



The Economy Observer

Debt Dossier: India's debt growth stable at ~12% YoY in 4QFY24

Household debt estimated to have hit a new high in the quarter

- India's non-financial sector (NFS) debt is estimated to have grown 11.9% YoY in 4QFY24 (quarter-ending Mar'24), similar to 11.8% a year ago and 12-13% in the previous three quarters. Outstanding NFS debt touched USD6.0t (or INR502t) in 4QFY24, equivalent to an eight-quarter high of 170% of GDP. In real terms, however, total debt (using GDP deflator) grew 9.7% YoY in 4QFY24, the slowest in four quarters.
- Within NFS debt, non-government non-financial (NGNF) debt grew at a five-quarter high rate of 12.7% YoY in 4QFY24 (vs. 9.7% YoY growth in 4QFY23), while the growth in government debt was at a 19-quarter low of 11.1% YoY (vs. 13.7% YoY growth in 4QFY23). Within the NGNF basket, household (HH) debt jumped 15.6% YoY in 4QFY24, driven by faster growth in the non-housing¹ debt. Our estimates suggest that HH debt² touched a new peak of 39.7% of GDP in 4QFY24, higher than 39.2% in 3Q and 38.6% of GDP in 4QFY21. Corporate debt³, however, rose by a six-quarter high rate of 10.1% YoY during the quarter, reaching close to a 15-year low of 43.2% of GDP⁴.
- An analysis of NGNF debt by sources/lenders suggests that NBFCs posted a strong lending growth of 19% YoY, while HFCs' outstanding loans⁵ are estimated to have contracted led by HDFC Ltd. in 4QFY24. Scheduled commercial banks' (SCBs) loans grew at a six-quarter high rate of 15.4% YoY in 4QFY24, with decent growth in corporate bonds (CBs), commercial papers (CPs) and external commercial borrowings (ECBs).
- A comparison of India's debt with that of other major global economies confirms that: a) India's NFS debt-to-GDP ratio at 170% of GDP in 1QCY24 (or 4QFY24) was the lowest and compared with 225-410% of GDP in other economies; b) India's debt-to-GDP ratio, along with China, in 1QCY24 was higher than a year ago, while it was lower in advanced economies; c) Compared to all-time peak in the pandemic, India's debt-to-GDP ratio was slightly lower in 1QCY24, although it was at a much lower level in many advanced nations and all-time high in China; and d) Although India's debt-to-GDP ratio is much lower than that of China and advanced economies, it is much higher than that of other emerging/developing economies.
- Overall, our estimates suggest that corporate debt growth remained sluggish, while the growth in HH and government debt was decent in India in 4QFY24. These trends have been observed in many recent quarters and broadly align with the investment growth observed by these economic participants. Further, HH debt is estimated to have reached a new peak, with non-housing loans growing faster than housing loans for the seventh successive quarter in 4QFY24.

Exhibit 1: India's domestic NFS debt estimates⁶

	USD t			As a percentage of GDP ⁷			YoY (%)		
_	FY21	FY22	FY23	FY24	4QFY23	3QFY24	4QFY24	3QFY24	4QFY24
Households (HH)	1.0	1.1	1.2	1.4	37.6	39.2	39.7	16.8	15.6
Non-financial corporate (NFC)	1.4	1.5	1.4	1.5	43.0	42.6	43.2	5.7	10.1
General government	2.4	2.7	2.8	3.1	85.9	86.6	87.1	14.0	11.1
Central government	1.6	1.8	1.9	2.1	58.1	59.0	58.9	16.3	11.1
State governments ⁸	0.8	0.9	0.9	1.0	27.8	27.6	28.2	9.4	11.2
Non-financial sector (NFS)	4.8	5.3	5.5	6.0	166.6	168.4	170.0	12.4	11.9
Non-government non-financial (NGNF)	2.4	2.6	2.6	2.9	80.6	81.7	82.9	10.8	12.7

Source: Reserve Bank of India (RBI), Ministry of Finance (MoF), Comptroller and Auditor General (CAG), Bloomberg, Company reports, MOFSL

Nikhil Gupta - Research Analyst (Nikhil.Gupta@MotilalOswal.com)

¹ Housing and mortgage debt are used synonymously in this analysis.

²The estimates of household debt in this study are slightly lower than the ones mentioned in our other research <u>report</u> (at 40% of GDP), since the latter includes household loans from other financial institutions (apart from SCBs, NBFCs and HFCs), as reported by the RBI (up to 4QFY23). The methodologies of the two estimates are different as the latter is more comprehensive.

³ Corporate debt is estimated as the residual, after deducting estimates of household debt from NGNF debt.

⁴ RBI has recently published Financial stocks and Flow of Funds accounts for 2021-22, updating India's sectoral debt data up to FY22.

⁵ HDFC Ltd. is included under HFCs in this analysis. For housing debt, it is suggested to look at the aggregate, rather than SCBs or HFCs separately.

⁶ Our estimates in this report are based on internal calculations, for which the methodology is shared in the Appendix at the end of the report. Bank for International Settlements (BIS) also provides India's debt estimates, which are available up to 3QFY24 and different from our estimates.

Annualized nominal GDP = Sum of the last four quarters to smoothen the sharp changes in nominal GDP on a quarterly basis

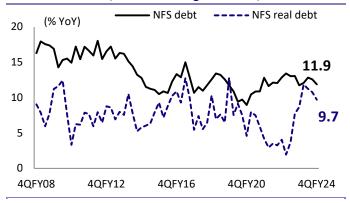
 $^{^{8}}$ Debt estimates of state governments (based on fiscal deficit of 20 states) are prepared by us.



India's NFS debt touched USD6.0t (or INR502t) for the first time ever in 4QFY24 vs. USD5.9t/USD5.5t (INR486t/INR449t) in 3QFY24/4QFY23

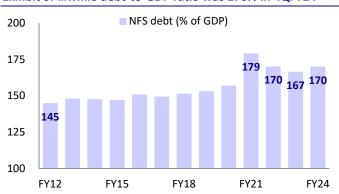
India's NFS debt grew 11.9% YoY; similar to that in the past five quarters: Our estimates suggest that India's NFS debt touched USD6.0t (or INR502t) for the first time ever in 4QFY24 vs. USD5.9t/USD5.5t (INR486t/INR449t) in 3QFY24/4QFY23 (Exhibit 1). NFS debt grew 11.9% YoY in 4QFY24, similar to 11.8% a year ago and 12-13% in the previous three quarters. The growth in NGNF debt picked up to a five-quarter high of 12.7% YoY in 4QFY24 (vs. 9.7% YoY growth in 4QFY23), while the growth in government debt was at a 19-quarter low of 11.1% YoY (vs. 13.7% YoY growth in 4QFY23).

Exhibit 2: Nominal/real NFS debt grew 11.9%/9.7% YoY...



NS debt deflated by GDP deflator Please see Appendix at the end of the report for methodology

Exhibit 3: ...while debt-to-GDP ratio was 170% in 4QFY24



Source: RBI, MoF, CAG, Bloomberg, Company reports, CEIC, MOFSL

Compared to 11.9% nominal growth, NFS debt in real terms (using GDP deflator) grew 9.7% YoY in 4QFY24, which was the lowest in four quarters (*Exhibit 2*). Further, since India's annualized nominal GDP grew only 9.6% in FY24, NFS debt stood at 170% of GDP, compared to 168.7%/166.6% of GDP in 3QFY24/4QFY23 (*Exhibit 3*).

GG debt stood at 87.1% of GDP in 4QFY24, same as in 3QFY24, but much higher than 85.9% of GDP a year ago Government debt growth was 19-quarter low: NFS includes three major domestic economic sectors – Households (HH), non-financial companies (NFCs) and general government (GG, Center + States). The former two sectors together are termed as the non-government non-financial (NGNF) sector. GG debt grew 11.1% YoY, marking the slowest growth in 19 quarters and compared to 13.7% a year ago (Exhibit 4). Our estimates suggest that GG debt stood at 87.1% of GDP in 4QFY24, same as in 3QFY24, but much higher than 85.9% of GDP a year ago.

Exhibit 4: NGNF debt grew faster than government debt for the first time in five quarters

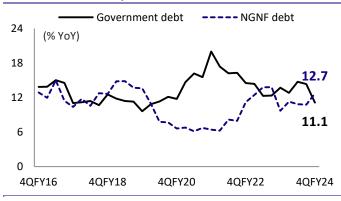
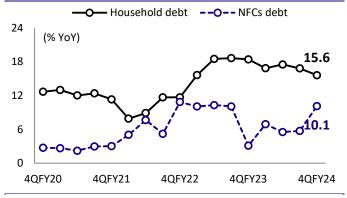


Exhibit 5: HH debt continued to grow much faster than corporate debt



Source: RBI, MoF, CAG, Bloomberg, Company reports, CEIC, MOFSL



The Center and state governments' debt jumped 11.1% each in 4QFY24 vs. 16.1%/9.0% a year ago. Accordingly, the center's debt stood at 58.9% of GDP in 4QFY24, almost unchanged in the past four quarters (and up from 58.1% of GDP in 4QFY23). In contrast, states' debt, at 28.2% of GDP, was the highest in eight quarters.

NGNF debt growth was 12.7% YoY in 4QFY24, the highest in five quarters and compared to 9.7% growth in 4QFY23 HH debt continued to grow strongly: In contrast, NGNF debt growth was 12.7% YoY in 4QFY24, the highest in five quarters and compared to 9.7% growth in 4QFY23. As a percentage of GDP, NGNF debt is estimated at 82.9% in 4QFY24, the highest in eight quarters, but lower than its all-time peak of 90% in 3QFY21. For almost a decade, between FY12 and FY21, NGNF debt (as percentage of GDP) was higher than the government debt in India, which has reversed since FY22. Now the government debt is higher than NGNF debt in India, just like in the pre-FY12 period.

Within the NGNF basket, HH debt inched up 15.6% YoY in 4QFY24, marking the slowest pace in seven quarters. In contrast, corporate debt grew 10.1% YoY during the quarter, the fastest in five quarters and partly supported by a low base of 3.1% YoY growth in 4QFY23 (Exhibit 5). HH sector accounted for almost 57% of the growth in NGNF debt in 4QFY24.

HH debt inched up 15.6% YoY in 4QFY24, marking the slowest pace in seven quarters Since HH debt grew faster than nominal GDP, it surged to 39.7% of GDP in 4QFY24, marking its new high and beating its previous peak of 38.6% of GDP in 4QFY21 (Exhibit 6). NFCs debt, according to our estimates, was broadly unchanged at ~43% of GDP in 4QFY23, only slightly better than the 15-year low of 42.6% of GDP in 3QFY24. Interestingly, HH debt now accounts for about 48% of NGNF debt, compared to 41% in FY20.

Exhibit 6: HH debt-to-GDP increased to a new peak of 39.7% of GDP in 4QFY24...

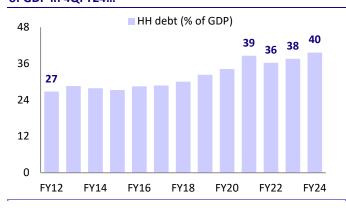
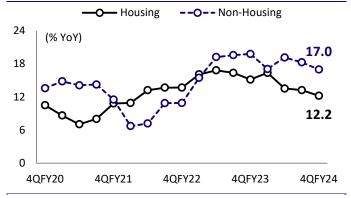


Exhibit 7: ...and non-housing debt surged faster than housing debt



Source: RBI, MoF, CAG, Bloomberg, Company reports, CEIC, MOFSL

Non-housing debt increased 17% YoY, while housing debt grew 12.2% YoY in 4QFY24 Importantly, within HH debt, non-housing debt continued to grow much faster than housing debt (*Exhibit 7*). Non-housing debt increased 17% YoY, while housing debt grew 12.2% YoY in 4QFY24. Accordingly, non-housing debt accounted for 73% of HH total debt. As highlighted in our <u>recent report</u>, while housing debt is very low in India compared with other economies, the non-mortgage HH debt is the same as in Australia and Japan, and higher than in the world's several other major nations.

16 July 2024



Sources of borrowings for the NGNF sector

There are six major official sources from where a company or an individual can borrow in the country – scheduled commercial banks (SCBs), non-banking finance companies (NBFCs), housing finance companies (HFCs), corporate bonds (CBs), commercial papers, and foreign borrowings (also known as ECBs). An individual can borrow from the first three sources, while NFCs can raise borrowings through any of these six sources. To estimate the true extent of India's debt, we have adjusted the intra-financial sector lending (SCBs to NBFC/HFCs, etc.). Please refer to *Appendices 1 and 2* at the end of the report for further details.

Bank lending to the NGNF sector rose 15.4% YoY in 4QFY24, the highest in six quarters and much faster than 9.9% YoY growth in 4QFY23

An analysis of NGNF debt by sources/lenders suggests that bank lending (excluding HDFC Ltd.) to the NGNF sector (after adjusting for intra-financial sector loans) rose 15.4% YoY in 4QFY24, the highest in six quarters and much faster than 9.9% YoY growth in 4QFY23 (Exhibit 8). This is in stark contrast to unadjusted loan book of banks, since a larger portion (as much as 12.5% now) is directed toward other financial companies. Corporate bond issuances (after adjusting for the financial sector) grew 6.1% YoY last quarter (weaker than 7.7%/4.1% growth in 3QFY24/4QFY23), ECBs recorded a growth of 7.2%, and CPs also grew strongly at 11.5% YoY in 4QFY24 (on the base of -10.5% YoY in 4QFY23).

NBFCs loan book, on the other hand, grew 19% YoY in 4QFY24, higher than 16.1% YoY in 4QFY23, but slower than 22%+ growth in the first three quarters of FY24

NBFCs loan book, on the other hand, grew 19% YoY in 4QFY24, higher than 16.1% YoY in 4QFY23, but slower than 22%+ growth in the first three quarters of FY24. With such strong growth, their share in NGNF debt jumped to 16.7% in 4QFY24, the highest on record, and 15.8% a year ago.

HFCs loan book (including HDFC Ltd.) contracted 5.3% YoY during the quarter, as HDFC Ltd. is running down its book, along with Indiabulls Housing Finance. The combined loan book of NBFCs and HFCs – about 22% of NGNF debt – grew 11.8% YoY in 4QFY24, the slowest pace in five quarters and compared to 13.7% a year ago. This implies that NGNF debt, excluding NBFCs/HFCs, increased at a five-quarter high rate of 12.9% YoY in 4QFY24.

Exhibit 8: Drivers of NGNF debt growth

	INR t				YoY (%)					
_	FY21	FY22	FY23	FY24	4QFY23	1QFY24	2QFY24	3QFY24	4QFY24	
Banks*	99.8	109.8	120.6	139.2	9.9	10.2	10.1	11.3	15.4	
NBFCs	27.0	29.5	34.3	40.8	16.1	22.3	25.8	23.4	19.0	
HFCs~	12.9	13.4	14.6	13.8	8.6	11.9	0.4	-2.9	-5.3	
Corporate bonds#	21.6	25.7	26.7	28.3	4.1	10.3	10.0	7.7	6.1	
Commercial paper@	2.4	2.3	2.1	2.3	-10.5	9.9	-11.9	-5.6	11.5	
ECBs^	14.4	17.4	19.1	20.4	9.8	1.8	4.7	3.2	7.2	
NGNF debt	178.1	198.1	217.3	244.9	9.7	11.3	10.8	10.8	12.7	
Memo: NBFCs + HFCs	40.0	42.9	48.8	54.6	13.7	19.0	17.4	15.0	11.8	
Total excl. NBFCs + HFCs	138.1	155.1	168.5	190.3	8.6	9.2	9.1	9.6	12.9	
Non-bank lenders	78.3	88.3	96.7	105.7	9.5	12.7	11.8	10.1	9.3	

^{*}Excludes loans to the financial sector #Excludes corporate bonds issued by SCBs, NBFCs, and Banks

~HDFC Ltd. included in HFCs, not Banks, for comparison purposes @Excludes commercial paper issued by NBFCs

Source: RBI, Company reports, Bloomberg, CEIC, MOFSL

[^]Excluding FII investments in corporate bonds



Comparison of India's debt with other major nations

A comparison of India's NGNF debt with a few other major economies (the US, the UK, Japan, Eurozone (EZ) and China) confirms that while India's debt is growing at the fastest pace among these nations, its debt-to-GDP ratio remains significantly lower. India's NGNF debt grew 12.7% YoY in 4QFY24, compared to 7.5% growth in China, 1.0% growth each in the UK and EZ, 2.4% growth in the US, and 3.6% growth in Japan. While India's debt has grown faster than compared with most rich nations (because of the size, base, and potential), it has outpaced the growth in China's debt during the past nine quarters as well.

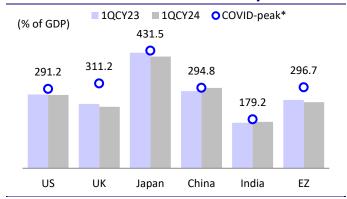
India's NFS debt-to-GDP ratio at 170% of GDP in 1QCY24 (or 4QFY24) was the lowest and compared to 225-410% of GDP in other economies

A comparison of India's debt with world's other major economies confirm that: a) India's NFS debt-to-GDP ratio at 170% of GDP in 1QCY24 (or 4QFY24) was the lowest and compared to 225-410% of GDP in other economies;

- b) India's debt-to-GDP ratio, along with China, in 1QCY24 was higher than a year ago, while it was lower in the advanced economies;
- c) Compared to all-time peak in the pandemic, India's debt-to-GDP ratio is slightly lower in 1QCY24, although it is at a much lower level in many advanced nations and all-time high in China (Exhibit 9);
- d) Although India's debt-to-GDP ratio is much lower than that of China and advanced economies, it is much higher than that of other emerging and developing economies (Exhibit 10).

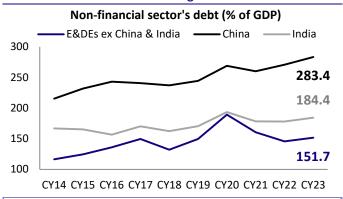
Due to the pandemic, China's debt-to-GDP ratio also jumped to 271.2% in 3QCY20 from 247% in late-CY19. Like in other nations, the ratio started falling in CY21 and stood at 262.8% at end-CY21. However, it started rising once again in CY22 and stood at its all-time peak of 294.8% in 1QCY24.

Exhibit 9: India's debt is lower than other major nations...



* 3QFY21 in the UK/Japan, 4QFY21 in the US/India/EA

Exhibit 10: ...but it is still much higher than other E&DEs



Source: Various national sources, Bank for International Settlements (BIS), CEIC, MOFSL

Overall, our estimates suggest that corporate debt growth remained sluggish, while the growth in HH and government debt remained decent in India in 4QFY24. These trends have been observed in the many recent quarters and broadly align with the investment growth observed by these economic participants. Further, HH debt is estimated to have reached a new peak, with non-housing loans growing faster than housing loans for the seventh successive quarter in 4QFY24.



An analysis of India's various debt estimates

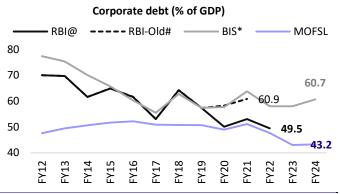
After observing and re-evaluating our estimates/calculations for some time, we published a note titled *Fathoming the 'Depths of Debt'* in Feb'19, wherein we used various official sources to prepare and present our estimates of India's NFS debt for the first time ever. Our estimates suggested India's HH debt stood at ~33% of GDP in FY18, which was popularly believed to be only ~10-11% of GDP then. We have continued with our estimates since then, which were vindicated by the first-ever publication of outstanding financial position of each sector in India by the RBI in Jul'19.

The RBI has been compiling and publishing flow of funds (FOF) accounts of the Indian economy broadly in accordance with the System of National Accounts (SNA, 2008). The data on FoF accounts of the Indian economy are available from 1951-52. For the first time in Jul'19, the RBI augmented FoF accounts with outstanding positions, i.e., financial stocks, of each sector in the economy with data from 2011-12 to 2017-18. The latest version of "Financial Stocks and Flow of Funds of the Indian economy, 2021-22" was published in the RBI Bulletin in Jun'24, and the previous version (with data up to 2020-21) was published in Mar'23.

Besides the RBI, the Bank for International Settlements (BIS) also publishes data on outstanding credit of each sector in the world's major economies (for more than 40 nations, including many developing countries). BIS interpolates and extrapolates the RBI's estimates to update India's debt data on a quarterly basis with a lag of about six months (recent data is available up to Dec'23).

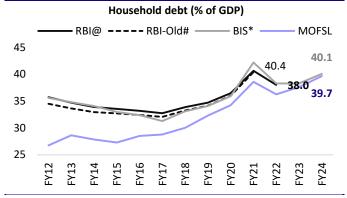
Comparison different data estimates, the broad trends are unmistakable: India's corporate sector is deleveraging notably, and HH debt is at all-time high For interested readers, we provide a comparison of India's household and corporate debt estimates by the RBI, BIS and MOFSL (Exhibits 11 and 12). Interestingly, the RBI revised down its estimate of India's corporate debt rather dramatically from ~60% of GDP each in FY20 and FY21 (published in Mar'23) to ~50% and down to 49.5% of GDP in FY22 (published in Jun'24). All these estimates are still open to revisions. However, the broad trends are unmistakable: India's corporate sector is deleveraging significantly, and HH debt is at all-time high.

Exhibit 11: India's corporate debt eased to 49.5% of GDP in FY22, as per the RBI...



@RBI's data from "Financial Stocks and Flow of Funds of the Indian Economy 2021-22" published in Jun'24 (#Mar'23)

Exhibit 12: ...and HH debt was 38% of GDP in FY22 vs. 35.7%/32.7% in FY12/FY17



* Recent data is as of Dec'23

Source: RBI, BIS, CSO, MOFSL



Appendix: Estimating total debt in the domestic NGNF sector

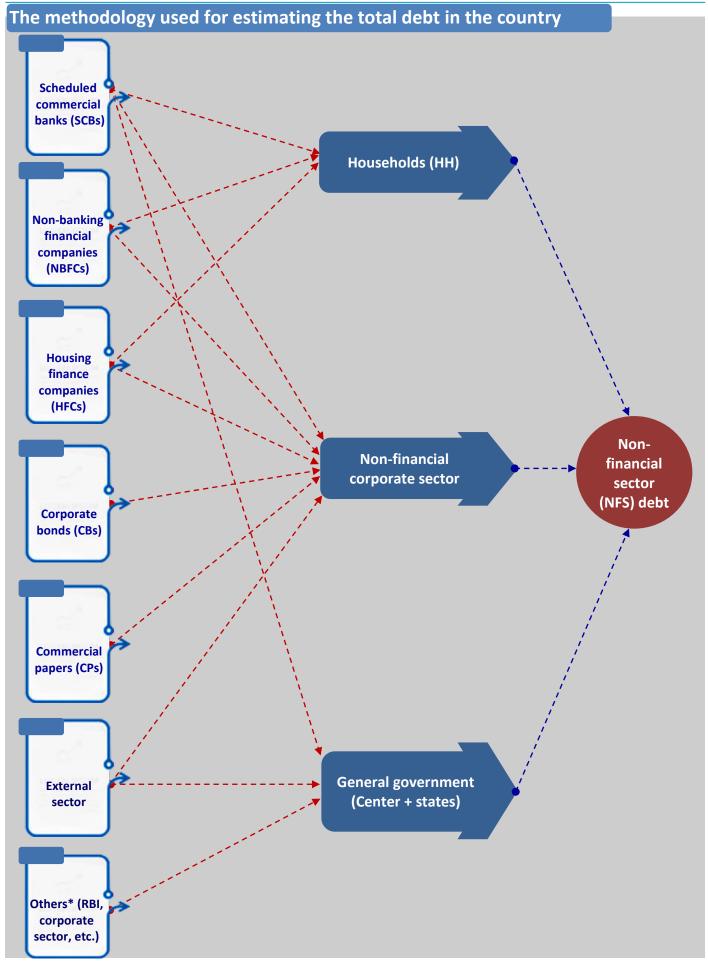
SCBs, NBFCs, and HFCs are the three major institutional sources of lending available to the HH and corporate sectors, which together constitute the NGNF sector. We use loans and advances data from these financial companies to estimate the total debt of the NGNF sector. Apart from these three sources, the NGNF sector borrows through CPs, CBs, and ECBs. We gather data on the following six relevant parameters, making suitable adjustments to avoid double counting:

- SCBs' loans and advances, excluding their lending to the financial sector. We have excluded HDFC Ltd from the SCBs' data for comparison purposes.
- Loan book data for NBFCs from the RBI's annual/bi-annual publications (titled: 'Report on Trend and Progress of Banking in India', 'Financial Stability Report') available up to 1HFY24. For quarterly data, we have compiled the data of 17 NBFCs, accounting for about three-fifths of the entire industry (list of NBFCs is provided in Exhibit 9).
- The loan book for HFCs that is also available from the RBI's *Report on Trend and Progress of Banking in India and National Housing Bank Report*, which provides data up to FY23. For quarterly data, we have compiled the data of nine HFCs (including HDFC Ltd), accounting for ~80% of the entire industry (list of HFCs is provided in Exhibit 13).
- Outstanding corporate bonds, adjusted for debentures, issued by NBFCs, HFCs, and Tier II capital of SCBs (assumed at 2% of Banks' loan books).
- Outstanding CPs, adjusted for NBFC/HFC issuances.
- Long- and short-term external debt (ECBs + INR debt) raised by the NGNF sector, adjusted for Foreign Institutional Investor (FII) exposure to corporate bonds.

Exhibit 13: List of 17 NBFCs and 9 HFCs used for quarterly analysis

Exhibit 13: List of 17 NBFCs and 9 HFCs used for quarterly analysis				
NBFCs (~60% of the industry)	HFCs (~83% of the industry)			
1. Bajaj Finance	1. HDFC			
2. Cholamandalam Investment and Finance Co	2. HUDCO			
3. IIFL Finance	3. LIC Housing			
4. JM Financial	4. Indiabulls Housing			
5. L&T Financial	5. Sundaram BNP Finance			
6. Mahindra & Mahindra Finance	6. PNB Housing Finance			
7. Magma Finance	7. Canara Home Finance			
8. Manappuram Finance	8. Reliance Home Finance			
9. Muthoot Finance	9. Repco Home Finance			
10. Reliance Capital				
11. Shriram Finance				
12. Sundaram Finance				
13. Power Finance				
14. REC				
15. PTC India financial services Ltd.				
16. Piramal Finance				
17. Aditya Birla Capital				





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



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

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

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

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate 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 laloswal.com/ResearchAnalyst/PublishViewLitigation.aspx

A graph of daily closing prices of securities is available at www.nseindia.com, <a href="www.nseindia.co 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 Motifal 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") (UEN 201129401Z), which is a holder of a capital markets services license and an exempt financial adviser in Singapore. This report is distributed solely to persons who (a) qualify as "institutional investors" as defined in section 4A(1)(c) of the Securities and Futures Act of Singapore ("SFA") or (b) are considered "accredited investors" as defined in section 2(1) of the Financial Advisers Regulations of Singapore read with section 4A(1)(a) of the SFA. Accordingly, if a recipient is neither an "institutional investor" nor an "accredited investor", they must immediately discontinue any use of this Report and inform MOCMSPL. In respect of any matter arising from or in connection with the research you could contact the following representatives of MOCMSPL. In case of grievances for any of the services rendered by MOCMSPL write to grievances@motilaloswal.com.

Nainesh Rajani

Email: nainesh.rajani@motilaloswal.com Contact: (+65) 8328 0276

Specific Disclosures

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

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.

16 July 2024 9



- 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.

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.

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:

THE					
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.

16 July 2024