

BSE SENSEX 53,177
S&P CNX 15,850

CMP: INR276 TP: INR315 (+14%) Neutral

Motilal Oswal values your support in the Asiamoney Brokers Poll 2022 for India Research, Sales, Corporate Access and Trading team. We [request your ballot](#).



Stock Info

Bloomberg	BANDHAN IN
Equity Shares (m)	1,611
M.Cap.(INRb)/(USD\$b)	445.3 / 5.7
52-Week Range (INR)	354 / 230
1, 6, 12 Rel. Per (%)	-12/17/-21
12M Avg Val (INR M)	2544
Free float (%)	60.0

Financials Snapshot (INR b)

Y/E March	FY22	FY23E	FY24E
NII	87.1	106.6	140.0
OP	80.1	97.9	126.0
NP	1.3	41.9	58.9
NIM (%)	7.3	7.5	7.9
EPS (INR)	0.8	26.0	36.6
EPS Gr. (%)	-94.3	NM	40.5
BV/Sh. (INR)	107.9	129.2	159.9
ABV/Sh. (INR)	101.1	123.1	154.6

Ratios

RoE (%)	0.7	21.9	25.3
RoA (%)	0.1	2.7	3.1

Valuations

P/E(X)	NM	10.6	7.6
P/BV (X)	2.6	2.1	1.7
P/ABV (X)	2.7	2.2	1.8

Assam floods to elongate recovery trajectory

Stress dissolution to moderate; provisioning to remain elevated

- Bandhan stock has corrected sharply in recent days owing to concerns over its Assam portfolio as 85-90% of total districts in the state have been affected by severe floods.
- As Assam constitutes ~9% of MFI loans and ~8% of total banking units for BANDHAN, the ongoing flood situation will affect collection trends over the near term.
- Its SMA book for Assam and West Bengal stands at 8.5%/8.2% (v/s 46.4%/41.3% in 1QFY22), with restructured assets of INR54.2b (5.8% of loans). We expect the stress dissolution rate to now moderate.
- Our PAT and ABV projections have witnessed sharp swings of -24% to 22% over the past five quarters. We remain watchful of the near-term impact, though the stock trades at reasonable valuations of 1.7x FY24E P/BV against its average FY23-24E RoE of 24%. We maintain our Neutral rating with a revised TP of INR315 per share (2x FY24E P/BV).

Assam witnesses severe floods; forms 9%/8% of MFI loans/banking units

Assam has witnessed severe floods in recent weeks, which has affected 85-90% of total districts in the state and impacted the lives of ~3.3m. Total casualties, so far, stands at 135, almost similar to the 149 casualties witnessed in May-Aug'20. While Assam has witnessed floods in the past as well, the severity this time has been quite high v/s prior years and can impact lending operations in the state. Assam constitutes ~9% of MFI loans and ~8% of total banking units for BANDHAN.

Collection efficiency to take a beating, weekly meetings getting impacted

Collection efficiency (CE), particularly in Assam, has been severely impacted in the past due to multiple events such as the CAA agitation, floods, COVID-19 pandemic, etc. CE dropped to as low as 49% in Jun'21. It gradually recovered and improved to 93% in 4QFY22. The same for the bank improved to 97% from 77% over a similar period. Collections are likely to take a beating due to the ongoing flood situation. Our industry interaction suggests that weekly meetings have been impacted and the recovery trajectory will get prolonged.

BANDHAN demonstrated a higher resilience in earlier crises

Historically, BANDHAN has demonstrated higher resilience in dealing with various crises, and delinquencies have been much lower v/s the industry (refer Exhibit 11-15). During earlier events, where the customer's ability to pay or businesses had got impacted (Cyclone Fani, floods, GST, or demonetization), the incremental loss rates have been limited. Though CE dropped sharply, the recoveries improved with a lag. However, when the issue pertains to the willingness or credit culture (farm loan waiver or Assam agitation), the incremental loss rates have been higher (3-4% range). The situation in Assam appears grim as the state has been in recovery mode after the impact posed by the COVID-19 pandemic. We, thus, remain watchful on near term developments.

Nitin Aggarwal - Research Analyst (Nitin.Agarwal@MotilalOswal.com)

Research Analyst: Yash Agarwal (Yash.Agarwal@motilalosal.com) | Vinayak Agarwal (Vinayak.Agarwal@MotilalOswal.com)

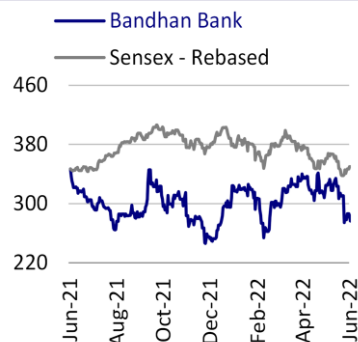
Investors are advised to refer through important disclosures made at the last page of the Research Report.

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

Shareholding pattern (%)

As On	Mar-22	Dec-21	Mar-21
Promoter	40.0	40.0	40.0
DII	4.6	1.9	1.9
FII	34.3	34.6	34.9
Others	21.1	23.5	23.2

FII Includes depository receipts

Stock's performance (one-year)**The SMA book witnessed a healthy reduction, may rise in the near term**

We note that the SMA book across various buckets has witnessed a constant decline, led by an improving environment, which has supported a gradual recovery. The SMA book has moderated to 6.5% in 4QFY22 v/s 37.1% in 1QFY22. The SMA book stands relatively higher for Assam/West Bengal at 8.5%/8.2% (v/s 46.4%/41.3% in 1QFY22). While the recovery has been encouraging, we expect the SMA book to increase in the near term, which could result in elevated slippages.

Credit cost glide path to get elongated as Assam witnesses higher stress

The MFI business is highly cyclical, which is evident from the fact that credit cost has seen severe volatility in times of acute stress. We note that the recovery in terms of reduction in credit cost has also been quick (refer Exhibit 9). Credit cost has been high (6-8% range) over 4QFY20-1QFY22 and rose to 30% (annualized) in 2QFY22 as the bank focused on cleaning up its Balance Sheet. Since then, credit cost has moderated sharply and stood negligible in 4QFY22. We expect the credit cost glide path to get elongated as potential recoveries, particularly from the Assam relief scheme, get delayed.

Total stress pool stands ~19% of EEB loans; coverage stands ~59%

Total EEB stress pool stands ~INR119b (19.1% of loans), within which the restructured book stands at INR48.9b (7.8% of loans). Including Housing loans, the restructured book stands at INR54.2b (5.8% of loans). The coverage on the total stress pool stands ~58.5%, which excludes the Assam relief package. The management expects a recovery of INR30b over 1HFY23 and INR25b from the CGFMU scheme.

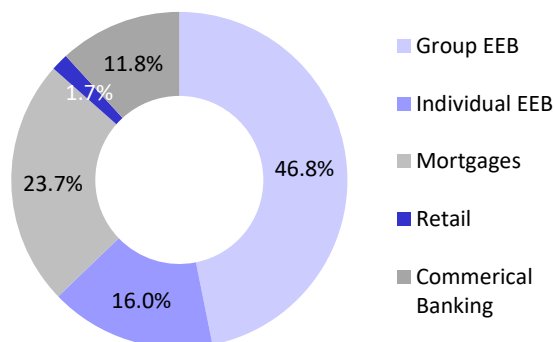
Earnings have witnessed acute volatility

BANDHAN's earnings have demonstrated acute volatility due to the cyclical nature of the MFI business. Our PAT and ABV projections have witnessed sharp swings of -24% to 22% over the past five quarters. This has rendered the stock extremely volatile to external events and shocks. Exhibit 10 shows how our annual estimates for key parameters have changed over the past few quarters.

Valuation and view

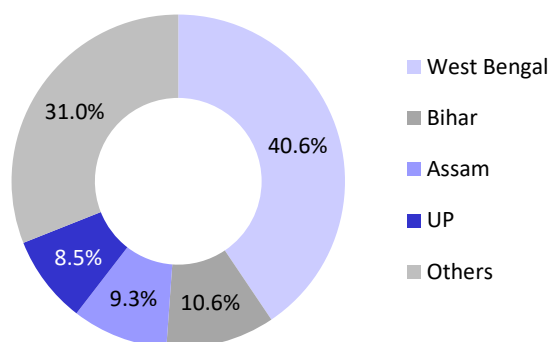
The performance of the MFI industry has been resilient in recent months, with assets stress declining and growth trajectory holding strong over 4QFY22. This is reflected in BANDHAN's performance as well. Given the ongoing developments in Assam, we expect the stress dissolution rate to moderate, while the recovery and ongoing improvement in CE may also get affected. We remain watchful about the near-term impact, though the stock has corrected sharply by ~20%/15% since its 4QFY22 result/past 3 weeks and trades at reasonable valuations of 1.7x FY24E P/BV against its average FY23-24E RoE of 24%. We maintain our Neutral rating with a revised TP of INR315 (2x FY24E P/BV) and will review our estimates after its 1QFY23 result.

Exhibit 1: Loan mix – MFI plus individual EEB constitutes 63% of total loans



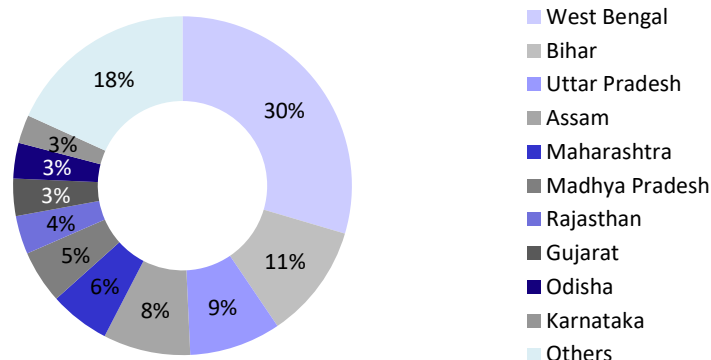
Source: MOFSL, Company

Exhibit 2: Geographical MFI loan mix: Assam constitutes ~9% of MFI loans



Source: MOFSL, Company

Exhibit 3: Assam constitutes ~8% of total Banking units at 5,649 units



Source: MOFSL, RBI, Company

The impact of the Assam floods appears to be higher in a short timespan

Exhibit 4: The current Assam floods have led to higher casualties in a short timespan

Impact from the Assam floods	CY19 (May-August)	CY20 (May-August)	CY22 (May-June)
Districts impacted	30	30	28
Villages impacted	3,024	5,474	NA
People impacted (m)	5.3	5.8	3.3
Number of deaths	110	149	135

Source: MOFSL, Company

Collection efficiency witnesses a gradual recovery till 4QFY22, likely to take a beating in 1QFY23

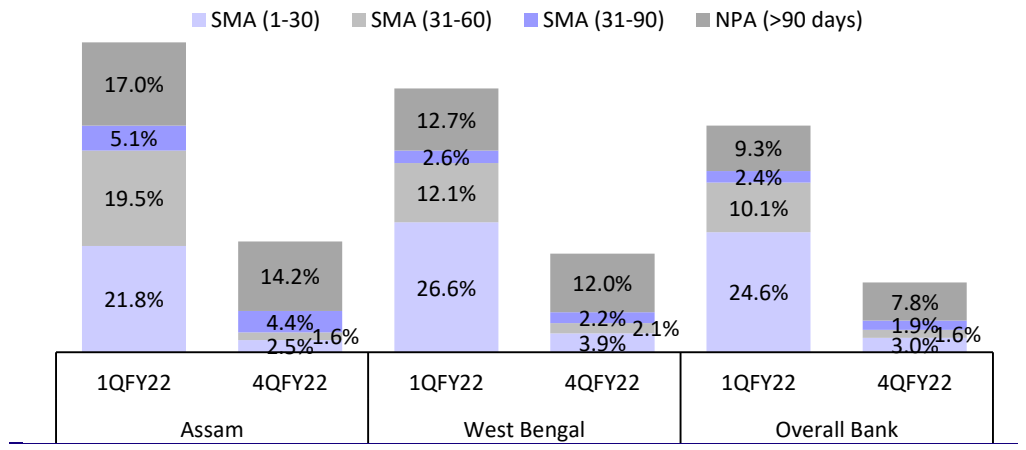
Exhibit 5: Collection efficiency trends across key states – Assam to take a beating

Collection efficiency excluding NPA	Sep'20	Dec'20	Mar'21	Jun'21	1QFY22	2QFY22	3QFY22	4QFY22
Assam	75%	88%	83%	49%	67%	67%	91%	93%
West Bengal	87%	90%	95%	73%	85%	86%	96%	97%
Rest of India	95%	94%	97%	85%	90%	93%	97%	97%
Total	89%	92%	95%	77%	86%	88%	96%	97%

Source: MOFSL, Company

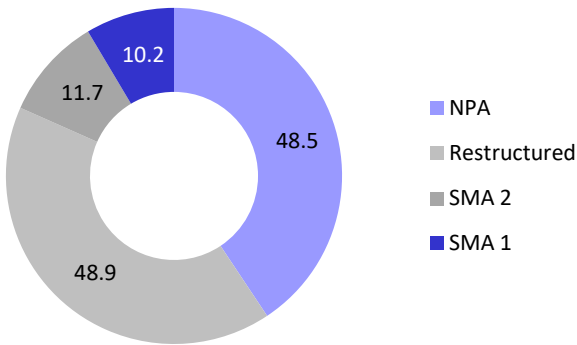
SMA book for Assam moderates, but is likely to increase in the near term due to the flood situation

Exhibit 6: SMA and NPA book across Assam, West Bengal, and the overall bank moderates over the past few quarters



Source: MOFSL, Company

Exhibit 7: Total stress pool within EEB stands ~INR119b (~19% of loans)



Source: MOFSL, Company

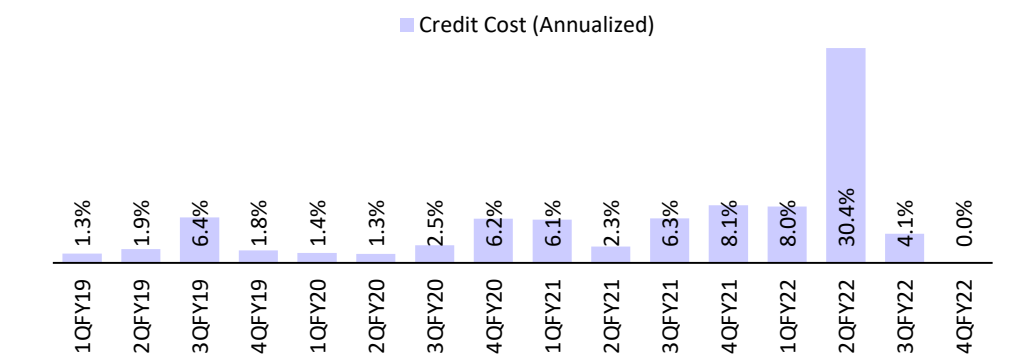
Exhibit 8: Coverage on the stress pool stands ~59%; expect a recovery of INR55b, excluding the Assam relief scheme

Coverage	INR b
Provisions	69.7
Estimated recovery over 1HFY23	30.0
CGFMU recovery	25.0

Source: MOFSL, Company

Credit cost has been highly volatile over the past few quarters

Exhibit 9: Credit cost trends over the past several quarters



Source: MOFSL, Company

Four out of five quarters
have seen a double-digit
change in earnings for FY23

Exhibit 10: Change in our FY23 estimates in the past five quarters

FY23E	4QFY21	1QFY22	2QFY22	3QFY22	4QFY22
NII	115.3	110.2	108.9	96.5	99.1
Change (%)	-7.4%	-4.4%	-1.2%	-11.4%	2.7%
PPOP	104	100.7	96.9	84.4	89.7
Change (%)	-3.2%	-3.2%	-3.8%	-12.9%	6.3%
PAT	55.3	52.3	44.1	35.9	43.7
Change (%)	-13.5%	-5.4%	-15.7%	-18.6%	21.7%
Loans	1227.9	1107.2	1107.2	1055.2	1,164.50
	-3.8%	-9.8%	0.0%	-4.7%	10.4%
GNPA (%)	6.0	6.6	7.4	8.6	4.6
NNPA (%)	2.0	1.8	1.9	2.3	1.2
Credit Cost (%)	2.6	2.8	3.5	3.5	2.7
NIM (%)	7.7	7.9	8.1	7.2	7.0
RoA	3.5	3.6	3.2	2.6	2.8
RoE	24.9	24.9	26.8	20.4	22.8
BV	152	143	113	118	130
Change (%)	-6.7%	-5.9%	-21.0%	4.4%	10.2%
ABV	141	135	103	108	125
Change (%)	-9.6%	-4.3%	-23.7%	4.9%	15.7%
EPS	34.3	32.5	27.4	22.3	27.2
Change (%)	-13.6%	-5.2%	-15.7%	-18.6%	22.0%

Source: MOFSL, Company

BANDHAN demonstrated higher resilience during earlier crisis

Exhibit 11: 90+ DPD as of Mar'17 caused by the demonetization (Nov'16)

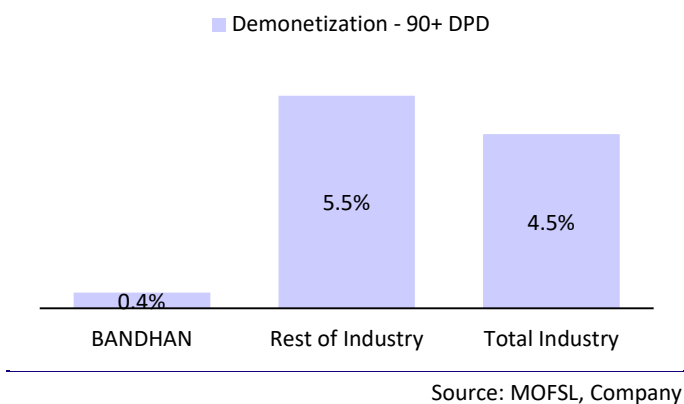


Exhibit 12: 90+ DPD as of Dec'17 caused by the implementation of GST (Jul'17)

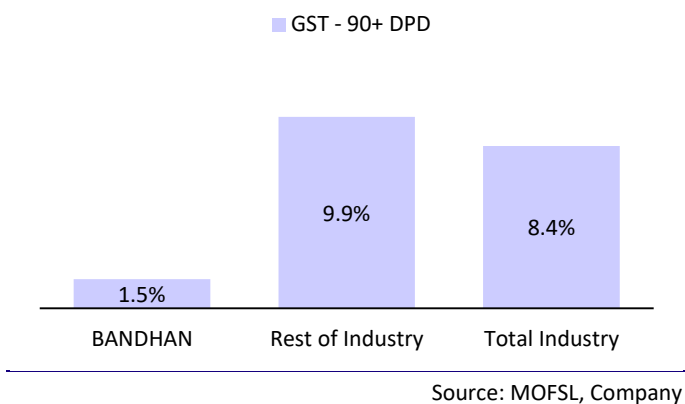


Exhibit 13: 90+ DPD as of Mar'18 caused by the farm loan waiver in UP (Aug'17)

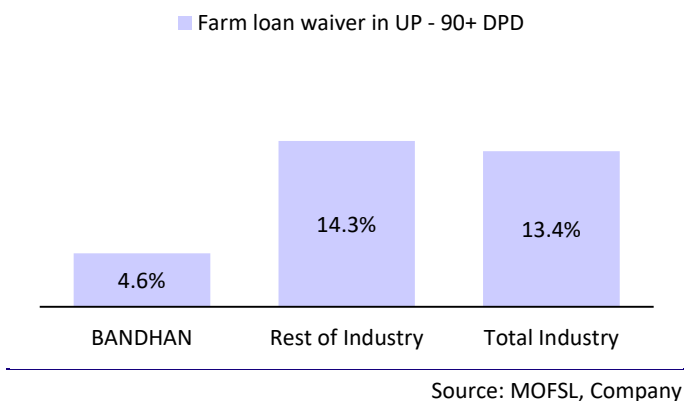
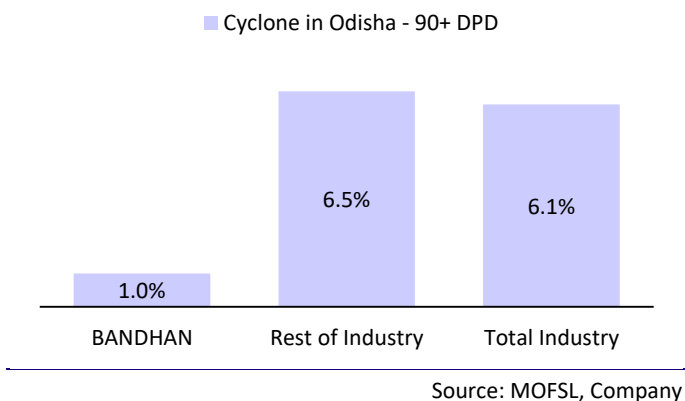
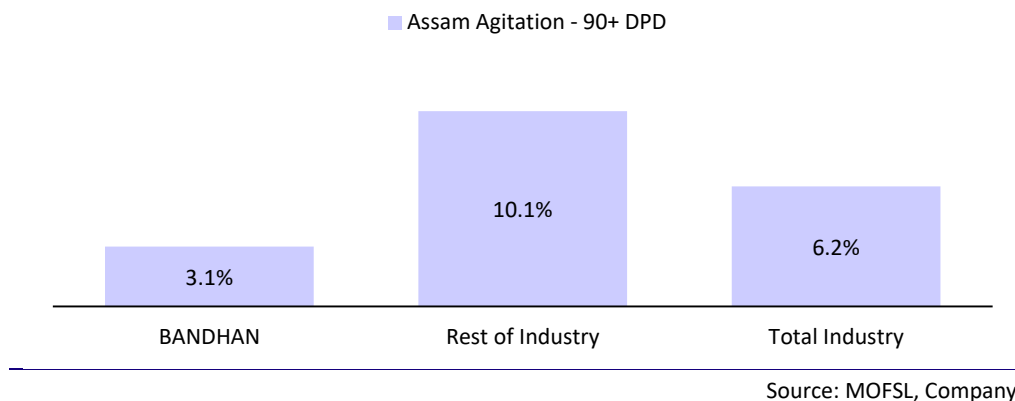


Exhibit 14: 90+ DPD as of Sep'19 caused by Cyclone Fani in Odisha (May'19)



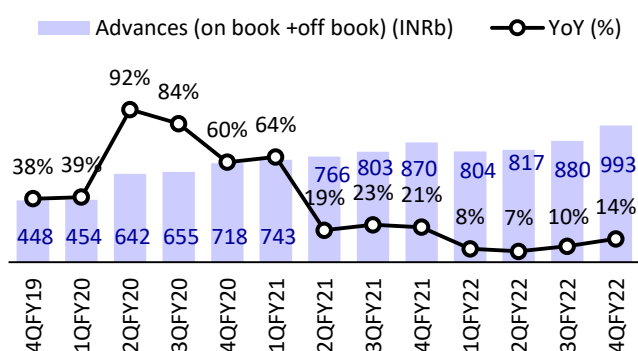
Despite having the highest market share in Assam, BANDHAN outperformed the industry with regard to delinquencies during the agitation in the state

Exhibit 15: 90+ DPD as of Feb'20 due to the disruption caused by the Assam agitation (Nov'19)



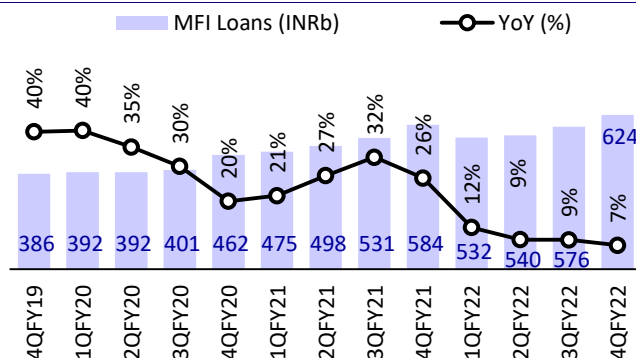
Story in charts

Exhibit 16: AUM grew by 14% YoY and 13% QoQ



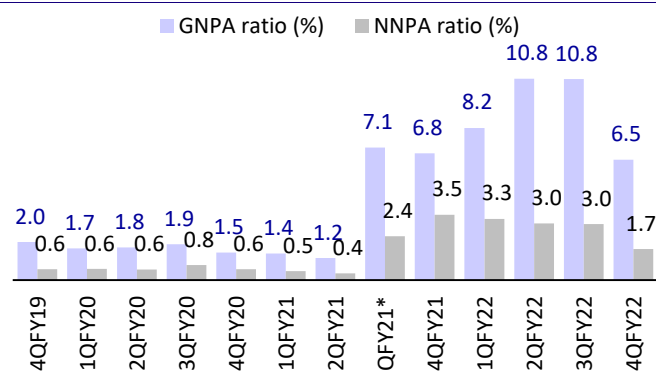
2QFY20-1QFY21 growth not comparable due to the merger
Source: MOFSL, Company

Exhibit 17: MFI loans rose by 7% YoY and 8% QoQ



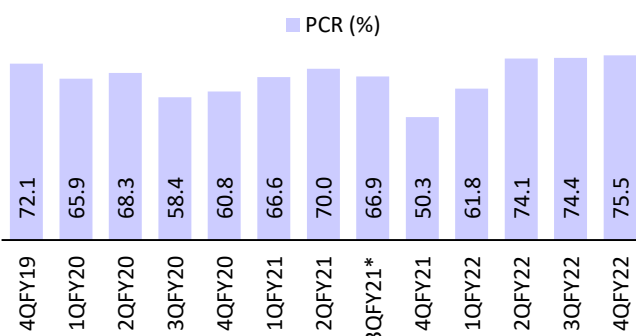
Source: MOFSL, Company

Exhibit 18: Asset quality ratios improves sharply, with GNPA/NNPA ratio declining by 435bp/135bp QoQ



3QFY21 based on pro-forma numbers Source: MOFSL, Company

Exhibit 19: Provision coverage ratio improves to ~75.5% in 4QFY22 v/s 50% in 4QFY21



3QFY21 based on pro-forma numbers Source: MOFSL, Company

Exhibit 20: DuPont Analysis: Return ratios to pick up strongly from FY23 onwards

	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Net Interest Income	8.1	8.9	8.5	7.3	6.9	6.9	7.5
Other Income	1.9	2.1	2.1	2.0	2.2	2.2	2.1
Total Income	10.0	11.0	10.6	9.4	9.1	9.2	9.6
Operating Expenses	3.5	3.6	3.3	2.7	2.8	2.8	2.8
Employees	1.8	2.0	1.8	1.6	1.7	1.7	1.7
Others	1.7	1.6	1.4	1.1	1.1	1.1	1.1
Operating Profit	6.5	7.4	7.4	6.6	6.3	6.4	6.7
Core operating Profit	6.4	7.4	7.2	6.3	6.0	6.3	6.6
Provisions	1.0	1.5	1.9	3.8	6.2	2.7	2.5
NPA	0.6	1.3	0.8	4.2	6.2	2.5	2.3
Others	0.4	0.1	1.1	-0.4	0.0	0.2	0.2
PBT	5.5	6.0	5.5	2.9	0.1	3.7	4.2
Tax	1.9	2.1	1.4	0.7	0.0	0.9	1.1
RoA	3.6	3.9	4.1	2.1	0.1	2.7	3.1
Leverage (x)	5.4	4.9	5.6	6.3	7.3	8.0	8.1
RoE	19.5	19.0	22.9	13.5	0.7	21.9	25.3

Financials and valuations

Income Statement							(INR b)	
Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	
Interest Income	48.0	66.4	108.9	125.2	138.7	189.3	240.5	
Interest Expense	17.7	21.5	45.6	49.6	51.6	82.7	100.6	
Net Interest Income	30.3	45.0	63.2	75.6	87.1	106.6	140.0	
Growth (%)	26.2	48.3	40.7	19.6	15.2	22.4	31.2	
Non-Interest Income	7.1	10.6	15.5	21.1	28.2	33.9	39.3	
Total Income	37.4	55.6	78.7	96.7	115.4	140.5	179.2	
Growth (%)	32.8	48.7	41.6	22.9	19.3	21.8	27.6	
Operating Expenses	13.1	18.1	24.3	28.2	35.2	42.6	53.3	
Pre-Provision Profit	24.3	37.5	54.5	68.6	80.1	97.9	126.0	
Growth (%)	35.5	54.2	45.3	25.9	16.9	22.1	28.7	
Core PPOP	23.8	37.1	53.3	65.5	76.4	96.4	124.2	
Growth (%)	34.6	55.7	43.7	22.8	16.7	26.1	28.8	
Provisions (excl. tax)	3.7	7.4	13.9	39.1	78.8	41.9	47.2	
PBT	20.6	30.1	40.5	29.5	1.3	56.0	78.7	
Tax	7.1	10.6	10.3	7.4	0.0	14.1	19.8	
Tax Rate (%)	34.6	35.2	25.4	25.2	2.2	25.2	25.2	
PAT	13.5	19.5	30.2	22.1	1.3	41.9	58.9	
Growth (%)	21.0	45.0	54.9	-27.1	-94.3	NM	40.5	
Balance Sheet								
Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	
Equity Share Capital	11.9	11.9	16.1	16.1	16.1	16.1	16.1	
Reserves and Surplus	81.9	100.1	135.9	158.0	157.7	192.0	241.4	
Net Worth	93.8	112.0	152.0	174.1	173.8	208.1	257.5	
Deposits	338.7	432.3	570.8	779.7	963.3	1,194.5	1,493.1	
Growth (%)	45.8	27.6	32.0	36.6	23.5	24.0	25.0	
of which CASA Deposits	116.2	176.2	210.3	338.3	400.8	556.6	704.8	
Growth (%)	70.0	51.6	19.4	60.9	18.5	38.9	26.6	
Borrowings	2.9	5.2	163.8	169.6	199.2	223.1	256.6	
Other Liabilities and Prov.	7.7	14.9	30.6	26.5	52.3	55.0	64.8	
Total Liabilities	443.1	564.4	917.2	1,149.9	1,388.7	1,680.7	2,072.1	
Current Assets	55.1	58.0	83.5	61.9	93.2	75.7	84.9	
Investments	83.7	100.4	153.5	251.6	290.8	351.9	418.7	
Growth (%)	51.8	19.9	52.9	63.9	15.6	21.0	19.0	
Loans	297.1	396.4	666.3	816.1	939.7	1,171.1	1,477.9	
Growth (%)	76.5	33.4	68.1	22.5	15.1	24.6	26.2	
Fixed Assets	2.4	3.3	3.7	4.9	5.9	6.6	7.4	
Other Assets	4.8	6.3	10.1	15.5	59.0	75.5	83.2	
Total Assets	443.1	564.4	917.2	1,149.9	1,388.7	1,680.7	2,072.1	
Asset Quality								
	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E	
GNPA	3.7	8.2	9.9	57.6	63.8	59.9	54.1	
NNPA	1.7	2.3	3.9	28.6	15.6	14.1	12.2	
GNPA Ratio	1.2	2.0	1.5	6.8	6.5	4.9	3.6	
NNPA Ratio	0.6	0.6	0.6	3.5	1.7	1.2	0.8	
Credit Cost	1.0	1.9	2.6	5.3	9.0	3.7	3.3	
PCR (Excl. Tech. write-off)	53.7	72.1	60.8	50.3	75.5	76.4	77.4	

Financials and valuations

Ratios

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Spread Analysis (%)							
Avg. Yield on Earning Assets	13.9	14.2	15.4	12.6	11.6	13.3	13.6
Avg. Yield on loans	16.4	16.5	17.9	14.7	13.9	15.8	16.1
Avg. Yield on Investments	7.1	6.7	6.6	5.9	5.5	6.4	6.5
Avg. Cost of Int. Bear. Liab.	6.5	6.0	8.3	6.2	5.1	6.8	6.8
Avg. Cost of Deposits	5.9	5.4	6.6	5.9	5.5	5.5	5.5
Interest Spread	7.5	8.2	7.2	6.4	6.5	6.5	6.8
Net Interest Margin	8.8	9.6	9.0	7.6	7.3	7.5	7.9

Capitalization Ratios (%)

CAR	31.5	29.2	27.4	23.5	20.1	19.2	18.5
Tier I	30.3	27.9	25.2	22.5	18.9	18.5	17.9
Tier II	1.2	1.3	2.2	1.0	1.2	0.7	0.5

Business and Efficiency Ratios (%)

Loans/Deposit Ratio	87.7	91.7	116.7	104.7	97.6	98.0	99.0
CASA Ratio	34.3	40.8	36.8	43.4	41.6	46.6	47.2
Cost/Assets	3.0	3.2	2.6	2.4	2.5	2.5	2.6
Cost/Total Income	35.0	32.6	30.8	29.1	30.5	30.3	29.7
Cost/Core income	35.4	32.8	31.3	30.1	31.6	30.7	30.0
Int. Expense/Int. Income	36.9	32.3	41.9	39.6	37.2	43.7	41.8
Fee Income/Total Income	17.7	18.4	18.2	18.6	21.3	23.1	20.9
Non Int. Inc./Total Income	18.9	19.1	19.7	21.8	24.5	24.1	21.9
Emp. Cost/Total Expense	52.6	55.7	56.3	59.1	60.6	60.6	60.6
Investment/Deposit Ratio	24.7	23.2	26.9	32.3	30.2	29.5	28.0

Profitability Ratios and Valuation

RoE	19.5	19.0	22.9	13.5	0.7	21.9	25.3
RoA	3.6	3.9	4.1	2.1	0.1	2.7	3.1
RoRWA	5.5	5.6	6.2	3.3	0.2	4.2	4.7
Book Value (INR)	79	94	94	108	108	129	160
Growth (%)	93.7	19.4	0.5	14.5	-0.2	19.8	23.7
Price-to-BV (x)	3.5	2.9	2.9	2.6	2.6	2.1	1.7
Adjusted BV (INR)	78	93	93	96	101	123	155
Price-to-ABV (x)	3.6	3.0	3.0	2.9	2.7	2.2	1.8
EPS (INR)	11.8	16.4	21.6	13.7	0.8	26.0	36.6
Growth (%)	15.8	39.1	31.9	-36.5	-94.3	NM	40.5
Price-to-Earnings (x)	23.5	16.9	12.8	20.2	NM	10.6	7.6

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 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.: INP000000670); 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.