

Estimate change
TP change
Rating change


Bloomberg	MCX IN
Equity Shares (m)	51
M.Cap.(INRb)/(USD\$b)	61.8 / 0.8
52-Week Range (INR)	2135 / 1142
1, 6, 12 Rel. Per (%)	-7/-26/-32
12M Avg Val (INR M)	1075

Financials & Valuations (INR b)

Y/E Mar	2022	2023E	2024E
Sales	3.7	4.6	5.3
EBIT Margin (%)	38.0	49.8	54.5
PAT	1.4	2.0	2.5
EPS (INR)	28.2	40.4	50.2
EPS Gr. (%)	(36.2)	43.5	24.0
BV/Sh. (INR)	278.1	304.7	337.1

Ratios

RoE (%)	10.2	13.8	15.6
RoCE (%)	11.2	14.5	16.1

Valuations

P/E (x)	43.0	29.9	24.1
P/BV (x)	4.4	4.0	3.6
EV/EBITDA (x)	28.0	16.5	12.6
Div Yield (%)	3.0	3.5	3.5

Shareholding pattern (%)

As On	Mar-22	Dec-21	Mar-21
Promoter	0.0	0.0	0.0
DII	48.3	46.4	40.9
FII	26.7	31.5	36.7
Others	25.0	22.1	22.4

FII Includes depository receipts

CMP: INR 1,211
TP: INR 1,500 (+24%)
Buy
Strong operational performance, an exceptional item impacts PAT

- Overall futures ADT improved by 4% QoQ and options ADT jumped by 70%, which **resulted in a 19% rise in revenue ahead of our estimate**. EBIT margin stood at 47.4% as compared to 35.2%/39.3% in 3QFY22/4QFY21, led by operating leverage benefits.
- Volumes from futures declined by 22% YoY in 4QFY22 as only the first phase of the new margin norms were implemented in 4QFY21.
- While option volumes kicked off from 1Q, the company started levying transaction charges only from 3QFY22.
- While staff costs were higher by 3% YoY, it declined by 11% QoQ. Software support charges grew in line with revenue growth. **Overall EBIT, at INR505m, was better than our forecasts.**
- Net profit stood at INR366m, a decline of 5% YoY and 7% QoQ. **PAT was lower than our estimate, owing to a one-time write-off of INR204m due to impairment of intangible assets under development.**
- In FY22, ADT was higher by 7%, in spite of the implementation of margin norms, as option volumes surged on the exchanges. Overall revenue fell 6% as the revenue from options was available only in 2HFY22. EBIT margin fell to 38% as compared to 41.8% in FY21 owing to operating deleverage in the Futures segment. As a result, net profit dipped by 36% YoY to INR1.4b (also impacted by an exceptional item in 4QFY22).
- The board has approved a dividend of INR17.5 per share.

Healthy volume growth driven by Crude Oil

- Total volumes grew 29% YoY and 21% QoQ to INR26t in 4QFY22.
- In 4QFY22, Crude Oil volumes saw a sharp jump (over 4x YoY) to INR12t, whereas Gold/Silver/Commodity volumes fell by 15%/34%/36%.

Key takeaways from the management commentary

- MCX is awaiting approval from the regulators (Sebi and CERC) to launch Electricity derivatives. The recently introduced cap of INR12/unit is a big challenge for the same. The management expects the Gold spot exchange to go live by Aug-Sep'22. However, the GST slab rate needs to be resolved before the launch of the same.

Sustainability of volume key to growth

- We remain positive on a gradual increase in ADT on the back of surging option volumes, amid rising volatility in commodity prices. Progress on other growth initiatives, such as a gold spot exchange and electricity futures face certain challenges. On the cost front, transition to TCS from 63 moons will drive savings and lead to a relatively strong (25%) APAT CAGR over FY22-24E.
- We like MCX for its near-monopoly in the Indian Commodity Exchange segment (92% market share). We value the stock at a multiple of 30x FY24E EPS. Our TP of INR1,500/share implies a 24% upside. We reiterate our Buy rating.

Prayesh Jain - Research Analyst (Prayesh.Jain@MotilalOswal.com)

Research Analyst: Nitin Aggarwal (Nitin.Aggarwal@MotilalOswal.com) | Urmila Bohra (Urmila.bohra@motilalosal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report.

 Motilal Oswal research is available on www.motilalosal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

Quarterly performance

(INR m)

	FY21				FY22				FY21	FY22	FY22E	Var. (%/bp)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Sales	730	1,197	1,009	970	876	832	896	1,065	3,906	3,668	963	10.5
QoQ Gr. (%)	-30.7	63.9	-15.7	-3.9	-9.7	-5.0	7.6	18.9	4.4	-6.1	7.6	1130bp
Staff Costs	178	202	195	177	208	206	204	182	752	800	208	(12.3)
Other expenses	287	338	327	351	300	288	309	350	1,303	1,247	326	7.5
Depreciation	48	52	59	61	67	66	67	27	221	227	68	(59.8)
EBIT	217	605	428	381	302	272	315	505	1,631	1,394	362	39.5
Margin (%)	29.7	50.5	42.4	39.3	34.5	32.7	35.2	47.4	41.8	38.0	37.6	987bp
Interest Costs	1	1	1	1	1	0	1	1	2	3	1	
Other Income	497	178	248	115	213	161	145	146	1,038	665	141	3.7
PBT bef. Exceptional items	714	783	675	495	515	432	460	650	2,667	2,057	502	29.6
Tax	150	197	-42	110	116	100	111	79	415	407	126	(36.8)
Rate (%)	21.1	25.2	-6.2	22.3	22.5	23.2	24.1	12.2	15.6	19.8	25.0	-1283bp
PAT	564	586	718	384	398	327	344	366	2,252	1,435	376	(2.6)
QoQ Gr. (%)	-25.2	3.8	22.6	-46.5	3.5	-17.9	5.2	6.6	-4.8	-36.3	9.5	
EPS (INR)	11.1	11.5	14.1	7.5	7.8	6.4	6.8	7.2	44.2	28.1	7.4	(2.6)

Y/E March

	FY21				FY22E				FY21	FY22
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
ADT (INR b)	227	381	327	318	280	258	246	396	327	352
Volumes (INR t)										
Gold	4.7	7.4	5.3	4.7	3.6	3.6	3.2	4.0	22.1	14.4
Silver	3.6	9.1	6.1	5.2	4.5	3.3	3.4	3.4	24.0	14.6
Crude oil	2.1	1.7	1.4	2.2	3.3	5.5	7.8	12.0	7.5	28.6
Volumes (YoY %)										
Gold	107%	29%	33%	-27%	-24%	-51%	-39%	-15%	20%	-35%
Silver	109%	174%	113%	44%	25%	-64%	-44%	-34%	109%	-39%
Crude oil	-66%	-80%	-83%	-78%	56%	219%	442%	434%	-78%	279%



Key takeaways from the management commentary

Business

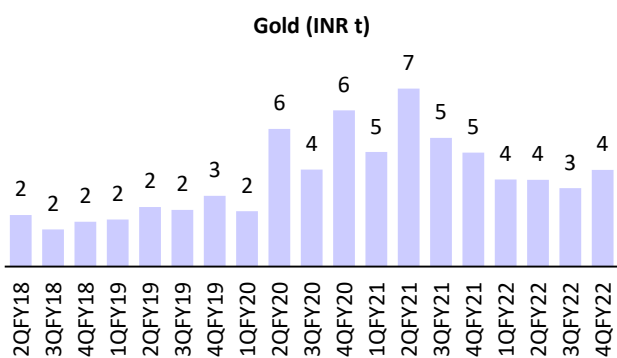
- Options on Futures contracts have seen strong traction.
- It has received additional contract approvals (like Gold options), but a lesser duration (monthly expiry on bi-monthly futures).
- The company has 0.5m active clients in FY22, which was a marginal improvement over FY21.
- Concentration of the top 10 members stood at 62.65%. The share of algo trading stood at 48% v/s 41% in FY21. The increase in the share of algo trading was on the back of the addition of two international players, one of which is very active.
- The share of Mobile trading has fallen to 41% from 47% in FY21, with people returning back to work.
- MCX is awaiting approval from the regulators (Sebi and CERC) to launch Electricity derivatives. The recently introduced cap of INR12/unit is a big challenge for the same.
- The management expects the Gold spot exchange to go live by Aug-Sep'22. However, the GST slab rate needs to be resolved before the launch of the same. e-gold receipts have not yet been launched by the BSE due to the same issue.

Financials

- Options on Futures contracts have seen strong traction.
- Revenue breakup**

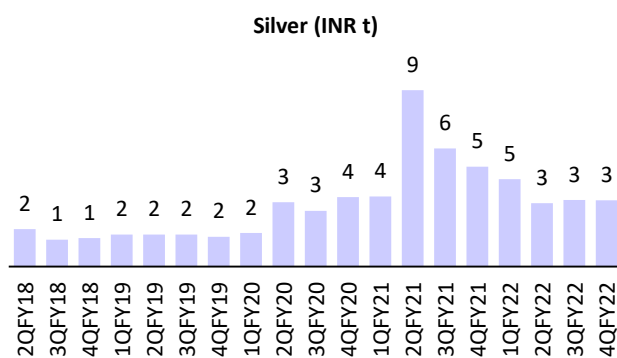
- In FY22, membership fees stood at INRINR30m, transaction charges on options stood at INR320m, and data fees stood at INR50m.
- In 4QFY22, membership fees were a little lower than INR10m, transaction charges on options stood at INR220m, and data fees were more than INR10m.
- **Depreciation:** The useful life of a few assets was reworked in 4QFY22, and accordingly depreciation saw a sharp decline.
- **Software support charges:** There is a fixed monthly component of INR12.4m and variable payment is based on turnover payable to 63 moons. In 4QFY22, energy products saw good volumes. It has created a provision of INR9m for variable software charges to be paid. The management is yet to take a call if any payment is to be paid to the vendor (CME) over and above this commitment.
- **An exceptional item:** This is on the back of a dispute with a London-based software firm to develop a trading system for the spot market. While currently no use case exists, any future developments can utilize these codes.
- **Employee cost:** The higher employee cost was due to senior level recruitment and no hike in FY21. However, a sequential decline was on the back of attrition.
- The **tax rate** will be ~22% in FY23.
- **Tech cost paid to TCS:** There will be no charges levied till Sep'23. After Oct'23, a fixed AMC and software upgradation charges will be paid, but the same is expected to be less than INR100m. Upfront cost paid for development will be part of intangible assets and will therefore lead to higher depreciation.

Exhibit 1: Gold volumes remain rangebound



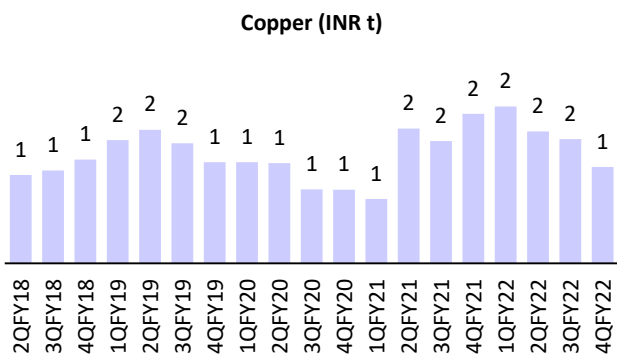
Source: Company, MOFSL

Exhibit 2: Sustained silver volumes



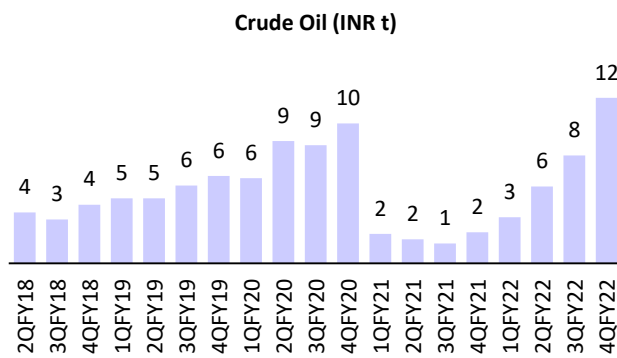
Source: Company, MOFSL

Exhibit 3: Copper volumes remain muted



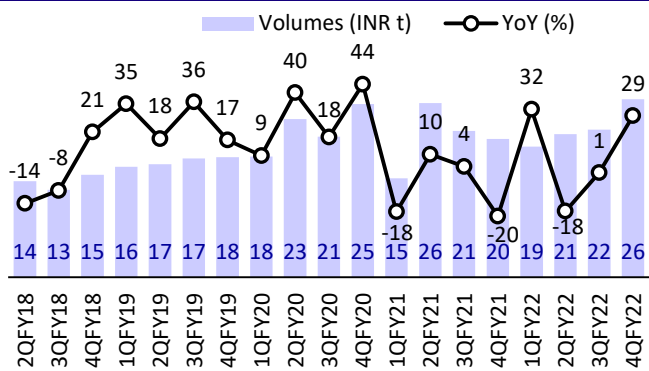
Source: Company, MOFSL

Exhibit 4: A sharp jump in Crude Oil volumes



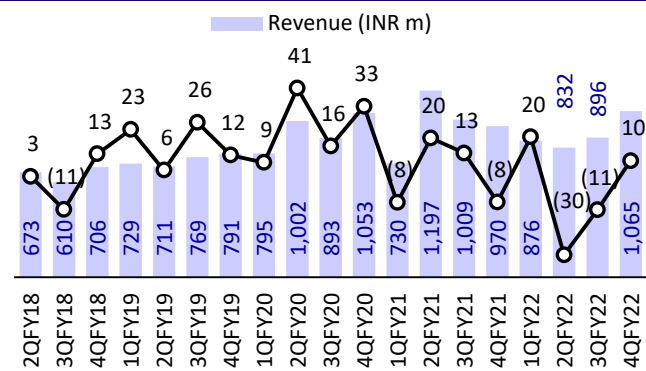
Source: Company, MOFSL

Exhibit 5: Overall volumes grew by 29% YoY...



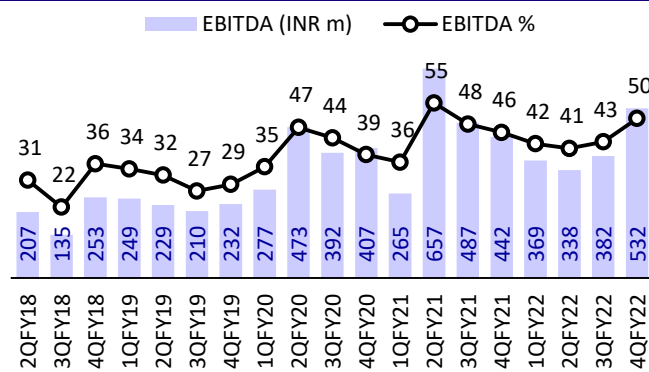
Source: MOFSL, Company

Exhibit 6: ...translating into strong revenue growth



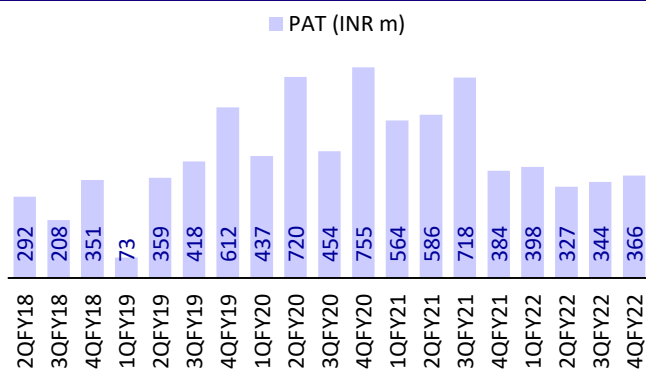
Source: MOFSL, Company

Exhibit 7: Margin continues to trend upwards



Source: MOFSL, Company

Exhibit 8: Trend in PAT



Source: MOFSL, Company

Exhibit 9: Revisions to our estimates

Changes in our estimates	Revised		Earlier		Change (%)	
	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
Volumes (INR t)	122	143	121	147	1.5	(2.9)
Volume growth (%)	39.3	16.8	39.1	22.1	0.2	(5.3)
Revenue (INR m)	4,634	5,325	4,596	5,600	0.8	(4.9)
EBITDA margin (%)	56.9	61.3	53.4	59.2	340bp	200bp
EPS (INR)	40.4	50.2	41.8	53.4	(3.2)	(6.0)

Source: MOFSL

Financials and valuations

Income statement							(INR m)	
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Sales	2,594	2,598	3,001	3,742	3,906	3,668	4,634	5,325
Change (%)	10	0	15	25	4	(6)	26	15
Cost of Services	1,071	1,174	1,338	1,463	1,388	1,440	1,247	1,168
SG&A Expenses	723	679	743	730	667	607	753	894
Provisions								
EBITDA	801	745	920	1,549	1,851	1,621	2,635	3,263
As a percentage of Net Sales	31	29	31	41	47	44	57	61
Depreciation	186	167	154	182	221	227	327	359
Interest	2	-	-	2	2	3	-	-
Other Income	1,164	884	986	1,289	1,038	665	699	772
EO Item (net)	-	-	238	-	-	204	204	204
PBT	1,777	1,462	1,513	2,654	2,667	1,853	2,803	3,471
Tax	512	377	75	389	415	407	752	919
Rate (%)	29	26	5	15	16	22	27	26
Minority Interest	-	-	(24)	(99)	(1)	12	11	5
PAT	1,266	1,085	1,462	2,365	2,252	1,435	2,040	2,547
Extraordinary								
Net Income	1,266	1,085	1,462	2,365	2,252	1,435	2,040	2,547
Change (%)	198	(14)	35	62	(5)	(36)	42	25

Balance Sheet							(INR m)	
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Share Capital	510	510	510	510	510	510	510	510
Reserves	13,078	13,253	11,999	13,084	13,672	13,671	15,024	16,678
Net Worth	13,588	13,763	12,509	13,594	14,182	14,181	15,534	17,188
SGF	1,705	1,806	3,298	4,098	4,692	5,256	5,256	5,256
Loan and other long-term liab.	420	408	414	546	576	658	714	775
Capital Employed	15,713	15,977	16,221	18,237	19,451	20,095	21,504	23,219
Net Block	1,633	3,624	3,451	6,094	7,395	5,060	5,053	5,014
Other LT Assets	281	281	281	281	281	281	281	281
Investments	4,404	5,316	4,839	5,943	6,066	4,440	4,440	4,440
Curr. Assets	12,340	10,393	12,175	15,028	11,283	18,225	20,432	23,057
Current Investments	7,544	8,878	5,824	6,618	5,985	7,135	7,135	7,135
Debtors	28	63	60	65	90	115	126	139
Cash and Bank Balance	3,890	596	5,346	7,593	4,261	9,755	11,828	14,306
Loans and Advances	3	3	2	2	1	222	245	269
Other Current Assets	875	854	943	751	948	998	1,098	1,208
Current Liab. and Prov.	2,945	3,636	4,524	9,109	5,575	7,911	8,702	9,572
Net Current Assets	9,395	6,757	7,651	5,919	5,709	10,314	11,730	13,485
Application of Funds	15,713	15,977	16,221	18,237	19,451	20,095	21,504	23,219

Financials and valuations

Ratios

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Basic (INR)								
EPS	24.8	21.2	28.7	46.4	44.2	28.2	40.4	50.2
Cash EPS	28.5	24.5	31.2	48.0	48.5	32.8	46.6	57.1
Book Value	266.4	269.9	245.3	266.6	278.1	278.1	304.7	337.1
DPS	15.3	17.3	20.4	30.6	28.2	30.5	35.7	35.7
Payout (%)	73.1	96.7	85.7	81.6	75.9	127.6	105.2	84.6
Valuation (x)								
P/E	46.7	54.6	40.5	25.0	26.3	41.2	29.9	24.1
Cash P/E	40.8	47.3	37.1	24.2	23.9	35.4	26.0	21.2
EV/EBITDA	60.0	67.2	52.6	29.4	26.7	26.4	16.5	12.6
EV/Sales	18.5	19.2	16.1	12.2	12.7	11.7	9.4	7.7
Price/Book Value	4.4	4.3	4.7	4.4	4.2	4.2	4.0	3.6
Dividend Yield (%)	1.6	1.8	2.1	3.1	2.9	3.1	3.5	3.5
Profitability Ratios (%)								
RoE	9.9	7.9	11.0	17.4	16.2	10.2	13.8	15.6
RoCE	9.6	7.7	12.4	16.8	15.6	11.2	14.5	16.1

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd.. (PIMPL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions. Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts"), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co.Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company
- received compensation/other benefits from the subject company in the past 12 months
- other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

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

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579;PMS:INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP00000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: na@motilaloswal.com, Contact No.:022-71881085.

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