27E
Revenue	2,46,678	2,94,622	2,46,120	2,94,020	0%	0%
EBITDA	18,064	22,924	17,522	22,569	-3%	-2%
Adj. PAT	12,019	15,995	11,623	15,687	-3%	-2%

Financials and valuations

Consolidated - Income Statement								(INRm)
Y/E March	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Total Income from Operations	77,232	84,998	1,30,633	1,61,660	1,81,188	2,06,895	2,46,120	2,94,020
Change (%)	8.0	10.1	53.7	23.8	12.1	14.2	19.0	19.5
RM Cost	65,786	71,648	1,12,231	1,40,178	1,56,172	1,78,702	2,10,186	2,50,505
Employees Cost	1,422	1,296	1,530	2,062	2,576	3,325	3,692	4,116
Other Expenses	5,252	5,266	7,419	9,204	10,518	12,878	14,720	16,830
Total Expenditure	72,459	78,210	1,21,181	1,51,444	1,69,266	1,94,906	2,28,598	2,71,452
% of Sales	93.8	92.0	92.8	93.7	93.4	94.2	92.9	92.3
EBITDA	4,773	6,787	9,453	10,216	11,922	11,990	17,522	22,569
Margin (%)	6.2	8.0	7.2	6.3	6.6	5.8	7.1	7.7
Depreciation	959	1,028	1,090	1,383	1,759	2,013	2,305	2,869
EBIT	3,814	5,759	8,363	8,832	10,162	9,977	15,217	19,700
Int. and Finance Charges	1,073	661	445	671	1,134	1,333	850	500
Other Income	222	359	405	472	749	961	1,166	1,764
PBT bef. EO Exp.	2,963	5,458	8,323	8,633	9,777	9,604	15,532	20,964
EO Items	0	0	0	0	0	0	0	0
PBT after EO Exp.	2,963	5,458	8,323	8,633	9,777	9,604	15,532	20,964
Total Tax	403	1,381	2,133	2,215	2,453	2,034	3,910	5,277
Tax Rate (%)	13.6	25.3	25.6	25.7	25.1	21.2	25.2	25.2
Minority Interest	180	475	617	0	0	0	0	0
Reported PAT	2,380	3,602	5,573	6,419	7,324	7,571	11,623	15,687
Adjusted PAT	2,380	3,602	5,573	6,419	7,324	7,571	11,623	15,687
Change (%)	60.5	51.3	54.7	15.2	14.1	3.4	53.5	35.0
Margin (%)	3.1	4.2	4.3	4.0	4.0	3.7	4.7	5.3

Consolidated - Balance Sheet								(INR m)
Y/E March	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Equity Share Capital	249	250	501	555	555	555	555	555
Total Reserves	13,313	16,697	22,139	29,501	35,491	41,532	51,491	65,514
Net Worth	13,562	16,947	22,640	30,056	36,046	42,087	52,046	66,069
Minority Interest	954	1,383	2,000	0	0	0	0	0
Total Loans	8,338	5,203	5,806	8,729	11,246	6,148	2,148	48
Deferred Tax Liabilities	1,012	1,112	1,187	1,171	1,258	1,530	1,530	1,530
Capital Employed	23,865	24,644	31,633	39,957	48,550	49,765	55,724	67,647
Gross Block	17,246	18,568	20,677	29,513	38,099	43,506	49,190	55,127
Less: Accum. Deprn.	2,507	3,535	4,625	6,008	7,767	9,781	12,085	14,954
Net Fixed Assets	14,738	15,033	16,053	23,505	30,331	33,725	37,104	40,172
Goodwill on Consolidation	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
Capital WIP	101	1,077	5,037	3,740	2,030	3,355	3,671	3,734
Total Investments	15	15	913	960	1,027	1,262	1,262	4,762
Current Investments	0	0	50	0	0	0	0	3,500
Curr. Assets, Loans&Adv.	16,431	16,491	21,147	28,936	37,105	36,246	39,480	49,898
Inventory	7,842	7,599	8,472	14,799	16,379	16,232	20,668	24,542
Account Receivables	4,764	1,306	3,417	1,374	1,391	2,673	2,023	2,417
Cash and Bank Balance	456	3,579	3,764	3,525	3,476	5,749	2,022	5,298
Loans and Advances	3,370	4,006	5,494	9,239	15,859	11,592	14,767	17,641
Curr. Liability & Prov.	8,796	9,345	12,891	18,560	23,318	26,197	27,168	32,294
Account Payables	7,644	7,859	10,595	15,970	19,816	22,312	22,547	26,773
Other Current Liabilities	979	1,310	2,113	2,357	3,229	3,564	4,240	5,065
Provisions	173	177	184	233	273	321	382	456
Net Current Assets	7,636	7,145	8,256	10,377	13,787	10,048	12,312	17,604
Appl. of Funds	23,865	24,644	31,633	39,957	48,550	49,765	55,724	67,647

Financials and valuations

Ratios

Y/E March	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
Basic (INR)								
EPS	8.6	13.0	20.1	23.1	26.4	27.3	41.9	56.6
Cash EPS	12.0	16.7	24.0	28.1	32.8	34.6	50.2	66.9
BV/Share	48.9	61.1	81.6	108.4	130.0	151.7	187.7	238.2
DPS	0.0	0.0	3.5	3.5	5.0	5.8	6.0	6.0
Payout (%)	0.0	0.0	17.4	15.1	18.9	21.1	14.3	10.6
Valuation (x)								
P/E	196.8	130.0	84.0	73.0	63.9	61.9	40.3	29.8
Cash P/E	140.2	101.2	70.3	60.0	51.5	48.9	33.6	25.2
P/BV	34.5	27.6	20.7	15.6	13.0	11.1	9.0	7.1
EV/Sales	6.2	5.5	3.6	2.9	2.6	2.3	1.9	1.6
EV/EBITDA	99.9	69.4	50.0	46.3	39.9	39.1	26.7	20.4
Dividend Yield (%)	0.0	0.0	0.2	0.2	0.3	0.3	0.4	0.4
FCF per share	-5.4	24.1	1.6	-2.3	15.3	19.5	5.8	33.4
Return Ratios (%)								
RoE	20.5	23.6	28.2	24.4	22.2	19.4	24.7	26.6
RoCE	17.4	20.8	25.8	20.6	19.0	18.0	23.9	26.7
RoIC	15.9	19.9	29.7	24.5	20.6	19.3	25.8	28.7
Working Capital Ratios								
Fixed Asset Turnover (x)	4.5	4.6	6.3	5.5	4.8	4.8	5.0	5.3
Asset Turnover (x)	3.2	3.4	4.1	4.0	3.7	4.2	4.4	4.3
Inventory (Days)	37	33	24	33	33	29	31	30
Debtor (Days)	23	6	10	3	3	5	3	3
Creditor (Days)	36	34	30	36	40	39	33	33
Leverage Ratio (x)								
Current Ratio	1.9	1.8	1.6	1.6	1.6	1.4	1.5	1.5
Interest Cover Ratio	3.6	8.7	18.8	13.2	9.0	7.5	17.9	39.4
Net Debt/Equity	0.6	0.1	0.1	0.2	2.0	0.0	0.0	-0.1

Consolidated - Cash Flow Statement

(InR m)

Y/E March	FY20	FY21	FY22	FY23	FY24	FY25	FY26E	FY27E
OP/(Loss) before Tax	2,963	5,458	8,323	8,633	9,777	9,604	15,532	20,964
Depreciation	959	1,028	1,090	1,383	1,759	2,013	2,305	2,869
Interest & Finance Charges	851	302	40	199	385	372	-316	-1,264
Direct Taxes Paid	-403	-1,381	-1,993	-2,161	-2,453	-2,034	-3,910	-5,277
(Inc)/Dec in WC	725	3,577	-1,154	-1,475	1,646	2,177	-5,990	-2,016
CF from Operations	5,096	8,983	6,306	6,580	11,115	12,133	7,622	15,276
Others	0	0	211	321	0	0	0	0
CF from Operating incl EO	5,096	8,983	6,517	6,901	11,115	12,133	7,622	15,276
(Inc)/Dec in FA	-6,591	-2,298	-6,070	-7,539	-6,876	-6,732	-6,000	-6,000
Free Cash Flow	-1,495	6,685	447	-638	4,239	5,400	1,622	9,276
(Pur)/Sale of Investments	479	0	-898	-48	-67	-235	0	-3,500
Others	1,763	-4,171	1,666	-1,171	-2,214	3,220	1,166	1,764
CF from Investments	-4,349	-6,468	-5,301	-8,757	-9,157	-3,747	-4,834	-7,736
Issue of Shares	10	1	251	1,284	0	0	0	0
Inc/(Dec) in Debt	-244	-3,135	603	2,924	2,516	-5,097	-4,000	-2,100
Interest Paid	-1,073	-661	-445	-671	-1,134	-1,333	-850	-500
Dividend Paid	0	0	-971	-971	-1,387	-1,595	-1,664	-1,664
Others	538	4,403	-469	-949	-2,004	1,912	0	0
CF from Fin. Activity	-768	609	-1,031	1,617	-2,008	-6,112	-6,514	-4,264
Inc/Dec of Cash	-22	3,123	185	-240	-49	2,273	-3,727	3,276
Opening Balance	478	456	3,579	3,765	3,525	3,476	5,749	2,022
Closing Balance	456	3,579	3,765	3,525	3,476	5,749	2,022	5,298

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://online.reports.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

- Research Analyst and/or his/her relatives do not have a financial interest in the subject company(ies), as they do not have equity holdings in the subject company(ies). MOFSL has financial interest in the subject company(ies) at the end of the week immediately preceding the date of publication of the Research Report: Yes.
Nature of Financial interest is holding equity shares or derivatives of the subject company
- Research Analyst and/or his/her relatives do not have actual/beneficial ownership of 1% or more securities in the subject company(ies) at the end of the month immediately preceding the date of publication of Research Report.
MOFSL has actual/beneficial ownership of 1% or more securities of the subject company(ies) at the end of the month immediately preceding the date of publication of Research Report: No
- Research Analyst and/or his/her relatives have not received compensation/other benefits from the subject company(ies) in the past 12 months.
MOFSL may have received compensation from the subject company(ies) in the past 12 months.
- Research Analyst and/or his/her relatives do not have material conflict of interest in the subject company at the time of publication of research report.
MOFSL does not have material conflict of interest in the subject company at the time of publication of research report.
- Research Analyst has not served as an officer, director or employee of subject company(ies).
- 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(ies) in the past 12 months.
8. MOFSL may have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company(ies) in the past 12 months.
9. MOFSL may have received compensation or other benefits from the subject company(ies) or 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, 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/NCDX); 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.