

NMDC

 BSE SENSEX
 S&P CNX

 58,576
 17,530

एनएमडीसी

NMDC IN

497.3 / 6.5

213 / 128

2/15/4

2023E

232.1

97.1

74.4

25.4

-25.4

126.0

21.0

19.4

6.7

1.3

2512

39.2

2,931

Stock Info

Bloomberg

Equity Shares (m)

M.Cap.(INRb)/(USDb)

52-Week Range (INR)

1, 6, 12 Rel. Per (%)

Free float (%)

Y/E March

Net Sales

EBITDA

EPS (INR)

BV/Sh (INR)

Gr. (%)

RoE (%)

RoCE (%)

P/E(x)

P/BV(x)

PAT

12M Avg Val (INR M)

Financials Snapshot (INR b)

2021

153.7

88.0

66.0

22.5

47.0

101.5

23.5

20.3

7.5

1.7

2022E

264.4

130.5

99.8

34.1

51.3

115.6

31.4

28.7

5.0

1.5

CMP: INR170 TP: INR220 (+30%)

Buy

Steel plant commissioning nears; demerger in 3QFY23E

Multiple long-term and short-term triggers to propel the stock

- After posting the highest ever annual production of iron ore (at 42mt) in FY22, NMDC has raised the bar and is now aiming at 46mt for FY23E and even higher for FY24E. The growth will be driven by both Chhattisgarh and Karnataka sectors.
- The Nagarnar Iron and Steel Company (NISP) steel plant is nearing commissioning and we expect the same to be completed by end-2QFY23/early-3QFY23.
- The company is working on the demerger of the steel plant in parallel and is likely to complete the process in 2QFY23/early-3QFY23.
- With more iron ore mines being put on auction and steel companies achieving self-sufficiency, the long-term approach of the government to tax iron ore exports (to discourage the same) may warrant a second thought. This can trigger a re-rating of NMDC as it plans to increase its capacity to 70mt in the near term.
- The stock is trading at 3.4x our FY23E EV/EBITDA, excluding the book value of the steel plant. We raise our SoTP-based TP to INR220 (from INR200) valuing NMDC's: (a) mining business at 5x FY23E EV/EBITDA and (b) steel plant CWIP at 75% of the total capex (from 50% earlier). Our FY23 iron ore fines assumption is at a 10% discount to the CMP. Maintain BUY.

EV/EBITDA 5.2 3.6 4.8 Iron ore prices raised by INR1,100/t in the last four months

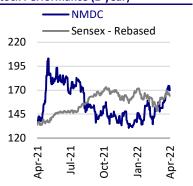
- NMDC has increased iron ore prices by INR200/t for fines and INR1,000/t for lumps, marking a fourth price hike since the beginning of 4QFY22. It has raised the offer prices to INR5,160/t and INR6,100/t, respectively. The price hikes are driven by higher prices of pellets, DRI and secondary TMT.
- These hikes have resulted in a cumulative price increase of INR1,100/t for fines and INR1,200/t for lumps.
- Further hikes in iron ore prices will depend on international coal prices,
 which will fuel the domestic secondary TMT and DRI prices.

Shareholding pattern (%)

As On	Dec-21	Sep-21	Dec-20
Promoter	60.8	60.8	69.7
DII	21.8	21.9	20.5
FII	5.3	6.8	4.5
Others	12.1	10.5	5.4

FII Includes depository receipts

Stock Performance (1-year)



Commissioning of steel plant and demerger of business in 2Q/3QFY23E

- As highlighted in our previous report (link <u>here</u>), NMDC has already initiated the process of commissioning of the steel plant by starting the heating of the coke oven batteries in Jan'22.
- We believe the demerger of the NISP, which is likely to be completed by 3QFY23E, will be the key trigger for the stock. Thereafter, the government is anticipated to call for bids from potential suitors, which should likely lead to a sale of the government's holding in the steel plant to the new owner.
- The management highlighted that the demerged financials would likely be presented to the Board in 1HFY23E.

Vishal Chandak - Research Analyst (Vishal.Chandak@MotilalOswal.com)

Raval Mistry – Research Analyst (Raval.Mistry@MotilalOswal.com)

MOTILAL OSWAL NMDC

As highlighted in our previous report (link <u>here</u>), the management is likely to split the company vertically with mirror shareholding structure. This means, a person holding one share in NMDC will receive one share in NISP in addition to his/her existing holding of one share in NMDC.

- These shares of NISP will be listed on the stock exchanges once they are issued and regulatory approvals are in place.
- In the interim, the NISP will have a separate management (post-demerger) team and the required manpower will be working on an MDO basis.

Valuation remains inexpensive; retain BUY with 30% potential upside

- Domestic iron ore price is not a true reflection of the international price, as it depends upon several factors including: (a) domestic secondary iron ore price, (b) domestic sponge iron price, and (c) domestic pellet price. A weak pricing in any of these three segments can impact the pricing of domestic iron ore. We believe as long as international thermal coal price remains strong, the pricing for the domestic sponge iron, secondary rebar and pellet will remain strong and so will domestic iron ore price.
- The current government has been trying to e-auction more iron ore mines to help steel and other units achieve self-sufficiency. This should reduce the dependence on merchant iron ore for these steel plants. Once the major steel plants achieve self-sufficiency in iron ore, there will be no case for imposition of 30% export duty on iron ore. The government in that case is likely to reconsider this policy and liberalize the sector as well and implement a level-playing field for the Indian iron ore miners in the international market.
- While NMDC has guided for 46mt iron ore production in FY23, we are building in production and sales of 45mt in our estimates. In addition, our price assumption is 10% lower compared with the current price, which leaves headroom for both price as well as volume expansion.
- NMDC's iron ore price is about 30% cheaper on the eastern coast of India and about 20% cheaper on the western coast of India v/s Australian imports on grades adjusted basis. Hence, there is a disincentive for steel makers to import iron ore vis-à-vis buying from NMDC.
- NMDC is currently trading at 3.4x/3.1x our FY23E/24E EV/EBITDA for the core mining business.
- Our SoTP-based TP of INR220 (up from INR200) comprises: a) INR173 for the core iron ore mining business, factoring in a lower ASP v/s the CMP valuing at 5x FY23 EV/EBITDA and (b) INR47 for the steel CWIP at 25% discount as the commissioning is likely to happen in FY23 itself.
- Key risk to our call is slowdown in China, which could lead to lower steel and iron ore prices.

Story in charts

Exhibit 1: Key operating metrics

Key metrics	FY16	FY17	FY18	FY19	FY20	FY21	FY22E	FY23E	FY24E
Iron ore sales volume - m tons	28.8	35.6	36.1	32.4	31.5	33.0	40.8	45.0	50.0
Blended realization - INR/t	2,233	2,479	3,220	3,756	3,713	4,663	6,480	5,157	4,696
Operating expenses - INR/t	1,030	1,217	1,468	1,549	1,739	1,995	3,281	2,999	2,810
EBITDA - INR/t	1,203	1,262	1,752	2,207	1,974	2,669	3,199	2,157	1,886
EBITDA - INR b	35	45	63	71	62	88	130	97	94

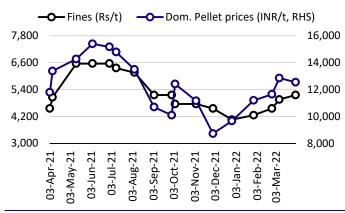
Source: MOFSL, Company

Exhibit 2: Price for fines recovered 27% post 62% drop

03-Apr-21 4,560
07-Apr-21 5,060
12-May-21 6,560
30-Jun-21 6,560
10-Jul-21 6,360
06-Aug-21 6,360
06-Aug-21 6,160
05-Nov-21 7,160
05-Nov-21 7,060
28-Dec-21 4,760
29-Jan-22 4,560
25-Feb-22 4,560
01-Apr-22 7,160

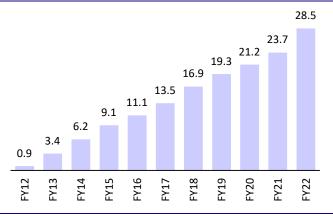
Source: MOFSL, Company Data

Exhibit 3: Domestic pellet price v/s NMDC fines price



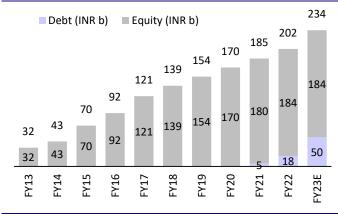
Source: MOFSL, Company Data, SteelMint

Exhibit 4: Money retained by monitoring committee (INR b)



Source: MOFSL, Company Data

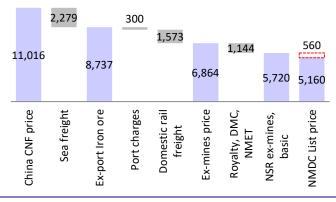
Exhibit 5: NISP capex largely equity funded

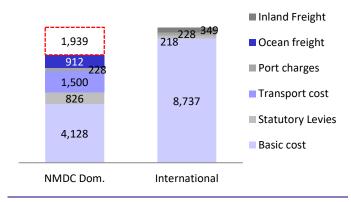


Source: MOFSL, Company Data

Exhibit 6: Iron ore export is profitable despite 30% export tax (INR/t)

Exhibit 7: NMDC ore is 30% cheaper compared to import for similar grade of iron ore(USD/t)



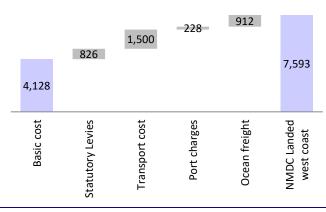


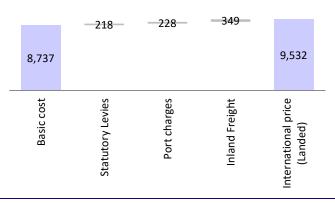
Source: MOFSL

Source: MOFSL

Exhibit 8: Domestic iron ore landed price (INR/t)

Exhibit 9: Imported iron ore landed price (USD/t)

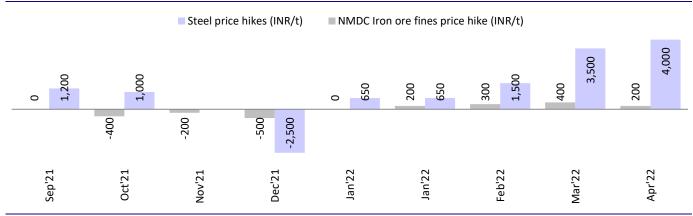




Source: MOFSL

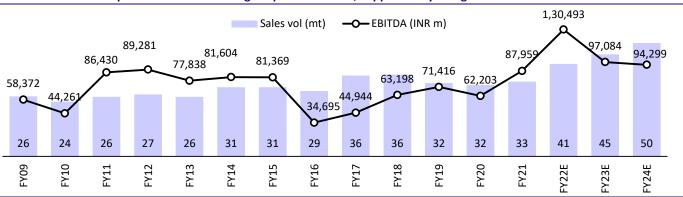
Source: MOFSL

Exhibit 10: Steel price hikes provide headroom for further NMDC price hikes of iron ore



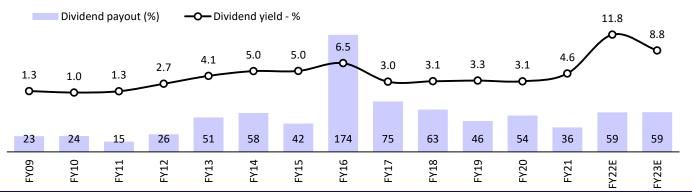
Source: MOSL, Company

Exhibit 11: EBITDA expected to remain strong despite lower ASP, supported by rising iron ore volumes



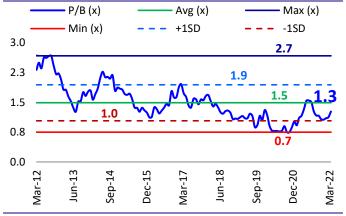
Source: Company, MOFSL

Exhibit 12: Dividend yield is attractive even at current levels



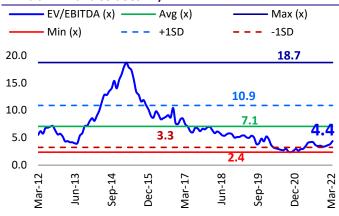
Source: MOFSL, Company

Exhibit 13: P/B remains below average cycle...



Source: MOFSL, Company Data

Exhibit 14: ...and so does EV/EBITDA



Source: MOFSL, Company Data

Exhibit 15: Key assumptions and change in estimates

	FY22E				FY23E		FY24E			
INR m	Old	New	% change	Old	New	% change	Old	New	% change	
Iron ore Volumes - mt	40.8	40.8	-	43.0	45.0	4.7	45.0	50.0	11.1	
Blended ASP (INR/t)	6,480	6,480	-	5,157	5,157	-	4,696	4,696	-	
Revenue	2,64,356	2,64,356	-	2,21,742	2,32,055	4.7	2,11,328	2,34,808	11.1	
EBITDA/t - INR	3,199	3,199	-	2,215	2,157	-2.6	1,935	1,886	-2.5	
EBITDA	1,30,493	1,30,493	-	95,247	97,084	1.9	87,078	94,299	8.3	
Adj PAT	98,730	99,803	1.1	72,340	74,440	2.9	66,029	72,113	9.2	

Source: MOSL

Exhibit 16: Valuation remains inexpensive – TP calculation

Y/E March	2018	2019	2020	2021	2022E	2023E
Iron ore						
EBITDA per ton (INR)	1,752	2,207	1,974	2,669	3,199	2,157
Volumes (m tons)	36.1	32.4	31.5	33.0	40.8	45.0
EBITDA	63,198	71,416	62,203	87,959	1,30,493	97,084
Target EV/EBITDA(x)						5.0
Target EV						4,85,420
Add: Net Cash	49,381	42,436	18,268	38,115	28,168	30,055
Add: 75% CWIP	31,300	34,481	38,679	42,692	85,000	1,38,000
Equity Value						6,53,474
Target price (INR/share)						220

Source: MOFSL

Exhibit 17: Global comparative valuations

'	M.Cap	PE (x)		EV/EBITDA (x)		PB (x)			ROE (x)				
Company	USD m	CY20/ FY21	CY21/ FY22	CY22/ FY23									
NMDC*	6,530	5.0	6.7	6.9	3.6	4.8	5.1	1.5	1.3	1.3	31.4	21.0	18.8
Vale	1,00,072	5.3	6.8	8.4	3.3	4.1	4.9	2.2	2.0	1.9	45.9	30.3	23.0
FMG	48,469	8.1	9.9	13.6	4.9	5.7	7.5	2.8	2.7	2.7	34.9	30.4	20.4

Source: MOSL, Company. (*) denotes MOFSL estimates

Financials and valuations

Y/E March	2017	2018	2019	2020	2021	2022E	2023E	2024E
Net sales	88,294	1,16,149	1,21,527	1,16,992	1,53,701	2,64,356	2,32,055	2,34,808
Total Expenses	43,350	52,951	50,110	54,789	65,742	1,33,862	1,34,972	1,40,509
Iron ore cost (INR/ton)	1217	1468	1549	1739	1995	3281	2999	2810
Steel cost (INR/t)								
EBITDA	44,944	63,198	71,416	62,203	87,959	1,30,493	97,084	94,299
% of Net Sales	50.9	54.4	58.8	53.2	57.2	49.4	41.8	40.2
EBITDA per ton ore	1,262	1,752	2,207	1,974	2,669	3,199	2,157	1,886
Depn. & Amortization	1,962	2,560	2,789	2,869	2,278	2,478	2,653	2,828
EBIT	42,982	60,638	68,628	59,334	85,680	1,28,015	94,431	91,471
Net Interest		371	403	99	168	120	120	120
Other income	9,088	5,197	5,883	5,138	3,499	5,500	5,500	5,500
PBT before EO	52,070	65,464	74,107	64,373	89,011	1,33,395	99,811	96,851
EO income	-8,933	-5,309	-2,120	-10,778				
PBT after EO	43,137	60,155	71,987	53,596	89,011	1,33,395	99,811	96,851
Tax	17,038	22,093	25,565	17,413	26,485	33,592	25,371	24,738
Rate (%)	39.5	36.7	35.5	32.5	29.8	25.2	25.4	25.5
Reported PAT	26,099	38,062	46,422	36,183	62,527	99,803	74,440	72,113
Adjusted PAT	31,504	41,421	47,789	46,886	65,959	99,803	74,440	72,113
Change (%)	-10.1	31.5	15.4	-1.9	40.7	51.3	-25.4	-3.1
Balance Sheet Y/E March	2017	2018	2019	2020	2021	2022E	2023E	2024E
Share Capital	3,164	3,164	3,062	3,062	2,931	2,931	2,931	2,931
Reserves	2,22,026	2,40,374	2,56,453	2,72,278	2,94,631	3,35,820	3,66,299	3,94,451
Shareholders' funds	2,25,189	2,43,538	2,59,515	2,75,340	2,97,561	3,38,750	3,69,229	3,97,382
Loans		5,001	3,642	5,656	19,945	19,945	19,945	19,945
Long-term Provisions	6,112	7,141	7,684	8,334	9,497	9,497	9,497	9,497
Capital Employed	2,31,301	2,55,680	2,70,841	2,89,329	3,27,003	3,68,192	3,98,671	4,26,824
Gross Block	39,724	49,473	52,752	58,878	62,391	67,391	72,391	77,391
Less: Accum. Deprn.	20,196	22,756	25,545	28,414	30,692	33,171	35,824	38,652
Net Fixed Assets	19,528	26,717	27,207	30,464	31,699	34,220	36,567	38,739
Capital WIP	1,18,314	1,25,199	1,37,925	1,54,716	1,70,767	2,00,767	2,35,767	2,70,767
Investments	7,270	7,865	9,393	9,856	9,849	9,849	9,849	9,849
Curr. Assets	1,11,909	1,26,311	1,23,295	1,16,404	1,55,535	1,65,670	1,58,183	1,49,216
Inventories	5,400	5,717	6,662	7,235	9,217	14,485	12,715	12,866
Sundry Debtors	10,435	14,727	14,245	22,237	21,399	36,213	28,610	28,949
Cash and Bank	52,893	54,382	46,077	23,923	58,060	48,113	49,999	40,542
Loans and Advances	43,181	51,484	56,311	63,008	66,859	66,859	66,859	66,859
Curr. Liability & Prov.	25,719	30,411	26,979	22,103	40,846	42,314	41,694	41,747
Sundry Creditors	1,988	1,595	2,027	2,256	3,602	5,070	4,450	4,503
Other Liabilities & prov.	23,731	28,815	24,952	19,848	37,244	37,244	37,244	37,244
Net Current Assets	86,190	95,900	96,316	94,301	1,14,689	1,23,356	1,16,488	1,07,469
Misc. Exp. (not w/off)								
Application of Funds	2,31,301	2,55,680	2,70,841	2,89,336	3,27,003	3,68,192	3,98,671	4,26,823

Financials and valuations

Ratios								
Y/E March	2017	2018	2019	2020	2021	2022E	2023E	2024E
Basic (INR)								
EPS	10.0	13.1	15.6	15.3	22.5	34.1	25.4	24.6
Cash EPS	10.6	13.9	16.5	16.2	23.3	34.9	26.3	25.6
BV/Share	71.2	77.0	84.8	89.9	101.5	115.6	126.0	135.6
DPS	5.2	5.3	5.5	5.3	7.8	20.0	15.0	15.0
Payout (%)	74.9	62.9	45.9	54.0	36.4	58.7	59.1	61.0
Valuation (x)								
P/E	17.0	13.0	10.9	11.1	7.5	5.0	6.7	6.9
Cash P/E	16.0	12.2	10.3	10.4	7.3	4.9	6.5	6.6
P/BV	2.4	2.2	2.0	1.9	1.7	1.5	1.3	1.3
EV/Sales	5.5	4.2	3.9	4.3	3.0	1.8	2.0	2.0
EV/EBITDA	10.8	7.7	6.7	8.1	5.2	3.6	4.8	5.1
Dividend Yield (%)	3.0	3.1	3.3	3.1	4.6	11.8	8.8	8.8
EV (USD/t)	5.0	5.2	4.8	4.9	4.3	4.4	4.3	4.3
Return Ratios (%)								
EBITDA Margins	50.9	54.4	58.8	53.2	57.2	49.4	41.8	40.2
Net Profit Margins	35.7	35.7	39.3	40.1	42.9	37.8	32.1	30.7
RoE	13.5	17.7	19.3	17.5	23.5	31.4	21.0	18.8
RoCE	11.5	17.1	18.3	15.5	20.3	28.7	19.4	17.5
RoIC	44.0	63.4	60.8	44.9	63.6	96.8	66.3	65.3
Working Capital Ratios								
Fixed Asset Turnover (x)	2.2	2.3	2.3	2.0	2.5	3.9	3.2	3.0
Asset Turnover (x)	0.4	0.5	0.4	0.4	0.5	0.7	0.6	0.6
Debtor (Days)	43	46	43	69	51	50	45	45
Inventory (Days)	22	18	20	23	22	20	20	20
Creditors (Days)	8	5	6	7	9	7	7	7
Leverage Ratio (x)				<u> </u>	-			
Current Ratio	4.4	4.2	4.6	5.3	3.8	3.9	3.8	3.6
Debt/Equity	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
2 2 2 4 2 4 2 1 2 1		*	*	***	•			
Cash Flow Statement								
Y/E March	2017	2018	2019	2020	2021	2022E	2023E	2024E
Pre-tax profit	43,137	60,155	71,987	53,596	89,011	1,33,395	99,811	96,851
Depreciation	1,962	2,560	2,789	2,944	2,278	2,478	2,653	2,828
(Inc)/Dec in Wkg. Cap.	13,117	-8,676	-8,629	-21,434	5,277	-18,614	8,754	-437
Tax paid	-18,942	-23,432	-26,024	-23,047	-24,877	-33,592	-25,371	-24,738
Other operating activities	406	3,205	346	8,545	1,615	·	<u> </u>	
CF from Op. Activity	39,679	33,812	40,469	20,604	73,305	83,667	85,847	74,504
(Inc)/Dec in FA + CWIP	-23,505	-20,524	-19,972	-23,990	-15,981	-35,000	-40,000	-40,000
(Pur)/Sale of Investments	-316	-2,523	7,661	17,155	312	,	<u> </u>	
Others		6,294	(3,504)	(18,391)	2,412			
CF from Inv. Activity	-23,821	-16,753	-15,816	-25,226	-13,256	-35,000	-40,000	-40,000
Equity raised/(repaid)	-76,078	-,	-10,067		-17,006			
Interest paid	-,-	-369	-401	-97	-166			
Debt raised/(repaid)	-14,970	5,001	-1,359	2,014	14,289			
Dividend (incl. tax)	-19,553	-23,923	-21,321	-19,525	-22,733	-58,614	-43,961	-43,961
Other financing activities	,,	3721	190	77	-296	,	-,	/
CF from Fin. Activity	-1,10,601	-15,570	-32,959	-17,531	-25,912	-58,614	-43,961	-43,961
(Inc)/Dec in Cash	-94,743	1,490	-8,305	-22,154	34,137	-9,947	1,886	-9,457
Add: opening Balance	1,47,636	52,893	54,382	46,077	23,923	58,060	48,113	49,999
Closing Balance	52,893	54,382	46,077	23,923	58,060	48,113	49,999	40,542
C.Comb Datanec	32,033	34,302	+0,077	20,020	30,000	40,113	13,333	40,342

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.

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. 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 Financial associate entities of Motilal Oswal Services Limited available swal.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.nseindia.com, www.nseindia.com, www.nseindia.com, www.nseindia.com, <a href="www.nseindia.com, www.nseindia.com, <a href="www.nseindia.com, www.nseindia.com, <a href="www.nseindia.com, <a href="www.nseindia.com

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 activity to which this document relates 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 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.

Registered Office Address: Motilal Oswal Tower, Rahimfullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website 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.: INP0000004409) 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. Research and IPOs. Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Private Equity 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, 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.