

Estimate change



TP change



Rating change



Bloomberg	NACL IN
Equity Shares (m)	1,933
M.Cap.(INRb)/(USDb)	91.2 / 1.3
52-Week Range (INR)	52 / 24
1, 6, 12 Rel. Per (%)	-1/6/-2
12M Avg Val (INR M)	643
Free float (%)	48.5

**Financials & Valuations (INR b)**

Y/E MARCH	2021E	2022E	2023E
Sales	86.5	99.4	100.8
EBITDA	13.1	17.5	18.6
Adj. PAT	6.3	9.5	10.0
EBITDA Margin (%)	15.2	17.5	18.5
Cons. Adj. EPS (INR)	3.4	5.1	5.4
EPS Gr. (%)	357.1	49.8	5.5
BV/Sh. (INR)	54.2	55.2	56.2

**Ratios**

Net D:E	-0.3	-0.1	0.1
RoE (%)	6.3	9.3	9.6
RoCE (%)	7.6	11.3	11.0
Payout (%)	79.7	80.8	80.4

**Valuations**

P/E (x)	14.5	9.7	9.2
P/BV (x)	0.9	0.9	0.9
EV/EBITDA(x)	5.0	4.7	5.3
Div. Yield (%)	5.5	8.4	8.8

**Shareholding pattern (%)**

As On	Dec-20	Sep-20	Dec-19
Promoter	51.5	51.5	51.5
DII	9.8	10.0	15.6
FII	7.2	7.2	11.8
Others	31.5	31.4	21.1

FII Includes depository receipts

**CMP: INR49**
**TP: INR59 (+21%)**
**Buy**
**Higher LME prices boost profitability**
**Retain Buy on improved earnings outlook and dividend yield**

- Nalco's (NACL) 3QFY21 result was strong on the back of higher LME prices. It reported an EBITDA of INR4.3b (+57% QoQ) and PAT of INR2.4b (+123% QoQ).
- We raise our FY21E/FY22E EPS estimate by 9%/13% to factor in a lower tax rate. We expect alumina prices to stay strong which should support strong cash flows and a good dividend payout (8% yield in FY22). Maintain **Buy**.

**Higher LME boosts EBITDA by 57% QoQ**

- Revenue was flat QoQ at INR23.8b (4% above estimate) as higher LME price (+13% QoQ, +10% YoY) was offset by lower Aluminum sales (103kt, -16% QoQ). Alumina sales, however, was up 21% QoQ to 344kt.
- EBITDA rose 57% QoQ (11x YoY) to INR4.3b (7% above our estimate) led by better realization. Depreciation increased 18% QoQ to INR1.7b.
- The management opted for the new tax regime during 3QFY21. As a result, implied tax rate in 3Q was lower at ~20% (v/s 31% in 2QFY21) as higher tax provision made in earlier quarters was written back in 3Q.
- As a result, PAT rose 123% QoQ to INR2.4b (21% above our estimate).
- Aluminum:** It reported an EBIT at INR1.6b, up 116% QoQ (v/s a loss of INR1.4b in 3QFY20). Revenue declined 7% QoQ to INR16.4b on lower volumes (103kt, -16% QoQ). The same was offset by higher LME prices (USD1,925/t, +13% QoQ). Sales were lower during 3QFY21 due to inventory destocking in 2Q. Derived realization improved 12% QoQ (and 10% YoY) to USD2,153/t. Derived EBITDA/t improved 104% QoQ to USD287/t.
- Alumina:** Revenue (including inter-segment) stood at INR9.9b (+1% QoQ). EBIT came in at INR1.8b (+52% QoQ). While alumina production rose 8% YoY (14% QoQ) to 555kt, external sales rose 3% YoY (21% QoQ) to 344kt.

**Valuation and view**

- With spot LME aluminum hovering at ~USD2,000/t (up ~18% YoY), near-term profitability outlook is strong. Alumina prices have not yet reacted to the strength in aluminum and could surprise positively in FY22. With integrated mining operations, NALCO is the best play on higher LME prices.
- Aluminum market has been in surplus (2.8mt in CY20) which is expected to continue in CY21 and could put pressure on prices in the medium term. We have factored in LME at USD1,850/t in FY22E.
- The management has announced a 1mtpa alumina refinery expansion at a capex of ~INR64b and expects to complete the project in FY23. Given slow execution, we, however, expect commissioning in FY24.
- We value the stock on a SoTP basis at 5x FY22E EV/EBITDA and 0.75x book value for growth CWIP to arrive at our TP of INR59. At the CMP, it provides an attractive dividend yield of ~8%. Maintain Buy.

Amit Murarka - Research analyst (Amit.Murarka@motilaloswal.com)

Basant Joshi - Research analyst (Basant.Joshi@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](http://www.motilaloswal.com/Institutional-Equities), Bloomberg, Thomson Reuters, Factset and S&P Capital.

**Quarterly performance**

(INR m)

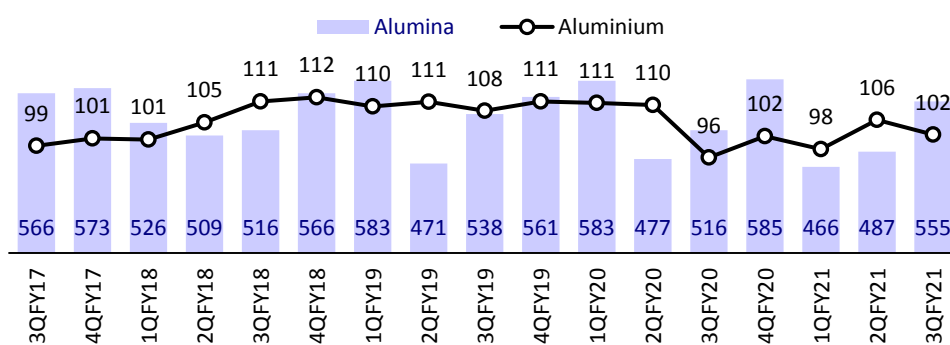
Y/E March	FY20				FY21				FY20	FY21E	3Q FY21E	v/s our est.(%)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE				
<b>Net Sales</b>	20,841	23,636	20,884	19,359	13,806	23,749	23,788	25,151	84,718	86,494	22,813	4
Change (YoY %)	-29.9	-22.3	-23.2	-30.0	-33.8	0.5	13.9	29.9	-26.3	2.1	9.2	
<b>EBITDA</b>	2,144	322	343	2,084	1,291	2,759	4,339	4,745	4,892	13,133	4,062	7
Alumina - EBITDA (USD/t)	106	57	56	81	38	69	85	96	72	76	68	
Aluminum - EBITDA (USD/t)	63	-158	-143	-3	120	141	287	267	-62	207	329	
As a % of Net Sales	10.3	1.4	1.6	10.8	9.3	11.6	18.2	18.9	5.8	15.2	17.8	
Interest	16	16	17	8	18	18	17	18	57	72	18	
Depreciation	1,264	1,343	1,341	1,351	1,359	1,432	1,697	1,496	5,298	5,983	1,395	22
Other Income	614	566	482	1,064	333	242	362	372	2,726	1,309	386	-6
<b>PBT (before EO Item)</b>	1,477	-472	-532	1,789	247	1,550	2,986	3,603	2,262	8,386	3,034	-2
Extra-ordinary Income	0	0	0	0	0	0	0	0	0	0	0	
<b>PBT (after EO Item)</b>	1,477	-472	-532	1,789	247	1,550	2,986	3,603	2,262	8,386	3,034	-2
Total Tax	499	-188	-193	762	80	476	588	923	880	2,067	1,060	-45
Tax (%)	33.8	39.9	36.2	42.6	32.6	30.7	19.7	25.6	38.9	24.7	34.9	
<b>Reported PAT</b>	978	-284	-340	1,028	166	1,075	2,398	2,680	1,382	6,319	1,974	21
<b>Adjusted PAT</b>	978	-284	-340	1,028	166	1,075	2,398	2,680	1,382	6,319	1,974	21

**Segmental quarterly performance**

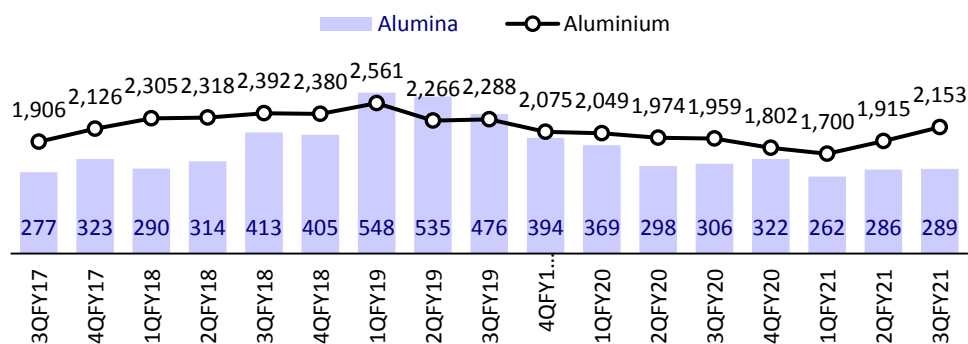
(INR m)

Y/E March	FY20				FY21				FY20	FY21E	3Q FY21E	v/s our est. (%)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE				
<b>Alumina production (kt)</b>	583	477	516	585	466	487	555	565	2,161	2,073	516	8
CoP (USD/t)	264	241	251	241	224	217	203	212	248	213	225	
<b>Aluminum production (kt)</b>	111	110	96	102	98	106	102	105	418	411	100	2
CoP (USD/t)	2,016	2,165	2,140	1,757	1,611	1,791	1,879	1,819	2,026	1,787	1,811	
Aluminum sales (kt)	103	110	96	87	73	123	103	110	396	409	100	3
Alumina sales (kt)	231	386	333	357	220	285	344	365	1,307	1,214	327	5
Average LME Aluminum (USD/t)	1,792	1,762	1,752	1,694	1,493	1,703	1,925	1,950	1,750	1,768	1,925	0
NSR premium (USD/t)	257	212	207	108	207	212	228	235	196	220	215	6
Alumina NSR (USD/t)	369	298	306	322	262	286	289	309	324	286	293	-2

**Exhibit 1: Alumina/Aluminum production volumes (kt)**



**Exhibit 2: Alumina/Aluminum realization (USD/t)**



Source: MOFSL, Company

**Valuation and view**

- With spot LME aluminum hovering at ~USD2,000/t (up ~18% YoY), near-term profitability outlook is strong. Alumina prices have not yet reacted to the strength in aluminum and could surprise positively in FY22. With integrated mining operations, NALCO is the best play on higher LME prices.
- Aluminum market has been in surplus (2.8mt in CY20) which is expected to continue in CY21 and could put pressure on prices in the medium term. We have factored in LME at USD1,850/t in FY22E.
- The management has announced a 1mtpa alumina refinery expansion at a capex of ~INR64b and expects to complete the project in FY23. Given slow execution, we, however, expect commissioning in FY24.
- We value the stock on a SoTP basis at 5x FY22E EV/EBITDA and 0.75x book value for growth CWIP to arrive at our TP of INR59. At the CMP, it provides an attractive dividend yield of ~8%. Maintain **Buy**.

**Exhibit 3: Target price calculation**

	FY19	FY20	FY21E	FY22E
<b>EBITDA</b>	<b>29,561</b>	<b>4,892</b>	<b>13,133</b>	<b>17,451</b>
EV-to-EBITDA (x)				5.0
Target EV				87,256
Add: Growth CWIP at 75%				15,750
Add: Cash surplus	35,772	20,355	22,925	7,234
Equity value				1,10,240
<b>Target price</b>				<b>59</b>
<b>Key assumption</b>				
USD:INR rate	69.9	70.9	74.2	75.0
LME (USD/t)	2,033	1,750	1,768	1,850

Source: MOFSL, Company

## Financials and valuations

Income Statement							(INR m)
Y/E March	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
<b>Net Sales</b>	<b>75,430</b>	<b>95,094</b>	<b>1,14,993</b>	<b>84,718</b>	<b>86,494</b>	<b>99,448</b>	<b>1,00,789</b>
Change (%)	10.7	26.1	20.9	-26.3	2.1	15.0	1.3
Total Expenses	64,634	78,311	85,432	79,826	73,361	81,997	82,166
<b>EBITDA</b>	<b>10,797</b>	<b>16,783</b>	<b>29,561</b>	<b>4,892</b>	<b>13,133</b>	<b>17,451</b>	<b>18,623</b>
% of Net Sales	14.3	17.6	25.7	5.8	15.2	17.5	18.5
Deprn. and Amortization	4,804	4,804	4,761	5,298	5,983	5,835	5,719
<b>EBIT</b>	<b>5,993</b>	<b>11,979</b>	<b>24,800</b>	<b>-406</b>	<b>7,149</b>	<b>11,616</b>	<b>12,904</b>
Net Interest	27	20	24	57	72	71	71
Other income	4,075	3,008	3,259	2,726	1,309	1,178	589
<b>PBT before EO</b>	<b>10,041</b>	<b>14,968</b>	<b>28,035</b>	<b>2,262</b>	<b>8,386</b>	<b>12,723</b>	<b>13,422</b>
EO income	402	5,421	-636	0	0	0	0
<b>PBT after EO</b>	<b>10,442</b>	<b>20,388</b>	<b>27,399</b>	<b>2,262</b>	<b>8,386</b>	<b>12,723</b>	<b>13,422</b>
Tax	2,962	6,964	10,075	880	2,067	3,260	3,439
Rate (%)	28.4	34.2	36.8	38.9	24.7	25.6	25.6
<b>Reported PAT</b>	<b>7,480</b>	<b>13,424</b>	<b>17,324</b>	<b>1,382</b>	<b>6,319</b>	<b>9,463</b>	<b>9,983</b>
<b>Adjusted PAT</b>	<b>7,193</b>	<b>9,855</b>	<b>17,726</b>	<b>1,382</b>	<b>6,319</b>	<b>9,463</b>	<b>9,983</b>
Change (%)	0.8	37.0	79.9	-92.2	357.1	49.8	5.5

Balance Sheet							(INR m)
Y/E March	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
Share Capital	9,665	9,665	9,328	9,328	9,328	9,328	9,328
Reserves	92,387	95,384	95,517	90,553	91,834	93,648	95,608
<b>Net Worth</b>	<b>1,02,052</b>	<b>1,05,048</b>	<b>1,04,845</b>	<b>99,881</b>	<b>1,01,162</b>	<b>1,02,976</b>	<b>1,04,936</b>
Total Loans	511	450	668	123	123	123	15,123
Deferred Tax Liability	12,456	11,515	11,307	10,606	10,606	10,606	10,606
<b>Capital Employed</b>	<b>1,15,018</b>	<b>1,17,013</b>	<b>1,16,820</b>	<b>1,10,610</b>	<b>1,11,891</b>	<b>1,13,705</b>	<b>1,30,665</b>
Gross Block	80,489	85,022	91,155	98,443	1,04,443	1,10,443	1,16,443
Less: Accum. Deprn.	9,044	13,627	18,297	23,595	29,579	35,414	41,132
<b>Net Fixed Assets</b>	<b>71,444</b>	<b>71,395</b>	<b>72,858</b>	<b>74,848</b>	<b>74,864</b>	<b>75,029</b>	<b>75,311</b>
Capital WIP	5,660	9,152	8,827	14,267	16,267	35,267	54,267
Investments	389	1,176	1,758	2,773	2,773	2,773	2,773
<b>Curr. Assets</b>	<b>67,517</b>	<b>64,415</b>	<b>68,027</b>	<b>53,609</b>	<b>53,923</b>	<b>38,465</b>	<b>36,291</b>
Inventories	11,559	11,941	12,100	16,969	14,218	13,623	13,807
Account Receivables	1,843	2,581	2,405	1,401	1,896	2,725	2,761
Cash and Bank Balance	35,084	33,619	35,772	20,355	22,925	7,234	4,839
Others	19,031	16,274	17,750	14,884	14,884	14,884	14,884
<b>Curr. Liability and Prov.</b>	<b>29,992</b>	<b>29,126</b>	<b>34,650</b>	<b>34,886</b>	<b>35,935</b>	<b>37,829</b>	<b>37,976</b>
Account Payables	8,641	9,774	13,069	7,956	9,005	10,898	11,045
Provisions and Others	21,351	19,352	21,581	26,930	26,930	26,930	26,930
<b>Net Curr. Assets</b>	<b>37,525</b>	<b>35,290</b>	<b>33,377</b>	<b>18,723</b>	<b>17,988</b>	<b>636</b>	<b>-1,685</b>
<b>Appl. of Funds</b>	<b>1,15,018</b>	<b>1,17,013</b>	<b>1,16,820</b>	<b>1,10,610</b>	<b>1,11,891</b>	<b>1,13,705</b>	<b>1,30,665</b>

## Financials and valuations

### Ratios

Y/E March	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
<b>Basic (INR)</b>							
<b>EPS</b>	<b>3.7</b>	<b>5.1</b>	<b>9.5</b>	<b>0.7</b>	<b>3.4</b>	<b>5.1</b>	<b>5.4</b>
Cash EPS	6.4	9.4	11.8	3.6	6.6	8.2	8.4
BV/Share	52.8	54.3	56.2	53.5	54.2	55.2	56.2
DPS	2.8	4.7	4.5	2.8	2.7	4.1	4.3
Payout (%)	110.4	81.5	84.9	441.7	79.7	80.8	80.4
<b>Valuation (x)</b>							
P/E	13.2	9.6	5.2	66.1	14.5	9.7	9.2
Cash P/E	7.7	5.2	4.1	13.7	7.4	6.0	5.8
P/BV	0.9	0.9	0.9	0.9	0.9	0.9	0.9
EV/Sales	0.8	0.6	0.5	0.8	0.8	0.8	1.0
EV/EBITDA	5.5	3.6	1.8	14.0	5.0	4.7	5.3
Dividend Yield (%)	5.7	9.6	9.2	5.6	5.5	8.4	8.8
<b>Return Ratios (%)</b>							
EBITDA Margin (%)	14.3	17.6	25.7	5.8	15.2	17.5	18.5
Net Profit Margin (%)	9.5	10.4	15.4	1.6	7.3	9.5	9.9
RoE	7.2	9.5	17.2	1.4	6.3	9.3	9.6
RoCE (pre-tax)	7.9	12.9	24.0	2.0	7.6	11.3	11.0
RoIC (pre-tax)	8.0	16.3	34.6	-0.6	10.0	16.8	18.8
<b>Working Capital Ratios</b>							
Fixed Asset Turnover (x)	0.9	1.1	1.3	0.9	0.8	0.9	0.9
Asset Turnover (x)	0.7	0.8	1.0	0.8	0.8	0.9	0.8
Debtor (Days)	9	10	8	6	8	10	10
Inventory (Days)	56	46	38	73	60	50	50
Payable (Days)	42	38	41	34	38	40	40
<b>Leverage Ratio (x)</b>							
Current Ratio	2.3	2.2	2.0	1.5	1.5	1.0	1.0

### Cash Flow Statement

Y/E March	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
<b>(INR m)</b>							
Pre-tax profit	9,639	20,388	27,399	2,262	8,386	12,723	13,422
Depreciation	4,804	4,804	4,761	5,298	5,983	5,835	5,719
(Inc.)/Dec. in Working Cap.	1,217	-178	3,274	-9,071	3,305	1,660	-73
Tax paid	-2,184	-4,825	-10,209	-1,005	-2,067	-3,260	-3,439
Others	884	-5,524	-447	-971	72	71	71
<b>CF from Op. Activity</b>	<b>14,359</b>	<b>14,666</b>	<b>24,779</b>	<b>-3,486</b>	<b>15,678</b>	<b>17,029</b>	<b>15,698</b>
(Inc.)/Dec. in FA + CWIP	-7,781	-8,374	-7,680	-8,578	-8,000	-25,000	-25,000
<b>Free Cash Flow to firm</b>	<b>6,578</b>	<b>6,292</b>	<b>17,099</b>	<b>-12,064</b>	<b>7,678</b>	<b>-7,971</b>	<b>-9,302</b>
(Pur.)/Sale of Investments	10,178	1,718	1,272	2,068	0	0	0
Interest and div.	2,795	1,522	1,089	1,353			
<b>CF from Inv. Activity</b>	<b>5,191</b>	<b>-5,134</b>	<b>-5,319</b>	<b>-5,158</b>	<b>-8,000</b>	<b>-25,000</b>	<b>-25,000</b>
Equity raised/(repaid)	-28,407	0	-5,074	0	0	0	0
Int. Paid	-4	-1	0	-9	-72	-71	-71
Debt raised/(repaid)	511	-61	218	-579	0	0	15,000
Dividend (incl. tax)	-8,259	-10,934	-12,451	-6,185	-5,037	-7,649	-8,022
Other financing activities							
<b>CF from Fin. Activity</b>	<b>-36,159</b>	<b>-10,997</b>	<b>-17,308</b>	<b>-6,773</b>	<b>-5,109</b>	<b>-7,720</b>	<b>6,907</b>
<b>(Inc.)/Dec. in Cash</b>	<b>-16,608</b>	<b>-1,465</b>	<b>2,153</b>	<b>-15,416</b>	<b>2,570</b>	<b>-15,691</b>	<b>-2,395</b>
Add: opening Balance	51,692	35,084	33,619	35,772	20,355	22,925	7,234
<b>Closing Balance</b>	<b>35,084</b>	<b>33,619</b>	<b>35,772</b>	<b>20,355</b>	<b>22,925</b>	<b>7,234</b>	<b>4,839</b>

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 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, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd., (PIMPL). MOFSL is a listed public company, the details in respect of which are available on [www.motilaloswal.com](http://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](http://www.nseindia.com), [www.bseindia.com](http://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
- received compensation/other benefits from the subject company in the past 12 months

- 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.

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 -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.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website [www.motilaloswal.com](http://www.motilaloswal.com). CIN no.: L67190MH2005PLC153397. Correspondence Office Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad(West), Mumbai-400 064. Tel No: 022 7188 1000.

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)\*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579;PMS:INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: [na@motilaloswal.com](mailto:na@motilaloswal.com), Contact No.:022-71881085.

\* MOSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench.