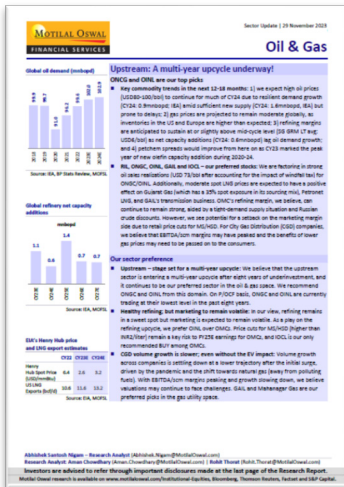


Upstream: A multi-year upcycle underway!



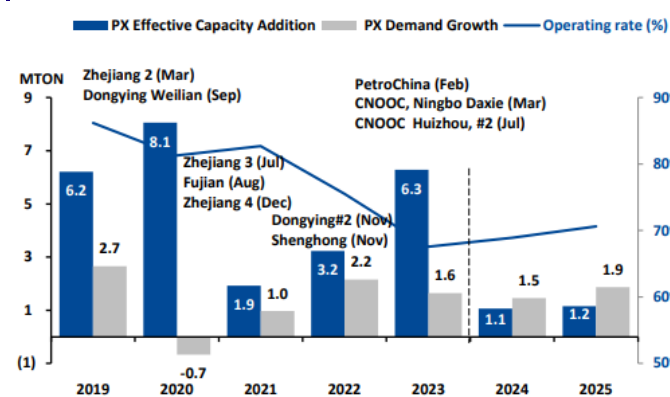
FY25E. Also, ONGC has exposure to petrochemicals via OPaL; however, OPaL's current contribution to ONGC's earnings and valuation remains negligible.

- Lastly, both GAIL and IOCL will witness the commencement of new petrochemical capacities amounting to 560/1,618ktpa during FY26-27E.

Buy CGDs amid declining spot LNG prices; MAHGL is our top BUY

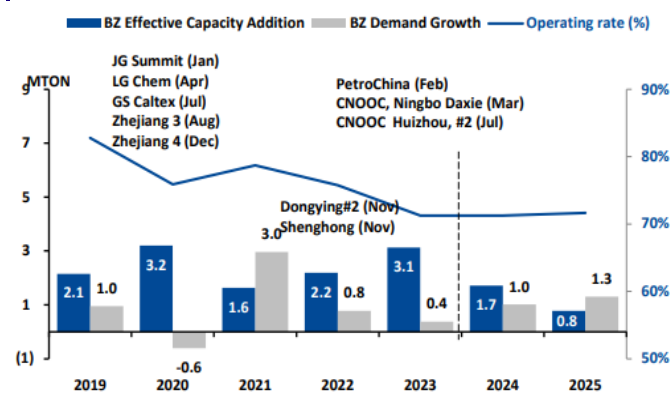
- Other key trends worth highlighting from the O&G sector include declining spot LNG prices (Asia JKM down 23% MoM in Jan'24 till date) and robust MS/HSD marketing margins at INR11/8.6 per lit.
- We also highlight that USD1/mmBtu decline in spot prices increases GUJGA's FY25E EBITDA by ~14%. As such, despite the recent run-up, should spot LNG prices continue to correct, we believe stock price performance should remain strong.
- We also like Mahanagar Gas as its volume growth outlook closely aligns with that of Indraprastha Gas (and with lower EV risk). Moreover, it is currently trading at ~30% discount when measured on FY26E P/E basis.

Exhibit 1: AP/ME PX Capacity Addition vs. Demand Growth



Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 2: AP/ME BZ Capacity Addition vs. Demand Growth



Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 3: Major PX plant start-up in CY23-25

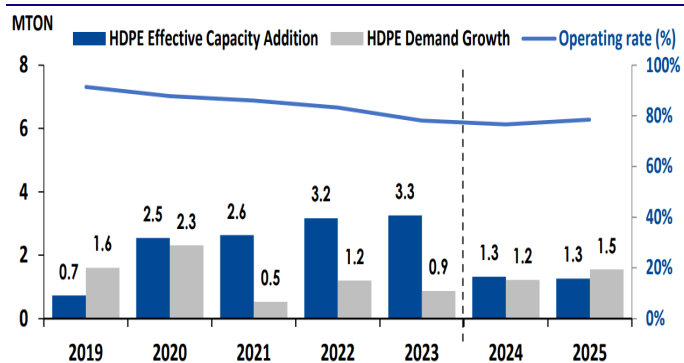
Country	Company	Capacity (ktpa)	Start-up
China	PetroChina Guangdong	2600	Feb'23
China	CNOOC Ningbo Daxie	1600	Mar'23
China	CNOOC Huizhou, #2	1500	Jul'23
India	Indian Oil	800	Jul'25

Source: CMA (Fall 24), Thai Oil, MOFSL

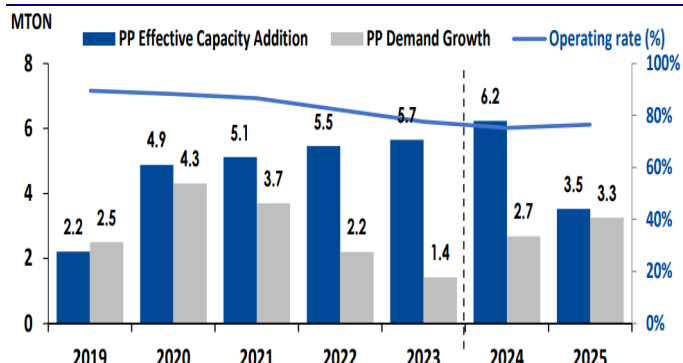
Exhibit 4: Major BZ plant start-up in CY23-25

Country	Company	Capacity (ktpa)	Start-up
China	Sinopec Hainan R&C	200	Jan'23
China	PetroChina Guangdong	870	Feb'23
China	CNOOC Ningbo Daxie	500	Mar'23
China	CNOOC Huizhou, #2	500	Jul'23
China	ExxonMobil	480	Jan'24
Korea	S-Oil	270	Sep'24
China	Sinopec Tianjin	310	Sep'24
China	Shangdong Yulong	1000	4QCY25

Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 5: AP/ME HDPE capacity addition vs. demand growth

Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 6: AP/ME PP capacity addition vs. demand growth

Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 7: Major HDPE plant start-up in CY23-25

Country	Company	Capacity (ktpa)	Start-up
China	PetroChina	800	Jan'23
China	Shangdong Jinghai	400	Apr'23
China	Sinopec Hainan	300	Apr'23
China	Ningxia Baofeng	300	Jun'23
Philippines	JG Summit	250	Aug'23
Vietnam	Longson	500	Nov'23-Jan'24
China	Sinopec Tianjin	500	Jun'24
China	Shangdong Yulong	1,250	4QCY24
China	Inner Mongolia	275	May'25

Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 8: Major PP plant start-up in CY23-25

Country	Company	Capacity (ktpa)	Start-up
China	Quanzhou Grand Pacific	450	Jun'23
China	Zhongjing 3	600	Nov'23
Vietnam	Longson	400	Nov'23-Jan'24
China	Oriental Energy	1,000	Jan'24
India	Nayara Energy	450	Jan'24
China	ExxonMobil (Huizhou)	955	Jan'24
China	China Energy Baotou Coal	410	Mar'24
China	Shangdon Yulong	1,600	4QFY24
China	Inner Mongolia	500	May'25
India	Indian Oil Corporation	500	Jun'25
Indonesia	Lotte	250	Jun'25

Source: CMA (Fall 24), Thai Oil, MOFSL

Exhibit 9: EBITDA potential of GAIL's PDH-PP; Usar plant at peak utilization

Capacity (mmtpa)	0.5
Spread over feedstock (USD/mt)	409.9
Opex (USD/mt)	100.0
EBITDA (USD/mt)	309.9
Exchange Rate	83.5
EBITDA (INR b)	12.9

Source: Company, MOFSL

Exhibit 10: IOCL's ongoing petrochemical projects

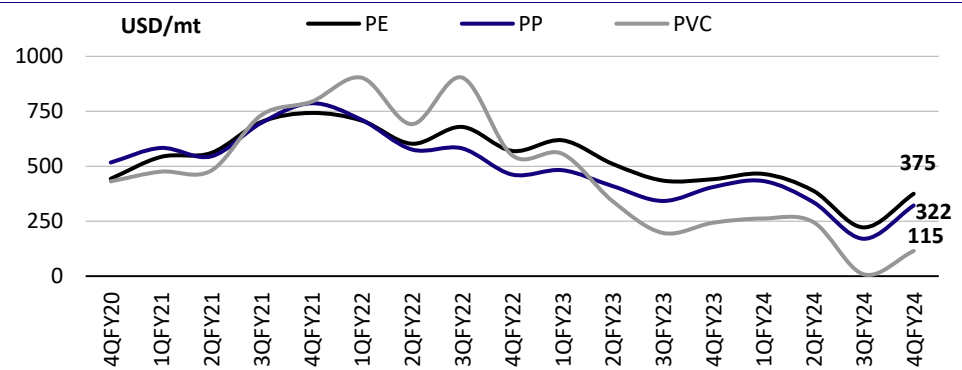
Project	Estimated Cost (INR b)
PX-PTA Project at Paradip Refinery	138
Ethylene Glycol Project at Paradip Refinery	57
Acrylics/ Oxo-Alcohol Project at Dumad	53
Naphtha Cracker Expansion Project at Panipat Refinery	16
PX-PTA Expansion at Panipat	13

Source: Company, MOFSL

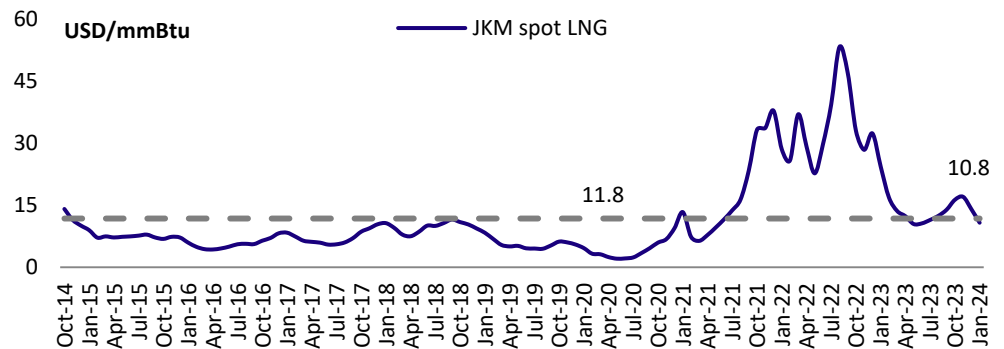
Exhibit 11: RIL's petrochemicals slate

Particulars	Products	Quantity (mmt)
Polymers and Elastomers	PP	2.7
	PE	2.2
	PVC	0.8
Intermediates and Polyesters	Elastomers and feedstock	0.4
	PX and benzene by products	1.9
	Benzene and Derivatives	0.4
	PTA	2.2
	MEG and By-products	1
	Filament	1.2
	Staple	0.8
	PET	1.2
	Fuels, Solids and Others	9.5
Total		24.3

Source: Company, MOFSL

Exhibit 12: PE, PP, and PVC spreads over Naphtha

Source: Company, MOFSL

Exhibit 13: JKM spot LNG declined 23% MoM in Jan'24 till date

Source: Company, MOFSL

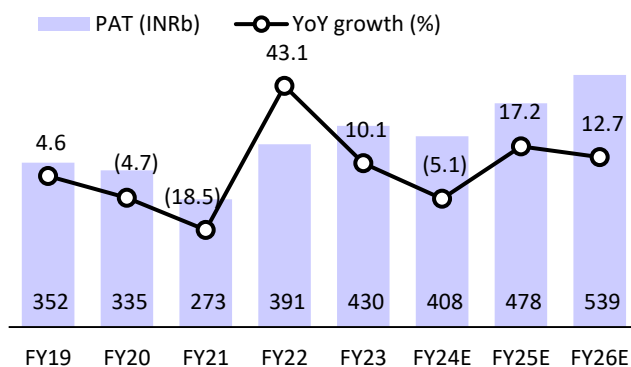
Exhibit 14: Outlook for key petchem end markets

Auto & Mobility	✓	Chinese demand is expected to grow in CY24, driven by EV sales
	✓	US car sales is expected to remain strong in the near term, despite high prices and rising interest rates
Industrial Goods	✓	Industrial coil and wood end markets have started recovering
	✓	Demand for metal and containers persists, and the outlook remains challenging in CY24
Packaging	✓	Recovery expected across the globe albeit at a slow pace
Construction & Decoration	✓	The US housing market is expected to improve from late CY24 onwards
	✓	The EU market can worsen further if economic tightening continues, especially in the presence of sustained high inflation

Source: PTTGC, MOFSL

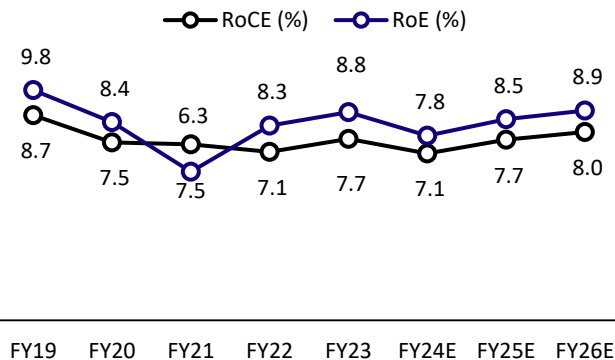
RIL – Financial summary and assumptions (TP: INR3,130) – BUY

Exhibit 15: Standalone PAT profile



Source: Company, MOFSL

Exhibit 16: Return ratios to stabilize going forward



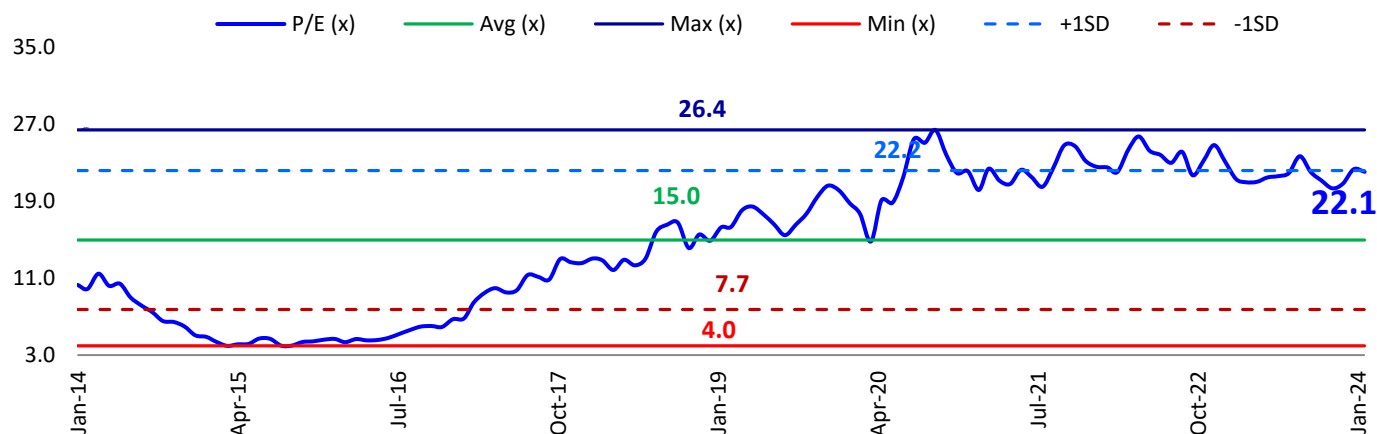
Source: Company, MOFSL

Exhibit 17: Standalone financial summary (INR b)

Y/E march	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Sales	3,716	3,370	2,457	4,237	5,283	5,247	5,522	5,612
EBITDA	589	528	335	523	656	741	807	880
Adj. PAT	352	335	273	391	430	408	478	539
Adj. EPS (INR)	54.6	52.0	42.4	60.6	66.7	63.3	74.2	83.7
BV/Sh.(INR)	659	636	771	766	817	876	946	1,024
Ratios								
Net D:E	0.4	0.5	0.3	0.4	0.3	0.3	0.3	0.2
RoE (%)	9.8	8.4	6.3	8.3	8.8	7.8	8.5	8.9
RoCE (%)	8.7	7.5	7.5	7.1	7.7	7.1	7.7	8.0
Payout (%)	13.2	15.0	13.0	12.1	12.1	10.7	10.7	10.7
Valuations								
P/E (x)	49.4	51.8	63.6	44.4	40.4	42.6	36.3	32.2
P/BV (x)	4.1	4.2	3.5	3.5	3.3	3.1	2.9	2.6
EV/EBITDA (x)	32.1	36.5	56.7	36.5	28.8	25.7	23.3	21.2
Div. Yield (%)	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
FCF per share	6.7	84.3	-34.5	76.6	30.2	7.7	60.9	55.7

Source: Company, MOFSL

Exhibit 18: RIL's one-year forward P/E ratio

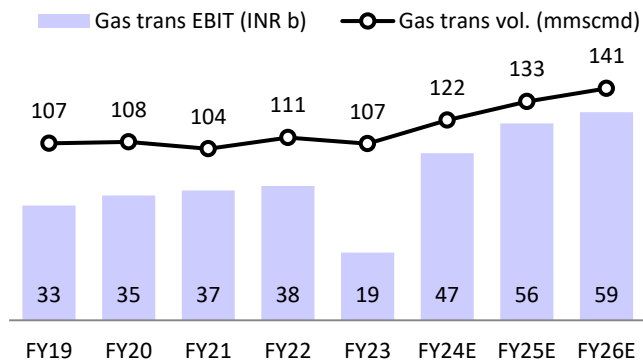


Source: Company, MOFSL



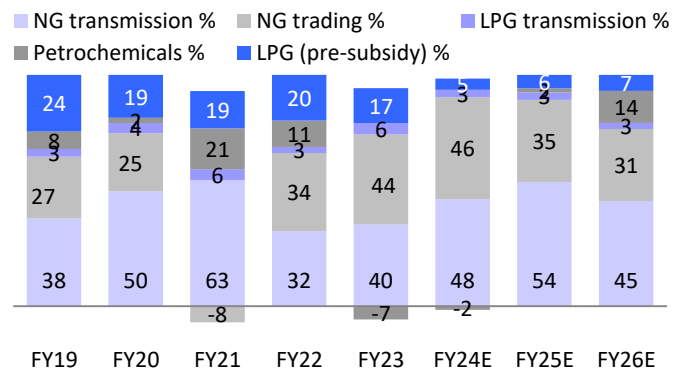
GAIL – Financial summary and assumptions (TP: INR195) – BUY

Exhibit 19: Expect transmission volumes to reach ~141mmscmd in FY26E...



Source: Company, MOFSL

Exhibit 20: ...with contribution to EBITDA increasing to 45% over FY23



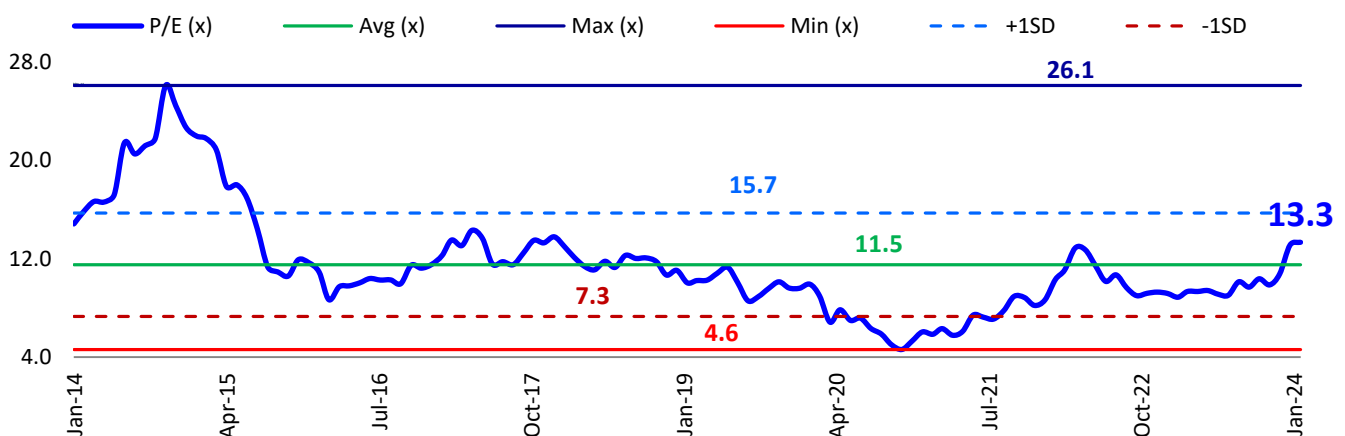
Source: Company, MOFSL

Exhibit 21: Financial summary (INR b)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Sales	751.3	718.8	567.4	916.5	1,443.0	1,339.3	1,433.1	1,534.9
EBITDA	95.3	83.7	64.5	138.3	67.0	120.2	123.1	158.2
Adj. PAT	63.3	74.2	49.0	102.9	53.0	83.4	83.5	106.9
Adj. EPS (INR)	9.6	11.3	7.4	15.6	8.1	12.7	12.7	16.3
EPS Gr. (%)	33.6	17.3	-34.0	110.1	-48.5	57.4	0.1	28.0
BV/Sh.(INR)	68.1	73.0	77.1	89.5	93.5	102.4	111.3	122.7
Ratios								
Net D:E	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.2
RoE (%)	14.3	15.0	10.8	20.3	9.5	14.2	13.0	15.0
RoCE (%)	13.1	12.6	9.0	17.0	7.9	11.2	10.2	11.8
Payout (%)	34.7	51.3	45.0	21.3	49.6	30.0	30.0	30.0
Valuations								
P/E (x)	17.1	14.6	22.1	10.5	20.4	13.0	13.0	10.1
P/BV (x)	2.4	2.3	2.1	1.8	1.8	1.6	1.5	1.3
EV/EBITDA (x)	3.3	7.7	9.0	4.7	11.8	7.6	7.3	5.7
Div. Yield (%)	1.6	2.6	2.1	2.1	2.4	2.3	2.3	3.0
FCF Yield (%)	0.6	1.3	2.8	2.8	-4.2	1.5	2.0	4.6

Source: Company, MOFSL

Exhibit 22: GAIL's one-year forward P/E ratio



Source: Company, MOFSL



IOCL – Financial summary and assumptions (TP: INR165) – BUY

Exhibit 23: Key assumptions

Y End: March 31	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Exchange Rate (INR/USD)	70.0	70.9	74.3	74.5	80.4	83.1	84.6	86.0
Brent Crude (USD/bbl)	70.1	61.2	44.4	80.5	96.1	83.4	85.0	85.0
Domestic direct sales refined pdts (MMT)	85	84	76	80	91	92	96	100
YoY (%)	10%	0%	-10%	6%	13%	2%	4%	4%
Reported GRM (USD/bbl)	5.4	0.1	5.6	11.3	19.5	12.9	9.0	9.0
Singapore GRM (USD/bbl)	4.9	3.2	0.5	5.0	10.7	6.3	6.0	6.0
Prem./(disc) (USD/bbl)	0.5	(3.1)	5.1	6.3	8.8	6.6	3.0	3.0
Refining capacity utilization (%)	104%	100%	90%	98%	105%	106%	104%	104%
Total Refinery throughput (MMT)	71.8	69.4	62.4	67.7	72.3	73.0	72.0	72.0
YoY (%)	4%	-3%	-10%	9%	7%	1%	-1%	0%
Marketing Margin (INR/lit)								
Blended gross marketing margin incld inventory	5.0	5.8	6.2	4.4	-1.1	5.7	4.1	4.1
Consolidated EPS	12.5	1.8	15.8	18.7	8.5	33.2	16.7	16.1

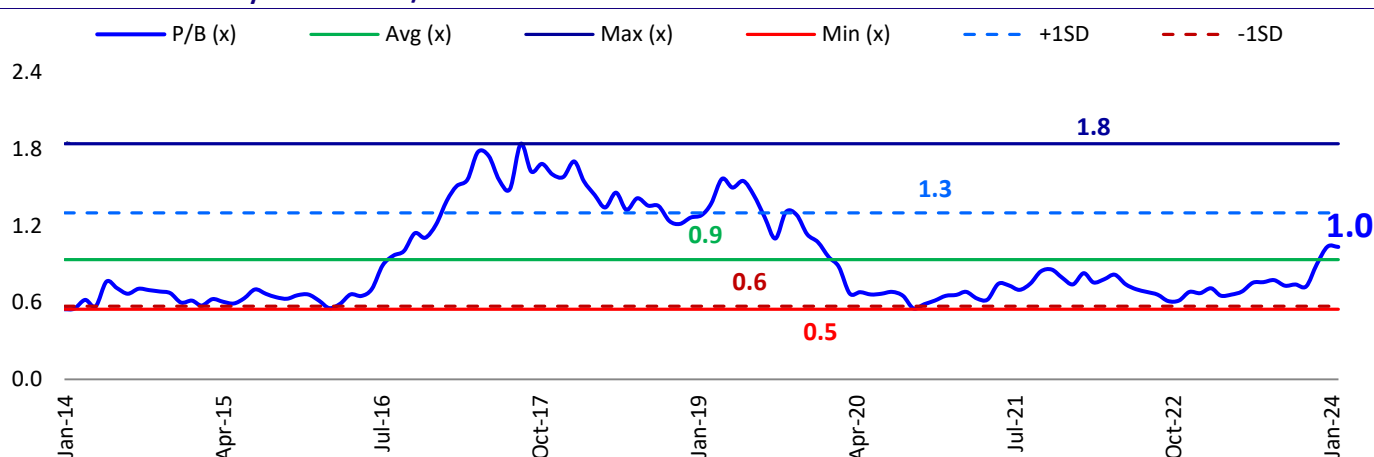
Source: Company, MOFSL

Exhibit 24: Financial Summary (INR b)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Sales	5,281.6	4,837.6	3,639.5	5,893.4	8,418	8,497	10,607	11,419
EBITDA	352.2	168.4	405.9	477.4	307	766	478	482
Adj. PAT	172.7	24.1	217.6	257.3	117	457	230	221
Adj. EPS (INR)	12.5	1.8	15.8	18.7	8.5	33.2	16.7	16.1
EPS Gr. (%)	(23.7)	(86.0)	801.4	18.2	-54.5	290.4	-49.6	-3.9
BV/Sh.(INR)	81.7	69.3	81.2	97.0	101.5	120.1	130.3	140.2
Ratios								
Net D:E	0.8	1.3	0.9	0.9	1.0	0.8	0.7	0.7
RoE (%)	15.3	2.3	21.0	21.0	8.6	30.0	13.4	11.9
RoCE (%)	10.6	2.4	10.0	12.4	8.2	17.2	8.6	7.6
Payout (%)	57.5	NM	59.2	52.6	35.3	43.9	38.8	38.2
Valuations								
P/E (x)	7.7	15.7	6.1	7.7	17.0	4.3	8.6	9.0
P/BV (x)	1.8	2.1	1.8	1.5	1.4	1.2	1.1	1.0
EV/EBITDA (x)	6.4	15.2	5.9	5.3	8.8	4.2	6.8	6.7
Div. Yield (%)	6.4	2.9	8.3	8.7	3.1	10.1	4.5	4.3
FCF Yield (%)	1.8	(3.4)	33.4	14.8	18.5	20.0	8.6	9.3

Source: Company, MOFSL

Exhibit 25: IOCL's one-year forward P/B ratio

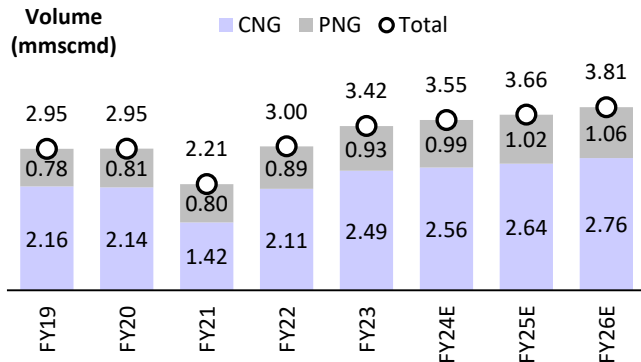


Source: Company, MOFSL



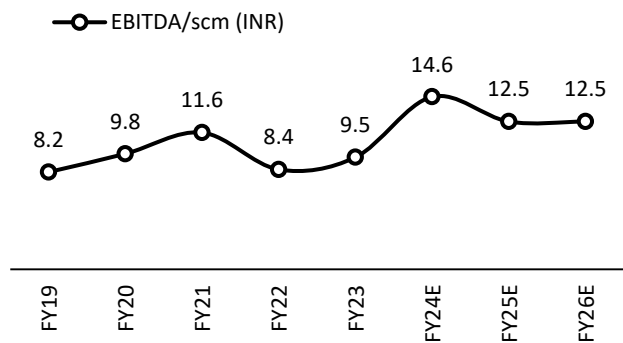
MAHGL – Financial summary and assumptions (TP: INR1,665) – BUY

Exhibit 26: Expect volumes to grow at 4% CAGR during FY23-26E



Source: Company, MOFSL

Exhibit 27: Expect EBITDA/scm to decline to INR12.5 by FY25-26E



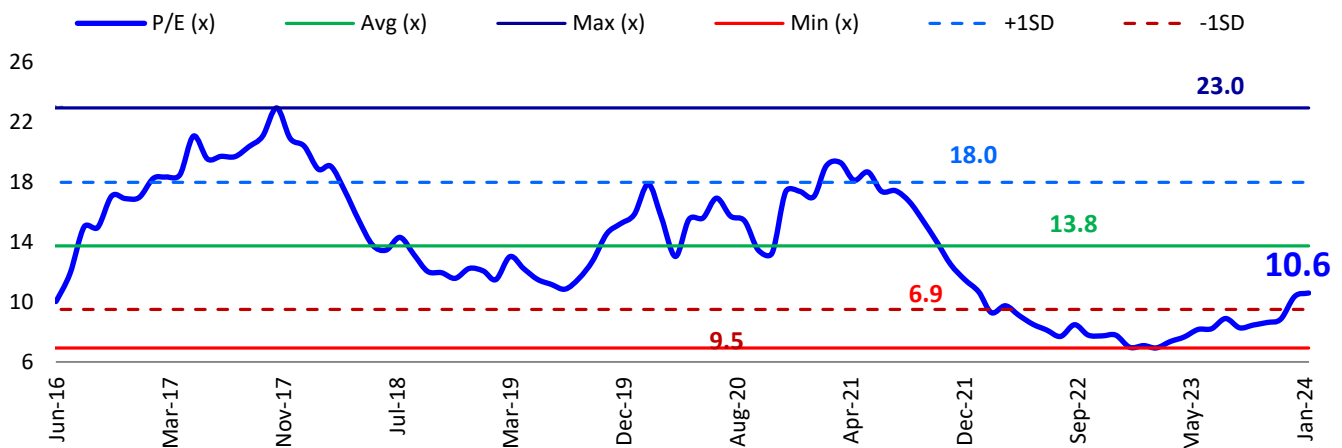
Source: Company, MOFSL

Exhibit 28: Financial summary (INR b)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Sales	27.9	29.7	21.5	35.6	63.0	61.6	58.8	62.0
EBITDA	8.9	10.5	9.3	9.2	11.8	18.9	16.7	17.4
Adj. PAT	5.5	7.9	6.2	6.0	7.9	13.3	11.3	11.9
Adj. EPS (INR)	55.3	80.3	62.7	60.4	80.0	135.0	114.9	120.3
EPS Gr. (%)	14.3	45.2	-21.9	-3.6	32.3	68.8	-14.9	4.8
BV/Sh.(INR)	242.8	298.9	327.2	364.2	418.5	499.5	568.5	640.7
Ratios								
Net D:E	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2
RoE (%)	24.3	29.7	20.0	17.5	20.4	29.4	21.5	19.9
RoCE (%)	24.3	29.8	20.1	17.5	20.5	29.5	21.6	19.9
Payout (%)	43.5	52.4	36.7	38.1	32.5	40.0	40.0	40.0
Valuation								
P/E (x)	24.3	16.7	21.4	22.3	16.8	10.0	11.7	11.2
P/BV (x)	5.5	4.5	4.1	3.7	3.2	2.7	2.4	2.1
EV/EBITDA (x)	14.7	12.4	13.7	13.9	11.0	6.7	7.4	6.8
Div. Yield (%)	1.5	2.6	1.7	1.7	1.9	4.0	3.4	3.6
FCF Yield (%)	2.4	4.2	3.5	1.9	1.9	5.8	4.9	5.9

Source: Company, MOFSL

Exhibit 29: MAHGL's one-year forward P/E ratio



Source: Company, MOFSL



GUJGA – Financial summary and assumptions (TP: INR575) – BUY

Exhibit 30: Expect total volumes to grow at 11% CAGR over FY23-26E

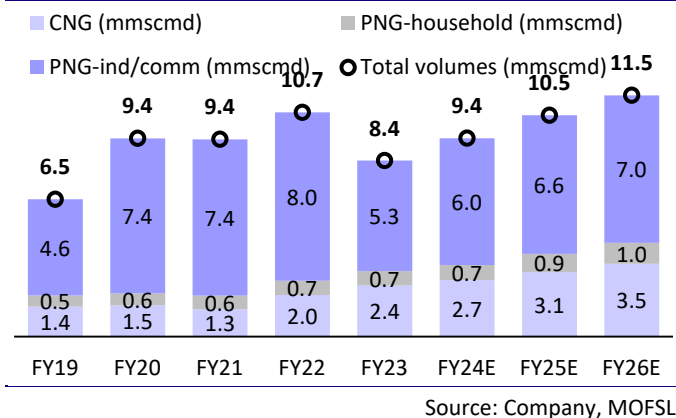


Exhibit 31: Expect margin to be stable

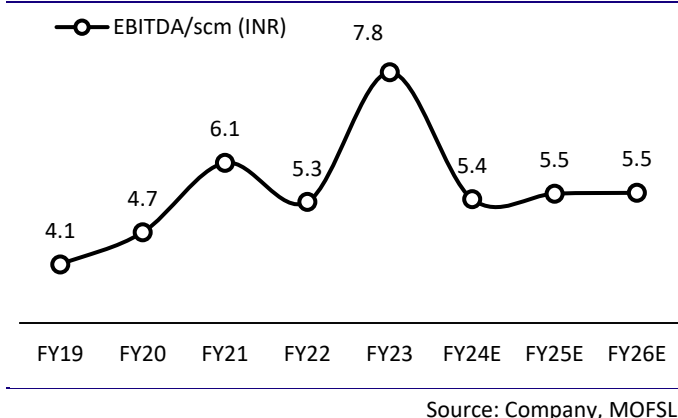
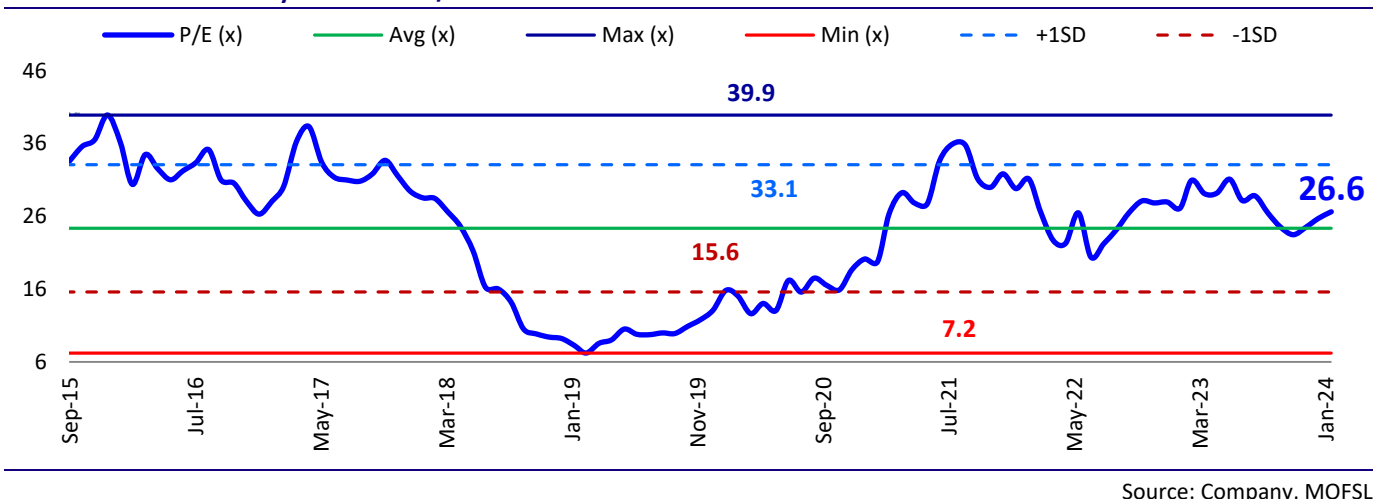


Exhibit 32: Financial summary (INR b)

Y/E March	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E	FY26E
Sales	77.5	103.0	98.7	164.6	167.6	157.5	164.8	180.2
EBITDA	9.8	16.3	20.8	20.8	23.9	18.6	21.1	23.1
PAT	4.2	11.9	12.7	12.9	15.3	10.9	12.8	14.6
EPS (INR)	6.2	17.3	18.4	18.8	22.2	15.8	18.7	21.2
EPS Gr. (%)	47.4	177.8	6.3	2.1	17.8	-28.7	18.2	13.4
BV/Sh.(INR)	31.7	47.8	64.6	81.3	101.6	112.7	125.7	140.5
Ratios								
Net D:E	0.8	0.3	0.1	0.1	-0.1	-0.1	-0.2	-0.2
RoE (%)	21.3	43.6	32.8	25.8	24.2	14.7	15.7	15.9
RoCE (%)	19.4	29.8	35.0	31.5	31.6	20.1	21.2	21.5
Payout (%)	19.9	8.7	13.1	12.9	30.0	30.0	30.0	30.0
Valuations								
P/E (x)	91.0	32.8	30.8	30.2	25.6	36.0	30.4	26.9
P/BV (x)	17.9	11.9	8.8	7.0	5.6	5.0	4.5	4.0
EV/EBITDA (x)	41.5	24.6	19.0	19.1	16.1	20.6	17.9	16.1
Div. Yield (%)	0.2	0.2	0.4	0.4	1.2	0.8	1.0	1.1
FCF Yield (%)	1.1	2.1	2.3	0.8	3.3	1.2	1.9	2.4

Source: Company, MOFSL

Exhibit 33: GUJGA's one-year forward P/E ratio



Investment in securities market are subject to market risks. Read all the related documents carefully before investing

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.

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, 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 entities of Motilal Oswal Financial Services Limited are available on the website at <http://online.reports.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 Advisers 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 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.

This report is meant for the clients of Motilal Oswal only.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Exhibit 1:

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 - 71934200 / 71934263; 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.:022-40548085.

Exhibit 2:

Grievance Redressal Cell:

Contact Person	Contact No.	Email ID
Ms. Hemangi Date	022 40548000 / 022 67490600	query@motilaloswal.com
Ms. Kumud Upadhyay	022 40548082	servicehead@motilaloswal.com
Mr. Ajay Menon	022 40548083	am@motilaloswal.com

Exhibit 3:

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; 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.

Exhibit 4:

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 dp grievances@motilaloswal.com.