

BSE SENSEX

32,833

S&P CNX

10,122

CMP: INR129
TP: INR187 (+46%)
Buy

Stock Info

Bloomberg	NMDC IN
Equity Shares (m)	3,164
52-Week Range (INR)	153 / 103
1, 6, 12 Rel. Per (%)	1/9/-14
M.Cap. (INR b)	401.8
M.Cap. (USD b)	6.2
Avg Val, INRm	446
Free float (%)	25.1

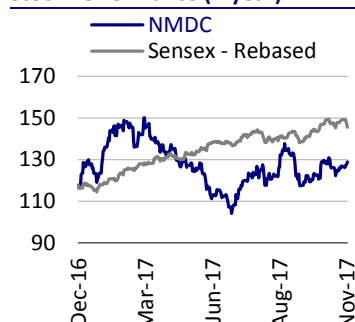
Financials Snapshot (INR b)

Y/E Mar	2017	2018E	2019E
Net Sales	88.3	107.9	107.6
EBITDA	44.9	60.3	59.7
PAT	31.5	41.9	40.2
EPS (INR)	10.0	13.2	12.7
Gr. (%)	11.7	33.0	-4.2
BV/Sh (INR)	71.2	77.2	82.7
RoE (%)	12.8	15.6	16.2
RoCE (%)	12.2	15.2	15.8
P/E (x)	12.9	9.7	10.1
P/BV (x)	1.8	1.7	1.5

Shareholding pattern (%)

As On	Sep-17	Jun-17	Sep-16
Promoter	74.9	74.9	80.0
DII	17.3	17.0	14.0
FII	3.7	4.3	3.4
Others	4.0	3.8	2.7

FII Includes depository receipts

Stock Performance (1-year)

Iron ore pricing improving
Highly profitable steel project, albeit delayed, is available for free
Pricing power returning – mines take price hike in December

Indian iron ore miners are gaining pricing power again, as some of the mines in Odisha are shut, international iron ore prices have moved up, and demand is increasing (as Indian steel mills are trying to boost production in a seasonally strong part of the year). We expect Indian iron ore supply to get tight over the next 2-3 years, with leases of a number of private mines expiring by end-FY20 and increasing domestic steel production. NMDC has increased prices by 10-13% (Exhibit 4) with effect from 1st December 2017, but it remains competitive with respect to imports for its key customers (Exhibit 7/8).

Capacity utilization to improve as demand is rising sharply

NMDC has iron ore mining capacity of 46mtpa, but utilization is only ~80%. We expect utilization to improve gradually to 100% over the next 2-3 years, as its key customers (JSW steel, Essar Steel and RINL) are all ramping up production. There will be additional demand of 15-20mtpa. NMDC is well placed to serve them due to its high quality of ore and access to rail infrastructure. NMDC is also investing in doubling of the KK line to improve evacuation from the Chhattisgarh complex.

Steel plants, albeit delayed, will be highly profitable

NMDC is setting up a 3mtpa steel plant at Nagarnagar, Chhattisgarh, which is 290km away from the Vizag port. The steel project is running behind schedule and likely to start production in FY20. However, the steel plant is likely to be highly profitable because (1) equipment and technology are supplied by high-quality European players, (2) the economy of scale will be high at 3mtpa single 4,500 cubic meter blast furnace, (3) it is in proximity to mines and ports and (4) it has captive iron ore mines. Iron ore will be supplied from Deposit 13. The mine has 325mt R&R and 10mtpa EC, and lease for 50 years starting January 2017.

Expect annual total stock return of 20% over next 3-4 years

We expect iron ore volumes CAGR of 5-6% over the next 4-5 years from the existing mines (Exhibit 6). Steel plant is likely to produce about 1mt in FY21 and full 3mt in FY22. Margins in the steel business are likely to be 10,000/t, as it has many advantages. Despite factoring in 10% lower iron ore margins w.r.t. FY18, we expect EBITDA CAGR of 17% to INR97b over FY17-22. We expect equity value CAGR of 15% to INR223 in four years, while the dividend yield will be ~5% at CMP. Thus, we expect a 20% annual total stock return over the next 3-4 years.

The stock is trading at attractive valuations of EV/EBITDA of 6.1x, P/E of 9.7x and P/BV of 1.7x FY18E. Return ratios are attractive at 15-16% RoE/RoCE, despite the drag of large CWIP on balance sheet. Valuations are ignoring value of the steel plant. Reiterating **Buy**.

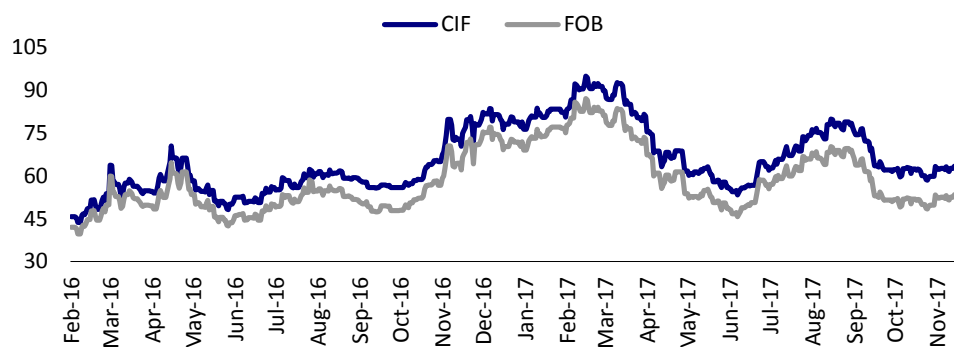
Sanjay Jain – Research analyst (SanjayJain@MotilalOswal.com); +91 22 6129 1523

Dhruv Muchhal – Research analyst (Dhruv.Muchhal@MotilalOswal.com); +91 22 6129 1549

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.

Global iron ore prices are recovering led by steady demand in China and improving sea-borne demand-supply fundamentals

Exhibit 1: Iron ore (China cfr) – USD/t

Source: MOSL, Bloomberg

Exhibit 2: Iron ore lumps: Landed cost to Indian steel mills (NMDC v/s imports)

	Unit	Dolvi	Essar	RINL
(a) Landed cost from NMDC	USD/wmt	74	74	64
(b) Landed cost of imports	USD/wmt	85	85	85
NMDC pricing at premium/(discount) to imports	USD/wmt	-11	-11	-21
(a) calculations for landed cost from NMDC				
Ex-Mine Price	INR/wmt	2,600	2,600	2,600
add: royalty@15% & DMF@30%	INR/wmt	507	507	507
add: transportation/port handling	INR/wmt	1,750	1,750	1,050
Landed cost at plant	INR/wmt	4,857	4,857	4,157
Landed cost at plant	USD/wmt	74	74	64
(b) calculations for landed cost of imports				
Iron ore lumps cfr	USD/dmt	81	81	81
less: moisture (8%)	USD/wmt	2	2	2
add: import duty (2.5%)	USD/wmt	7	7	7
Landed cost on port	USD/wmt	85	85	85
add: Domestic transportation cost	USD/wmt	0	0	0
Landed cost at plant	USD/wmt	85	85	85

USD/INR exchange rate = 65.2 IODEX68USD/T, CFR China basis

Source: MOSL

Exhibit 3: Iron ore fines: Landed cost to Indian steel mills (NMDC v/s imports)

	Unit	Dolvi	Essar	RINL
(a) Landed cost from NMDC	USD/wmt	68	56	58
(b) Landed cost of imports	USD/wmt	69	69	69
NMDC premium/(discount) to imported	USD/wmt	-1	-13	-12
(a) calculations for landed cost from NMDC				
Ex-Mine Price	INR/wmt	2,260	2,260	2,260
add: royalty@15% & DMF@30%	INR/wmt	441	441	441
add: transportation/port handling	INR/wmt	1,750	950	1,050
Landed cost at plant	INR/wmt	4,451	3,651	3,751
Landed cost at plant	USD/wmt	68	56	58
(b) calculations for landed cost of imports				
Iron ore fines cfr	USD/dmt	68	68	68
less: moisture (8%)	USD/wmt	5	5	5
add: import duty (2.5%)	USD/wmt	7	7	7
Landed cost on port	USD/wmt	69	69	69
add: Domestic transportation cost	USD/wmt	0	0	0
Landed cost at plant	USD/wmt	69	69	69

USD/INR exchange rate = 65.2 IODEX68USD/T, CFR China basis

Source: MOSL

Exhibit 4: NMDC's prices – INR/t (ex-royalty, DMF etc)

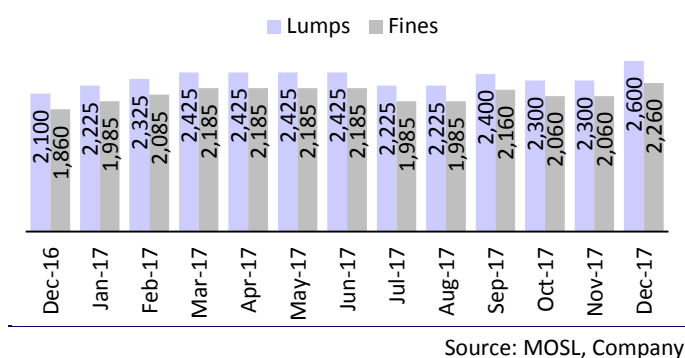


Exhibit 5: NMDC's avg. prices – INR/t (ex-royalty, DMF etc)

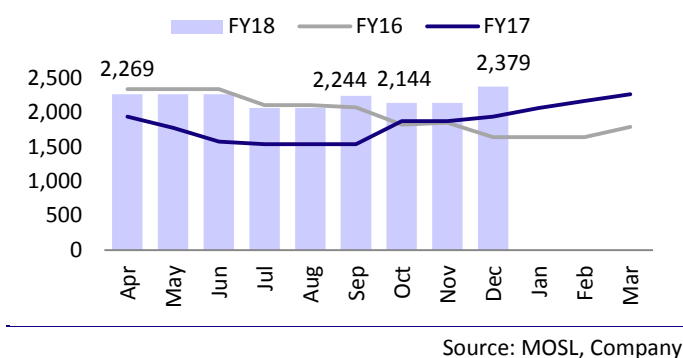


Exhibit 6: Iron ore sales – mt

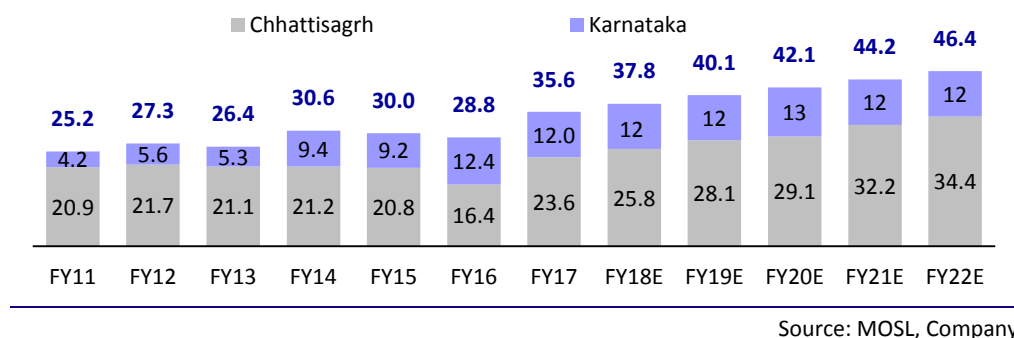


Exhibit 7: Target price calculation

	INR million									
Y/E March	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E
Iron ore										
EBITDA per ton (INR)	2,963	2,676	2,666	1,214	1,262	1,594	1,489	1,493	1,469	1,444
Volumes (m tons)	26.3	30.5	30.5	28.8	35.6	37.8	40.1	42.1	44.2	46.4
Steel										
EBITDA per ton (INR)									5,000	10,000
Volumes (m tons)									1.0	3.0
EBITDA	77,838	81,604	81,369	34,998	44,944	60,259	59,663	62,801	69,889	97,006
Target EV/EBITDA(x)					6.5	6.5	6.5	6.5	6.5	6.5
Target EV					292,133	391,685	387,813	408,205	454,276	630,540
Less: Net Debt	-210,258	-186,572	-184,431	-132,666	-52,893	-35,506	-31,616	-28,839	-30,646	-54,370
Add: CWIP	16,180	52,769	77,100	97,229	118,314	152,208	172,208	192,208	107,208	22,208
Equity Value					463,339	579,398	591,636	629,252	592,130	707,118
Target price (INR/share)					146	183	187	199	187	223

Source: MOSL, Company

Exhibit 8: Valuations: Indian Companies

	Rating	Price (INR)	MCAP (USD M)	EPS			P/E (x)		EV/EBITDA (x)		P/B(x)	
				FY17E	FY18E	FY19E	FY18E	FY19E	FY18E	FY19E	FY18E	FY19E
Steel												
Tata Steel	Neutral	695	10,460	37.9	59.4	65.2	11.7	10.7	7.0	6.8	1.9	1.7
JSW Steel	Buy	255	9,529	14.8	20.3	24.9	12.5	10.2	8.1	7.3	2.3	1.9
JSPL	Buy	172	2,438	-20.9	-15.8	2.0	-10.9	85.5	10.3	7.1	0.6	0.5
SAIL	Sell	77	4,917	-6.4	-4.3	3.1	-18.0	24.5	28.2	11.3	0.9	0.9
Non-Ferrous												
Hindalco	Buy	240	7,689	8.6	18.8	26.4	12.8	9.1	6.6	5.6	1.6	1.4
Nalco	Neutral	82	3,280	3.7	4.7	5.8	17.6	14.3	8.2	6.4	1.5	1.4
Vedanta	Buy	296	13,586	15.1	25.5	44.4	11.6	6.7	7.3	4.5	1.7	1.5
Rain Ind.*	Buy	355	1,847	9.6	25.5	38.9	13.9	9.1	7.8	5.9	3.1	2.4
Mining												
Coal India	Buy	276	27,024	14.9	17.5	20.7	15.8	13.4	8.2	7.1	6.7	6.4
Hindustan Zinc	Neutral	300	19,612	19.7	22.7	33.5	13.2	8.9	8.2	5.2	4.4	3.3
NMDC	Buy	128	7,849	10.0	13.2	12.7	9.7	10.1	6.1	6.2	1.7	1.5

*CY reporting

Source: Company, MOSL

Financials and Valuations

Income Statement (Consolidated)							(INR Million)
Y/E March	2014	2015	2016	2017	2018E	2019E	2020E
Net sales	120,582	123,564	64,556	88,294	107,947	107,563	112,903
Change (%)	12.6	2.5	-47.8	36.8	22.3	-0.4	5.0
Total Expenses	38,978	42,195	29,559	43,350	47,688	47,899	50,103
EBITDA	81,604	81,369	34,998	44,944	60,259	59,663	62,801
% of Net Sales	67.7	65.9	54.2	50.9	55.8	55.5	55.6
Depn. & Amortization	1,504	1,622	2,078	1,962	2,334	2,687	2,966
EBIT	80,100	79,747	32,920	42,982	57,926	56,977	59,835
Net Interest							
Other income	20,945	23,200	17,744	9,088	4,040	2,069	1,590
PBT before EO	101,045	102,946	50,664	52,070	61,965	59,046	61,425
EO income	455		-1,848	-8,933			
PBT after EO	101,500	102,946	48,816	43,137	61,965	59,046	61,425
Tax	33,391	33,460	14,769	17,038	20,072	18,895	19,656
Rate (%)	32.9	32.5	30.3	39.5	32.4	32.0	32.0
Reported PAT	68,110	69,487	34,047	26,099	41,893	40,151	41,769
Adjusted PAT	67,804	69,487	35,335	31,504	41,893	40,151	41,769
Change (%)	2.3	2.5	-49.1	-10.8	33.0	-4.2	4.0

Balance Sheet							(INR Million)
Y/E March	2014	2015	2016	2017	2018E	2019E	2020E
Share Capital	3,965	3,965	3,965	3,164	3,164	3,164	3,164
Reserves	295,918	319,353	297,146	222,026	241,138	258,510	277,499
Share holders funds	299,883	323,317	301,110	225,189	244,302	261,673	280,663
Loans			14,970				
Deferred tax liability (net)	1,073	984	1,222	6,112	6,112	6,112	6,112
Capital Employed	300,956	324,301	317,302	231,301	250,414	267,785	286,775
Gross Block	28,506	29,446	37,304	39,724	43,724	47,724	51,724
Less: Accum. Depn.	14,883	16,109	18,234	20,196	22,530	25,216	28,182
Net Fixed Assets	13,623	13,337	19,070	19,528	21,195	22,508	23,542
Capital WIP	52,769	77,100	97,229	118,314	152,208	172,208	192,208
Investments	2,504	5,619	6,954	7,270	7,270	7,270	7,270
Curr. Assets	245,874	248,642	210,203	111,909	99,389	95,426	93,673
Inventories	6,812	6,919	6,370	5,400	5,915	5,894	6,186
Sundry Debtors	14,484	17,523	18,961	10,435	14,787	14,735	15,466
Cash and Bank	186,572	184,431	147,636	52,893	35,506	31,616	28,839
Loans and Advances	38,005	39,768	37,237	43,181	43,181	43,181	43,181
Curr. Liability & Prov.	13,814	20,397	16,154	25,719	29,646	29,625	29,918
Sundry Creditors	11,092	2,263	3,244	1,988	5,915	5,894	6,186
Other Liabilities & prov.	2,722	18,134	12,909	23,731	23,731	23,731	23,731
Net Current Assets	232,060	228,245	194,050	86,190	69,742	65,800	63,755
Application of Funds	300,956	324,301	317,302	231,301	250,414	267,785	286,775

E: MOSL Estimates

Financials and Valuations

Ratios

Y/E March	2014	2015	2016	2017	2018E	2019E	2020E
Basic (INR)							
EPS	17.1	17.5	8.9	10.0	13.2	12.7	13.2
Cash EPS	17.5	17.9	9.4	10.6	14.0	13.5	14.1
BV/Share	75.6	81.5	75.9	71.2	77.2	82.7	88.7
DPS	8.5	8.6	11.0	5.2	6.0	6.0	6.0
Payout (%)	57.9	42.2	172.4	74.9	54.4	56.7	54.5
Valuation (x) CMP@127							
P/E	7.4	7.2	14.2	12.8	9.6	10.0	9.6
Cash P/E	7.3	7.1	13.5	12.0	9.1	9.4	9.0
P/BV	1.7	1.6	1.7	1.8	1.6	1.5	1.4
EV/EBITDA	3.9	3.9	10.6	7.8	6.1	6.2	5.9
Dividend Yield (%)	6.7	6.7	8.7	4.1	4.7	4.7	4.7
EV/ton	4	4	4	4	4	4	4
Return Ratios (%)							
RoE	23.3	22.0	16.8	12.8	15.6	16.2	15.1
RoCE	23.2	22.0	16.4	12.2	15.2	15.8	14.8
RoIC	116.5	92.5	62.6	41.4	60.2	69.5	69.0
Working Capital Ratios							
Fixed Asset Turnover (x)	4.2	4.2	1.7	2.2	2.5	2.3	2.2
Asset Turnover (x)	0.4	0.4	0.2	0.4	0.4	0.4	0.4
Debtor (Days)	44	52	50	43	50	50	50
Inventory (Days)	21	20	20	22	20	20	20
Creditors (Days)	34	7	20	8	20	20	20
Growth (%)							
Sales	12.6	2.5	-47.8	36.8	22.3	-0.4	5.0
EBITDA	4.8	-0.3	-57.0	28.4	34.1	-1.0	5.3
PAT	2.3	2.5	-49.1	-10.8	33.0	-4.2	4.0
Leverage Ratio (x)							
Current Ratio	17.8	12.2	13.0	4.4	3.4	3.2	3.1
Debt/Equity	-0.6	-0.6	-0.4	-0.2	-0.1	-0.1	-0.1

Cash Flow Statement

(INR Million)

Y/E March	2014	2015	2016	2017	2018E	2019E	2020E
Pre-tax profit	101,500	102,946	48,816	43,137	61,965	59,046	61,425
Depreciation	1,504	1,622	2,078	1,962	2,334	2,687	2,966
(Inc)/Dec in Wkg. Cap.	-27,095	-11,975	93	13,117	-939	53	-732
Tax paid	-33,391	-30,314	-17,373	-17,038	-20,072	-18,895	-19,656
Other operating activities	-3,880	-7,655	-4,455	-1,499			
CF from Op. Activity	38,639	54,624	29,159	39,679	43,287	42,891	44,003
(Inc)/Dec in FA + CWIP	-22,888	-24,331	-20,242	-23,505	-37,894	-24,000	-24,000
(Pur)/Sale of Investments	-7	-3,116	-1,335	-316			
CF from Inv. Activity	-22,895	-27,447	-21,576	-23,821	-37,894	-24,000	-24,000
Equity raised/(repaid)				-76,078			
Debt raised/(repaid)			14,970	-14,970			
Dividend (incl. tax)	-39,429	-29,318	-58,694	-19,553	-22,780	-22,780	-22,780
Other financing activities							
CF from Fin. Activity	-39,429	-29,318	-44,379	-110,601	-22,780	-22,780	-22,780
(Inc)/Dec in Cash	-23,685	-2,141	-36,796	-94,743	-17,387	-3,889	-2,777
Add: opening Balance	210,258	186,572	184,431	147,636	52,893	35,506	31,616
Closing Balance	186,572	184,431	147,636	52,893	35,506	31,616	28,839

E: MOSL Estimates

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 Securities Ltd. (MOSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOSL, 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. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. 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), Metropolitan Stock Exchange Of India Ltd. (MSE) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) & National Securities Depository Limited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Limited are available on the website at <http://online-reports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf>

Pending Regulatory Enquiries against Motilal Oswal Securities Limited by SEBI:

SEBI pursuant to a complaint from client Shri C.R. Mohanraj alleging unauthorized trading, issued a letter dated 29th April 2014 to MOSL notifying appointment of an Adjudicating Officer as per SEBI regulations to hold inquiry and adjudge violation of SEBI Regulations; MOSL requested SEBI to provide all documents, records, investigation report relied upon by SEBI which were referred in Show Cause Notice. The matter is currently pending.

MOSL, its associates, Research Analyst or their relative may have any financial interest in the subject company. MOSL and/or its associates and/or Research Analyst may have 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. MOSL 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 MOSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report. Research Analyst may have served as director/officer, etc. in the subject company in the last 12 month period. MOSL and/or its associates may have received any compensation from the subject company in the past 12 months.

In the last 12 months period ending on the last day of the month immediately preceding the date of publication of this research report, MOSL or any of its associates may have:

- managed or co-managed public offering of securities from subject company of this research report,
- received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.
- Subject Company may have been a client of MOSL or its associates during twelve months preceding the date of distribution of the research report.

MOSL and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report. To enhance transparency, MOSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report. MOSL 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 MOSL 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.

Terms & Conditions:

This report has been prepared by MOSL 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 MOSL. 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. MOSL will not treat recipients as customers by virtue of their receiving this report.

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.

Disclosure of Interest Statement

Analyst ownership of the stock

NMDC

No

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 MOSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOSL 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 MOSL & 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 Securities Limited (MOSL) 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 MOSL 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 MOSL, 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., MOSL 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

Motilal Oswal Capital Markets Singapore Pte Limited is acting as an exempt financial advisor under section 23(1)(f) of the Financial Advisers Act (FAA) read with regulation 17(1)(d) of the Financial Advisers Regulations and is a subsidiary of Motilal Oswal Securities Limited in India. This research is distributed in Singapore by Motilal Oswal Capital Markets Singapore Pte Limited and it is only directed in Singapore to accredited investors, as defined in the Financial Advisers Regulations and the Securities and Futures Act (Chapter 289), as amended from time to time. In respect of any matter arising from or in connection with the research you could contact the following representatives of Motilal Oswal Capital Markets Singapore Pte Limited:

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. MOSL, 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 MOSL. 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 MOSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, nor its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOSL 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.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 3080 1000. Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-30801085.

Registration details of group entities.: MOSL: SEBI Registration: INZ000158836 (BSE/NSE/MSE); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) offers wealth management solutions. *Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. * Motilal Oswal Commodities Broker Pvt. Ltd. offers Commodities Products. * Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. * Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products