

## The changing nature of the financial system: implications for resilience and long-term growth in emerging market economies

Reserve Bank of India

The macro-financial health of emerging market economies (EMEs) has significant global and regional implications as they continue to serve as areas of growing demand, play a critical role in global supply chains and remain providers of global labour across the skill spectrum. A robust, far-reaching and adaptive financial system is critical to keep EMEs, such as India, on the high-growth track. Even as emerging markets remain susceptible to financial market spillovers from global movements, they have developed new areas of resilience. Countries such as India have also emerged as leaders in developing interoperable national fast payment systems and using digital public infrastructure to enhance financial inclusion. In what follows we outline the major trends and patterns in India's financial system in recent times, its role in promoting economic growth and policy action in building a resilient and stable financial system.

### The changing nature of the financial system

The desirable features of a financial system are thought to include being less complex and more transparent, better capitalised and having a more sustainable level of maturity mismatch (IMF (2012)). A safe financial system would be competitive but without encouraging excessive risk-taking or dependence on implicit government guarantees.

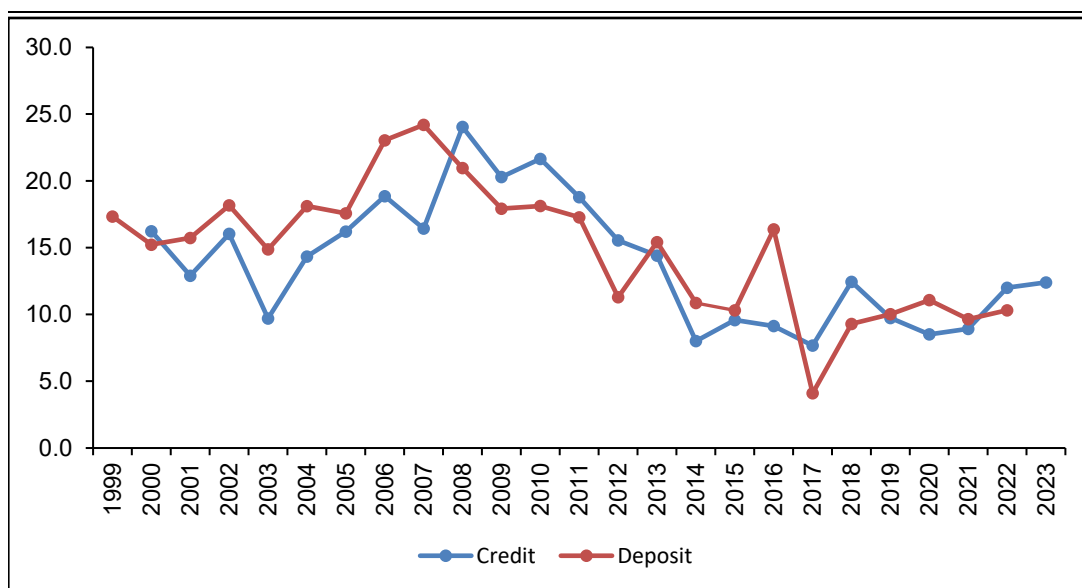
The Indian financial system has evolved into a more market-determined and development-oriented diversified financial system, especially since the 1990s. Successive reforms undertaken in various segments of the financial system have contributed significantly to this change, which was also facilitated by the changing demands of a growing economy. Currently, the Indian financial system is considerably diversified with vibrant financial and capital markets supporting the financial intermediation undertaken by financial institutions. In the financial institutions landscape, alongside various niche banks such as commercial banks, cooperative banks, new generation small finance banks and payments banks, India also has a large number of non-bank financial institutions (NBFIs). These institutions include non-bank financial companies (NBFCs), housing finance companies, insurance companies, development banks, mutual funds and other small players like pension funds and primary dealers. These entities are interlinked as well as with various segments of the financial markets such as the money market, bond market (mainly government securities, or G-Secs, and corporate bonds), forex market and stock market, among others.

The outbreak of the Covid-19 pandemic had a profound impact on lending practices in India. As a first reaction to the pandemic-related lockdowns, supply chains froze, demand declined and precautionary/forced savings increased due to lack of opportunities to spend, particularly in contact-intensive services. The confluence of these factors resulted in a sharp decline in credit growth even as deposits increased, affecting banks' net interest margins (Reserve Bank of India (2022)). In India, domestic credit growth had hovered around 10% during the previous 10 years. Even though credit growth went below 10% during the pandemic years, it has recovered in the last two years (Figure 1).

Growth rate of domestic loans and advances and deposits in India

in per cent

Graph 1



Source: CEIC database.

## I.I Financial institutions in India

In the evolving dynamics of the Indian banking sector, private banks are asserting greater influence in terms of credit disbursal. There has been a significant surge in total loans disbursed by banks in India over the past two decades, with private banks displaying substantial growth.<sup>1</sup> This robust expansion underscores the rising market share<sup>2</sup> and increasing significance of private banks within the Indian banking sector. Although public sector bank (PSB) growth rates have been slower as compared with

<sup>1</sup> With total private sector loans increasing from INR 582.48 billion in 2000 to a staggering INR 54.63 trillion in 2023.

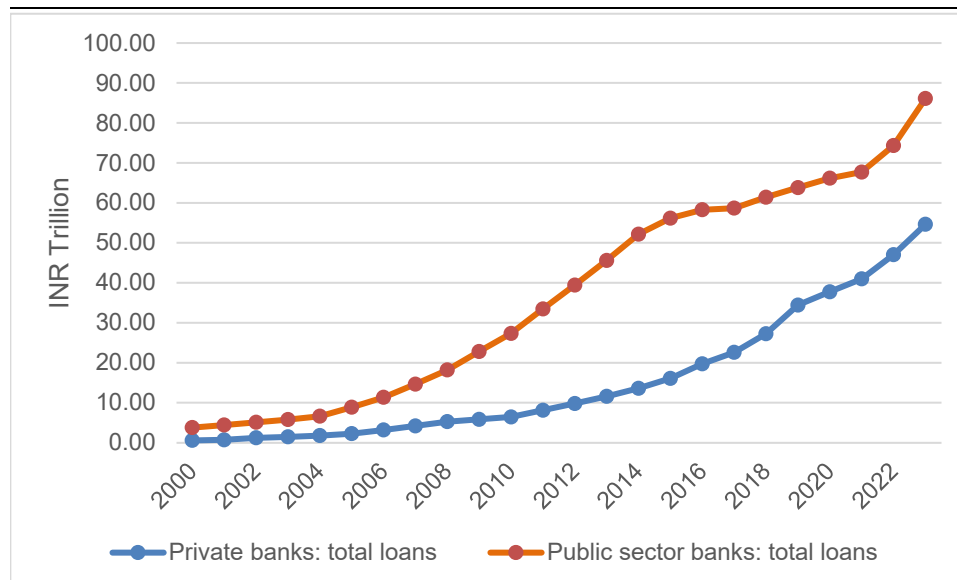
<sup>2</sup> The share of private sector banks in total loans increased from 19% in 2010 to 39% in 2023.

the private banks' during the period 2014–21, they continue to play a vital role in the banking landscape with a focus on priority sector lending (Graph 2).

## Loans of private and public sector banks in India

In trillions of rupees

Graph 2



Source: CEIC database.

In India, the structure of the financial system has been undergoing changes in the last few years, with the NBFC sector increasing its footprint in financial intermediation, reflected in a gradual rise in credit intensity. NBFCs play a pivotal role in offering unconventional solutions that resonate with diverse segments of the population that remain underpenetrated by traditional banking institutions. Credit from the NBFC sector grew at 16.1% in 2022–23 compared to credit growth of 15.0% for scheduled commercial banks (SCBs). In terms of the sectoral distribution of NBFC credit, industry accounted for around two fifths of the overall lending portfolio at end-March 2023, attributable to infrastructure lending by large government-owned NBFCs, followed by retail lending with a share of around 31% (Reserve Bank of India (2023b)). A peculiar feature of this increased role of NBFCs has been a rise in interconnectedness with the traditional banking system. Bank lending to NBFCs grew by 70.7% during September 2020 to September 2023, which far exceeded the growth of 50.2% in aggregate bank credit during the same period.

Development banks cater to various sectors by providing long-term funding for agriculture, foreign trade, small industries, housing finance companies (HFCs) and infrastructure development, respectively.<sup>3</sup> In India, HFCs extend housing finance to individuals, corporate bodies and cooperative societies. These HFCs have roughly one third market share in housing finance, second only to SCBs. HFCs' credit growth to the housing sector accelerated in 2022–23 due to the post-Covid shift in preference for home ownership, government initiatives to promote affordable housing, and

<sup>3</sup> [financialservices.gov.in/beta/en/nabard-act](https://financialservices.gov.in/beta/en/nabard-act).

attractive tax incentives (Reserve Bank of India (2023b)). The National Bank for Agriculture and Rural Development (NABARD); the Export-Import Bank of India (EXIM Bank); the Small Industries Development Bank of India (SIDBI); the National Housing Bank (NHB); and the National Bank for Financing Infrastructure and Development (NaBFID) are the apex development banks/All India Financial Institutions (AIFIs) in India. During 2022–23, there was robust growth in the financial assistance sanctioned and disbursed by AIFIs, largely driven by SIDBI's efforts to bolster support for the credit requirements of the micro, small and medium-sized enterprises (MSMEs) sector. However, the overall disbursements of AIFIs as a percentage of sanctioned financial assistance experienced a decline in 2022–23<sup>4</sup> (Table A1).

## I.II Financial markets

The relative importance of bank intermediation and capital markets in India has shifted over the past 20 years, with capital markets gaining greater significance as a source of funding, investment and risk management. In emerging markets, where there is less diversity in financial markets, the stock market could be a crucial source of funds. However, banks continue to play a key role in the financial system, and both banking and capital market segments are expected to coexist and complement each other in driving economic growth and development in India. The extant literature suggests that the positive effects of bank credit on growth, capital accumulation and productivity enhancement become more pronounced when stock markets are active and developed (Botev et al (2019); Sehrawat and Giri (2015)).

In recent years, the dynamism in Indian stock markets indicates that it is likely that larger Indian corporates with better balance sheets will shift more towards equity and low-cost debt financing. The share of banks and financial intermediaries in the composition of debt of non-financial firms in India declined to 35% in 2021–22, from over 50% in 2010–11, while that of debentures and bonds increased to 23%.<sup>5</sup>

The market capitalisation of the Bombay Stock Exchange (BSE) has seen substantial growth of around 360%.<sup>6</sup> In January 2024, it was at an all-time high of around INR 334.7 trillion,<sup>7</sup> making India the world's fourth largest stock market in terms of market capitalisation<sup>8</sup> (Graph 3.A). Public issues have also been steadily rising in India, with the highest number of initial public offerings (IPOs) issued in 2010.<sup>9</sup> The amount raised through IPOs has also shown an increasing trend over the years, with 2021–22 recording the highest amount raised at INR 1.3 trillion (Graph 3.B). This

<sup>4</sup> Reserve Bank of India (2023b).

<sup>5</sup> Source: Centre for Monitoring Indian Economy (CMIE).

<sup>6</sup> Increasing from approximately INR 65 trillion in 2010 to around INR 299 trillion in 2023.

<sup>7</sup> CEIC database.

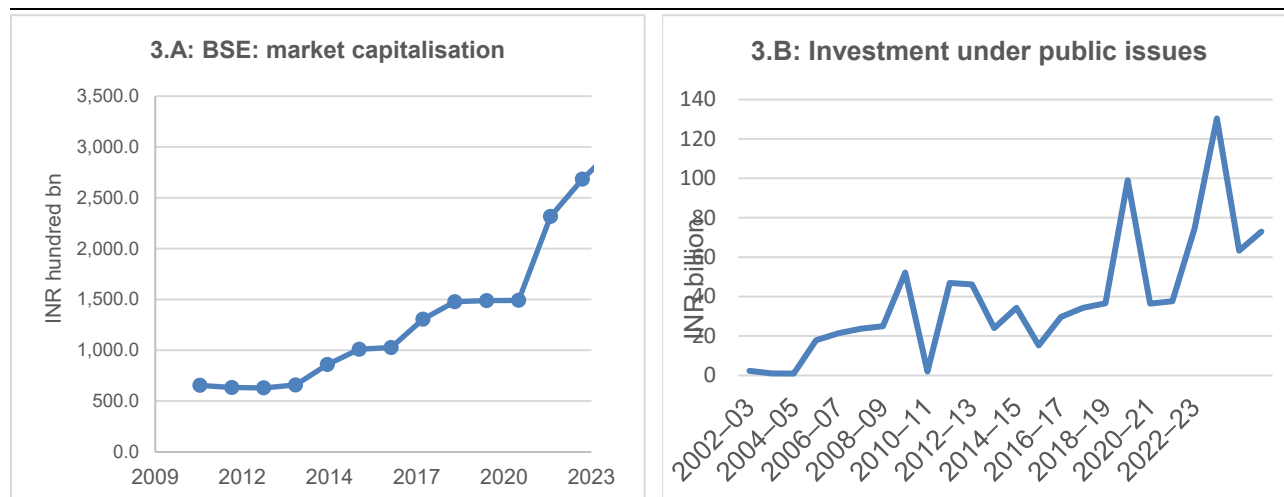
<sup>8</sup> [www.livemint.com/market/stock-market-news/india-overtakes-hong-kong-as-world-s-fourth-largest-stock-market-11705975318603.html](https://www.livemint.com/market/stock-market-news/india-overtakes-hong-kong-as-world-s-fourth-largest-stock-market-11705975318603.html).

<sup>9</sup> Total funds raised through public issues reached approximately INR 729.9 billion during 2022–23, a significant increase from INR 461.8 billion during 2010–11 (Prime Database: [primedatabase.com/pub\\_demo.asp](https://primedatabase.com/pub_demo.asp)).

suggests a growing appetite for IPOs among investors and companies seeking capital,<sup>10</sup> indicating a shifting trend towards capital markets as a vital source of funding and investment in India. The DEMAT value in the equity segment alone reached INR 331 trillion in December 2023, showing an increase of INR 24 trillion in the final month of the year.<sup>11</sup>

### Trends in market capitalisation and the number of public issues of the Bombay Stock Exchange (BSE)

Graph 3



Source: CEIC database.

Source: PRIME Database..

The establishment of the BSE SME platform in March 2012 and the National Stock Exchange (NSE) SME platform (also known as Emerge) in September 2012 aimed to address the financing constraints faced by small and medium-sized enterprises (SMEs) in India.<sup>12</sup> It has been found that firms listed on SME exchanges have higher profitability, liquidity and asset utilisation ratios as compared with unlisted SMEs as well as small firms listed on main boards (Ganguly (2022)).

Assets under management (AUM) of mutual funds in India have witnessed robust growth during the past 10 years. In May 2014, the industry's AUM crossed the INR 10 trillion milestone for the first time. Just three years later, by August 2017, AUM had more than doubled, reaching over INR 20 trillion. Then, in November 2020, AUM surpassed INR 30 trillion for the first time. As of 31 January 2024, the industry's AUM stands at INR 52.74 trillion<sup>13</sup> (Graph 4).

<sup>10</sup> [economictimes.indiatimes.com/markets/ipos/fpos/indias-ipo-boom-a-sign-of-vibrant-markets-and-growing-investor-confidence/articleshow/105694715.cms?from=mdr](https://economictimes.indiatimes.com/markets/ipos/fpos/indias-ipo-boom-a-sign-of-vibrant-markets-and-growing-investor-confidence/articleshow/105694715.cms?from=mdr).

<sup>11</sup> Source: National Securities Depository Limited.

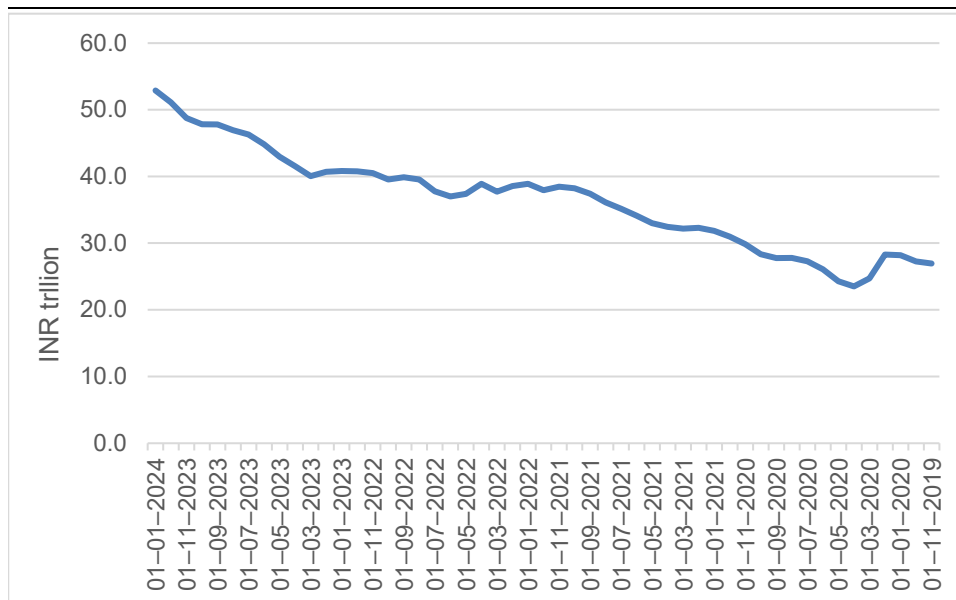
<sup>12</sup> Since the inception of these platforms, 633 SMEs have mobilised INR 77.77 billion in equity capital up to 2021–22. SMEs are of vital importance to the Indian economy due to their ability to create jobs and promote inclusive growth (Reserve Bank of India (2022)).

<sup>13</sup> Association of Mutual Funds in India ([www.amfiindia.com/indian-mutual#:~:text=Assets%20Under%20Management%20\(AUM\)%20of,a%20span%20of%2010%20years](https://www.amfiindia.com/indian-mutual#:~:text=Assets%20Under%20Management%20(AUM)%20of,a%20span%20of%2010%20years)).

## Average net assets under management of mutual funds in India

In trillions of rupees

Graph 4



Source: CEIC database.

Likewise, there has been a notable increase in insurance sector penetration, mainly driven by public sector companies. In 2022, India secured 10th position globally as an insurance market, with a premium volume of USD 131 billion, accounting for 1.9% share in the global insurance premium. Forecasts suggest that by 2032, India is set to reach the sixth position worldwide<sup>14</sup> (Table A2). Both insurance premiums and AUM have increased constantly through the years<sup>15</sup> (Graph A1). As of 2023, there are approximately 69 registered insurers in India, with 61 operating in the private sector and eight in the public sector<sup>16</sup> (Graph A2).

The availability of a deep and liquid corporate bond market has significant positive implications for economic growth since it provides firms with a steady alternative source of finance for both long-term and working capital investments. Although the corporate bond market in India, at 25% of GDP, is smaller than many of its emerging market peers, it has been growing steadily and is projected to double within six years (Surti and Goel (2023); CRISIL Ratings (2023)). However, the corporate bond market in India remains limited in reach as it is largely dominated by top-rated bonds, with 97% of the issuances and trading in the corporate bond market happening in just the top three rating categories<sup>17</sup> (Tyagi (2020)).

<sup>14</sup> See Swiss Re (2023).

<sup>15</sup> The period under reference pertains to 2010 to 2023.

<sup>16</sup> CEIC database.

<sup>17</sup> These categories refer to AAA, AA+ and AA. This is in contrast with the United States, for instance, where only 5% of the corporate bond market trading occurs in the top rating buckets of AAA and AA.

Both domestic and foreign investors have played an important role in India's expanding financial market. Despite fluctuations, there seems to be an overall positive trend in foreign portfolio investment (FPI). However, there have also been periods of negative FPI, such as in March 2020 and June 2022, indicating investor uncertainty and risk aversion.<sup>18</sup> On the other hand, there was a noticeable increase in foreign direct investment (FDI) inflows from 2010 to 2016, reaching a peak of USD 64,679 million in 2020 followed by intermittent corrections in subsequent years, with FDI inflows in 2023 amounting to USD 41,326 million.<sup>19</sup> Overall, the Indian capital market has witnessed growing confidence of investors, both domestic and foreign, within India's financial markets.

### I.III Digital payments

Digital innovation is proving to be instrumental in reducing informality in the Indian economy. Digitising various data sources<sup>20</sup> is bringing more transactions hitherto untapped by providing electronic records and has helped to formalise economic activities. The presence of these records can further lead to providers extending credit to these institutions, leading to more formalisation of the economy. Further, digital innovation in the form of fintech platforms provides SMEs with alternative financing options beyond traditional bank loans. Platforms like peer-to-peer lending and the account aggregator ecosystem enable businesses to access capital more easily. Apart from this, leveraging advanced technologies such as data analytics and artificial intelligence, banks can identify credit line opportunities for customers and merchants engaged in significant unified payment interface (UPI) based digital payments. This is because of the far more accurate picture of the creditworthiness of the individual and business based on transaction history and algorithmic automated underwriting processes. A few examples of digital innovations in India are the Trade Receivables Discounting System (TReDS) and pre-sanctioned credit lines from banks through the UPI.<sup>21</sup> Recently, the Reserve Bank of India (RBI) has approved linking of RuPay credit cards with the UPI, thus providing benefit to the customer and facilitating increased use of credit cards.<sup>22</sup>

The pandemic accelerated digital adoption in financial services, with digital transactions surging through platforms like the UPI. The value of UPI transactions has grown at a CAGR of 168%<sup>23</sup> during 2018–23 (PIB (2023)) (Graph 5). Globally, India

<sup>18</sup> CEIC database.

<sup>19</sup> CEIC database.

<sup>20</sup> Starting from customer onboarding through digital identity management to visibility of assets through bank statements and other digital footprints of supplies and receivables, as well as API-based linkages to sources like the Goods and Services Tax Network (GSTN), income tax, Ministry of Corporate Affairs, etc.

<sup>21</sup> This is an innovative financial offering which empowers individuals and businesses to access pre-sanctioned credit lines from banks. It facilitates the availability of low-ticket, high-volume retail loans, fostering economic growth and enhancing financial inclusion.

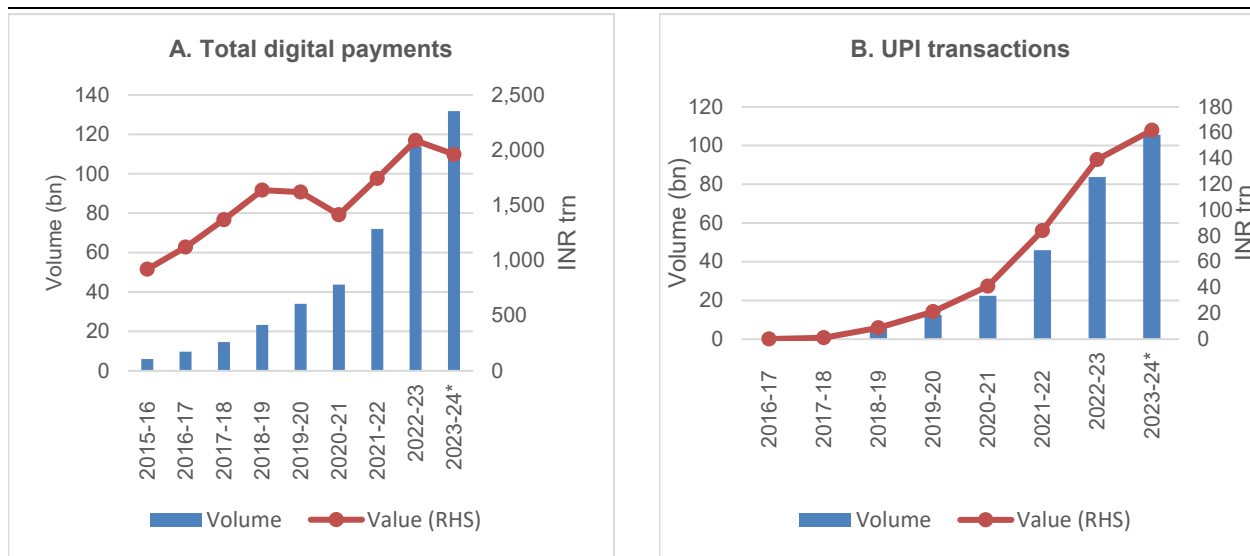
<sup>22</sup> [www.rbi.org.in/scripts/FS\\_PressRelease.aspx?prid=53831&fn=2752](https://www.rbi.org.in/scripts/FS_PressRelease.aspx?prid=53831&fn=2752).

<sup>23</sup> From INR 1 trillion in FY 2017–18 to INR 139 trillion in FY 2022–23.

outpaced other nations to emerge as the largest player in real-time transactions, with a 46% share in 2022 (89.5 billion transactions). In order to make digital payments more seamless, on 8 March 2022 “DigiSaathi”, a 24x7 helpline, was jointly launched by the National Payments Corporation of India (NPCI), the payment system operators and participants.<sup>24</sup>

## Digital payments in India

Graph 5



Data up to January 2024.

Source: RBI.

## I.IV Sectoral allocation of credit

### I.IV. a. Growth in sectoral credit

The sectoral allocation of credit in India has undergone material changes over time, reflecting shifts in economic priorities, policy measures and changes in the business environment. Non-food credit growth, which was quite robust in 2018–19, with year-on-year growth of 13.4%, fell to around 6% during the slowdown of 2019–20.<sup>25</sup> The slowdown was exacerbated in 2020–21 when credit growth decelerated to 5.5% in the aftermath of the pandemic. However, with the gradual resumption of economic activity, credit to agriculture and services sectors has registered accelerated growth in the recent period with non-food credit growth reaching 8.7% in 2021–22 and 15.4% in 2022–23. The agriculture sector witnessed credit growth even during the pandemic,

<sup>24</sup> This initiative was launched with an aim to provide round-the-clock assistance to users regarding queries related to digital payment products and services. This highlights the resilience and adaptability of India's financial systems in response to unprecedented challenges.

<sup>25</sup> Source: Database on Indian Economy, RBI.

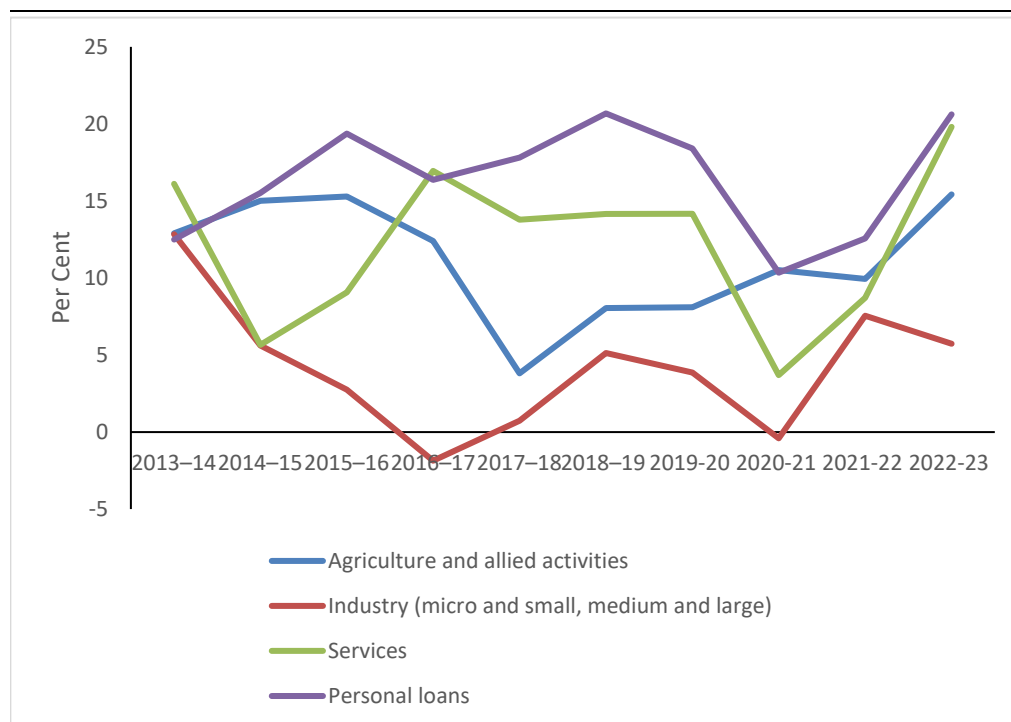


from 8.1% in 2019–20 to 10.5% in 2020–21, and further to 15.5% in 2022–23 (Graph 6).

Industrial credit<sup>26</sup> growth turned negative to –0.4% in 2020–21 owing to the pandemic (Graph 6). In 2021–22, it picked up to reach 7.5%, and remains in positive territory post-pandemic. There was increased growth in credit to categories such as “food processing”, “petroleum, coal products and nuclear fuels”, “leather and leather products”, “paper and paper products”, “mining and quarrying”, “textiles”, “all engineering”, “rubber, plastic and their products”, “gems and jewellery”, “beverages and tobacco” and “vehicles, vehicle parts and transport equipment” after the initial setback due to the pandemic. However, credit to “cement and cement products”, “glass and glassware”, “construction” and “basic metal and metal products” experienced contraction (Graph A3).

Sectoral credit growth in India

Graph 6



Source: RBI, Handbook of Statistics on the Indian Economy, compiled from various years.

Credit growth to the services sector, which had slowed down significantly to 3.7% owing to the pandemic and the subsequent lockdown in 2020–21, has accelerated to reach 8.7% in 2021–22 and 19.8% in 2022–23, showcasing recovery. The growth was driven primarily by the “transport operators” and “trade” sectors. Additionally, “tourism, hotels and restaurants” also experienced accelerated growth despite the challenges of the pandemic (Graph A4). The trade sector exhibited strong

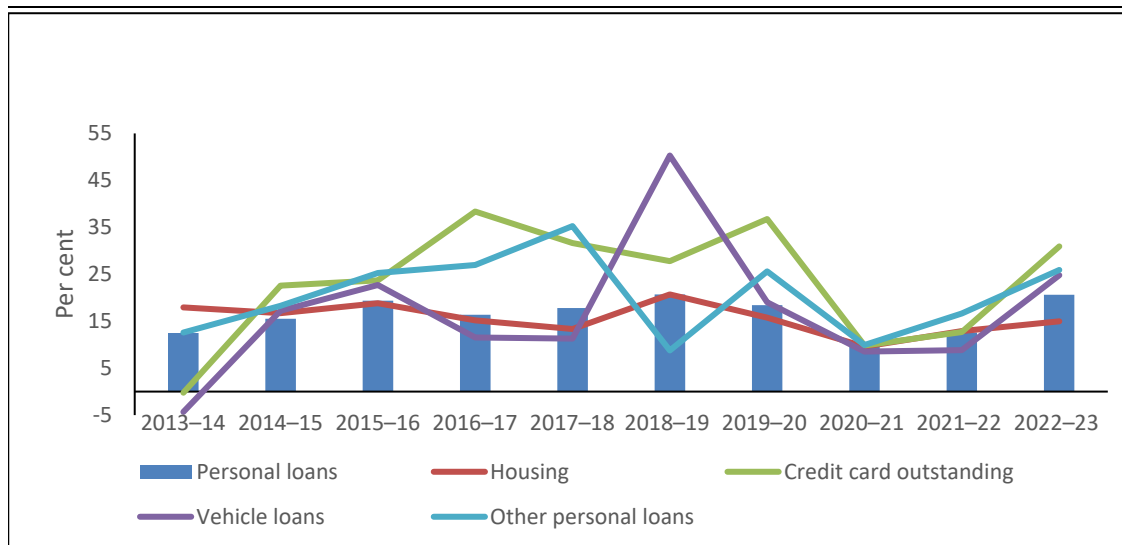
<sup>26</sup> Industrial credit encompasses funding for micro, small, medium-sized and large industries, determined by their investment in plant and machinery, as well as turnover.

performance throughout the pandemic, experiencing accelerated credit growth from 2020.

Personal loans had decelerated during Covid-19, falling from 18.4% in 2019–20 to 10.3% in 2020–21. The acceleration in economic activities and the latent demand of consumers has led to credit growth of 12.6% in 2021–22 and 20.6% in 2022–23. The pickup in credit uptake in this segment has been buoyed by credit demand in housing, credit cards and vehicle loans (Graph 7).

Credit growth within personal loans in India

Graph 7



Source: RBI, Handbook of Statistics on the Indian Economy, compiled from various issues.

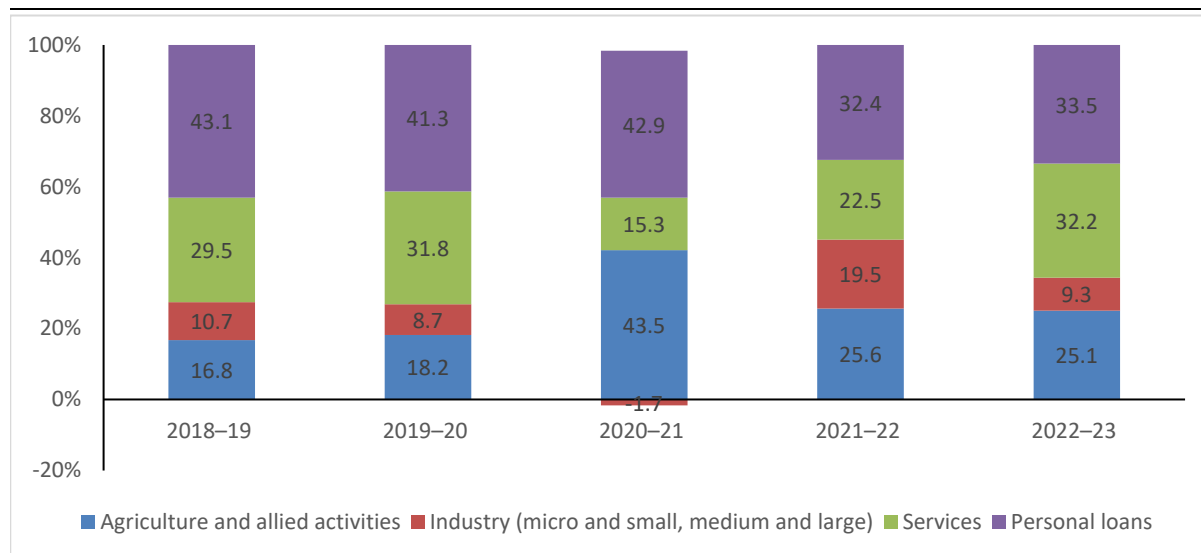
#### I.IV. b. Sectoral shares in total credit

The evolution in the sectoral shares of credit during the last five years shows that the share of personal loans has declined while that of agriculture and services has increased, though with a fluctuating trend. It is only the industrial sector which experienced an episode of negative share in the incremental credit flow in 2020–21 (Graph 8). In the fiscal year 2018–19, large industries constituted approximately 83% of the total credit to the industrial sector (Graph 9).

## Sectoral shares of credit allocation in India

In per cent

Graph 8

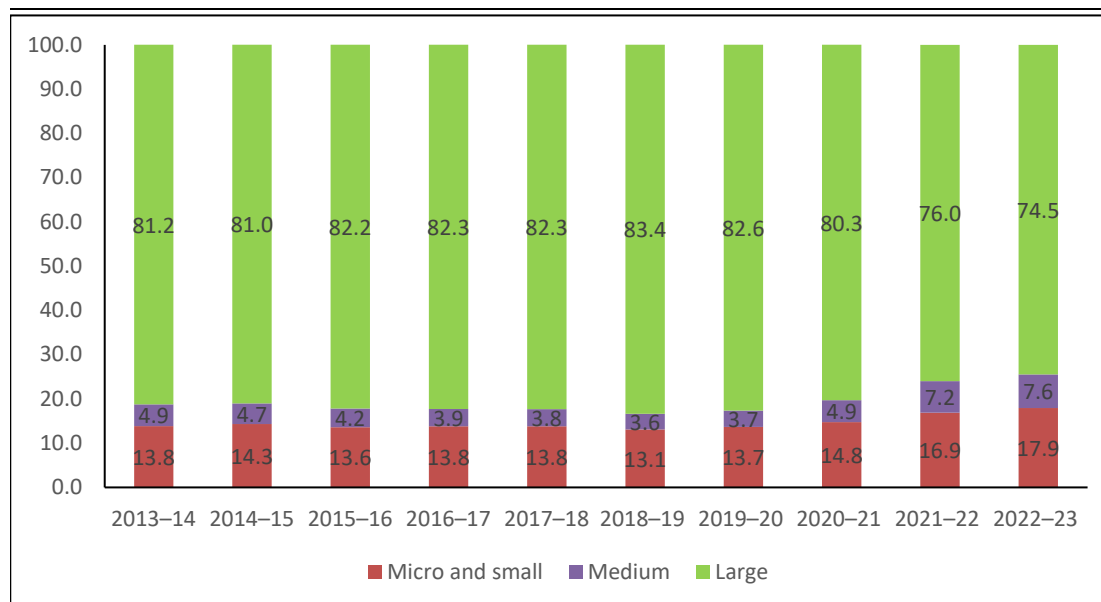


Source: RBI, Handbook of Statistics on the Indian Economy, various issues.

## Allocation of industrial credit across segments

In per cent

Graph 9



Source: RBI, Handbook of Statistics on the Indian Economy, compiled from various issues.

There was a significant increase in the share of the agriculture and allied sectors in total credit from 18.2% in 2019-20 to 43.5% in 2020-21. This growth was supported by various measures taken by the government of India and the RBI. The performance of the agriculture sector bodes positively for rural consumption and suggests

potential revitalisation in the industrial sector, due to interlinkages and interdependence between the industrial and agriculture sectors, potentially influencing future credit and growth in the industrial sector.

Within the industrial sector, the infrastructure segment constituted approximately 32.6% of total industrial credit in 2019–20. This proportion increased to 33% in 2020–21 and further to 33.5% in 2021–22, indicating a sustained share of infrastructure in overall industrial credit. The infrastructure subsector credit growth declined from 17.2% in 2018–19 to 3.8% in 2019–20 and further to 1.1% in 2020–21,<sup>27</sup> marred by the slowdown induced by the pandemic, before gaining pace in 2021–22. In 2018–19, the power sector accounted for the highest share (54%) in infrastructure credit, followed by roads and ports (around 20%) and telecommunications (14%). The services sector share in the incremental credit flow was hit by the pandemic and fell from 31.8% in 2019–20 to 15.3% in 2020–21. During the recovery phase, the sector's share rose to 32.2% in 2022–23 (Graph 8).

Examining the sectoral composition of bond issuances may also help provide insights into their role in boosting economic growth. The financial sector dominates the issuance of bonds in India, holding a 60% share. Industry and public sector undertakings account for the rest. Corporate bond issuance from manufacturing and non-energy infrastructure sectors is a very small proportion of the overall bond market. Another feature of the Indian corporate bond market relates to a sharp growth in the smallest issue bracket (INR 1 million and lower).<sup>28</sup> This could reflect diversification of funding sources for previously excluded firms that formerly had to rely on bank lending only, implying higher future growth potential (Surti and Goel (2023)).

## II. Excessive finance, resilience and long-run growth

Owing to wide heterogeneities in the size, nature and sources of finance of firms, it is difficult to establish the role of finance in driving long-term growth in India (Allen et al (2012)). However, it may certainly be argued that a generalised easing of financial conditions improves the economic growth rate over the long term.<sup>29</sup> Some estimates have suggested that, assuming an average credit-to-GDP ratio (0.5), annualised non-food bank credit growth of 13% will be needed to achieve the target of a USD 5 trillion economy by 2025–26 (RBI (2022)). Studies show that an increase in bank credit could revive the investment cycle. Recent RBI estimates suggest that a 1 percentage point increase in bank borrowings increases nominal net fixed assets by 0.17 percentage points (RBI (2023b)). India's credit-to-GDP ratio, which hovered above 100% until 2015,<sup>30</sup> experienced a decline thereafter to reach around 90% in recent years. Since

<sup>27</sup> Source: RBI, *Handbook of Statistics on the Indian Economy*, compiled from various years.

<sup>28</sup> These issuances grew at a cumulative annual growth rate of 20% between 2011–12 and 2021–22, roughly four times that of the largest issues (size of INR 1 billion and above).

<sup>29</sup> Estimates suggest that a 1 percentage point easing in the financial conditions index increases year-on-year GDP growth rates in the range of 1.1 to 1.3 percentage points (RBI (2022)).

<sup>30</sup> Source: CEIC database.

February 2020, deposit growth has been outpacing credit growth and although the gap has narrowed somewhat, the wedge still existed in March 2023.

Empirical evidence suggests that there is a positive causal relationship between financial depth/development and economic growth (MacDonald and Xu (2023); Singh et al (2016); Balasubramanian (2022); Levine (2005)). However, some have argued that beyond a certain level of financial development, the positive effect on economic growth begins to recede, while costs in terms of economic and financial volatility begin to rise. The plausible reasons for this negative effect on growth are an increase in macroeconomic volatility because of rapid credit growth, banks exposure to shocks, and non-commensurate developments in institutional and regulatory frameworks. Empirical studies have examined the relationship between bank credit and economic growth indicating the existence of threshold effects (Lay (2020); Ho and Saadaoui (2022); Cecchetti and Kharroubi (2019)).<sup>31</sup> Accounting for cross-country variations, however, Botev et al (2019) find that there is no evidence of this “too much finance is bad” hypothesis.

The direct effects of financial integration on output volatility are ambiguous. This arises from the fact that the structural features of a financial system such as the extent of the intermediation function performed by banks versus non-banks, concentration and competition and cross-border competition can have implications for output volatility and long-run growth. Empirical evidence suggests that some structures of financial systems are likely to be more closely related to positive economic and financial stability outcomes than others.

Efficient allocation of credit, rather than simply credit growth, is important as misallocation<sup>32</sup> could impede economic growth. In the Indian context, the extent of capital misallocation is reflected in the unusually high dispersion of productivity across firms (Hsieh and Klenow (2009)). Recent analysis suggests that for firms relying heavily on PSBs, the relationship between credit growth and productivity is weak (George et al (2023)). It has also been hypothesised that credit misallocation may also lead to burgeoning of zombie firms<sup>33</sup> potentially crowding out lending to more productive firms. A study by Chari et al (2021) shows that in the post-GFC period, there has been a rise in bank lending not only to firms with low liquidity but also to low-solvency borrowers. They find that stressed banks had an increased tendency to lend to zombie borrowers.

Yet another important aspect for strengthening the relationship between finance and growth is financial resilience. The growing interconnectedness in the financial system with its diversification is a challenge in this regard. A case in point is the NBFC sector in India. Alongside the growing interconnectedness with the banking sector, there is significant heterogeneity within the NBFC sector, which makes systemic risk

<sup>31</sup> Lay (2020) identified an inverted U-shaped relationship and a threshold of 135% of GDP is found after World War II in 17 industrialised countries. Ho and Saadaoui (2022) document that the positive effects of finance on growth disappear at a threshold level of 96.5%. Cecchetti and Kharroubi (2019) document a negative relationship between credit growth and real growth. Finding an inverted U-shaped relationship between levels of finance and output, they argue that in growth terms the relationship is unequivocally negative.

<sup>32</sup> Wherein less productive firms have access to credit while the more productive firms remain credit-constrained.

<sup>33</sup> A firm is classified as a zombie if it is unviable.

identification and monitoring a challenging task. However, substantial capital buffers, improving asset quality and robust earnings have increased the resilience of the NBFC sector, with the capital to risk (weighted) assets ratio (CRAR) at 27.6% in September 2023, well above the regulatory minimum of 15%. The results of a simulation exercise involving scenarios that assume simultaneous default of the top three and top five NBFCs, which have the potential to cause maximum solvency losses to the banking system, show that despite the contagion effect, both the Common Equity Tier 1 (CET1) ratio and the CRAR of the banking system will remain above the regulatory minimum as there are ample capital buffers. Overall, the banking system remains resilient to contagion risk from the NBFC sector.

Further, inclusion of smaller sectors and individuals under the umbrella of the formal financial system would be required to make economic growth broad-based. A large group of borrowers including MSMEs, agricultural labourers, daily wage labourers, women and micro-entrepreneurs remain underserved by the formal financial sector. While the contribution of these groups to aggregate output may be relatively small, having access to finance for these groups is vital for employment and long-term inclusive growth. However, despite the provision of collateral-free loans, government guarantees and several other measures, a few MSMEs still resort to non-institutional sources for getting timely credit, often at exorbitant rates of interest.

In this regard, there are many constraints to MSME finance<sup>34</sup> with an overall credit gap in the MSME sector estimated at INR 20–25 trillion.<sup>35</sup> From the banks' perspective, MSMEs are high-risk borrowers due to insufficient assets and low capital. There is less publicly available information on MSMEs than on large firms, and less reporting of transactions by MSMEs creates difficulties in assessing their real turnover and profitability. Consequently, it becomes difficult for banks to assess their creditworthiness, which can discourage lending, or the lenders substitute the lack of information with higher collateral requirements and/or higher interest rates.<sup>36</sup> Similar challenges are also faced by other underserved customers. They also suffer from non-availability of tailor-made credit products, as traditional banks lack the incentive to invest in such products, given that any such customised product would require changes to the core banking infrastructure that is designed to serve a mass population rather than a niche market segment.

### III. Policy measures and discussion

The effect of financial development on economic performance is time-varying and also depends on overall economic development and trade openness (Botev et al (2019)). Policymakers should be focused on understanding the channels through which the financial system interacts with the real sector. Being cognisant of these

<sup>34</sup> See Mund (2020).

<sup>35</sup> See RBI (2019).

<sup>36</sup> Smaller-ticket retail loans are largely provided by NBFCs, which translates to a higher cost of borrowing for the customers (CRIF (2021)).

channels will help in developing appropriate valves to relieve stresses and aid growth, wherever possible.

Financial market development is a continuous process. While the RBI has already taken various steps to support the overall growth of the financial market, there are still further steps which could make the domestic market more vibrant. In the money market, it is seen that the transmission of monetary policy to overnight money market rates is instantaneous and full. However, there is a thinning of uncollateralised volumes which raises concerns around its representativeness and reliability.

Issuance of green bonds provides a strong signal of a country's commitment to a low-carbon economy. It also helps in bringing down the cost of capital for green projects. On behalf of the government of India, the RBI issued sovereign green bonds (SGrBs) in two tranches of INR 80 billion each on 25 January and 9 February 2023. During 2023–24, five-year and 10-year SGrBs of INR 50 billion in each tranche were issued on 10 November and 8 December 2023, respectively. In addition, 30-year SGrBs of INR 50 billion each were issued on 19 January and 2 February 2024. Further, RBI has notified the SGrBs as “specified securities” under the fully accessible route (FAR) for FPI, thus allowing non-residents to invest in these securities without any restrictions.

The orderly development of the sovereign yield curve needs significant market liquidity at important benchmark tenor points and a supply of G-Secs of various tenors to diverse classes of market participants matching their investment requirements.<sup>37</sup> As part of our continuing efforts to increase retail participation in G-Secs, the “RBI Retail Direct Scheme” was launched in November 2021 to enable individual investors to conveniently invest in G-Secs, state development loans (SDLs) and sovereign gold bonds. The RBI has been proactively taking steps to enable greater non-resident investment in G-Secs.<sup>38</sup>

Principle-based regimes have been implemented in place of prescriptive regulations in a bid to provide greater flexibility and operational freedom to market participants in the derivatives markets. Considering the recent changes in the regulations relating to over-the-counter (OTC) derivatives and in line with international standards, a regulatory framework for market-makers in OTC derivatives has been put in place to ensure high standards of governance, risk management and conduct by market-makers.

RBI has also continued its efforts towards integrating domestic and offshore rupee markets. Banks in India with operative International Financial Services Centre (IFSC) banking units were permitted to access the offshore non-deliverable rupee derivatives market in 2020. To facilitate integration of offshore and onshore markets for overnight indexed swaps (OIS) – the most active rupee interest rate derivative in the domestic market – banks in India and standalone primary dealers (SPDs) have

<sup>37</sup> To this end, during 2020–21 the Benchmark Security Issuance Strategy was introduced, under which G-Secs of specific benchmark tenors of two, five, seven, 10, 14, 30 and 40 years are issued. Thereafter, G-Secs with a 50-year tenor have also been introduced after market consultation.

<sup>38</sup> While limits for non-resident investments in domestic markets were liberalised, the voluntary retention route (VRR) was introduced to facilitate non-resident investment in government and corporate bonds. The fully accessible route (FAR), introduced in 2020, enables non-residents to invest in specified G-Secs without any macroprudential limits.

been permitted to undertake settlement of OIS transactions with non-residents in foreign currency.

Digital technology is transforming the financial services landscape. Leveraging technology can improve not only the efficiency of capital allocation, but also the expanse of financial inclusion. However, we must be mindful of rapid growth of entities that use technology to provide financial services without appropriate guardrails, and it is important for authorities to identify, assess and respond to risks from these entities while continuing to foster innovation to improve efficiency of capital allocation. To keep pace with the dynamically changing landscape, the RBI has been making conscious efforts to facilitate innovation in the fintech sector for the larger public good. On 17 August 2023, the RBI launched the pilot of the Public Tech Platform for Frictionless Credit (PTPFC). The platform is being envisioned as a critical “digital public infrastructure” (DPI) in the lending space which has transformative potential. Currently, five loan journeys are live on the platform: Kisan Credit Card loan, Digital Dairy/ cattle loan, MSME loan, Housing Loan and Personal Loan. Ten banks have already been onboarded to the platform and are using 13 data services such as digitised land records, Aadhar e-KYC, NeSL e-signing, PAN validation, Account aggregator, Digilocker and CGTMSE,<sup>39</sup> which are provided through the platform. Technical integration of the Goods and Services Tax Network (GSTN) with the platform is also in progress post the gazette notification.<sup>40</sup>

Strengthening cyber security frameworks and protocols is crucial to protect sensitive financial data and maintain trust in digital financial services. In this regard, on 2 June 2023 the RBI placed “Draft Master Directions on Cyber Resilience and Digital Payment Security Controls for Payment System Operators (PSOs)” on its website for comments. The document covers robust governance mechanisms for identification, analysis, monitoring and management of information security risks, including cyber security risks and vulnerabilities, and baseline security measures for ensuring safe and secure digital payment transactions.

<sup>39</sup> Credit Guarantee Fund Trust for Micro and Small Enterprises.

<sup>40</sup> This will improve access for lenders by leveraging digital reach, and by using the platform lenders can create fully digital loan journeys for customers which will not only be cost-effective but also improve access by removing barriers of physical presence. So far, INR 42 billion of loans have been sanctioned and disbursed, which include INR 24 billion of MSME loans in the pilot.



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## Appendix

### Financial assistance sanctioned and disbursed by AIFIs

In billions of rupees

Table A1

	2021–22	2022–23	2021–22	2022–23
EXIM Bank	688.63	797.65	561.89	687.87
NABARD	3,803.96	3,843.19	3,783.87	3,648.32
NHB	305.07	361.37	259.90	303.72
SIDBI	1,485.50	2,881.37	1,464.02	2,807.87
NaBFID	N/A	185.61	N/A	100.45
Total	6,283.16	8,069.19	6,069.68	7,548.23

Source: Respective financial institutions.

### Growth in real premium by region in the world in 2022

In per cent

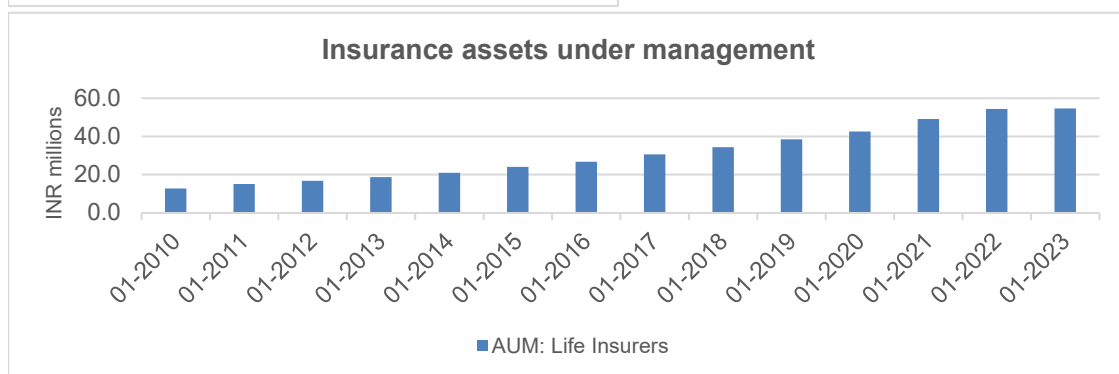
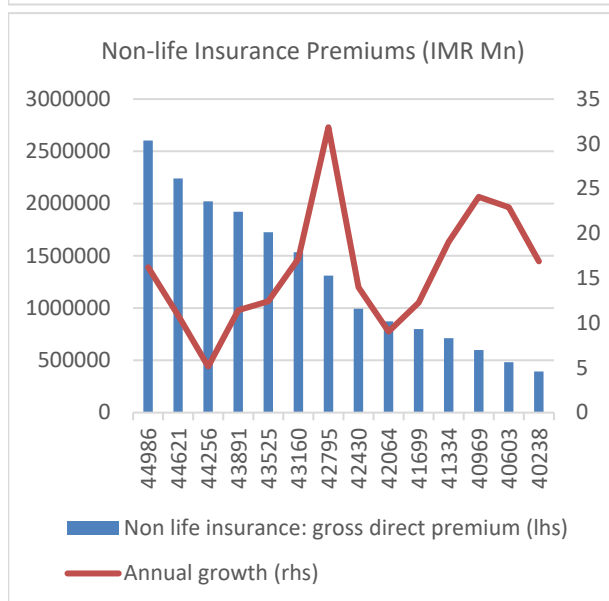
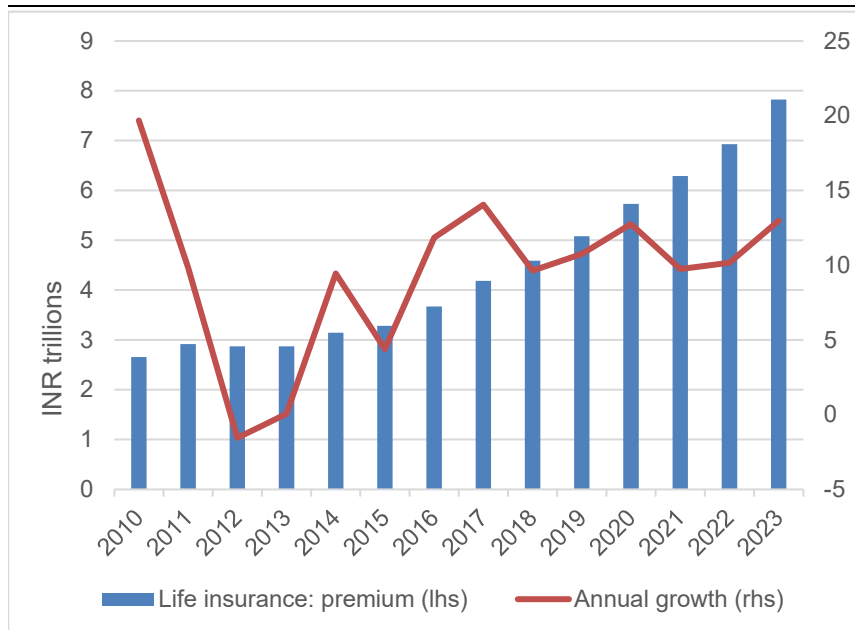
Table A2

Regions	Life	Non-life	Total
Advanced markets	–4.4	0	–1.8
Emerging markets	1.4	2.8	2.1
Asia-Pacific	–2.0	2.9	–0.1
India	8.2	6.0	7.7
World	–3.1	0.5	–1.1

Source: Swiss Re (2023).

## Insurance premiums and AUM

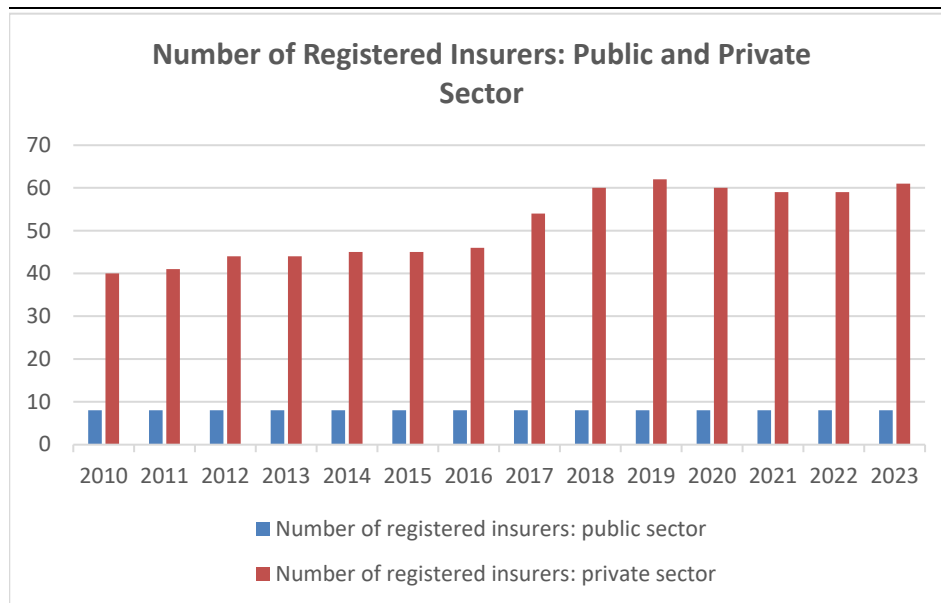
Graph A1



Source: CEIC database.

Numbers of registered insurers in India

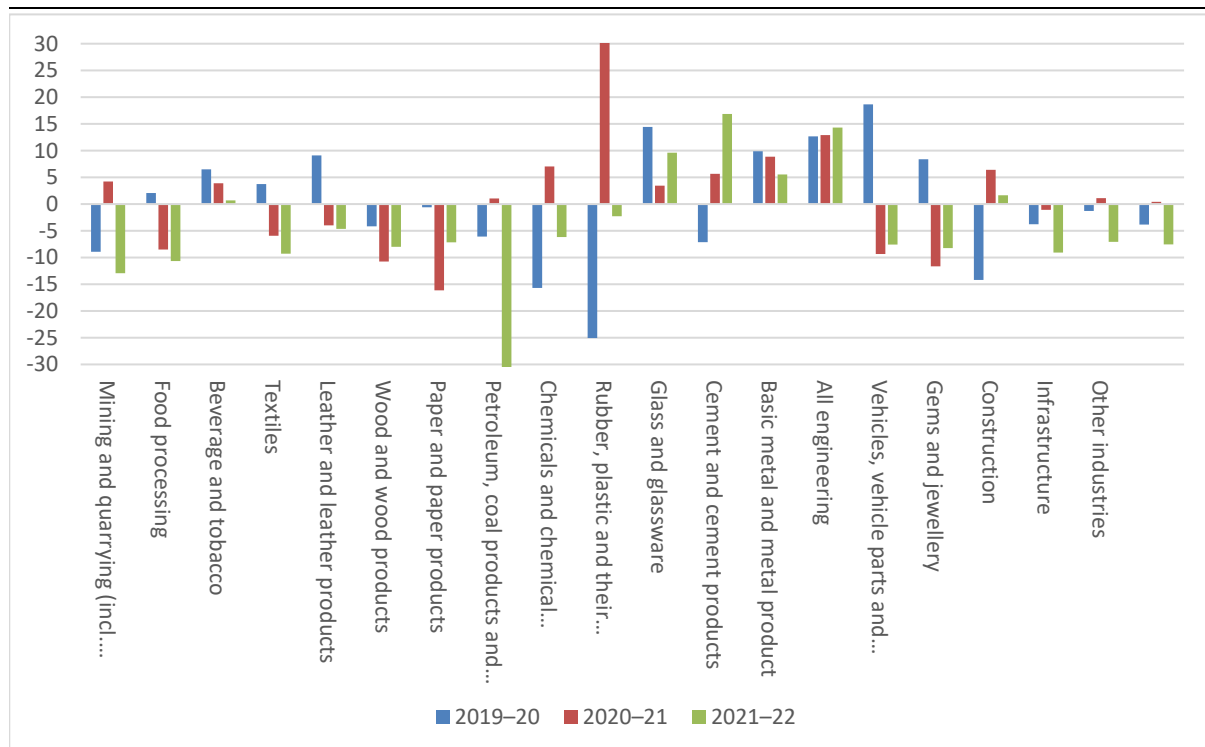
Graph A2



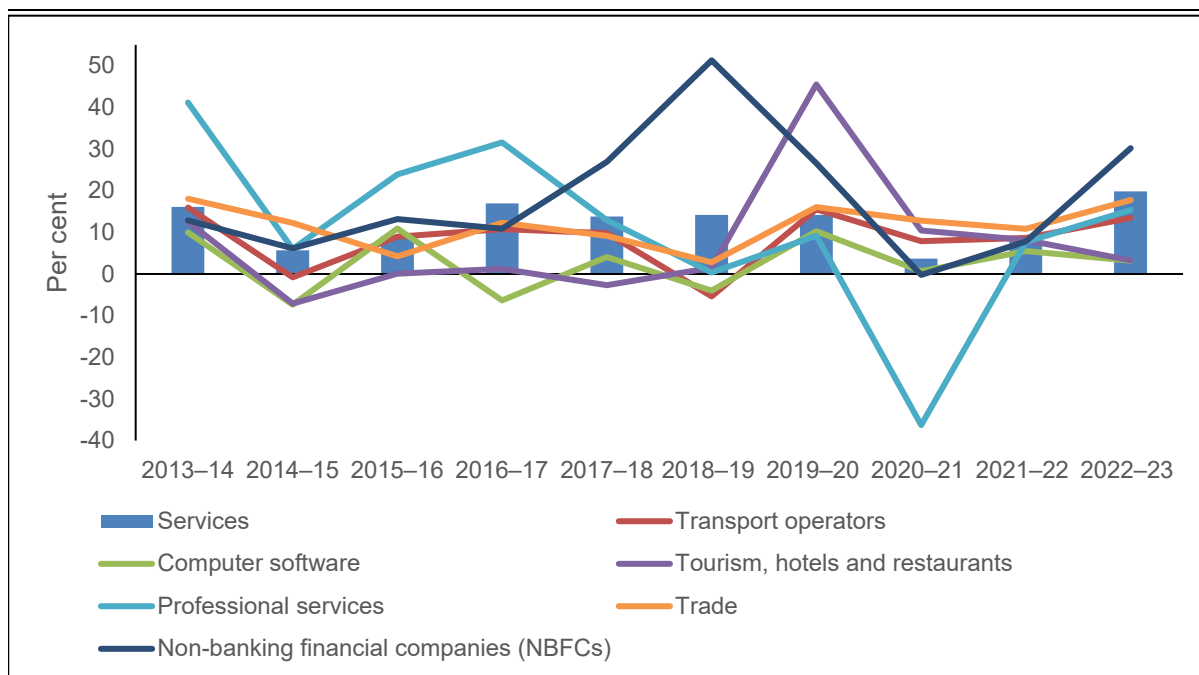
Source: CEIC database.

Credit growth within the industrial sector in India

Graph A3



Source: RBI, Handbook of Statistics on the Indian Economy, compiled from various years.



Source: RBI, Handbook of Statistics on the Indian Economy, compiled from various years.