

BSE Sensex: 63,416

S&P CNX: 18,817

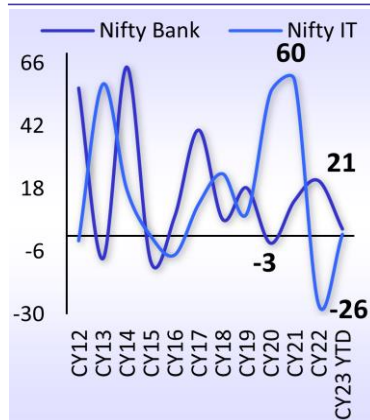
Motilal Oswal values your support in the Asiamoney Brokers Poll 2023 for India Research, Sales, Corporate Access and Trading team. We request your ballot.



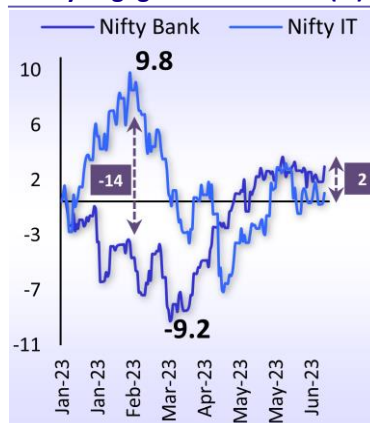
Bank vs. IT: Our previous report



Nifty Bank vs. IT: YoY change (%)



Nifty Bank vs. IT – Divergence nearly negligible in CY23YTD (%)



Bank vs. IT: Taking stock of the relative Alpha!

Bank vs. IT: Reassessing their roles in alpha creation

- In this report, we revisit our findings on the roles of key benchmark indices in alpha creation since our last released report in [Mar'23](#). Here, we decode the roles of two prominent sectors in relative alpha generation over the last decade – Banks and IT! We present several perspectives around the same and highlight how relative divergence between these two sectors has played an important role in determining the out-/under-performance of Indian markets.
- As we are nearing the end of 1HCY23, we assess the Bank vs. IT divergence play and reinforce our findings with new learnings.

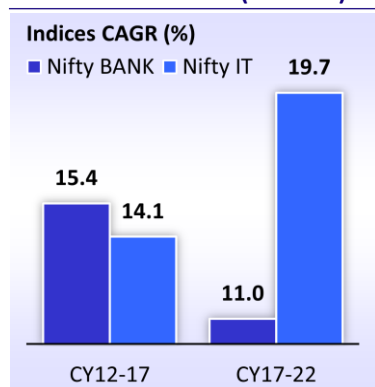
Recap of CY23: Sharp divergence in the beginning, moderates by mid-year

- CY22 ended with a sharp outperformance of Banks over IT and the divergence stood at 47% between Nifty Bank and Nifty IT indices.
- However, since the beginning of CY23 (Jan-Mar'23) banks started to underperform mainly due to the US banking crisis, expectations of a moderation in NII growth and margins for Indian banks and weak FII flows. Conversely, IT began to recover over a weak base of CY22 and anticipation of global interest rates nearing the peak.
- During Apr-Jun'23, however, the performance reversed again for both the sectors with banks reviving as the US banking crisis receded, 4QFY23 earnings exceeded expectations and there was a pause in monetary tightening by the RBI. On the contrary, weak earnings performance by IT companies erased all the gains in Nifty IT by Apr'23, resulting in the divergence between both these indices narrowing to ~2% by end of Jun'23 from the highs of ~14% in Feb'23.
- Flows:** CY22 witnessed a sharp FII selling of USD17b, after three consecutive years of inflows, whereas DII inflows to Indian equities remained at an all-time high at USD32.2b. However, FIIs turned net buyers as of CY23YTD with net inflow of USD4.4b. On the other hand, DII inflows continue to lead with net inflow of USD10b as of CY23YTD.

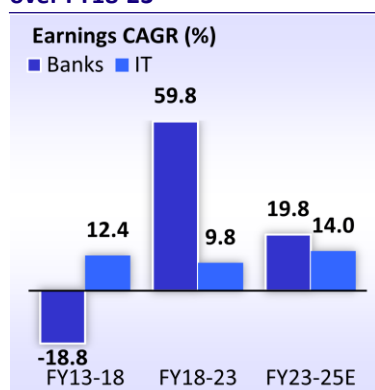
Earnings of Banks spike faster than that of IT...

- Nifty Bank/Nifty IT constituents recorded a PAT CAGR of 14%/11% over **FY13-23** while the indices grew 13%/17% during the same period. Over **FY20-23**, earnings for Nifty Bank and Nifty IT reported a CAGR of 39% and 10%, while the indices grew 34% and 37% during the same period, respectively.
- In FY23, earnings for Nifty Bank constituents remained strong with ~38% YoY growth, whereas growth for IT constituents moderated to 7% YoY. The Nifty Bank and Nifty IT indices grew 21% and declined 26% in CY22, respectively.
- The strong earnings momentum in Indian banks was driven by healthy loan growth, stable margins, and asset quality improvements with a sharp revival in PSBs profits in the second half of the decade that continued in FY23 as well. Whereas, earnings performance of IT companies remained decent during the first half of the decade but moderated marginally in the second half. IT

Nifty Bank and IT – Performance over the last decade (CY12-22)



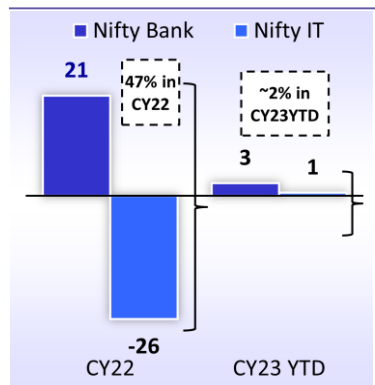
Earnings of Banks remain high over FY18-23



Weightage of banks remains high while IT moderates in CY23

	Dec'12	Dec'20	Dec'22	May'23
Weights in Nifty50 (%)				
Banks	21.6	26.5	27.1	27.3
IT	11.4	16.3	14	13.0
Funds ownership (%)				
Banks		21.1	23.1	21.5
IT		11.2	9.7	9.6

Divergence in CY23YTD is only 2% vs. 47% in CY22



companies' earnings were a mixed bag in FY23 with tier-1 firms delivering muted revenue growth and modest margins and underperforming the tier-2 companies notably.

- In line with this trend, we expect earnings of Nifty Bank constituents to continue to remain strong and report 20% CAGR over **FY23-25**, driven by healthy credit growth and stable margins. On the other hand, earnings of Nifty IT constituents to post a CAGR of 14%, led by margin expansion in FY24 and demand recovery in FY25E.

...but market cap rises at a similar pace despite significant volatility

- During CY12-22, total market cap of Nifty Bank reported a 15.9% CAGR to reach INR31t; whereas, market cap of Nifty IT posted a 16.1% CAGR to reach INR27t.
- While market caps for Nifty Bank and Nifty IT grew at a similar pace over the last ten years (~16% CAGR each), the pace of growth for Nifty IT was higher than that of Nifty Bank in the recent five years (at ~19% and 14% CAGR, respectively).
- Further, the market cap contributions from Nifty Bank and Nifty IT constituents to Nifty-50 narrowed to a range of ~21% and ~18%, respectively, in CY23YTD.
- Market cap ratio between Nifty Bank and Nifty IT indices reached 1.2x in CY22 from the lows of 0.7x in CY21. The ratio remained at 1.2x in CY23YTD as well.
- **Sectoral weights in the Indices:** Bank and IT sectors together constitute ~40% of Nifty-50 and ~35% of NSE-500 weights to date. Over the last five years, weightage of Bank in Nifty-50 averaged at ~27% (down 300bp from the 2019 highs), whereas that of IT averaged at ~15% (up 330bp from the 2017 lows).

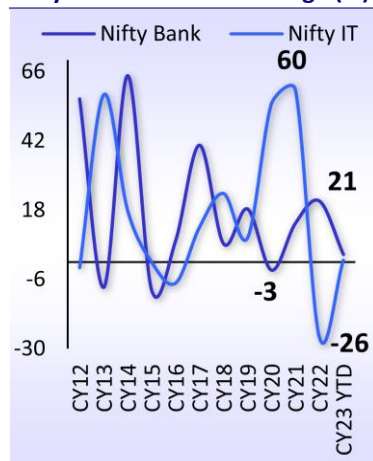
Nifty Bank outperforms while Nifty IT underperforms between the three peaks of Nifty-50

- Collectively, within the three peaks of Nifty-50 (achieved in Oct'21, Dec'22 and June'23), Nifty Bank recorded gains of 11% whereas Nifty IT posted loss of 21%.
- Nifty Bank has been down ~1% from its May'22 high, whereas Nifty IT has been down 27% from its Jan'22 high. Hence, we note that Nifty Bank has outperformed the Nifty IT in all the scenarios of benchmark peaks over the last 21 months.
- Both these indices have seen a strong resurgence from Covid lows in Mar'20, with Nifty Bank and Nifty IT surging ~160% each. A strong focus on tech spends globally fueled the IT sector rally in CY20 and CY21, whereas a strong economic recovery in India led the healthy revival of Indian banking system in CY21/CY22.

Divergence headroom remains high for the year!

- The wide divergence between the two main sectoral indices that one is used to since a decade has not played out so far in CY23. This is because the outperformance of IT vs. Bank has reversed post-Mar'23. Given the wide-ranging concerns on the near-term IT demand, as highlighted by our IT team in their recent reports ([Report 1](#), [Report 2](#)), we expect the trajectory for Nifty IT to remain subdued going ahead.
- Meanwhile the Banking sector continues to report solid earnings performance with RoE, asset quality and credit costs in fine fettle. We expect a healthy 20% earnings CAGR for Banks over FY23-25. Valuations for the Banking sector are also quite reasonable in the context of broader markets. Thus, Banks repeating the outperformance over IT appears quite probable in 2023, in our view.

Nifty Bank vs. IT: YoY change (%)



Wide divergence of the past tapers in CY23YTD

- Despite the strong performances of both Nifty Bank and IT indices over the past decade, the combined annual returns have shown a huge divergence.
- The divergence ranged between ~10% and ~60% per year, highlighting the obvious but decisive role of getting the sector call right at the beginning of a CY.
- Both the sectors have very natural and pertinent macro linkages. Banking being a microcosm of the broader economy cannot remain immune to the prevailing global and domestic macro environment. Technology, meanwhile, derives more than two-thirds of its revenue from the US and Europe and has direct linkages with the trends prevailing in the global economy.
- For example, since the onset of Covid-19, the IT sector has – both in 2020 and 2021 – benefitted from the tailwinds of rising technology spends globally as digitization assumed a mission critical importance in an era of physical and social distancing. Meanwhile, the banking sector bore the brunt of weaker economic growth and concerns around deterioration in asset quality led by persistent lockdowns in 2020 and 2021.
- However, the divergence between both these indices has remained negligible (~2%) in CY23YTD, generating possibility of a large divergence headroom going ahead.

Exhibit 1: Key indices – YoY performance (%)

Year	Nifty-50	Nifty Bank	Nifty IT
CY12	28.0	57.0	-2.0
CY13	7.0	-9.0	58.0
CY14	31.0	65.0	18.0
CY15	-4.0	-10.0	0.0
CY16	3.0	7.0	-7.0
CY17	29.0	41.0	12.0
CY18	3.0	6.0	24.0
CY19	12.0	18.0	8.0
CY20	15.0	-3.0	55.0
CY21	24.0	13.0	60.0
CY22	4.0	21.0	-26.0
CY23YTD	4.0	3.0	1.0

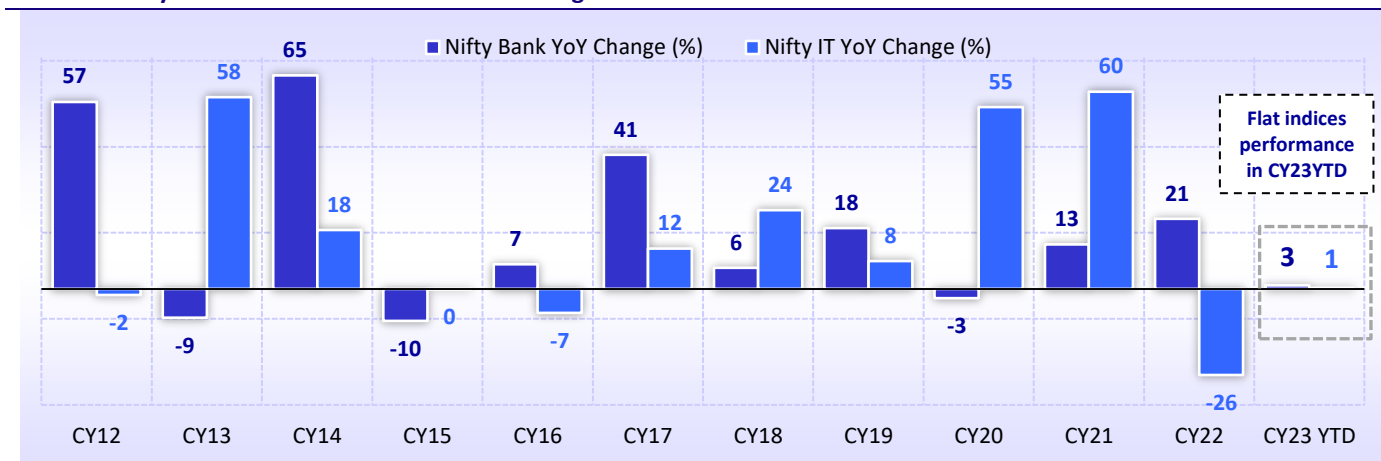
Source: Bloomberg, MOFSL

Exhibit 2: Stark divergence between indices YoY (%)

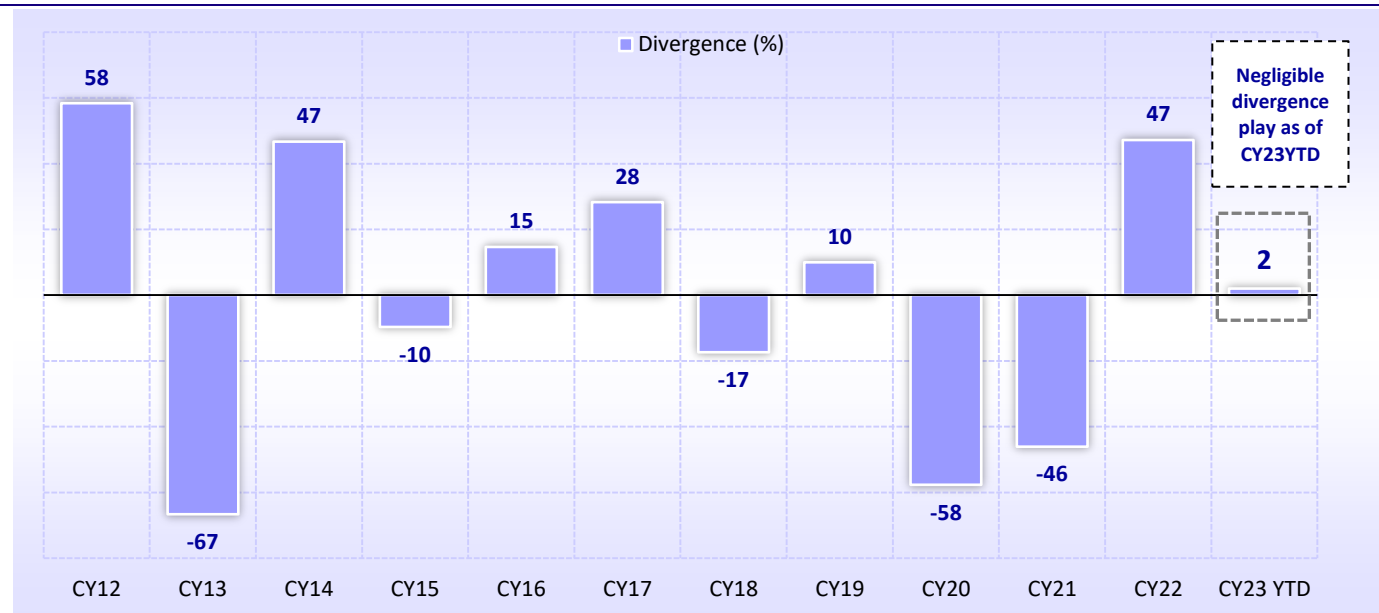
Divergence YoY	Nifty-50 vs. Nifty Bank	Nifty-50 vs. Nifty IT	Nifty Bank vs. Nifty IT
CY12	-29.0	30.0	58.0
CY13	15.0	-51.0	-67.0
CY14	-33.0	14.0	47.0
CY15	6.0	-4.0	-10.0
CY16	-4.0	10.0	15.0
CY17	-12.0	16.0	28.0
CY18	-3.0	-21.0	-17.0
CY19	-6.0	4.0	10.0
CY20	18.0	-40.0	-58.0
CY21	11.0	-35.0	-46.0
CY22	-17.0	30.0	47.0
CY23YTD	1.0	3.0	2.0

Source: Bloomberg, MOFSL

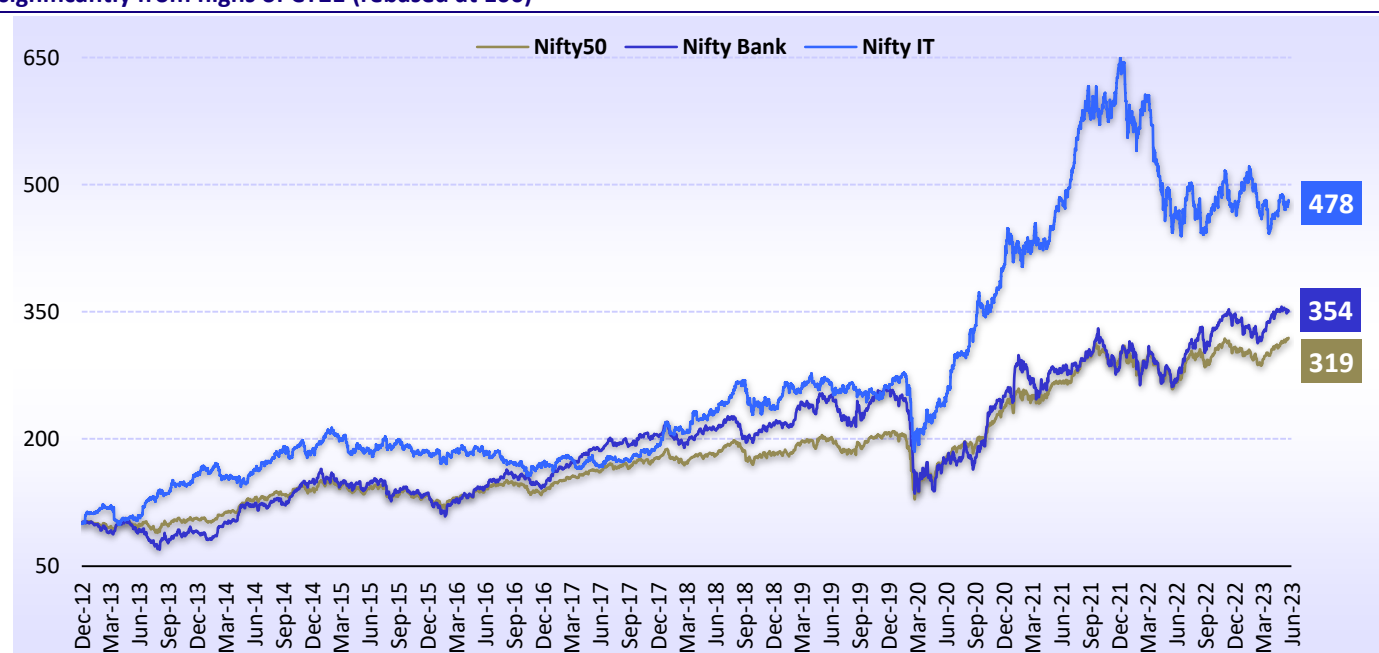
Exhibit 3: Nifty Bank and IT remained volatile during the decade



Source: Bloomberg, MOFSL

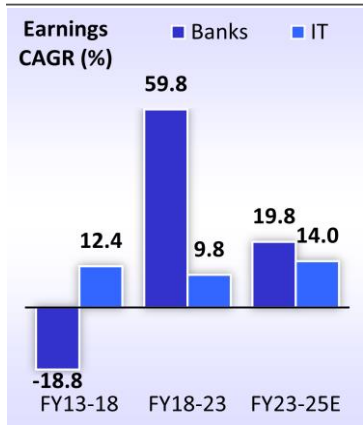
Exhibit 4: Wide divergence of the past tapers in CY23YTD

Source: Bloomberg, MOFSL

Exhibit 5: Nifty Bank and IT remained volatile during the decade, while remained flat in CY23YTD, Nifty IT corrected significantly from highs of CY21 (rebased at 100)

Source: Bloomberg, MOFSL

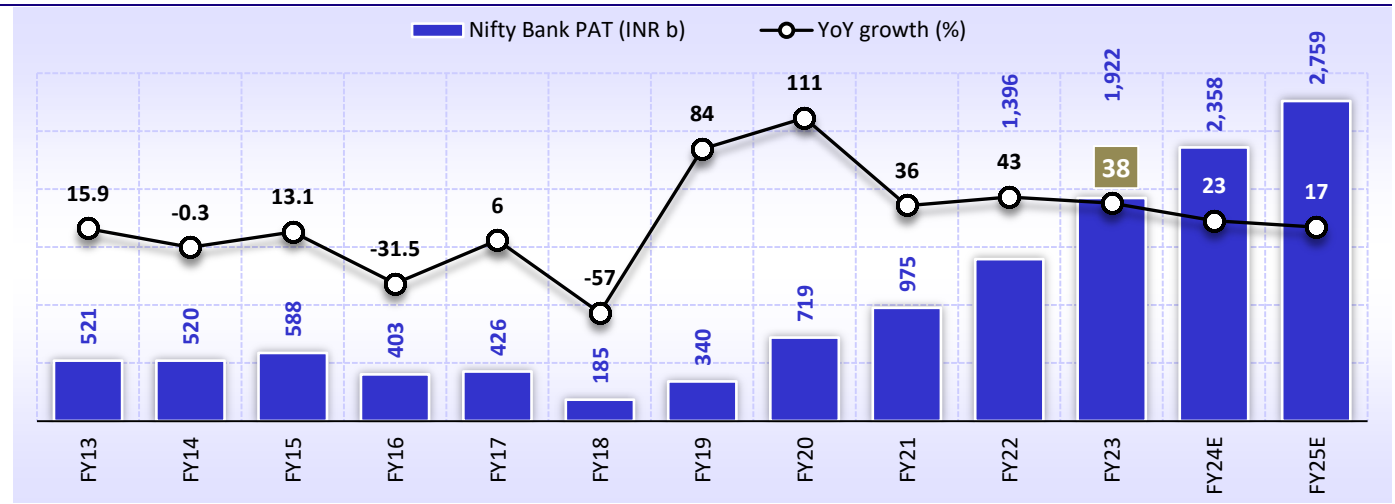
Aggregate PAT growth of indices constituents in the last decade



Earnings of Banks spike faster than that of IT...

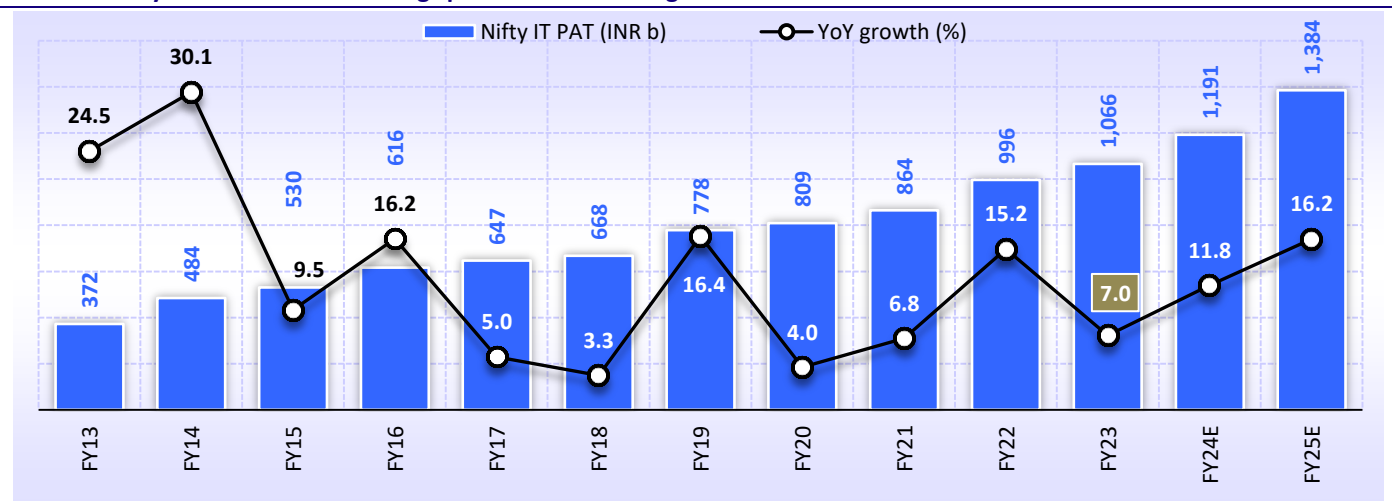
- The aggregate profits of Nifty Bank constituents reported ~14% CAGR over FY13-23 reaching INR1.9t in FY23; whereas that of Nifty IT constituents posted 11% CAGR and reached INR1.1t in FY23.
- Profit growth of Nifty Bank constituents remained weak during the first half of the decade with a decline in growth majorly due to weaknesses in the PSB constituents. However, the aggregate profit jumped in the second half and reported a strong 60% CAGR mainly led by the strong performances of PSBs.
- Conversely, Nifty IT constituents reported a stronger profit CAGR of 12% in the first half of the decade, which moderated marginally to 10% in the second half.
- We expect profits of Nifty Bank and Nifty IT constituents to report ~20% and 14% CAGR, respectively, during FY23-25.

Exhibit 6: Nifty Bank constituents' earnings performances during the first and second halves of FY13-23



Source: MOFSL, Company

Exhibit 7: Nifty IT constituents' earnings performances during the first and second halves of FY13-23

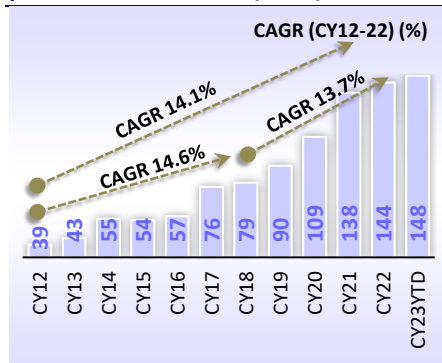


Source: MOFSL, Company

...but market cap rises at a similar pace despite volatility

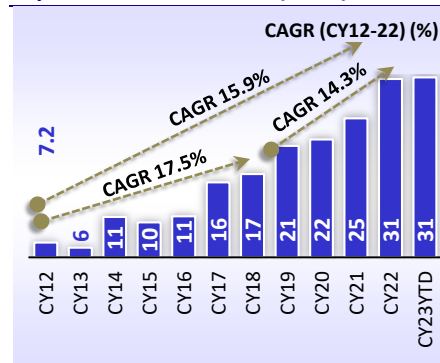
- During CY12-22, total market cap of Nifty Bank reported a 15.9% CAGR to reach INR31t; whereas, market cap of Nifty IT posted a 16.1% CAGR to reach INR27t.
- While market caps for Nifty Bank and Nifty IT grew at a similar pace over the last ten years (~16% CAGR each), the pace of growth for Nifty IT was higher than Nifty Bank in the recent five years (at ~18% and 15% CAGR, respectively).
- Further, the market cap contributions from Nifty Bank and Nifty IT constituents to Nifty-50 narrowed to a range of ~22% and ~19%, respectively, in CY23YTD. Besides, the trends of contributions were similar with respect to Nifty-500 as well. The market cap contributions of Nifty Bank and Nifty IT constituents stood at ~12% and ~10% of Nifty-500, respectively, as of CY23YTD.
- Market cap ratio between Nifty Bank and Nifty IT indices reached 1.2x in CY22 from the lows of 0.7x in CY21. The ratio remained at 1.2x in CY23YTD as well.

Exhibit 8: Market cap of Nifty-50 posted a 14.1% CAGR (INR t)



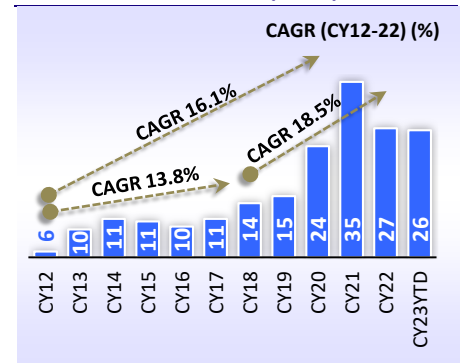
Source: MOFSL, Bloomberg

Exhibit 9: Market cap of Nifty Bank reported a 15.9% CAGR (INR t)



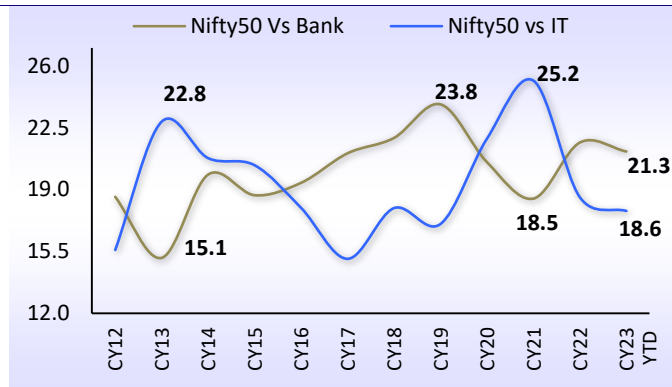
Source: MOFSL, Bloomberg

Exhibit 10: Market cap of Nifty IT clocked a 16.1% CAGR (INR t)

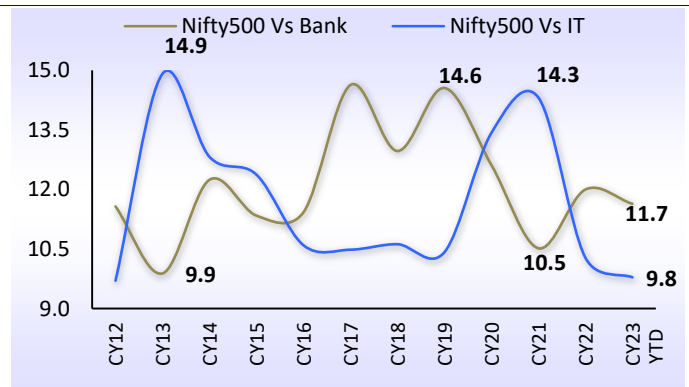


Source: MOFSL, Bloomberg

Exhibit 11: Average market cap contributions of both Nifty Bank and IT indices vs. Nifty-50 and Nifty-500 in the last decade (%)

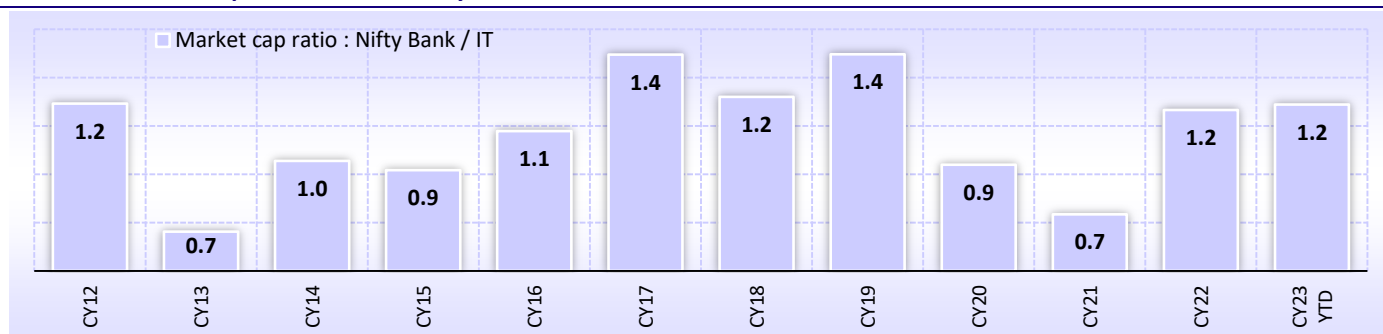


Source: MOFSL, Bloomberg



Source: MOFSL, Bloomberg

Exhibit 12: Market cap ratio between Nifty Bank and IT indices reached 1.2x in CY22



Source: Bloomberg, MOFSL

Refer to the recent report "Nifty and Virtuous Circle of Peaks and Troughs"



Nifty Bank outperforms while Nifty IT underperforms between the three peaks of Nifty-50

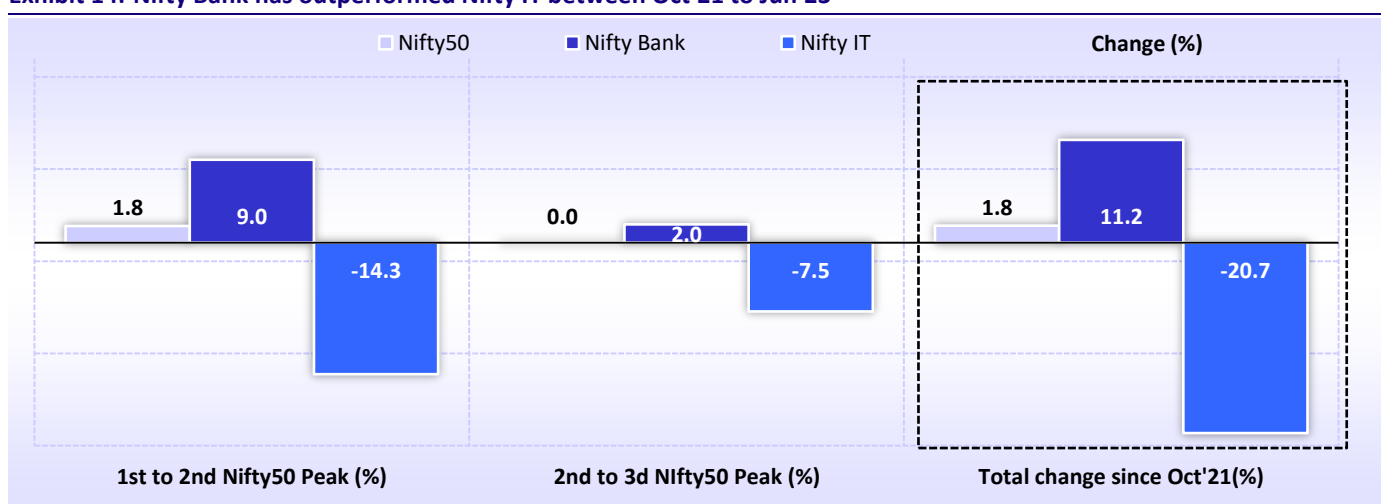
- Nifty-50 reached its all-time high in Jun'23 post-achieving its last peak in Dec'22.
- Comparing the indices' performances (between Dec'22 and Jun'23), the Nifty Bank has outperformed by ~2% whereas Nifty IT has underperformed by ~8% during the same period.
- While comparing the earlier two peaks of Nifty-50 (i.e. Oct'21 vs. Dec'22), we found that Nifty Bank had gained 9% whereas Nifty IT had lost 14%.
- Collectively, within the three peaks of Nifty-50 (achieved in Oct'21, Dec'22 and Jun'23), Nifty Bank recorded gains of 11% whereas Nifty IT posted loss of 21%.
- From the all-time high levels of the respective indices, Nifty Bank has been down ~1% from its May'22 high, whereas Nifty IT has been down 27% from its Jan'22 high.
- Hence, we note that Nifty Bank has outperformed the Nifty IT in all the scenarios of benchmark peaks over the last 21 months.
- Further, it is worthwhile to note that both these indices have seen a strong resurgence from Covid lows in Mar'20, with Nifty Bank and Nifty IT surging ~160% each. A strong focus on tech spends globally fueled the IT sector rally in CY20 and CY21, whereas a strong economic recovery in India led the healthy revival of Indian banking system in CY21/CY22.

Exhibit 13: Nifty Bank outperformed while Nifty IT underperformed

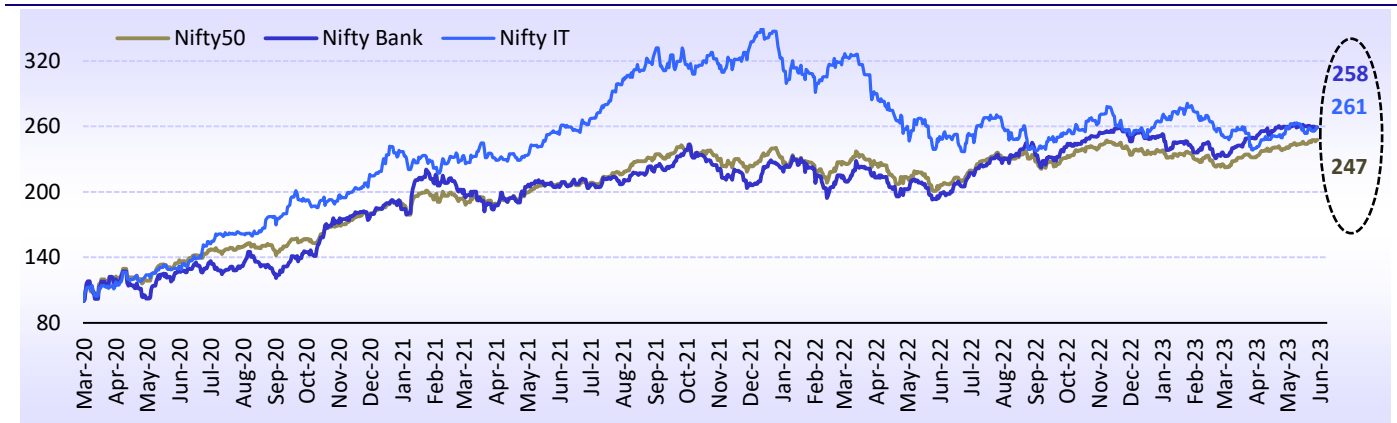
Nifty-50 highs date	Nifty50 closing	Nifty Bank Closing	Nifty IT closing	Nifty50 Change (%)	Nifty Bank Change (%)	Nifty IT Change (%)
18-Oct-21 (Peak 1)	18,477	39,685	36,306	-	-	-
1-Dec-22 (Peak 2)	18,813	43,261	31,121	2	9	-14
27-Jun-23 (Peak 3) - CY23YTD	18,817	44,122	28,800	0	2	-8
Total Change since Oct'21				2	11	-21

Source: Bloomberg, MOFSL

Exhibit 14: Nifty Bank has outperformed Nifty IT between Oct'21 to Jun'23



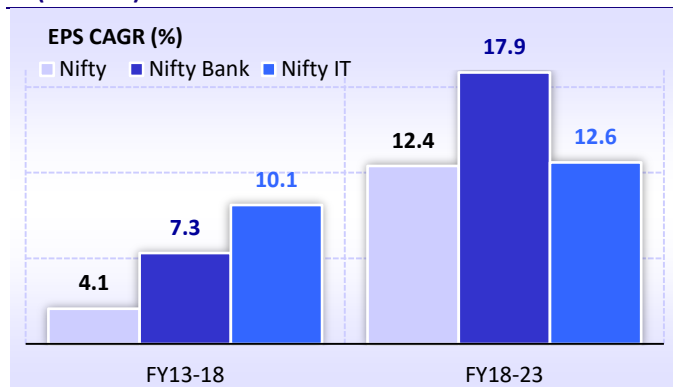
Source: Bloomberg, MOFSL

Exhibit 15: Both Nifty Bank and IT surged ~160% each from Mar'20 lows (rebased at 100)

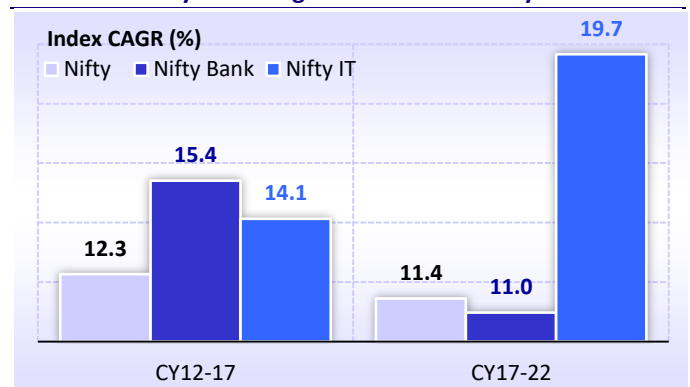
Source: MOFSL, Bloomberg

Earnings surge with re-rating being a common phenomenon

- EPS for Nifty Bank and Nifty IT reported 13% and 11% CAGR during FY13-23, while the indices compounded at 13% and 17%, respectively, between CY12-22.
- Though earnings grew at a decent pace for both the indices' constituents, the indices registered even faster growth leading to re-rating. However, re-ratings were higher in Nifty IT than that of the Nifty Bank index.

Exhibit 16: EPS of Nifty Bank constituents grew more than IT (FY13-23)

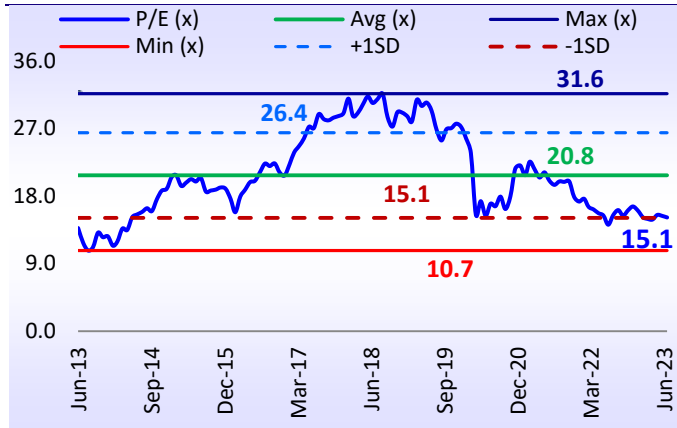
Source: MOFSL, Company

Exhibit 17: Nifty IT index grew faster than Nifty Bank index

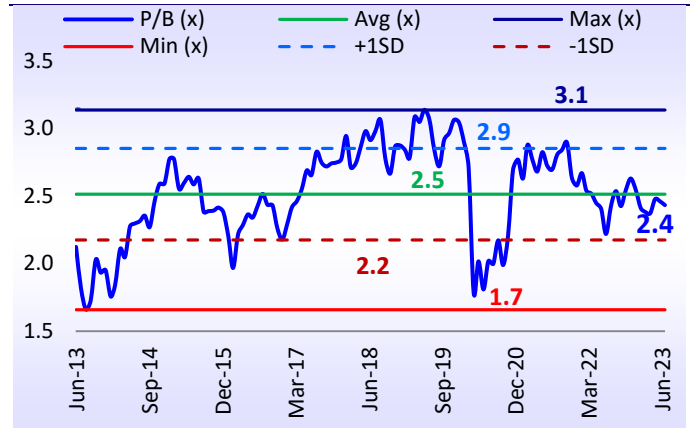
Source: MOFSL, Company

Valuations for Nifty IT appear richer than Nifty Bank

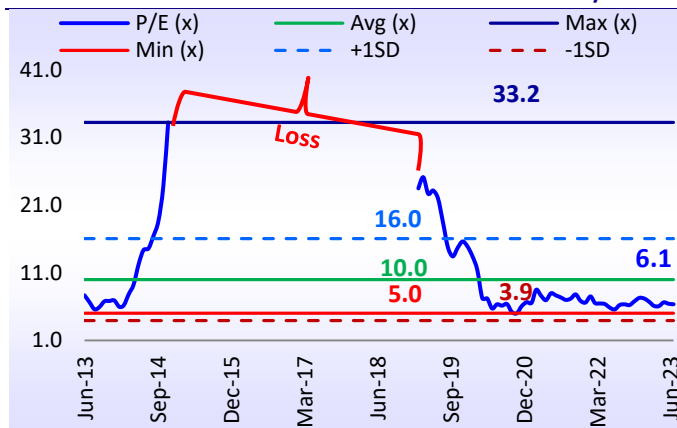
- In the first half of the decade, valuations of Nifty Bank remained at a premium to that of Nifty IT mainly due to depressed earnings. However, during Covid-19, the leadership reversed and Nifty IT gained significant premium over Banks mainly driven by re-ratings of the IT constituents.
- Though valuations of IT constituents are down from their highs of CY21, they continue to trade at a premium to that of the Banks.
- **P/E ratio:** MOFSL Private and Public Banks' 12-month forward P/E is trading at a 27% and 38% discount to the long period average (LPA), respectively, whereas that of Nifty IT is trading at a 9% premium to its LPA.
- **P/B ratio:** MOFSL Private Banks' 12-month forward P/B is trading at a 3% discount and Public Banks' P/B is trading at a 16% premium. Nifty IT's P/B, conversely, is trading at a 30% premium to its LPA.

Exhibit 18: MOFSL Private Banks' 12-month forward P/E

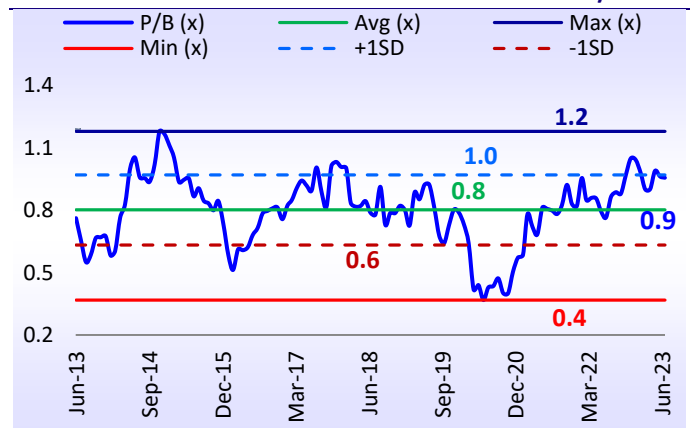
Source: MOFSL, Bloomberg

Exhibit 19: MOFSL Private Banks' 12-month forward P/B

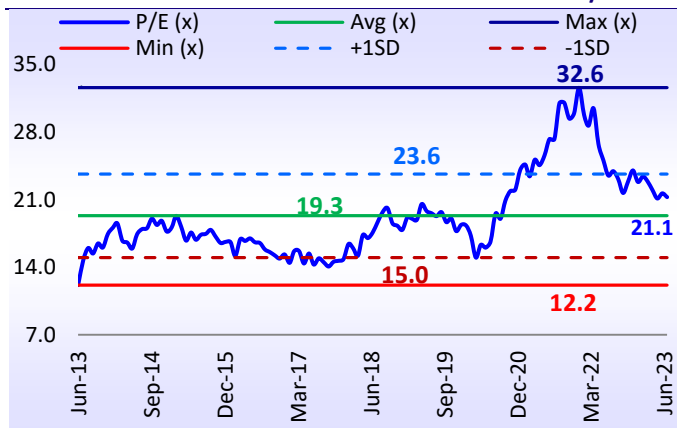
Source: MOFSL, Bloomberg

Exhibit 20: MOFSL Public Banks' 12-month forward P/E

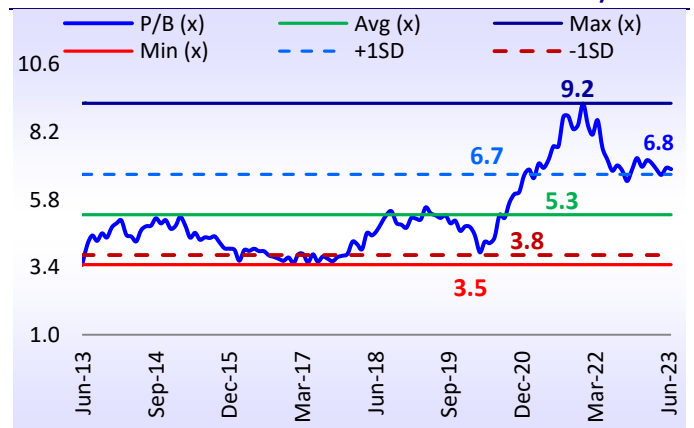
Source: MOFSL, Bloomberg

Exhibit 21: MOFSL Public Banks' 12-month forward P/B

Source: MOFSL, Bloomberg

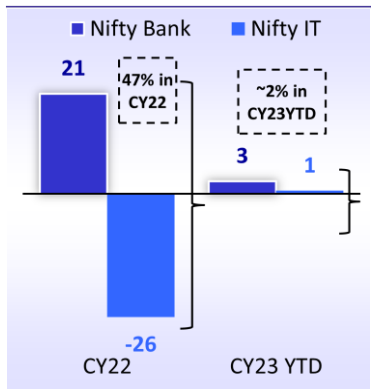
Exhibit 22: MOFSL IT Universe's 12-month forward P/E

Source: MOFSL, Bloomberg

Exhibit 23: MOFSL IT Universe's 12-month forward P/B

Source: MOFSL, Bloomberg

Divergence in CY23YTD is only 2% vs. 47% in CY22



Divergence headroom remains high for the year!

- The wide divergence between the two main sectoral indices that one is used to since a decade has not played out so far in CY23. This is because the outperformance of IT vs. Bank has reversed post-Mar'23. Given the wide-ranging concerns on the near-term IT demand, as highlighted by our IT team in their recent reports ([Report 1](#), [Report 2](#)), we expect the trajectory for Nifty IT to remain subdued going ahead.
- Meanwhile the Banking sector continues to report solid earnings performance with RoE, asset quality and credit costs in fine fettle. We expect a healthy 20% earnings CAGR for Banks over FY23-25. Valuations for the Banking sector are also quite reasonable in the context of broader markets. Thus, Banks repeating the outperformance over IT appears quite probable in 2023, in our view.

Exhibit 24: Nifty Bank and Nifty IT constituents – valuations snapshot

Company	Sector/ Index	Market Cap (USD b)	Price chg.	Price CAGR (%) as of Dec'22			EPS (INR)			P/E (x)			P/BV (x)			ROE (%)		
			CY23 YTD	1yr	5yr	10yr	FY23	FY24E	FY25E	FY23	FY24E	FY25E	FY23	FY24E	FY25E	FY23	FY24E	FY25E
HDFC Bank	Bank	109.9	1.9	10.1	11.7	17.0	79.3	94.4	112.8	20.9	17.6	14.7	3.3	2.8	2.4	17.0	17.3	17.7
ICICI Bank	Bank	79.0	5.4	20.4	23.2	15.7	45.8	53.7	62.4	20.5	17.4	15.0	3.3	2.8	2.5	17.5	17.6	17.6
SBI	Bank	60.6	-7.7	33.5	14.6	9.9	62.4	74.5	86.7	9.1	7.6	6.5	1.5	1.2	1.1	18.1	18.1	17.7
Kotak Mah. Bank	Bank	44.0	0.9	1.7	12.6	18.8	75.1	87.0	98.8	24.6	21.2	18.7	3.3	2.8	2.5	14.1	14.3	13.8
Axis Bank	Bank	35.8	4.4	37.6	10.6	13.2	71.4	83.7	99.3	13.6	11.6	9.8	2.4	1.9	1.6	18.2	18.4	18.1
Bank of Baroda	Bank	12.1	2.7	126.8	2.9	0.7	27.3	33.0	38.1	7.0	5.8	5.0	1.0	0.9	0.8	15.3	16.2	16.4
IndusInd Bank	Bank	12.1	8.1	37.4	-5.8	11.3	96.0	122.3	155.4	13.7	10.8	8.5	1.9	1.6	1.4	14.5	16.1	17.6
Punjab Natl. Bank	Bank	6.8	-8.9	51.4	-20.0	-10.7	2.3	6.2	8.7	22.3	8.2	5.9	0.6	0.6	0.5	2.6	6.8	8.9
IDFC First Bank	Bank	6.3	32.2	22.9	1.8	-	3.8	4.9	6.3	20.6	16.0	12.3	2.0	1.8	1.6	10.4	11.9	13.5
AU Small Finance	Bank	6.1	14.8	26.3	14.5	-	22.0	26.6	35.3	34.0	28.2	21.3	4.6	3.9	3.3	15.5	15.0	16.9
Bandhan Bank	Bank	4.6	1.7	-7.5	-	-	13.6	26.4	31.7	17.5	9.0	7.5	2.0	1.7	1.5	11.9	20.4	21.2
Federal Bank	Bank	3.1	-11.5	67.5	5.0	9.9	14.3	16.7	19.8	8.6	7.4	6.2	1.2	1.1	0.9	14.9	15.4	15.8
Nifty Bank	Banks	380.4	2.6	21.1	11.0	13.2												
TCS	IT	145.9	-1.8	-12.9	19.2	17.9	115.3	132.4	154.3	27.7	24.2	20.7	12.9	13.3	13.8	46.9	54.3	65.4
Infosys	IT	70.8	-15.3	-20.1	23.7	17.9	57.6	63.5	71.8	22.2	20.1	17.8	7.1	7.0	7.1	32.0	34.9	39.9
HCL Technologies	IT	38.6	12.5	-21.2	18.5	21.0	54.8	60.6	69.3	21.4	19.3	16.9	4.8	4.9	5.0	23.3	25.3	29.3
Wipro	IT	26.4	-2.5	-45.0	10.7	11.5	20.7	21.7	25.1	18.5	17.7	15.2	2.7	2.8	2.7	15.8	15.6	18.3
LTI Mindtree	IT	18.0	18.6	-40.5	31.3	-	151.8	174.0	211.2	34.0	29.7	24.5	9.2	7.8	6.5	26.1	28.3	29.0
Tech Mahindra	IT	12.5	10.2	-43.3	15.1	15.9	57.3	59.8	72.1	19.5	18.7	15.5	3.5	3.4	3.3	18.5	18.7	21.8
L&T Technology	IT	4.9	4.5	-34.2	29.1	-	110.5	132.0	155.4	34.8	29.1	24.8	8.2	7.2	6.2	25.6	26.2	26.9
Persistent Sys	IT	4.6	26.3	-21.1	40.1	31.2	124.4	162.0	187.4	39.3	30.2	26.1	9.2	7.7	6.4	25.9	28.4	27.4
Mphasis	IT	4.3	-6.7	-41.9	22.1	17.8	86.9	91.2	111.3	21.2	20.2	16.5	4.4	4.0	3.7	22.0	20.8	23.2
Coforge	IT	3.4	20.9	-34.1	43.2	32.0	130.6	177.7	195.0	36.0	26.4	24.1	9.3	7.7	6.4	27.1	32.0	29.5
Nifty IT	IT	329.5	0.6	-26.0	19.7	16.9												

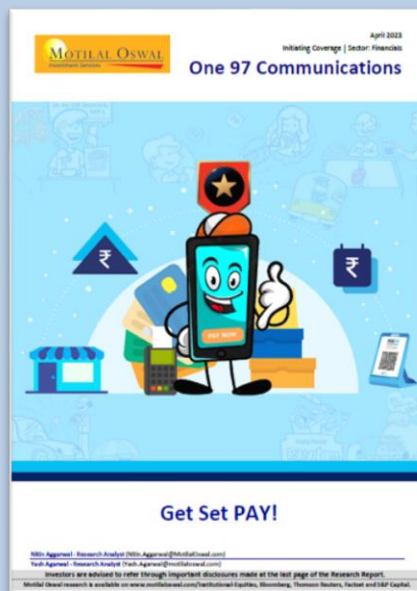
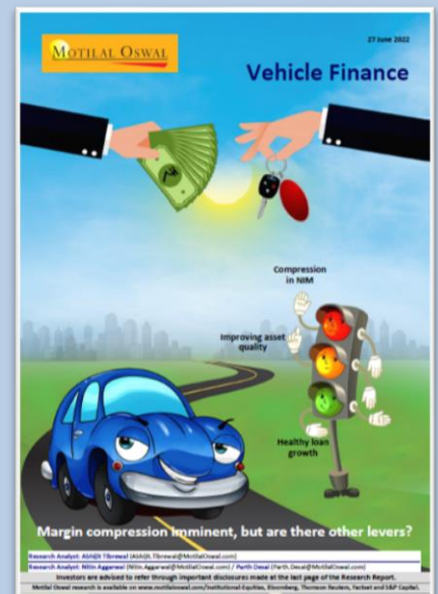
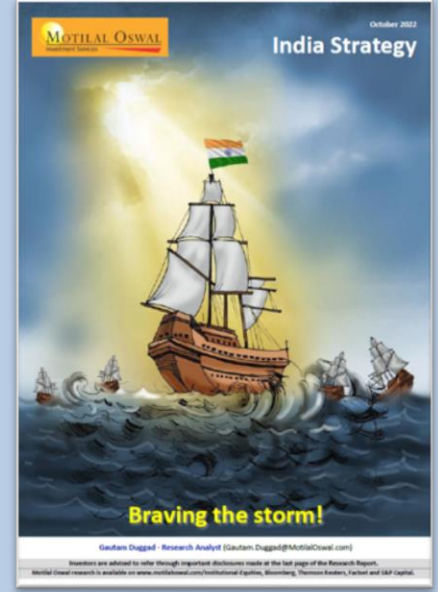
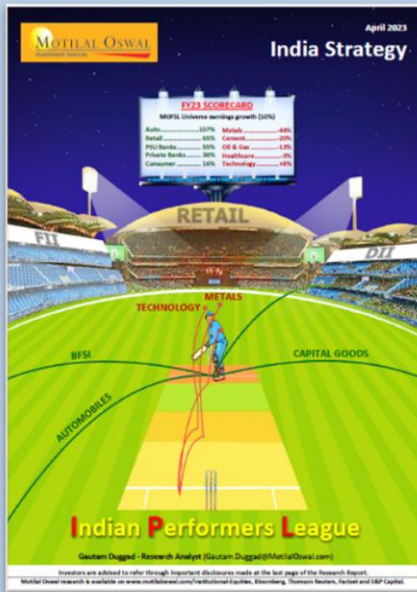
Source: MOFSL, Bloomberg

*Note: To check divergence among constituents, we have highlighted 1, 5 and 10 year price CAGR as on 31st Dec'22 and have highlighted CY23YTD performance separately.

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

REPORT GALLERY

RECENT STRATEGY/THEMATIC REPORTS



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, 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 - MOFSL) 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 Ltd. are available on the website at <http://online.reports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf>

Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

MOFSL, its associates, Research Analyst or their relatives may have any financial interest in the subject company. MOFSL and/or its associates and/or Research Analyst or their relatives may have 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. MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may have any other potential conflict of interests at the time of publication of the research report or at the time of public appearance, 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.

In the past 12 months, MOFSL or any of its associates may have:

- received any compensation/other benefits from the subject company of this report
- managed or co-managed public offering of securities from subject company of this research report,
- received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.

- MOFSL and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report.
- Subject Company may have been a client of MOFSL or its associates during twelve months preceding the date of distribution of the research report.
- Research Analyst may have served as director/officer/employee in the subject company.
- MOFSL and research analyst may engage in market making activity for the subject company.

MOFSL and its associate company(ies), and Research Analyst and their relatives from time to time may have:

(a) 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.

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.

To enhance transparency, MOFSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report. 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.

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.

Analyst Certification

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

Disclosure of Interest Statement	India Strategy
Analyst ownership of the stock	No

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 Financial Services Limited (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.

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. 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.

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.

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

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.

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.