

Alkyl Amines

Estimate changes

TP change

Rating change



CMP: INR2,147

TP: INR1,935 (-10%)

Neutral

Bloomberg	AACL IN
Equity Shares (m)	51
M.Cap.(INRb)/(USDb)	109.8 / 1.3
52-Week Range (INR)	2986 / 2119
1, 6, 12 Rel. Per (%)	-6/-22/-34
12M Avg Val (INR M)	84

Financials & Valuations (INR b)

Y/E March	FY23	FY24E	FY25E
Sales	16.8	16.0	20.8
EBITDA	3.4	2.7	4.1
PAT	2.3	1.7	2.8
EPS (INR)	44.7	33.6	55.3
EPS Gr. (%)	1.6	-24.8	64.5
BV/Sh.(INR)	228.5	254.6	297.5

Ratios

Net D:E	0.1	0.0	-0.0
RoE (%)	21.2	13.9	20.0
RoCE (%)	19.5	12.8	18.9
Payout (%)	22.4	22.4	22.4

Valuations

P/E (x)	48.0	63.8	38.8
P/BV (x)	9.4	8.4	7.2
EV/EBITDA (x)	32.2	40.9	26.4
Div. Yield (%)	0.5	0.4	0.6
FCF Yield (%)	-0.5	0.8	1.2

Shareholding pattern (%)

As On	Sep-23	Jun-23	Sep-22
Promoter	72.0	72.0	72.0
DII	1.1	1.2	1.1
FII	2.9	2.9	2.3
Others	24.0	24.0	24.6

FII Includes depository receipts

Muted 2Q led by pricing pressure & higher competition

- Alkyl Amines (AACL)'s 2QFY24 revenue was lower than our expectation and declined 14% YoY, primarily due to increased Chinese dumping amid the company's aggressive pricing in 2-3 products. Gross margin expanded to 45.7% in 2Q. EBITDA, at INR483m, was lower than our estimate due to higher-than-anticipated other expenses. This resulted in an EBITDAM of 13.7%.
- Management highlighted that demand from the domestic market is decent enough, although some pressure exists in the agrochemical and pharma sectors. Demand has been weaker in Europe and META (Middle East, Turkey, and Africa) regions than it has historically been. Some customers, though, are expecting demand to accelerate once the situation normalizes.
- Alcohol prices are expected to remain at elevated levels for the next year and AACL hasn't been able to pass on the price increase completely to customers. That being said, AACL has maintained its market share in the domestic market, if not gained, even during the slowdown. The company, though, has been sacrificing margin in order to maintain its market share.
- The company has commissioned its ethyl amine capacity of ~30ktpa, and steady progress is being seen from the same. Management intends to run it at a lower capacity than the nameplate one and then gradually ramp up as demand keeps on growing (at 5-7% per year). AACL has a 70% market share in ethyl amine in the domestic market.
- Due to underperformance in 1H, we have cut our revenue/EBITDA/EPS estimates by 10%/15%/21% for FY24 and EBITDA/EPS estimates by 6%/8% for FY25. The stock is trading at ~39x FY25E EPS of INR55.3 and ~26x FY25E EV/EBITDA. **We reiterate our Neutral rating on the stock, and value it at 35x FY25E EPS to arrive at our TP of INR1,935.**

Miss due to lower revenue and higher other expenses

- Revenue stood at INR3.5b (est. of INR4.1b, down 14% YoY).
- Gross margin stood at 45.7% with EBITDAM at 13.7% (vs. ~19.9% in 2QFY23).
- EBITDA came in at INR483m (est. of INR724m, down 41% YoY) due to higher-than-expected other expenses.
- PAT stood at INR272m (est. of INR491m, down 48% YoY) due to higher-than-expected interest expense.
- For 1HFY24**, revenue stood at INR7.6b (down 14% YoY), EBITDA stood at INR1.2b (down 38% YoY), and PAT came in at INR700m (down 43% YoY).
 - EBITDAM was at 16% in 1HFY24 (down 630bp YoY).
 - AACL's 1HFY24 EBITDA was at 39% of our full-year estimate.

Valuation and View

- The company has commissioned its ethyl amine plant and boosted its aliphatic amine capacity by ~30%. The total capacity at present for AACL stands at ~200ktpa (including derivatives and specialty chemicals). Additionally, AACL is venturing into new specialty products that are likely to improve its margins. This would be driven by robust demand for these products, which encompass a blend of amine derivatives and specialties.

Aman Chowdhary – Research Analyst (Aman.Chowdhary@MotilalOswal.com)

Research Analyst – Abhishek Nigam (Abhishek.Nigam@MotilalOswal.com) **Rohit Thorat** (Rohit.Thorat@MotilalOswal.com)

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

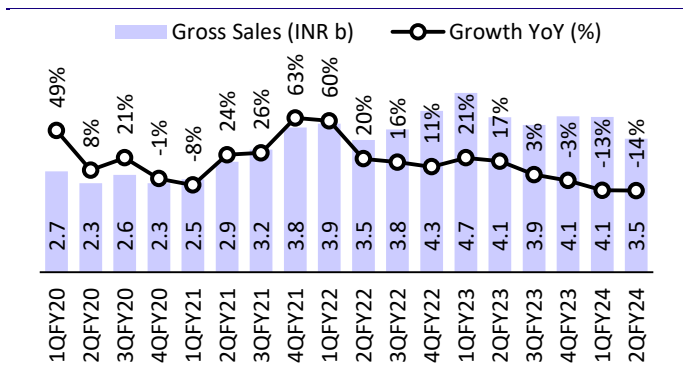
Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

- We predict ~11% revenue CAGR over FY23-FY25 for AACL, accompanied by 11% EPS CAGR during the same period. Potential risk to our outlook includes increased competition, which will limit the pricing power of AACL as competitors influence market prices.
- The stock is trading at ~39x FY25E EPS of INR55.3 and ~26x FY25E EV/EBITDA. **We reiterate our Neutral rating on the stock, and value it at 35x FY25E EPS to arrive at our TP of INR1,935.**

Standalone - Quarterly snapshot

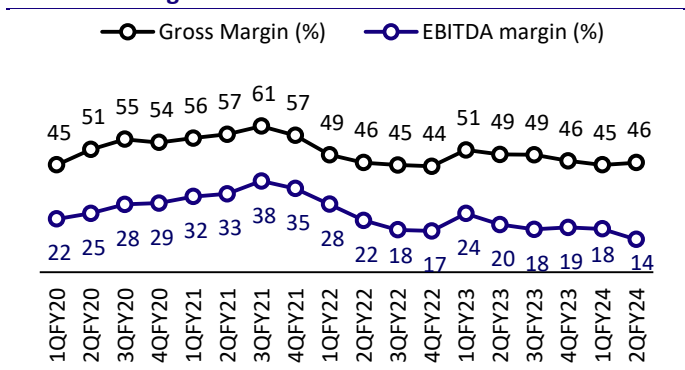
Y/E March	(INR m)											
	FY23				FY24				FY23	FY24E	FY24	Var.
	1Q	2Q	3Q	4Q	1Q	2Q	3QE	4QE			2QE	(%)
Gross Sales	4,735	4,089	3,884	4,117	4,098	3,522	3,996	4,367	16,824	15,982	4,569	-23%
YoY Change (%)	20.8	17.3	3.1	-3.2	-13.5	-13.9	2.9	6.1	9.1	-5.0	11.8	
Gross Margin (%)	50.9%	49.0%	48.9%	46.4%	44.7%	45.7%	46.0%	45.6%	48.9%	45.5%	45.9%	-0.2%
EBITDA	1,158	813	696	769	740	483	675	788	3,436	2,686	862	-44%
Margin (%)	24.5	19.9	17.9	18.7	18.1	13.7	16.9	18.1	20.4	16.8	18.9	-5.2
Depreciation	118	112	107	116	122	125	128	131	452	506	126	
Interest	8	11	7	11	9	17	8	16	37	50	9	
Other Income	42	23	45	28	55	24	59	31	138	168	27	
PBT before EO expense	1,075	714	626	671	664	364	598	671	3,085	2,298	754	-52%
PBT	1,075	714	626	671	664	364	598	671	3,085	2,298	754	-52%
Tax	256	189	169	185	166	92	150	170	799	578	190	
Rate (%)	23.8	26.5	27.0	27.5	25.0	25.2	25.2	25.3	25.9	25.2	25.2	
Reported PAT	819	524	457	486	498	272	448	502	2,286	1,719	564	-52%
YoY Change (%)	4.3	-3.1	-0.4	4.8	-39.2	-48.0	-2.0	3.1	1.6	-24.8	7.6	
Margin (%)	17.3	12.8	11.8	11.8	12.1	7.7	11.2	11.5	13.6	10.8	12.3	-4.6

Exhibit 1: Sales were down 14% YoY to INR3.5b



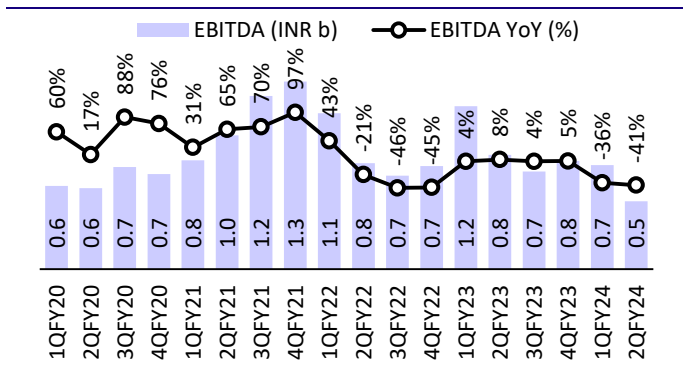
Source: Company, MOFSL

Exhibit 2: Margins contracted YoY



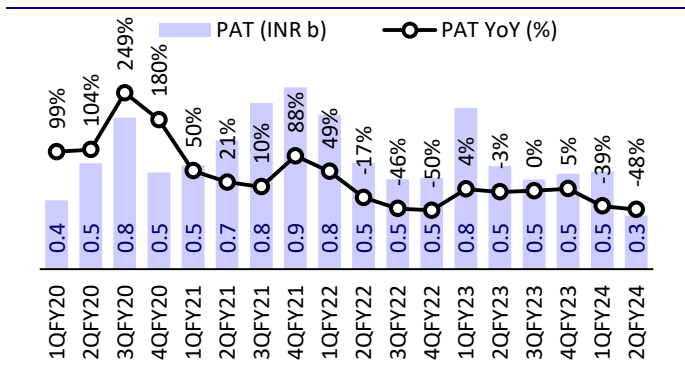
Source: Company, MOFSL

Exhibit 3: EBITDA down 41% YoY to INR483m



Source: Company, MOFSL

Exhibit 4: PAT down 48% YoY to INR272m



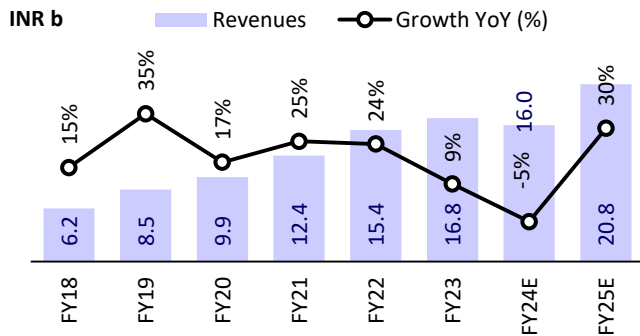
Source: Company, MOFSL

Management conference call highlights

- AACL's 1HFY24 has been difficult in terms of margin, largely due to some domestic competition and significant competition from China in 2-3 products
- However, on the positive side, volumes have grown more than 15% in 1H
- AACL has maintained its market share, if not gained, in most of the products
- Domestic market seems to be doing alright. Some pains in agrochemical and pharma sectors are visible.
- Europe and META (Middle East, Turkey, Africa) regions are going through a more difficult time than historically they have been.
- Alcohol prices are to remain at current levels in the next year as well
- The company hasn't been able to pass on the price increase completely to the customers
- AACL is sacrificing margin in order to gain market share
- Steady progress in ethyl amines (newly commissioned) to be seen
- Initially, intends to run at a lower capacity than 100tpd (15ktpa)
- Demand has been growing at 5-7% every year and it is at 28-30ktpa currently, with some exports as well
- 70% market share for AACL in Ethyl amines, 25% of competitor and 5% would be imports
- Power & Fuel costs are included in other expenses. Forms about 20% of the total expenses
- Commissioning a solar capacity in the next few days in Dahej
- Savings could be ~INR100-200m in FY25
- A new boiler has been commissioned
- Management is in the process of applying for an ADD
- ACN CIF prices currently at USD1.4/kg
- 1HFY24 utilization levels stood at 63-65%; expected utilization for 2HFY24 to be maintained at the same levels
- Pharma industry comprises a large amount of the ethyl amine market
- Rubber chemicals have also gone through a tough phase
- Customers are talking about seeing light at the end of the tunnel
- No overcapacity in Methyl Amines with two other competitors in India – Balaji Amines and RCF.
- A couple of derivatives of AACL has done well but Methyl has not been a worry in the overall scheme of things
- It has some headroom for growth in terms of capacity
- No additional capacity requirements by FY25
- Capex of INR850m mostly in ethyl amines, capex of INR500m in 2HFY24 expected
- Capex for FY25E at same levels of FY24E that would be mainly in the specialty business going forward
- Sales mix in 1HFY24 was 50% for Amines, 30% for derivatives and rest was for other spec chem
- Total capacity was ~200ktpa with utilization at 50-55%, this is the optimum utilization for some plants

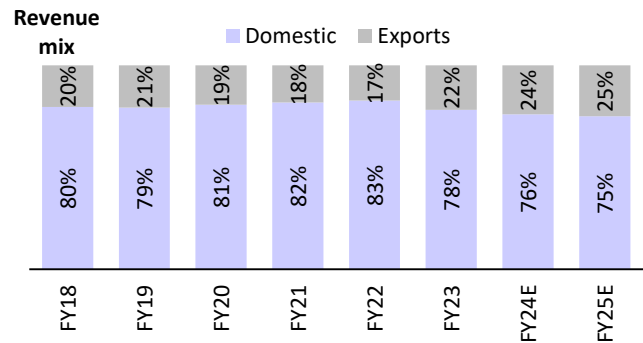
Financial story in charts

Exhibit 5: Expect ~11% revenue CAGR over FY23-25...



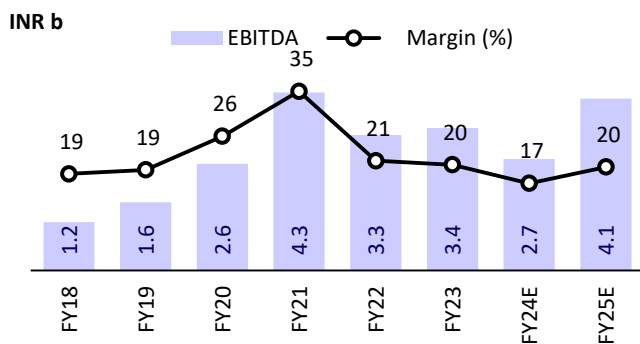
Source: Company, MOFSL

Exhibit 6: ...with exports rising to 25% by FY25



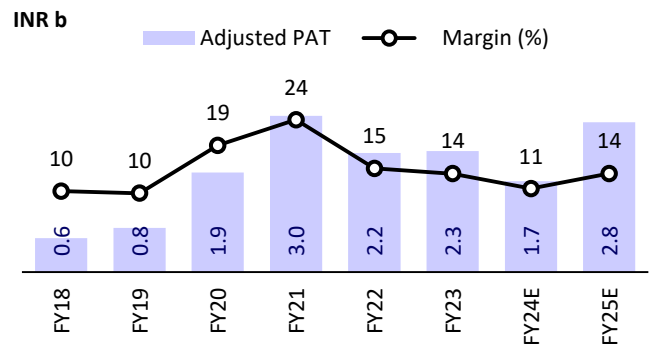
Source: Company, MOFSL

Exhibit 7: Expect EBITDA margin to be back at ~20% in FY25



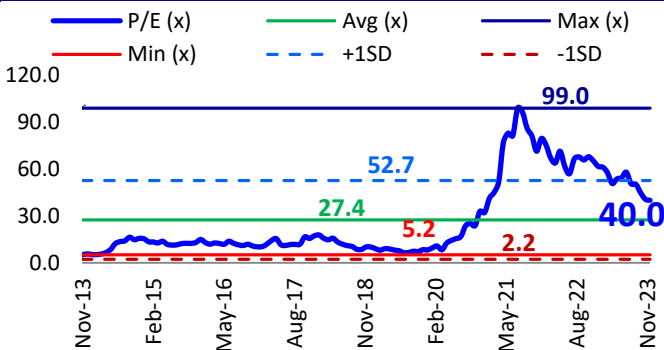
Source: Company, MOFSL

Exhibit 8: ...with PAT margin at FY23 levels



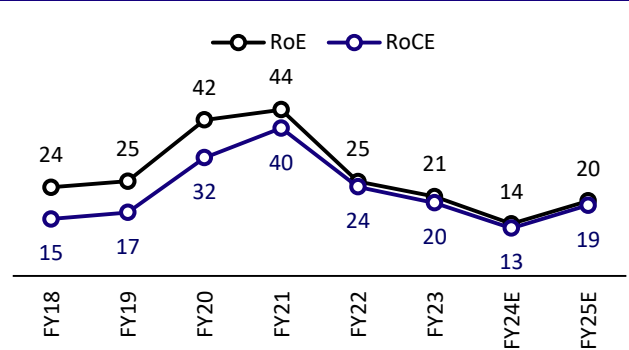
Source: Company, MOFSL

Exhibit 9: One-year forward P/E trades at 40.5x



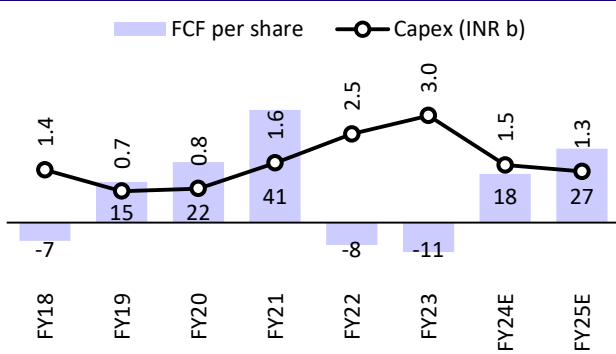
Source: Company, MOFSL

Exhibit 10: Return ratios of AAOL



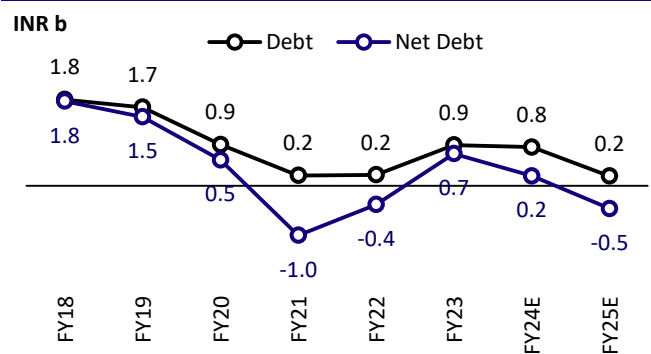
Source: Company, MOFSL

Exhibit 11: Expect strong FCF generation over FY24-25



Source: Company, MOFSL

Exhibit 12: Debt profile of AAOL



Source: Company, MOFSL

Financials and valuations

Standalone - Income Statement

(INR m)

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Total Income from Operations	6,248	8,464	9,929	12,424	15,428	16,823	15,982	20,777
Change (%)	15.3	35.5	17.3	25.1	24.2	9.0	-5.0	30.0
Gross Margin (%)	46.5	45.5	51.2	57.9	45.8	48.9	45.5	46.0
EBITDA	1,164	1,644	2,570	4,291	3,265	3,431	2,686	4,144
Margin (%)	18.6	19.4	25.9	34.5	21.2	20.4	16.8	19.9
Depreciation	157	233	269	291	348	452	506	508
EBIT	1,008	1,410	2,301	4,001	2,918	2,980	2,180	3,636
Int. and Finance Charges	81	148	103	63	38	33	50	51
Other Income	32	39	70	70	142	139	168	194
PBT bef. EO Exp.	958	1,302	2,269	4,007	3,021	3,086	2,298	3,779
EO Items	0	0	328	0	0	0	0	0
PBT after EO Exp.	958	1,302	2,597	4,007	3,021	3,086	2,298	3,779
Total Tax	315	464	444	1,054	772	799	578	951
Tax Rate (%)	32.9	35.7	17.1	26.3	25.6	25.9	25.2	25.2
Reported PAT	643	837	2,153	2,953	2,249	2,287	1,719	2,828
Adjusted PAT	643	837	1,881	2,953	2,249	2,287	1,719	2,828
Change (%)	27.6	30.3	124.5	57.0	-23.9	1.7	-24.8	64.5
Margin (%)	10.3	9.9	18.9	23.8	14.6	13.6	10.8	13.6

Standalone - Balance Sheet

(INR m)

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Equity Share Capital	102	102	102	102	102	102	102	102
Total Reserves	2,869	3,548	5,264	7,822	9,796	11,587	12,922	15,117
Net Worth	2,972	3,650	5,366	7,924	9,898	11,689	13,024	15,220
Total Loans	1,813	1,653	866	216	227	855	812	203
Deferred Tax Liabilities	405	507	404	414	472	560	560	560
Capital Employed	5,189	5,810	6,636	8,554	10,598	13,104	14,396	15,982
Gross Block	3,846	4,280	4,971	5,315	7,377	8,713	10,213	11,513
Less: Accum. Deprn.	295	515	736	1,026	1,374	1,825	2,332	2,840
Net Fixed Assets	3,552	3,764	4,235	4,288	6,003	6,887	7,881	8,673
Capital WIP	184	432	449	1,376	1,426	3,520	3,520	3,520
Total Investments	14	14	0	302	0	0	0	0
Curr. Assets, Loans&Adv.	2,621	3,275	3,150	5,486	6,283	5,493	5,652	7,243
Inventory	852	1,057	837	1,219	1,645	1,837	1,745	2,268
Account Receivables	1,238	1,526	1,642	2,280	2,767	2,584	2,455	3,191
Cash and Bank Balance	32	202	323	1,260	626	182	607	685
Cash	22	193	312	961	379	172	596	674
Bank Balance	10	8	10	299	247	11	11	11
Loans and Advances	499	490	349	727	1,245	890	845	1,099
Curr. Liability & Prov.	1,182	1,676	1,198	2,899	3,116	2,797	2,657	3,454
Account Payables	848	1,304	748	1,790	2,285	1,897	1,802	2,343
Other Current Liabilities	250	264	354	1,002	730	772	733	953
Provisions	84	107	97	107	101	128	121	158
Net Current Assets	1,439	1,599	1,952	2,587	3,168	2,696	2,995	3,789
Appl. of Funds	5,189	5,810	6,635	8,554	10,597	13,103	14,396	15,982

Financials and valuations

Ratios

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Basic (INR)								
EPS	12.6	16.4	36.9	57.9	44.0	44.7	33.6	55.3
EPS Growth (%)	27.6	30.3	124.5	57.0	-24.0	1.6	-24.8	64.5
Cash EPS	15.7	21.0	42.1	63.6	50.8	53.5	43.5	65.2
BV/Share	58.2	71.5	105.2	155.3	193.7	228.5	254.6	297.5
DPS	2.4	3.4	8.7	16.0	10.0	10.0	7.5	12.4
Payout (%)	19.1	20.6	20.6	27.7	22.7	22.4	22.4	22.4
Valuation (x)								
P/E	170.3	130.7	58.2	37.1	48.7	48.0	63.8	38.8
Cash P/E	136.9	102.2	50.9	33.7	42.2	40.1	49.3	32.9
P/BV	36.8	30.0	20.4	13.8	11.1	9.4	8.4	7.2
EV/Sales	17.8	13.1	11.1	8.7	7.1	6.6	6.9	5.3
EV/EBITDA	95.5	67.5	42.8	25.3	33.4	32.2	40.9	26.4
Dividend Yield (%)	0.1	0.2	0.4	0.7	0.5	0.5	0.4	0.6
FCF per share	-6.5	14.8	21.8	40.7	-8.1	-10.7	17.6	26.8
Return Ratios (%)								
RoE	23.7	25.3	41.7	44.4	25.2	21.2	13.9	20.0
RoCE	15.2	17.0	31.6	39.5	23.8	19.5	12.8	18.9
RoIC	15.8	17.9	34.6	51.4	30.7	24.6	16.6	24.7
Working Capital Ratios								
Fixed Asset Turnover (x)	2.2	2.3	2.5	2.9	3.0	2.6	2.2	2.5
Asset Turnover (x)	1.2	1.5	1.5	1.5	1.5	1.3	1.1	1.3
Inventory (Days)	50	46	31	36	39	40	40	40
Debtor (Days)	72	66	60	67	65	56	56	56
Creditor (Days)	50	56	27	53	54	41	41	41
Leverage Ratio (x)								
Current Ratio	2.2	2.0	2.6	1.9	2.0	2.0	2.1	2.1
Interest Cover Ratio	12.4	9.5	22.4	63.2	76.2	89.8	43.6	71.6
Net Debt/Equity	0.6	0.4	0.1	-0.1	0.0	0.1	0.0	0.0

Standalone - Cash Flow Statement

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
(INR m)								
OP/(Loss) before Tax	958	1,302	2,597	4,007	3,021	3,086	2,298	3,779
Depreciation	154	233	269	291	348	452	506	508
Interest Expenses	81	148	103	63	38	33	50	51
Others	-6	51	-308	1	-31	61	0	0
Direct Taxes Paid	-198	-356	-581	-1,012	-744	-714	-578	-951
(Inc)/Dec in WC	26	64	-193	290	-585	-434	126	-716
CF from Operations	1,016	1,442	1,886	3,640	2,047	2,484	2,401	2,670
(Inc)/Dec in FA	-1,350	-689	-771	-1,561	-2,462	-3,030	-1,500	-1,300
Free Cash Flow	-334	753	1,115	2,079	-415	-546	901	1,370
Change in Investments	16	0	343	-587	369	237	0	0
Others	-6	21	22	21	36	22	0	0
CF from Investments	-1,340	-668	-407	-2,127	-2,057	-2,771	-1,500	-1,300
Issue of Shares	0	0	0	4	7	12	0	0
Inc/(Dec) in Debt	547	-268	-797	-381	-228	616	-43	-609
Interest Paid	-83	-150	-107	-68	-40	-31	-50	-51
Dividend Paid	-123	-172	-443	-408	-306	-511	-385	-633
Others	-16	-13	-13	-11	-6	-7	0	0
CF from Fin. Activity	325	-603	-1,360	-864	-573	80	-477	-1,293
Inc/Dec of Cash	1	171	119	649	-583	-207	424	78
Opening Balance	22	22	193	312	961	379	172	596
Closing Balance	22	193	313	962	379	172	596	674

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") (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 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, 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.

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.