

MCX

Estimate change	1
TP change	1
Rating change	—

MCX IN
51
76.2 / 0.9
2022 / 1142
16/5/-9
770

Financials & Valuations (INR b)

Y/E Mar	2023E	2024E	2025E
Sales	5.2	6.1	7.0
EBIT Margin (%)	49.1	59.5	61.2
PAT	2.5	3.3	3.9
EPS (INR)	49.5	65.3	75.7
EPS Gr. (%)	76.1	31.9	15.9
BV/Sh. (INR)	288.0	301.0	316.2
Ratios			
RoE (%)	17.5	22.2	24.5
Valuations			
P/E (x)	30.2	22.9	19.7
P/BV (x)	5.2	5.0	4.7
Div Yield (%)	2.3	2.3	2.3
·			

Shareholding pattern (%)

As On	Sep-22	Jun-22	Sep-21
Promoter	0.0	0.0	0.0
DII	50.6	48.6	45.4
FII	23.6	27.0	32.7
Others	25.8	24.4	21.9

FII Includes depository receipts

CMP: INR 1,494 TP: INR 1,800 (+20%) Buy

Healthy business outlook sans the software transition issue

- Net profit grew 96% YoY and 55% QoQ to INR641m. PAT came in 14% above our estimate, led by a beat in revenue, EBIT, other income, and the tax rate.
- Overall volumes improved by 25% QoQ and 71% YoY to INR35.9t. While volumes were in line, realizations in Options have been better than expected.
- Volumes from Futures fell 9% YoY and 6% QoQ to INR15.5t in 2QFY23, while the same for Options grew a strong 63% QoQ at INR20.4t.
- Staff cost was higher by 11% YoY, but flat QoQ at INR229m. Software support charges saw a higher growth of 45% YoY and 16% QoQ, led by an increase in volumes.
- Overall EBIT grew 38% QoQ and 120% YoY to INR598m, better than our forecasts by 7%.
- EBIT margin stood at 47% v/s 32.7%/40% in 2QFY22/1QFY23, led by the incremental revenue from Options.
- Other income grew 14% YoY and 97% QoQ to INR182m (better than our forecast).

Energy and bullion drive overall volume growth

- Volumes in the Energy segment rose 155% YoY, led by a 299%/73% jump in crude oil/natural gas volumes.
- Bullion volumes rose 15% YoY due to a 24%/6% rise in gold/silver volumes.
- Base metal volumes were lower by 29% YoY as nickel volumes were nil in 2QFY23 v/s INR1.2t in 2QFY22. Copper/lead volumes were also lower by 10%/47%.

Key takeaways from the management commentary

- The TCS software should go live by the end of 3QFY23. In the intervening period, MCX has extended its contract with 63 moons at an exorbitant rate.
- Option volumes should remain strong. The launch of monthly options on bimonthly gold Futures will further drive growth.

Raise our estimates to factor in better realizations, maintain our Buy rating

- We remain positive on a gradual increase in ADT, led by surging Option volumes, amid rising volatility in commodity prices. New avenues (gold spot exchange and electricity Futures) will drive volumes in the longer term.
- We like MCX for its near-monopoly in the Indian Commodity Exchange segment (92% market share). We have upgraded our FY23/FY24 EPS estimate by 11%/12% to factor in a better than expected realization in Option volumes. To build in exorbitant costs of the 63 moons contract for 3QFY23, we have assumed a 38% QoQ jump in software support charges. We value the stock at a multiple of 26x Sep'24 EPS. We maintain our Buy rating with a revised TP of INR1,800/share.

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

Quarterly performance												(INR m)
		FY	22			FY23				FY23E	FY23E	Var.
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			2QE	(%/bp)
Sales	876	832	896	1,065	1,088	1,274	1,380	1,464	3,668	5,206	1,210	5.3
YoY growth (%)	20.0	-30.5	-11.2	9.8	24.2	53.1	54.1	37.5	-6.1	41.9	45.5	765bp
Staff costs	208	206	204	182	227	229	229	211	800	896	220	3.9
Other expenses	300	288	309	350	368	389	473	270	1,247	1,500	372	4.6
EBITDA	369	338	382	532	493	656	678	983	1,621	2,810	618	6.2
Depreciation	67	66	67	27	58	58	59	82	227	256	59	(2.0)
EBIT	302	272	315	505	435	598	619	902	1,394	2,554	559	7.0
Margin (%)	34.5	32.7	35.2	47.4	40.0	47.0	44.9	61.6	38.0	49.1	46.2	77bp
Interest costs	1	0	1	1	1	0	0	2	3	3	1	-100
Other income	213	161	145	146	93	182	177	174	665	626	149	22.1
PBT bef. exceptional items	515	432	460	650	527	781	796	1,074	2,057	3,177	708	10.3
Tax	116	100	111	79	106	135	159	236	407	635	142	(5.0)
Rate (%)	22.5	23.2	24.1	12.2	20.1	17.2	20.0	22.0	19.8	20.0	20.0	-277bp
PAT	398	327	344	366	415	641	632	839	1,435	2,527	561	14.2
YoY growth (%)	-29.5	-44.2	-52.1	-4.7	4.3	96.4	83.9	128.9	-36.3	76.1	71.9	
EPS (INR)	7.8	6.4	6.8	7.2	8.2	12.6	12.4	16.5	28.1	49.5	11.0	14.2
Total volumes (INR t)	19.2	21.0	21.6	26.1	28.7	35.9	38.9	41.8	87.9	145.3	35.9	-
QoQ growth (%)	-5.5	9.7	2.7	21.1	9.8	25.4	8.1	7.6			25.4	
YoY growth (%)	32.0	-17.7	0.6	28.9	49.6	71.2	80.3	60.2	7.6	65.3	71.2	

E: MOFSL estimates



Key takeaways from the management commentary Software transition to TCS

- MCX has started user acceptance testing (UAT), and is planning to launch mock and a parallel run in early Nov'22. It is hopeful of going live by the end of 3QFY23 as it is the management's topmost priority. A penalty clause exists in the TCS contract.
- The extension of the 63 moons contract for 3QFY23 has been inked at an exorbitant rate. However, the amount was not disclosed for competitive reasons.
- In 1HFY23, INR280m was paid to 63 moons.

Business

- Transaction charges: In 2Q/1QFY23, transaction charges on Futures stood at INR640m/INR660m. The same for Options stood at INR430m/INR270m.
- Trading UCCs: In 1HFY23, UCCs stood at 374k v/s 313k YoY. In 2QFY23, UCCs stood at 291k v/s 219k YoY. Around 237k/213k UCCs were traded in Futures/Options.
- Outlook on Option volumes: Options are the future in all markets. Hence, MCX is gradually launching products. The margin on underlying Futures are higher than that in Options. Recent traction in volumes for crude oil Options has been on the back of higher margin. It is similar to natural gas. A monthly Options contract in gold will be introduced, which will halve the premium from current levels and influence volume growth.
- As per FPI regulations, MCX can participate if it chooses the mode of no delivery. However, if it wants to adopt a cash and carry model, GST registration is required, which is a hindrance.
- Gold v/s crude oil Options: While traders are common between crude oil and gold, the volumes of crude oil are higher given the small size of the contract. The margin on crude oil Futures is 30-35%. In the last five days ahead of the

MOTILAL OSWAL MCX

- contract's expiry, margin increases by 5% daily. In the case of gold Futures, the underlying margin is 12% and the increase is similar to that in crude oil.
- The company will try to launch products (monthly gold options) within the first month of shifting to the TCS software.
- Up to INR50m of premium turnover, transaction charges are INR50 per INR100k of premium. Above that, it stands at INR40 per INR100k of premium.
- Approvals are not in place for the steel contracts yet, while electricity futures will be launched soon.

Financials

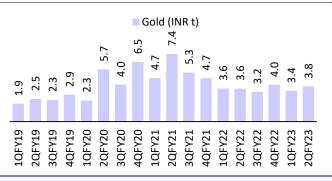
- Other income: MCX is moving its INR9b investment book to YTM kind of products, including perpetual and state development bonds, where returns are higher than short-term funds. All these investments can be kept in the HTM category, and there will be no MTM impact on these investments.
- Current mix: Around 45% in these kinds of bonds; 5% in ETFs, which are maturing in Apr'23; and the rest is in short-term investments, which are being evaluated on a regular basis to shift to YTM kind of products.
- The tax rate should sustain at these levels. For FY23, the management expects the tax rate to be 23%.

Exhibit 1: Volume-wise performance

EXHIBIT 1. VOIGING-WISC	1QFY21	2QFY21	3QFY21	4QFY21	1QFY22	2QFY22	3QFY22	4QFY22	1QFY23	2QFY23
Volumes (INR b)	10,121	20,121	30,1121	70,1121	10,1122	20,122	30,1122	701122	10,1125	20,125
Agro Commodities	141	199	280	389	383	269	286	183	118	42
Base Metals	2,378	4,488	4,332	4,467	4,427	3,743	3,544	3,376	2,131	2,643
Bullion	8,343	16,767	11,421	10,228	8,099	6,844	6,677	7,417	7,013	7,863
Energy	3,643	4,409	5,198	5,479	6,040	9,944	10,798	14,926	19,322	25,334
Index	3,043	73	204	207	206	200	252	201	72	62
Total	14,505	25,936	21,435	20,769	19,155	21,001	21,558	26,104	28,655	35,944
Mix (%)	14,303	23,330	21,433	20,703	13,133	21,001	21,330	20,104	20,033	33,344
Agro Commodities	1	1	1	2	2	1	1	1	0	0
Base Metals	16	17	20	22	23	18	16	13	7	7
Bullion	58	65	53	49	42	33	31	28	24	22
	25	17	24	26	32	47	50	57	67	70
Energy Index	- 25	0	1	1	1	1	1	1	0	0
YoY growth (%)	-	U					<u>T</u>	тт	U	0
	(52)	12	26	10	171	25		(52)	(60)	(05)
Agro Commodities	(52)	12	36 32	18	86	35	(10)	(53)	(69)	(85)
Base Metals	(50)			36		(17)	(18)	(24)	(52)	(29)
Bullion	71	86	66	(52)	(3)	(59)	(42)	(27)	(13)	15
Energy	(53)	(54)	(49)	(53)	66	126	108	172	220	155
Index	(4.0)	40		(4.0)	22	173	23	(3)	(65)	(69)
Total	(18)	12	4	(18)	32	(19)	1	26	50	71
QoQ growth (%)	(==)				(4)	(0.0)		(0.0)	(0.6)	(0=)
Agro Commodities	(57)	41	40	39	(1)	(30)	6	(36)	(36)	(65)
Base Metals	(28)	89	(3)	3	(1)	(15)	(5)	(5)	(37)	24
Bullion	(17)	101	(32)	(10)	(21)	(15)	(2)	11	(5)	12
Energy	(69)	21	18	5	10	65	9	38	29	31
Index			180	1	(0)	(3)	26	(20)	(64)	(14)
Total	(43)	79	(17)	(3)	(8)	10	3	21	10	25
FUTCOM	14,108	25,102	20,713	19,841	17,733	16,826	15,710	16,412	16,078	15,484
FUTIDX	-	73	204	207	206	200	252	201	72	62
OPTFUT	397	757	501	720	1,216	3,975	5,596	9,491	12,505	20,398
Total	14,505	25,932	21,419	20,769	19,155	21,001	21,558	26,104	28,655	35,944
Mix (%)										
FUTCOM	97	97	97	96	93	80	73	63	56	43
FUTIDX	-	0	1	1	1	1	1	1	0	0
OPTFUT	3	3	2	3	6	19	26	36	44	57
YoY growth (%)										
FUTCOM	(18)	12	3	(18)	26	(33)	(24)	(17)	(9)	(8)
FUTIDX						173	23	(3)	(65)	(69)
OPTFUT	(1)	(0)	(8)	(41)	206	425	1,017	1,217	929	413
Total	(18)	12	4	(18)	32	(19)	1	26	50	71
QoQ growth (%)										
FUTCOM	(42)	78	(17)	(4)	(11)	(5)	(7)	4	(2)	(4)
FUTIDX			180	1	(0)	(3)	26	(20)	(64)	(14)
OPTFUT	(67)	91	(34)	44	69	227	41	70	32	63
Total	(43)	79	(17)	(3)	(8)	10	3	21	10	25
FUTIDX OPTFUT	(67)	91	180 (34)	1 44	(0) 69	(3) 227	26 41	70	(64) 32	(14) 63

Source: Company, MOFSL

Exhibit 2: Gold volumes see an uptick (INR t)



2.6 1.6 1.6 2QFY19 3QFY20 4QFY20 3QFY19 4QFY19 2QFY20 2QFY21 3QFY21 1QFY20 1QFY21 4QFY21 1QFY22 2QFY22 3QFY22 4QFY22

9.1

6.1

Exhibit 3: Sustained recovery in silver volumes (INR t)

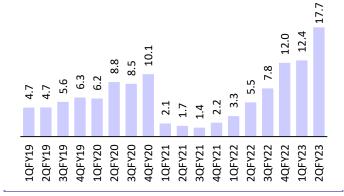
Source: Company, MOFSL Source: Company, MOFSL

Exhibit 4: Copper volumes (INR t) remain recover

10FY19 1.6 20FY19 1.7 30FY19 1.3 10FY20 1.3 30FY20 1.3 40FY20 0.9 10FY21 0.8 20FY21 1.6 40FY21 1.6 40FY22 1.7 30FY22 2.0 20FY22 1.7 30FY22 1.6 40FY22 1.7 30FY23 1.1 10FY23 1.1 20FY23 1.1 20FY23 1.1

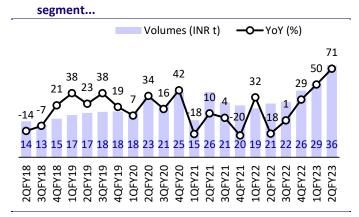
Source: Company, MOFSL

Exhibit 5: Strong crude oil volumes (INR t)



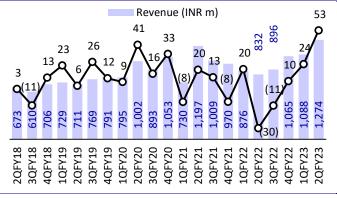
Source: Company, MOFSL

Exhibit 6: Volumes stays strong, led by the options



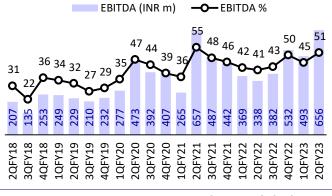
Source: MOFSL, Company

Exhibit 7: ...translating into strong revenue growth



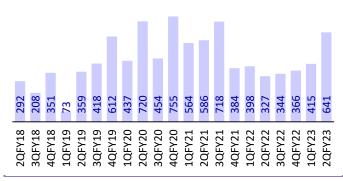
Source: MOFSL, Company

Exhibit 8: Margin remains strong



Source: MOFSL, Company

Exhibit 9: Trend in PAT (INR m)



Source: MOFSL, Company

Exhibit 10: Revisions to our estimates

Change in estimates	Revised		Ear	rlier	Change (%)		
	FY23	FY24	FY23	FY24	FY23	FY24	
Volumes (INR t)	145	172	143	171	1.4	0.6	
Volume growth (%)	65.3	18.4	62.9	19.4	2.3	(1.0)	
Revenue (INR m)	5,206	6,072	4,815	5,649	8.1	7.5	
EBITDA margin (%)	54.0	65.0	52.8	62.6	120bp	230bp	
EPS (INR)	49.4	65.8	44.7	58.6	10.6	12.2	

Source: MOFSL

Financials and valuations

Income Statement									(INR m)
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Sales	2,594	2,598	3,001	3,742	3,906	3,668	5,206	6,072	6,995
Change (%)	10	0	15	25	4	(6)	42	17	15
Cost of Services	1,071	1,174	1,338	1,463	1,388	1,440	1,696	1,322	1,454
SG&A Expenses	723	679	743	730	667	607	700	805	926
Provisions									
EBITDA	801	745	920	1,549	1,851	1,621	2,810	3,946	4,616
As a percentage of Net Sales	31	29	31	41	47	44	54	65	66
Depreciation	186	167	154	182	221	227	256	333	338
EBIT	614.9	578.3	765.5	1,367.1	1,630.7	1,394.4	2,554	3,613	4,278
Interest	2	-	-	2	2	3	3	3	3
Other Income	1,164	884	986	1,289	1,038	665	626	662	676
EO Item (net)	-	-	238	-	-	204	-	-	-
PBT	1,777	1,462	1,513	2,654	2,667	1,853	3,177	4,273	4,951
Tax	512	377	75	389	415	407	635	940	1,089
Rate (%)	29	26	5	15	16	22	20	22	22
PAT before MI	1,266	1,085	1,439	2,266	2,251	1,446	2,542	3,333	3,862
Minority Interest	-	-	(24)	(99)	(1)	12	15	-	-
PAT	1,266	1,085	1,462	2,365	2,252	1,435	2,527	3,333	3,862
Extraordinary									
Net Income	1,266	1,085	1,462	2,365	2,252	1,435	2,527	3,333	3,862
Change (%)	198	(14)	35	62	(5)	(36)	76	32	16

Balance Sheet									(INR m)
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Share Capital	510	510	510	510	510	510	510	510	510
Reserves	13,078	13,253	11,999	13,084	13,672	13,671	14,176	14,843	15,615
Net Worth	13,588	13,763	12,509	13,594	14,182	14,181	14,686	15,353	16,125
SGF	1,705	1,806	3,298	4,098	4,692	5,256	5,256	5,256	5,256
Loan and other long-term liab.	420	408	414	546	576	658	669	680	692
Capital Employed	15,713	15,977	16,221	18,237	19,451	20,095	20,611	21,289	22,073
Net Block	1,633	3,624	3,451	6,094	7,395	5,060	6,560	6,660	6,760
CWIP	-	-	-	-	-	-	-	-	-
Other LT Assets	281	281	281	281	281	281	286	292	298
Investments	4,404	5,316	4,839	5,943	6,066	4,440	4,529	4,619	4,712
Curr. Assets	12,340	10,393	12,175	15,028	11,283	18,225	17,305	17,948	18,699
Current Investments	7,544	8,878	5,824	6,618	5,985	7,135	7,278	7,423	7,572
Debtors	28	63	60	65	90	115	117	119	122
Cash and Bank Balance	3,890	596	5,346	7,593	4,261	9,755	8,666	9,136	9,710
Loans and Advances	3	3	2	2	1	222	227	231	236
Other Current Assets	875	854	943	751	948	998	1,018	1,039	1,059
Current Liab. and Prov.	2,945	3,636	4,524	9,109	5,575	7,911	8,069	8,230	8,395
Net Current Assets	9,395	6,757	7,651	5,919	5,709	10,314	9,236	9,718	10,304
Application of Funds	15,713	15,977	16,221	18,237	19,451	20,095	20,611	21,289	22,073

E: MOFSL estimates

Financials and valuations

Ratios									
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
Basic (INR)									
EPS	24.8	21.3	28.7	46.4	44.2	28.1	49.5	65.3	75.7
Cash EPS	29.5	25.4	31.9	50.4	49.2	33.6	55.6	73.3	83.8
Book Value	266.4	269.9	245.3	266.6	278.1	278.1	288.0	301.0	316.2
DPS	15.0	17.0	20.0	30.0	27.7	30.0	35.0	35.0	35.0
Payout (%)	74.3	98.2	87.1	83.0	77.1	129.7	80.0	80.0	80.0
Valuation (x)									
P/E ratio	60.2	70.3	52.1	32.2	33.9	53.1	30.2	22.9	19.7
Cash P/E ratio	50.7	58.9	46.9	29.6	30.4	44.6	26.9	20.4	17.8
Price/Book Value ratio	5.6	5.5	6.1	5.6	5.4	5.4	5.2	5.0	4.7
Dividend Yield (%)	1.0	1.1	1.3	2.0	1.9	2.0	2.3	2.3	2.3
Profitability Ratios (%)									
RoE	9.9	7.9	11.1	18.1	16.2	10.1	17.5	22.2	24.5

NOTES

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 be within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

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

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. 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 Motilal Oswal Financial Services Limited available 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.nseindia.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.

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.

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 brokerdealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this

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

- 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. MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 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
- Research Analyst has not served as director/officer/employee in the subject company
- MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- MOFSL has not received any compensation or other benefits from third party in connection with the research report
- MOFSL has not engaged in market making activity for the subject company

26 October 2022

MOTILAL OSWAL MCX

The associates of MOFSL may have:

- financial interest in the subject company
- actual/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 or date of the public appearance.
- received compensation/other benefits from the subject company in the past 12 months
- 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.
- 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.
- Served subject company as its clients during twelve months preceding the date of distribution of the research report.

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.: 022-3980 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 71881000. Details of Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No: 022-71881085.

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN.: 146822. IRDA Corporate Agent – CA0579. Motilal Oswal Financial Services Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Insurance, Bond, NCDs and IPO products. Customer having any query/feedback/ clarification may write to query@motilaloswal.com. In case of grievances for any of the services rendered by Motilal Oswal Financial Services Limited (MOFSL) write to grievances@motilaloswal.com, for DP to dpgrievances@motilaloswal.com.