MOTILAL OSWAL

FINANCIAL SERVICES

Amara Raja

Neutral

Estimate changes	
TP change	
Rating change	\longleftrightarrow

Bloomberg	ARENM IN
Equity Shares (m)	171
M.Cap.(INRb)/(USDb)	152.9 / 1.8
52-Week Range (INR)	904 / 546
1, 6, 12 Rel. Per (%)	9/29/21
12M Avg Val (INR M)	542

Financials & Valuations (INR b)

2023	2024E	2025E
103.9	113.8	125.8
13.6	15.6	17.7
7.3	8.7	9.5
42.7	51.0	55.9
42.7	19.5	9.5
310	346	387
14.8	15.5	15.2
14.9	15.6	15.4
15.0	29.4	26.8
20.9	17.5	16.0
2.9	2.6	2.3
0.7	1.7	1.7
3.2	5.3	3.9
	103.9 13.6 7.3 42.7 42.7 310 14.8 14.9 15.0 20.9 2.9 0.7	103.9 113.8 13.6 15.6 7.3 8.7 42.7 51.0 42.7 19.5 310 346

Shareholding pattern (%)

As On	Dec-23	Sep-23	Dec-22		
Promoter	28.1	28.1	28.1		
DII	17.9	16.8	9.3		
FII	24.0	24.6	35.5		
Others 30.0 26.3 27.2					
FII Includes depository receipts					

CMP: INR892 TP: INR825 (-8%)

Revenue in line, EBITDA/PAT beat estimates

EBITDA margin of 10-11% achievable for the cell manufacturing operations at 7-9GWh scale

- Amara Raja's (ARENM) 3QFY24 financials were encouraging as EBITDA beat estimate at INR4.1b (vs INR3.8b), led by better-than-expected gross margin. Sustained growth in 2W demand (OE/aftermarket volumes grew in 30%/15% YoY in 3Q), stable replacement demand in PVs, and recovery in industrials are expected to drive ~9% revenue CAGR over FY23-26E.
- We raise our FY24E/25E EPS by 7%/4% to factor in for recovery in 2W demand and better gross margins. However, we believe the current valuations of ~17.5x/16x FY24E/25E EPS fairly reflects the recovery in the underlying industry and its prospects of foraying into new energy business. We reiterate our **Neutral** rating with a TP of INR825/share (14x Mar'26E EPS).

Better than est. gross margin aids margin expansion

- 3QFY24 revenue/EBITDA/adj. PAT grew 9%/3%/8% YoY to INR28.8b/ INR4.1b/INR2.4b (vs. est. INR28.5b/INR3.8b/INR2.1b). 9MFY24 revenue/EBITDA/adj. PAT increased 6%/13%/16% YoY.
 - Revenue grew 9% YoY to INR28.8b (in line). This revenue growth in 3QFY24 was lower than EXID revenue growth of 13% YoY.
- Revenue from the new energy business for 9MFY24 stood at INR4b.
- Gross margin contracted 130bp YoY (+50bp QoQ) to 32.1% (vs. est. 31% vs. EXID gross margins of 31.5%).
- Further, despite lower employee costs (down 40bp YoY as a percentage of sales), EBITDA margins declined 80bp YoY to 14.2% (vs. est.13.5%, vs. EXID margin of 11.5%). This decrease was attributed to lower gross margins and higher other costs. The rise in Other costs can be attributed to a) a quarterly insurance cost of INR100m and b) consultancy charges aimed at improving efficiency within the plant. EBITDA grew 3% YoY to INR4.1b (vs. est. INR3.8b).

Adj. PAT stood at INR2.4b (grew 8% YoY vs. est. INR2.1b).

Highlights from the management commentary

- Revenue from LAB grew 12% YoY, led by 4W/2W volume growth, while industrials grew 6-7% YoY. The telecom sector exhibited a growth of 2-3%, surpassing the average growth rate. Additionally, trading accounted for around 7% of revenues, primarily driven by sales in tubular batteries
- Cell manufacturing plant: This plant would be operational by FY26. With the current lead prices and capex requirements, this business could achieve 10-11% EBITDA and ROE of 10-11% when the business reaches a scale of 7-9GW, below which, it would be difficult to achieve the targets.

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

Aniket Desai - Research analyst (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.

FY24 Capex for LAB business would be INR2.5b and INR2.5-3b for the lead recycling plant (expected to commence in 1QFY25) and new energy business. FY25 total capex would be INR6b (INR2.5-3b for LAB and INR3-3.5b for new energy business).

Valuation and view

The stock trades at 17.5 x/16x FY24E/FY25E EPS. We reiterate our **Neutral** rating with a TP of INR825/share (14x Mar'26E EPS), reflecting the anticipation of better earnings growth, balanced out by the growing concern posed by the increasing influence of lithium chemistry on the Auto and Industrial businesses.

Quarterly	Performance
-----------	-------------

Quarterly Performance											(INR m)
Y/E March (INR m)		FY2	23			FY2	4E		FY23	FY24E	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE			3QE
Net Sales	26,200	26,995	26,372	24,292	27,699	28,108	28,811	29,214	1, 03, 859	1,13,831	28,482
YoY Change (%)	38.9	19.2	11.5	11.4	5.7	4.1	9.2	20.3	19.4	9.6	8.0
RM Cost (% of sales)	73.4	69.5	66.6	67.0	71.1	68.4	67.9	68.1	69.2	68.9	69.0
Staff Cost (% of sales)	5.1	5.6	6.1	6.0	5.8	5.8	5.7	5.8	5.7	5.8	5.7
Other Exp (% of sales)	11.5	11.6	12.2	13.1	10.3	12.1	12.2	12.0	12.1	11.7	11.8
EBITDA	2,609	3,602	3,969	3,373	3,535	3,870	4,099	4,114	13,552	15,618	3,845
Margins (%)	10.0	13.3	15.0	13.9	12.8	13.8	14.2	14.1	13.0	13.7	13.5
Depreciation	963	1,019	1,145	1,145	1,111	1,148	1,144	1,196	4,272	4,599	1155
Interest	46	54	58	62	56	62	59	63	221	240	65
Other Income	170	237	261	226	216	275	237	232	893	960	220
PBT before EO expense	1,770	2,765	3,026	2,392	2,584	2,935	3,133	3,087	9,952	11, 73 9	2845
Extra-Ord expense	0	0	0	477	0	0	0	0	477	0	0
PBT after EO	1,770	2,765	3,026	1,915	2,584	2,935	3,133	3,087	9,476	11,739	2,845
Тах	455	744	798	535	659	791	737	756	2,532	3,023	718
Tax Rate (%)	25.7	26.9	26.4	28.0	25.5	27.0	23.5	24.5	26.7	25.8	25.3
Adj PAT	1,315	2,022	2,228	1,729	1,925	2,143	2,396	2,331	7,293	8,716	2,127
YoY Change (%)	6.1	40.3	54.0	75.5	46.4	6.0	7.6	34.8	42.7	19.5	-4.6

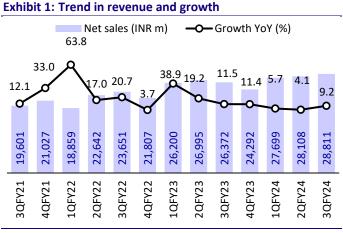
E: MOFSL Estimates



Key takeaways from the management commentary

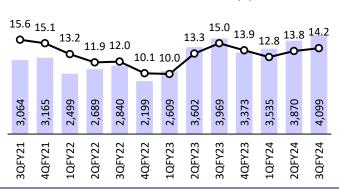
- Revenue from LAB grew 12% YoY, led by 4W/2W volume growth, while industrials grew 6-7% YoY. The telecom sector exhibited a growth of 2-3%, surpassing the average growth rate. Additionally, trading accounted for around 7% of revenues, primarily driven by sales in tubular batteries.
- 4W- Revenue for the aftermarket grew 11% YoY, while OEM grew 2% YoY marginally.
- > **2W-** Aftermarket grew 15% YoY, while OEM revenue grew 30% YoY.
- Home inverter segment growth was stagnant as the company is meeting requirements through the trading route.
- Exports: 4W exports grew 25% YoY. The company has commenced shipments to North American geography for 4W AGM batteries.
- Margins:
- Lead prices during the quarter were around INR200k/ton, which is 8-9% higher on a YoY basis, adversely impacting margins.
- There were no price hikes taken during the quarter in the B2C segment but the B2B segment had some cost pass through. If lead remains at USD2150-2200/ton, then it may have to take price hikes.
- Other costs were higher due to a) a quarterly insurance cost of INR100m and b) consultancy charges aimed at improving the efficiency within the plant.
- New energy business:
- Revenues have doubled during the period. The Battery pack segment contributes 80% of the revenues, supplying to both e-2Ws and e-3Ws. Furthermore, the company has initiated supply of Li-ion battery packs to telecom players (supply operations already underway for BSNL) and meeting industrial backup storage requirements. It is working on battery pack and chargers for higher voltage requirements for PVs. The current pack capacity is at 500MW, which it plans to take it 2GW. This is not a capital-intensive business. It has the capacity to do INR2b/quarter of revenues (vs. INR1.5b currently).
- Supplying chargers to 3W OEMs such as Piaggio and M&M. Supply to e-2W OEMs is still low.
- > 9MFY24 revenues stood at INR4b.
- Cell manufacturing plant:
- This plant would be operational by FY26. Considering the current lead prices and the capex requirements, this business has the potential to achieve 10-11%
 EBITDA and a ROE of 10-11%, once it scales up to 7-9GW. Achieving these targets might pose challenges if the business operates below this specified scale.
- Initially, the company will initiate the supply of NMC chemistry cells and eventually progress into LFP chemistry cells. The company anticipates that, I the future, LFP chemistry will constitute 60% of the market, with the remaining share contributed by other chemistries.
- There are few changes in the second cell PLI bidding for 10GW where ARE&M would participate.
- Capex in FY24 for LAB business would be INR2.5b and INR2.5-3b for the lead recycling plant (expected to commence in 1QFY25) and new energy business. FY25 total capex would be INR6b (INR2.5-3b for LAB and INR3-3.5b for new energy business).
- Integration of plastic component business has been complete with the effective date of merger as Feb 01, 2024.

Key exhibits



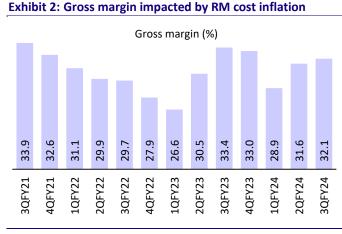
Source: Company, MOFSL

Exhibit 3: Trend in EBITDA and EBITDA margin



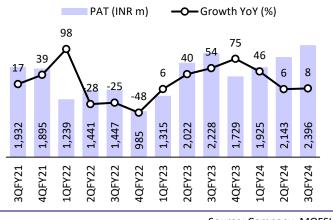
EBITDA -O-EBITDA (%)

Source: Company, MOFSL

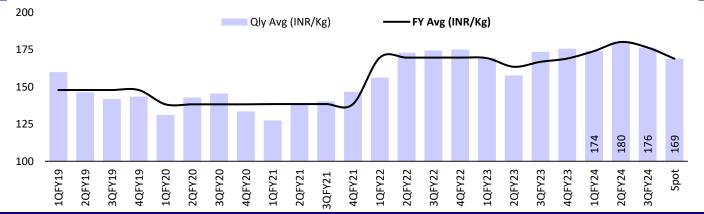


Source: Company, MOFSL





Source: Company, MOFSL



Source: Bloomberg, MOFSL

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

Valuation and view

- Industry structure remains a duopoly, but AMRJ strong in second position: While the industry structure remains largely a duopoly, AMRJ has emerged as a formidable challenger to leader EXID, with market leadership in Telecom and UPS segments and the fast gaining share in Auto. Over FY13-23, it clocked 13%/10% CAGRs in net sales/PAT, exceeding EXID's 9%/6% CAGR each in net sales and PAT. This was driven by a combination of technological innovation (first to introduce maintenance-free, factory-charged, extended-warranty batteries), witty advertising, and a unique distribution model (franchisee-based), supported by operational efficiency-led competitive pricing.
- Gearing up to lead: AMRJ is gearing up to be a leader by undertaking new business opportunities in the battery space, mainly Home UPS, Solar, and Motive Power, and by expanding capacity and network, along with consolidation in existing areas. In the Telecom segment, the management expects to maintain its market share at current levels (~55%). In the Auto segment, the market share is expected to remain stable at 35-36%
- Li-ion technology poses risk to Auto and Industrial segments: The declining cost of lithium batteries poses a threat to the Auto and the Industrial Batteries business. E-2Ws/e-3Ws do not require a lead acid battery as an auxiliary battery. This will in turn adversely impact 15-20% of revenue of lead acid battery players. At USD100/KwHr, lithium can offer competition to a lead acid battery (LAB) in the Industrial segment particularly Telecom, UPS, and other nascent, but growth-driving businesses such as Motive Power and Solar. Any further development in this direction could lead to the de-rating of the P/E multiple (due to the decline in terminal growth).
- Strategic initiatives to drive growth: AMRJ is focusing on maximizing its core LAB business and foraying into the New Energy business (in the form of li-ion cells and battery packs, EV charging products, energy storage solutions, etc.). While the LAB business will go global, the New Energy business will focus on opportunities in India. Growth in LAB will recover strongly, and the delivery of a 13-15% CAGR over the next five years depends on the successful execution of its export strategy. Its entry into the New Energy business is a step in the right direction, but its success will depend on the technology partner, cost competitiveness, targeted segments, etc. For lithium cell manufacturing, it targets an 8-10GW capacity (requiring an investment of USD0.8-1b) to achieve global competitiveness. As the investment in the New Energy business will be spread over 5-10 years, it can fund the capex through free cash flows in the core business (average INR3-4b p.a.) as well as debt (currently net cash on the balance sheet).
- Valuations fair; reiterate our Neutral rating: We raise our FY24E/25E EPS by 7%/4% to factor in for recovery in 2W demand and better gross margins. We expect value migration to organized players (such as EXID and AMRJ) from unorganized ones in the Replacement segment, driven by tax reforms such as GST and lower corporate tax rates. With the exit of Johnson Controls, promoters are expected to play a pivotal role in its long-term strategy as well as technology sourcing. The stock trades at 17.5x/16x FY24E/FY25E EPS. We reiterate our Neutral rating with a TP of INR825/share (14x Mar'26E EPS), reflecting the

anticipation of better earnings growth, balanced out by the growing concern posed by the increasing influence of lithium chemistry on the Auto and Industrial businesses.

Exhibit 6: Revisions to our estimates

(INR M)		FY24E			FY25E				
	Rev	Old	Chg (%)	Rev	Old	Chg (%)			
Net Sales	1,13,831	1,12,034	1.6	1,25,836	1,23,062	2.3			
EBITDA (%)	13.7	13.3	50bp	14.1	13.8	20bp			
Net Profit	8,716	8,156	6.9	9,544	9,177	4.0			
EPS (INR)	51.0	47.8	6.9	55.9	53.7	4.0			

Source: MOFSL

Story in charts

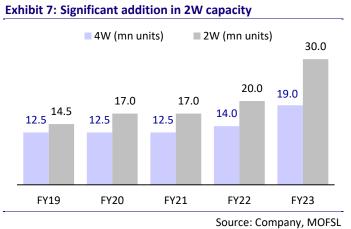


Exhibit 9: EBITDA and EBITDA margin trend

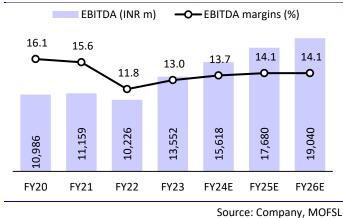


Exhibit 11: Trend in CFO, capex, and FCF

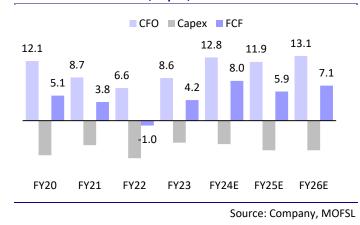
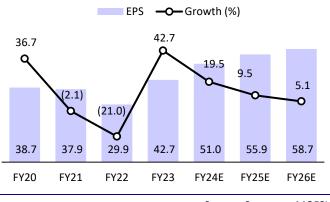
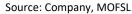


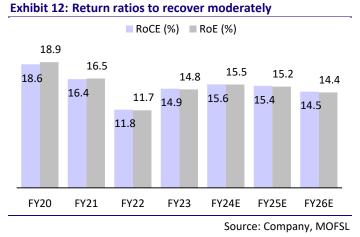
Exhibit 8: Trend in revenue Net sales (INR m) -O- Growth (%) 21.6 19.4 10.5 9.6 7.7 σ 4.5 О 0.7 d 1,13,831 1,35,519 1,25,836 395 1,03,859 71,497 86,958 68, FY23 FY20 FY21 FY22 FY24E FY25E FY26E

Source: Company, MOFSL

Exhibit 10: Earnings likely to have bottomed out in FY22







Financials and valuations

Standalone - Income Statement Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	(INR m) FY26E
Net Sales	68,395	71,497	86,958	1,03,859	1,13,831	1,25,836	1,35,519
Change (%)	0.7	4.5	21.6	19.4	9.6	10.5	7.7
EBITDA	10,986	11,159	10,226	13,552	15,618	17,680	19,040
Margin (%)	16.1	15.6	11.8	13,552	13,018	14.1	13,040
Depreciation	3,007	3,192	3,957	4,272	4,599	5,182	5,790
EBIT	7,978	7,967	6,269	9,280	11,019	12,498	13,251
Int. and Finance Charges	122	105	151	221	240	350	350
Other Income - Rec.	551	874	780	893	960	750	650
PBT bef. EO Exp.	8,407	8,736	6,898	9,952	11,739	12,898	13,551
EO Expense/(Income)	0	0	0,050	477	0	0	0
PBT after EO Exp.	8,407	8,736	6,898	9,475	11,739	12,898	13,551
Current Tax	1,799	2,265	1,786	2,479	3,023	3,353	3,523
Deferred Tax	0	0	0	53	0	0	0
Tax Rate (%)	21.4	25.9	25.9	26.7	25.8	26.0	26.0
Reported PAT	6,608	6,470	5,112	6,944	8,716	9,544	10,028
PAT Adj for EO items	6,608	6,470	5,113	7,293	8,716	9,544	10,028
Change (%)	36.7	-2.1	-21.0	42.7	19.5	9.5	5.1
Margin (%)	9.7	9.0	5.9	7.0	7.7	7.6	7.4
Standalone - Balance Sheet							(INR m)
Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	171	171	171	171	171	171	171
Total Reserves	36,385	41,932	45,343	52,808	58,962	65,944	73,410
Net Worth	36,556	42,103	45,514	52,978	59,133	66,115	73,580
Deferred Liabilities	441	407	314	728	728	728	728
Total Loans	343	234	234	165	500	500	500
Capital Employed	37,341	42,744	46,062	53,872	60,360	67,343	74,808
Gross Block	29,269	38,628	42,498	50,816	54,903	60,903	66,903
	10.077	44.004	47 575	24.047	26.446	24 620	27.440

Capital Employed	37,341	42,744	46,062	53,872	60,360	67,343	74,808
Gross Block	29,269	38,628	42,498	50,816	54,903	60,903	66,903
Less: Accum. Deprn.	10,977	14,081	17,575	21,847	26,446	31,628	37,418
Net Fixed Assets	18,292	24,548	24,923	28,969	28,457	29,275	29,485
Capital WIP	8,270	3,993	8,297	2,337	3,000	3,000	3,000
Total Investments	1,562	2,805	778	4,860	8,860	15,860	19,860
Curr. Assets, Loans&Adv.	21,882	26,625	29,761	34,825	39,480	40,001	43,889
Inventory	11,427	14,382	18,038	16,434	20,271	22,409	24,133
Account Receivables	6,363	7,875	7,926	7,797	9,980	11,032	11,881
Cash and Bank Balance	326	967	536	998	3,538	267	1,099
Loans and Advances	3,766	3,401	3,262	9 <i>,</i> 596	5,692	6,292	6,776
Curr. Liability & Prov.	12,665	15,227	17,697	17,119	19,437	20,793	21,426
Account Payables	6,149	7,465	8,065	7,508	9,356	10,343	11,139
Other Current Liabilities	4,685	5,623	7,177	6,892	9,106	10,067	10,842
Provisions	1,832	2,140	2,455	2,720	974	383	-554
Net Current Assets	9,217	11,398	12,064	17,706	20,043	19 ,20 8	22,463
Appl. of Funds	37,341	42,744	46,062	53,872	60,360	67,343	74,808

E: MOFSL Estimates

Financials and valuations

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)							
EPS	38.7	37.9	29.9	42.7	51.0	55.9	58.7
Cash EPS	56.3	56.6	53.1	67.7	78.0	86.2	92.6
BV/Share	214.0	246.5	266.5	310.2	346.2	387.1	430.8
DPS	11.0	11.0	4.5	6.1	15.0	15.0	15.0
Payout (%)	34.1	29.0	15.0	15.0	29.4	26.8	25.5
Valuation (x)							
P/E	23.1	23.5	29.8	20.9	17.5	16.0	15.2
Cash P/E	15.8	15.8	16.8	13.2	11.4	10.3	9.6
P/BV	4.2	3.6	3.3	2.9	2.6	2.3	2.1
EV/Sales	2.2	2.1	1.7	1.5	1.3	1.2	1.1
EV/EBITDA	13.9	13.6	14.9	11.2	9.6	8.6	8.0
Return Ratios (%)							
RoE	18.9	16.5	11.7	14.8	15.5	15.2	14.4
RoCE	18.6	16.4	11.8	14.9	15.6	15.4	14.5
RoIC	21.6	19.0	13.0	16.6	18.1	19.9	19.8
Working Capital Ratios							
Gross Fixed Asset Turnover (x)	2.3	1.9	2.0	2.0	2.1	2.1	2.0
Inventory (Days)	61.0	73.4	75.7	57.8	65.0	65.0	65.0
Debtor (Days)	34	40	33	27	32	32	32
Creditor (Days)	33	38	34	26	30	30	30
Working Capital Turnover (Days)	47	53	48	59	53	55	58
Leverage Ratio (x)							
Current Ratio	1.7	1.7	1.7	2.0	2.0	1.9	2.0
Debt/Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Net P/L Before Tax and E/O Items	8,407	8,733	6,898	9,952	11,739	12,898	13,551
Depreciation	3,007	3,192	3,957	4,272	4,599	5,182	5,790
	122	105		,			
Interest & Finance Charges			151	-673	-720	-400	-300
Direct Taxes Paid	2,364	1,995	1,993	2,401	3,023	3,353	3,523
(Inc)/Dec in WC	2,892	-1,301	-2,406	-2,529	202	-2,435	-2,424
CF from Operations	12,065	8,734	6,607	8,622	12,797	11,892	13,094
Others	-296	-714	-277	638	0	0	0
CF from Operating incl EO	11,769	8,020	6,329	9,259	12,797	11,892	13,094
(inc)/dec in FA	-6,999	-4,964	-7,598	-4,459	-4,750	-6,000	-6,000
Free Cash Flow	4,770	3,056	-1,268	4,800	8,047	5,892	7,094
Others	13,305	13,212	16,219	24,731	-3,040	-6,250	-3,350
CF from Investments	-8,497	-6,350	-4,819	-7,704	-3,790	-5,250	-5,350
(Inc)/Dec in Debt	-275	-321	-359	-335	335	0	0
Interest Paid	-52	-40	-67	-88	-240	-350	-350
Dividend Paid	-3,311	-854	-1,708	-581	-2,562	-2,562	-2,562
CF from Fin. Activity	-3,638	-1,215	-2,135	-1,004	-2,467	-2,912	-2,912
Inc/Dec of Cash	-365	455	-624	551	6,539	3,730	4,832
Add: Beginning Balance	2,512	512	967	343	894	7,434	11,163
Closing Balance	2,147	967	343	894	7,434	11,163	15,995

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

NOTES

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://o

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 service transactions. Details of pending Enquiry Proce 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.

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 Act of 4040 as amended (the "Advisor Act" and together with the 1034 Act the "Acts) and 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 activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In relance 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

- 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.
- MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company 2
- 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 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months 6
- MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months 7
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- MOFSL has not received any compensation or other benefits from third party in connection with the research report 9
- 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 [.]	
Onevance	i (cui cooui	000	

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.