

MCX

BSE SENSEX S&P CNX 32,802 10,118

CMP: INR907 TP: INR1,300 (+43%)

Buy



Stock Info

| Bloomberg | MCX IN |
|-----------------------|------------|
| Equity Shares (m) | 51 |
| 52-Week Range (INR) | 1411 / 899 |
| 1, 6, 12 Rel. Per (%) | -8/-17/-49 |
| M.Cap. (INR b) | 46.2 |
| M.Cap. (USD b) | 0.7 |
| Avg Val, INRm | 417 |
| Free float (%) | 100.0 |

Financials Snapshot (INR b)

| Y/E Mar | 2017 | 2018E | 2019E |
|-------------|-------|-------|-------|
| Net Sales | 2.6 | 2.8 | 3.7 |
| EBITDA | 0.8 | 0.9 | 1.7 |
| PAT | 1.3 | 1.3 | 2.0 |
| EPS (INR) | 24.8 | 26.5 | 39.2 |
| Gr. (%) | 6.2 | 6.6 | 48.0 |
| BV/Sh (INR) | 266.4 | 262.0 | 281.9 |
| RoE (%) | 10.2 | 10.0 | 14.4 |
| RoCE (%) | 10.0 | 9.7 | 14.0 |
| P/E (x) | 36.5 | 34.3 | 23.1 |
| P/BV (x) | 3.4 | 3.5 | 3.2 |

Shareholding pattern (%)

| As On | Sep-17 | Jun-17 | Sep-16 | | | |
|----------------------------------|--------|--------|--------|--|--|--|
| Promoter | 0.0 | 0.0 | 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)



Volume triggers playing out

Reiterate Buy; increased competition remains a key risk

We hosted MCX at our recent Midcap Conference. In our discussions, we covered a range of topics such as volumes on the exchange, potential triggers, and competitive threats. Some notable highlights:

- Post demonetization, a series of problems has kept a revival in bullion at bay gold volumes have declined 47% and silver volumes have declined 31% in the last 12 months. However, there has been a strong volume uptick in base metals.
- The recently-launched options constitute 5% of total gold volumes; MCX expects ~20% contribution towards the end of FY18. A basket approval on the rest of the eligible contracts can be expected soon, as clearing and settlement on the first expiry has been seamless. MCX would begin charging on options once it has more commodities covered and once participation reaches a satisfactory level.
- While there are triggers in the form of new products and higher participation, threat also exists from increased competitive intensity on the Universal Exchange License proposition. Current SEBI criteria for the launch of options protect MCX; any relaxation would reverse the situation and pose additional risks.

Cash deployment – may contemplate owning technology in the future

MCX may consider various options for its technology agreement with Financial Technologies, including buying the platform out, once the contract runs down by FY22. While this could cost INR2b-2.5b, buying out would result in opex savings of up to INR500m per annum, before the cost of a few employees who will be brought on-board. With its current cash balance of INR13b, MCX has the ability to weather the storm in case of predatory pricing. Of the cash balance, INR2.5b is member margin. The clearing corporation subsidiary would need parking of INR3b, of which INR1b has been capitalized and INR2b would need to be put in.

Bullion volume still a drag

Post demonetization, a series of problems has kept a revival in bullion at bay – gold volumes have declined 47% and silver volumes have declined 31% in the last 12 months. GST-related uncertainty, low inventory and share loss of smaller players in the jewelry market have resulted in the share of bullion in overall volumes on MCX coming off to 24% as at November 2017 versus 29% in the previous year. On the other hand, base metals have been seeing a pickup in volumes across aluminum (14% YoY LTM), copper (4%), lead (18%), nickel (18%) and zinc (33%), which together contribute 42% of volume (versus 37% in the previous year).

Options pick-up reasonable so far

Earlier in October, MCX introduced options on its 1kg gold contract. While with one expiry down, options constitute 5% of the total gold volume, the company expects ~20% contribution towards the end of FY18. A basket approval on the rest of the eligible contracts can be expected soon, as clearing and settlement on the first expiry has been seamless. MCX would begin charging on options once it has more commodities covered and once participation reaches a satisfactory level. Pricing on

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

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

options is expected to yield 25-30% of that on futures contracts for the same underlying. Six more contracts on MCX will qualify for trading in options, and that should help drive volumes. The parallel in equities, if any cue (options volumes are ~5x futures volumes), is encouraging.

Other triggers to volumes

MCX is hopeful of increased liquidity in longer duration contracts as institutional participation increases, led by permission to AIFs and mutual funds for taking exposure in the commodities market. MCX is currently in discussions with 20+ AIFs, while only one has started to trade on MCX. Another positive recent development that would further propel the level of participation is that the RBI has opened up broking subscriptions for banks, which would extend reach and make it wider compared to the current network of national distributors.

Universal license a matter of time

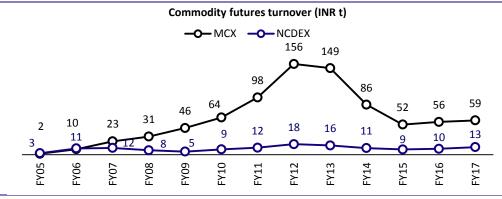
Universal exchanges are bound to happen, thanks to Finance Ministry plans. This would enable both BSE and NSE to enter into the commodities segment, thereby intensifying competition. Predatory pricing is likely, given that the commodities space is greenfield for the new entrants. MCX may have to take price cuts to maintain its share in the market. At the same time, a small offset is that this would also open up additional opportunities for MCX, of which, it intends to tap the currencies market.

Our views on MCX

- Regulator's drive in sync with our positive thesis: Our positive thesis on MCX stems from the belief 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 the exchange's liquidity will be an indicator of the progress. We expect FY19 volumes to increase to INR330b/day from FY17 levels of INR235b, driving earnings CAGR of 24% during this period. Our price target of INR1,300 discounts forward earnings by 30x. Maintain Buy. The multiple will be revisited basis the volumes ramp up once options expand to all commodities.
- Options criteria protect MCX's turf: MCX's monopolistic hold in the non-agricultural commodities was strengthened by the criteria for an exchange to launch options INR10b+ average daily turnover for a year in the commodity of interest. We believe this criterion protects MCX's turf amid likelihood of competition being allowed in the commodities derivatives segment.
- 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 the competition's agenda to undercut MCX's prevailing charges, thereby 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.

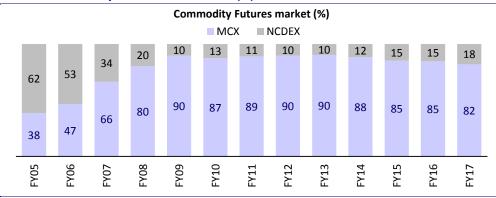
MOTILAL OSWAL MCX

Exhibit 1: Commodity futures turnover



Source: MOSL

Exhibit 2: Commodity futures market share (%)



Source: MOSL

Valuation and view

- Market leadership in winner-takes-all business: MCX has retained its market leadership position, with a share of 80-90% over FY09-16. Even in the most turbulent of months during FY13-14, when the parent's existence was in deep waters on issues of fraud around National Spot Exchange (NSEL), the exchange managed to retain its share. Additionally, it has remained without a fulltime MD & CEO since May 2014 when Mr Manoj Vaish resigned after just three months. This is a reflection of the winner-takes-all nature of the business model.
- Monopoly share in multiple commodities takes care of concentration risk: MCX's golden run in terms of volumes came at the time of significant run-up in gold and silver prices in FY12 and FY13. That was also perceived to be a risk, given that the share of volumes from these two commodities had exceeded 70%. However, presence in multiple commodities helps avert the concentration risk, and this was evidenced in FY15, when action in oil prices drove energy to exceed gold as the largest traded commodity at MCX by value.
- All eyes on reforms, as SEBI-FMC merger is complete: SEBI's merger with FMC is now complete, paving the way for much-awaited reforms in the ecosystem. The upside for MCX may yet be partly a function of reports around approvals to competition and entry of a credible global exchange materializing. We don't expect these at one-go or immediately, but rather in a gradual, phased manner over the course of the next calendar year. SEBI already has the ball rolling in terms of reform and expects universal licenses to be active through the course

- of the year. MCX could, in the meanwhile: [1] get a head start, and [2] strengthen itself with investment from CME.
- Volume reversal to pre-CTT levels is our base case: Our base case assumes gradual recovery in volumes to INR300b-360b in FY19E and INR380-440b in FY20E, closer towards pre-commodities transaction tax (CTT) average daily turnover of INR450b-500b. This compares with current ADT of INR200b-250b.
- Volumes have taken a temporary hit: Volumes suffered in 2HFY17 on account of demonetization's impact on gold volumes. Post this, a failure in pick-up has resulted out of tepid activity in the physical market. This time, it is compounded by uncertainty posed by GST. That said, 2QFY18 has seen a good pick-up in terms of volume. While bullion remains lower than pre-demonetization levels, a good contribution has been made by a rally in base metals. Options are on the verge of being launched, and will result in a further volume boost once they start trading.
- Multiplier effect on operational earnings from operating leverage, Buy: From 4QFY18, options on all commodities will also be launched, a key trigger for volumes. This should kickstart the recovery in volumes, which should continue with the entry of new participants such as FIs and new products such as indices. This drives our expectation of healthier revenue growth over FY17-20 (18%) and consequently driving earnings growth (22%). Our price target of INR1,300 discounts forward earnings by 30x, implying ~40% upside. Buy.

Key triggers

- Pick-up in volume led by the introduction of new products like options /indices
- Introduction of new participants like banks/FIs
- High volatility in key commodities like bullion/crude

Key risk – increased competition from equity exchanges

One of the implications of FMC's merger with SEBI is that stock exchanges will be able to become universal exchanges, where equities, debt instruments and currencies are traded under the same roof as commodity derivatives. Stock exchanges already have depositories and clearing corporations that will cater to the needs of commodity traders as well. If NSE enters the commodities segment, MCX could see stiff competition, which may impair both market share and profit margins.

Financials and Valuations

| Y/E March | FY14 | FY15 | FY16 | FY17 | FY18E | FY19E | FY20E |
|------------------------------|--------|----------|--------|--------|--------|--------|-------------|
| Sales | 3,407 | 2,225 | 2,349 | 2,641 | 2,812 | 3,717 | 4,311 |
| Change (%) | (34) | (35) | 6 | 12 | 6 | 32 | 16 |
| | | | | | | | |
| Cost of Services | 935 | 733 | 779 | 1,071 | 1,194 | 1,258 | 1,317 |
| SG&A Expenses | 1,014 | 616 | 804 | 726 | 687 | 765 | 815 |
| Provisions | | | | | | | |
| EBITDA | 1,457 | 876 | 766 | 844 | 931 | 1,693 | 2,178 |
| % of Net Sales | 43 | 39 | 33 | 32 | 33 | 46 | 51 |
| Depreciation | 343 | 259 | 246 | 186 | 191 | 191 | 194 |
| Interest | 11 | 14 | 0 | 2 | - | - | - |
| Other Income | 993 | 1,098 | 977 | 1,164 | 1,083 | 1,162 | 1,194 |
| EO Item (net) | - | - | 667 | - | - | - | - |
| PBT | 2,097 | 1,701 | 831 | 1,821 | 1,823 | 2,664 | 3,179 |
| Tax | 569 | 450 | 413 | 512 | 473 | 665 | 794 |
| Rate (%) | 27 | 26 | 50 | 28 | 26 | 25 | 25 |
| PAT | 1,528 | 1,251 | 418 | 1,309 | 1,350 | 1,998 | 2,385 |
| Extraordinary | 1,320 | 1,231 | 410 | 1,303 | 1,330 | 1,550 | 2,303 |
| Net Income | 1,528 | 1,251 | 418 | 1,309 | 1,350 | 1,998 | 2,385 |
| Change (%) | (53) | (18) | (67) | 213 | 3 | 48 | 19 |
| | (55) | (10) | (0.) | | | | |
| Balance Sheet | | | | | | (IN | IR Million) |
| Y/E March | FY14 | FY15 | FY16E | FY17E | FY18E | FY19E | FY19E |
| Share Capital | 510 | 510 | 510 | 510 | 510 | 510 | 510 |
| Reserves | 10,931 | 11,512 | 11,529 | 13,078 | 12,853 | 13,868 | 16,277 |
| Net Worth | 11,441 | 12,022 | 12,039 | 13,588 | 13,363 | 14,378 | 16,787 |
| SGF | 1,720 | 1,871 | 1,879 | 1,705 | 1,731 | 1,731 | 1,705 |
| Loan & other long term liab. | 449 | 343 | 282 | 420 | 452 | 452 | 420 |
| Capital Employed | 13,610 | 14,236 | 14,201 | 15,713 | 15,546 | 16,561 | 18,912 |
| Net Block | 1,735 | 1,553 | 1,430 | 1,633 | 1,748 | 1,818 | 1,766 |
| CWIP | - | - | - | - | - | - | - |
| Other LT Assets | 281 | 281 | 281 | 281 | 281 | 281 | 281 |
| Investments | 132 | 132 | 2,230 | 4,404 | 4,428 | 4,428 | 4,428 |
| Curr. Assets | 15,267 | 16,278 | 14,227 | 12,340 | 13,739 | 14,422 | 16,391 |
| Current Investments | 10,766 | 12,795 | 8,511 | 7,544 | 8,868 | 8,868 | 7,544 |
| Debtors | 90 | 107 | 42 | 28 | 88 | 108 | 114 |
| Cash & Bank Balance | 3,417 | 2,655 | 5,003 | 3,890 | 3,708 | 4,116 | 7,133 |
| Loans & Advances | 676 | 456 | 268 | 3 | 9 | 11 | 11 |
| Other Current Assets | 319 | 265 | 404 | 875 | 1,067 | 1,318 | 1,589 |
| Current Liab. & Prov | 3,805 | 4,007 | 3,967 | 2,945 | 4,650 | 4,387 | 3,954 |
| Net Current Assets | 11,462 | 12,271 | 10,260 | 9,395 | 9,089 | 10,035 | 12,437 |
| | _, | , | -, | -, | -, | -, | _, |
| Application of Funds | 13,610 | 14,236 | 14,201 | 15,713 | 15,546 | 16,561 | 18,912 |

E: MOSL Estimates

Financials and Valuations

| Ratios | | | | | | | |
|---|--|--|--|--|---|---|--|
| Y/E March | FY14 | FY15E | FY16 | FY17 | FY18E | FY19E | FY19E |
| Basic (INR) | | | | | | | |
| EPS | 30.0 | 24.6 | 23.4 | 24.8 | 26.5 | 39.2 | 46.8 |
| Cash EPS | 36.9 | 29.6 | 13.0 | 29.3 | 30.2 | 42.9 | 50.6 |
| Book Value | 225.4 | 235.8 | 236.1 | 266.4 | 262.0 | 281.9 | 329.2 |
| DPS | 10.2 | 10.2 | - | 15.3 | 20.4 | 20.4 | 20.4 |
| Payout % | 39.0 | 48.5 | - | 70.7 | 91.4 | 61.7 | 51.7 |
| Valuation (x) | | | | | | | |
| P/E | 30.2 | 36.9 | 38.8 | 36.5 | 34.3 | 23.1 | 19.4 |
| Cash P/E | 24.6 | 30.6 | 69.6 | 30.9 | 30.0 | 21.1 | 17.9 |
| EV/EBITDA | 22.0 | 35.4 | 43.0 | 41.6 | 36.5 | 19.8 | 15.3 |
| EV/Sales | 9.4 | 13.9 | 14.0 | 13.3 | 12.1 | 9.0 | 7.7 |
| Price/Book Value | 4.0 | 3.8 | 3.8 | 3.4 | 3.5 | 3.2 | 2.8 |
| Dividend Yield (%) | 1.3 | 1.3 | - | 2.0 | 2.7 | 2.7 | 2.7 |
| Profitability Ratios (%) | | | | | | | |
| RoE | 13.3 | 10.7 | 3.5 | 10.2 | 10.0 | 14.4 | 15.3 |
| RoCE | 12.8 | 10.4 | 8.8 | 10.0 | 9.7 | 14.0 | 14.9 |
| RoIC | (145.9) | (50.7) | (99.5) | 19.1 | 15.1 | 34.4 | 38.1 |
| Turnover Ratios | (/ | (= -) | () | | | | |
| Debtors (Days) | 10 | 17 | 7 | 4 | 11 | 11 | 10 |
| Fixed Asset Turnover (x) | 19 | 12 | 13 | 14 | 14 | 18 | 20 |
| Cook Flour Statement | | | | | | | (INID NAIII: - m) |
| Cash Flow Statement Y/E March | FY14 | FY15E | FY16E | FY17E | FY18E | FY19E | (INR Million) FY19E |
| CF from Operations | 1,949 | 617 | 705 | 647 | 768 | 1,334 | 1,692 |
| Cash for Working Capital | (1,565) | 503 | 22 | (1,251) | 1,505 | (537) | (845) |
| Net Operating CF | 385 | 1,120 | 727 | (604) | 2,274 | 797 | 847 |
| | | -, | | 10041 | | | |
| | | | | (004) | | | |
| Net Purchase of FA | (59) | (9) | (200) | (345) | (237) | (261) | (287) |
| Net Purchase of FA Free Cash Flow | (59) 325 | (9) 1,111 | (200) 527 | | (237) 2,036 | | (287) 560 |
| | | | | (345) | | (261) | |
| Free Cash Flow | 325 | 1,111 | 527 | (345) (950) | 2,036 | (261) 536 | 560 |
| Free Cash Flow Net Purchase of Invest. | 325 586 | 1,111 (1,214) | 527 5,174 | (345) (950) 1,810 | 2,036 (551) | (261) 536 855 | 560 886 |
| Free Cash Flow Net Purchase of Invest. Net Cash from Invest. | 325 586 527 | 1,111 (1,214) (1,222) | 527 5,174 4,974 | (345) (950) 1,810 1,464 | 2,036 (551) | (261) 536 855 | 560 886 |
| Proc. from equity issues Proceeds from LTB/STB | 325 586 527 | 1,111 (1,214) (1,222) | 527 5,174 4,974 | (345) (950) 1,810 1,464 | 2,036 (551) (789) | (261) 536 855 594 | 560 886 599 |
| Free Cash Flow Net Purchase of Invest. Net Cash from Invest. Proc. from equity issues Proceeds from LTB/STB Dividend Payments | 325 586 527 - - (1,133) | 1,111 (1,214) (1,222) | 527 5,174 4,974 - - | (345) (950) 1,810 1,464 | 2,036 (551) (789) - - (662) | (261) 536 855 594 | 560 886 599 |
| Proc. from equity issues Proceeds from LTB/STB | 325 586 527 | 1,111 (1,214) (1,222) | 527 5,174 4,974 - - - | (345) (950) 1,810 1,464 | 2,036 (551) (789) | (261) 536 855 594 | 560 886 599 |
| Proc. from equity issues Proceeds from LTB/STB Dividend Payments Cash Flow From Fin. | 325 586 527 - - (1,133) | 1,111 (1,214) (1,222) - - - | 527 5,174 4,974 - - - | (345) (950) 1,810 1,464 | 2,036 (551) (789) - - (662) | (261) 536 855 594 | 560 886 599 |
| Free Cash Flow Net Purchase of Invest. Net Cash from Invest. Proc. from equity issues Proceeds from LTB/STB Dividend Payments Cash Flow from Fin. Others Net Cash Flow | 325 586 527 - (1,133) (1,133) - (221) | 1,111 (1,214) (1,222) - - - - (103) | 527 5,174 4,974 - - - - 5,701 | (345) (950) 1,810 1,464 - - (925) (925) | 2,036 (551) (789) - - (662) (662) | (261) 536 855 594 | 560 886 599 - (1,171) (1,171) |
| Free Cash Flow Net Purchase of Invest. Net Cash from Invest. Proc. from equity issues Proceeds from LTB/STB Dividend Payments Cash Flow from Fin. Others | 325 586 527 - (1,133) (1,133) | 1,111 (1,214) (1,222) - - - - | 527 5,174 4,974 - - - | (345) (950) 1,810 1,464 - - (925) (925) | 2,036 (551) (789) - - (662) (662) | (261) 536 855 594 - (981) (981) | 560 886 599 - (1,171) (1,171) |

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. Mohanrai 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, 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:

- 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, b)
- 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 Nο

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.

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: 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. (MOAMC): 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