MOTILAL OSWAL

14 November 2017

Update | Sector: Others

MCX

BSE SENSEX	S&P CNX
33,034	10,225

MCX METAL & ENERGY Trade with Trust

Stock Info

Bloomberg	MCX IN
Equity Shares (m)	51
52-Week Range (INR)	1,411/932
1, 6, 12 Rel. Per (%)	-18/-20/-50
M.Cap. (INR b)	48.5
M.Cap. (USD b)	0.7
Avg Val, INRm	438.0
Free float (%)	100.0

Financials Snapshot (INR b)

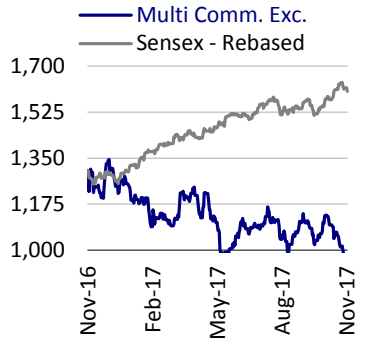
Y/E Mar	2017	2018E	2019E
Net Sales	2.6	2.8	4.0
EBITDA	0.8	0.9	2.0
PAT	1.3	1.3	2.2
EPS (INR)	24.8	26.5	43.4
Gr. (%)	6.2	6.6	64.2
BV/Sh (INR)	266.4	262.0	284.1
RoE (%)	10.2	10.0	15.9
RoCE (%)	10.0	9.7	15.4
P/E (x)	45.6	42.8	26.1
P/BV (x)	4.3	4.3	4.0

Shareholding pattern (%)

As On	Sep-17	Jun-17	Sep-16
Promoter	0	0	0
DII	33.6	35.8	39.8
FII	30.9	25.8	19.6
Others	35.5	38.4	40.6

FII Includes depository receipts

Stock Performance (1-year)



CMP: INR952 TP: INR1,300(+37%) Buy

Multi-faceted reforms have only just begun

Key takeaways from India Commodity Day hosted by MCX

We attended the 'India Commodity Day' hosted by MCX on its 14th Anniversary. The session saw a speaker representation from MCX's senior management and also prominent members of the ecosystem, including:

1) P. S. Reddy – MD & CEO, CDSL
2) P. K. Bindlish – CGM, Commodity Derivatives Market Regulation, SEBI
3) G. Mahalingam – Whole-time member, SEBI
4) R. Amalorpavanathan – Deputy MD, NABARD
5) Supriyo Bhattacharjee – DGM, Financial Markets Regulation (FMRD), RBI
6) Dr. Rakesh Junjhunwala – Rare Enterprises
7) Kevin Piccoli – Deputy Director, US CFTC

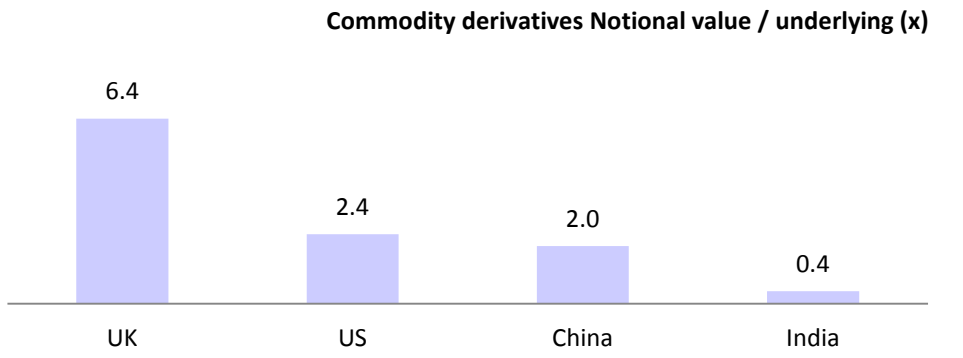
The discussion focused on a range of topics, such as the steps taken by the regulators and the way forward, the idea of commodities as an asset class, and commodity price outlook.

Some notable highlights from the event:

Unexplored market in the context of physical underlying

- Commodities are an important cog in the wheel of an emerging economy like India, and commodity derivatives have a huge potential in such a market. With only a fraction of that opportunity explored so far, the bigger possibilities are still to be unraveled. Considerable efforts have gone by both – the regulators and the exchanges – in this direction. The opportunity landscape can be gauged with following data:
  - In India, the notional value of commodity derivatives is less than USD1t – less than half of the country's GDP of USD2.3t.
  - This notional value is ~2x GDP in China, ~2.4x in the US and 6.4x in the UK.

Exhibit 1: Indian market still significantly underpenetrated



Source: MOSL, Company

Ashish Chopra – Research Analyst (Ashish.Chopra@MotilalOswal.com); +91 22 6129 1530

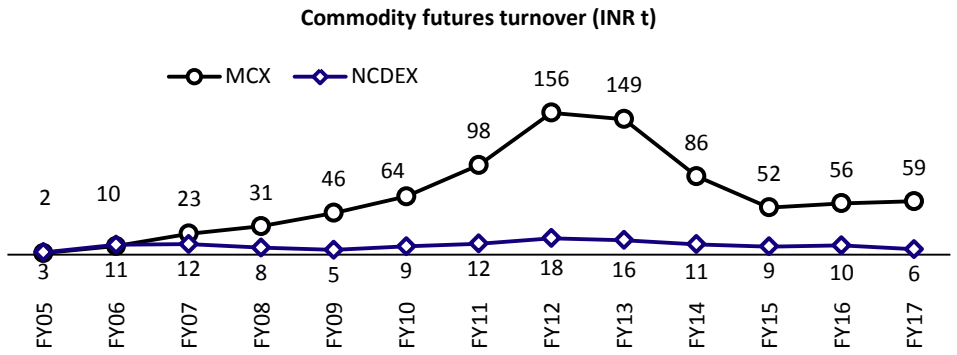
Sagar Lele – Research Analyst (Sagar.Lele@MotilalOswal.com); +91 22 6129 1531

- **Need to hedge**: Against this backdrop, there is an evident need for hedging by a vast array of domestic producers, whose business models imply that their price exposures are domestic in nature. MCX offers a platform to meet these hedging needs.

SEBI has been on a reform spree, more to come

- After the SEBI took over as the regulator of commodity derivatives from the FMC in September 2015, the segment has seen a plenty of action on the policy front over the last two years. Some of the notable reforms include: [1] Risk management – settlement guarantee funds, position limits, [2] Warehousing norms, [3] New products (options), [4] New participation (Category-3 AIFs), [5] Setting up of separate clearing corporations (underway), and [6] Integrated commodity derivative and equity markets – phase 1 of which was broker integration, which has helped reduce cost of trading and facilitated ease of doing business.
- However, the SEBI cited that it is just getting started, and there is a long road ahead before India can start comparing with the important commodity markets in the world. It believes that the current set of a few participants is not adequate to bring liquidity. Institutional investors need to be brought into the market. FPIs and DIIs are next, and the SEBI continues deliberating on the best-suited approach to attract them.
- **Treading cautiously**: The SEBI's broader agenda still remains three-fold: protect investors, regulate securities market, and grow new securities segments. Its reform around position limits may appear restrictive, but it felt the need to start on a cautious note. Demand for derivatives in a commodity should not exceed overall physical supply in that commodity.

Exhibit 2: SEBI reforms continue to aim at greater liquidity and hedging in commodity derivatives



Source: MOSL, Company

There are some missing pieces that are commanding attention

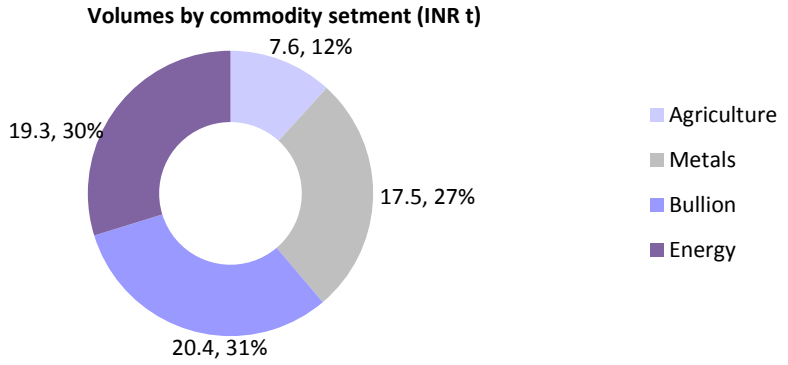
- There was acknowledgement that some elements of the necessary infrastructure are still work-in-progress – and these primarily are concerned with the delivery ecosystem. The Warehousing Development and Regulatory Authority (WDRA) had been in a dormant state for a while. However, in February 2017, there were a few regulations in the warehouse repository space. Warehouses are now to be registered with the WDRA necessarily. They are wholly responsible for quality and quantity of stocks they hold.

- This ties in with commodity depository receipts, where CDSL will hold the receipts in CDSL commodity repository – a subsidiary floated in association with the BSE and MCX. The receipt acts as a valid proof of the underlying asset held, against which one can borrow money, for example. The aim is to make the ecosystem robust enough, so that commodity in any warehouse should be tradable at any exchange.

Thrust on agricultural commodities – a big opportunity but some challenges

- The Indian economy does not depend on agriculture as much as it did 20-25 years ago. That said, agriculture cannot be relegated to the background, as it still commands significant relevance in terms of propelling GDP. If monsoon fails, the agriculture segment woes end up slackening consumer demand.
- A market-oriented price discovery model is needed for agricultural commodities in India – the SEBI is working toward it. The role of spot markets could be crucial in this segment. The SEBI has cited in the past that entry of players like mutual funds, banks and insurance companies will be facilitated once an expert committee formed at government level recommends how synergy between spot and futures markets could happen.
- However, there is a challenge to achieving the same: spot price discovery for any commodity is not seamless – rather fragmented, and there are problems in attaining a reliable source of price for any underlying. Problems also persist with assaying the quality, storage and transportation.

Exhibit 3: Agricultural commodities contributed merely 12% to FY17 turnover



Source: MOSL, Company

Way forward – awareness, delivery, spot, liquidity

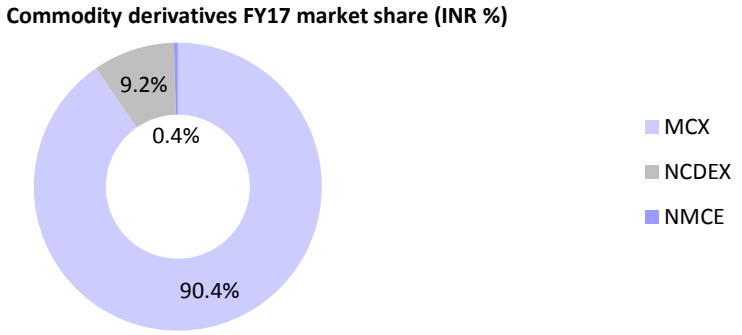
- **Retail participation**: How to increase retail participation in this market is an important question. Retail participation even in government securities is through the route of MFs. As a result, there is a need to build huge amount of awareness amid a lack of familiarity about the asset class. Traditionally, gold is looked upon as an asset class more from a jewelry than a financial investment perspective.
- **Permitting foreign players, indices**: The SEBI looking at introducing new products like index, and also charting a roadmap to bring in foreign players. Speculative volumes, arbitrage trades and HFT are necessary for liquidity on the exchange.

- **Other parts of ecosystem**: The SEBI in process of issuing warehousing norms on non-agricultural commodities too. On the whole, movement of commodities, particularly agricultural, will be facilitated swiftly and adequately.
- **Farmer incomes**: The government wants to double farmers' income in the next five years. For this, farmers have to be facilitated to realize adequate prices for their produce. Commodity derivative exchanges could play a role here.

To conclude with our views on MCX

- **The regulator's drive in sync with our positive thesis**: Our positive thesis on MCX stems from the believe that it is a platform on its transformation journey from catering largely to speculative interests of a small set of participants to a deeper ecosystem that eventually acts as a platform for hedgers across commodities. The ideas brought forth during the event re-emphasized those endeavors of the regulator-exchanges combine, and growth in exchange's liquidity will be an indicator of the progress. We expect FY19 volumes to increase to INR356b per day from FY17 levels of INR235b, driving earnings CAGR of 31% during this period. Our price target of INR1,230 discounts FY19E earnings by 30x. Maintain **Buy**.
- **Options criteria protect MCX's turf**: MCX's monopolistic hold in the non-agricultural commodities was strengthened further by the criterion for an exchange to launch options – INR10b+ average daily turnover for a year in the commodity of interest. We believe the criterion protects MCX's turf amid likelihood of competition being allowed in the commodities derivatives segment.

Exhibit 4: MCX's dominant market share faces limited risks under current regulations governing launch of options on an exchange



Source: MOSL, Company

- **Any policy relaxation for new exchanges is a potential risk**: It is natural that the new exchanges will seek relaxation on this criterion, and any change to the prevailing regulation is a risk. It will further competition's agenda to undercut MCX's prevailing charges, eliciting a response from the leader to respond with requisite aggression. Even if it holds on to its leading market share, the interim financial performance will take a dent.

Financials and Valuations

Income Statement (INR Million)

Y/E Mar	2013	2014	2015	2016	2017	2018E	2019E	2020E
Net Sales	**5,160**	**3,407**	**2,225**	**2,349**	**2,641**	**2,812**	**4,044**	**4,824**
Change (%)	-1.9	-34.0	-34.7	5.6	12.4	6.5	43.8	19.3
EBITDA	**3,331**	**1,457**	**876**	**766**	**844**	**931**	**1,969**	**2,611**
EBITDA Margin (%)	64.6	42.8	39.4	32.6	32.0	33.1	48.7	54.1
Depreciation	307	343	259	246	186	191	191	194
EBIT	**3,023**	**1,114**	**616**	**521**	**658**	**740**	**1,778**	**2,417**
Interest	0	11	14	0	2	0	0	0
Other Income	1,259	993	1,098	977	1,164	1,083	1,176	1,231
Extraordinary items	0	0	0	-667	0	0	0	0
PBT	**4,282**	**2,097**	**1,701**	**831**	**1,821**	**1,823**	**2,954**	**3,648**
Tax	1,065	569	450	413	512	473	738	911
Tax Rate (%)	24.9	27.1	26.5	49.7	28.1	25.9	25.0	25.0
Min. Int. & Assoc. Share	0	0	0	0	0	0	0	0
Reported PAT	**3,217**	**1,528**	**1,251**	**418**	**1,309**	**1,350**	**2,216**	**2,736**
Adjusted PAT	**3,217**	**1,528**	**1,251**	**418**	**1,309**	**1,350**	**2,216**	**2,736**
Change (%)	12.4	-52.5	-18.1	-66.6	213.0	3.1	64.2	23.5

Balance Sheet (INR Million)

Y/E Mar	2013	2014	2015	2016	2017	2018E	2019E	2020E
Share Capital	510	510	510	510	510	510	510	510
Reserves	11,058	10,931	11,512	11,529	13,078	12,853	13,979	16,277
Net Worth	**11,567**	**11,441**	**12,022**	**12,039**	**13,588**	**13,363**	**14,489**	**16,787**
Debt	569	2,169	2,214	2,162	2,125	2,183	2,183	2,125
SGF	0	1,720	1,871	1,879	1,705	1,731	1,731	1,705
Total Capital Employed	**12,136**	**13,610**	**14,236**	**14,201**	**15,713**	**15,546**	**16,672**	**18,912**
Net Fixed Assets	**2,044**	**1,735**	**1,553**	**1,430**	**1,633**	**1,748**	**1,818**	**1,766**
Capital WIP	0	0	0	0	0	0	0	0
Investments	10,682	10,898	12,927	10,741	11,948	13,296	13,296	11,972
Current Assets	**5,131**	**4,782**	**3,764**	**5,997**	**5,077**	**5,152**	**6,454**	**9,128**
Debtors	69	90	107	42	28	88	122	114
Cash & Bank	3,475	3,417	2,655	5,003	3,890	3,708	4,554	7,133
Loans & Adv, Others	1,587	1,275	1,002	952	1,159	1,356	1,777	1,881
Curr Liabs & Provns	**5,721**	**3,805**	**4,007**	**3,967**	**2,945**	**4,650**	**4,896**	**3,954**
Net Current Assets	**-590**	**977**	**-243**	**2,030**	**2,132**	**502**	**1,558**	**5,174**
Total Assets	**12,136**	**13,610**	**14,236**	**14,201**	**15,713**	**15,546**	**16,672**	**18,912**

Financials and Valuations

Ratios

Y/E Mar	2013	2014	2015	2016	2017	2018E	2019E	2020E
Basic (INR)								
EPS	**58.6**	**30.0**	**24.6**	**23.4**	**24.8**	**26.5**	**43.4**	**53.7**
Cash EPS	69.1	36.9	29.6	13.0	29.3	30.2	47.2	57.4
Book Value	226.8	225.4	235.8	236.1	266.4	262.0	284.1	329.2
DPS	0.5	10.2	10.2	0.0	15.3	20.4	20.4	20.4
Payout (incl. Div. Tax.)	0.9	39.0	48.5	0.0	70.7	91.4	55.7	45.1
Valuation(x)								
P/E				48.5	45.6	42.8	26.1	21.1
Cash P/E				87.0	38.6	37.5	24.0	19.7
Price / Book Value				4.8	4.3	4.3	4.0	3.4
EV/Sales				18.9	17.7	16.2	11.0	9.2
EV/EBITDA				58.0	55.3	48.8	22.7	17.0
Dividend Yield (%)				0.0	1.6	2.1	2.1	2.1
Profitability Ratios (%)								
RoE	29.9	13.3	10.7	3.5	10.2	10.0	15.9	17.5
RoCE	28.5	12.8	10.4	8.8	10.0	9.7	15.4	17.0
RoIC	0	0	0	0	0	0	0	0
Turnover Ratios (%)								
Fixed Asset Turnover (x)	28.2	19.3	12.5	12.9	14.3	14.5	19.4	21.7
Debtors (No. of Days)	5	10	17	7	4	11	11	10
Leverage Ratios (%)								
Net Debt/Equity (x)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cash Flow Statement

(INR Million)

Y/E Mar	2013	2014	2015	2016	2017	2018E	2019E	2020E
Adjusted EBITDA	3,331	1,457	876	766	844	931	1,969	2,611
Non cash opr. exp (inc)	-79	876	0	0	0	0	0	0
(Inc)/Dec in Wkg. Cap.	-1,941	-1,565	503	22	-1,251	1,505	-209	-961
Tax Paid	-782	-384	-259	-62	-197	-163	-418	-595
Other operating activities	0	0	0	0	0	0	0	0
CF from Op. Activity	**529**	**385**	**1,120**	**727**	**-604**	**2,274**	**1,341**	**1,054**
(Inc)/Dec in FA & CWIP	-462	-59	-9	-200	-345	-237	-261	-287
Free cash flows	**68**	**325**	**1,111**	**527**	**-950**	**2,036**	**1,080**	**767**
(Pur)/Sale of Invt	1,910	586	-1,214	5,174	1,810	-551	856	915
Others	0	0	0	0	0	0	0	0
CF from Inv. Activity	**1,448**	**527**	**-1,222**	**4,974**	**1,464**	**-789**	**595**	**628**
Inc/(Dec) in Net Worth	0	0	0	0	0	0	0	0
Inc / (Dec) in Debt	0	0	0	0	0	0	0	0
Interest Paid	0	0	0	-14	0	-2	-2	-2
Divd Paid (incl Tax) & Others	-2,134	-1,133	0	0	-925	-662	-1,088	-1,344
CF from Fin. Activity	**-2,134**	**-1,133**	**0**	**-14**	**-925**	**-664**	**-1,090**	**-1,345**
Inc/(Dec) in Cash	**-156**	**-221**	**-103**	**5,687**	**-65**	**821**	**847**	**336**
Add: Opening Balance	3,124	3,475	3,417	2,655	5,003	3,890	3,708	4,554
Closing Balance	**2,968**	**3,254**	**3,315**	**8,342**	**4,937**	**4,710**	**4,554**	**4,891**

NOTES

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://onlinereports.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 and also sought personal hearing. The matter is currently pending.

MOSL, it's 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:

a) managed or co-managed public offering of securities from subject company of this research report,
b) received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
c) received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.
d) 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 it's 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	MCX
▪ Analyst ownership of the stock	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 Advisors 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, 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 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: NSE (Cash): INB231041238; NSE (F&O): INF231041238; NSE (CD): INE231041238; BSE (Cash): INB011041257; BSE(F&O): INF011041257; BSE(CD); MSE(Cash): INB261041231; MSE(F&O): INF261041231; MSE(CD): INE261041231; 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