RESERVE BANK OF INDIA

BULLETIN

FEBRUARY 2024

VOLUME LXXVIII NUMBER 2

The Reserve Bank of India Bulletin is issued monthly by the Department of Economic and Policy Research, Reserve Bank of India, under the direction of the Editorial Committee.
The Central Board of the Bank is not responsible for interpretation and opinions expressed. In the case of signed articles, the responsibility is that of the author.

For subscription to Bulletin, please refer to Section 'Recent Publications'

The Reserve Bank of India Bulletin can be accessed at **https://bulletin.rbi.org.in**

CONTENTS

GOVERNOR'S STATEMENT

Governor's Statement

*Governor's Statement**

Shaktikanta Das

This is the first monetary policy statement of 2024, a momentous year for the Reserve Bank of India which enters its 90th year of existence and operations on April 1. Over the years, the Reserve Bank has established itself as a credible institution which stands for stability, trust and economic progress. In recent years, it has become a pioneer in fostering innovation and technology in the financial system. Customer centricity and financial inclusion have always been its priorities. The Reserve Bank's tireless efforts towards maintaining a fine balance among price stability, financial stability and external sector stability have paid rich dividends as the country embarks on a higher growth trajectory in the years to come. As India gains a pole position in the new global order, the contribution of the Reserve Bank is getting widely recognised in India and abroad.

The global economy continues to present a mixed picture. On the one hand, the odds of soft-landing have increased with inflation moving closer to the target and growth holding up better than expected in major advanced and emerging market economies. On the other hand, the ongoing wars and conflicts and the emergence of new flashpoints in different parts of the world, with disruptions in the Red Sea being the latest in the series, impart uncertainty to the global macroeconomic outlook.

In this unsettled global environment, the Indian economy has performed remarkably well in the recent years. Growth is accelerating and outpacing most forecasts, while inflation is on a downward trajectory. At the current juncture, India's potential growth is propelled by structural drivers like improving physical infrastructure; development of world class digital and payments technology; ease of doing business; enhanced labour force participation; and improved quality of fiscal spending. Our multi-pronged, proactive, and calibrated policies on the monetary, regulatory and supervisory fronts have worked well to maintain and strengthen macroeconomic and financial stability.

Decisions and Deliberations of the Monetary Policy Committee (MPC)

The Monetary Policy Committee (MPC) met on 6th, 7th and 8th February, 2024. After a detailed assessment of the evolving macroeconomic and financial developments and the outlook, it decided by a 5 to 1 majority to keep the policy repo rate unchanged at 6.50 per cent. Consequently, the standing deposit facility (SDF) rate remains at 6.25 per cent and the marginal standing facility (MSF) rate and the Bank Rate at 6.75 per cent. The MPC also decided by a majority of 5 out of 6 members to remain focused on withdrawal of accommodation to ensure that inflation progressively aligns to the target, while supporting growth.

I shall now briefly set out the rationale for these decisions. The momentum in domestic economic activity continues to be strong. Headline inflation, after moderating to 4.9 per cent in October, rose to 5.7 per cent in December 2023. This was primarily due to food inflation, mostly vegetables. The softening in core inflation (CPI inflation excluding food and fuel) continued across both goods and services, reflecting the cumulative impact of monetary policy actions as well as significant softening in commodity prices. The uncertainties in food prices, however, continue to impinge on the headline inflation trajectory.

Taking into account this growth-inflation dynamics and the fact that transmission of the cumulative 250 bps policy rate hike is still underway, the MPC decided to keep the policy repo rate unchanged at 6.50 per cent. The MPC will carefully monitor any signs of generalisation of food price pressures which can fritter away the gains in easing of core inflation. Monetary policy must continue to be

* Governor's Statement - February 8, 2024.

actively disinflationary to align inflation to the target of 4 per cent on a durable basis. The MPC will remain resolute in this commitment. The MPC also decided to remain focused on withdrawal of accommodation to ensure fuller transmission and anchoring of inflation expectations.

Assessment of Growth and Inflation

Global Growth

Global growth is expected to remain steady in 2024 with heterogeneity across regions.[1] Though global trade momentum remains weak, it is exhibiting signs of recovery and is likely to grow faster in 2024[2]. Inflation has softened considerably and is expected to moderate further in 2024.[3] Financial markets are volatile as market participants adjust their expectations on the timing and pace of rate cuts by major central banks who remain cautious against premature easing in their fight against inflation.

Amidst the current headwinds, elevated level of public debt is raising serious concerns on macroeconomic stability in many countries, including some of the advanced economies (AEs). Global public debt to GDP ratio is projected to reach 100 per cent by the end of this decade. The public debt levels in AEs are in fact much higher than those in the emerging market economies (EMEs).[4]. The challenges of debt sustainability in an environment of high interest rates and low growth at the global level can become new sources of stress. Reducing debt burdens is necessary to create fiscal space for new investments in priority areas, including green transition. As regards India, given the fiscal consolidation path as well as improving growth prospects, we expect the general government debt to gradually come down.[5]

Domestic Growth

Domestic economic activity remains strong. The first advance estimates (FAE) placed the real gross domestic product (GDP) growth at 7.3 per cent for 2023-24, marking the third successive year of growth above 7 per cent.[6]

Going forward, the momentum of economic activity witnessed during 2023-24 is expected to continue in the next year (2024-25). Agricultural activity is holding up well despite lower rainfall, lower reservoir levels and delayed sowing.[7] *Rabi* sowing has surpassed last year's level as well as the normal acreage.[8] The allied sector is also expected to provide major support to agriculture with continued momentum in horticulture and fisheries.[9]

Industrial activity is gaining steam on the back

1 According to the latest update of the World Economic Outlook (WEO) of the IMF released on January 30, 2024, global growth is expected to remain steady at 3.1 per cent during 2024, the same as in 2023.

2 As per the latest WEO of the IMF, world trade volume (goods and services) growth is expected to accelerate to 3.3 per cent in 2024 from 0.4 per cent in 2023.

3 As per the latest WEO of the IMF, world consumer price inflation is expected to moderate to 5.8 per cent in 2024 from 6.8 per cent in 2023.

4 According to the IMF, the gross public debt to GDP ratio of Advanced Economies (AEs) is projected to increase from 104.1 per cent in 2019 to 112.1 per cent in 2023. For Emerging Market Economies (EMEs), the gross public debt to GDP ratio is estimated to increase from 55.9 per cent in 2019 to 68.3 per cent in 2023 (Fiscal Monitor, October 2023).

5 According to IMF, the general government debt of India increased to 88.5 per cent of GDP during the pandemic year 2020. This has come down to 81 per cent of GDP in 2022 and is projected to decline to 80.5 per cent in 2028 (IMF Fiscal Monitor, Oct 2023).

6 GDP expanded by 9.1 per cent and 7.2 per cent in 2021-22 and 2022-23, respectively. On the supply side, enhanced contribution from manufacturing sector and sustained buoyancy in construction activity and other services led to a growth of 6.9 per cent in gross value added (GVA) for 2023-24. Manufacturing expanded by 6.5 per cent while construction sector registered double digit growth of 10.7 per cent, respectively, during 2023-24.

7 Northeast monsoon ended with 9 per cent below long period average (LPA) rainfall. At the all-India level, the water storage position at 52 per cent of total reservoir capacity as of February 1, 2024 is lower by 17.3 per cent over the last year and 2.8 per cent over the decadal average.

8 As on February 2, 2024, *rabi* sowing has surpassed last year's level and was higher by 5.2 per cent over the normal 5-year average acreage. The acreage of wheat, oilseeds and coarse cereals has exceeded that of last year's level by 0.7 per cent, 1.1 per cent and 7.1 per cent, respectively.

9 As per the 3rd AE (released on January 18, 2024), the production of horticultural crops during 2022-23, driven by higher production of fruits and vegetables, is placed at a record 355.3 million tonnes, 2.3 per cent higher over the final estimate of 2021-22. With record fish production of 175.45 lakh tons in 2022-23 (162.48 lakh tonnes in 2021-22), India is the third largest fish producing country in the world accounting for 8 per cent of global production and contributing over 6.7 per cent to the agricultural gross value added (GVA).

of improving performance of manufacturing.[10] The early results of corporates in the manufacturing sector remain upbeat, driven by higher profit margins.[11] The purchasing managers' index (PMI) for manufacturing is displaying expansion along with strengthening of future activity index.[12]

Services sector activity is expected to remain resilient on the back of strong domestic demand and stable global prospects.[13] The PMI services increased significantly in January (2024), suggesting continued strong expansion.[14] The buoyant demand for residential housing, coupled with increased thrust on government capex, is expected to propel construction activity.[15]

On the demand side, improving employment conditions[16] and moderating inflation, together with a rebound in agricultural activity should push up household consumption. Rural demand continues to gather pace.[17] Strengthening farm level activity as reflected in declining MNREGA demand[18] and the extension of Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) should further support rural consumption.[19] Urban consumption remains strong on the back of improved income levels.[20]

Investment cycle is gaining steam, aided by sustained thrust on government capex;[21] increasing capacity utilisation;[22] rising flow of resources to the commercial sector;[23] and policy support from schemes such as production linked incentive (PLI).[24] Revival in private corporate investment is also underway.[25] Our survey suggests that investment intentions of private corporates remain upbeat and both services and infrastructure firms are optimistic about overall business conditions. Net external demand is also improving with narrowing merchandise trade deficit.[26] Taking all these factors into consideration, real GDP growth for 2024-25 is projected at 7.0 per cent with Q1

[10] Index of industrial production (IIP) for manufacturing posted a growth of 5.6 per cent during October-November, while core industries recorded a robust growth of 7.8 per cent during Q3.

[11] The early results of 494 listed manufacturing companies suggest GVA in nominal terms expanded by 15.4 per cent y-o-y driven by increase in gross profits by 16.8 per cent.

[12] PMI manufacturing increased to 56.5 in January from 54.9 in December and remained above the long run trend. Business expectations, measured by future activity index over 12 months, strengthened to a 13-month high in January, boosted by increased new enquiries and product diversification, and robust demand.

[13] E-way bills and toll collections increased by 17.1 per cent and 12.8 per cent, respectively, in Q3:2023-24, while port cargo rose by 10.1 per cent during this period. Railway freight traffic expanded by 6.4 per cent both in Q3 and January 2024. Goods and services tax (GST) collections growth accelerated to 12.9 per cent in Q3:2023-24 from 10.6 per cent growth in the preceding quarter. GST collections expanded by 10.4 per cent y-o-y to ₹1.72 lakh core in January to record second highest collection ever.

[14] PMI services rose to 61.8 in January 2024 from 59.0 in December 2023, with the rate of expansion picking up to a six-month high.

[15] The central government's capital expenditure recorded a growth of 37.5 per cent in April-December 2023, on the top of 25.1 per cent growth during the same period last year. Steel consumption rose by 14.5 per cent, while cement production increased by 4.5 per cent during Q3.

[16] According to Periodic Labour Force Survey (PLFS), urban unemployment rate has been secularly declining from 9.8 per cent in Q2: 2021-22 to 7.2 per cent in Q2:2022-23 and further to 6.6 per cent in Q2:2023-24.

[17] Two-wheeler sales expanded by 22.6 per cent during Q3:2023-24, while tractor sales contracted by 4.9 per cent during this period.

[18] Mahatma Gandhi National Rural Employment Guarantee Act or MGNREGA work demand declined by 5.5 per cent in December 2023 and 4.8 per cent in January 2024.

[19] According to the press release issued on November 29, 2023, the Central government will provide free food grains to about 81.35 crore beneficiaries under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) for a period of five years with effect from 1st January 2024, aimed at ensuring food and nutrition security.

[20] Domestic air passengers traffic expanded by 9.1 per cent while passenger vehicles sales posted a growth y-o-y of 8.3 per cent in Q3:2023-24. Early corporate results suggest that staff cost of listed manufacturing companies increased by 11.0 per cent in Q3: 2023-24.

[21] Capital expenditure in BE 2024-25 increased to ₹11.1 lakh crore (3.4 per cent of GDP), an increase of 16.9 per cent over ₹9.5 lakh crore in RE 2023-24 and 11.1 per cent over ₹10.0 lakh crore in BE 2023-24.

[22] Final results suggest capacity utilisation increased by 40 bps to 74.0 per cent in Q2:2023-24. The long-term average is 73.7 per cent which pertains to the period Q1:2008-09 to Q2:2023-24 excluding Q1:2020-21. Seasonally adjusted CU, however, declined by 90 bps and stands at 74.5 per cent in Q2:2023-24.

[23] As on January 12, 2024, the total flow of resources to the commercial sector from banks and other sources at ₹23.6 lakh crore during the current financial year so far is significantly higher than that of last year (₹19.8 lakh crore).

[24] Investment under PLI scheme has already matured to the extent of ₹1.03 lakh till November 2023 so far.

[25] This was primarily driven by key industries such as steel, petroleum, textiles, power, chemicals, food processing, and construction.

[26] Merchandise trade deficit declined to US$ 70.5 billion in Q3 from US$ 71.5 billion during the same quarter last year.

at 7.2 per cent; Q2 at 6.8 per cent; Q3 at 7.0 per cent; and Q4 at 6.9 per cent. The risks are evenly balanced.

Inflation

Headline inflation moderated to an average of 5.5 per cent during April-December 2023 from 6.7 per cent during 2022-23. Food price inflation, however, continued to impart considerable volatility to the inflation trajectory.[27] In contrast, the deflation in CPI fuel deepened and core inflation (CPI inflation excluding food and fuel) moderated to a four-year low of 3.8 per cent in December. The decline in core inflation continued to be broad based with inflation remaining steady or softening across its constituent groups and sub-groups.[28]

The inflation trajectory, going forward, would be shaped by the outlook on food inflation, about which there is considerable uncertainty. Adverse weather events remain the primary risk with implications for the *rabi* crop. Increasing geopolitical tensions are leading to supply chain disruptions and price volatility in key commodities, particularly crude oil. On the positive side, the progress in *rabi* sowing has been satisfactory and augurs well for the season. Prices of key vegetables, especially onions and tomatoes, are registering seasonal price correction. Taking into account these factors, CPI inflation is projected at 5.4 per cent for the current year (2023-24) with Q4 at 5.0 per cent. Assuming a normal monsoon next year, CPI inflation for 2024-25 is projected at 4.5 per cent with Q1 at 5.0 per cent; Q2 at 4.0 per cent; Q3 at 4.6 per cent; and Q4 at 4.7 per cent. The risks are evenly balanced.

What do these Inflation and Growth Conditions mean for Monetary Policy?

Inflation has seen a significant moderation from the highs of the summer of 2022. Over the last two years, monetary policy has prioritised inflation over growth, undertaking calibrated increase in policy repo rate by 250 basis points and withdrawal of stimulus measures. Monetary policy was supported by pro-active supply-side measures by the government. That said, the job is not yet finished, and we need to be vigilant about new supply shocks that may undo the progress made so far.

Headline inflation has remained high and has seen considerable volatility, moving in a range of 4.3 per cent to 7.4 per cent during the current financial year.[29] Recurring food price shocks could interrupt the ongoing disinflation process, with risks that it could lead to de-anchoring of inflation expectations and generalisation of price pressures. Adding to these are the renewed flash points on the geo-political front, including supply chain disruptions. Importantly, the CPI inflation target of 4.0 per cent is yet to be reached. Monetary policy, in the midst of these lingering uncertainties, has to remain vigilant to ensure that we successfully navigate the last mile of disinflation. Stable and low inflation at 4 per cent will provide the necessary bedrock for sustainable economic growth.

Liquidity and Financial Market Conditions

After remaining in surplus during April-August 2023, system level liquidity[30] turned into deficit

[27] As headline inflation edged up to 5.7 per cent in December from a low of 4.9 per cent in October, CPI food inflation increased to 8.7 per cent in December 2023 from 6.3 per cent in October. The pick-up in food inflation since November was primarily driven by vegetables along with fruits, pulses and sugar.

[28] In December, CPI excluding food and fuel inflation moderated in eight of the 10 sub-group/groups and remained steady in the remining two. Inflation moderated in sub-groups/groups such as clothing and footwear, health, transport and communication, education, personal care and effects, among others.

[29] Headline inflation was 4.3 per cent in May 2023 and 7.4 per cent in July 2023.

[30] System level liquidity is measured by the difference between liquidity absorption and liquidity injection under the liquidity adjustment facility (LAF). Liquidity absorption under LAF includes reverse repos (main as well as fine-tuning operations) and standing deposit facility (SDF). Liquidity injection under LAF includes repos (main as well as fine-tuning operations) and marginal standing facility (MSF). In other words, System level liquidity = [(Reverse repos +SDF) – (Repo + MSF)]. A net positive number represents system surplus level liquidity, while a net negative number represents system level deficit liquidity.

from September after a gap of four and half years.[31] Adjusted for government cash balances, potential liquidity in the banking system is still in surplus. During December-January, the Reserve Bank pro-actively injected liquidity through both the main and the fine-tuning repo operations to ease liquidity tightness in the system.[32] With government spending picking up and augmenting system level liquidity, the Reserve Bank undertook six fine-tuning variable rate reverse repo (VRRR) auctions during February 2-7, 2024 to absorb surplus liquidity.[33]

Financial market segments have adjusted to the evolving liquidity conditions in varying degrees. While the short-term rates have fluctuated, long term rates have remained relatively stable, reflecting better anchoring of inflation expectations as indicated in the softening of term spread in the G-sec market.[34] In the credit market, monetary transmission remains incomplete.[35]

Let me reiterate that our policy stance is in terms of interest rate which is the principal tool of monetary policy in the current framework. Our stance of withdrawal of accommodation should be seen in the context of incomplete transmission and inflation ruling above the target of 4 per cent and our efforts to bring it back to the target on a durable basis. So far as liquidity conditions are concerned, these are being driven by exogenous factors, which are likely to correct in the foreseeable future, aided by our market operations. On our part, the Reserve Bank remains nimble and flexible in its liquidity management through two-way main and fine-tuning operations, in both repo and reverse repo. We will deploy an appropriate mix of instruments to modulate both frictional and durable liquidity so as to ensure that money market interest rates evolve in an orderly manner and financial stability is maintained.

The reversal of liquidity facilities under both SDF and MSF even during weekends and holidays, announced in our December policy statement, has facilitated better funds management by the banks.[36]

As of February 7, 2024, the Indian rupee (INR) has remained stable compared to both its emerging market peers and a few advanced economies[37]. In terms of coefficient of variation (CV), the INR exhibited the lowest volatility in 2023-24 (April to January) compared to the corresponding period in the previous three years.[38] Let me reiterate that the exchange rate of the Indian rupee is market determined. Its relative stability in the recent period, despite a stronger US dollar and elevated US treasury yields, reflects the

[31] The system level liquidity deficit widened from an average of ₹0.42 lakh crore during September-November 2023 to ₹1.61 lakh crore during December-January.

[32] Between December 15, 2023 – January 31, 2024, nine fine tuning variable rate repo (VRR) operations of 1-7 days maturity were conducted amounting to ₹7.75 lakh crore, while two main VRR operations injected ₹4.25 lakh crore into the system.

[33] The Reserve Bank conducted two 4-day VRRR auctions of ₹50,000 crore each on February 2 and February 5, 2024, respectively. In addition, two 1-day VRRR auctions of ₹75,000 crore and ₹50,000 crore were conducted on February 6 and two 1-day VRRR auctions of ₹50,000 crore each on February 7, 2024. Thus, against a total notified amount of ₹3,25,000 crore, the amount absorbed through these auctions was ₹1,53,915 crore.

[34] During December-January, the average term spread (10-year minus 91-day Treasury Bills) softened to 24 basis points (bps) from 40 bps in October-November.

[35] The weighted average lending rate (WALR) on fresh rupee loans rose by 181 bps while that on outstanding loans rose by 113 bps during the current tightening cycle (May 2022 – December 2023). During the same period, the weighted average domestic term deposit rates (WADTDR) on fresh deposits and outstanding deposits rose by 246 basis points and 180 bps, respectively.

[36] This has indeed been reflected in the behavior of banks with lower placement of funds under the SDF and lower recourse to the MSF on Fridays since December 30. Average placement of funds under the SDF and funds availed under the MSF have moderated to ₹0.64 lakh crore and ₹0.38 lakh crore, respectively, during the Friday's since December 30 (up to February 2, 2024) as compared with ₹0.70 lakh crore and ₹0.86 lakh crore, respectively, in the Fridays since the beginning of December.

[37] As of February 7, 2024, the depreciation of Indian rupee (INR) at 0.9 per cent against the US dollar on a financial year basis is lower as compared to emerging market peers like Chinese yuan, Thailand baht, Indonesian rupiah, Vietnamese dong and Malaysian ringgit and a few advanced economy currencies like Japanese yen, Australian dollar, Korean won and New Zealand dollar.

[38] For the period April to January, the coefficients of variation (CV) of the INR were 1.4 per cent, 1.0 per cent, 2.7 per cent, and 0.6 per cent for the years 2020-21, 2021-22, 2022-23 and 2023-24 respectively. For the period April to January 2022-23 and 2023-24, the INR was one of the least volatile in terms of CV among various peer EME currencies including the Chinese yuan, the Thailand baht, Indonesian rupiah, and the Malaysian ringgit.

strength and stability of the Indian economy, its sound macroeconomic fundamentals, financial stability and improvements in India's external position, particularly the significant moderation in the current account deficit (CAD), comfortable foreign exchange reserves and return of capital inflows.

Financial Stability

The domestic financial system remains resilient with healthy balance sheets of banks and financial institutions.[39] The financial parameters of non-banking financial companies (NBFCs) are also improving in tandem with those of the banking system.[40] Good governance, robust risk management, sound compliance culture and protection of customers' interest are of paramount importance for the safety and stability of the financial system and individual institutions. The Reserve Bank lays great emphasis on these aspects. We expect all regulated entities to accord the highest priority to these functions.

External Sector

India's current account deficit (CAD) declined sharply to 1.0 per cent of GDP in Q2:2023-24 from 3.8 per cent in Q2:2022-23. Going ahead, the net balance under services and remittances is expected to remain in large surplus, partly offsetting the trade deficit. India's services exports remained resilient in October-December 2023, driven by software, business and travel services.[41] Moreover, with around 10.2 per cent share in world telecommunications, computer and information services exports, India is a significant player in the world software business.[42] According to the World Bank, with an estimated US$135 billion in inward remittances in 2024, India would remain the largest recipient of remittances globally.[43] Thus, the CAD for 2023-24 and 2024-25 is expected to be eminently manageable.

On the financing side, net foreign direct investment (FDI) stood at US$ 13.5 billion in April-November 2023 as compared with US$ 19.8 billion a year ago.[44] Foreign portfolio investment (FPI) witnessed a sharp turnaround during 2023-24 (up to February 6) with net FPI inflows of US$ 32.4 billion as against net outflows of US$ 6.7 billion a year ago. Net accretions to non-resident deposits and net inflows under external commercial borrowings were also higher during the year.[45] As on February 2, 2024, India's foreign exchange reserves stood at US$ 622.5 billion.[46] Vulnerability indicators suggest greater resilience of India's external sector.[47] We are confident of comfortably meeting all our external financing requirements.

[39] The key indicators of capital and asset quality of scheduled commercial banks (SCBs) improved further as of end-September 2023. The capital adequacy ratio (CRAR) and the liquidity coverage ratio (LCR) of SCBs were well above the regulatory threshold. The CRAR ratio of SCBs stood at 16.8 per cent in September 2023. The LCR of SCBs was comfortable at 135.4 per cent, much above the minimum stipulation of 100 per cent. SCBs' gross non-performing assets (GNPA) ratio and the net non-performing assets (NNPA) ratio declined to a multi-year low of 3.2 per cent and 0.8 per cent, respectively, in September 2023.

[40] The resilience of the NBFCs sector improved with CRAR at 27.6 per cent, GNPA ratio at 4.1 per cent and return on assets (RoA) at 2.9 per cent, respectively, in September 2023.

[41] India's services exports grew by 5.1 per cent on a y-o-y basis during October-December 2023.

[42] India's rising software and business services exports through Global Capability Centres (GCCs) are a testament to its growing dominance in high-skilled and high-value services exports. Riding on the wave of big data, Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT) and advancements in compatible hardware, generative AI, and spatial computing opens up newer dimensions for Indian software exports.

[43] According to the World Bank, India's inward remittances would rise by 8.0 per cent in 2024. India's share is around 15 per cent of the global inward remittances.

[44] Net inflows were lower during April-November 2023 due to higher repatriation at US$ 25.6 billion as against US$ 19.9 billion during same period last year. Gross inward FDI was marginally lower at US$ 47.0 billion during April-November 2023 as against US$ 49.0 billion during the same period last year.

[45] Net accretions to non-resident deposits increased by US$ 7.3 billion during April-November 2023 from US$ 3.6 billion a year ago, led by higher inflows in NRE and FCNR(B) accounts. Net inflows of ECBs to India were US$ 1.6 billion during April-December 2023 as against net outflows of US$ 5.9 billion a year ago.

[46] The Foreign exchange Reserves cover more than ten months of projected imports for 2023-24 and 97.1 per cent of total external debt as on end-September 2023.

[47] India's external debt/GDP ratio fell from 20.0 per cent at end-March 2022 to 18.6 per cent at end-September 2023. The debt service ratio increased from 5.2 per cent to 6.7 per cent during the same period.

Additional Measures

I shall now announce certain additional measures.

Review of the Regulatory Framework for Electronic Trading Platforms (ETPs)

The Reserve Bank's extant regulatory framework for electronic trading platforms (ETPs) was issued in 2018. In view of the subsequent developments in markets, products, and technology, *etc.*, a revised regulatory framework for ETPs will be issued for stakeholders' feedback.

Hedging of Gold Price Risk in the Over the Counter (OTC) Market in the International Financial Services Centre (IFSC)

In December 2022, the Reserve Bank had permitted resident entities to hedge their gold price risk in recognised exchanges in the IFSC. It has now been decided to also allow resident entities to hedge the price of gold in the over the counter (OTC) segment in the IFSC. This will provide more flexibility to resident entities in hedging their exposure to gold prices.

Key Fact Statement (KFS) for Retail and MSME Loans & Advances

At present, the loans and advances availed by borrowers, apart from including the rate of interest, also include other fees and charges such as processing fees, documentation charges, *etc.* To enhance transparency in disclosure of such information, the Reserve Bank had mandated certain categories of lenders to provide the borrower a Key Fact Statement (KFS) containing essential information such as the all-inclusive annual percentage rate (APR) and recovery and grievance redress mechanism. The requirement of KFS is now being extended to cover all retail and MSME loans. This measure will lead to enhanced transparency in lending and enable customers in making informed decisions.

Enhancing the Robustness of AePS

Aadhaar Enabled Payment System (AePS) has played an important role in financial inclusion by enabling customers to make digital payment transactions through service providers such as business correspondents. Given their significance, it is proposed to streamline the process for on-boarding of AePS service providers and introduce some additional fraud risk management measures. These measures will further strengthen the security of the AePS system and enhance its robustness.

Principle-Based Framework for Authentication of Digital Payment Transactions

Over the years, the Reserve Bank has proactively facilitated introduction of various mechanisms such as Additional Factor of Authentication (AFA) for securing digital payments. While no particular mechanism was specified by the Reserve Bank, SMS-based OTP has become very popular. With technological advancements, however, alternative authentication mechanisms have emerged in recent years. Therefore, to facilitate adoption of alternative authentication mechanisms for enhancing the security of digital payments, it is proposed to put in place a principle-based framework for authentication of such transactions.

Introduction of Programmability and Offline Functionality in Central Bank Digital Currency (CBDC) Pilot

The CBDC Retail (CBDC-R) pilot currently enables Person to Person (P2P) and Person to Merchant (P2M) transactions. It is now proposed to enable additional functionalities of programmability and offline capability in CBDC retail payments. Programmability will facilitate transactions for specific/targeted purposes, while offline functionality will enable these transactions in areas with poor or limited internet connectivity.

Conclusion

The Indian economy is making confident progress on a strong, sustained and transformative growth path. Domestic and international investors are reposing greater confidence on India's economic prospects. In our assessment, the current setting of monetary policy is moving in the right direction with growth holding firm and inflation trending down to the target. Therefore, much has been achieved, but we must remain vigilant. Policymaking during uncertain times has to be based on a continuous assessment of the incoming data and its implications for the evolving outlook.

We reaffirm our commitment to bring down inflation to the target of 4 per cent in a timely and sustainable manner. Price and financial stability are the foundations for strong, sustainable and inclusive growth. Our endeavour all along has been to take a holistic approach to keep the economy in balance. We must not only preserve the hard-earned strength and stability of the Indian economy but also build on this further for a long haul of higher growth with price and financial stability. In the current environment, what Mahatma Gandhi said long ago remains relevant and I quote: *"I am moving cautiously, watching myself at every step. ….. but there is the fixed determination behind every act of mine…"*[48]

Thank you. Namaskar.

[48] Mahatma Gandhi, Collected Works, Vol. 82

MONETARY POLICY STATEMENT FOR 2023-24

Resolution of the Monetary Policy Committee (MPC)
February 6 to 8, 2024

Monetary Policy Statement, 2023-24 Resolution of the Monetary Policy Committee (MPC) *

On the basis of an assessment of the current and evolving macroeconomic situation, the Monetary Policy Committee (MPC) at its meeting today (February 8, 2024) decided to:

- Keep the policy repo rate under the liquidity adjustment facility (LAF) unchanged at 6.50 per cent.

Consequently, the standing deposit facility (SDF) rate remains unchanged at 6.25 per cent and the marginal standing facility (MSF) rate and the Bank Rate at 6.75 per cent.

- The MPC also decided to remain focused on withdrawal of accommodation to ensure that inflation progressively aligns to the target, while supporting growth.

These decisions are in consonance with the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 per cent within a band of +/- 2 per cent, while supporting growth.

Assessment and Outlook

2. Global growth is likely to remain steady in 2024 after a surprisingly resilient performance in a turbulent year gone by. Inflation is edging down from multi-decade highs, with intermittent upticks. Financial market sentiments have been fluctuating with changing views about an early pivot by central banks in advanced economies (AEs). The likelihood of lower interest rates has spurred rallies in equity markets, although uncertainty about the timing of interest rate reduction is reflected in bidirectional movements in the US dollar and sovereign bond yields. Emerging market economies (EMEs) are facing currency fluctuations amidst volatile capital flows.

3. Domestic economic activity is strengthening. As per the first advance estimates (FAE) released by the National Statistical Office (NSO), real gross domestic product (GDP) is expected to grow by 7.3 per cent, year-on-year (y-o-y) in 2023-24, underpinned by strong investment activity. On the supply side, gross value added (GVA) expanded by 6.9 per cent in 2023-24, with manufacturing and services sectors as the key drivers.

4. Looking ahead, recovery in *rabi* sowing, sustained profitability in manufacturing and underlying resilience of services should support economic activity in 2024-25. Among the key drivers on demand side, household consumption is expected to improve, while prospects of fixed investment remain bright owing to upturn in the private capex cycle, improved business sentiments, healthy balance sheets of banks and corporates; and government's continued thrust on capital expenditure. Improving outlook for global trade and rising integration in global supply chain will support net external demand. Headwinds from geopolitical tensions, volatility in international financial markets and geoeconomic fragmentation, however, pose risks to the outlook. Taking all these factors into consideration, real GDP growth for 2024-25 is projected at 7.0 per cent with Q1 at 7.2 per cent; Q2 at 6.8 per cent; Q3 at 7.0 per cent; and Q4 at 6.9 per cent (Chart 1). The risks are evenly balanced.

5. From its October 2023 trough of 4.9 per cent, CPI inflation increased successively in the next two months to 5.7 per cent by December. Food inflation, primarily y-o-y vegetable price increases, drove the pick-up in headline inflation, even as deflation in fuel deepened. Core inflation (CPI inflation excluding food and fuel) softened to a four-year low of 3.8 per cent in December.

* Released on February 8, 2024.

6. Going forward, the inflation trajectory would be shaped by the evolving food inflation outlook. *Rabi* sowing has surpassed last year's level. The usual seasonal correction in vegetable prices is continuing, though unevenly. Yet considerable uncertainty prevails on the food price outlook from the possibility of adverse weather events. Effective supply side responses may keep food price pressures under check. The continuing pass-through of monetary policy actions and stance is keeping core inflation muted. Crude oil prices, however, remain volatile. Manufacturing firms covered in the Reserve Bank's enterprise surveys expect some softening in the growth of input costs and selling prices in Q4:2023-24, while services and infrastructure firms expect higher input cost pressures and growth in selling prices. Taking into account these factors, CPI inflation is projected at 5.4 per cent for 2023-24 with Q4 at 5.0 per cent. Assuming a normal monsoon next year, CPI inflation for 2024-25 is projected at 4.5 per cent with Q1 at 5.0 per cent; Q2 at 4.0 per cent; Q3 at 4.6 per cent; and Q4 at 4.7 per cent (Chart 2). The risks are evenly balanced.

7. The MPC noted that domestic economic activity is holding up well and is expected to be backed by the momentum in investment demand, optimistic business sentiments and rising consumer confidence. On the inflation front, large and repetitive food price shocks are interrupting the pace of disinflation that is led by the moderation of core inflation. Geopolitical events and their impact on supply chains, and volatility in international financial markets and commodity prices are key sources of upside risks to inflation. The cumulative effect of policy repo rate increases is still working its way through the economy. The MPC will carefully monitor any signs of generalisation of food price pressures to non-food prices which can fritter away the gains in the easing of core inflation. As the path of disinflation needs to be sustained, the MPC decided to keep the policy repo rate unchanged at 6.50 per cent in this meeting. Monetary policy must continue to be actively disinflationary to ensure anchoring of inflation expectations and fuller transmission. The MPC will remain resolute in its commitment to aligning inflation to the target. The MPC also decided to remain focused on withdrawal of

Chart 1: Quarterly Projection of Real GDP Growth (y-o-y)

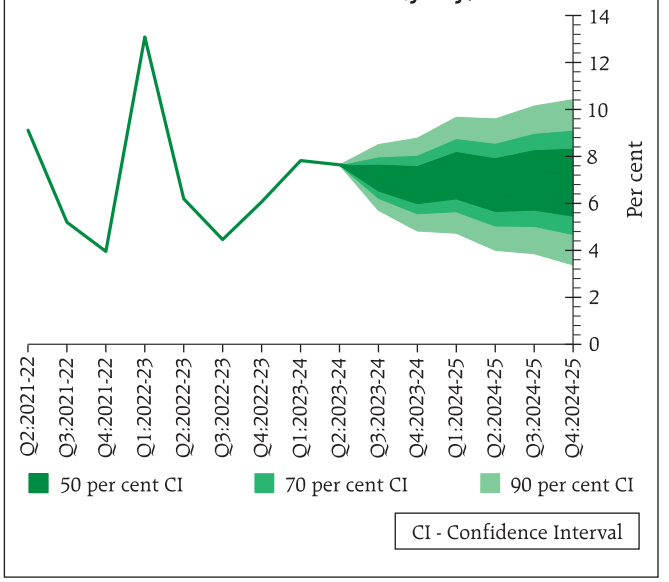
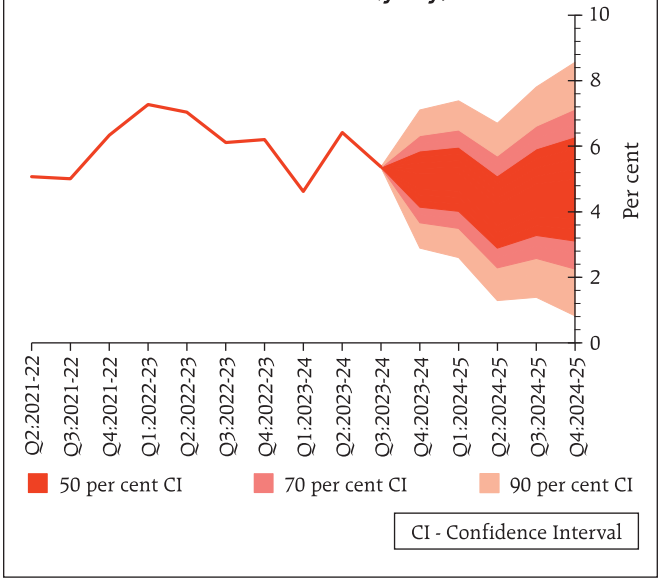


Chart 2: Quarterly Projection of CPI Inflation (y-o-y)



accommodation to ensure that inflation progressively aligns to the target, while supporting growth.

8. Dr. Shashanka Bhide, Dr. Ashima Goyal, Dr. Rajiv Ranjan, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted to keep the policy repo rate unchanged at 6.50 per cent. Prof. Jayanth R. Varma voted to reduce the policy repo rate by 25 basis points.

9. Dr. Shashanka Bhide, Dr. Ashima Goyal, Dr. Rajiv Ranjan, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted to remain focused on withdrawal of accommodation to ensure that inflation progressively aligns to the target, while supporting growth. Prof. Jayanth R. Varma voted for a change in stance to neutral.

10. The minutes of the MPC's meeting will be published on February 22, 2024.

11. The next meeting of the MPC is scheduled during April 3 to 5, 2024.

STATEMENT ON DEVELOPMENTAL AND REGULATORY POLICIES

Statement on Developmental and Regulatory Policies

Statement on Developmental and Regulatory Policies

This Statement sets out various developmental and regulatory policy measures relating to (i) Financial Markets; (ii) Regulations; and (iii) Payment Systems and Fintech.

I. Financial Markets

1. Review of the Regulatory Framework for Electronic Trading Platforms

In October 2018, the Reserve Bank had put in place a regulatory framework for electronic trading platforms (ETPs) for executing transactions in financial instruments regulated by it. Under the framework, which aimed to ensure fair access through transparent, safe, and efficient trading processes, robust trading infrastructures and prevent market abuse, thirteen ETPs operated by five operators have since been authorised. Over the last few years, there has been increased integration of the onshore forex market with offshore markets, notable developments in the technology landscape and an increase in product diversity. Market makers have also made requests to access offshore ETPs offering permitted Indian Rupee (INR) products. In view of these developments, it has been decided to review the regulatory framework for ETPs. The revised regulatory framework will be issued separately for public feedback.

2. Hedging of Gold Price Risk in the Over the Counter (OTC) Market in the International Financial Services Centre (IFSC)

With a view to providing flexibility to resident entities to hedge their exposures to gold price risk efficiently, resident entities were permitted, in December 2022, to access recognised exchanges in the International Financial Services Centre (IFSC). It has now been decided to also allow them to hedge the price of gold in the over the counter (OTC) segment in the IFSC. This will provide resident entities more flexibility and easier access to derivative products in hedging their exposure to gold prices. The related instructions are being issued separately.

II. Regulations

3. Key Fact Statement (KFS) for Retail and MSME Loans & Advances

The Reserve Bank has announced several measures in the recent past to foster greater transparency and disclosure by the regulated entities (REs) in pricing of loans and other charges levied on the customers. One such measure is the requirement for lenders to provide their borrowers a Key Fact Statement (KFS) containing the key information regarding a loan agreement, including all-in-cost of the loan, in simple and easy to understand format. Currently KFS is specifically mandated in respect of loans by scheduled commercial banks to individual borrowers; digital lending by REs; and microfinance loans. Now, it has been decided to mandate all REs to provide the 'Key Fact Statement' (KFS) to the borrowers for all retail and MSME loans. Providing critical information about the terms of the loan agreement, including all-inclusive interest cost, shall greatly benefit the borrowers in making an informed decision.

III. Payment Systems and Fintech

4. Enhancing the Robustness of AePS

Aadhaar Enabled Payment System (AePS), operated by NPCI, enables customers to perform digital payment transactions in assisted mode. In 2023, more than 37 crore users undertook AePS transactions, which points to the important role played by AePS in financial inclusion. To enhance the security of AePS transactions, it is proposed to streamline

the onboarding process, including mandatory due diligence, for AePS touchpoint operators, to be followed by banks. Additional fraud risk management requirements will also be considered. Instructions in this regard shall be issued shortly.

5. Principle-based Framework for Authentication of Digital Payment Transactions

Over the years, the Reserve Bank has prioritised security of digital payments, in particular the requirement of Additional Factor of Authentication (AFA). Though RBI has not prescribed any particular AFA, the payments ecosystem has largely adopted SMS-based One Time Password (OTP). With innovations in technology, alternative authentication mechanisms have emerged in recent years. To facilitate the use of such mechanisms for digital security, it is proposed to adopt a principle-based *"Framework for authentication of digital payment transactions"*. Instructions in this regard will be issued separately.

6. Introduction of Programmability and Offline Functionality in Central Bank Digital Currency (CBDC) Pilot

The CBDC Retail (CBDC-R) pilot currently enables Person to Person (P2P) and Person to Merchant (P2M) transactions using Digital Rupee wallets provided by pilot banks. It is now proposed to enable additional use cases using programmability and offline functionality. Programmability will permit users like, for instance, government agencies to ensure that payments are made for defined benefits. Similarly, corporates will be able to program specified expenditures like business travel for their employees. Additional features like validity period or geographical areas within which CBDC may be used can also be programmed. Second, it is proposed to introduce an offline functionality in CBDC-R for enabling transactions in areas with poor or limited internet connectivity. Multiple offline solutions (proximity and non-proximity based) across hilly areas, rural and urban locations will be tested for this purpose. These functionalities will be introduced through the pilots in a gradual manner.

SPEECHES

Fundamental Shifts in the Global Economy:
New Complexities, Challenges and Policy Options
Shaktikanta Das

Harnessing Digital Technologies in Central Banks:
Opportunities and Challenges
Michael Debabrata Patra

No More a Shadow (of a) Bank
M. Rajeshwar Rao

Role and Expectations of Directors of Urban Co-operative Banks:
Upholding Governance and Professionalism with
Capacity Building and Technology Upgradation
Swaminathan J

The Vital Role of Internal Ombudsman in Ensuring Customer-Centric Financial Excellence
Swaminathan J

*Fundamental Shifts in the Global Economy: New Complexities, Challenges and Policy Options**

Shaktikanta Das

On behalf of the Reserve Bank of India, the current Chair of the SEACEN (South East Asian Central Banks) forum, I extend a warm welcome to Governors of central banks and other delegates to this 59th SEACEN Governors' Conference. The weather in Mumbai during this time of the year is pleasant and I hope you get some time for sightseeing. As everyone in this hall is aware, SEACEN plays a pivotal role in promoting collaboration, knowledge sharing and policy coordination among the member central banks, and thereby contributes significantly to the stability, resilience and sustainable development of the regional and the global economy.

We are gathered here at a critical juncture when the international economic landscape is undergoing profound transformations. The prospects of a soft landing have improved for the global economy, but there are multiple challenges with uncertainties looming on the horizon. The theme of the Conference "Navigating Economic Headwinds and Advancing Financial Inclusion: Perspectives and Challenges" aptly fits into the current policy dilemma that all central banks of the region face today. In these times, prudent macro-financial policies assume even greater importance for all of us to not only navigate through the current turbulence, but also to chart a course towards a more promising future. It is heartening to note that the economies in the region are making notable progress and are positioning themselves for continued advancement in the years ahead. There is a need for deeper integration in this region to stimulate economic growth and foster inclusiveness. I am sure the insightful discussions at this conference will offer some takeaways for our future policy making.

I have chosen the theme "Fundamental Shifts in the Global Economy: New Complexities, Challenges and Policy Options" for my address today. First, I propose to speak about the resilience of the global economy in recent years in marked contrast to the earlier periods of crisis. Thereafter, I propose to outline the emerging trends and shifts that are currently reshaping the global economy irreversibly and posing significant challenges for policymakers. Finally, my effort would be to provide a macroeconomic overview of our region, followed by highlighting some policy choices for the future.

Resilience of the Global Economy

According to the latest projection of the International Monetary Fund (IMF), the global growth is projected at 3.1 percent in 2024 and 3.2 percent in 2025, with forecast for 2024 revised upward by 0.2 percentage point from its October 2023 projection. It is interesting to note that that this time around the global economy has been far more resilient, weathering repeated shocks remarkably well. Even the financial system has broadly withstood the unprecedented monetary tightening across the world. The resilience of emerging market economies (EMEs), in particular, stands out unlike previous episodes of volatility which saw EMEs at the receiving end. EMEs have probably learnt from their past experience and played it well this time. While there is no definitive answer to this so called soft landing as yet, let me outline some possible factors.

First, during the global financial crisis (GFC) and the previous episodes of global turmoil, banking

* Keynote Address by Shri Shaktikanta Das, Governor, Reserve Bank of India - February 15, 2024 - Delivered at the 59th SEACEN Governors' Conference in Mumbai

crises were a common feature in which insufficiently capitalised banks were at the core of the crisis. In contrast, this time the EMEs did not face adverse spillover effects from the recent banking sector turmoil in the advanced economies (AEs) in March 2023. This has been possible due to the strengthening of prudential regulation through wider adoption of Basel III norms and improvements in supervisory practices, which has resulted in a much-improved banking and financial system. Second, the improved macroeconomic fundamentals and buffers of the EMEs in recent years provided cushion against global shocks of the last four years. Third, fiscal and monetary stimulus provided during the COVID-19 has not been fully rolled back, especially in AEs. This has so far somewhat restricted the degree of spillovers from policy tightening by the AEs. Fourth, greater diffusion of technology in industry and services has gained traction after the pandemic. This has enhanced productivity in several EMEs and offset the adverse impact on output from factors like monetary tightening. In fact, technology has opened up new vistas of opportunities for EMEs, particularly in the services sector. Fifth, due credit also has to be given to calibrated and clear communication by central banks. Effective communication has now become an even stronger tool than earlier in providing forward guidance and anchoring market expectations.

Changing Landscape of the Global Economy

The pandemic was an unprecedented crisis of epic proportions in terms of loss of life and livelihood. In recent human history, recessions have been caused by swings in agricultural production, sharp jump in oil prices and financial upheavals. The global financial crisis also was a manifestation of the financial excesses growing under the benign neglect of policymakers. In contrast, the pandemic was a health emergency leading to a complete shutdown of economic activity and mobility to save lives against an unknown enemy. Consequently, there was no clear or readymade template for policymakers to follow; instead, they had to innovate and learn on the job in framing appropriate policy responses to minimise the negative impact of the pandemic on the economy and the financial system.

When the shadows of the pandemic were receding, geopolitical tensions and supply chain disruptions fuelled new challenges and inflation came back strongly. The resultant regime shift in monetary policy rattled financial market sentiments leading to a period of 'great volatility'. Existing models that were built to explain historical patterns in the data were found wanting in explaining the new realities. These models are now being increasingly challenged by ongoing shocks, geo-economic tensions and supply chain reconfigurations. For instance, models focusing on aggregate analysis fell short to explain what we observed in the aftermath of the pandemic. There was a rotation in demand initially from services to goods and then from goods to services. There was also a period of pent-up and revenge spending. These sectoral imbalances kept the levels of inflation high. The pandemic has indeed highlighted the need for more granular and sectoral analysis. In a sense, paradigm shifts in economic thinking are on the anvil. Let me reflect on some of these issues further.

First, the world after the pandemic has changed fundamentally in terms of shifting labour market dynamics, work processes and technological deepening. Work from home, online education and shopping have received wide acceptance, altering the way we work, learn and live. Technological innovation and digitalisation are permeating through every sector of the economy. Businesses are adapting to these trends for their survival. Frontier technologies like Artificial Intelligence (AI) and Machine Learning (ML) are being used widely to boost productivity. These technologies open new opportunities, but they also present challenges that we need to address.

Second, monetary policy before the pandemic was operating in a low for long regime in its quest for reviving growth while resisting deflationary pressures. This situation changed suddenly and drastically with monetary policy adopting the stance of "higher for longer" rates to fight inflationary pressures, following the war in Ukraine. Such regime shifts in the presence of debt overhang in an environment of high interest rates and low growth raise concerns on macroeconomic stability in many countries. Higher interest rates not only raise the interest servicing burden of heavily indebted countries but also impact the balance sheet of banks and financial institutions, as it was seen during the recent banking sector turmoil in advanced economies. In an extreme sense, high indebtedness of countries may constrain monetary policy due to sharp trade-off between price stability and financial stability.

Third, globalisation had boosted the global economy by enhancing productivity, creating global value chains and free movement of capital and labour across countries. The benefits of globalisation, however, had reached unevenly across countries. Given the recent trends of geo-economic fragmentation, industrial and trade policies worldwide are undergoing a shift. Several economies are now reshoring, nearshoring and friend-shoring[1] their production processes on security and strategic considerations. Consequently, there is growing trade fragmentation, technological decoupling, disrupted capital flows and labour movements. All of these do not portend well for an integrated global market for goods and services.

Fourth, from emerging market economies (EMEs) perspective, disruptions in trade flows in food, energy and critical industrial inputs due to recurring geopolitical flashpoints and disturbances in key trade routes are raising concerns for food security and macroeconomic management. Moreover, in view of the volatility in financial markets and capital flows, these countries remain vulnerable to external shocks. In such an environment, creation of domestic buffers in terms of strategic reserves of critical commodities as well as a strong umbrella of forex reserves become imperative for the EMEs.

Fifth, macroeconomic models used by central banks so far have mainly focused on the demand side of the economy. Enough emphasis was not given on supply side factors. The pandemic, followed by the war, and the resultant supply chain disruptions have brought in a sharp focus on the supply side. Overlapping supply shocks, as we saw recently, led to persistent inflationary pressures even when aggregate demand was not unreasonably high. In this context, the role of governments in managing the supply-side or cost-push pressures on inflation has increasingly gained wider acceptance. Going forward, a better understanding of the supply side of the economy has become very important for conducting monetary policy more effectively.

Against this background, let me now briefly touch upon the macroeconomic settings in our region.

Macroeconomic Overview of the SEACEN Region

The South-East Asian economies have shown remarkable resilience in the face of large global shocks. To a large extent, this can be attributed to improved monetary and macroeconomic policy framework that these countries have adopted in recent years. Growth in this region has remained strong, while inflation has been lower than the OECD average. Economic activity of the region has been supported by resilient services activity across sectors such as retail trade, digital services, e-commerce and tourism. This region remains a model of regional integration with close

[1] The term "reshoring" refers to a country's transfer of (part of the) global supply chain back home (or geographically closer to home the case of "nearshoring"). "Friend-shoring" limits supply-chain networks and the sourcing of inputs to countries allied with the home country and trusted partners with aligned strategic and political preferences.

trade and labour flow linkages. Nevertheless, there is significant untapped potential for further trade integration. I strongly feel that promotion of tourism within the SEACEN countries can further strengthen the economies of the region.

Turning to the Indian economy, India has successfully navigated through multiple challenges and emerged as the fastest growing large economy. Prudent monetary and fiscal policies have paved the path for India's success in sailing through these rough waters. The Reserve Bank projects the Indian economy to grow by 7.0 per cent during 2024-25, marking the fourth successive year of growth at or above 7 per cent. Inflation has moderated from the highs of the summer of 2022. Recurring food price shocks and renewed flash points on the geo-political front, however, pose challenges to the ongoing disinflation process. We remain vigilant to navigate through the last mile of disinflation as it is often the most difficult part of the journey. We firmly recognise that stable and low inflation will provide the necessary bedrock for sustainable economic growth.

India's coordinated policy response in the face of a series of adverse shocks can be a good template for the future. While monetary policy worked on anchoring inflation expectations and quelling demand-pull pressures, supply side interventions by the government alleviated supply-side pressures and moderated cost-push inflation. Effective fiscal-monetary coordination was at the core of India's success.

I would now like to turn to some possible policy choices for the future course of the global economy, as new realities take shape in the years to come.

Policy Choices Going Ahead

First, we need to chalk out an effective strategy for global cooperation and coordination to deal with multiple challenges afflicting the global economy. Multilateralism must be re-energised. In this regard, agreements on a "critical minerals corridor" and a "food corridor" for safeguarding food security are necessary. Such arrangements have to be fair and equitable.

Second, there is a need to develop cooperation in areas of common interest and urgent needs such as climate change where no country can devise strategies on its own. Smooth and orderly green transition is necessary to avoid disruptions to economic activity and loss of growth potential. While the investment needs for smooth green transition are large, the actual financial flows to green projects are highly skewed and are, by and large, concentrated in advanced economies. As a result, there is a need to enhance green capital flows to EMEs. At the same time, we have to be mindful of potential financial stability implications of green transition.

Third, improving infrastructure remains key to long-term growth. While investment in hard infrastructure (roads, ports, airports, electricity, water) is important, there has to be equal emphasis on creating soft infrastructure (education, health, legal, financial, institutional). Skill enhancement and increasing female labour force participation are key to enhancing effective labour supply and potential growth of the region.

Fourth, India's experience has shown how Digital Public Infrastructure (DPI) can be utilised for advancing financial inclusion and productivity gains through cost reductions. Our sustained engagement in the India Stack and the Unified Payments Interface (UPI), especially during the pandemic and thereafter, has given us the confidence that digital public infrastructure can become a critical part of global public good when scaled up beyond national boundaries. The linkage of Indian UPI and the fast payment systems of a few other countries drives home the potential of the UPI to become an international model for cross-border payments.

Fifth, new technological developments like artificial intelligence (AI) and machine learning (ML) can bring about significant improvements in efficiency and productivity of businesses. Necessary safeguards, however, need to be put in place to prevent the misuse of technology. In particular, global financial market regulators need to be vigilant about the possible misuse of AI and ML in perpetrating financial fraudulence.

Conclusion

The global economy stands at crossroads. Challenges remain in plenty, but new opportunities are also knocking at the door. Together, the course we take from here will decide our destiny in times to come. We need policies that are attuned to the new realities of the global economy. In an uncertain world, central banks need to be proactive to better serve the objectives of price and financial stability.

In this environment, collaboration is not an option but a necessity. We need greater resolve and coordination to make significant progress in dealing with global challenges. SEACEN, as a platform for central banks of the region, serves as a valuable forum for sharing insights and fostering cooperation in several areas for enhanced progress and prosperity. The cooperation among countries should give due consideration to the principles of comparative advantage and resource endowments so that each one of us benefits. Let us take our deliberations to the next level to achieve well-being of our people and our economies.

Thank You, Namaskar.

*Harnessing Digital Technologies in Central Banks: Opportunities and Challenges**

Michael Debabrata Patra

Introduction

Good morning and a warm welcome to all colleagues from central banks representing the South Asian Association for Regional Cooperation (SAARC).

We are also delighted to be joined by experts on emerging technologies from the academia, the private sector, the legal sphere, data scientists, the World Bank, the RBI Innovation Hub and of course, my colleagues from the Reserve Bank of India (RBI).

This two-day seminar with 'Emerging Digital Technologies in Central Banking and Finance' as its theme marks the fulfilment of the commitment made in the 44th meeting of the SAARCFINANCE Governors' Group held at Marrakech in October 2023. Given recent developments on the technological front globally, the seminar's theme could not have been timelier and more relevant. We hope that it will serve as an avenue for intensifying engagements within the SAARC through sharing of knowledge and experiences as well as by energising person-to-person interactions.

The State of Play

New age technologies such as application programming interfaces (APIs), artificial intelligence (AI) and machine learning (ML), biometric-based identification and authentication (biometrics), cloud computing (CC) and distributed ledger technology (DLT) are currently powering innovations in the financial sector worldwide. Technological advances are also making the role of central banks more relevant and multi-faceted. Leveraging on these technologies, central banks are re-engineering their own work processes and procedures, building new capacities and, more generally, rethinking their approach to their various functions. They are also adapting their operations to new demands of citizens for more speed, convenience, and affordability. At the same time, central banks are widening and deepening their oversight and regulation role to deal with new products and new providers, including those like FinTech and BigTech that operate outside the purview of the traditional financial sector.

Consequently, central banks are also confronted with the associated risks. In doing so, they must pay heed to the fact that regulations can stifle or foster innovation in the financial sector by the manner in which they shape the rules and standards for cooperation, interoperability and competition. It is in this context that central banks cannot and should not work in isolation[1]. More than ever, cooperation and dialogue with other central banks and regulators as also with other stakeholders, both domestic and international, is an imperative if they have to navigate the unresting tides of innovation. Hence, forums like this seminar assume importance.

Opportunities

Let me spend a few minutes discussing the opportunities presented by these emerging technologies. First, we live in an age of data–driven policy making. Central banks are repositories of enormous volumes of data. Therefore, data quality and data governance are of utmost importance to ensure that policy measures are apposite and effective. In this context, digital technologies, especially the newer ones including AI and ML, help to dive deep

* Keynote address delivered by Michael Debabrata Patra, Deputy Governor, Reserve Bank of India (RBI) at the SAARCFINANCE seminar on Emerging Digital Technologies in Central Banking and Finance on January 17, 2024 at Goa. Valuable comments received from Snehal S Herwadkar, Rajas Saroy, Ajesh Palayi, Gunjeet Kaur, and editorial help from Vineet Kumar Srivastava are gratefully acknowledged.

[1] D. Delort and J. A. Garcia (2023): Central Banks and Innovation, World Bank Blogs, April 19.

into existing data as well as unstructured and high-frequency information to carry out meaningful analyses. They help to detect trends and anomalies better and thereby provide useful insights on specific economic and financial situations as inputs for policy formulation. In essence, the synergy between structured data, rigorous reporting and AI amplifies the productivity of data-driven processes, reinforcing their importance in modern central banking.

Second, central banks can use digital technologies, especially newly developed tools of big data analytics, for economic forecasting that is vital for forward-looking monetary policy assessments. An important development in this regard is the Billion Prices Project (BPP) created at MIT in 2008, which experiments with retail prices that are posted online on the websites of retailers all over the world. The objective is to improve the computation of traditional economic indicators starting with the consumer price index[2]. By 2010, the project was collecting 5 million prices every day from over 300 retailers in 50 countries. In May 2017, the BPP began experimenting with crowd-sourcing and mobile technologies to measure the monthly inflation rate in Venezuela where official statistics haven't been published since 2015.

Third, in the oversight of financial markets, technological innovations can help trade repositories (TRs) to tackle data quality issues and increase the value of TR data to authorities and the public. Regulators need to be vigilant, however, about unexpected forms of interconnectedness between financial markets and institutions on account of applications of AI and ML.

Fourth, regulatory compliance is another area which can significantly benefit central banks through RegTech and SupTech tools. With the increasing complexity of financial regulations, automating compliance processes through such tools, conducting risk assessments and monitoring transactions for potential violations could help sharpen compliance and ensure that financial institutions adhere to regulatory frameworks. This helps in reducing compliance costs for regulated entities, while improving the financial ecosystem as a whole. Machine readable regulations could be an additional synthesis in the usage of AI. Effective use of new technologies is expected to help to detect fraudulent actives in the system in a complex and interconnected environment.

Fifth, emerging technologies help central banks to design new products and services to cater to specific requirements. For instance, CBDC as a digital form of sovereign currency offers a secure and reliable medium of exchange. Apart from enhancing financial inclusion and improving transaction efficiency, it may also help reduce costs and facilitate cross-border transactions.

Cross Country Experience

Central banks have been early adopters of emerging technologies. I will not attempt complete enumeration of central bank practices; instead, present select experiences to underscore the wide diversity of usage.

Among advanced economy central banks, the European Central Bank (ECB) has been an early mover in applying these technologies to data collection, assessment and interpretation, and banking supervision. The US Federal Reserve is exploring the potential of generative AI through an 'incubator' programmme with 'responsible innovation' at the forefront of its strategy. The Bank of England uses AI in the scrutiny of data quality to identify potential indicators of unforeseen economic disruptions. Similarly, the Deutsche Bundesbank employs an unsupervised ML system to identify outliers in significant financial datasets. Meanwhile,

[2] Cavallo, A., and R. Rigobon (2016): 'The Billion Prices Project: Using Online Prices for Measurement and Research', Journal of Economic Perspectives, 30 (2): 151-78. DOI: 10.1257/jep.30.2.151

the Banque de France's BIZMAP initiative leverages these advanced technologies to assist small- and medium-sized enterprises in France as they navigate global markets. Many central banks, including the Bank of Canada, are implementing cloud adoption strategies for data analysis and collaboration which helps them in hassle-free upscaling of computing power[3].

Among emerging market economies, the Central Bank of Malaysia has developed a SupTech tool that supports communication with supervised entities with the aim of enhancing both the efficiency of the process and the consistency of the messages conveyed. Bank Indonesia has been using news articles to enhance the forecasting of labour market dynamics. The approach involves building a statistical index of employment vulnerability computed from a corpus of around 27,000 monthly news texts covering a period of 23 years and based on natural language processing (NLP) techniques.

The Indian Experience

The RBI as a full-service central bank has employed emerging technologies in virtually all its functions while also encouraging their adoption in various parts of the financial system. This has also involved spearheading innovation and building up the digital public infrastructure. As a result, a recent assessment has found that the usage of AI related keywords in Indian banks has increased sizeably[4]. A survey conducted by the RBI at end June-2023 revealed that almost three-fourths of Indian banks and several non-banking financial companies (NBFCs) have developed chatbots and virtual assistants. Increased collaboration of banks and NBFCs with FinTechs has facilitated introduction of model-based lending.

Within the RBI, big data analytics, AI and ML have been extensively employed in monetary policy, research and data management functions. Examples include use of AI powered tools to refine the quality of banking statistics; building of hybrid models that combine traditional statistical methods with ML tools for forecasting and nowcasting; applications of natural language processing (NLP) for classification of internal audit reports; and analyses of the textual complexity of banking regulations. The use of unconventional data like media sentiment is undertaken for assessing the effectiveness of central bank communication. Other applications include tracking inflation through online food prices and assessing crop production from remote sensing data.

On the supervisory front, the Advanced Supervisory Analytics Group (ASAG) has been set up to leverage ML models for social media analytics, know your customer (KYC) compliances and for gauging governance effectiveness. The establishment of an advanced off-site supervisory monitoring system—DAKSH – is helping to digitalise supervisory processes. An Integrated Compliance Management and Tracking System (ICMTS) and a Centralised Information Management System (CIMS) are two major SupTech initiatives being implemented for seamless reporting by supervised entities for enhancing data management and data analytics capabilities, respectively.

On the digital financial inclusion front, the RBI Innovation Hub has pioneered the delivery of farm loans or Kisan Credit Card (KCC) loans in a fully digital and hassle-free manner. The RBI has also facilitated setting up of digital banking units (DBUs) by commercial banks, which will enable broader access to cost effective and convenient digital financial products and services.

The RBI's innovations in payment and settlement systems have been recognised the world over. It

[3] Araujo, D. *et al.* (2023). 'Machine learning applications in central banking'. IFC Bulletin 57. Bank for International Settlements.

[4] Reserve Bank of India (2023): Report on Trend and Progress of Banking in India 2022-23.

is now building upon the success of India's fast payment system – the Unified Payment Interface (UPI) – by incorporating functionalities like offline payments through near field communication (NFC) technology (UPI Lite X), payments through feature phones (UPI123Pay), conversational payments. The UPI has been interlinked with PayNow, Singapore's fast payment system, in collaboration with the Monetary Authority of Singapore to enable users to make instant and low-cost cross-border peer-to-peer (P2P) payments. This is a major step towards the internationalisation of the UPI. Similar collaborations with other jurisdictions, notably with the UAE's Instant Payment Platform (IPP), are in the pipeline. In the development of CBDCs, both wholesale and retail e-₹ pilots were initiated in 2022. Going forward, the aim is to expand the ongoing pilots by covering more locations, include more participating banks and incorporate feedback.

On the information technology front, the RBI is working on establishing a cloud facility for the financial sector in India. Taking cognisance of increasing geopolitical and climate related risks, a Lightweight Portable Payment System (LPSS) is being developed to process critical transactions during emergencies. The RBI is also developing a state-of-the-art greenfield data centre to address capacity expansion constraints to meet ever-increasing IT landscape needs and to avoid region specific risks.

The RBI has facilitated responsible innovation in the financial sector through initiatives like its regulatory sandbox, which has produced practical and innovative solutions in domains such as 'retail payments', 'cross-border payments', 'MSME lending' and 'prevention and mitigation of financial frauds'. It has also conducted hackathons to leverage the experience and skills of the private sector, the academia, and the public to provide innovative solutions to the problems facing digital India. The account aggregator (AA) framework helps in secured sharing of financial data between regulated financial institutions and also provides customers control over their data. By promoting data portability, this framework also expands the market for lenders. While encouraging innovation, the Reserve Bank is also proactive in safeguarding customer interests by regulating digital lending and flagging unauthorised forex trading platforms.

Challenges

As society harnesses the benefits of emerging technologies, regulators should pay careful attention to the underlying risks and hence to responsible use, data security and privacy, legal compliance, and ethical questions. These aspects will also require central banks to reskill and upskill the existing workforces and adapt to the changing digital landscape in a sustainable way.

First, with the increasing use of AI, concerns arise about transparency, data biases, governance, privacy and the robustness of algorithms. Hence, central banks need to ensure that there are enough checks and balances in place. The RBI has emphasised that data used for training of models should be extensive, accurate and diverse to rule out any prejudices and that algorithms should be auditable.

Second, cybersecurity in banking organisations is essential for continuing public trust in the financial system. Cyber risks also entail customers facing threats of exposing personally identifiable information (PII). Organisations too have to bear high costs on account of the operational impact on businesses, demand for payment of ransoms and/or having to develop new infrastructure from scratch. Due to increasing reliance on Software as a Service (SaaS) solutions, financial institutions can also get affected by third-party or supply-chain attacks. Cloud computing is becoming vital for many modern applications, but it is also associated with threats to data security and privacy, system availability, continuity of operations,

interoperability, auditability and compliance with legal requirements[5].

Third is the issue of digital financial exclusion whereby a significant proportion of the population may feel left behind. Additionally, emerging technologies have unleashed complex products and business models with risks, of which users may not be fully aware. New risks include the proliferation of fraudulent apps, deep fakes, and mis-selling through dark patterns.

Fourth, digital innovation can also drive fragmentation of the financial world, as differing systems can divide user groups and countries from each other[6]. For effective cross-border digital financial infrastructures, there emerges a need to discuss and promote common protocols, standardised APIs and secure communications channels. Legacy infrastructures in the financial system need to be upgraded in line with these common protocols to handle new kinds of demand.

Central bankers must closely monitor developments in Quantum Computing, which is expected to lead to a multi-fold increase in computational abilities. There is growing concern, however, about the vulnerability of existing cryptographic methods that secure our financial transactions as Quantum Computing can rapidly perform code-breaking calculations.

It is imperative to strike a balance between benefits and risks by strengthening the capacity of regulated entities (REs) and surveillance by oversight authorities, formulating/updating relevant legal and regulatory frameworks, proactively engaging stakeholders to identify possible risks, and expanding consumer education.

Conclusions and Way forward

There is significant heterogeneity across SAARC central banks in the use and adoption of emerging technologies. Within the SAARC, therefore, it is important for our central banks to learn from each other's experiences by focusing on nuances of technology, integration with existing systems, skilling and adaptability, and the disruptive aspects of technology.

Looking ahead, we can also envision the interlinking of technologies. A case in point is increased outward orientation of India's UPI to citizens of other countries. The potential is vast; to exploit it, we must gear up to participate in the new technology revolution. Above all, we must open our minds to the power of innovation, to the cross-fertilisation of ideas and experiences while being mindful of the inherent risks.

This seminar brings together the best minds, practices and capabilities in our region. This fusion will surely shed light on the way forward. As I wish you every success in your deliberations, I would like to end with a few words of caution expressed by Stephen Hawking: **"Success in creating AI would be the biggest event in human history. Unfortunately, it might also be the last, unless we learn how to avoid the risks."**

Thank you.

---

[5] Koh, T.Y. and Prenio, J. (2023). 'Managing cloud risk- some considerations for the oversight of critical cloud service providers in the financial sector'. FSI Insights on policy implementation No. 53. Bank for International Settlements.

[6] da Silva, L.P. 'Central banks at the crossroads'. Speech at the Asia School of Business (ASB), Master of Central Banking, Kuala Lumpur, 19 August 2023.

*No More a Shadow (of a) Bank**

M. Rajeshwar Rao

Ladies and Gentlemen!

It's a pleasure to be here at CII NBFC Summit 2024. At the outset, let me thank Mr. Abhimanyu Munjal, Chairman, CII National Committee on Non-Banking Finance Companies (NBFCs) for extending the invitation to me for delivering this inaugural talk at the 6th edition of the NBFC summit organised by CII.

I recall that it was at this forum, in earlier speech[1] at CII NBFC Summit held in October 2021, I had dwelt upon the introduction of Scale Based Regulatory (SBR) approach in the NBFC Sector. Much water has flown under the bridge since then. SBR framework has since been rolled out for the NBFC sector and NBFCs have seamlessly transitioned to the revised regulations. While I had previously discussed the detailed contours of the SBR framework, today I propose to discuss the broad regulatory approaches behind NBFC regulations, including SBR framework and then focus on few specific issues pertaining to NBFC sector.

Role of NBFCs in the Financial Sector

In December 2023, Financial Stability Board (FSB) released its annual publication 'Global Monitoring Report on Non-Bank Financial Intermediation[2]'. It has noted that globally, the size of the non-bank financial intermediation (NBFI) sector has decreased by 3 per cent in 2022, which is the first notable decrease since 2009. However, Economic Function 2 (EF2) entities *i.e.,* entities undertaking lending activities, which are akin to NBFCs in India, have exhibited a growth of around 10 per cent which is the highest among all five economic categories of the NBFI sector monitored by the FSB. The report also notes that India accounts for third largest share of EF2 assets after the United States and the UK. At individual country level, India has the highest contribution coming from lending entities in its total financial assets of NBFI sector.

This report also mentions that over a five-year period between 2017 and 2022, the share of total financial assets held by the NBFI sector in half of the emerging market economies has come down. India is, however, amongst very few countries which have shown a growth in the share of total financial assets held by NBFIs. In essence, the data indicates that NBFC Sector in India remains a critical cog in the wheels of economic growth. As of March 2023, NBFCs credit to GDP ratio stood at 12.6 per cent and the sector has grown to become 18.7 per cent of banking sector assets as on March 2023 as compared to 13 per cent ten years ago (March 2013).

A very notable feature of Indian NBFI sector is the predominance of lending companies. While globally, collective investment vehicles such as Money Market Funds (MMFs), fixed income funds, mixed funds, credit hedge funds, real estate funds, *etc.* contribute to around 74 per cent of the NBFI sector assets, the Indian case is quite different. This feature, combined with the fact that NBFCs have assumed certain significance and criticality over last few years, makes it imperative that the regulations of the NBFC sector keep pace with the changing landscape and move from a light touch regulatory approach to a more calibrated and nuanced approach to address the growing interlinkages and emerging risks in order to safeguard financial stability.

It may perhaps be worthwhile to first take stock of the state of the affairs in the NBFC sector. The SBR

---

* Remarks delivered by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India – February 09, 2024 - at the NBFC Summit organised by Confederation of Indian Industry at Mumbai.

Inputs provided by Pradeep Kumar and Anuj Sharma are gratefully acknowledged.

1 Chasing the Horizon (Remarks delivered by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India – October 22, 2021 – at the CII NBFC Summit on Role of NBFCs in Achieving $5 trillion Economy) available at https://www.rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1135

2 https://www.fsb.org/2023/12/global-monitoring-report-on-non-bank-financial-intermediation-2023/

framework for NBFCs was issued on October 22, 2021 and it became effective from October 1, 2022. Usually, the impact of such a reform can only be assessed in medium to long term. However, the initial assessment suggests that the NBFC sector has become stronger and resilient post introduction of the SBR framework. Our interaction with industry also suggests that the framework has achieved the intended effect of proportionate regulatory burden on the entities based on the parameters of size, complexity and interconnectedness, among others.

As on September 30, 2023, NBFCs in the base, middle and upper layers constituted 6 per cent, 71 per cent and 23 per cent of the total assets of NBFCs, respectively. The latest edition of the Financial Stability Report (FSR)[3] notes that aggregate lending by NBFCs rose by 20.8 per cent (y-o-y) in September 2023 from 10.8 per cent a year ago, primarily led by personal loans and loans to industry. The GNPA ratio of NBFCs continued on its downward trajectory with improvement across sectors with overall GNPA ratio in September 2023 being 4.6 per cent *vs.* 5.9 per cent in Sep 2022 and NNPA ratio was 1.5 per cent *vs.* 3.2 per cent in Sep 2022. Capital adequacy of NBFCs has also improved to 27.6 per cent from 27.4 per cent during this period. The profitability of NBFCs has also improved as evident from increase in RoA to 2.9 per cent from 2.5 per cent.

In terms of the outlook, stress tests conducted by the Reserve Bank shows that the overall sector will be able to withstand future shocks. For credit risk, under the baseline scenario, the one-year ahead GNPA ratio of the sector is estimated to be 3.8 per cent and CRAR at 22.0 per cent while under a medium shock, the CRAR may drop by around 70 bps relative to the baseline and in the event of severe shock, the capital adequacy ratio of the sector may decline by 101 bps relative to the baseline, to 21.0 per cent. Similarly, for liquidity risk, the stress test results indicate that the number of NBFCs which would face negative cumulative mismatch in liquidity over the next one year in the baseline, medium and high-risk scenarios stood at 6 (representing 1.3 per cent of asset size of the sample), 17 (10.4 per cent) and 34 (15.0 per cent), respectively.

Overall the NBFC sector remains healthy, stable and resilient to future shocks. However, the FSR also notes that during the last four years, the compound annual growth rate (CAGR) for personal loans (nearly 33 per cent) has far exceeded that for overall credit growth (nearly 15 per cent) for the NBFC sector. Our recent increase in risk weights of select retail loan categories may have to be seen in this context.

Regulatory approaches for NBFC sector

Coming to the regulatory approach for the NBFC sector -

While framing the regulations for the financial sector, Reserve Bank has always been conscious of the fact that the degree of regulation of a financial entity should be commensurate with the perception of risks posed by the entity and the scale of its operations on the financial system. Our regulatory approach towards NBFC sector has been guided by a combination of activity-based and entity-based regulations to safeguard financial stability and protect customers. We have tried to leverage the strengths of both these approaches to achieve a more comprehensive and flexible regulatory framework. We find this hybrid approach particularly valuable for an ever-evolving NBFC Sector, where innovations and new business models seem to be constantly emerging.

Entity based regulations have the advantage of providing a comprehensive view of overall risk exposure of a specific financial institution and is better placed to address the systemic risks arising from the interplay of various activities within a single entity

[3] https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1254

to minimise negative externalities. From regulator's perspective, entity-based regulations are generally easier to implement and enforce, as regulations are applied uniformly to a set of entities. However, the flip side is that entity-based regulations may be less precise in targeting specific activities, slower to adapt to changing landscape, and, at times, may potentially impose extra burden on low-risk activities.

On the other hand, activity-based regulations allow for more precise targeting of potentially risky financial activities by enabling the regulators to focus on high-risk activities regardless of the type of institution involved. Potential down-side is that such an approach could result in a fragmented regulatory landscape, with different rules for various activities, potentially making oversight more complex. At times, systemic risks arising from the combination of multiple activities may remain undetected.

It has been advocated that ideally, the principle of same risk, same activity, same regulation should apply, *i.e,* there should be similar regulation for entities undertaking similar activity to avoid regulatory arbitrage. As the saying goes – if it looks like a duck, quacks like a duck, and acts like a duck, then it probably is a duck- and should be regulated as a duck. However, this approach needs to be calibrated suitably for effective yet non-stifling regulations. Instead of following a narrow approach of putting in place the same set of regulations for all financial institutions irrespective of their scale of operations, a nuanced approach may be more suitable for achieving the desired objectives.

We have been cognizant of the fact that the NBFCs engage in specialised activities, each carrying its unique risks, and the flexibility inherent in the hybrid model has enabled us to adapt swiftly to the changes in the sector without sacrificing the overarching systemic risk management inherent in the entity-based regulations. Keeping this balance in mind, our regulatory approach has evolved into two broad categories – prudential regulations and conduct of business regulations. While the prudential regulation focusses on solvency, safety and soundness of the financial entities and overall financial system, the conduct of business regulation focusses on how the financial entities deal with their customers and fair business practices. The current regulatory landscape is a combination of entity and activity-based approaches under the pillars of prudential and conduct regulations.

Let me cite some recent regulations in the NBFC sector wherein we have tried to maintain the balance between different regulatory approaches:

- The first case in point, I would like to mention is that of Peer to Peer Lending Platforms (NBFC-P2Ps): Since NBFC-P2Ps do not undertake any credit risk on themselves and are merely acting as a meeting place for the lenders and the borrowers, prudential regulations for NBFC-P2Ps have been kept very light at basic entry level requirements. On the other hand, as the lenders on NBFC-P2Ps trust the platforms for getting to know the borrowers, and avail additional services such as KYC authentication, credit scoring, legal formalities, recovery assistance, *etc.* Therefore, conduct norms for these platforms have been kept at par with other regulated entities in the financial sector.
- Second example is that of microfinance sector. Microfinance loans are small-sized loans and constitutes a very small share in overall credit. Therefore, probability of financial stability concerns emanating from microfinance loans is quite low. However, in terms of numbers, microfinance loans affect a large number of borrowers and these borrowers belong to the vulnerable category.

Therefore, it becomes necessary that the regulatory approach for microfinance loans is specifically targeted to protect the interests of these borrowers. With the objective of customer protection in mind, an entity-agnostic and activity-based comprehensive regulatory framework for microfinance loans has been put in place for microfinance loans provided by all regulated entities.

- Third example is of regulatory framework for Infrastructure Debt Fund-NBFCs (IDF-NBFCs). Recently, we have reviewed the regulatory framework for IDF-NBFCs wherein regulatory guidelines for the activity of infrastructure financing have been harmonised to the extent possible with other categories of NBFCs engaged in infrastructure financing[4]. Accordingly, we have withdrawn the requirement of a sponsor for the IDF-NBFCs and have aligned their regulatory capital requirement and exposure norms with NBFC-IFCs and NBFC-ICCs in the middle layer. The approach allows for harmonisation of the regulations applicable to infrastructure financing NBFCs while preserving the unique low-risk character of IDF-NBFCs.

Are Upper Layer NBFCs regulated at par with banks?

Now, coming to specific issues pertaining to NBFC sector, let me discuss two pertinent issues-

First, there have been some reports and discussions that the regulations for NBFCs, especially for NBFCs in the Upper Layer, have been made at par with banks. I would like to take this opportunity to set the record straight in this matter. While it is agreed that the regulations between banks and NBFCs have been harmonised in some areas and regulations for certain NBFCs especially upper layer NBFCs have been strengthened under SBR, framework significant differences continue to exist between the regulations applicable to banks and NBFCs. I would like to highlight just a few of them to emphasise this-

- Minimum initial capital requirement for a universal bank is ₹1000 crore *vis-à-vis* ₹10 crore for an NBFC. Also, the scrutiny for a banking license applicant is much more rigorous than the scrutiny for an NBFC license applicant primarily to reflect the access of public deposits throgh a bank license. To provide a perspective, it may perhaps be pertinent to mention here that RBI has provided certificate of registration to 447 NBFCs over last five years whereas no universal bank license has been given and only 2 small finance banks (SFBs) have been given licenses during this period.
- Second major difference is that banks cannot engage in any activities other than those which are specifically provided under the Banking Regulation Act, 1949. Whereas there is no such provision under RBI Act governing NBFCs' regulations. Also, banks are required to deploy minimum 40 per cent of the adjusted net bank credit towards priority sector lending and this requirement is even higher for SFBs at 75 per cent. NBFCs have no such requirements.
- Sometimes, it is also argued that the regulatory capital requirement of NBFCs is higher at 15 per cent *vis-à-vis* 9 per cent for banks. However, it needs to be noted that banks' capital requirement comprises of credit, market and operational risk capital charges whereas for NBFCs (including NBFCs in the upper layer), the capital requirement is based only on credit risk capital charge. Even components of regulatory capital are

[4] NBFC-Infrastructure Finance Companies (NBFC-IFCs) and NBFC-Investment and Credit Companies (NBFC-ICCs).

not as elaborately prescribed as is the case for banks.

- There are almost no regulatory restrictions for operations of NBFCs. Commercial banks on the other hand, are subjected to detailed branch authorisation policy prescribing the manner in which they can open the branches. There are no corresponding guidelines for NBFCs (including NBFCs-UL).

In a nutshell, I would like to emphasise that the regulations for NBFCs (especially in the upper layer) are much more calibrated and are certainly not on par with the regulations applicable to banks.

Should NBFCs be allowed to accept deposits?

The second issue which I would like to discuss is regarding the deposit taking activity of NBFCs.

With the perception that SBR framework has made regulations of NBFCs more bank-like, there have also been intermittent demands that NBFCs should be allowed to accept public deposits. Having clarified the first issue, let me emphasise that it is indeed the non-acceptance of public deposits by the NBFCs which provides the regulatory comfort to the Reserve Bank to have lower entry barriers for NBFCs, allow them to specialise in any specific sector of their choice and have lower exit barriers to wind up their businesses.

Acceptance of deposit, in whatever manner and form, necessitates existence of a macro financial safety net including deposit insurance and central bank liquidity backstop. These safety nets come with increased regulatory rigour and intense supervisory oversight. The NBFCs have evolved as a niche companies serving specific economic function and it is uncharacteristic for them to demand becoming like a bank.

Considering this, Reserve Bank has not issued any certificate of registration to new NBFCs for acceptance of public deposits since 1997. On the contrary, Reserve Bank's approach has been to disincentivise deposit-taking activities of NBFCs as evident from decrease in the number of deposit-taking NBFCs over last decade from 241 in March 2014 to 26 in September 2023.

Concerns and Expectations

NBFC sector has come a long way since its initial days and the regulatory framework for the NBFC sector has aided its development of by providing the operational flexibility and proportionate regulations. However, there are certain risks on the horizon and I would like to use this forum to urge the NBFCs to monitor these risks in their business models or balance sheets and initiate necessary action as and when required:

- NBFCs are large net borrowers of funds from the financial system, with the highest exposure to banks. Several NBFCs maintain borrowing relationships with multiple banks. Banks also subscribe to their debentures and commercial papers. Such concentrated linkages coupled with high leverage may create contagion risks in the financial system. Concentration of funding sources for NBFCs is also not a prudent strategy as they may face sudden drying up of such funding during stress events. Therefore, it may be prudent for NBFCs to focus on broad-basing their funding sources and reduce over-dependence on bank credit.
- In pursuance of high growth, there seems to be tendency among the NBFCs to get the customers on board with oversimplified underwriting processes. While the ease and convenience for a borrower is very important, this should not come at the cost of underwriting standards. Besides improving the ease of lending, NBFCs should equally focus on maintaining the quality of their loan portfolio.

- Of late, some of the business practices of NBFC-P2Ps do not appear to be in line with the regulatory guidelines. A large proportion of lenders on NBFC-P2Ps are individuals and they are not expected to be well-equipped to understand the risks involved in providing credit. Instead of educating the lenders about the inherent risks in the lending activity, NBFC-P2Ps have been observed to underplay the risks through various means such as promising high/ assured returns, structuring the transactions, providing anytime fund recall facilities, *etc.* Let me make it absolutely clear that any breach of licensing conditions and regulatory guidelines is non-acceptable.
- Under the revised framework for microfinance loans, rule-based prescriptions on pricing of loans were replaced with a principle-based framework with enhanced disclosures and transparency requirements. It has been observed that while the lenders were quick to pass on the increased costs to borrowers, they have been reluctant to pass on the benefits envisaged under the new framework. Some of the MFIs have increased their margins disproportionately in new regime. We are not oblivious to the misuse of the freedom provided to the microfinance sector and irresponsible practices would compel us to act.
- Post March 2023 banking sector turmoil in the US and Europe, the business models of financial entities have come under enhanced scrutiny. We have also observed concentrated business model in some NBFCs. For example, some of the NBFCs, have concentrated exposure to segments such as consumer loans, vehicle loans, *etc.* If any of these segment faces economic stress, there can be significant impact on the financial of those NBFCs and, in turn, on their lenders including banks. It is in their self-interest that entities should consider these risks and we expect that Boards are having a pulse on such issues.
- Lastly, in view of the increasing reliance of NBFCs on delivering their services through digital medium and their partnerships with Fintechs, the sector's exposure towards technology related risks, including cybersecurity threats and operational disruptions, as well as their reliance on third party partnerships has increased significantly. Therefore, we expect the entities to put in place suitable risk mitigation measures, commensurate with their business and risk profile, even if it means going beyond the regulatory minimum requirements.

Concluding thoughts

We have recently come out with a draft omnibus framework for the Self-Regulatory Organisations (SROs). The SROs are expected to play an important role in improving the compliance culture as well as promote ethical business practices, customer protection, better governance standards, sound risk management measures and contribute positively to the orderly development of the financial sector, including NBFCs.

The NBFC sector is an important stakeholder of the Indian financial sector. Strengthened regulation and enhanced oversight of the NBFC sector is the best testimony of the importance of the NBFCs in not only the financial system but overall economy. It's time that NBFC sector comes out of its own shadow as well as that of the banking sector. I am sure that NBFCs will play a significant role in achieving the dream of a $5 trillion economy going forward.

Thank you.

Role and Expectations of Directors of Urban Co-operative Banks: Upholding Governance and Professionalism with Capacity Buidling and Technology Upgradation *

Swaminathan J.

Chairmen, Directors and Chief Executive Officers of Urban Co-operative Banks, my colleagues from the RBI and, ladies and gentlemen. Good morning.

I am delighted to be amongst you today on this occasion to engage with you on a topic that the Reserve Bank considers to be of the utmost importance. This conference is part of the series of engagements with regulated entities that Governor had kicked off in May 2023 on the themes of good governance and operational resilience. Since then, we have covered Public and Private Sector Banks, select NBFCs and UCBs.

UCBs form a critical layer of the financial system of the country. Despite the sector's consistent 3-4 per cent presence in the overall banking business, its significance should not be underestimated. In terms of sheer numbers, with a count around 1,500, UCBs significantly outnumber commercial banks. Their outreach extends to a broad spectrum of society, serving common citizens, marginalised sections, small and medium-sized businesses, agriculture, and allied activities.

Historically, UCBs have played a pivotal role in advancing financial inclusion, predating commercial banks' involvement in this area. Their contribution to financial inclusion is deeply embedded in their journey, reaching out to segments that were underserved and overlooked. This pioneering role has firmly established UCBs as drivers of inclusivity and community welfare.

The Indian Co-operative Movement has a rich history with its origins in south India. The first Urban Cooperative Credit Society was registered in Kanchipuram in October 1904[1]. Since then, the co-operative movement in India has produced several remarkable success stories that have had a profound impact on various sectors of the economy. The Kaira District Co-operative Milk Producers' Union in Anand (which later became Amul), established under the guidance of the legendary Sardar Patel, is a shining example of how the co-operative movement can transform an entire industry.

Many urban banks were essentially cooperative credit societies in the beginning but later converted into banks. When a co-operative society transitions into a co-operative bank, it faces certain key challenges intrinsic to the business of banking.

Banks have the privilege of raising considerable sums of uncollateralised deposits which are their primary source of funds for their lending and investment operations. As such, co-operative banks are exceptions in the co-operative sector, wherein resources for lending and investment come from the public rather than just their members. This elevated leverage and disparity in maturity between assets and liabilities can be sustained only by continued trust of depositors. Therefore, the governance mechanisms and practices within banks should give paramount importance to safeguarding depositors' interests and upholding their trust.

* Speech by Shri Swaminathan J, Deputy Governor, Reserve Bank of India – January 24, 2024 – at the Conference of Governance in Urban Co-operative Banks for UCBs in Andhra Pradesh, Karnataka, Kerala and Telangana held in Hyderabad.

[1] "Genesis and Architecture of Urban Cooperative Banks", December 7, 1999, Reserve Bank of India, https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?ID=131 (last accessed on January 21, 2024).

Some may argue that UCBs are not systemically important in view of their size and turnover. However, if we consider the inter-connectedness that binds the entire spectrum of financial entities, it becomes evident that any vulnerable link has the potential to erode public trust and confidence. In an increasingly interwoven financial landscape, the ripples of even an apparently small disturbance can resonate far beyond its initial impact. The failure in 2001 of a Gujarat based UCB and more recently in 2019 to a Mumbai based UCB attest to the contagion risks posed by even relatively smaller banks.

Consequently, it becomes imperative for us to remain vigilant and proactive in upholding the resilience of the UCB sector. As stewards of financial stability, we must recognise that our commitment to stringent governance standards, robust risk management practices, and proactive supervision is not solely aimed at safeguarding the individual entities. Instead, it is deeply intertwined with the broader goal of sustaining public faith in the integrity of our financial ecosystem.

With this background I would like to discuss three key challenges confronting the sector, namely, (i) Governance and professionalism, (ii) Adoption and upscaling of technology, (iii) Capacity building in various operational areas with a view to enhancing efficiency.

Governance and professionalism

Effective governance forms the foundational bedrock. For UCBs, the need for robust governance mechanisms is even more pronounced due to their unique position as community-centric entities. Transparent decision-making, accountability, and adherence to best practices are paramount. Only Boards whose members meet the standard of fit and proper in terms of age, relevant qualifications, experience and proven clean track record along with the right aptitude will be in a position to deliver the desired results.

As I mentioned earlier depositors are major stakeholders and banks should always ensure that their interests are safeguarded. Directors should see themselves as trustees of the depositors' hard-earned savings. After all, it is their money which keeps the bank ticking. Encouraging depositors to become members can further enhance their sense of ownership and engagement in the institution's welfare as well as improve the capital base of the bank.

A basic understanding of the bank's financial statements is absolutely essential for a director. The UCBs should explain their accounts to their directors in detail, especially where the bank stands on important parameters such as capital adequacy, liquidity, asset quality and profitability. Further, the financial statements should be fully compliant with accounting standards. I would urge directors to carefully go through the auditor's report and ascertain if it is qualified or clean. Please engage with the auditors to understand their observations and concerns.

Similarly, this understanding of finance is also relevant for laying down underwriting standards and assessing credit proposals. Directors should be mindful of build up of concentration in their credit portfolios and try to diversify the risk, while closely monitoring the large exposures. Credit decisions should be solely based on the merits of each case, free from any external influences or considerations. Extending loans to connected parties such as relatives of directors and senior management are not in consonance with statutes, regulations, and good governance practices. These should be avoided.

While assessing proposals for restructuring, banks should have assessed the viability and have reasonable certainty of repayment from the borrower as per the restructured terms. In the context of NPAs, UCBs with assets in excess of ₹1,000 crore are already

required to have system-based asset classification and Directors should ensure that the system has been implemented with a proper policy for any manual overrides over system-based classification.

Directors also bear the responsibility of exercising vigilance regarding their banks' adherence to various statutory and regulatory requirements. RBI inspection reports should be discussed in the Board threadbare, and the observations should be suitably addressed in a timely manner. Further, for meaningful improvement the compliance given should be sustained. It should be ensured the same mistakes are not repeated. It would be useful for directors to seek regular updates from the bank on important RBI circulars and instructions. This approach not only reinforces the Board's oversight role but also contributes to a robust regulatory compliance framework.

I would also urge UCBs to have a good vigilance system, effective internal audit and fraud detection mechanisms in place. When frauds occur, the bank should promptly report to the regulator and other concerned authorities. Root causes should be suitably addressed. There should be zero tolerance towards acts of malfeasance.

Adoption and upscaling of technology

In today's rapidly evolving financial landscape, leveraging technology has become a strategic necessity for staying competitive. Embracing innovative solutions can lead to improved efficiency, enhanced customer experiences, and streamlined operations. By being proactive in adopting technology, UCBs can position themselves as modern and forward-thinking institutions, attracting a broader customer base and retaining relevance in a digital age. UCBs will continue to leverage on member loyalty. However, this can wane with time, generational changes, and of course, competition. Therefore, I would urge Directors to be receptive to adoption of latest technology but ensure that it is procured through credible suppliers and after proper due diligence.

As UCBs integrate technology into their operations, they must also be acutely aware of the potential cyber risks that come with it. The digital realm brings forth new vulnerabilities, making robust cybersecurity measures non-negotiable. It is therefore vital to invest in cybersecurity solutions, conduct regular risk assessments, and implement comprehensive training programs for staff to mitigate cyber threats effectively. UCBs should also fortify their operational resilience by minimising downtime. They should have proper business continuity and disaster recovery plans in place which are adequately tested.

Capacity building

Human Resources are undeniably the most valuable asset for any institution, including UCBs. UCBs can foster capacity building by implementing structured training programmes encompassing both technical and soft skills. Leadership potential should be nurtured through developmental initiatives, encouraging cross-training and job rotation, providing access to e-learning platforms and online courses, supporting further education, and recognising employees who actively engage in learning efforts.

I understand that the Umbrella Organisation (UO) for UCBs is taking shape. I sincerely hope that a professionally run umbrella organisation in India providing a slew of services and products suited to the UCB sector will provide synergies and galvanise the sector in areas where it may find itself wanting, particularly in areas such as capacity building and upscaling of technology.

Supervision of UCBs

Before I conclude, I would like to touch upon some supervisory initiatives taken by the Reserve Bank in the recent past. Occasionally, feedback surfaces from the sector suggesting that in our process of re-orientation, certain limitations specific to the UCB

sector might be inadvertently disregarded. However, I would like to clarify that this perception does not accurately reflect the reality of our efforts.

It may be appreciated that the Reserve Bank has attempted to adopt a more holistic approach towards addressing the growing complexities and inter-connectedness, and to deal effectively with the potential systemic risks. There has been a significant strengthening of the Reserve Bank's supervisory systems, transitioning from an entity-based approach to a more thematic and activity-based approach. Structural improvements have been implemented to enhance agility, flexibility, and specialisation. A unified and harmonised supervisory approach has been adopted for commercial banks, NBFCs, and UCBs, with a greater focus on identifying the root causes of vulnerabilities.

At times our supervisory medicines may taste bitter. However, prevention is always better than cure. I would like to assure you that the RBI has the best interests of the sector in mind, consistent with the duty cast upon it to safeguard the interests of depositors while fostering a resilient, sound, and stable financial system that contributes to the nation's development.

In conclusion, I would like to emphasise that the synergistic benefits stemming from the convergence of the cooperative movement and banking as embedded within the UCB framework can only be realised with sound governance and professional management. When guided by strong governance, UCBs can foster financial inclusion, ultimately contributing to the well-being of both the community and the institution itself. The efforts we invest today in fortifying the UCB sector will not only shield these institutions but will also serve as a bulwark against potential threats and risks to the financial sector. By cultivating a culture of prudence and foresight, we can ensure that the UCBs continue to thrive as pillars of trust, contributing to a robust and secure financial future for our country.

I hope that the interactions today result in better understanding of the challenges and facilitates concerted solutions in the interest of the co-operative sector. We shall continue to engage in meaningful interactions with the sector even beyond this Conference. Thank you.

*The Vital Role of Internal Ombudsman in Ensuring Customer-Centric Financial Excellence**

Swaminathan J.

MDs and CEOs of Regulated Entities, Heads of Customer Service, Principal Nodal Officers, Executive Director, Shri Neeraj Nigam, Reserve Bank Ombudsmen, senior colleagues from the Reserve Bank and most importantly the key audience of our conference today, the Internal Ombudsman from Regulated Entities. A very good morning to all of you.

It is indeed a great pleasure to be here amidst all of you at the 2nd Conference of Internal Ombudsman. This forum provides an opportunity for exchange of ideas and thoughts, fostering discussion to enhance the efficacy of Internal Ombudsman mechanism within the regulated entities.

In my recent interaction with the Chairpersons of Customer Service Committees, Whole Time Directors in charge of Customer Service Verticals and Principal Nodal Officers, I had highlighted the significance of investing in the Internal Ombudsman's capabilities for transparent and fair grievance redressal as it reinforces the trust of customers in the banking system.

Today, I would like to take the discussion forward, by talking about the pivotal role of Internal Ombudsman in ensuring effective and impartial resolution of grievances of the customers of regulated entities as well as being an agent for change.

Role of Internal Ombudsman

The concept of Internal Ombudsman was introduced almost nine years[1] ago as a forum for customers to obtain grievance redressal within the regulated entity itself, thereby obviating the need to approach the RBI Ombudsman.

The 2018 Internal Ombudsman Scheme for banks as well as the subsequent schemes for other regulated entities mandated escalation to the Internal Ombudsman before rejection of a customer grievance. Further, to strengthen the independent functioning of the Internal Ombudsman, these regulations also provided for tenure and compensation protection of the IO while advising regulated entities to ensure that adequate staff and infrastructure support is provided to Internal Ombudsman. The recent framework further enhances the stature of the Internal Ombudsman by providing for functional reporting to the Board.

In essence, the IO regulations attempt to create an independent apex level functionary within the regulated entity's internal grievance redressal mechanism, to act as a custodian of fairness, overseeing the grievance redress process and to maintain equitable outcomes for all stakeholders.

Indeed, the Office of the Internal Ombudsman in regulated entities can serve as the focal point for providing independent and unbiased perspective to customer grievance related decisions made by regulated entities. The Internal Ombudsman is expected to provide constructive feedback to the regulated entities by analysing the patterns and identifying the root causes of complaints and suggest policy level changes required at the level of regulated entities.

However, on occasions, the efficacy of the Internal Ombudsman mechanism has been called into question, particularly when decisions taken by regulated entities are overturned by the RBI Ombudsman or the Appellate Authority. Such

* Speech by Shri Swaminathan J, Deputy Governor, Reserve Bank of India - January 16, 2024 - at the Conference of Internal Ombudsman in Mumbai.

instances raise concerns about the efficacy of the Internal Ombudsman mechanism, especially the independence of the Internal Ombudsman.

Accordingly, I would like to highlight and elaborate upon four key areas for the Internal Ombudsman to focus upon for establishing a fair and just grievance redressal process. Later I will also discuss the role of the regulated entities in supporting their Ombudsman before concluding with a brief insight into the intent of our recently revised framework for Internal Ombudsman.

Independent Impartial Mindset

Firstly, I would urge Internal Ombudsman to adopt the mindset of an independent impartial observer and decision maker while adjudicating complaints. This entails cultivating a culture that prioritises impartiality and objectivity in evaluating the merits of each complaint. Moreover, recording a 'reasoned decision' by clearly and transparently articulating the rationale behind the resolution is crucial since it instils confidence in the customer.

Unbiased constructive feedback

Secondly, offering unbiased and constructive feedback on policy misinterpretations to regulated entities is essential for fostering a culture of continuous improvement. Internal Ombudsman should objectively identify instances where policies have been misconstrued or misapplied and provide feedback that not only points out errors but also suggests constructive solutions.

Suggest ways for qualitative improvement in systems and procedures

Thirdly, Internal Ombudsman can also contribute to regulated entities by providing valuable insights and recommendations for enhancing systems and procedures for improved efficiency and effectiveness in grievance redressal. In doing so, the Internal Ombudsman becomes an instrumental partner in the continuous improvement of the regulated entity's practices, fostering a culture of responsiveness and excellence in customer service.

Guiding the regulated entities in mitigating the complaints

Finally, Internal Ombudsman, on a periodical basis, should proactively provide their inputs on the patterns of complaints received, and guide the regulated entity in taking remedial measures to address recurring complaints. I believe this to be one of the most crucial aspects of the role of Internal Ombudsman in contributing to a more responsive and consumer-centric operational framework within the regulated entity.

Role of the Regulated Entities

While I have spoken at length on the role of the Internal Ombudsman, the role played by the Board and management of regulated entity is also important to ensure the effectiveness of this function.

It is often observed that the regulated entities are materially compliant with the letter of the regulations on Internal Ombudsman, but the expected outcome of the scheme remains below potential. This also manifests in the ever-rising trend of complaints against the regulated entities under alternate grievance redress mechanism of the Reserve Bank. Many of these complaints escalated to the RBI Ombudsman could have very well been resolved by the regulated entity itself.

At times there is a perception that the Internal Ombudsman, acting independently to address customer grievances, could introduce complexities or delays into the streamlined functioning of the business. As a result, some entities do not escalate the complaints to IO thereby making a sub-optimal use of the mechanism. However, it is important to

[1] Press release dated May 11, 2015.

recognise that the role of the Internal Ombudsman is not intended to impede but rather to ensure fairness, transparency, and adherence to regulatory standards.

Regulated entities must appreciate that a well-functioning Internal Ombudsman mechanism is beneficial for all stakeholders. Apart from reducing the hassles of customers needing to approach alternate fora, it safeguards the regulated entity from reputation risk by reducing the chances of rejections of genuine grievances being subsequently overturned by alternate grievance redressal for a such as the RBI Ombudsman.

Therefore, I would urge regulated entities to make efforts to reorient their grievance redress framework to support the Internal Ombudsman mechanism which would ensure smooth functioning of the overall internal grievance redress process in the regulated entities. Here, I would recommend the regulated entities to focus on three important aspects to achieve the objective, which is integral in building a robust internal grievance redress framework.

a. Firstly, the regulated entities should focus on providing adequate human resources and infrastructural support to the office of the Internal Ombudsman to function efficiently and effectively. Regulated entities may also explore the possibility of periodical interaction with front line staff by the Internal Ombudsman to help them gain insights on the ground level implementation of grievance redress and plug the gaps identified. Similarly, a regular interface of the Internal Ombudsman with Product and Business Heads could also be held for discussing the grievance redress angle of specific activities and products of the regulated entity.

b. Secondly, regulated entities should develop a comprehensive Standard Operating Procedure (SOP) for grievance redress based on the inputs received from their Internal Ombudsman as also the decisions of the RBI Ombudsman. This is essential to establish an institutional memory of grievance redress modalities. The resulting SOP can serve as an operational manual for both the incumbent and future Internal Ombudsman and their respective staff.

c. Lastly, regulated entities should aim to ensure that all customer concerns are thoroughly addressed. The Complaint Management System of the Regulated Entities should be designed in such a way that all rejected or partially rejected complaints involving deficiency in service are auto escalated directly to the Internal Ombudsman without any manual intervention, thereby facilitating a secondary review by an impartial authority.

Recent regulatory development in Internal Ombudsman framework

The Reserve Bank has institutionalised the Internal Ombudsman framework in banks, non-bank system participants, non-banking financial companies and Credit Information Companies in various phases.

Recently, a review of the framework was undertaken by the Reserve Bank in line with the integration of the erstwhile three RBI Ombudsman Schemes with the objective to improve the customer service standards in the regulated entities. A comprehensive Master Direction was issued in December 2023 to harmonise the instructions applicable to the various regulated entities.

This Master Direction factored inputs from several sources including takeaways from the last Internal Ombudsman Conference. It establishes consistency in various aspects, such as the timeframe for escalating complaints to the Internal Ombudsman, specific exclusions from such escalation, guidelines for temporary absence of Internal Ombudsman,

minimum qualifications for appointing Internal Ombudsman and reporting formats. Additionally, it introduces the role of Deputy Internal Ombudsman.

Anticipated outcomes of the revised framework include the reinforcement of the Internal Ombudsman mechanism and, consequently, the enhancement of the Internal Grievance Redress system in regulated entities, and streamlining compliance processes for added convenience.

Conclusion

Customer service and effective and timely grievance redressal forms the foundation of trust and reliability that customers place on the financial system. A strong and resilient grievance redress mechanism not only mitigates the hardship of the customers due to deficiency in service, but also elevates the brand value of the entity in the financial services space in general and customer delight in particular.

In essence, the Internal Ombudsman is not just a function; it's a force—a force for positive transformation, a force for ethical banking, and a force for a future where financial institutions evolve not just with the times but ahead of them. By strengthening this role, regulated entities not only safeguard their reputation but also position themselves as pillars of trust and stability in an ever-shifting financial landscape. Let us acknowledge and empower the Internal Ombudsman as the change agent that propels us into a future marked by trust, integrity, and enduring success. I hope today's conference augments our efforts in strengthening the IO mechanism.

Thank you.

ARTICLES

*State of the Economy**

The likelihood of the global economy exhibiting stronger than expected growth in 2024 has brightened in recent months, with risks broadly balanced. The Indian economy continues to sustain the momentum achieved in the first half of 2023-24, going by high frequency indicators. Expectations of a fresh round of capex by the corporate sector is likely to fuel the next leg of growth. Consumer price inflation came off its November-December spikes in its January 2024 reading, while core inflation is at its lowest since October 2019.

Introduction

The jury is still out, but the global economy is staunchly weathering the aggressive restraint of monetary policy. As central banks guide inflation towards target touchdown, they are confronted with some factors that may render this prolonged: the dissipation of improvements in supply chains and falling commodity prices; extreme weather events, including the current *el nino;* and escalations of geopolitical hostilities. Hence, they are increasingly focusing on a goldilocks policy performance in 2024: not declaring premature victory and also not snuffing out the resilience of growth. Increasingly, the focus will turn to putting the fiscal house in order in the context of overburdened debt levels but here too, it may have to be consolidation with a human face, blended with support for new drivers of growth as borrowing costs ease and job creation brings with it some real wage gains. Unlocking productivity is the challenge that lies ahead; new technologies offer exciting possibilities. Another daunting challenge is managing climate change if future stress and misery has to be avoided. A third challenge is to reinvent globalisation from a labyrinth of fragmentation, reshoring and the weaponisation of trade and finance. If these challenges are successfully navigated, it may be possible to disprove the consensus of slow for longer projections that cast a shadow right up to 2025. These issues are discussed in greater detail in the following section.

Macroeconomic outlooks in the emerging and developing world are diverging widely, ranging from implosive property sector contraction and deflation, to steady expansion on the back of investment thrusts. Barring idiosyncratic factors, the prospects for 2024 are supported by favourable financial conditions and external demand starting to look up. Among all the regions, it is the emerging and developing Asia ex China that appears to be on a rising growth profile.

Financial markets remain heady with expectations that monetary policy easing is round the corner; but the gap between central banks and investors persists. Swap markets are leading this optimism. Global financial conditions are becoming easier, mainly driven by equity market exuberance that is stretching valuations and compression in corporate bond spreads. In fact, corporate bond investors are snapping up new issues worldwide, locking in elevated yields ahead of what they believe as imminent interest rate cuts. Investor preference is tilted in favour of investment-grade issuances, with a predominant portion picked up by banks and financial companies. Sovereign bond yields are falling, especially at longer maturities, although more recently, investors are paring back expectations of monetary policy easing and this is also reflected in liquidity shortages as central bank balance sheet reduction progresses. Emerging market assets are beginning to see reversals of past outflows and the correlations with developed market yields are firming up. In currency markets, the unexpected resilience of the US economy has sparked a rebound of the US dollar. In response, hedge funds positioned

* This article has been prepared by Michael Debabrata Patra, G. V. Nadhanael, Rajni Dahiya, Shashi Kant, Kunal Priyadarshi, Garima Wahi, Ramesh Kumar Gupta, Pankaj Kumar, Harendra Behera, Gautam, Love Kumar Shandilya, Prashant Kumar, Harshita Yadav, Rachit Solanki, Pratibha Kedia, Shelja Bhatia, Supriyo Mondal, Abhinandan Borad, Avnish Kumar, Renjith Mohan, Manu Swarnkar, Arjya Misra, Priyanka Sachdeva, Khushi Sinha, Akshara Awasthi, Asish Thomas George, Vineet Kumar Srivastava, Samir Ranjan Behera, and Rekha Misra. Views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

for a depreciation are rushing to close out short positions, with reports that these positions have been completely neutralised. Analysts believe, however, that the fall in the US dollar has merely been delayed to later in the year.

It is the time of the year when *The Economist* updates its Big Mac index. Started in 1986 as a light-hearted guide to the fair value of currencies, it provides an informal measure of purchasing power parity (PPP) between two currencies by comparing the relative price worldwide of a Big Mac hamburger sold at McDonald's restaurants. As The Economist points out, "it seeks to make exchange-rate theory a bit more digestible." Now globally recognised and even featuring in academic textbooks and reports, it gave rise to the word burgernomics. In order to calculate the Big Mac index, the price of a Big Mac in a country denominated in local currency is divided by the price of Big Mac in the US on the notion that in the long run, exchange rates should move towards the rate that would equalise the prices of an identical basket of goods and services (in this case, a burger) in any two countries.

The January 2024 Big Mac update shows that although the US dollar has weakened against the pound sterling and the Canadian dollar, it has strengthened against almost all others. The Japanese yen is undervalued by 43 per cent, the Indonesian rupiah by 47 per cent, the Hong Kong dollar by 51 per cent and the Taiwanese dollar by 58 per cent. Looking at affordability or how many burgers can a currency buy relative to the US dollar, a country's GDP is valued in purchasing power or Big Mac terms. This shows that although India is positioned as the fifth largest economy in terms of market exchange rates, it is the third largest in the world in purchasing power terms, after China and the US. This broadly conforms to the latest update of the IMF as of October 2023. The Indian rupee is undervalued by 42 per cent in Big Mac terms, but this has to be taken with more than a pinch of salt – in India, beef burgers are not available at any McDonald's outlets and the chicken Maharaja Mac serves as a substitute. In terms of iPad minis[1] which is a more standardised product, the INR is estimated to be overvalued by 2.1 per cent, according to the Council of Foreign Relations' (CFR)[2] Mini Mac index[3] (It is unambiguously stated that these exchange rate details of the INR do not reflect the view of the Reserve Bank. The exchange rate of the INR is market determined).

The average global temperature has for the first time breached the benchmark of 1.5 degrees Celsius above pre-industrial levels over February 2023-January 2024, resulting in the hottest January on record. The average surface air temperature was 13.14 degrees Celsius, 0.12 degrees above the temperature of the previous warmest January in 2020. The global sea surface temperature also reached a record of 20.97 degrees, the second hottest for any month ever barring August 2023. There is a rising apprehension that the Paris agreement limit may be breached sooner than expected, which can jeopardise the goals set. Cities across the world – where over 80 per cent of world GDP is created and where the majority of the planet's population live – are under significant threat. Major ports may become swamped in coming years – Indonesia plans to move away from its capital Jakarta, 40 per cent of which now lies below sea level, for a new capital city over 1000 kilometres away. Many riverside cities may be at risk of flooding. The number of cities exposed to extreme heat in the hinterland is also expected to triple by 2030. The human and economic costs could be enormous.

Amidst a flurry of upgrades for 2023-24 and 2024-25 by multilateral agencies, the Indian economy

[1] The iPad Mini is a line of mini tablet computers designed, developed, and marketed by Apple Inc. It is a sub-series of the iPad line of tablets, with screen sizes of 7.9 inches and 8.3 inches.

[2] The CFR is an independent, nonpartisan membership organization, think tank, and publisher located in New York.

[3] In 2013, the CFR created the Mini Mac Index, which compares the price of iPad minis across countries. Minis are a global product that, unlike Big Macs, can move quickly and cheaply around the world.

continues to sustain the momentum achieved in the first half of the year, going by high frequency indicators presented in section 3. By the end of February 2024, the National Statistical Office will provide its second advance estimates of national income for 2023-24 and for the third quarter for the first time. Our nowcast presented in last month's edition had placed real GDP growth at 7 per cent for the third quarter. Implicitly, real GDP would have to expand by 7 per cent in the fourth quarter for the annual estimate of 7.3 per cent to be realised.

While agriculture may see some moderation if the *rabi* output does not offset the *kharif* shortfall, value added in manufacturing is holding up well. As section 3 points out, the results for listed non-financial companies show sustained profitability in the third quarter in line with the higher growth in value of production while revenue growth remains modest.

The contribution to overall profit growth was led by oil and gas sector companies, which were supported by an increase in their marketing margins. Foreign portfolio investors have begun 2024 with big buys in oil and gas stocks, followed by financial services and power. Auto sector companies registered an uptick in volume during the quarter, with passenger vehicle and three-wheeler segments posting their highest third quarter sales ever and two-wheelers also registering strong volume growth during the quarter. Fast moving consumer goods (FMCG) companies reported moderate sales growth during the quarter, with deflation in prices causing value growth to be lower than volume growth. The gap between rural and urban volume narrowed for the first time in four quarters. Construction, real estate and allied sectors such as cement continued to post upbeat results as reflected in a surge in profitability on the back of residential housing demand and the government's thrust on infrastructure development. Pharmaceutical sector companies reported a sharp turnaround in profitability on favourable demand. Chemical companies, however, faced headwinds amidst sluggish demand conditions and price declines in some cases. Management commentaries by various companies acknowledged the increase in delivery schedules and rates due to disruptions in the Red Sea.

In the services sector, fortunes were mixed. The performance of the information technology (IT) sector companies was subdued; several leading companies recorded a reduction in employee headcount, resulting in a slowing growth in salary expenses for the sector. Nonetheless, optimistic commentary about demand conditions led to general improvement in market sentiment for IT companies, which was also reflected in their stock prices. In the non-IT sector, profitability improved for hotels and tourism industries. Banking and financial sector companies maintained strong growth in profitability on the back of the still burgeoning credit demand in the economy and lower provisioning costs. In fact, banks' unsecured loans grew in spite of the hit on capital due to increase in risk weights. The lagged effect of pass through of policy rate increases into deposit and certificates of deposit rates exerted pressure on net interest margins.

Expectations for a fresh round of capex by the corporate sector to take the baton from the government and fuel the next leg of growth are mounting. Balance sheets are healthy on the back of high profits, with leverage remaining constant or improving and the return ratio at a multi-year high. Fixed asset growth is already evident in the oil and gas sector and in chemicals. In sectors such as steel and automobiles for which stock returns have exceeded index returns, fixed asset additions have, however, been underwhelming. Capex plans of the power sector are the most ambitious, but leverage is high among distribution companies. Even so, India has made big strides in the green energy sector over the last decade, with renewable power constituting

43 per cent of the total installed power capacity. The corporate must seize this lever to expand capex, especially with the target of tripling renewable energy capacity to 500 gigawatts by 2030. Overall, the corporate sector must get its act together ready to relieve the government of capex heavy lifting and take advantage of the space ceded in financial markets by a lower budgeted borrowing programme and the easing of borrowing costs that has already begun in response to the Interim Budget for 2024-25, driven as it is by capex and consolidation.

Overall inflation developments are also turning favourable, providing a stable environment for corporates to plan expansion strategies in anticipation of a pick-up in demand. With consumer price inflation coming off its November-December spikes in its January 2024 reading, inflation expectations may stabilise and edge down, although renewed pressures from cereals and proteins cannot be ruled out. Core inflation is at its lowest since October 2019 and non-food wholesale price inflation remains in deflation. This should augur well for the input cost outlook and selling prices of manufacturing firms.

Circling back to agriculture, evolving conditions for 2024-25 are turning favourable. Although the positive Indian ocean dipole event is weakening steadily, the India Meteorological Department (IMD) expects *El Niña* to turn neutral prior to the start of the monsoon season in June, and favourable *La Niña* may set in by August. In its preliminary monsoon forecast guidance for 2024, the private weather forecaster Skymet has predicted a normal south west monsoon.

Set against this backdrop, the remainder of the article is structured into four sections. Section II covers the rapidly evolving developments in the global economy. An assessment of domestic macroeconomic conditions is set out in Section III. Section IV encapsulates financial conditions in India, while the last Section sets out concluding remarks.

II. Global Setting

The likelihood of the global economy exhibiting stronger than expected growth in 2024 has brightened in recent months, with risks broadly balanced. Faster disinflation, continued fiscal support and improvements in productivity are expected to buffer against geopolitical tensions and supply disruptions. Accordingly, the International Monetary Fund (IMF) upgraded its global growth forecast to 3.1 per cent in 2024 (up by 0.2 percentage point from October 2023) and 3.2 per cent in 2025 in its January 2024 World Economic Outlook (WEO) [Table II.1]. In its Interim Economic Outlook of February 2024, the Organization for Economic Cooperation and Development (OECD), projected the global economy to grow by 2.9 per cent

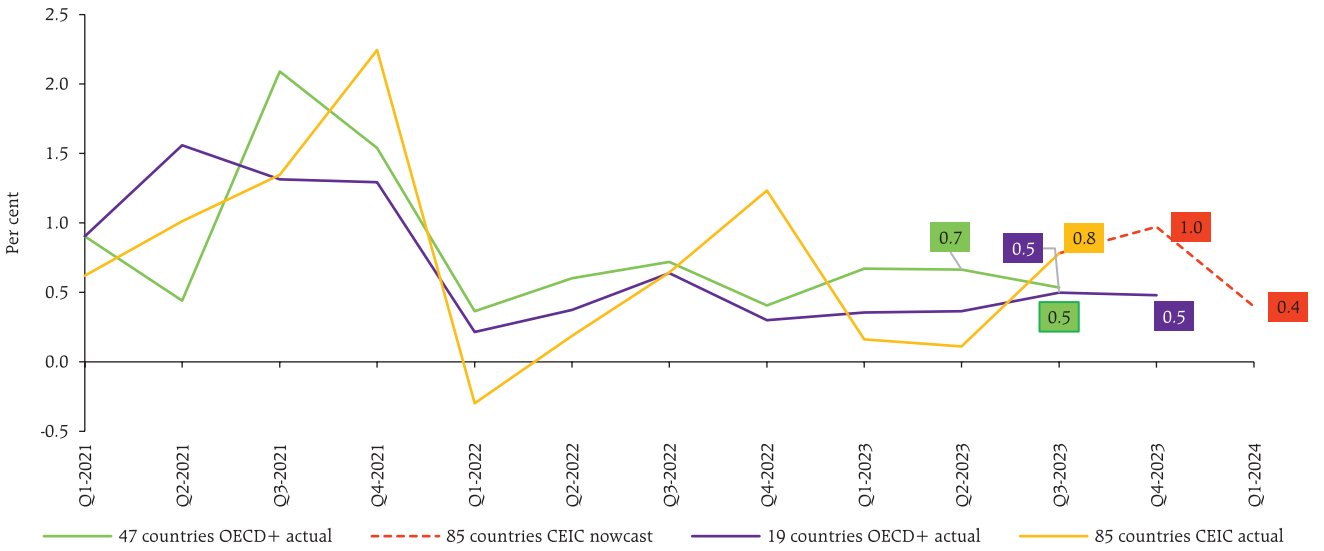
Table II.1: GDP Growth Projections for 2024 – Select AEs and EMEs

(Per cent)

Month of Projection →	OECD		IMF	
Region/Country ↓	Feb 2024	Nov 2023	Jan 2024	Oct 2023
World	2.9	2.7	3.1	2.9
Advanced Economies (AEs)				
US	2.1	1.5	2.1	1.5
UK	0.7	0.7	0.6	0.6
Euro area	0.6	0.9	0.9	1.2
Japan	1.0	1.0	0.9	1.0
Emerging Market Economies (EMEs)				
Brazil	1.8	1.8	1.7	1.5
Russia	1.8	1.1	2.6	1.1
India#	6.2	6.1	6.5	6.3
China	4.7	4.7	4.6	4.2
South Africa	1.0	1.0	1.0	1.8

#: India's data is on a fiscal year basis.
Sources: OECD; and IMF.

Chart II.1: Global GDP Growth Nowcast (Q-o-Q)



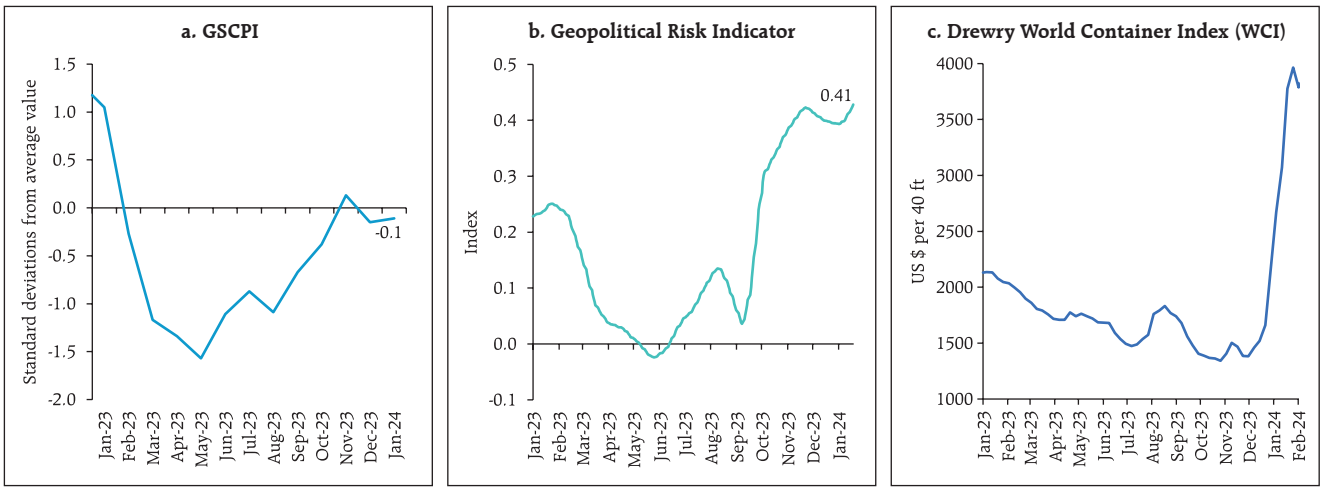
Sources: CEIC; OECD; and RBI staff estimates.

in 2024, higher by 0.2 percentage points from the November 2023 forecast, before recovering to 3.0 per cent in 2025. The OECD expects growth trajectories to continue to diverge across member countries.

Validating these developments, our nowcast points towards global growth momentum being maintained during Q1:2024 (Chart II.1).

The global supply chain pressures index (GSCPI) increased in January 2024 from its December 2023 level, though it remained lower than its historical average (Chart II.2a). Geopolitical risks remain high and container shipping costs soared due to the ongoing hostilities in the Red Sea and disruptions in other key global trade routes (Chart II.2b and II.2c).

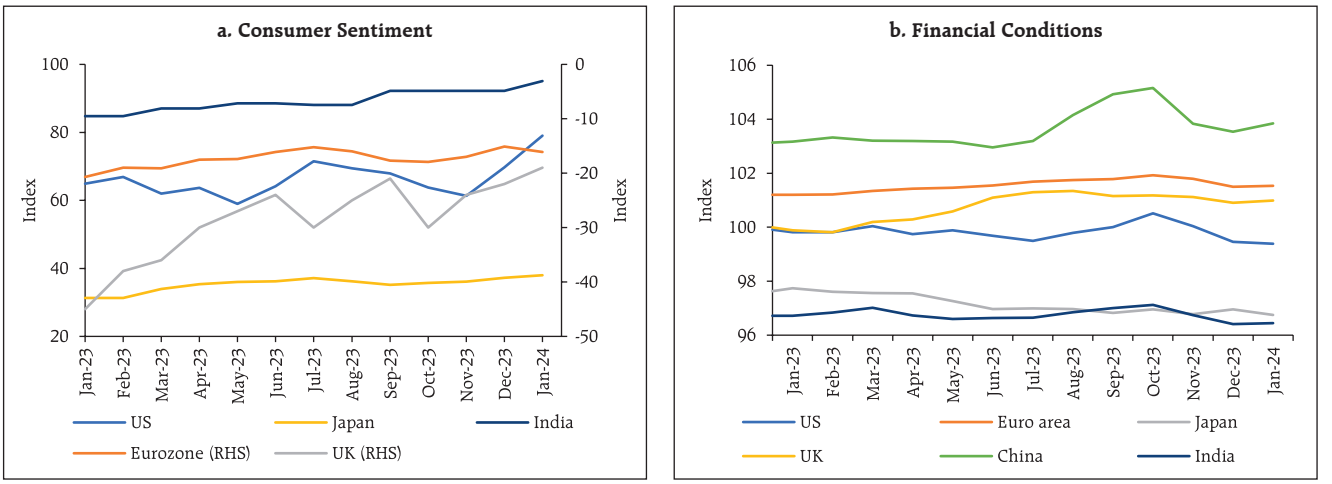
Chart II.2: Trends in Supply Chain Pressures and Geo-political Risks



Notes: 1. GSCPI reflects data on transportation costs and manufacturing indicators.
2. The WCI indicates the actual spot container freight rates for major east west trade routes. The composite represents a weighted average of the 8 shipping routes by volume and is reported in USD per 40-foot container.

Sources: Federal Reserve Bank of New York; BlackRock Investment Institute, January 2024; and Bloomberg.

Chart II.3: Sentiment and Financial Conditions



Notes: 1. Japan: A score above 50 indicates consumer optimism, below 50 shows lack of consumer confidence and 50 indicates neutrality.
2. Eurozone and UK: (-)100 indicates extreme lack of confidence, 0 neutrality and 100 extreme confidence.
3. India and US: Higher the value, higher is the consumer confidence.
Source: Bloomberg.

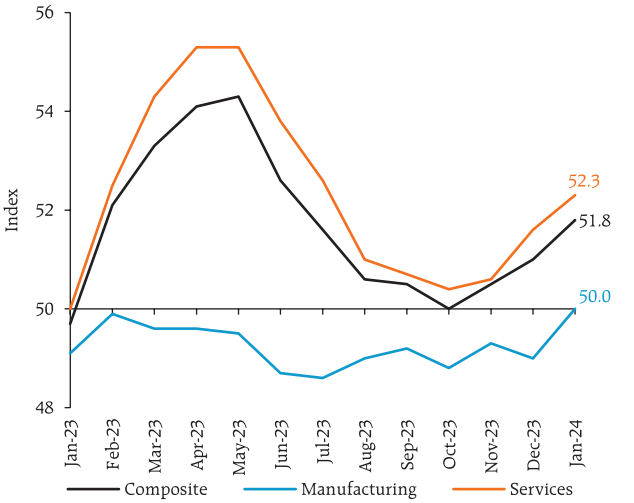
An optimistic outlook for inflation and household incomes brightened consumer sentiments in most economies in January 2024 (Chart II.3a). Financial conditions eased in the US, driven by ebullient equity markets notwithstanding a pushback of expectations for rate cuts, while conditions tightened in China (Chart II.3b).

The global composite purchasing managers index (PMI) increased to 51.8 in January 2024 - its highest reading since June 2023 - from 51.0 in December, supported by increases in both services business activity and manufacturing output. Global manufacturing rose to the neutral mark of 50.0 in January 2024, halting 16 consecutive months of contraction as production volumes edged higher - especially in the consumer goods category (Chart II.4). The services PMI expanded at its quickest pace since July 2023.

The PMI for export orders increased sequentially in January 2024 for both manufacturing and services. For manufacturing, it recorded a 17-month high, while the services export orders index transitioned into expansion territory after four months of contraction (Chart II.5).

In January, global commodity prices witnessed diverging movements. The Bloomberg Commodity Price Index recorded a marginal decline of 0.1 per cent (m-o-m) as rising oil prices were more than offset by a fall in metal and grain prices (Chart II.6a). The downward trend in non-oil commodity prices has persisted in February so far. Crude oil prices firmed

Chart II.4: Global PMI



Note: A level of 50 corresponds to no change in activity and a reading above 50 denotes expansion and *vice versa*.
Source: S&P Global.

Chart II.5: Global PMI: Export Orders

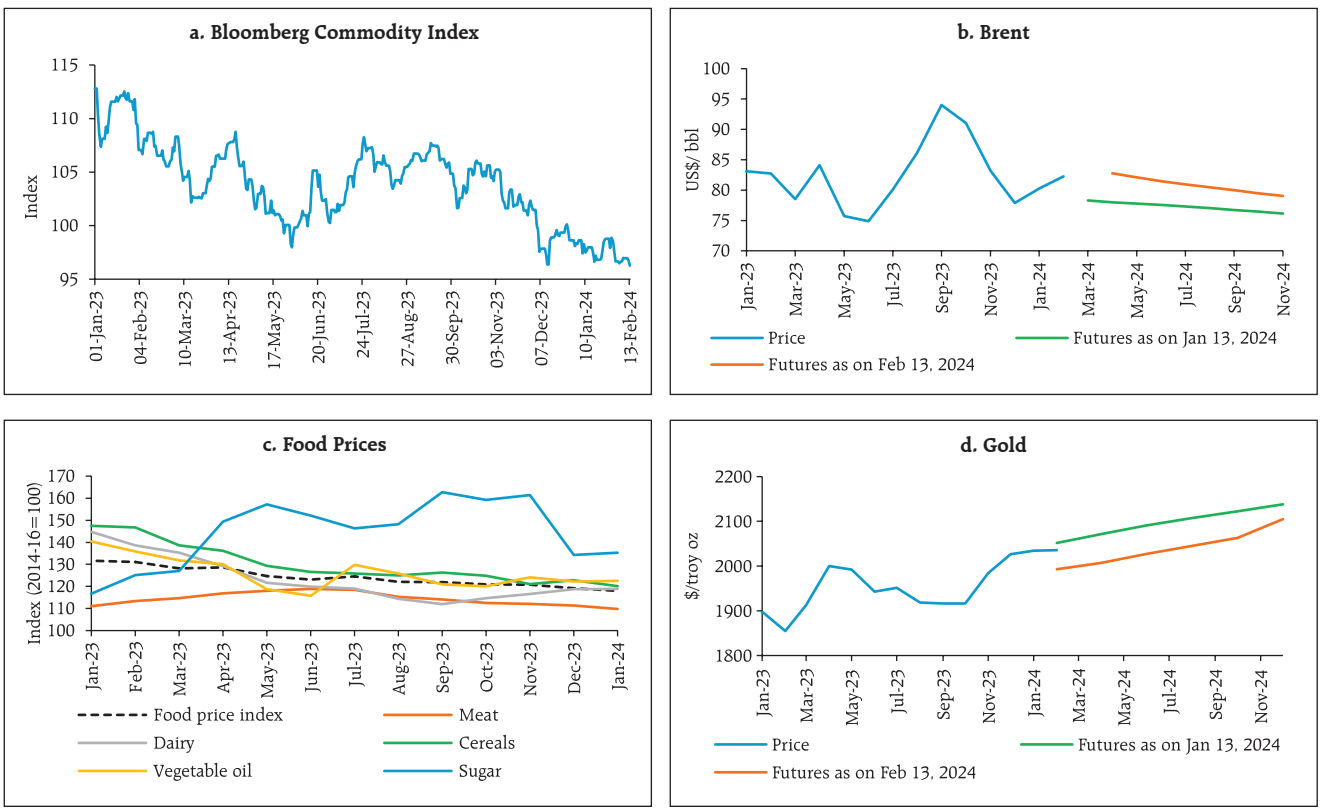
Note: A level of 50 corresponds to no change in activity and a reading above 50 denotes expansion and *vice versa*.
Source: S&P Global.

up throughout January and mid February 2024, ending January at 5.9 per cent higher over their December 2023 level, as tensions in the Middle East caused disruptions in the Red Sea vessel traffic (Chart II.6b). In its short-term energy outlook for February 2024, the US Energy Information Administration, indicated that ongoing risks of supply disruptions in the Middle East create the potential for crude oil prices to rise even higher, although a potential increase in oil inventories may tamper down prices beginning Q2:2024.

The Food and Agriculture Organization's (FAO's) food price index declined by 1.0 per cent (m-o-m) in January 2024, primarily driven by a reduction in the prices of cereals (-2.2 per cent) and meat (-1.4 per cent) [Chart II.6c]. Gold prices declined unevenly in January and in the first half of February, with intermittent spurts (Chart II.6d).

Headline inflation remained above the target in major economies, despite moderation during the course of 2023. In the US, CPI inflation moderated

Chart II.6: Commodity and Food Prices



Sources: Bloomberg; World Bank Pink Sheet; and FAO.

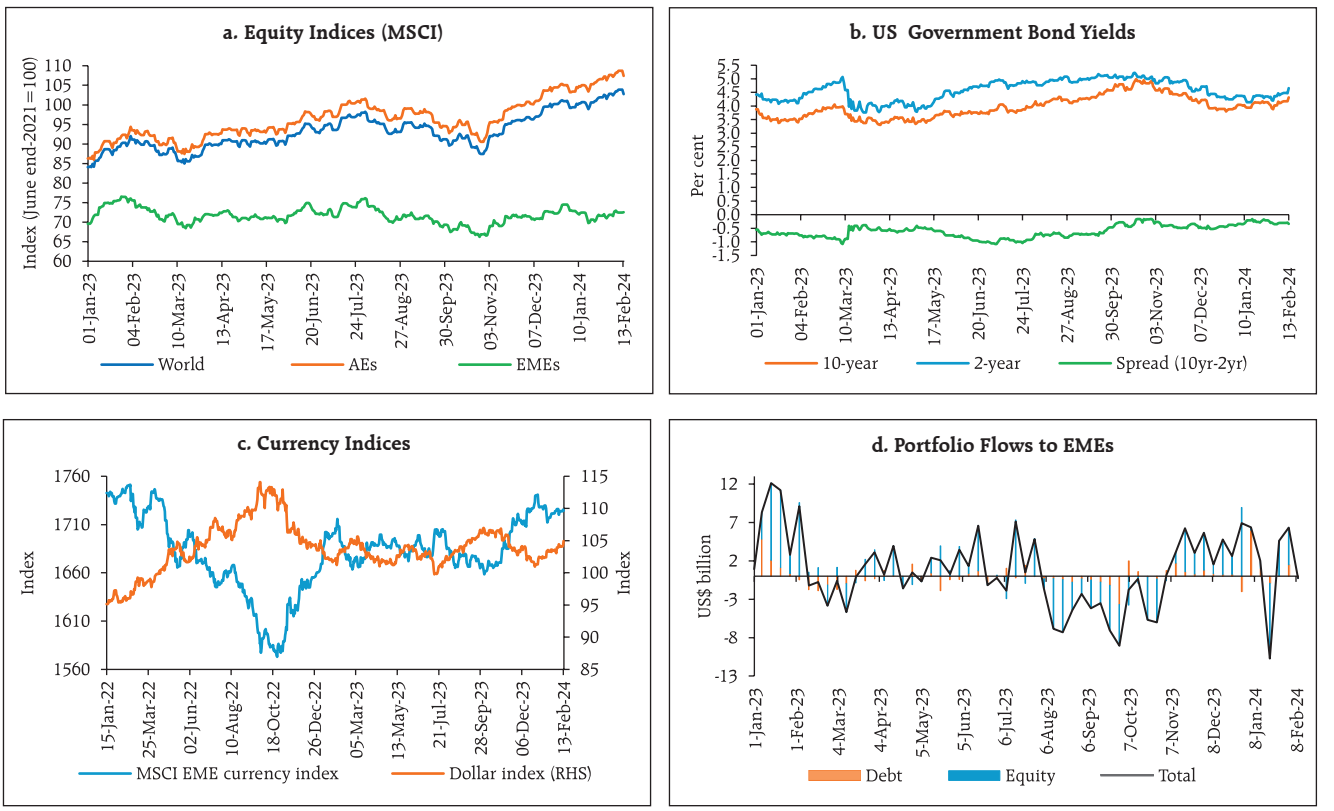
to 3.1 per cent in January 2024 from 3.4 per cent in December 2023, while the headline personal consumption expenditure (PCE) index inflation remained steady at 2.6 per cent (y-o-y) in December 2023. As per flash estimates, Euro area inflation moderated to 2.8 per cent in January 2024 from 2.9 per cent in December 2023 (Chart II.7a). In the UK, CPI inflation remained steady at 4.0 per cent in January, while Japan's inflation (CPI excluding fresh food) moderated to 2.3 per cent in December – its lowest reading since June 2022. Among EMEs, inflation moderated in South Africa in December 2023 and Brazil in January 2024. Inflation in Russia remained steady at 7.4 per cent in January 2024. China recorded deflation of 0.8 per cent in January (Chart II.7b). Core and services inflation fell across major AEs but remained higher than headline inflation. (Chart II.7c and II.7d).

Global equity markets registered gains in January and mid February, barring a few episodes of sentiment ebbs as the market priced in tapering expectations of a rate cut by the Fed. The Morgan Stanley Capital International (MSCI) world index rose 0.5 per cent in January, reflecting gains in AEs (by 1.1 per cent) while EMEs recorded losses (-4.7 per cent m-o-m) [Chart II.8a]. The US 10-year G-sec yield rose marginally by 3 basis points (bps) while the 2-year G-sec yield fell by 4 bps in January, thus widening the spread by 8 bps (Chart II.8b). In the currency markets, the US dollar strengthened by 1.9 per cent (m-o-m) in January as the reduced probability of rate cuts shored up demand. The US dollar continued to gain strength mid February. On the flip side, the MSCI currency index for EMEs declined by 0.9 per cent in January, exacerbated by capital outflows, mainly in the equity segment (Chart II.8c and II.8d).

Chart II.7: Inflation - AEs and EMEs

Sources: Bloomberg; and OECD.

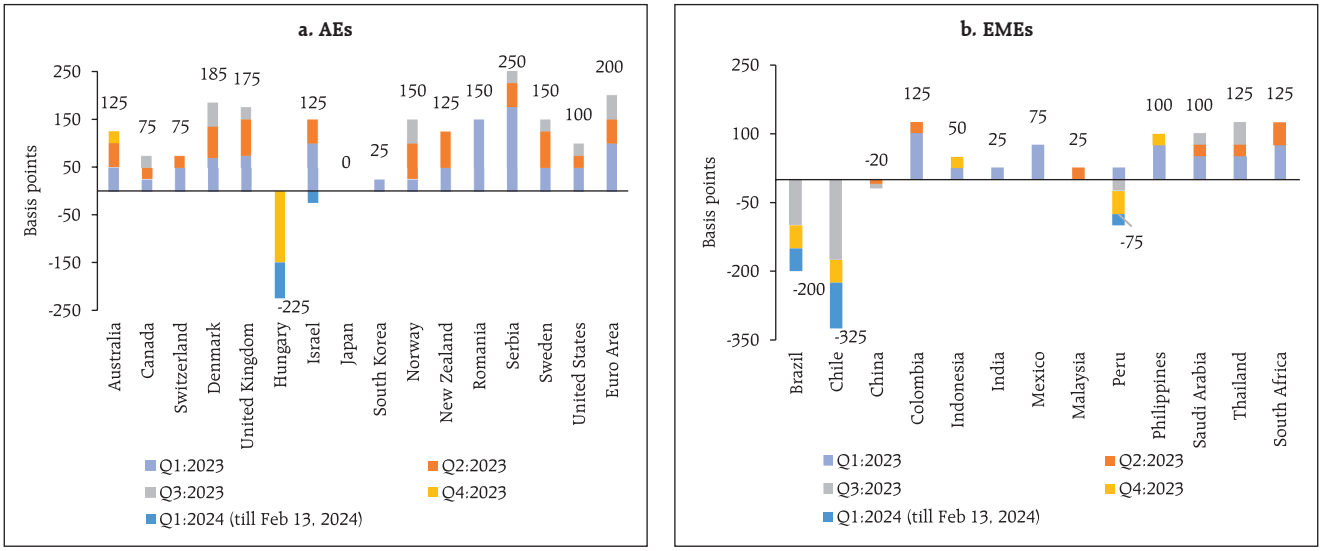
Chart II.8: Global Financial Markets



Sources: Bloomberg; and IIF.

As inflationary pressures waned, most central banks halted policy rate increases while a few moved ahead with rate cuts. In February 2024, most AE central banks kept their policy rates on hold, while

Chart II.9: Changes in Policy Rates



Source: Bloomberg.

the Czech Republic cut its benchmark rates by 50 bps (Chart II.9a). Among EMEs, Peru continued to reduce its policy rate by 25 bps in February while Turkey bucked the trend with a 250 bps hike in January (Chart II.9b).

III. Domestic Developments

Consumer confidence strengthened further in January 2024, driven especially by optimism about the general economic situation and employment conditions, as per the RBI's latest survey of households (Chart III.1a). Various enterprise surveys also point towards strong business optimism (Annex I).

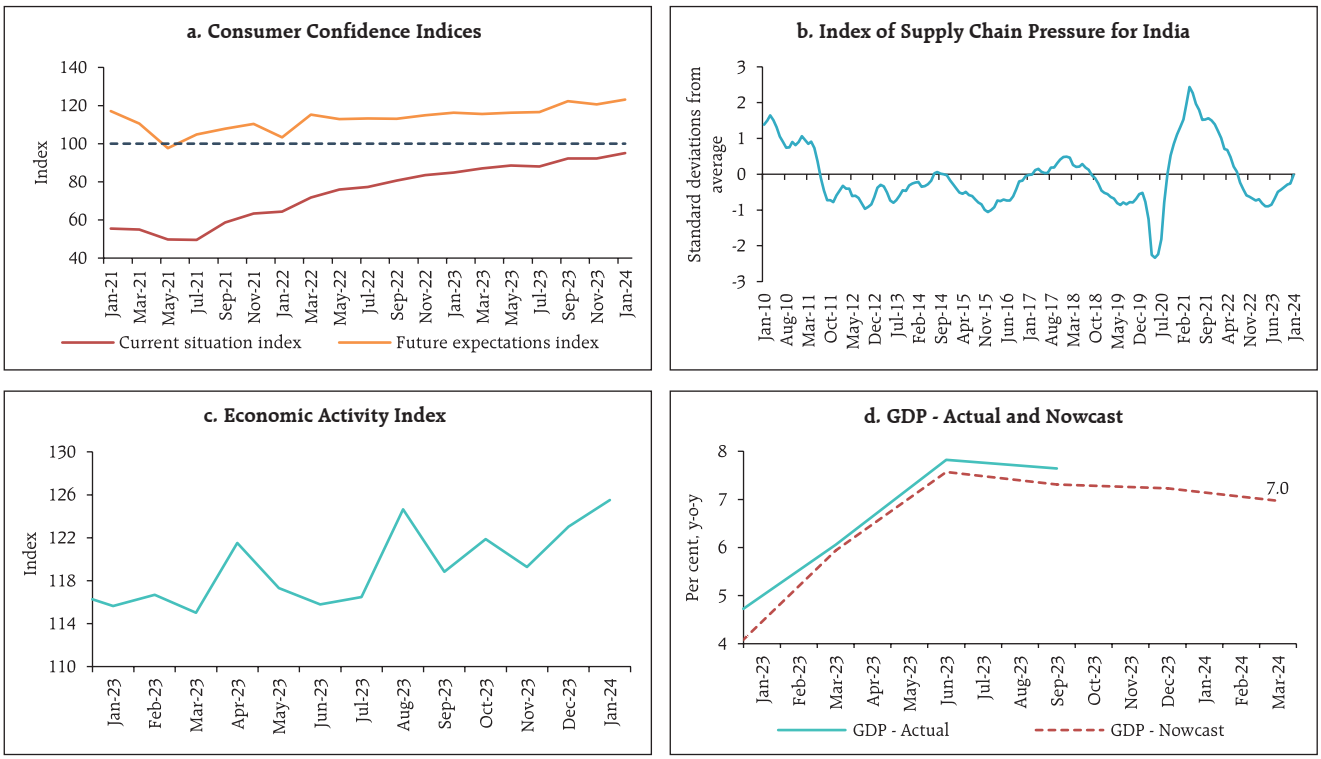
The disruption in global trade flows and higher transportation costs due to the ongoing Red Sea conflict has led to the build-up of supply chain pressures in recent months (Chart III.1b). Our economic activity index (EAI) nowcasts GDP growth for Q4:202324 at 7 per cent (Chart III.1c and III.1d).

Aggregate Demand

High frequency indicators point towards sustained strength in demand conditions in January 2024. E-way bills grew by 13.2 per cent in December 2023 (Chart III.2a). Toll collections expanded by 15.5 per cent y-o-y in January 2024, although they sequentially moderated from a record in the previous month (Chart III.2b).

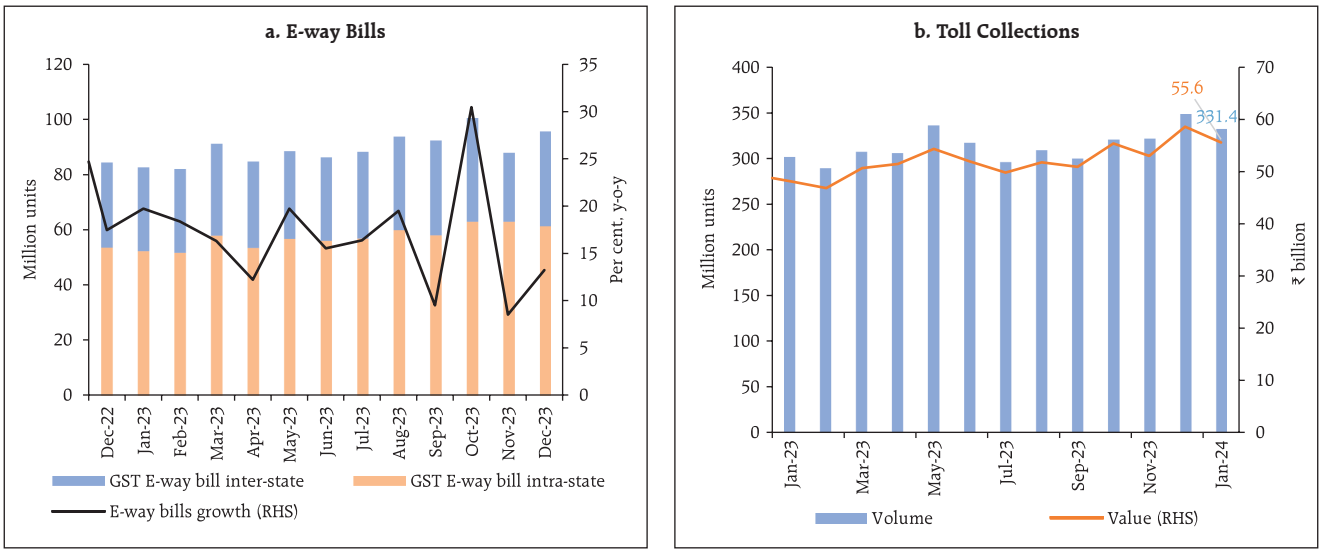
Automobile sales had registered an expansion of 23.3 per cent (y-o-y) in January with two wheeler sales recording double digit growth (Chart III.3a and III.3b). Retail tractor sales recorded a seven-month high growth at 21.2 per cent (y-o-y) in January 2024. Vehicle registrations recorded strong y-o-y growth

Chart III.1: Economic Activity and GDP Growth Nowcast



Note: The economic activity index (EAI) was constructed by extracting the common trend underlying twenty seven high frequency indicators of economic activity using a Dynamic Factor Model. EAI was scaled to 100 in February 2020 and 0 in April 2020, the worst affected month due to mobility restrictions.
Sources: Consumer Confidence Survey, RBI; National Statistical Office (NSO); and RBI staff estimates.

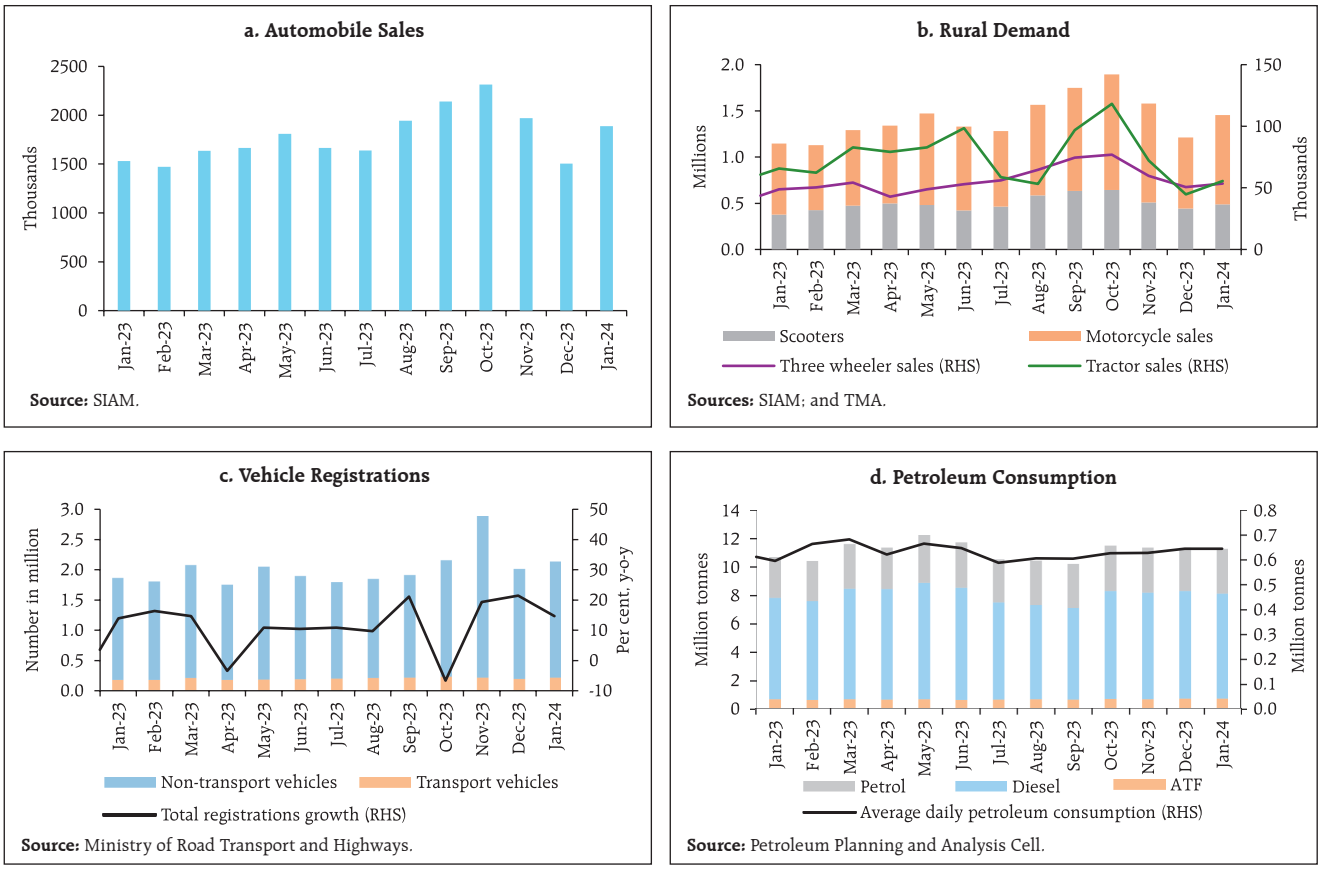
Chart III.2: E-way Bills and Toll Collections



Sources: GSTN; and RBI.

in January 2024 (Chart III.3c). The consumption of petroleum products also rebounded, growing at 8.3 per cent y-o-y, driven by strong industrial activity[4] (Chart III.3d).

Chart III.3: Automobile Sector Indicators



Source: SIAM.

Sources: SIAM; and TMA.

Source: Ministry of Road Transport and Highways.

Source: Petroleum Planning and Analysis Cell.

[4] https://m.economictimes.com/industry/energy/oil-gas/indias-fuel-demand-rises-8-2-y/y-in-january/articleshow/107520089.cms.

According to NielsenIQ, during Q3:2023:24, the FMCG industry recorded 6.4 per cent volume growth and 6.1 per cent value growth y-o-y.[5] Rural demand growth (in volume terms) picked up steadily to 5.8 per cent, while urban markets experienced a higher growth of 6.8 per cent (y-o-y).

As per the latest Periodic Labour Force Survey (PLFS), labour market conditions continued to improve during October-December 2023. The labour force participation rate (LFPR) in urban areas for persons aged 15 years and above increased to 49.9 per cent in October-December 2023 from 49.3 per cent in July-September 2023, the highest since the survey's inception, largely driven by female LFPR [Chart III.4a]. The worker population ratio (WPR) also increased for both males and females. Consequently, the unemployment rate (UR) fell to its lowest in the PLFS series to 6.5 per cent from 6.6 per cent in the last quarter.

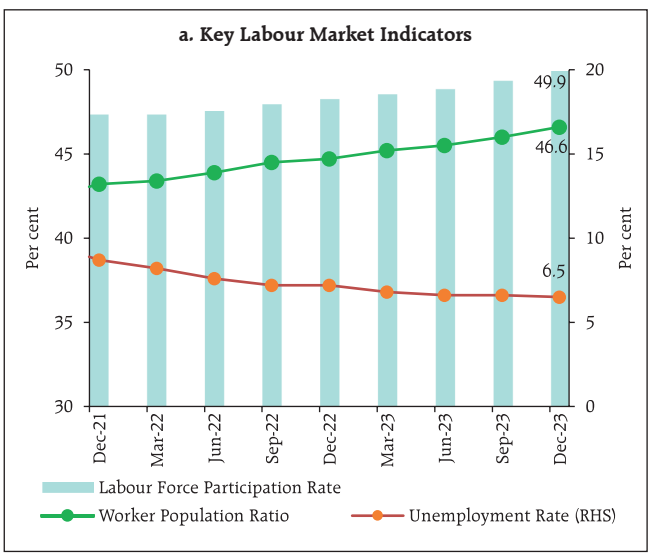
The rise in employment was driven by regular salaried and self-employed categories, as the share of casual labour decreased sequentially and in relation to the same quarter last year (Chart III.4b). Employment in the services sector, which contributed to 62 per cent of the total employment, continued to increase during Q3:2023-24, while in the secondary sector and in agriculture it recorded a decline.

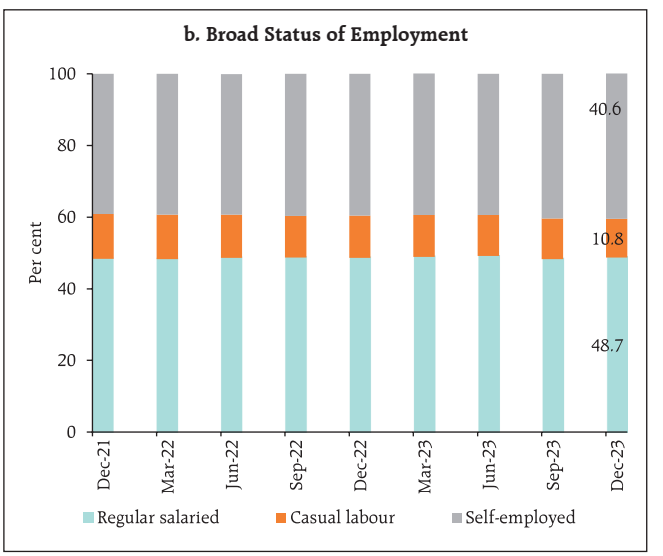
As per the data available from the Centre for Monitoring of Indian Economy (CMIE), the all-India UR fell to a 16-month low of 6.8 per cent in January (Chart III.5a). The LFPR and employment rate (ER) decreased marginally in the same month (Chart III.5b).

The employment outlook in the organised sector, as polled by the PMIs for manufacturing and services, showed a mixed picture. While manufacturing employment recorded a marginal contraction, services recorded a sequential pick-up in January (Chart III.6).

Households' demand for work under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) fell by 1.7 per cent (m-o-m) in January,

Chart III.4: Quarterly PLFS: Urban (age 15 and above)





Source: MoS&PI.

[5] NielsenIQ - https://www.thehindubusinessline.com/economy/fmcg-industry-set-to-grow-at-45-65-in-2024-nielseniq/article67816741.ece

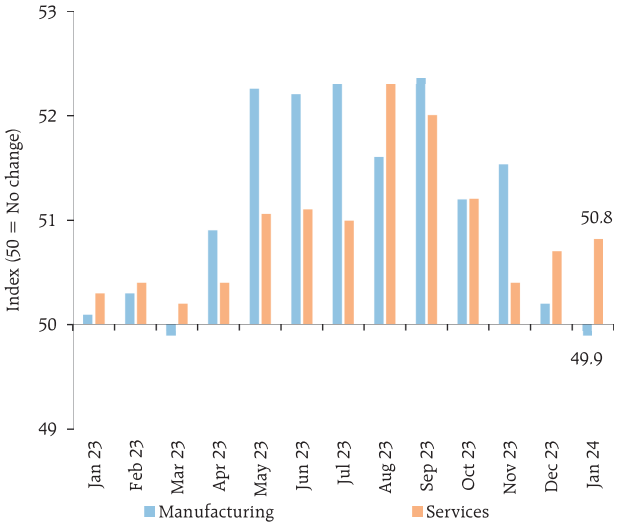
Chart III.5: Labour Market Conditions

Source: CMIE.

leading to a decline of 5.3 per cent on a y-o-y basis, reflecting farm labour demand during the *rabi* season and improved prospects of employment in the rural sector as a whole (Chart III.7).

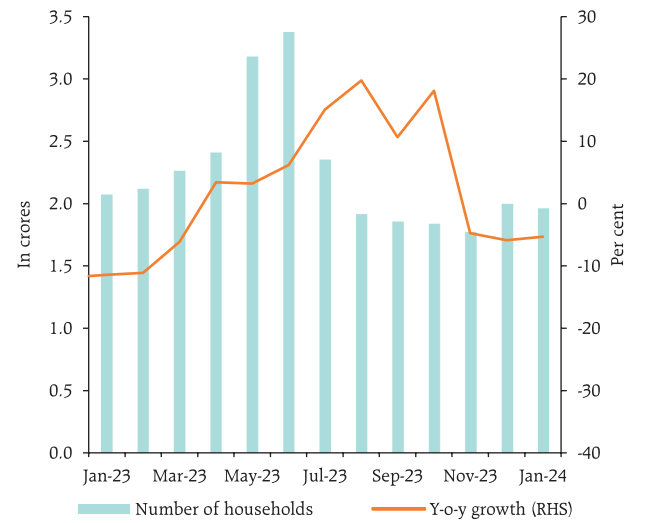
India's merchandise exports at US$ 36.9 billion registered a growth of 3.1 per cent (y-o-y) for the second consecutive month in January 2024, as a favourable base effect more than offset negative momentum (Chart III.8). Out of 30 major commodities, 18 commodities accounting for 72.3 per cent of the export basket registered expansion on a y-o-y basis. Petroleum products, engineering goods, iron ore, electronic goods, drugs and pharmaceuticals supported export growth whereas other cereals,

Chart III.6: PMI Employment Indices



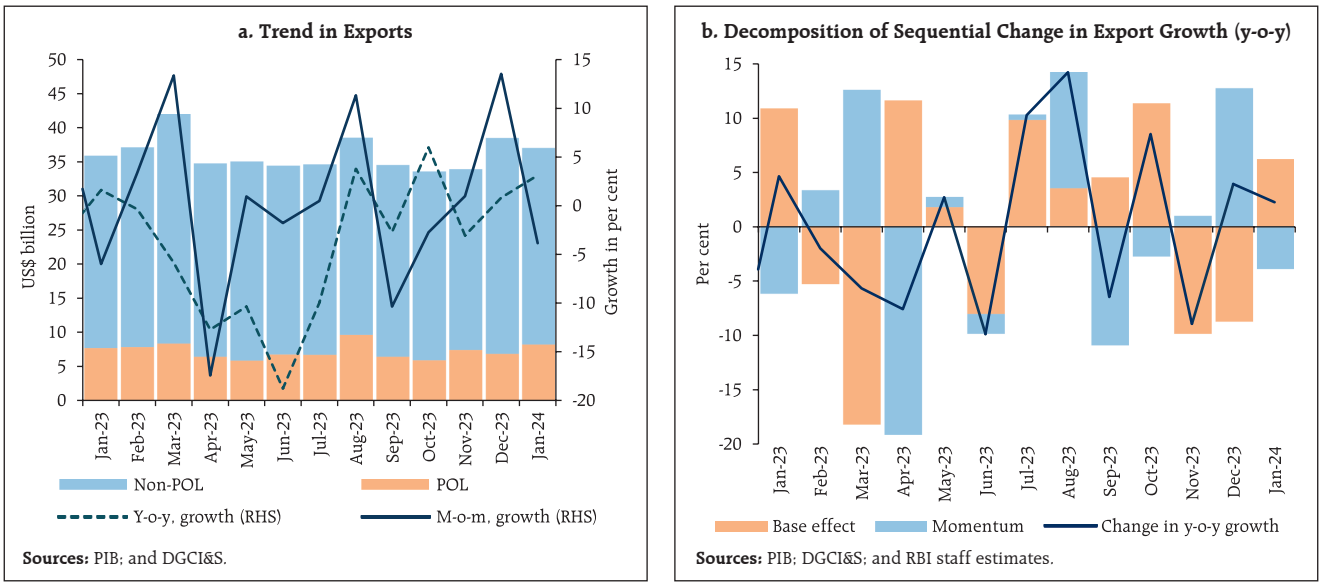
Note: A PMI value of above 50 indicates expansion.
Source: S&P Global.

Chart III.7: Monthly Work Demand Pattern of MGNREGA



Source: Ministry of Rural Development, GoI.

Chart III.8: India's Merchandise Exports



Sources: PIB; and DGCI&S.

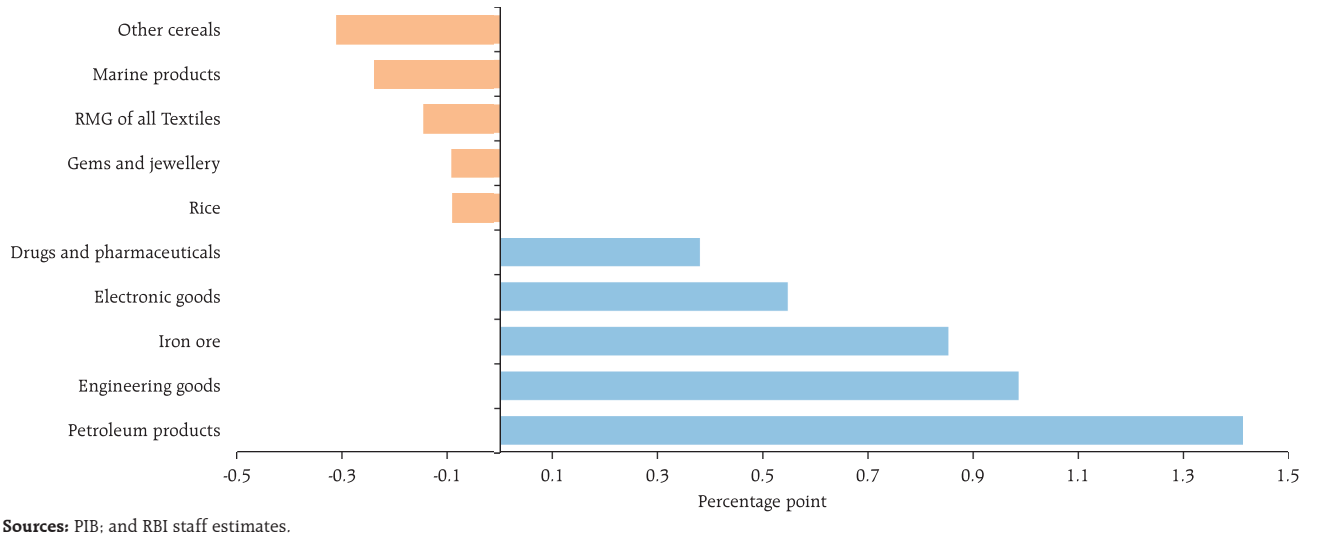
Sources: PIB; DGCI&S; and RBI staff estimates.

marine products, readymade garments of all textiles, gems and jewellery and rice dragged down growth in January (Chart III.9).

Merchandise imports at US$ 54.4 billion in January 2024 registered expansion after contracting for two consecutive months. A favourable base effect offset the negative momentum as in the case of exports, leading to y-o-y growth of 3.1 per cent (Chart III.10). Among the 30 major commodities, 13 commodities accounting for 58.2 per cent of the import basket registered growth.

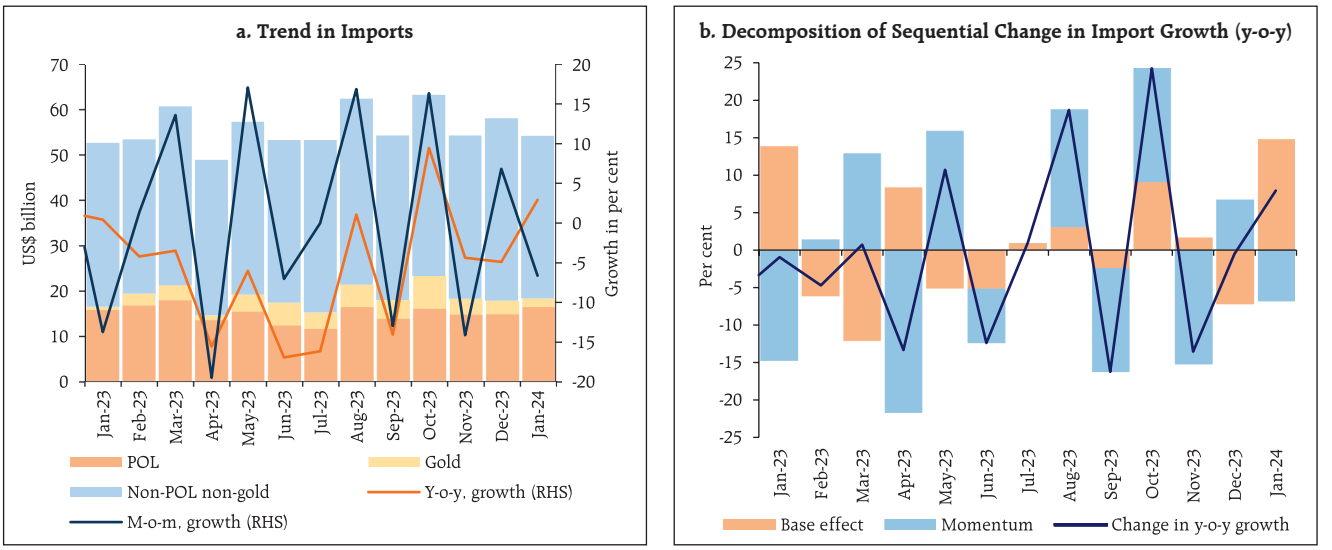
Electronic goods, gold, petroleum, oil and lubricants (POL), coal and silver supported import growth whereas fertilisers, vegetable oil, transport

Chart III.9: India's Merchandise Exports – Relative Contribution (January 2024 over January 2023)



Sources: PIB; and RBI staff estimates.

Chart III.10: India's Merchandise Imports



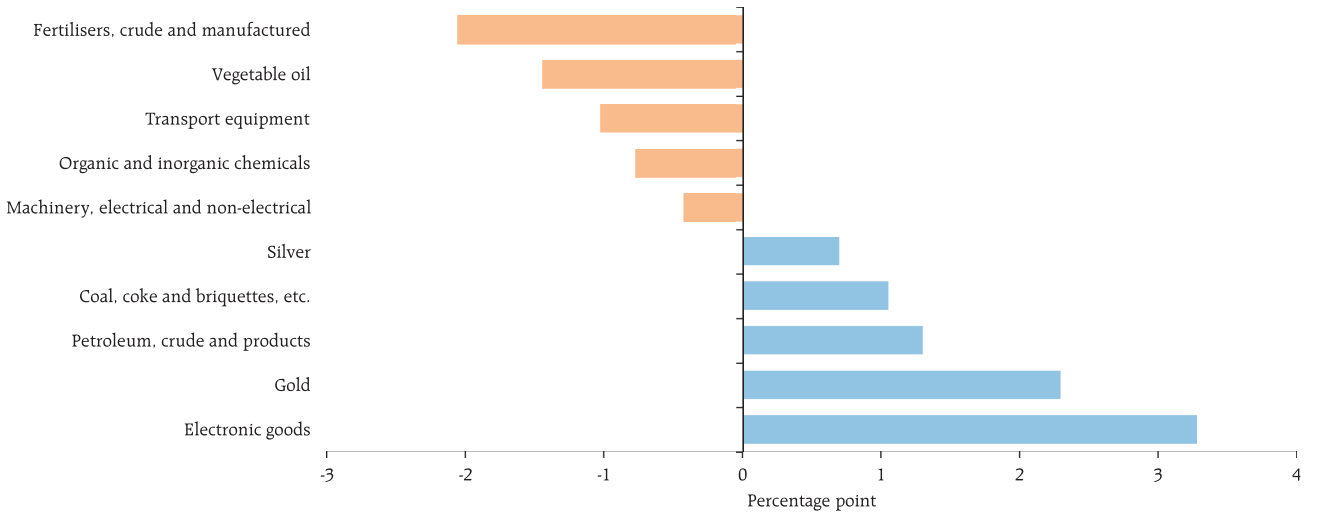
Sources: PIB; DGCI&S; and RBI staff estimates.

equipment, chemicals and machinery were offsetting components (Chart III.11).

The merchandise trade deficit narrowed to a 9-month low of US$ 17.5 billion in January 2024 as imports declined faster than exports sequentially. The share of POL in the total merchandise trade balance increased to 47.8 per cent in January 2024 from 40.7 per cent in December 2023 reflecting the sequential increase in value of POL imports exceeding that of petroleum exports (Chart III.12).

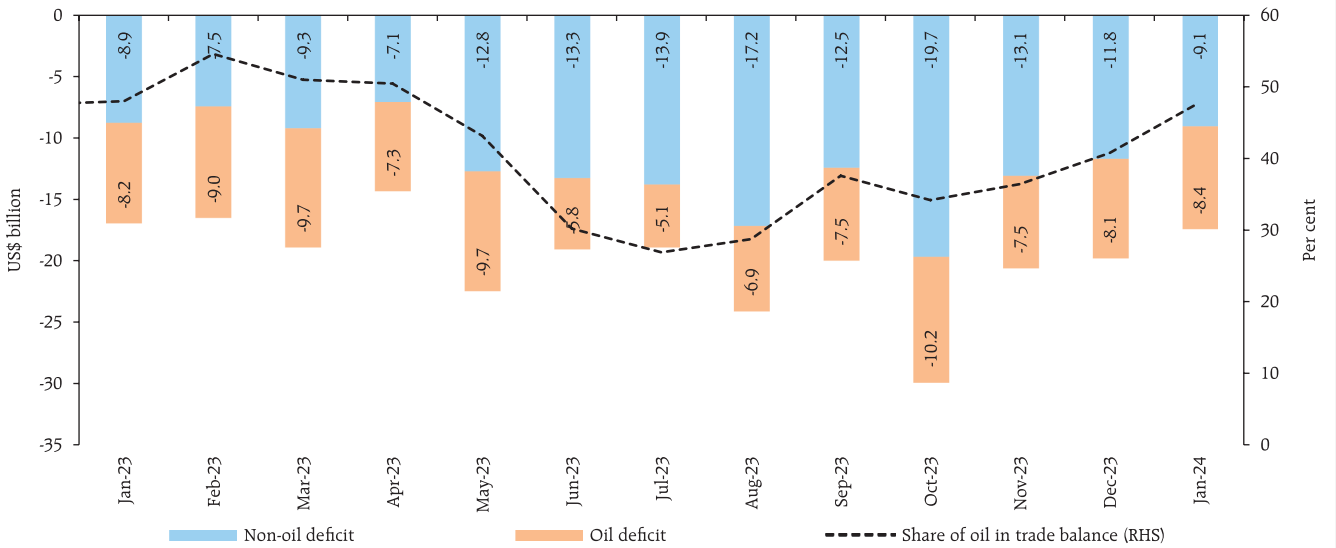
During April-January, 2023-24, India's merchandise exports at US$ 353.9 billion contracted by 4.9 per cent (y-o-y). Merchandise imports at US$ 561.1 billion declined by 6.7 per cent (y-o-y).

Chart III.11: India's Merchandise Imports – Relative Contribution (January 2024 over January 2023)



Sources: PIB; and RBI staff estimates.

Chart III.12: Decomposition of India's Merchandise Trade Deficit

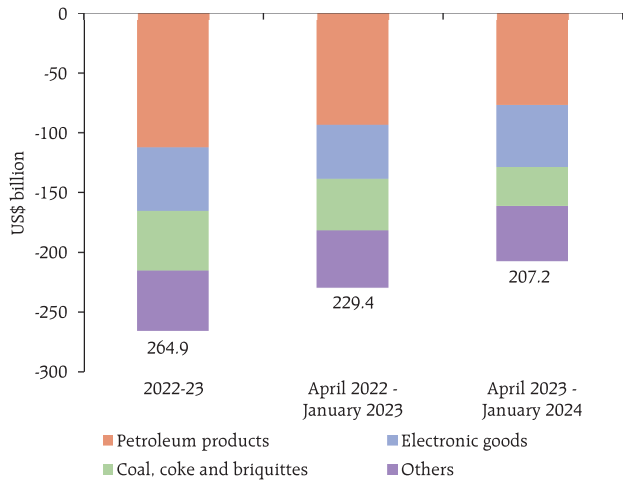


Sources: PIB; and DGCI&S.

Consequently, the merchandise trade deficit narrowed to US$ 207.2 billion during this period from US$ 229.4 billion during the corresponding period a year ago. Petroleum products were the largest source of the deficit, followed by electronic goods (Chart III.13).

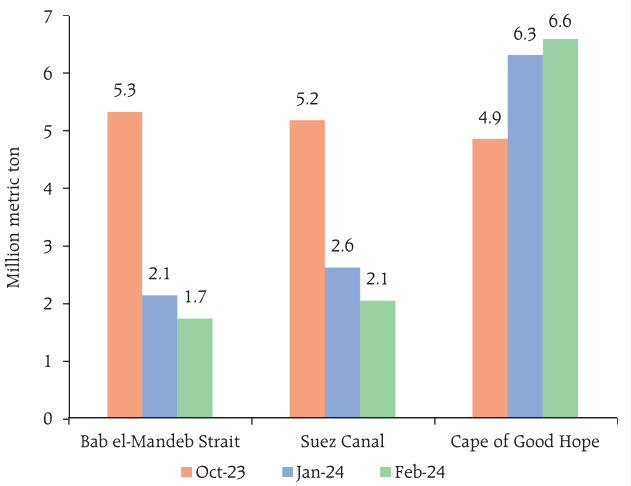
The disruptions in trade transiting though the Red Sea have necessitated re-routing of seaborne merchandise trade between Asia and Europe/north Africa *via* the Cape of Good Hope. The volume of goods passing through the Bab el-Mandeb Strait and the Suez Canal in January 2024 was less than half the average (Chart III.14). The increased transit time is pushing up shipping costs, while insurance premiums are also rising. About 48.7 per cent of India's merchandise

Chart III.13: Commodity wise Merchandise Trade Deficit



Note: Coal, coke and briquettes exports in January 2024 are assumed to be at the same level as in December.
Sources: PIB; DGCI&S; and RBI staff estimates.

Chart III.14: Disruptions in the Red Sea – Shipping Trade Volumes



Note: Data are monthly average. Data for February 2024 is average up to February 11.
Source: IMF PortWatch.

Chart III.15: Services Exports and Imports: Growth

Source: RBI.

exports and 30.4 per cent of imports are estimated to be exposed to this sea route[6].

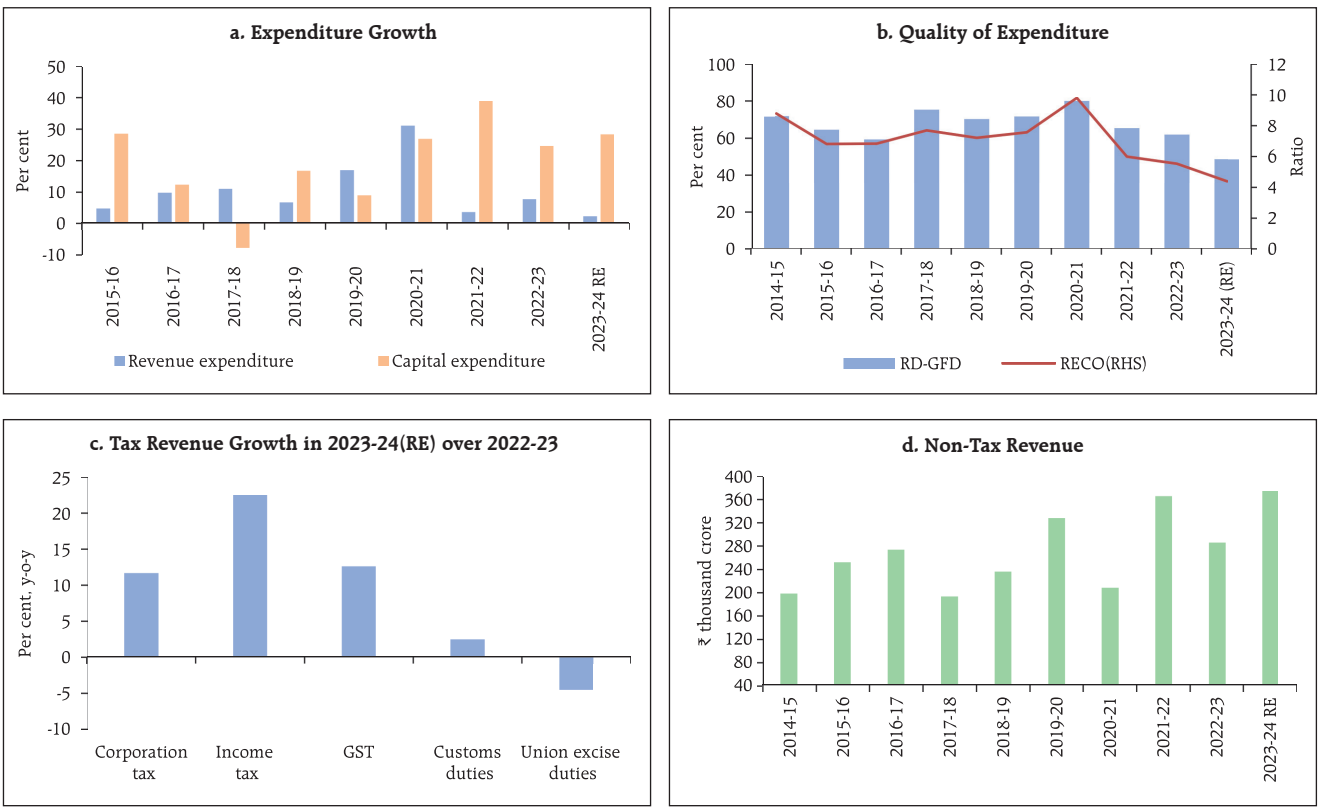
In December 2023, services exports rose by 1.3 per cent (y-o-y) to US$ 31.6 billion, driven by robust software, business, and travel services exports. Services imports declined by 1.2 per cent (y-o-y) to US$ 15.6 billion, mainly due to a decrease in transportation services (Chart III.15). As a result, net services exports earnings expanded by 3.9 per cent (y-o-y) to a record high of US$ 16.0 billion in December 2023.

The Interim Union Budget for 2024-25 adopted a balanced approach towards ensuring inclusive growth and sustainable development through fiscal consolidation as well as continued thrust on capital expenditure. During 2023-24 revised estimates (RE), capital expenditure of the Union government recorded an increase of 28.4 per cent (y-o-y) while revenue expenditure growth remained contained at 2.5 per cent (y-o-y) [Chart III.16a]. Capital outlay (*i.e.*, capital expenditure excluding loans and advances) recorded an increase of 29.2 per cent, resulting in a marked improvement in the quality of spending of the Union government (Chart III.16b). On the receipts side, direct tax collections grew by 17.2 per cent while indirect taxes increased by 7.0 per cent (y-o-y) in 2023-24(RE) [Chart III.16c]. Non-tax revenue recorded an increase of 31.7 per cent (y-o-y) on back of higher than budgeted surplus transfer by the Reserve Bank and public sector enterprises (Chart III.16d).

During 2023-24, the government continued with its fiscal consolidation efforts, with the GFD to GDP ratio placed at 5.8 per cent (RE), marginally below the budgeted 5.9 per cent, despite lower-than-expected nominal GDP growth. This is attributable to higher-than-expected non-tax revenue and lower capital expenditure in 2023-24. Revenue expenditure surpassed budget estimates (BE) by ₹38,103 crore

[6] The exposure is calculated as the share of total exports to/imports from North America, Europe, North Africa and select countries in west Asia in India's total exports/imports during April-November 2023. The share of Russia and Saudi Arabia is adjusted based on geographical access to alternate sea routes. It is assumed that all trade between these entities is sea borne.

Chart III.16: Fiscal Indicators



Source: Union Budget Documents.

while capital expenditure fell short by ₹50,715 crore[7], resulting in a reduction in total expenditure by ₹12,611 crore. On the receipts side, non-tax revenue exceeded the BE by ₹74,145 crore while non-debt capital receipts witnessed a shortfall of ₹28,000 crore in 2023-24 (RE). Further, while gross tax revenue exceeded BE, net tax revenue fell short by ₹6,713 crore due to higher than budgeted devolution to States.

For 2024-25, the Union Budget has aimed for a sizeable consolidation with GFD/GDP pegged at 5.1 per cent[8], 71 bps less than 2023-24 (RE). This reduction is sought to be achieved through containment of revenue expenditure to 11.2 per cent of GDP even as capital expenditure is budgeted to rise to 3.4 per cent of GDP (Table III.1). Further, in the Union Budget, the

Table III.1: Key Fiscal Indicators (as per cent of GDP)

Item	2022-23	2023-24		2024-25
	Actuals	BE	RE	BE
1	2	3	4	5
1. Fiscal Deficit	6.4	5.9	5.8	5.1
2. Primary Deficit	3.0	2.3	2.3	1.5
3. Revenue Deficit	3.9	2.9	2.8	2.0
4. Effective Revenue Deficit	2.8	1.7	1.8	0.8
5. Gross Tax Revenue	11.2	11.1	11.6	11.7
6. Non-Tax Revenue	1.0	1.0	1.3	1.2
7. Revenue Expenditure	12.7	11.6	11.9	11.2
8. Capital Expenditure	2.7	3.3	3.2	3.4
(i) Capital Outlay	*2.3*	*2.8*	*2.7*	*2.9*

Source: Union Budget Documents.

[7] There was around ₹24,000 crore reduction in the Special Assistance as Loan to States for capital expenditure in 2023-24(RE).

[8] Nominal GDP for 2024-25 (BE) has been projected at ₹3,27,71,808 crore assuming 10.5 per cent growth over the preceding year (*viz.*, ₹2,96,57,745 crore as per the first advance estimates for 2023-24 released by the Ministry of Statistics and Programme Implementation, Government of India).

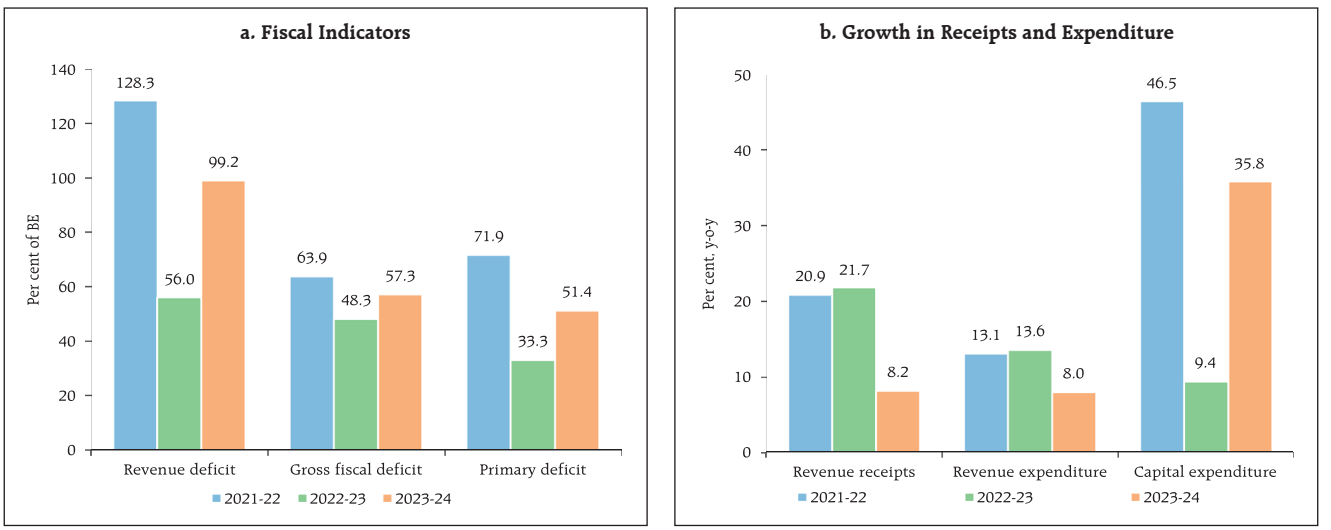
government has reiterated its commitment to attain the medium-term GFD target of 4.5 per cent of GDP by 2025-26.

The pronouncements in the Interim Union Budget 2024-25 are in line with the vision of *'Viksit Bharat' i.e.,* 'Prosperous *Bharat* in harmony with nature, with modern infrastructure, and provision of opportunities for all citizens and all regions to reach their potential'. To sustain the momentum of economic growth, the capex thrust especially on roads and railways has been continued. This would improve the quality of infrastructure in the country, enhance productivity and competitiveness of the Indian economy, and catalyze private investment and job creation.

As of Q3:2023-24, states' GFD reached 57.3 per cent of their BEs (Chart III.17a).[9] States' tax and non-tax revenues recorded growth of 14.6 per cent and 19.5 per cent, respectively. Grants from the Union government, however, contracted following the cessation of GST compensation to states and the tapering of finance commission grants. States' total revenue receipts witnessed a y-o-y growth of 8.2 per cent (Chart III.17b and Chart III.18a).

On the expenditure front, capital spending of states grew by 35.8 per cent (y-o-y), reflecting the continued thrust by the Union government. This was aided by the *Scheme for Special Assistance to States for Capital Investment.* By December 2023, the Union government had sanctioned ₹1.01 lakh crore (of the ₹1.3 lakh crore allocated for 2023-24), of which ₹61,499 crore has already been disbursed to the states. The scheme, introduced initially in 2021-22, has been extended till 2024-25 by the Interim Union Budget, with a budgeted growth of 23.2 per cent over 2023-24 (RE). The sustained capex push has improved the quality of expenditure of the states (Chart III.18b). The Interim Union Budget has estimated an increase of 8.4 per cent for gross transfers to the states during 2024-25 (BE), largely due to enhanced tax devolution and an increase

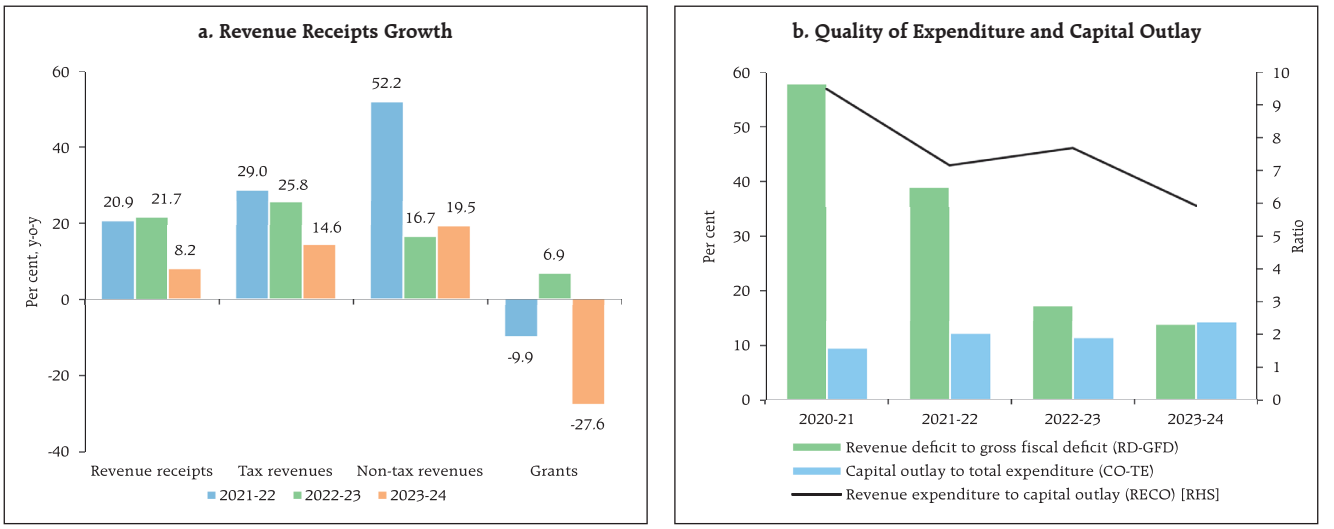
Chart III.17: States' Fiscal Indicators (April - December)



Note: Data pertains to 25 states.
Source: CAG.

[9] Data pertain to 25 states.

Chart III.18: States' Revenues and Expenditures (April - December)



Note: Data pertains to 25 states.
Source: CAG.

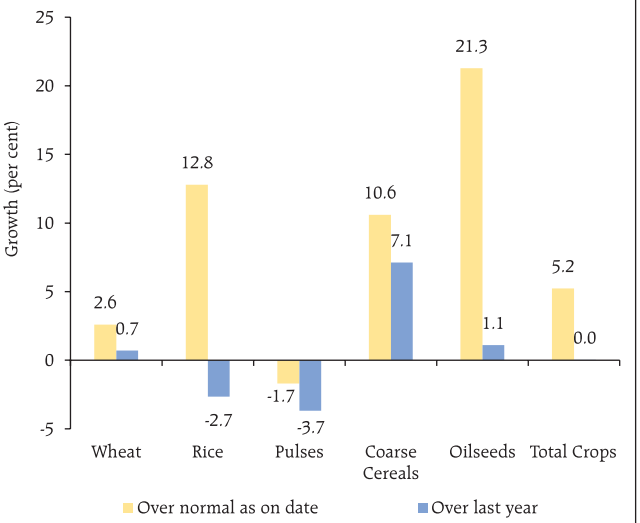
in allocation for special assistance (as loans) to the states.

Aggregate Supply

The Interim Budget for 2024-25 has focused on improving the productivity of agriculture and encouraging exports of allied activities, *viz.*, dairy sector, marine products, promoting the use of nano fertilizers and bio-agri-inputs while reducing import dependency in oilseeds and arresting the post-harvest losses. On the food security front, rice procurement by the central agencies progressed steadily. The Union government has also announced a host of measures to address high food inflation.[10] The buffer stock, as on February 01, 2024, stood at 7.6 times and 1.0 time of rice and wheat buffer norm, respectively.[11]

Rabi crop acreage during 2023-24 stood at 709.3 lakh hectares[12], a tad higher than the sown area last year and 5.2 per cent higher than the normal acreage. Area under all major crops, except rice and pulses, remained higher on a y-o-y basis (Chart III.19). Area sown under wheat, which accounted for 47 per cent of *rabi* full season normal area, increased by 0.7 per cent y-o-y.

Chart III.19: *Rabi* Acreage (as on February 02, 2024)



Source: Ministry of Agriculture and Farmers' Welfare.

[10] The government, as on February 02, 2024, announced the retail sale of 'Bharat Rice' at ₹29/kg, mandatory stock disclosures for rice/paddy by traders/wholesalers, retailers, big chain retailers and processors/millers on a regular basis, and enhanced the quantity of wheat under OMSS to 5 lakh tonnes per auction from 4.5 lakh tonnes. On February 08, 2024, the government revised down the stockholding limit for traders/wholesalers, big chain retailers and processors/millers, and provisioned additional quantity of wheat for OMSS operations as well as Bharat *atta.*

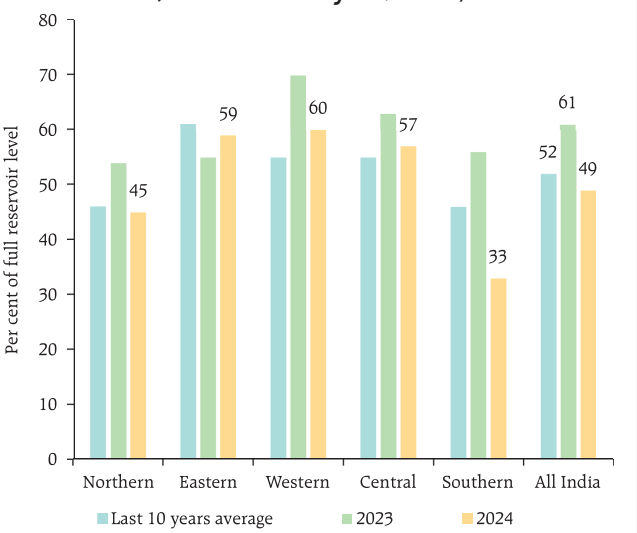
[11] The norm for the January-March quarter for rice and wheat is 76.1 lakh tonnes and 138 lakh tonnes, respectively.

[12] As per the final report released on February 02, 2024.

For February 2024, the IMD's prediction of above normal rainfall bodes well for the standing *rabi* wheat crop. However, the forecast for above normal maximum temperatures over many parts of the northwest and west central India poses a concern for wheat crops in these regions. Strong *El Nino* conditions over the Equatorial Pacific are likely to weaken steadily and turn to *El Nino* Southern Oscillation (ENSO) neutral conditions by the end of the spring season of 2024 which is a positive sign for upcoming monsoon season in 2024.

The water reservoir position at all India level (as of February 08, 2024) at 49 per cent of total reservoir capacity was lower than last year and the decadal average by 18.8 per cent and 5.8 per cent, respectively. All regions, except the eastern region, recorded lower storage levels than last year. Water storage was lower than the decadal average in the northern, eastern and southern regions (Chart III.20).

Chart III.20: Reservoir level (as on February 08, 2024)

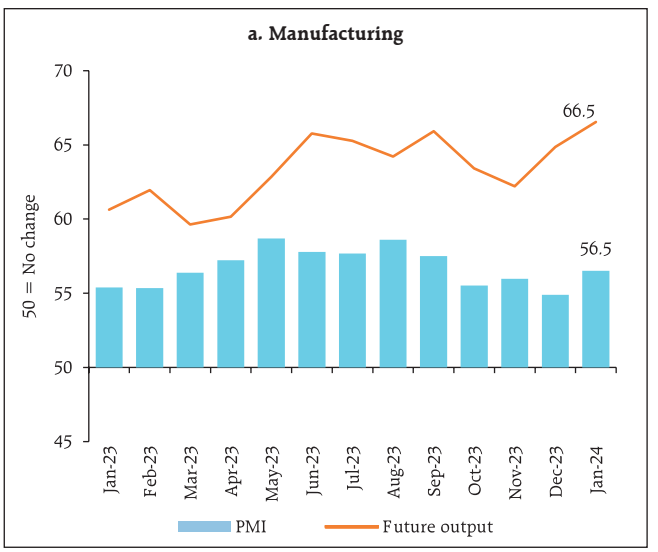


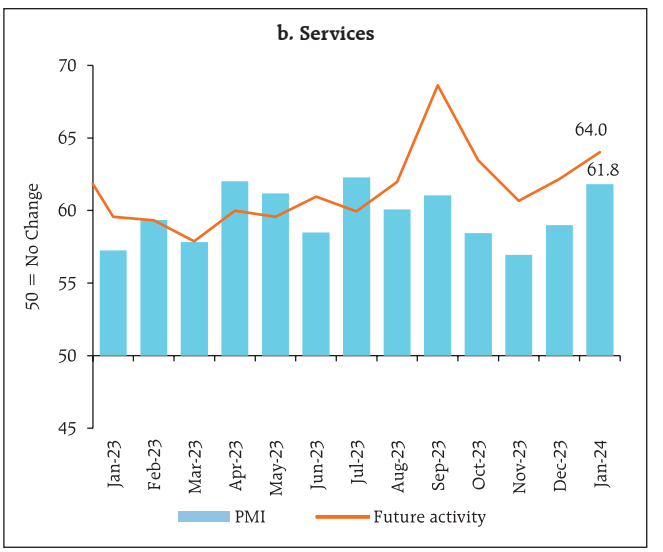
Source: Central Water Commission.

The headline PMI for the manufacturing sector expanded to a four-month high of 56.5 in January 2024, supported by new orders and output (Chart III.21a). The PMI for services expanded to a six-month high of 61.8 in January, led by expansion of new business (Chart III.21b).

Sales of listed private manufacturing companies recorded 3.8 per cent growth (y-o-y) during Q3:2023-24[13]. Real sales growth (a proxy for volume

Chart III.21: Purchasing Managers' Index (PMI)





Source: S&P Global.

[13] based on data of 1,354 early-reporting companies.

Chart III.22: Corporate Sector Performance

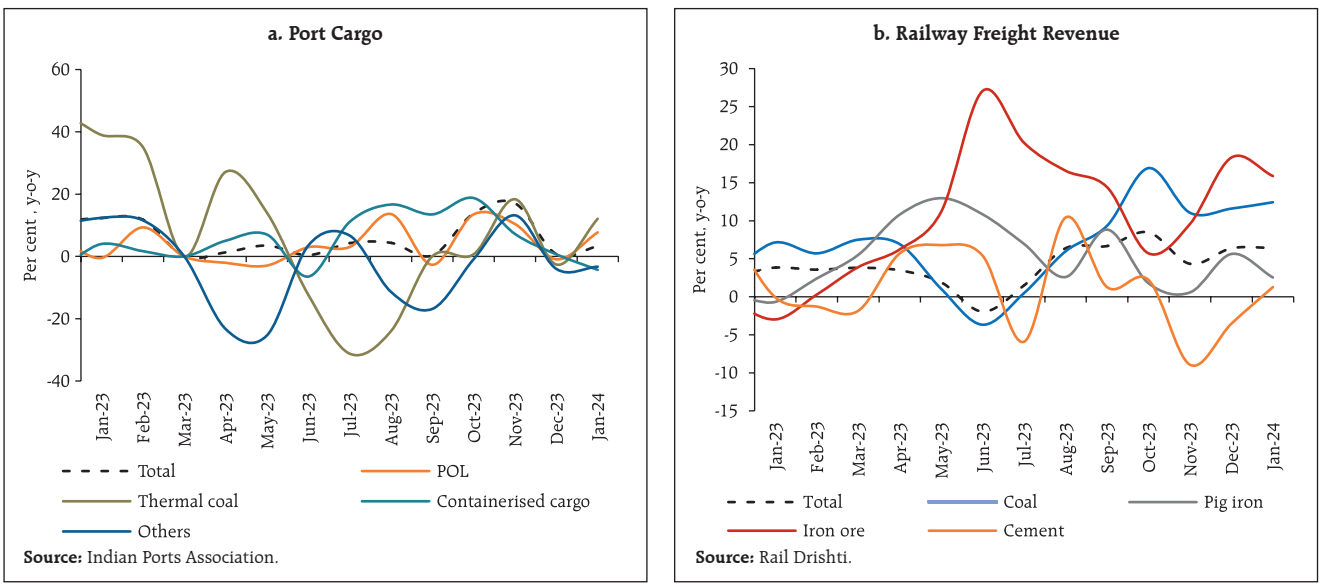
Note: Results are based on 2,204 listed non-government non-financial companies for Q3:2023-24.
Dotted lines are based on the common companies.
Sources: Capitaline; and RBI staff estimates.

growth), outpaced nominal sales growth for the third successive quarter (Chart III.22a). Higher income supported improvement in operating profits on both sequential and annual basis. While revenue growth of information technology (IT) firms decelerated further, that of non-IT services sector remained in double digits (Chart III.22b and III.22c).

Major ports experienced an increase of 3.2 per cent in cargo traffic, marked by a rise in carriage of petroleum, oil and lubricants (POL), iron ore and coal (Chart III.23a). A pick-up in freight movement of iron ore and coal also resulted in higher railway freight revenues (Chart III.23b).

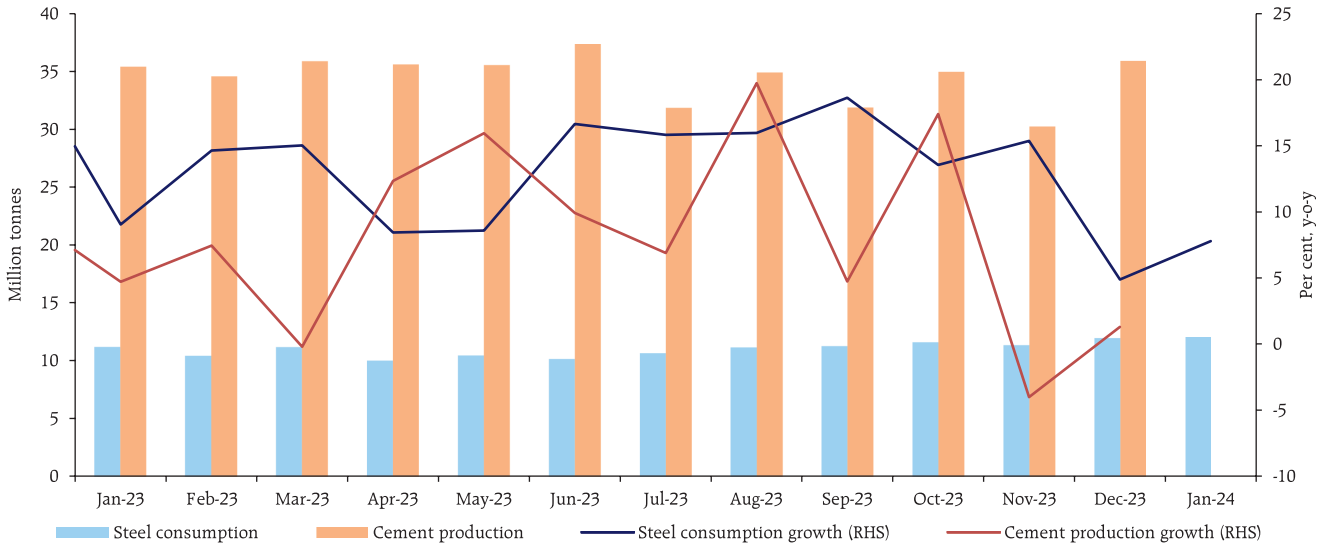
Construction sector indicators give a mixed picture, with steel consumption growing at a

Chart III.23: Port Cargo and Railway Traffic



Source: Indian Ports Association.
Source: Rail Drishti.

Chart III.24: Steel Consumption and Cement Production



Sources: Joint Plant Committee; and Office of the Economic Adviser, Ministry of Commerce and Industry.

healthy rate of 7.8 per cent in January, while cement production recorded a much lower growth of 1.3 per cent in December 2023 (Chart III.24).

Various high frequency indicators for the services sector remained robust in January 2024 (Table III.2).

Table III.2: High-Frequency Indicators – Services

Growth (y-o-y, per cent)

Sector	Indicator	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Urban demand	Passenger Vehicles Sales	11.0	4.5	12.9	14.9	1.6	2.9	11.6	3.1	17.3	4.3	3.2	13.9
Rural demand	Two Wheeler Sales	7.6	7.7	15.1	17.4	1.7	-7.2	0.6	0.8	20.1	31.3	16.0	26.24
	Three Wheeler Sales	86.1	69.2	104.2	70.4	98.6	78.9	68.8	47.0	42.1	30.8	30.6	9.48
	Tractor Sales	20.0	13.7	-11.1	1.2	4.2	6.1	1.1	-14.7	-4.3	6.4	-19.8	-15.3
Trade, hotels, transport, communication	Commercial Vehicles Sales	11.8		-3.3			6.9			3.2			
	Railway Freight Traffic	3.6	3.8	3.5	1.9	-1.9	1.5	6.4	6.7	8.5	4.3	6.4	6.4
	Port Cargo Traffic	11.8	0.0	1.3	3.5	0.4	4.3	4.4	0.3	13.8	17.0	0.7	3.2
	Domestic Air Cargo Traffic*	0.0	-4.4	-1.7	-12.7	-12.2	-14.0	0.6	13.5	15.5	20.1	-8.9	11.8
	International Air Cargo Traffic*	-8.1	0.8	-3.0	-0.5	5.8	-2.7	15.3	28.7	29.2	10.2	8.8	20.6
	Domestic Air Passenger Traffic *	50.2	22.9	23.2	15.9	21.1	25.5	27.3	38.8	22.8	9.9	1.1	5.0
	International Air Passenger Traffic*	98.0	62.4	43.9	35.8	24.1	21.1	25.0	40.5	33.4	21.4	6.2	20.7
	GST E-way Bills (Total)	18.4	16.3	12.2	19.7	15.5	16.4	19.5	9.5	30.5	8.5	13.2	
	GST E-way Bills (Intra State)	22.2	20.7	16.2	23.0	18.8	20.8	22.6	12.4	30.0	22.7	14.2	
	GST E-way Bills (Inter State)	12.4	9.3	5.9	14.3	9.9	9.1	14.4	4.9	31.2	-16.2	11.4	
	Hotel occupancy rate@	71.2	62.7	63.2	61.9	64.0	60.9	60.9	61.0	62.5	63.0		
	Average revenue per room	62.0	39.6	21.2	15.8	14.0	14.2	13.9	18.3	14.8	15.9		
	Tourist Arrivals	259.4	132.5	53.7	41.3	24.0	13.6	22.6	17.5	19.8	16.8		
Construction	Steel Consumption	14.6	15.0	8.4	8.6	16.7	15.8	16.0	18.6	13.6	15.4	4.9	7.8
	Cement Production	7.4	-0.2	12.4	15.9	9.9	6.9	19.7	4.7	17.4	-4.0	1.3	
PMI Index#	Services	59.4	57.8	62.0	61.2	58.5	62.3	60.1	61.0	58.4	56.9	59.0	61.8

Note: #: Data in levels. *: Data are based on the monthly average of daily figures. @: Data in rate, not in y-o-y rate of growth.
Sources: CMIE; CEIC; IHS Markit; SIAM; Airports Authority of India; and Joint Plant Committee.

Inflation

Headline inflation, as measured by y-o-y changes in the all-India consumer price index (CPI)[14], moderated to 5.1 per cent in January 2024 from 5.7 per cent in December 2023 (Chart III.25). The 60 bps softening in inflation came from a negative momentum of around 10 bps further supported by a favourable base effect of around 50 bps. The negative momentum in overall CPI was on account of a m-o-m decline in food prices by around 60 bps, while fuel and core group (*i.e.*, excluding food and fuel) witnessed a positive momentum of around 40 bps and 30 bps, respectively.

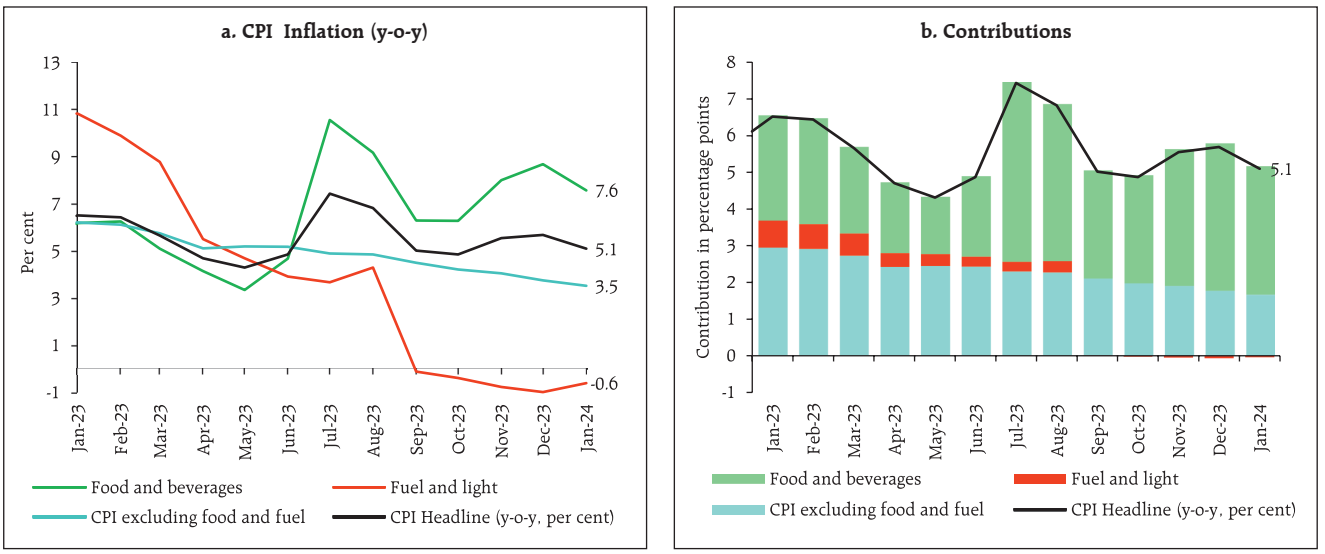
Food inflation (y-o-y) fell to 7.6 per cent in January 2024 from 8.7 per cent in December 2023. In terms of sub-groups, the correction occurred in cereals, milk, fruits, vegetables, pulses, spices and prepared meals. Prices of eggs, meat, fish and sugar registered an increase in inflation. Edible oils remained in deflation, and inflation in non-alcoholic beverages prices remained steady (Chart III.26).

The fuel and light group continued to record deflation at (-) 0.6 per cent in January 2024, as against (-) 1.0 per cent in December 2023 mainly on account of a slowdown in the rate of deflation of kerosene prices. Inflation (y-o-y) in electricity, LPG, firewood and chips prices remained broadly steady.

Core inflation eased to 3.5 per cent in January from 3.8 per cent in December. The moderation was mostly broad-based and across various sub-groups such as pan, tobacco and intoxicants, clothing and footwear, housing, household goods and services, health, recreation and amusement and personal care and effects. While inflation remained steady in transport and communications, it edged up marginally in education (Chart III.27).

In terms of regional distribution, inflation softened across both rural and urban areas in January 2024, with rural inflation at 5.3 per cent and urban inflation at 4.9 per cent. Majority of the states recorded inflation less than 6 per

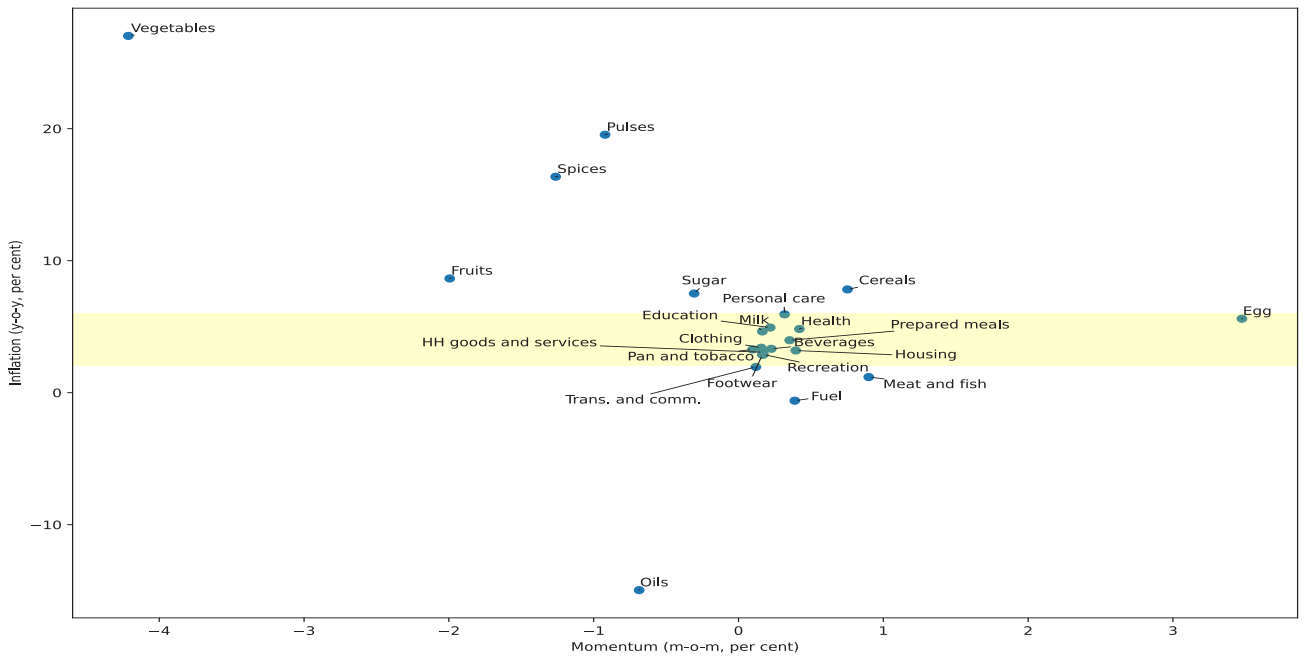
Chart III.25: Trends and Drivers of CPI Inflation



Sources: NSO; and RBI staff estimates.

[14] As per the provisional data released by the National Statistical Office (NSO) on February 12, 2024.

Chart III.26: Annual Inflation (y-o-y) and Momentum (m-o-m) across Sub-groups

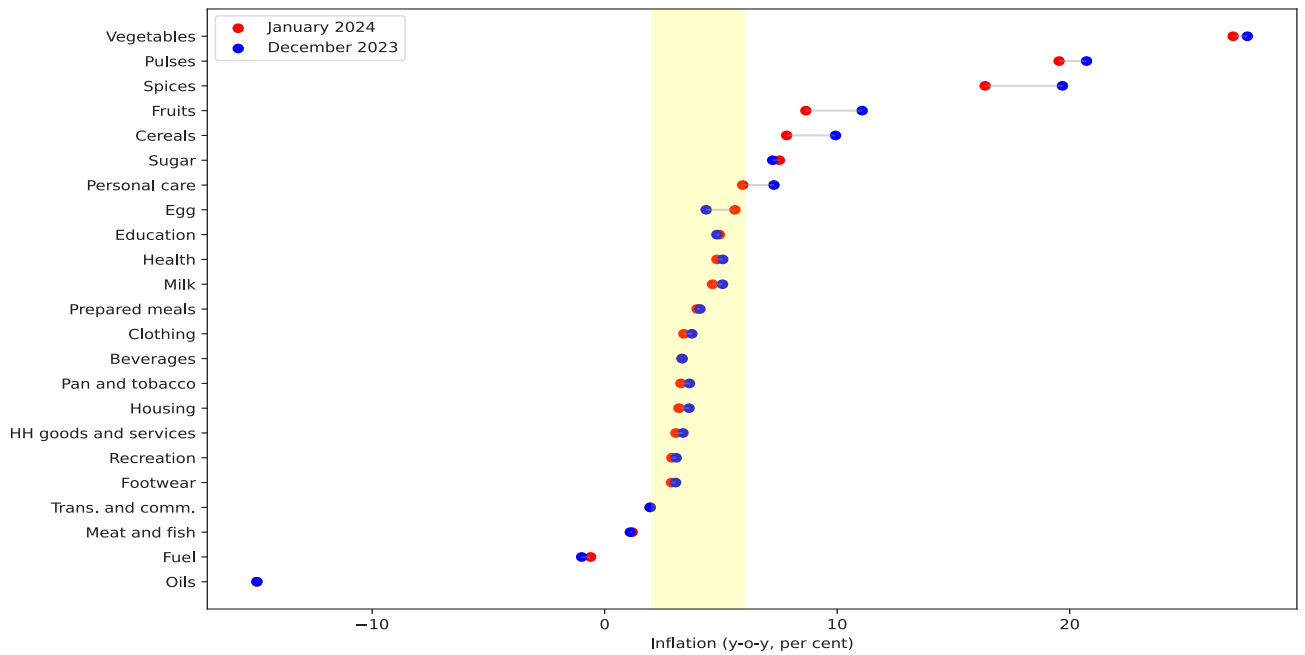


Sources: NSO; and RBI staff estimates.

cent (Chart III.28) with 23 out of 37 states/UTs facing inflation lower than the all-India figure of 5.1 per cent.

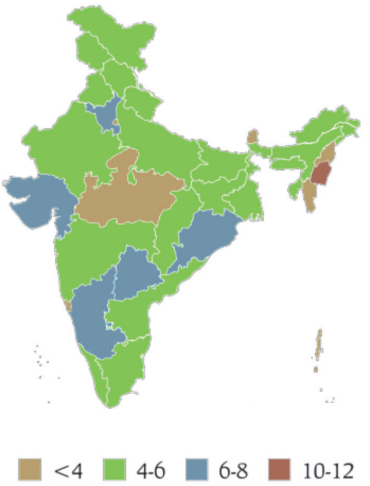
High frequency food price data for February so far (up to 12th) show that while cereal prices rose further, pulses prices declined. Edible oil prices also

Chart III.27: Annual Inflation across Sub-groups (January 2024 versus December 2023)



Sources: NSO; and RBI staff estimates.

Chart III.28: Spatial Distribution of Inflation January 2024 (CPI-Combined, y-o-y, per cent)



Note: Map is for illustrative purposes only.
Sources: NSO; and RBI Staff estimates.

remained in a broad-based decline (Chart III.29). Amongst key vegetables, tomato prices registered a sequential uptick in February so far, but onion and potato prices corrected further.

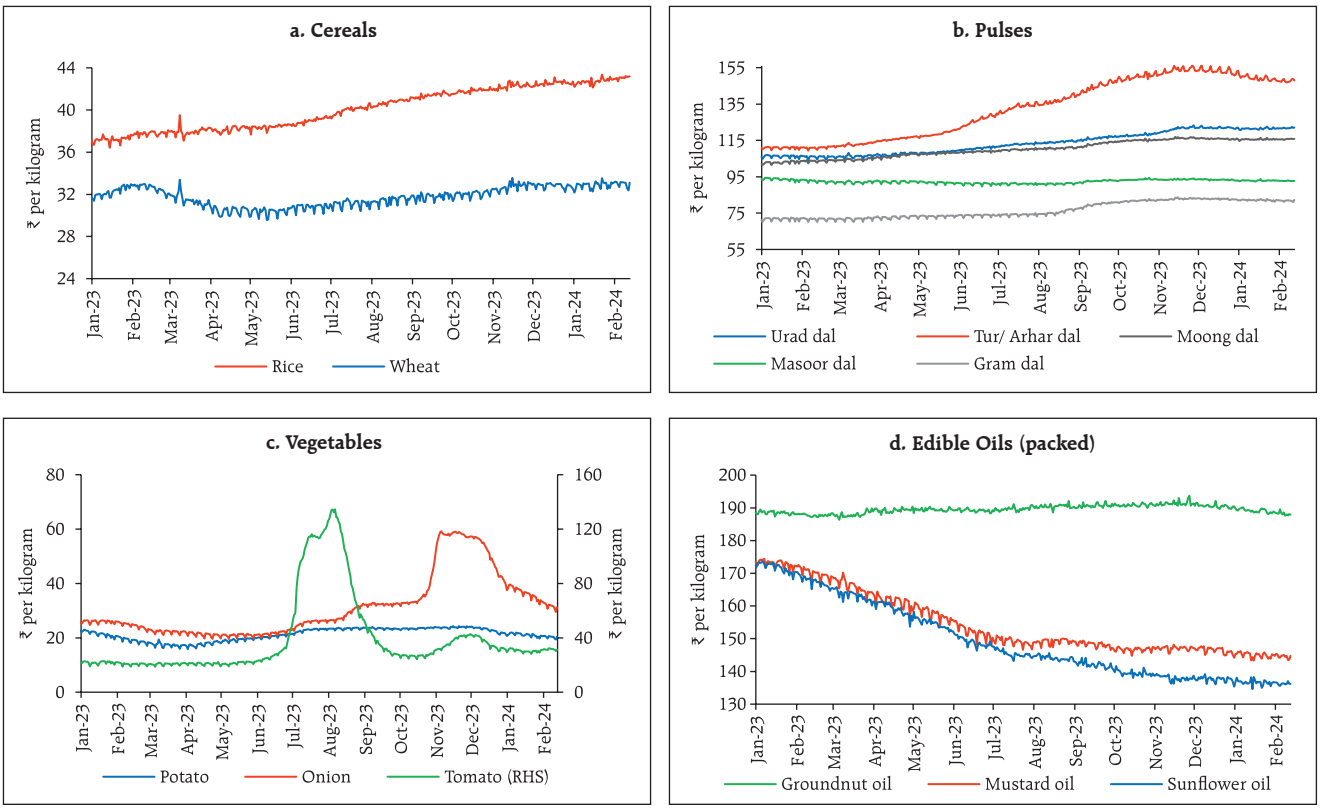
Table III.3: Petroleum Products Prices

Item	Unit	Domestic Prices			Month-over-month (per cent)	
		Feb-23	Jan-24	Feb-24^	Jan-24	Feb-24^
Petrol	₹/litre	102.92	102.92	102.92	0.0	0.0
Diesel	₹/litre	92.72	92.72	92.72	0.0	0.0
Kerosene (subsidised)	₹/litre	55.79	50.50	50.50	-3.1	0.0
LPG (non-subsidised)	₹/cylinder	1063.25	913.25	913.25	0.0	0.0

^: For the period February 1-12, 2024.
Note: Other than kerosene, prices represent the average Indian Oil Corporation Limited (IOCL) prices in four major metros (Delhi, Kolkata, Mumbai and Chennai). For kerosene, prices denote the average of the subsidised prices in Kolkata, Mumbai and Chennai.
Sources: IOCL; Petroleum Planning and Analysis Cell (PPAC); and RBI staff estimates.

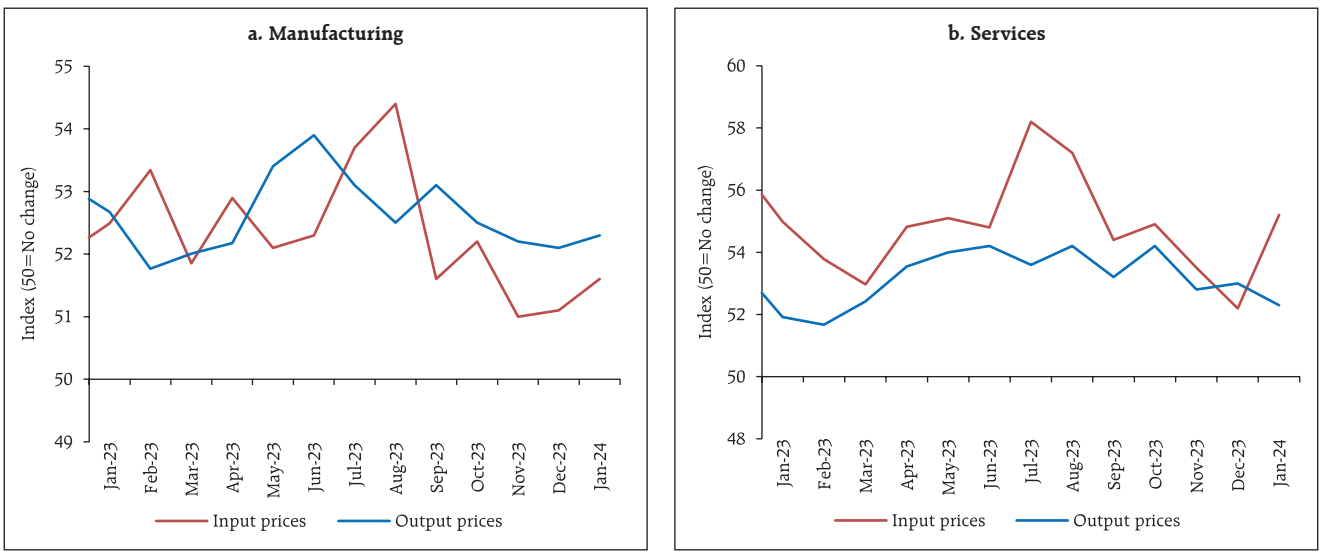
Retail selling prices of petrol and diesel in the four major metros remained steady in February so far (up to 12th). Kerosene and LPG prices were also kept unchanged in February so far (Table III.3).

Chart III.29: DCA Essential Commodity Prices



Sources: Department of Consumer Affairs, GoI; and RBI staff estimates.

Chart III.30: PMI: Input and Output Prices

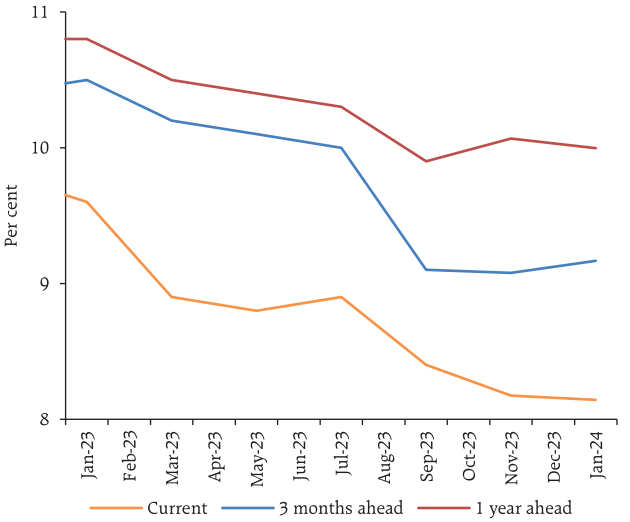


Source: S&P Global.

The PMIs for January 2024 indicated an uptick in input costs across manufacturing and service sectors. Selling prices, on the other hand, increased in the manufacturing sector while they moderated for the services sector (Chart III.30).

In the January 2024 round of the RBI's inflation expectations survey of households, their current perception as well as one year ahead expectations of inflation moderated by 10 bps each (Chart III.31). Inflation expectation for three months ahead period was, however, a shade higher in the latest survey round as respondents expected some rise in food inflation in the short-term.

Chart III.31: Households' Median Inflation Expectations



Source: RBI.

IV. Financial Conditions

During the second half of January 2024 and early February, liquidity conditions largely mirrored movements in government cash balance, *i.e.*, a frictional driver. While liquidity conditions tightened in the second half of January 2024 following the build-up of government cash balance, they eased for a brief period in the beginning of February with increase in government spending (Chart IV.1a). Liquidity conditions eased significantly after the announcement of the Interim Budget 2024-25 with the market realising the potential for higher government spending implicit in the revised estimates of government cash balances projected for 2023-24. As a result, banks drew down their excess reserves significantly which alleviated the liquidity stress in the banking system and eased the pressure on short-term rates in the first week of February. With short term rates plummeting

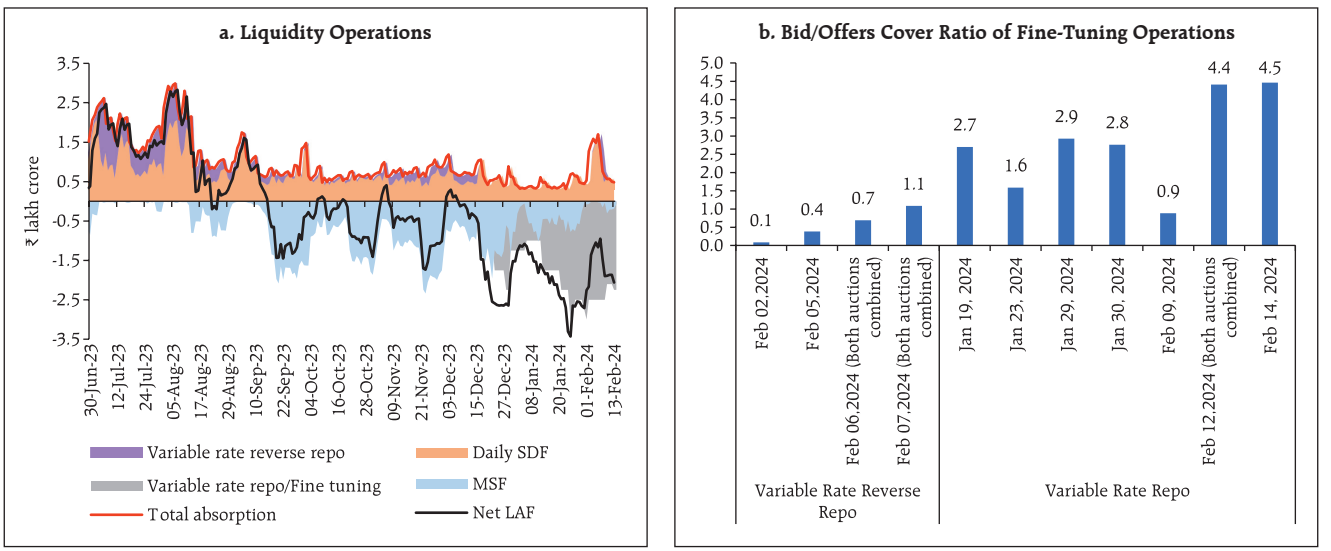
close to the SDF rate after February 1, the Reserve Bank conducted six fine tuning variable rate reverse repo (VRRR) operations with varying maturity (1-4 days) withdrawing cumulatively ₹1.54 lakh crore from the banking system. The fine-tuning VRRR auctions progressively elicited better response as banks became confident of government spending (Chart IV.1b). Liquidity conditions tightened again in line with build-up of government cash balance in the second week of February. Going ahead, rising government expenditure is expected to ease liquidity conditions.

During this period, the Reserve Bank conducted two main variable rate repo (VRR) operations and eight fine-tuning VRR auctions (up to February 15) to alleviate pressure on liquidity conditions. The demand for funds is reflected in high bid-cover ratio for fine-tuning VRR auctions conducted on February 12 and February 14. Banks also took recourse to the marginal standing facility (MSF) and borrowed, on an average, nearly ₹0.31 lakh crore (up to February 15, 2024).[15] The placement of funds under the standing deposit facility (SDF) averaged ₹0.61 lakh crore.

Reflecting shifting liquidity dynamics, the weighted average call rate (WACR) – the operating target of monetary policy – came down below the policy repo rate from February 5, before firming up again from February 8. The spread of the WACR over the policy repo rate averaged 20 bps during January 15 – February 15, 2024 (Chart IV.2a). Rates in the collateralised segment – the triparty and market repo rates – also moved in tandem with WACR (Chart IV.2b). In the term money segment, however, the yield on 3-month commercial paper (CP) for non-banking financial companies (NBFCs) and certificates of deposit (CDs) stayed elevated.

In the primary market, fund mobilisation through issuance of CDs at ₹6.2 lakh crore during 2023-24 (up to January 2024) was higher than ₹5.4 lakh crore a year ago. Banks' reliance on the issuance

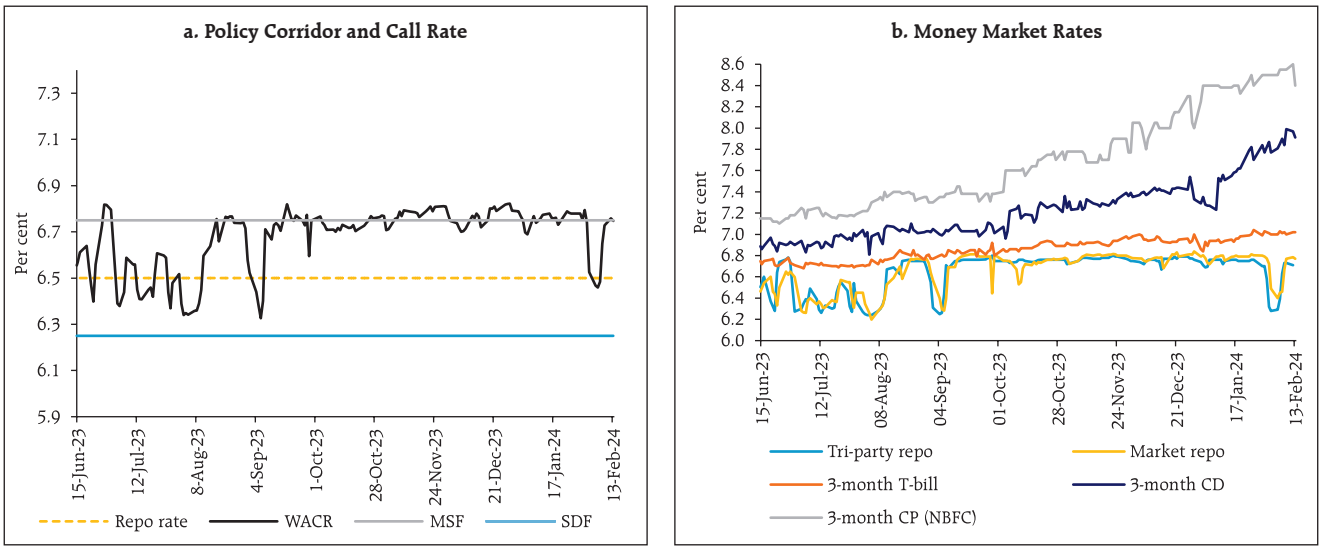
Chart IV.1: Developments in Liquidity Conditions



Source: RBI.

[15] The reversal of liquidity facilities under both SDF and MSF even during weekends and holidays, as announced in the December policy statement, has facilitated better funds management by the banks.

Chart IV.2: Policy Corridor and Money Market Rates

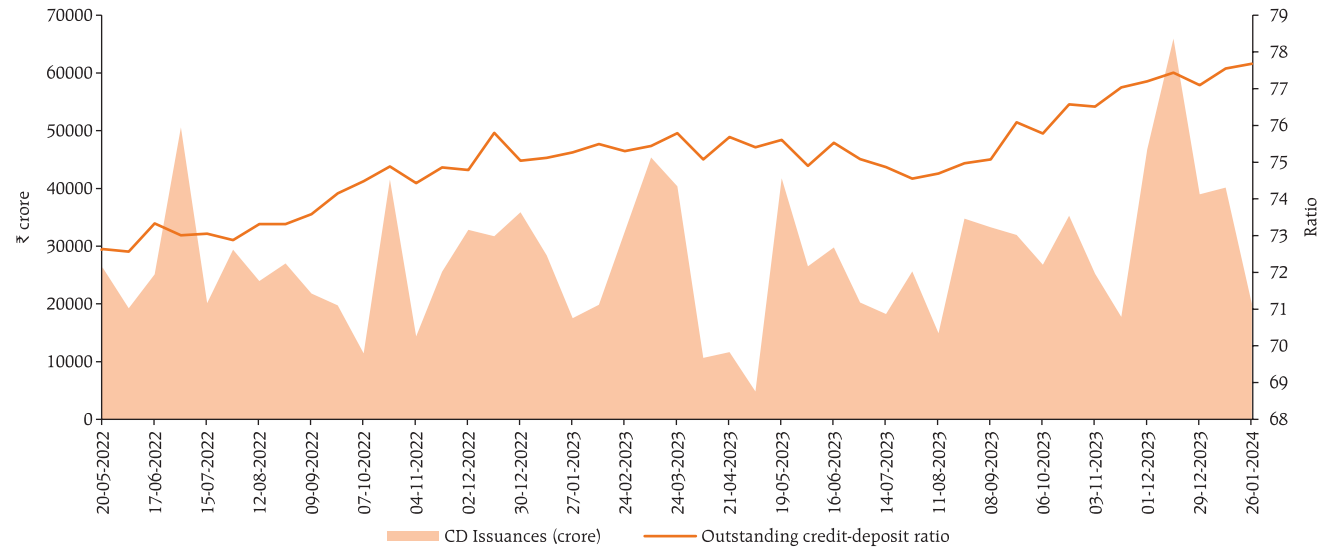


Sources: RBI; CCIL; and Bloomberg.

of CDs has increased this year amidst robust credit growth without commensurate growth in deposits (Chart IV.3). CP issuances at ₹10.8 lakh crore (up to January 2024) were also robust, largely similar to ₹11.4 lakh crore during the same period a year ago.

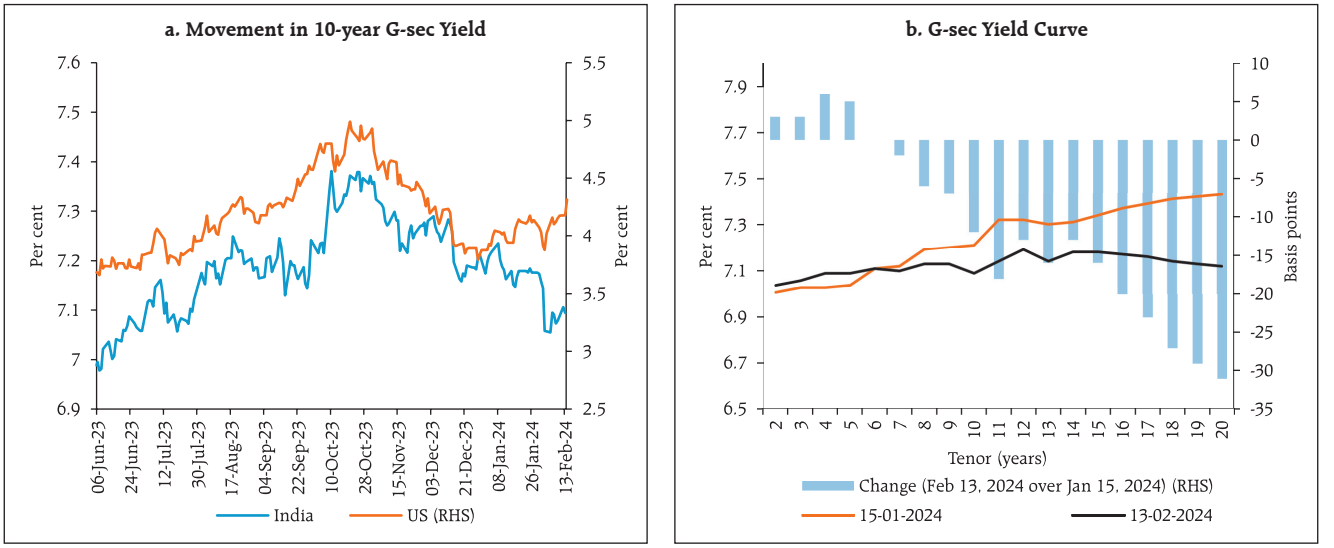
The yield on the 10-year G-sec benchmark softened to 7.09 per cent on February 15 from 7.15 per cent on January 15 (Chart IV.4a). Bond yields declined sharply on February 1 following budget announcement of gross market borrowings, which was much lower than market expectations. The yield curve shifted downwards with pronounced softening of yields across the mid to the long end of the curve (Chart IV.4b).

Chart IV.3: CD issuances



Source: RBI.

Chart IV.4: Developments in the G-sec Market



Sources: Bloomberg; CCIL; and RBI staff estimates.

Corporate bond yields and the associated risk premia exhibited a mixed trend during January 15 to February 14, 2024 (Table IV.1). Corporate bond issuances during 2023-24 (up to November) were higher at ₹6.1 lakh crore as compared with ₹5.3 lakh crore a year ago. Easing long term yields and relative stability in the bond market amidst a healthy economic outlook has prompted investors to raise funds for investments through debt issuances.

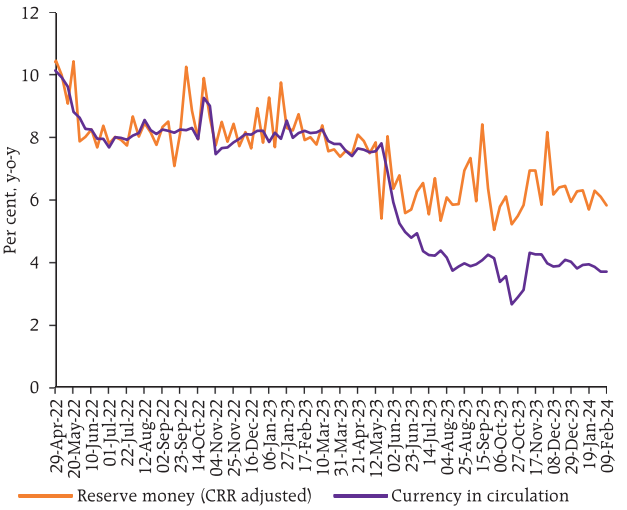
Reserve Money (RM) growth decelerated to 5.8 per cent as on February 9, 2024 from 11.2 per cent a year ago (8.8 per cent adjusted for the first-round impact of change in Cash Reserve Ratio (CRR) [Chart IV.5]. The growth in currency in circulation (CiC),

Table IV.1: Financial Markets - Rates and Spread

Instrument	Interest Rates (per cent)			Spread (basis points) (Over Corresponding Risk-free Rate)		
	Dec 18, 2023 – Jan 12, 2024	Jan 15, 2024 – Feb 14, 2024	Variation	Dec 18, 2023 – Jan 12, 2024	Jan 15, 2024 – Feb 14, 2024	Variation
1	2	3	(4 = 3-2)	5	6	(7 = 6-5)
Corporate Bonds						
(i) AAA (1-year)	8.02	8.01	-1	79	75	-4
(ii) AAA (3-year)	7.93	8.00	7	76	84	8
(iii) AAA (5-year)	7.97	7.82	-15	75	63	-12
(iv) AA (3-year)	8.58	8.61	3	140	146	6
(v) BBB- (3-year)	12.22	12.26	4	504	511	7

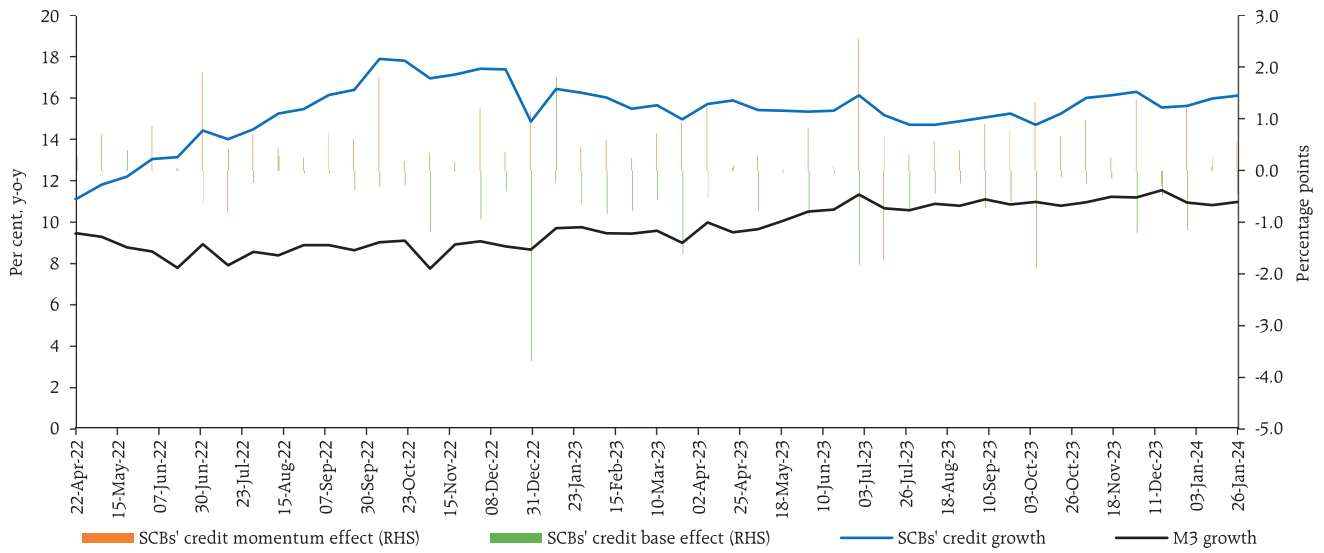
Note: Yields and spreads are computed as monthly averages.
Sources: FIMMDA; and Bloomberg.

Chart IV.5: Reserve Money and Currency in Circulation



Source: RBI.

Chart IV.6: M_3 Growth and Credit Growth of SCBs - Base and Momentum Effect



Source: RBI.

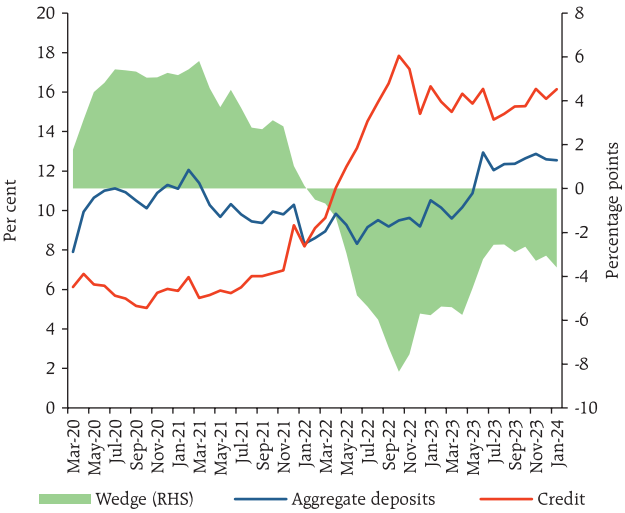
the largest component of RM, decelerated to 3.7 per cent from 8.2 per cent a year ago, reflecting the withdrawal of ₹2000 banknotes.[16]

Money supply (M_3) rose by 11.0 per cent (y-o-y) as on January 26, 2024 (9.8 per cent a year ago)[17]. Aggregate deposits with banks, the largest component of M_3, increased by 12.0 per cent (10.0 per cent a year ago). Scheduled commercial banks' (SCBs) credit growth stood at 16.1 per cent as on January 26, 2024 (16.3 per cent a year ago) [Chart IV.6].

SCBs' deposit growth (excluding the impact of the merger), which registered an increase in the wake of the withdrawal of ₹2000 banknotes, remained in double digits in January 2024 (Chart IV.7).

During June 2022 - May 2023, the incremental credit-deposit ratio remained above 100 per cent, but declined thereafter to below 100 per cent, reflecting the surge in deposit mobilisation. As on January 26, 2024 the incremental credit-deposit ratio stood at 96.9 per cent (Chart IV.8).

Chart IV.7: SCBs' Aggregate Deposits and Credit Growth - Wedge

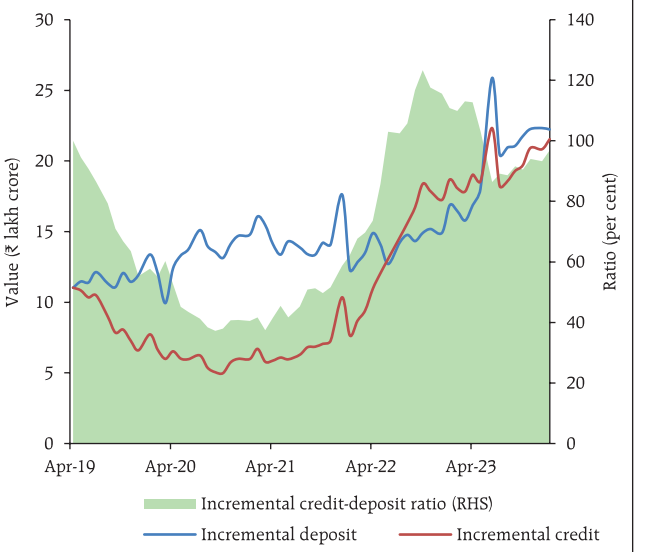


Source: RBI.

[16] Announced on May 19, 2023.

[17] excluding the impact of the merger of a non-bank with a bank (with effect from July 1, 2023).

Chart IV.8: Incremental Credit-Deposit Ratio



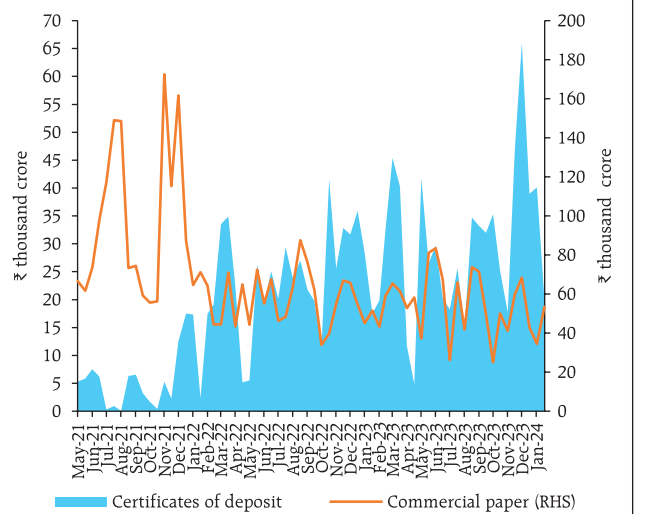
Source: RBI.

With the statutory requirements for CRR and statutory liquidity ratio (SLR) at 4.5 per cent and 18 per cent respectively, around 77.0 per cent of deposits were available with the banking system for credit expansion as on January 26, 2024. The deposit base is being supplemented by issuances of CDs (Chart IV.9).

In response to the cumulative 250 bps hike in the policy repo rate since May 2022, banks have revised their repo-linked external benchmark-based lending rates (EBLRs) upward by the same magnitude. The 1-year median marginal cost of funds-based lending rate (MCLR) increased by 155 bps during May 2022 to January 2024. Consequently, the weighted average lending rate (WALR) on fresh rupee and outstanding rupee loans increased by 181 bps and 113 bps, respectively, during May 2022 to December 2023. Tight liquidity conditions, coupled with robust credit demand, prompted banks to increase their term deposit rates in recent months. The weighted average domestic term deposit rate (WADTDR) on fresh and outstanding deposits increased by 246 bps on and 180 bps, respectively, during May 2022 to December 2023 (Chart IV.10).

The pass-through to WALRs on fresh rupee loans and WADTDRs on fresh deposits was higher for public sector banks than for private banks, while transmission to WALRs on outstanding loans was higher for private banks (Chart IV.11).

Chart IV.9: Certificates of Deposit (CDs) and Commerical Paper (CPs) - Fortnightly Issuances

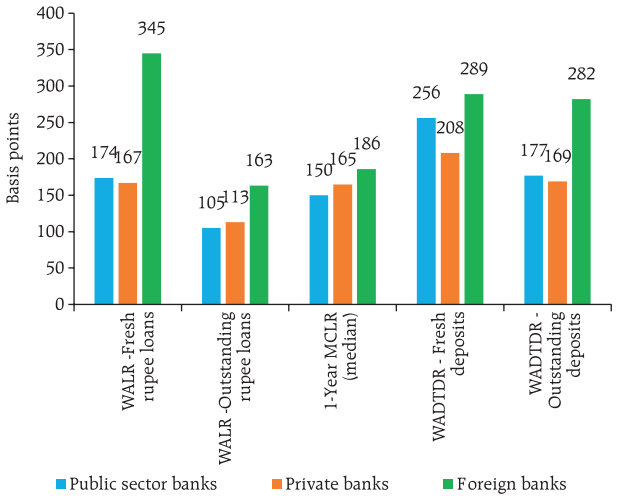


Source: RBI.

Chart IV.10: Transmission to Lending and Deposit Rates of SCBs (May 2022 to December 2023)

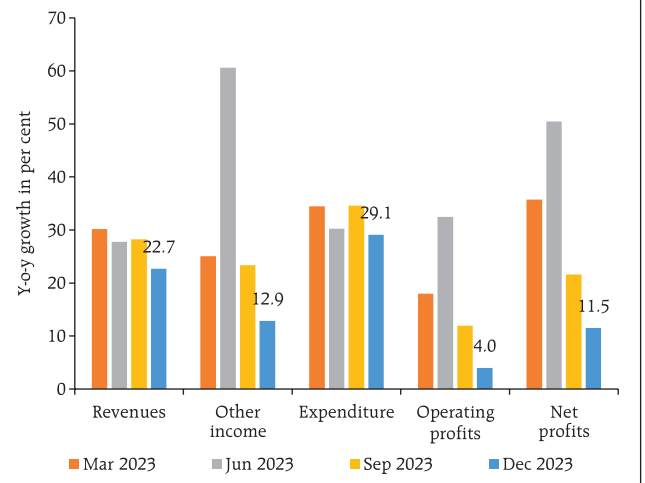
Note: Data on 1-year MCLR are up to January 2024.
Source: RBI.

Chart IV.11: Transmission across Bank Groups (May 2022 to December 2023)



Note: Data on 1-year MCLR are up to January 2024.
Source: RBI.

Chart IV.12: Performance of Listed Financial Companies



Note: Includes the historical standalone figures of HDFC Limited, which was merged with HDFC Bank in July 2023.
Sources: CMIE Prowess; and RBI staff estimates.

For a sample of 380[18] listed banking and financial sector companies, revenues, which primarily include the interest income in case of banks, registered double digit growth amidst strong credit demand. Other income, which includes income from fees, commissions, profit and loss from investments, also remained resilient. Expenditure growth outpaced revenue growth amidst an increase in interest and other expenses, leading to some moderation in growth of operating profits. Lower provisioning costs, however, boosted the net profit of banks and financial sector companies (Chart IV.12).

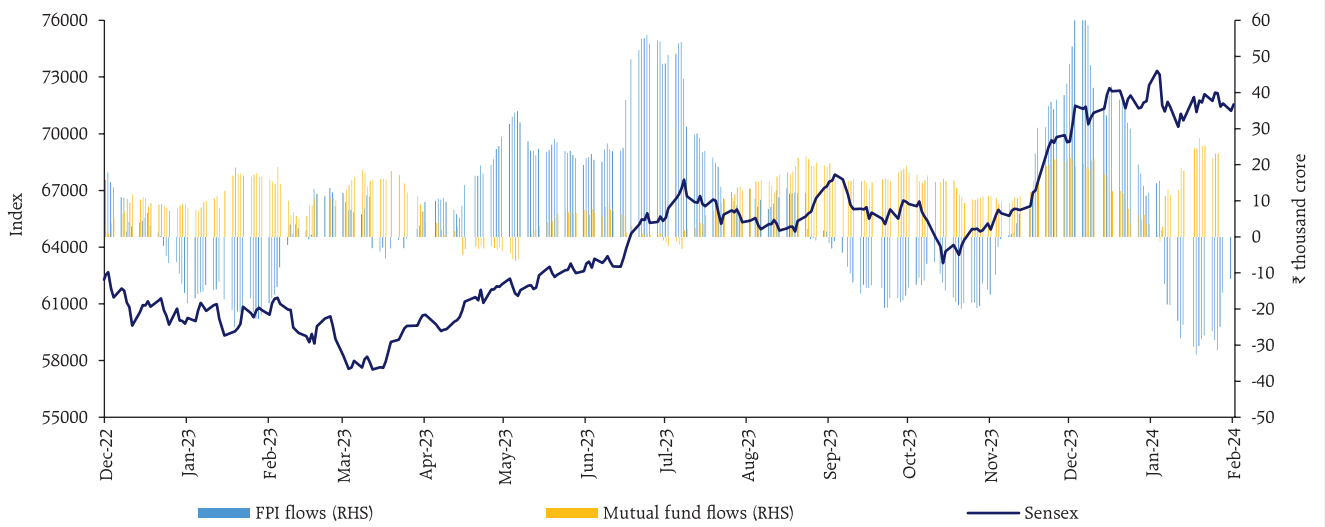
The Indian equity market benchmark BSE Sensex hit its all-time high of 73,328 on January 15, 2024 tracking positive global cues (Chart IV.13). FPI sell-off following quarterly earnings from a major private sector bank, however, imparted volatility to the Indian market. Thereafter, markets oscillated between gains and losses amid liquidation of a large Chinese real estate developer, hawkish comments by the US Federal Reserve Chair in the Federal Open Market Committee (FOMC) meeting and announcement of the interim Union Budget, 2024-25. Subsequently, moderation in domestic CPI inflation and pickup in IIP growth aided market sentiments. Overall, the BSE Sensex closed at 71,555 on February 13, 2024, lower by 2.4 per cent from its mid-January 2024 peak.

Macroeconomic uncertainty – as measured from the responses of the professional forecasters (SPF)[19] survey – suggest that uncertainty continues to remain low, coinciding with a low VIX – a volatility index based on Nifty index option prices (Chart IV.14).

[18] Constituting around 82 per cent of the market capitalisation of listed financial companies.

[19] Patra, M. D., Mohan, R., John, J. and Bhattacharyya, I. (2023). Measuring Uncertainty: An Indian Perspective *RBI Bulletin*, October.

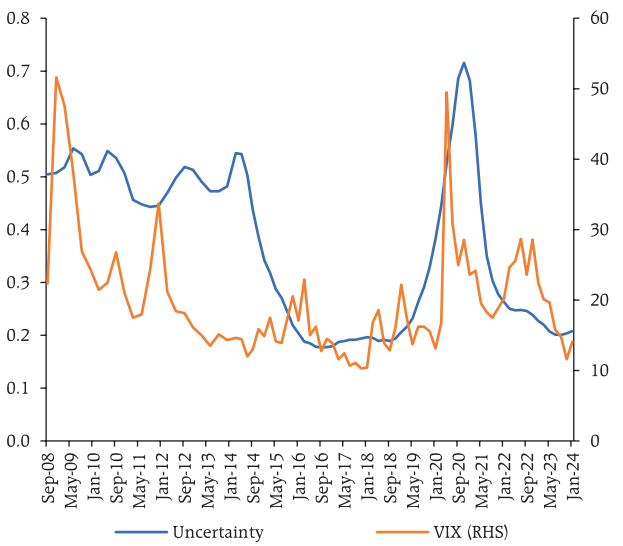
Chart IV.13: BSE Sensex and Institutional Flows



Note: FPI and MF flows are represented on 15-days rolling sum basis.
Source: Bloomberg.

Gross inward foreign direct investment (FDI) moderated to US$ 51.5 billion during April- December 2023 from US$ 55.5 billion during the corresponding period a year ago (Chart IV.15a). Net FDI at US$ 9.7 billion during April- December 2023 were lower than US$ 21.6 billion a year ago, mainly due to a rise in repatriation of equity capital. About 65 per cent of the FDI equity inflows were received in manufacturing, electricity and other energy sectors, transport, financial services, and retail and wholesale trade sectors. Singapore, Mauritius, the US, Japan, the UAE and the Netherlands accounted for more than three-fourths of the equity flows during the same period. According to fDi Intelligence[20], the number of globally announced greenfield FDI projects increased from 156 in 2022 to 174 in 2023. The most popular FDI sectors in 2023 were associated with green energy and digitisation, reflecting an undergoing structural shift in the world economy (Chart IV.15b). The United Nations Conference on Trade and Development (UNCTAD) expects a modest increase in global FDI flows in 2024, supported by receding inflation and a subsequent fall in the cost of borrowings. Existing risks in the form of persistent geopolitical tensions, heightened macroeconomic uncertainties and deepened geo-fragmentation concerns, however, limit the FDI outlook for 2024.

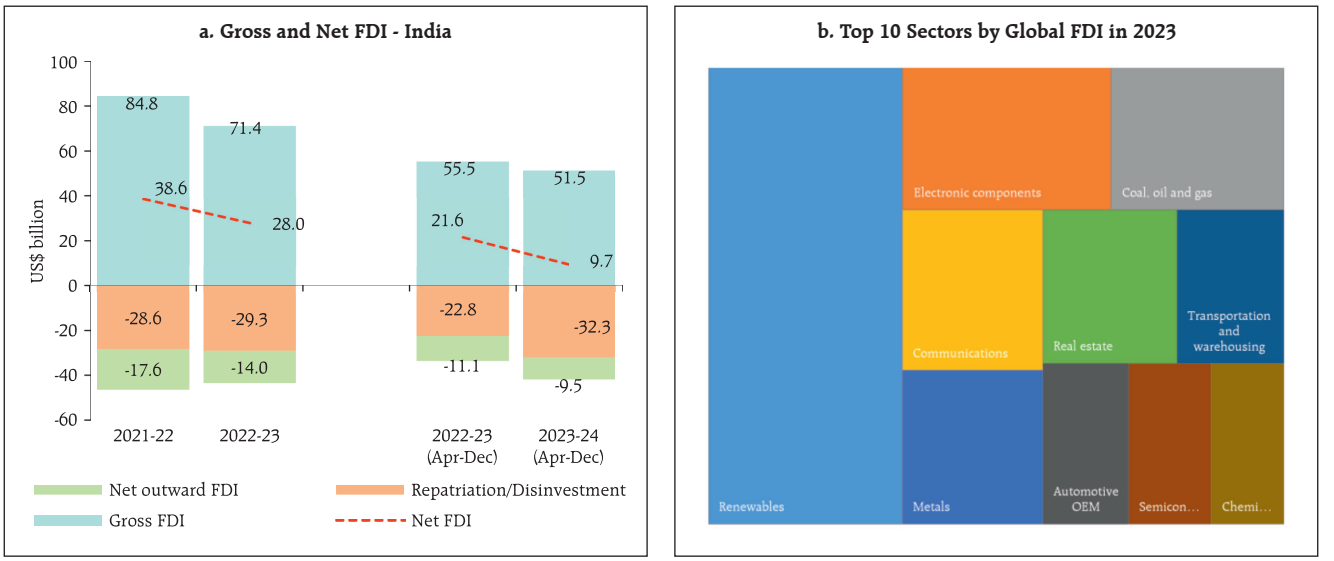
Chart IV.14: Macroeconomic Uncertainty



Source: Bloomberg; and RBI staff estimates.

[20] A specialist division from the Financial Times that provides a comprehensive offering of services related to foreign direct investment

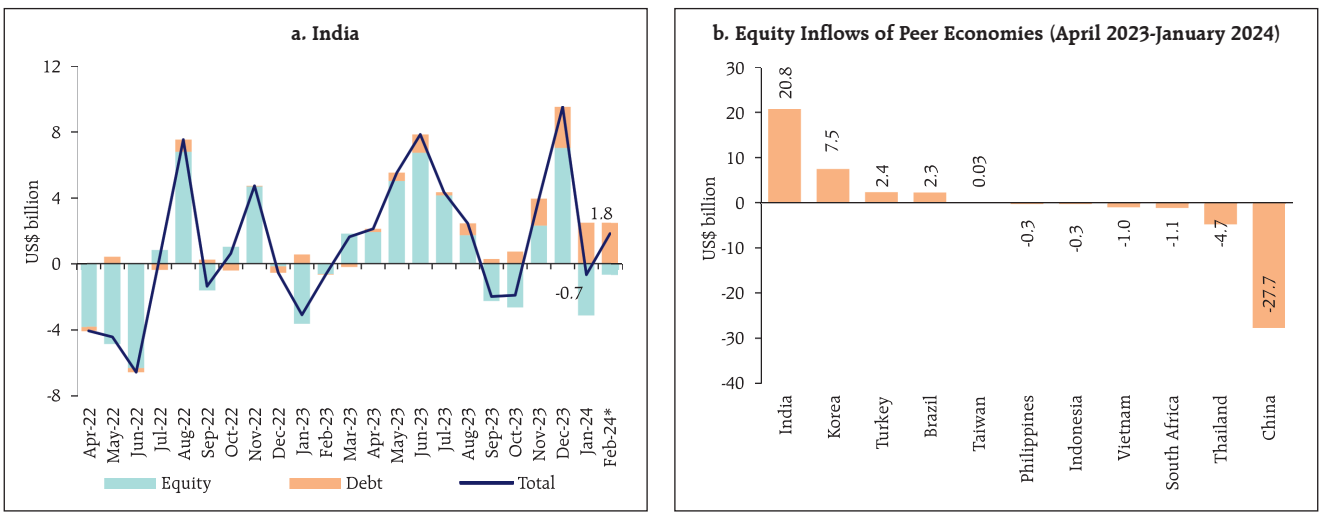
Chart IV.15: Foreign Direct Investment Flows



Sources: RBI; and fDi Intelligence.

Foreign portfolio investment (FPI) flows turned negative after two months in January 2024, weighed by rising US treasury yields. Net FPI outflows were to the tune of US$ 0.7 billion in January 2024 due to outflows in the equity segment (Chart IV.16a). The debt segment, however, recorded net inflows of US$ 2.5 billion, continuing the positive trajectory since April 2023. Within equity, financial services and FMCG recorded the highest outflows, while information technology, and oil, gas and consumable fuel received the largest inflows during January 2024. In February 2024 (up to 15th), FPI flows turned positive with net FPI inflows of US$ 1.8 billion. On a cumulative basis, net FPI inflows amounted to US$ 32.9 billion during 2023-24 so far (up to 15th February), led by equity inflows. Net equity inflows to India were to the tune

Chart IV.16: Net Portfolio Investments



Notes: 1. Debt includes investments under the voluntary retention route and hybrid instruments.
2. *: Data up to February 15, 2024.

Sources: National Securities Depository Limited; and Institute of International Finance.

of US$ 20.8 billion during 2023-24 (up to January 2024), which is the highest among emerging market peers (Chart IV.16b).

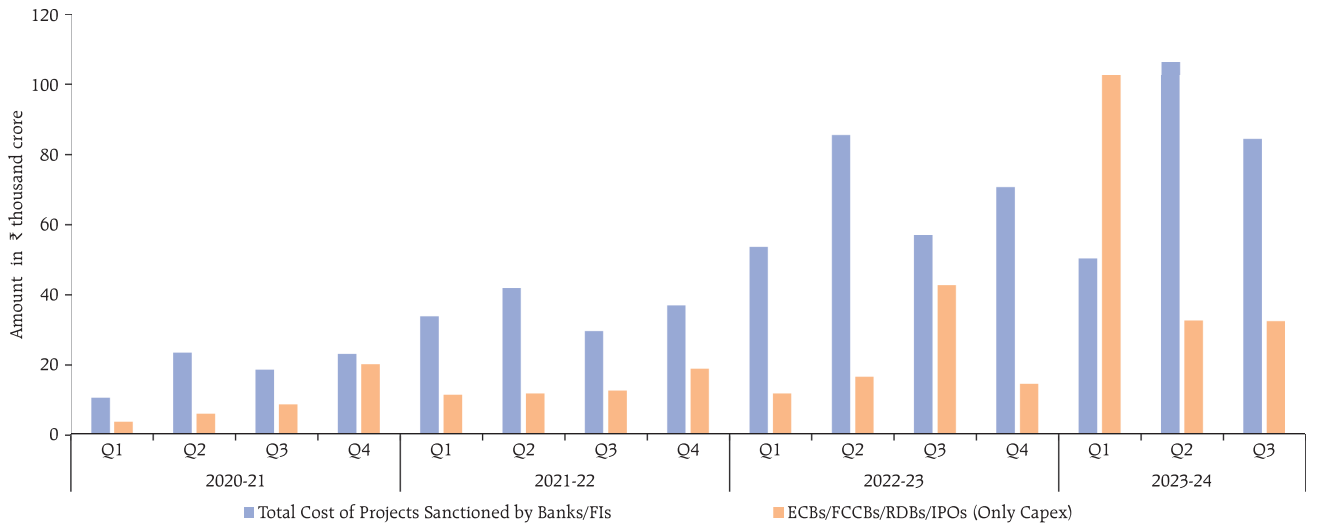
Net accretions to non-resident deposits increased to US$ 9.3 billion during April-December 2023 from US$ 5.4 billion a year ago, mainly due to a rise in net accretions to Foreign Currency Non-Resident [FCNR(B)] accounts and Non-Resident (External) Rupee Accounts [NR(E)A].

Overall, investment intentions of the private corporate sector have been positive this year so far. Total cost of projects, for which loans were sanctioned by major banks/all-India financial institutions (FIs) stood at ₹2.4 lakh crore during April-December 2023, which was 23 per cent higher than that in the corresponding period last year. Funds raised through external commercial borrowings (ECBs) for capex and initial public offerings (IPOs) remained robust during the second and third quarters of the current financial year, though their levels were lower than such resources raised during Q1:2023-24 (Chart IV.17).

During April-December 2023, ECB registrations (US$ 36.1 billion) and disbursements (US$ 25.6 billion) have been higher than their levels in the corresponding period in earlier years. After the unusually high amount of ECB registrations (US$ 21 billion) during Q1:2023-24, new registrations normalised to US$ 8 billion and US$ 7 billion during the second and third quarters of 2023-24, respectively. Adjusting for principal repayments, net ECB inflows stood at US$ 5.6 billion this year so far as against net outflows of US$ 2.3 billion in the corresponding period last year (Chart IV.18a). Out of total ECBs registered during April-December 2023, more than three-fourths are for capital expenditure (Chart IV.18b). Also, nearly three-fourths of ECBs raised were effectively hedged in terms of explicit hedging, rupee denominated loans or loans from foreign parents, offsetting considerably the interest and exchange rate sensitivity of foreign exposures (Chart IV.18c).

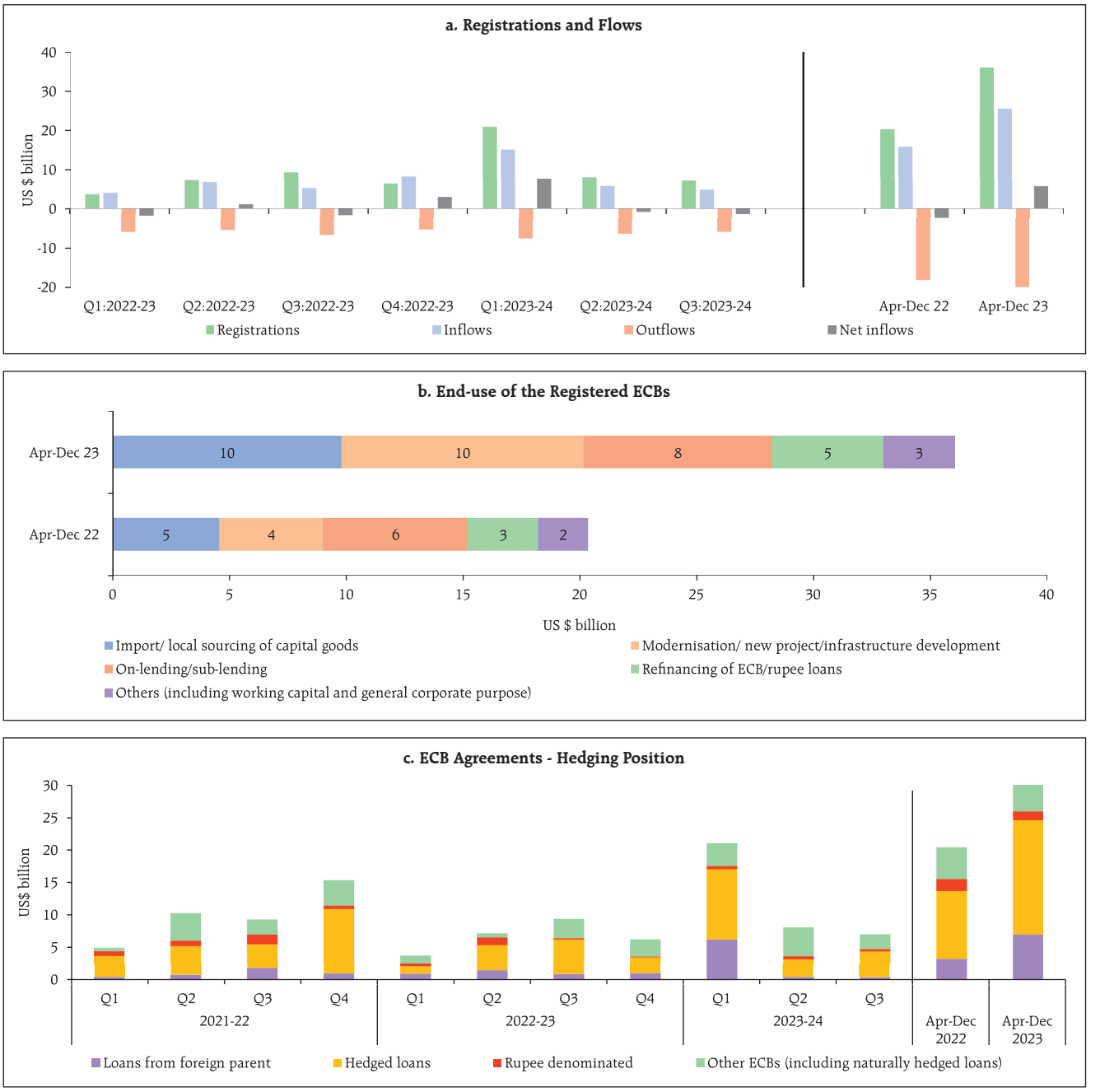
The secured overnight financing rate (SOFR), the global benchmark interest rate, increased by 50 bps during April-July 2023 but stabilised later

Chart IV.17: Private Corporate Investment Intentions



Note: ECB: External Commerical Borrowings; FCCB: Foreign Currency Convertible Bonds; RDB: Rupee Denominated Bonds; IPO: Initial Public Offerings.
Sources: RBI; SEBI; Project financed data collected from select banks/FIs, and RBI staff estimates.

Chart IV.18: External Commercial Borrowings

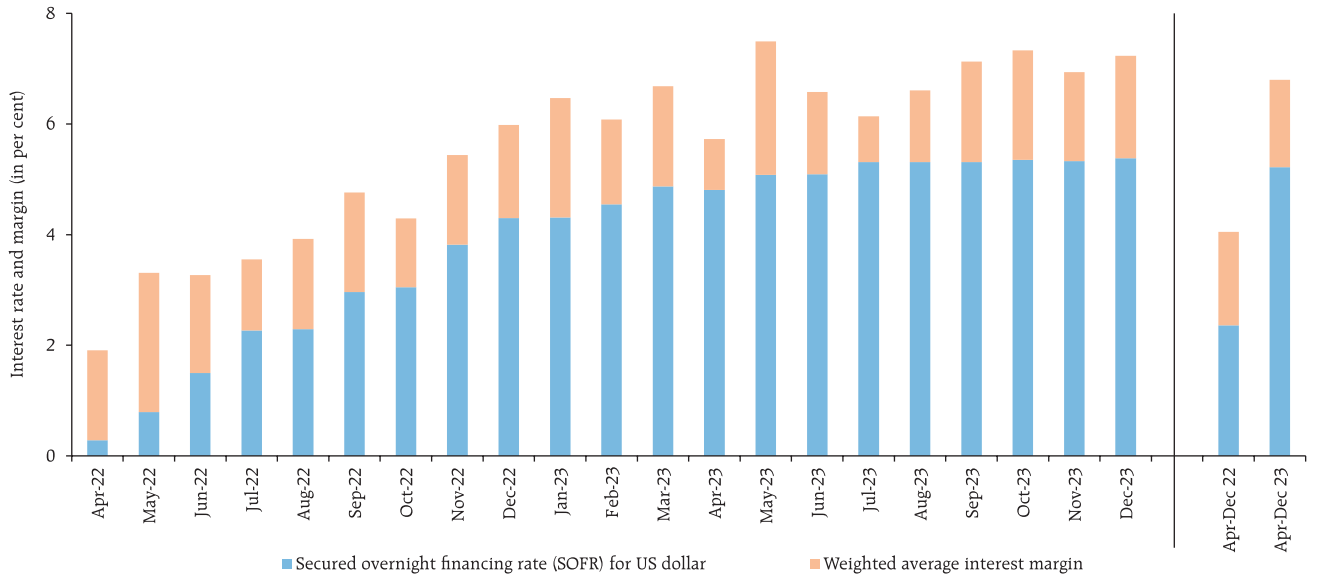


Source: RBI.

in line with pause in the global monetary policy tightening measures. The overall cost of ECBs has risen substantially over the last two years due to a rise in global interest rates, even as the weighted average interest margin (WAIM) (over the benchmark rates) moderated to 158 bps during April – December 2023 from 169 bps a year ago and an average of 207 bps during the year 2021 (Chart IV.19).

As on February 9, 2024 foreign exchange reserves at US$ 617.2 billion stood sufficient to cover for more than 10 months of imports projected for

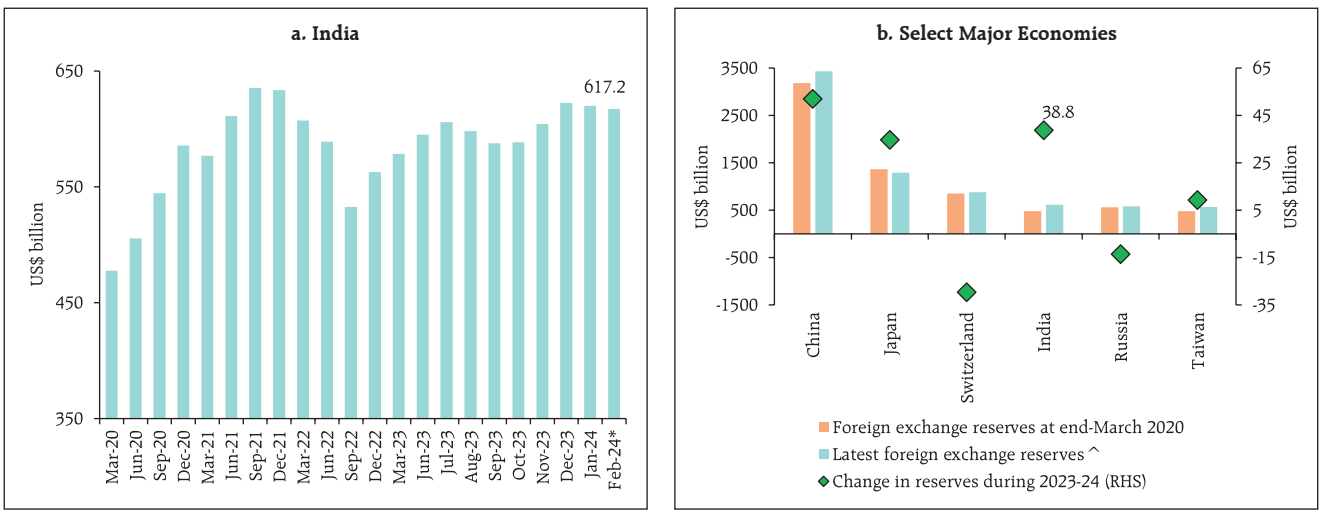
Chart IV.19: Overall Cost of ECBs



Source: RBI.

2023-24 and more than 97 per cent of total external debt outstanding at end-September 2023 (Chart IV.20a). India currently holds the fourth largest foreign exchange reserves in the world, up from sixth since the COVID-19 pandemic. Its reserves have increased by US$ 38.8 billion this financial year so far, the second highest among major foreign exchange reserves holding countries (Chart IV.20b).

Chart IV.20: Foreign Exchange Reserves



Notes: 1. *: Data for February 9, 2024.
2. ^ : Data for India and Russia is for February 9, 2024, end-December 2023 for Switzerland, and end-January 2024 for the remaining countries.
Sources: RBI; and respective central bank websites.

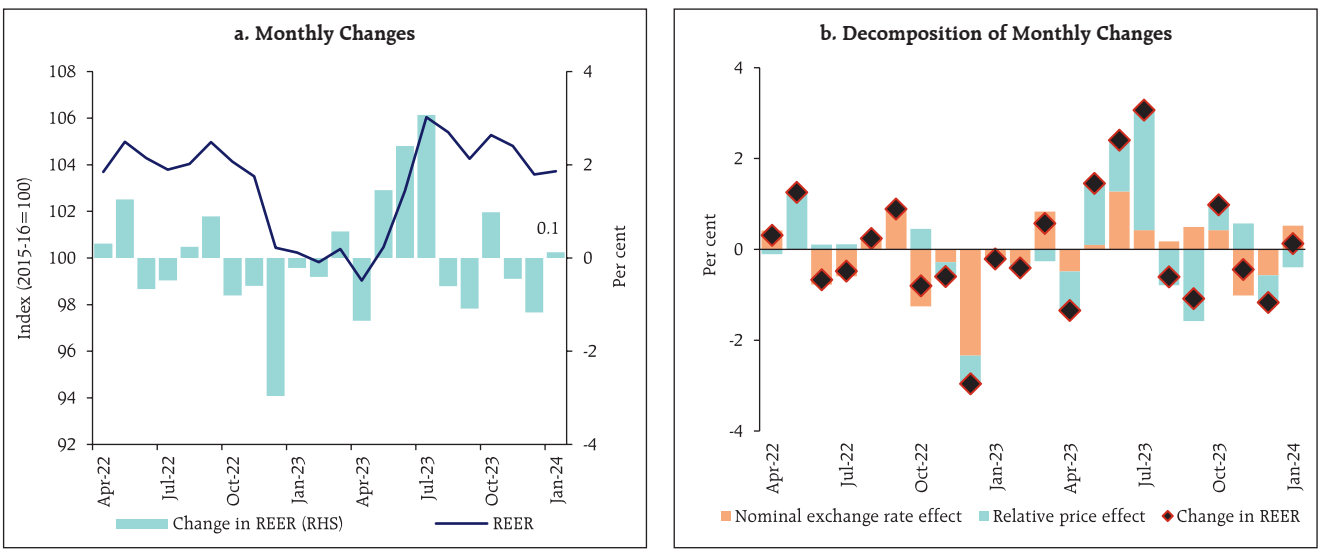
Chart IV.21: Movements of Indian Rupee and Major Currencies against the US Dollar (January 2024 over December 2023)

Note: US dollar (DXY) measures the movements of the US dollar against a basket of major currencies (Euro, Japanese yen, British pound, Canadian dollar, Swedish krona, Swiss franc).
Sources: FBIL; Thomson Reuters; and RBI staff estimates.

The Indian rupee (INR) appreciated modestly by 0.2 per cent (m-o-m) *vis-à-vis* the US dollar in January 2024. Moreover, the INR exhibited the least volatility among major currencies during the month (Chart IV.21).

In terms of 40-currency real effective exchange rate (REER), the INR appreciated marginally by 0.1 per cent (m-o-m) in January 2024 as appreciation of the INR in nominal effective terms more than offset negative relative price differentials (Chart IV.22).

Chart IV.22: Movements in the 40-Currency Real Effective Exchange Rate



Source: RBI..

Payment Systems

The onset of 2024 was marked by a strong expansion (y-o-y) across major digital payment modes (Table IV.2). Large-value transfers under the Real Time Gross Settlement (RTGS) posted double digit growth (y-o-y) in both volume and value terms in January 2024. The Unified Payments Interface (UPI) continued its upward run, buoyed by the initiative to enhance its domestic and international adoption. Recently, the NPCI International Payments Limited (NIPL) partnered with Lyra, a leader in securing e-commerce and proximity payments, to introduce UPI payments in France, the first European country to accept UPI.[21] Continuing with the internationalisation effort, UPI and RuPay connectivity projects have been launched with Mauritius and Sri Lanka to deepen financial integration.[22] Additionally, Google India Digital Services and NIPL signed a Memorandum of Understanding (MoU) to expand the global reach of the UPI, establish similar payment systems in other countries and streamline cross-border financial transactions.[23] The recently released Reserve Bank's Digital Payments Index (RBI-DPI) showed a growth (y-o-y) of 11 per cent in September 2023, underscoring the growing digitalisation of the payment ecosystem.[24]

Table IV.2: Growth in Select Payment Systems

(y-o-y in per cent)

Payment System Indicators	Transaction Volume				Transaction Value			
	Dec-22	Dec-23	Jan-23	Jan-24	Dec-22	Dec-23	Jan-23	Jan-24
RTGS	11.5	7.1	12.6	13.1	5.9	15.7	20.1	17.1
NEFT	29.0	37.5	32.2	43.4	9.4	13.0	15.0	19.8
UPI	71.4	53.5	74.1	51.8	55.0	42.2	56.1	41.7
IMPS	9.7	2.7	7.8	7.2	22.7	17.2	23.4	18.6
NACH	10.5	10.9	-10.5	22.8	34.5	4.6	13.1	21.5
NETC	27.2	13.0	30.2	10.2	34.3	18.6	33.6	15.5
BBPS	60.4	25.7	59.8	24.6	63.6	77.4	66.6	75.4

Note: RTGS: Real Time Gross Settlement; NEFT: National Electronic Funds Transfer; UPI: Unified Payments Interface; IMPS: Immediate Payment Service; NACH: National Automated Clearing House; NETC: National Electronic Toll Collection; BBPS: Bharat Bill Payment System.
Source: RBI.

Furthermore, the Reserve Bank, in its statement on developmental and regulatory policies of February 8, 2024 proposed to streamline the onboarding process and bring in additional fraud risk management requirements within the Aadhaar Enabled Payment System (AePS) to enhance security. It proposed the adoption of a principle-based "Framework for authentication of digital payment transactions", as well as programmability for Central Bank Digital Currency Retail (CBDC-R). An offline functionality in CBDC-R is being envisaged for enabling transactions in areas with poor or limited internet connectivity.[25]

Conclusion

Monetary policy the world over is at an inflection point. While the tightening cycle appears to have run itself out, the path forward remains bounded by the final downslide of inflation to targets which is proving daunting due to the materialisation of tail events. In the light of these evolving macroeconomic and financial developments, the RBI's monetary policy committee (MPC) met during February 6-8, 2024 and decided to

[21] NPCI Circular. February 2, 2024

[22] RBI Press Release. February 12, 2024.

[23] NPCI Circular. January 17, 2024

[24] The index was released on January 31, 2024

[25] Statement on Developmental and Regulatory Policies. February 8, 2024.

keep the policy repo rate unchanged at 6.50 per cent - as it has done for all of 2023-24 – and persevered with the stance of withdrawal of accommodation. It noted that domestic economic activity is holding up well and is expected to be backed by the momentum in investment demand, optimistic business sentiments and rising consumer confidence. Accordingly, the projection of real GDP growth for 2024-25 was placed at 7 per cent.

CPI inflation was projected at 4.5 per cent for the year 2024-25. Although lower by 90 basis points than the estimated average for 2023-24, the MPC noted with concern that large and repetitive food price shocks are impeding the disinflation engendered by the steady easing of core inflation, with geopolitical events and their impact on supply chains, and volatility in international financial markets and commodity prices posing upside risks. The MPC decided that monetary policy must remain disinflationary to ensure anchoring of inflation expectations and the progressive alignment of inflation outcomes with the target, while supporting growth.

Stable and low inflation at 4 per cent provides the bedrock for sustaining economic growth. In the words of Shri Shaktikanta Das, Governor: "*Price and financial stability are the foundations for strong, sustainable and inclusive growth. Our endeavour all along has been to take a holistic approach to keep the economy in balance. We must not only preserve the hard-earned strength and stability of the Indian economy but also build on this further for a long haul of higher growth with price and financial stability.*"[26]

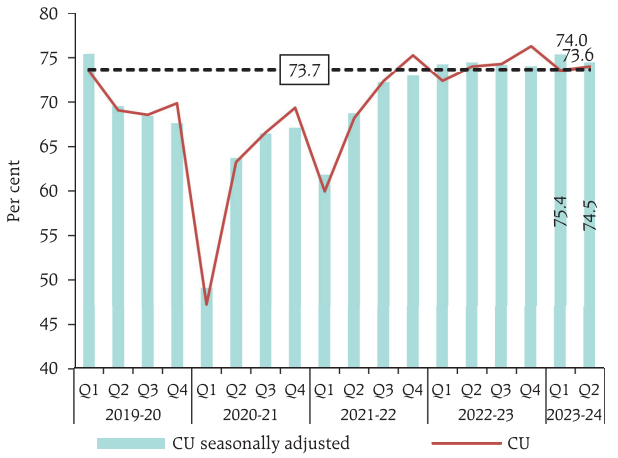
[26] Governor's Statement: Bi-monthly Monetary Policy Statement, 2023-2024, February 8, 2024.

Annex 1: Major Takeaways from the RBI's Enterprise Surveys

Key takeaways from the Reserve Bank's quarterly enterprise surveys conducted during Q3:2023-24 are:

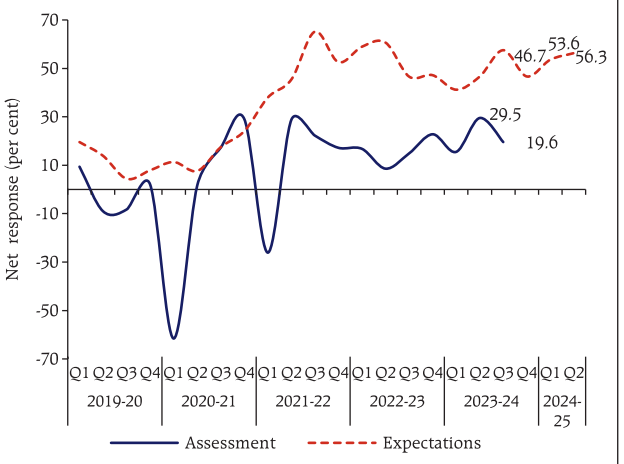
- Capacity utilisation (CU) in the manufacturing sector increased to 74.0 per cent in Q2:2023-24 from 73.6 per cent in Q1:2023-24, with manufacturers remaining optimistic about CU in the ensuing quarters. Seasonally adjusted CU, however, declined to 74.5 per cent in Q2 from 75.4 per cent in the previous quarter (Charts A1 and Chart A2).
- Overall business sentiment in the manufacturing, services, and infrastructure sectors remained upbeat for H1:2024-25 (Charts A3 and Chart A4).

Chart A1: Capacity Utilisation in Manufacturing Sector



Source: Order Books, Inventories and Capacity Utilisation Survey, RBI.

Chart A2: Manufacturers' Sentiments on Capacity Utilisation

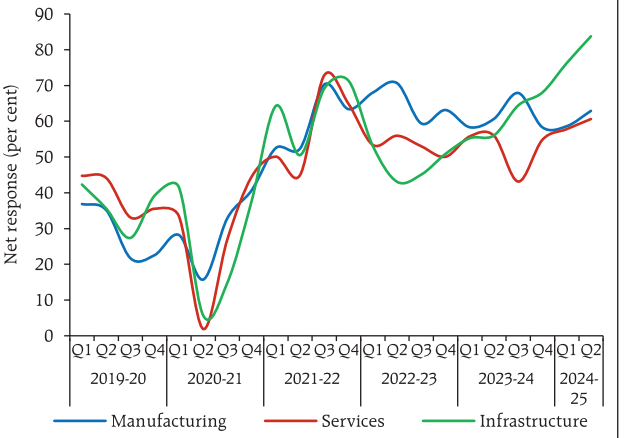


Source: Industrial Outlook Survey, RBI.

Chart A3: Sentiments on Production/Turnover

Sources: Industrial Outlook Survey and Services and Infrastructure Outlook Survey, RBI.

Chart A4: Sentiments on Overall Business Situation

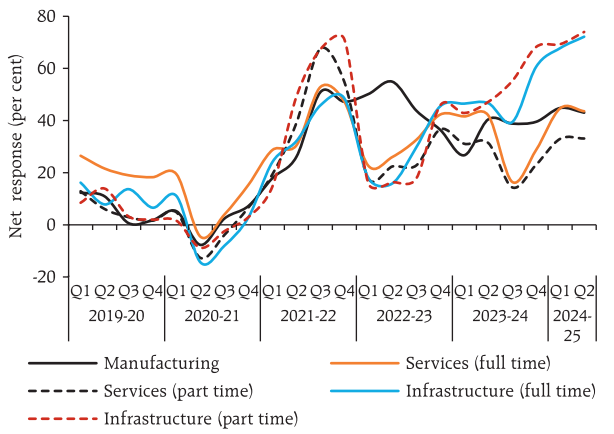


Sources: Industrial Outlook Survey and Services and Infrastructure Outlook Survey, RBI.

(Contd..)

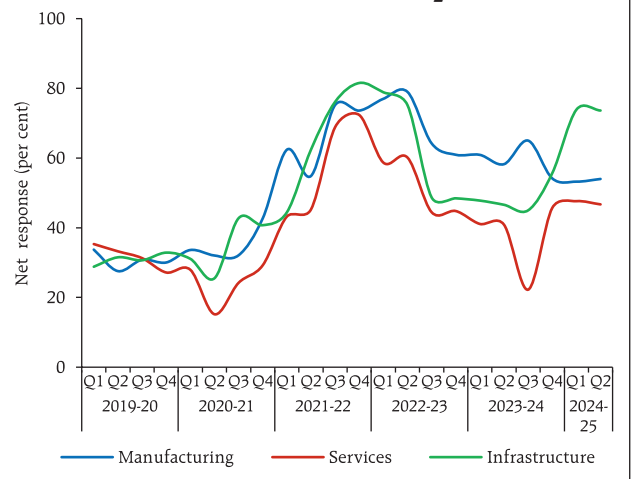
Annex 1: Major Takeaways from the RBI's Enterprise Surveys *(Concld.)*

Chart A5: Sentiments on Employment Situation



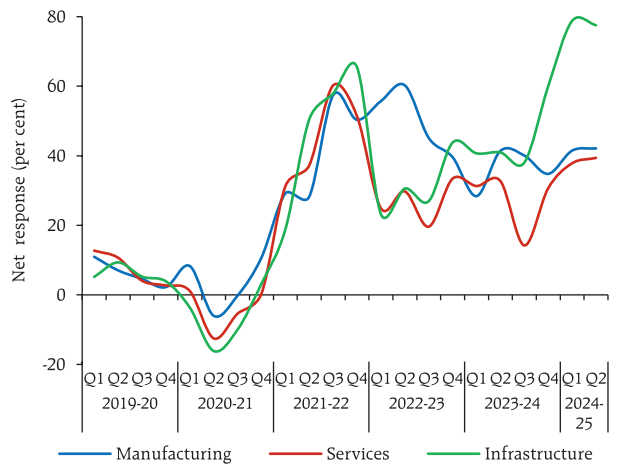
Sources: Industrial Outlook Survey and Services and Infrastructure Outlook Survey, RBI.

Chart A6: Sentiments on Input Cost



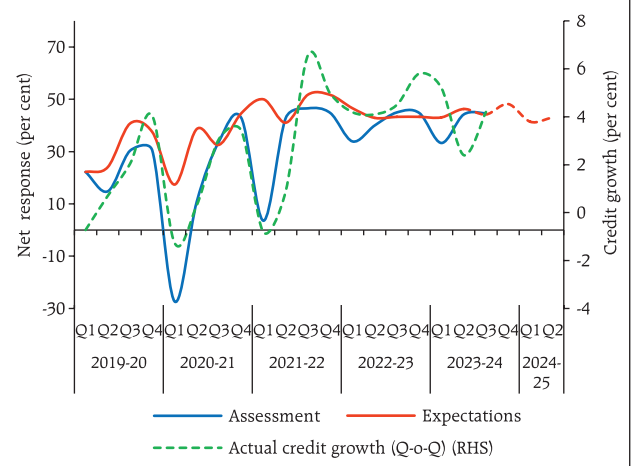
Sources: Industrial Outlook Survey and Services and Infrastructure Outlook Survey, RBI.

Chart A7: Sentiments on Selling Price



Sources: Industrial Outlook Survey and Services and Infrastructure Outlook Survey, RBI.

Chart A8: Senior Loan Officers' Expectations on Credit Demand



Source: Bank Lending Survey, RBI.

- The employment situation is anticipated to remain positive across sectors until the first half of the next fiscal year (Chart A5).
- Input cost pressures were assessed to have recorded some moderation in Q3:2023-24 for manufacturing; however, cost pressures are likely to remain elevated in manufacturing, services, and infrastructure sectors till H1:2024-25. Growth in selling prices is expected to move in tandem (Charts A6 and Chart A7).
- Senior loan officers anticipate robust demand for bank loans in H2:2023-24 with some moderation in the retail/ personal loan segment (Chart A8).

The Shape of Growth Compatible Fiscal Consolidation

*by Michael Debabrata Patra, Samir Ranjan Behera, Harendra Kumar Behera, Shesadri Banerjee, Ipsita Padhi and Saksham Sood^*

Medium-term complementarities between fiscal consolidation and growth in India argue for prioritising the composition of government expenditure towards developmental expenditure (viz. health, education, skilling, digitalisation and climate risk mitigation). Employing a dynamic stochastic general equilibrium (DSGE) model, we find that targeting productive employment-generating sectors, embracing energy-efficient transition and investing in digitalisation could lead to a substantial decline in general government debt.

I. Introduction

The Interim Budget (IB), 2024-25 crowns turbulent five years of budget making. Artificial intelligence (AI) analysis – specifically, natural language processing (NLP)[1] – of the encomiums being showered on the IB throws up four terms that stand out as perhaps its defining characteristics: confidence; commitment; capex; and consolidation. The Budget speech lays out a path of annual reductions in the fiscal deficit while committing to sustaining the emphasis on capital expenditure through a period of transformative changes underway in the Indian economy.

In the literature, economic growth and fiscal consolidation are viewed as bound in a rictus of opposing tensions. The Keynesian tradition posits a short-term trade-off – lower spending and/or higher taxes reduce aggregate demand, thereby depressing economic growth (Kleis and Moessinger, 2016). This position is supported by empirical evidence from both advanced and emerging market economies (Carrière-Swallow, David and Leigh, 2021; Guajardo, Leigh and Pescatori, 2014; and Hernández de Cos and Moral-Benito, 2013). The extent of output losses associated with fiscal consolidation depends on the size of the fiscal multiplier. In the case of developing countries, the growth sacrifice could be higher as they are expected to have higher fiscal multipliers due to labour market rigidities, limited automatic stabilisers and smaller initial stock of public capital (IMF, 2014; Baxter and King, 1993).[2]

In the long term, fiscal consolidation can boost growth and improve equality (Balasundharam *et al.*, 2023). Successful consolidation would lead to a reduction in the financing needs of the government and lower long-term interest rates both of which crowd in private investment (Gupta *et al.*, 2005). It also creates fiscal space to finance more productive expenditures or growth-enhancing tax cuts (European Central Bank, 2010). Fiscal consolidation processes that protect public investment in physical and human capital, and targeted social spending to mitigate the impact on inequality are found to yield lasting growth dividends (Kim *et al.*, 2021). A green investment push in the form of revenue mobilisation through carbon pricing is also found to result in stronger growth in the long term (IMF, 2020).

Non-Keynesian effects of fiscal consolidation are also evident in lower sovereign risk premia which translates to lower real interest rates and consequently, higher demand and growth (Alesina and Ardagna, 2010). To the extent that consolidation eliminates the need for larger and potentially more disruptive adjustments in the future, consumers' expected future tax increases will be smaller than originally perceived, resulting in an increase in current private consumption (Giavazzi and Pagano, 1990).

^ The authors are from the Reserve Bank of India. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

[1] Dahiya, R. (2024). An NLP Analysis of the Budget (Forthcoming).

[2] Empirical evidence on these predictions is mixed as multipliers in developing countries could also be reduced by larger precautionary savings stemming from an uncertain macroeconomic environment, low efficiency of public expenditure, lower fiscal policy credibility and a large informal economy (Miyamoto *et al.*, 2020; Ilzetzki, Mendoza and Vegh, 2013; Colombo *et al.*, 2022).

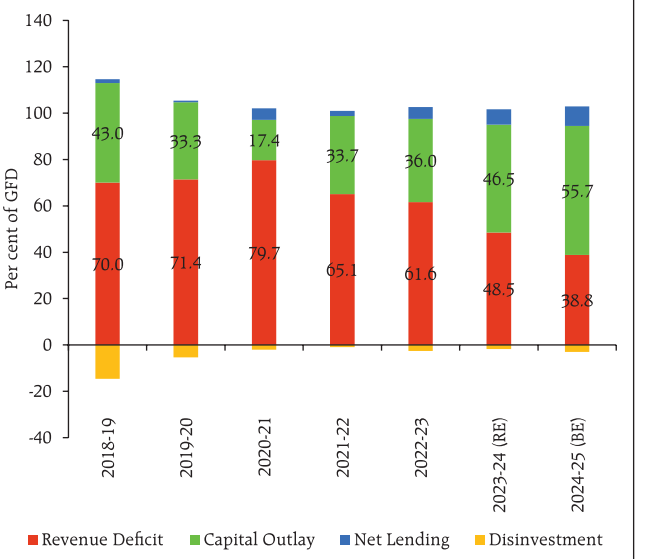
Against this backdrop and in the light of the commitments made in the IB, we quantify and incorporate these aspects into a general equilibrium model in which households, corporations and policy makers are interacting continuously – illustratively, households buy goods and services from corporations and the government, which translate into revenues for the latter two. Households also provide labour to the rest of the economy and receive incomes on which they pay taxes to the government which, in turn, makes transfers in the form of subsidies to households, and so on. To this general equilibrium model, we ask the question: if the government remains committed to the goals announced in the Interim Budget and directs some part of planned capex towards climate risk mitigation, reskilling/ upskilling the workforce and investing into the digital revolution, what would be the shape of fiscal consolidation?

The rest of the article is divided into four sections. Section II delves into the underlying fiscal dynamics of the Interim Budget that drive the fiscal consolidation process. Section III describes the alternative variables used for the analysis. Section IV lays out the key features of our dynamic stochastic general equilibrium (DSGE) model and presents the results. Section V sets out concluding observations.

II. The Underlying Fiscal Dynamics

The IB placed the revised estimate of the gross fiscal deficit (GFD) for 2023-24 at 5.8 per cent of GDP, lower than the budget estimate (BE) of 5.9 per cent. Reiterating its commitment to attain a GFD of 4.5 per cent of GDP by 2025-26, a GFD of 5.1 per cent of GDP has been budgeted in 2024-25 – a consolidation of 71 basis points over 2023-24 (RE). The IB also sustains the impetus provided to capital expenditure in the post-pandemic period, increasing its share to 3.4 per cent of GDP in 2024-25. The improvement in the quality of expenditure is reflected in the decline in the share of the revenue deficit to 38.8 per cent and an increase

Chart 1: Decomposition of GFD



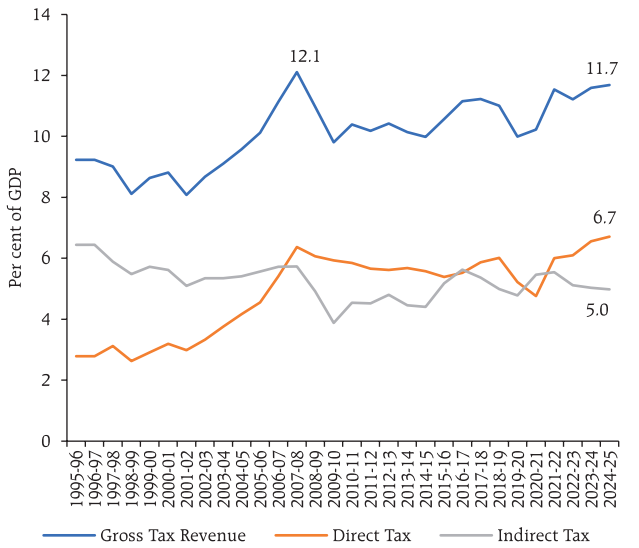
Source: Union Budget Documents.

in the share of capital outlay to 55.7 per cent of the GFD. This shift signifies that more than half of the borrowings are now directed towards the financing of capital expenditure, rather than the revenue deficit (Chart 1).

II.1 Receipts

The drive for fiscal consolidation is revenue-driven - the digitalisation of India's tax system has substantially improved tax collection by streamlining processes, enhancing transparency and promoting efficiency in filing, processing and scrutiny, leading to increased compliance and a widening of the tax base. Consequently, the tax-GDP ratio has increased from 10.1 per cent of GDP in 2013-14 to 11.7 per cent in 2024-25 (BE) (Chart 2). In 2023-24 (RE), gross tax revenue registered a buoyancy of 1.4, which is higher than the average of 1.1 during 2010-19. Revenue collection in 2023-24 was led by personal income taxes, which recorded a buoyancy of 2.5. In 2024-25, gross tax revenues are budgeted to increase by 11.5 per cent, indicating a buoyancy of 1.09 that is in alignment with the 10-year average (Table 1). In 2024-25, non-tax revenues are budgeted to increase by 6.4 per cent to ₹4.0 lakh crore.

Chart 2: Tax-GDP Ratio



Source: Union Budget Documents.

II.2 Expenditure

Total expenditure is budgeted to grow modestly in 2024-25 (BE), driven by restrained growth in revenue expenditure (Table 2). Infrastructure development is sustained through initiatives like the National Infrastructure Pipeline (NIP) and PM Gati-Shakti Mission. Consequently, the ratio of revenue expenditure to capital outlay (RECO), an indicator of the quality of expenditure, is budgeted to improve to an all-time low of 3.9 in 2024-25 (BE) (Chart 3).

Table 1: Tax Buoyancy

	Average Tax Buoyancy (2010-11 to 2018-19)	2022-23	2023-24 (BE)	2023-24 (RE)	2024-25 (BE)
1	2	3	4	5	6
1. Gross Tax Revenue	**1.11**	**0.79**	**0.99**	**1.41**	**1.09**
2. Direct Taxes	**1.03**	**1.11**	**1.00**	**1.94**	**1.24**
(i) Corporation Tax	0.92	1.00	1.00	1.32	1.24
(ii) Income Tax	1.27	1.25	1.00	2.54	1.25
3. Indirect taxes	**1.25**	**0.45**	**0.99**	**0.79**	**0.89**
(i) GST	-	1.35	1.14	1.43	1.11
(ii) Customs Duty	0.31	0.43	1.05	0.28	0.55
(iii) Excise Duty	0.91	-1.13	0.57	-0.51	0.48

Note: Calculations for 2023-24 (BE) are made over 2022-23 (RE).

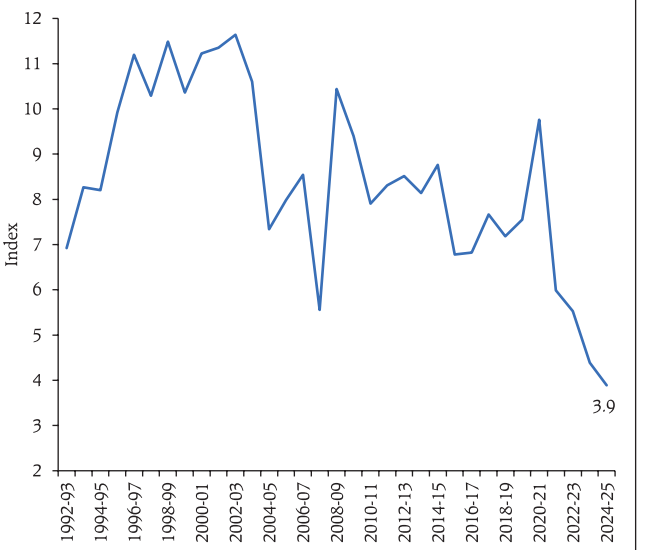
Table 2: Expenditure of Union Government

Item	₹ thousand crore				Growth Rate (per cent)	
	2022-23	2023-24 (BE)	2023-24 (RE)	2024-25 (BE)	2023-24 (RE)	2024-25 (BE)
1	2	3	4	5	6	7
1. Total Expenditure	4,193	4,503	4,490	4,766	7.1	6.1
2. Revenue Expenditure *(of which)*	3,453	3,502	3,540	3,655	2.5	3.2
(i) Interest Payments	929	1,080	1,055	1,190	13.7	12.8
(ii) Major Subsidies	531	375	413	381	-22.1	-7.8
Food	273	197	212	205	-22.2	-3.3
Fertiliser	251	175	189	164	-24.8	-13.2
Petroleum	7	2	12	12	79.5	-2.6
(iii) MGNREGA	91	60	86	86	-5.3	0.0
(iv) PM-KISAN	58	60	60	60	3.0	0.0
3. Capital Expenditure	740	1,001	950	1,111	28.4	16.9

Source: Union Budget Documents.

The IB has also announced the establishment of a corpus of ₹1 lakh crore to provide long-term financing at low or nil interest rates to the private sector to scale up research and innovation in sunrise domains. In order to encourage adoption of green energy and reduce reliance on fossil fuels, the IB has announced

Chart 3: Revenue Expenditure to Capital Outlay



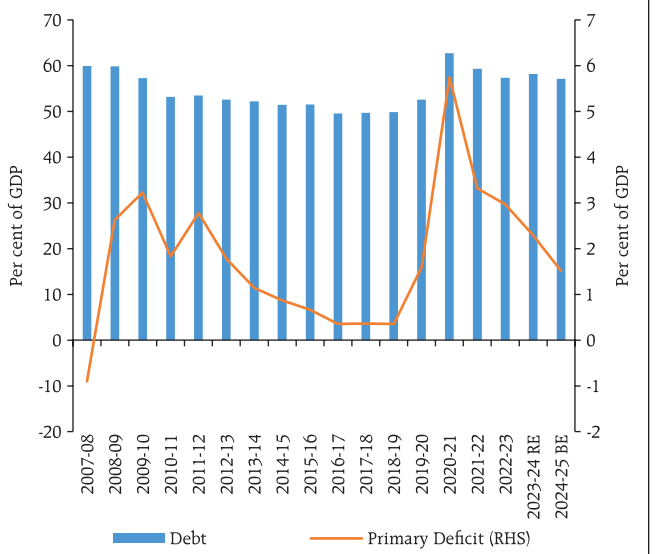
Source: Union Budget Documents.

a 'Rooftop Solarisation' scheme, with an outlay of ₹4,556 crore. This scheme aims to enable 1 crore households to obtain up to 300 units free electricity per month and save up to ₹18,000 annually from free solar electricity and selling the surplus to the distribution companies. The IB has also enhanced the target for the *Lakhpati Didi* scheme from 2 crore to 3 crore women to provide skill training to women self-help group (SHG) members.

II.3 Debt

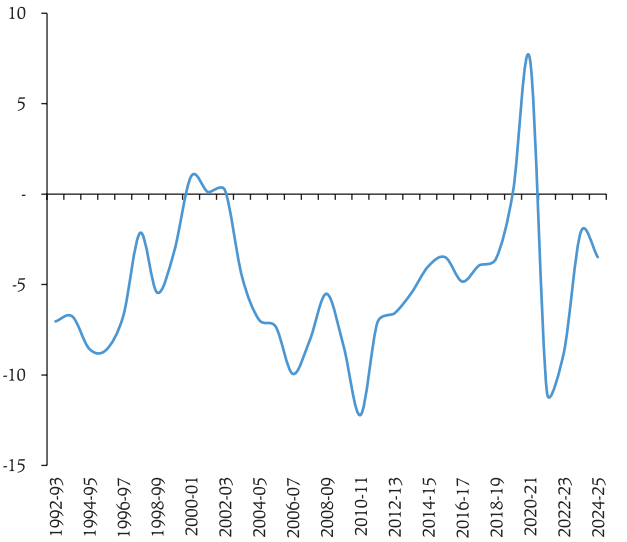
The outstanding debt of the Union government is budgeted to decline to 57.1 per cent of GDP in 2024-25 (BE) from 58.2 per cent of GDP in 2023-24 (RE) (Chart 4).[3] Going forward, with a favorable interest rate - growth differential (r *minus* g) and the primary deficit budgeted at 1.5 per cent of GDP in 2024-25 - down from 2.3 per cent of GDP in 2023-24 (RE) - the consolidation of the Union government's debt is expected to sustain (Chart 5). Two additional redeeming features are that more than 95 per cent of the outstanding debt is issued in domestic currency, which allays exchange rate risk; and the weighted average maturity of outstanding stock of dated securities stands at 12.2 years, mitigating rollover risk.

Chart 4: Union Government Debt



Source: Union Budget Documents.

Chart 5: Interest Rate Growth Differential



Source: Union Budget Documents.

III. Alternative Variables

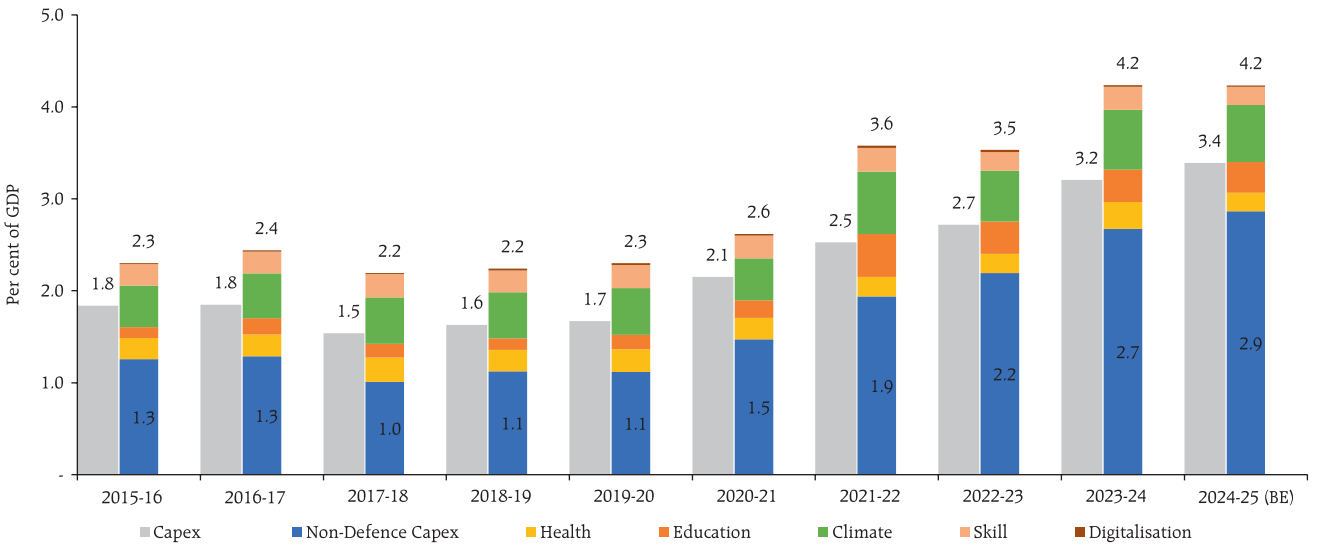
We take the public debt to GDP ratio as the variable of interest for measuring fiscal consolidation because it is comprehensive and not amenable to exogenous revenue bursts and/or unplanned expenditure cuts as a deficit variable is.

III.1 Redefining Capex

Recognising that some parts of capital expenditure are not strongly growth inducing while some parts of revenue expenditure can actually result in physical and human capital formation, we redefine capital expenditure to exclude defence and include social and economic expenditure covering allocations towards health, education, skilling, digitalisation and climate risk mitigation. We call this developmental expenditure (DE), which is budgeted at ₹13.9 lakh crore (4.2 per cent of GDP) in 2024-25 as against the provision of ₹11.1 lakh crore (3.4 per cent of GDP) for the traditionally defined capex (Chart 6).

[3] The general government debt ratio stands at 81.6 per cent of GDP in 2023-24 (BE).

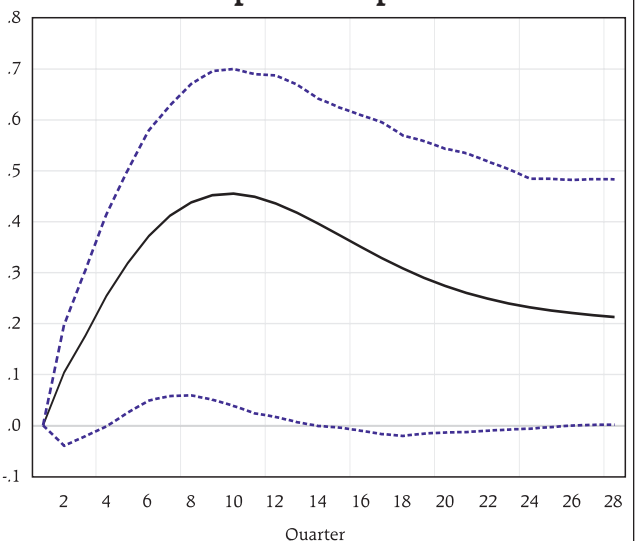
Chart 6: Capex *vis-a-vis* Developmental Expenditure



Source: Union Budget Documents.

A preliminary exercise in a vector autoregression (VAR) framework with real DE and real GDP shows that a one per cent rise in the former could have a cumulative multiplier impact that produces a 5 per cent rise in GDP over 4 years (Chart 7). The impulse response suggests that the GDP starts rising after 2 quarters and the impact becomes statistically significant after 4 quarters.

Chart 7: Response of GDP to one per cent rise in Developmental Expenditure



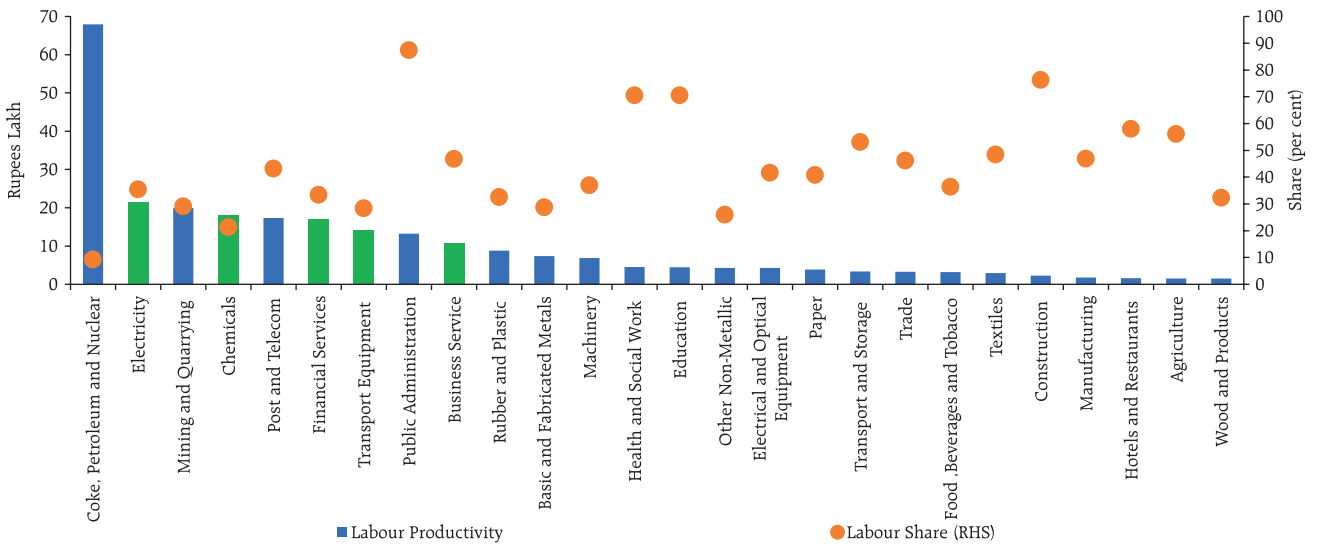
Source: Authors' estimates.

III.2 Reskilling/Upskilling the Labour Force

India's labour productivity is among the lowest relative to peers. As a result, labour's contribution in overall value added is only about 50 per cent in comparison with about 70 per cent in advanced countries. 55 per cent of the workforce is employed in agriculture and the construction sector, which have among the lowest productivities. As we enter an era of digitally driven knowledge-based economies, education and skill development are going to drive national competitiveness. Thus, it is imperative to prioritise skilling, upskilling and reskilling of the labour force to foster economic growth and employability, with special emphasis on women in the workforce. From the KLEMS database of the Reserve Bank of India (RBI)[4], five sectors (*i.e.*, chemicals and chemical products, financial services, business services, electricity, gas and water supply, and transport equipment) are identified for their

[4] The India KLEMS database, constructed by the Reserve Bank of India, consists of inputs (employment, labour quality, capital stock, capital composition, consumption of energy, material and services), output (gross value added; gross output) and total factor productivity (TFP) estimates from 1980-81 to 2021-22 for 27 industries.

Chart 8: Labour Productivity and Labour Share



Sources: India KLEMS Database; and Authors' estimates.

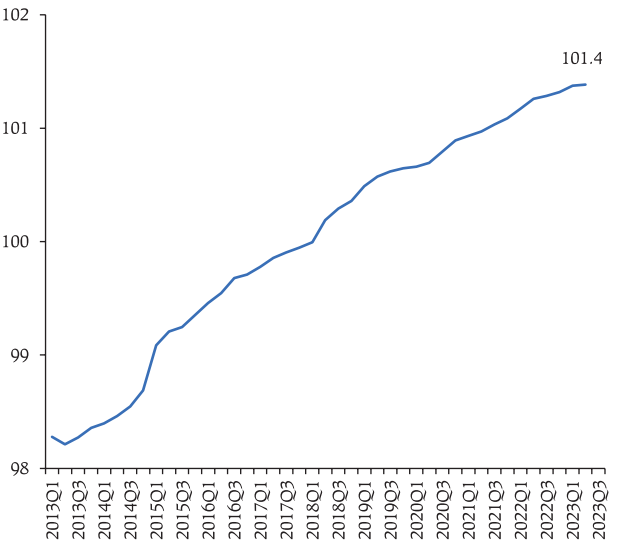
demonstrated higher labour productivity with a significant contribution of labour to overall output of the sector (Chart 8). A uniform 5 per cent rise in employment (including training and skilling) in these sectors for one year could contribute to more than one percentage point rise in GDP growth over the forecast horizon 2024-31.

III.3 Investing in Digitalisation

Digitalisation can increase economic efficiency and competitiveness, creating new businesses and products, increasing financial inclusion, improving governance and reducing disparities. Deep penetration of telecom and internet, the Pradhan Mantri Jan-Dhan Yojana to connect people with bank accounts, creation of a unique identity number - *Aadhar* - for each resident and exponential growth in digital financial transactions combined with the focus on developing digital public infrastructure have laid the foundations of India's digital economy – the India stack. Digitalisation increases productivity of both labour and capital, and thereby engenders a faster growth in total factor productivity.

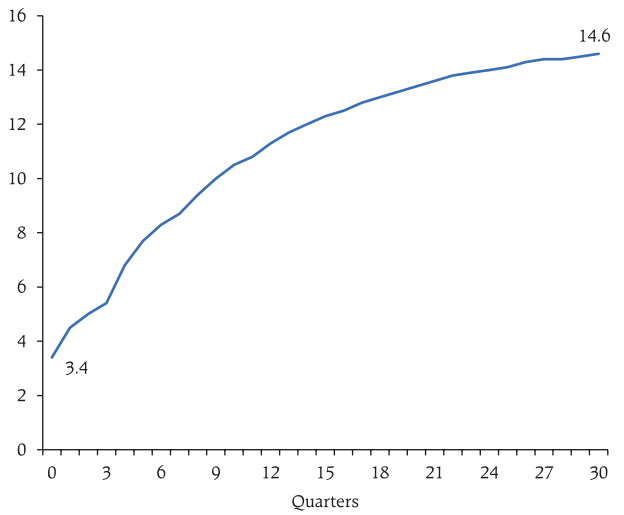
We employ a dynamic factor model (DFM) to construct a time-varying index of digitalisation by extracting a common factor from data on all digital payments, number of internet users, number of mobile phone subscriptions, number of QR codes generated per 100 persons, credit to the software industry, investment in ICT (information and communication technology) and people employed in the ICT sector (Chart 9).

Chart 9: Digitalisation Index



Source: Authors' estimates.

Chart 10: Cumulative Dynamic Multiplier of Digitalisation



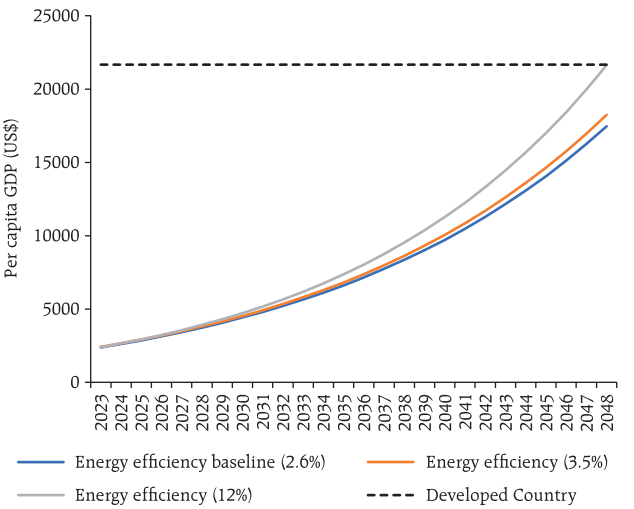
Source: Authors' estimates.

We find that a one per cent rise in real DE increases digitalisation by 0.02 percentage points. A growth of 10.4 per cent in DE (as budgeted for 2024-25) can cause digitalisation to grow by 0.2 per cent. The impact and dynamic multipliers of digitalisation on the economy is estimated by using an auto-regressive distributed lag (ARDL) model. The impact multiplier on GDP is found to be 3.4 in response to a one per cent increase in digitalisation (Chart 10)[5]. The cumulative dynamic multiplier is estimated from the model at 15 in the long run. A growth of 0.2 per cent in the digitalisation index can raise GDP growth by about 130 bps in a year and by 2.8 percentage points over seven years.

III.4 Energy Efficiency

India has committed to achieve net zero emission target by 2070 for which the dependence on consumption of fossil fuel needs to be cut down. India has been able to reduce the energy intensity of GDP steadily due to both structural changes in the economy and technological efficiency. Based on the emission factors of different sources of energy, it has been estimated that a one per cent increase in the share of renewable energy in the energy mix reduces CO_2 emissions by around 0.63 per cent (RBI, 2023). India has made significant strides in renewable installed capacity and its share in total installed capacity is at 42 per cent (including large hydro). Based on several initiatives that have been taken towards climate risk mitigation and technological upgradation during recent years[6], if the annual allocation towards climate mitigation is increased in a manner that 33 per cent of the annual allocation is invested in green energy augmenting technology every year, it will add to GDP growth by 10 basis points every year and 0.5 percentage points over the forecast horizon. As the horizon is lengthened, more gains accrue in terms of GDP growth. In the short-run, there may be a trade-off between climate mitigation and economic growth. In the medium term, however, there is no trade-off – mitigating climate risks is unequivocally beneficial for economic progress (Chart 11).

Chart 11: Per Capita GDP Path under Different Energy Efficiency Scenario



Source: Authors' estimates.

[5] It may be noted that it took five years period for digitalisation to increase by one per cent.

[6] Using an environmental Solow-type growth model, it has been shown that India's objective of becoming an advanced economy by 2047 is possible by enhancing the labour augmenting and energy augmenting technology growth by 10 per cent and 6 per cent, respectively (RBI, 2023).

IV. The Model and Results

We consider a closed economy dynamic stochastic general equilibrium (DSGE) model comprising households, firms, the banking system, the fiscal authority and the central bank (Chart 12).

Households are of two types: one category has multiple sources of income from labour, interest earned from bank deposits, government bonds and dividends from the ownership of firms; the other category survives on labour income and direct transfers. On the production side, firms use labour, capital and energy as inputs in a competitive market environment. Banks intermediate all financial transactions among economic agents. Using the policy rate as its key instrument, the central bank follows an interest rate rule featuring interest rate smoothing and stabilisation of CPI inflation around its target and GDP growth around its trend. The fiscal authority uses alternative policy instruments such as spending on public consumption, transfers, investment on public capital goods, tax on labour income and private consumption. The issuance of government bonds constitutes public debt which is held by households and commercial banks. The government services its debt along with periodic interest payments. All the agents are rational and interact with each other in a dynamic environment. We solve the model to investigate the likely path of the debt to GDP ratio over the period 2024-25 to 2030-31 and explore alternative paths under four scenarios (Chart 13). Scenario 1 envisages the effect of an increase (5 per cent) in the employment level in relatively productive sectors as delineated in Section III.2. Scenario 2 considers the impact of a rise in energy efficiency. Scenario 3 explores fiscal policy intervention through capex towards greater digitalisation of the economy. Scenario 4 combines all the above outcomes simultaneously.

Chart 12: Interplay among Building Blocks of the DSGE Model

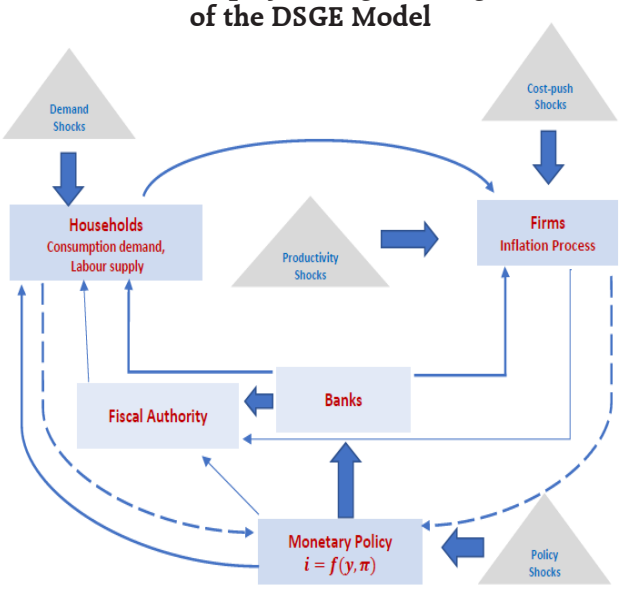
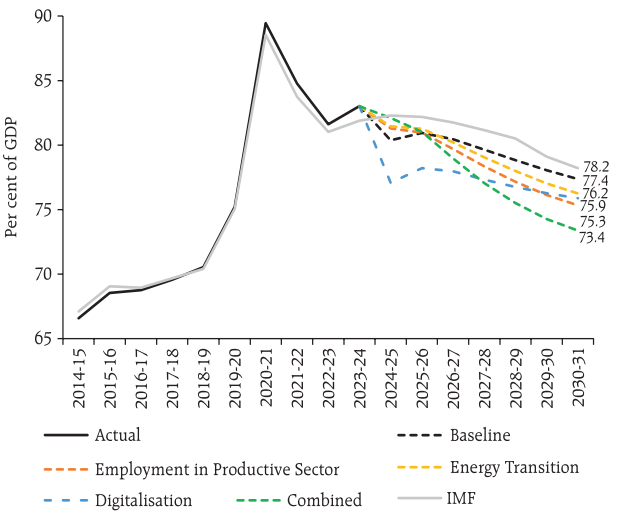


Chart 13: Projected Path of General Government Debt



Source: Authors' estimates.

Our baseline projection[7] suggests that the debt-GDP ratio will chart a secular decline, reaching 77.4 per cent in 2030-31. In scenario 1, the debt-GDP ratio rises in the short-run, capturing the short-run trade-off, but falls thereafter to 75.3 per cent by 2030-31. Scenario 2 is similar to Scenario 1 in that the choice of energy-efficient transition is subject to short-run

[7] In the baseline, real GDP growth is projected at 7.3 per cent per annum during the forecast period. CPI inflation is projected at 4.3 per cent per annum and remains stable at that level for the alternative scenarios.

pain but it yields long-run gains by reducing the debt-GDP ratio to 76.2 per cent by 2030-31. In Scenario 3, digitalisation impacts the fiscal consolidation path through higher levels of productivity, taking the debt-GDP ratio at 75.9 per cent at the end of the forecast period. Scenario 4 combines all the measures and shows that the debt-GDP ratio declines to 73.4 per cent by 2030-31.

V. Conclusion

Policy wielders always face the trilemma of balancing climate goals, debt sustainability and operational feasibility within the political mandate (IMF Fiscal Monitor, 2023). The trade-offs are starker for developing countries for which developmental priorities dominate. We argue on the basis of our empirical findings in a general equilibrium framework that medium-term complementarities between judicious fiscal consolidation and growth outweigh the short-run costs. Spending on social and physical infrastructure, climate mitigation, digitalisation and skilling the labour force can yield long-lasting growth dividends.

Our simulations reveal that the general government debt-GDP ratio swerves below the projected path set out by the IMF in its latest Article IV consultation report for India[8]. With recalibration of government expenditure, the general government debt-GDP ratio is projected to decline to 73.4 per cent by 2030-31, around 5 percentage points lower than the IMF's projected trajectory of 78.2 per cent. This is noteworthy as the debt-GDP ratio is projected to rise from 112.1 per cent in 2023 to 116.3 per cent in 2028 for advanced economies and from 68.3 per cent to 78.1 per cent for emerging and middle-income countries. It is in this context that we reject the IMF's contention that if historical shocks materialise, India's general government debt would exceed 100 per cent of GDP in the medium-term and hence further fiscal tightening is needed.

[8] Staff Report for the 2023 Article IV Consultation for India; IMF Country Report Number 23/426; December 2023.

References

Alesina, A. & Ardagna, S. (2010). Large Changes in Fiscal Policy: Taxes versus Spending. *Tax Policy and the Economy*, Vol. 24. The University of Chicago Press, pp. 35–68.

Alesina, A., Carlo F., and Giavazzi, F. (2015). The Output Effect of Fiscal Consolidation Plans. *Journal of International Economics*, Vol. 96 (S1), pp. S19–S42.

Anand, R., Delloro, V., & Peiris, S. J. (2014). A credit and banking model for emerging markets and an application to the Philippines. In Proceedings of the 2014 *BSP International Research Conference* (No. 2).

Balasundharam, V; Basdevant, O; Benicio, D; Ceber, A; Kim, Y; Mazzone, L; Selim, H; Yang, Y. (2023). Fiscal Consolidation: Taking Stock of Success Factors, Impact, and Design, *IMF Working Paper.* No.63. March.

Banerjee, S. (2013) *Essays on Inflation Volatility.* Doctoral thesis, Durham University. Available in Essays on Inflation Volatility - *Durham e-Theses*

Banerjee, S., & Behera, H. (2023). Financial frictions, bank intermediation and monetary policy transmission in India. *Economics of Transition and Institutional Change.*

Banerjee, S., Basu, P., & Ghate, C. (2020). A monetary business cycle model for India. *Economic Inquiry*, 58(3), 1362-1386.

Baxter, M., & King, R. G. (1993). Fiscal policy in general equilibrium. *The American Economic Review,* 315-334.

Carrière-Swallow, Y., David, A. C., & Leigh, D. (2021). Macroeconomic effects of fiscal consolidation in emerging economies: New Narrative evidence from Latin America and the Caribbean. *Journal of Money, Credit and Banking,* 53(6), 1313-1335.

Colombo, E., Furceri, D., Pizzuto, P., & Tirelli, P. (2022). Fiscal multipliers and informality (No. 2022-2082). *International Monetary Fund.*

European Central Bank (2010). Economic and Monetary Developments. *ECB Monthly Bulletin*. June.

Gerali, A., Neri, S., Sessa, L., & Signoretti, F. M. (2010). Credit and Banking in a DSGE Model of the Euro Area. *Journal of money, Credit and Banking*, 42, 107-141.

Giavazzi, F. & Pagano, M. (1990). Can Severe Fiscal Contractions be Expansionary? Tales of Two Small European Countries. *NBER Macroeconomics Annual. Vol.* 5. MIT Press, pp. 75 – 122.

Guajardo, Jamie, Daniel Leigh, and Andrea Pescatori (2014). Expansionary Austerity? International Evidence. *Journal of the European Economic Association*, Vol. 12, No.4, pp. 949-968

Gupta, S., Clements, B., Baldacci, E., & Mulas-Granados, C. (2005). Fiscal policy, expenditure composition, and growth in low-income countries. Journal of *International Money and Finance*, 24(3), 441-463.

Hernández de Cos, Pablo, and Enrique Moral-Benito (2013). Endogenous Fiscal Consolidations. *Fiscal Studies*, Vol. 34, No. 4, pp. 491–515.

Hnatkovska, V and Lahiri, A. (2020) Money and Banking in Emerging Economies. Available in DSGE_ OneSector_May2020.pdf. *ubc.ca*.

Ilzetzki, Ethan, Enrique G. Mendoza, and Carlos A. Végh (2013). How Big (Small?) are Fiscal Multipliers?. *Journal of Monetary Economics*, Vol. 60, No. 2, pp. 239-254.

International Monetary Fund (2014). Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections. Technical Notes and Manuals 14/04 (Washington: *International Monetary Fund*).

International Monetary Fund (2020). Mitigating Climate Change – Growth and Distribution-Friendly Strategies. *World Economic Outlook* October 2020 (Washington: International Monetary Fund).

Kim, J.I., Jean-Marc, A.B., Lee, K.Y., Toprak, H. H & Li, J (2021). Cross-Country Analysis of Program Design and Growth Outcomes: 2008–19. *IEO Background Paper* No. BP/21-01/01.

Kleis, M. & Moessinger, M.D. (2016). The Long-run Effect of Fiscal Consolidation on Economic Growth: Evidence from Quantitative Case Studies, ZEW - Leibniz Centre for European Economic Research, *ZEW Discussion Papers.* No.16-047.

Miyamoto, H., Gueorguiev, N., Honda, J., Baum, A., Walker, S., Schwartz, G., ... & Verdier, G. (2020). Growth impact of public investment and the role of infrastructure governance. *International Monetary Fund, Washington*, DC.

Reserve Bank of India (2023). Report on Currency and Finance: Towards a Greener and Cleaner India, May.

Saxegaard, M. M., Anand, R., & Peiris, M. S. J. (2010). An estimated model with macrofinancial linkages for India. *International Monetary Fund.*

Annexure

Annex I: Interim Union Budget 2024-25: Key Fiscal Indicators									
	₹ thousand crore					Per cent of GDP		Growth Rate	
	2021-22	2022-23	2023-24 (BE)	2023-24 (RE)	2024-25 (BE)	2023-24 (RE)	2024-25 (BE)	2023-24 (RE)	2024-25 (BE)
1	2	3	4	5	6	7	8	9	10
1. Direct Tax	1,408	1,660	1,823	1,945	2,199	6.6	6.7	17.2	13.1
(i) Corporation	712	826	923	923	1,043	3.1	3.2	11.7	13.0
(ii) Income	673	808	873	990	1,120	3.3	3.4	22.5	13.1
2. Indirect Tax	1,301	1,394	1,538	1,492	1,632	5.0	5.0	7.0	9.4
(i) GST	698	849	957	957	1,068	3.2	3.3	12.7	11.6
(ii) Customs	200	213	233	219	231	0.7	0.7	2.5	5.8
(iii) Excise	395	323	339	308	323	1.0	1.0	-4.5	5.0
3. Gross tax revenue (1+2)	**2,709**	**3,054**	**3,361**	**3,437**	**3,831**	**11.6**	**11.7**	**12.5**	**11.5**
4. Assignment to States	898	948	1,021	1,104	1,220	3.7	3.7	16.5	10.4
5. NCCD Transfers	6	8	9	9	9	0.0	0.0	10.0	7.3
6. Net tax Revenue (3-4-5)	1,805	2,098	2,331	2,324	2,602	7.8	7.9	10.8	11.9
7. Non-tax Revenue	365	285	302	376	400	1.3	1.2	31.7	6.4
(i) Dividends and Profits	161	100	91	154	150	0.5	0.5	54.5	-2.9
(ii) Interest Receipts	22	28	25	32	33	0.1	0.1	14.1	4.2
8. Revenue Receipts (6+7)	**2,170**	**2,383**	**2,632**	**2,700**	**3,001**	**9.1**	**9.2**	**13.3**	**11.2**
9. Non-debt Capital Receipts	39	72	84	56	79	0.2	0.2	-22.4	41.1
(i) Miscellaneous Capital Receipts	15	46	61	30	50	0.1	0.2	-34.8	66.7
(ii) Recovery of Loans	25	26	23	26	29	0.1	0.1	-0.6	11.5
10. Total Receipts (8+9)	**2,209**	**2,455**	**2,716**	**2,756**	**3,080**	**9.3**	**9.4**	**12.2**	**11.8**
11. Revenue Expenditure	**3,201**	**3,453**	**3,502**	**3,540**	**3,655**	**11.9**	**11.2**	**2.5**	**3.2**
(i) Interest Payments	805	929	1,080	1,055	1,190	3.6	3.6	13.7	12.8
(ii) Major Subsidies	446	531	375	413	381	1.4	1.2	-22.1	-7.8
Food	289	273	197	212	205	0.7	0.6	-22.2	-3.3
Fertilizer	154	251	175	189	164	0.6	0.5	-24.8	-13.2
Petroleum	3	7	2	12	12	0.0	0.0	79.5	-2.6
12. Capital Expenditure (i + ii)	**593**	**740**	**1,001**	**950**	**1,111**	**3.2**	**3.4**	**28.4**	**16.9**
(i) Capital Outlay	534	625	837	807	940	2.7	2.9	29.2	16.4
(ii) Loans & Advances	58	115	164	143	172	0.5	0.5	24.2	19.8
13. Total Expenditure (11+12)	**3,794**	**4,193**	**4,503**	**4,490**	**4,766**	**15.1**	**14.5**	**7.1**	**6.1**
14. Fiscal Deficit (13-10)	**1,585**	**1,738**	**1,787**	**1,735**	**1,685**	**5.85**	**5.14**	**-0.2**	**-2.8**

Model Appendix: Analytical Framework of DSGE Model

In Section IV, we present a stylised model of a closed economy that serves as an instrument to analyse the dynamics of debt. The model includes various building blocks, namely the household sector (HH), employment agency (EA), intermediate goods (IG) producing firms, final goods (FG) producing firms, capital goods (CG) producing firms, banking sector, the government and the central bank. The decision-making process of the agents and policy authorities is presented below.

A.1 Household Sector

The economy is populated by a continuum of households distributed over a unit interval and indexed by $j \in [0, 1]$, in which ψ_r is the proportion of Ricardian consumers, who are financially included and can smooth out their consumption intertemporally, while $(1 - \psi_r)$ is the proportion of Non-Ricardian households excluded from the financial market participation.

A.1.1 Ricardian Households

The representative Ricardian household derives utility from its consumption $(C_{j,t}^R)$ subject to habit formation, deposit holding $(D_{j,t})$, and incurs disutility from labour supply $(N_{j,t}^R)$. Its utility function is as follows:

$$U\left[C_{j,t}^R, N_{j,t}^R, \left(\frac{D_{j,t}}{P_t}\right)\right] = \left[(1-\sigma_h) ln\left(C_{j,t}^R - \sigma_h C_{t-1}^R\right) - \left(\frac{{N_{j,t}^R}^{1+\sigma_R}}{1+\sigma_R}\right) + ln\left(\frac{D_{j,t}}{P_t}\right)\right] \quad \ldots(1)$$

where, σ_h is the degree of habit formation, σ_R is the inverse of Frisch elasticity of labour supply of the Ricardian households. The expected present value of lifetime utility of the Ricardian household is:

$$E_t \sum_{t=0}^{\infty} \beta^t \, U\left[C_{j,t}^R, N_{j,t}^R, \left(\frac{D_{j,t}}{P_t}\right)\right] \quad \ldots(2)$$

where, $\beta \in (0,1)$ is the discount factor. The household faces a sequence of budget constraint:

$$(1+\tau_t^c) P_t C_{j,t}^R + D_{j,t} + B_{j,t}^H = (1-\tau_t^x) W_t^R N_{j,t}^R + (1+i_{t-1}^D) D_{j,t-1} + (1+i_{t-1}^G) B_{j,t-1}^H + \widetilde{\Omega}_t^{RH} \quad \ldots(3)$$

where, τ_t^c and τ_t^x are the proportional tax rates on consumption and labour income, respectively, paid by the household to the fiscal authority; $B_{j,t}^H$ is the government bond holding of the household; i_t^D, and i_t^G are the interest rate received from the deposit holding and government bond holding, respectively. The household owns the firms partially and hence, it receives a part of their profits $(\widetilde{\Omega}_t^{RH})$[7].

The representative Ricardian household maximises the present value of lifetime expected utility with respect to $\left\{C_{j,t}^R, N_{j,t}^R, D_{j,t}, B_{j,t}^H\right\}_{t=0}^{\infty}$ subject to the sequence of budget constraints.

A.1.2 Non-Ricardian Households

A representative Non-Ricardian household consumes the final good $C_{j,t}^{NR}$ and supplies labour $N_{j,t}^{NR}$ to the employment agency in the competitive labour market at the wage rate W_t^{NR}. Apart from their wage earning, they receive a lump-sum transfer payment (TR_t), covering different forms of benefits and allowances for subsistence, from the fiscal authority. This transfer payment is an exogenous policy variable decided by the government. Besides, the public consumption expenditure (G_t) adds utility to these households and the size of that effect is captured by $\alpha_g \in [0, 1]$.

The Non-Ricardian household maximises the following utility function:

$$U\left(C_{j,t}^{NR}, N_{j,t}^{NR}\right) = \left[ln\left(C_{j,t}^{NR} + \alpha_g G_t\right) - \left(\frac{{N_{j,t}^{NR}}^{1+\sigma_{NR}}}{1+\sigma_{NR}}\right)\right] \quad \ldots(4)$$

subject to their budget constraint:

$$(1+\tau_t^c) P_t C_{j,t}^{NR} = W_t^{NR} N_{j,t}^{NR} + P_t TR_t \quad \ldots(5)$$

and makes optimal choice for $C_{j,t}^{NR}$ and $N_{j,t}^{NR}$. σ_{NR} is the inverse of Frisch elasticity of labour supply of the non-Ricardian households.

(Contd.)

[9] Given the presence of public sector units (PSUs) and public sector banks (PSBs) in the economy, we assume that the government owns the firms and banks partially. Hence, a portion of profit of the firms and banks is reaped by the government in the form of non-tax revenue. The rest of it accrues to the Ricardian households.

Model Appendix: Analytical Framework of DSGE Model *(Contd.)*

A.2. Producers

A.2.1 Employment Agency

Given the presence of two types of household agents, we consider a labour packer, alternatively employment agency, who aggregates two different types of labour using a CES-type aggregator, and converts into a uniform effective labour input as in Banerjee (2013). Additionally, we assume that the labour supplied by the Ricardian households is more efficient (skilled) than that of the non-Ricardian households (unskilled) as in Hnatkovska and Lahiri (2020). This skill gap is modelled by an efficiency wedge between Ricardian to Non-Ricardian labour and captured by the parameter $\mu_r(>1)$. The technology for effective labour production is specified as:

$$N_t = \left[\psi_r^{\frac{1}{\varrho}}(\mu_r N_t^R)^{\left(\frac{\varrho-1}{\varrho}\right)} + (1-\psi_r)^{\frac{1}{\varrho}} N_t^{NR}{}^{\left(\frac{\varrho-1}{\varrho}\right)}\right]^{\frac{\varrho}{\varrho-1}} \quad \ldots(6)$$

where, $N_t^R = \int_0^1 N_{j,t}^R dj$ and $N_t^{NR} = \int_0^1 N_{j,t}^{NR} dj$. Using the expenditure minimisation exercise, the economy-wide aggregate nominal wage (W_t) is derived as:

$$W_t = \left[\psi_r \left(\frac{W_t^R}{\mu_r}\right)^{(1-\varrho)} + (1-\psi_r) W_t^{NR}{}^{(1-\varrho)}\right]^{\left(\frac{1}{1-\varrho}\right)} \quad \ldots(7)$$

A.2.2 Capital Goods Producing Firms

In a perfectly competitive environment, at the beginning of each period t, capital goods producers buy last period's undepreciated capital stock from the intermediate goods producing firms $(1-\delta_k)K_{t-1}$ at a price $P_t^k\left(=P_t Q_t^k\right)$. In addition, they purchase an amount of I_t^k units of the final goods from retailers at a price of P_t. The producers face quadratic investment adjustment cost and investment specific technology shock $\left(\chi_t^{I^k}\right)$. Hence, the law of motion of capital stock is given by:

$$K_t = (1-\delta_K)K_{t-1} + \left[1 - \frac{\vartheta_k}{2}\left\{\left(\frac{I_t^k}{I_{t-1}^k}\right) - 1\right\}^2\right] \chi_t^{I^k} I_t^k \quad \ldots(8)$$

where, ϑ_k represents investment adjustment cost, $\chi_t^{I^k}$ is investment specific technology shock. The optimisation problem of capital goods producing firms can be written as:

$$\max_{I_{t+s}^k} E_t \sum_{s=0}^{\infty} \Lambda_{t,t+s}\left[Q_{t+s}^k\{K_{t+s} - (1-\delta_k)K_{t+s-1}\} - I_{t+s}^k\right] \ldots(9)$$

The optimal choice for private investment $\left(I_t^k\right)$ by the capital goods producers pins down the dynamics of real price of capital goods (alternatively, asset price) denoted by Q_t^k in our model economy.

A.2.3 Intermediate Goods Producing Sector

In this sector, a generic i^{th} firm is solving the problem of optimal combination of inputs and capacity utilisation subject to a Cobb Douglas-type production technology. The representative firm minimises its production cost subject to the production technology in a perfectly competitive environment with marginal cost pricing. It makes the choice for borrowing from the commercial banks to cover (a) the cost for purchasing capital at the beginning of the period, and (b) a fraction (κ_w) of wage bill that needs to be paid to the labours before the production starts. Additionally, it incurs a quadratic cost of capacity utilisation denoted by $\psi(u_t)$ for variations in the capacity utilisation (u_t). The profit function of the IG firm (Π_t^{IG}) is given by:

$$\Pi_{i,t}^{IG} = P_t^D Y_{i,t}^D + (1-\delta_k)P_t^K K_{i,t-1} - (1+\kappa_w i_t^L)\, W_t N_{i,t}$$
$$-(1+i_{t-1}^L)P_{t-1}^K K_{i,t-1} - P_t^E E N_{i,t} - P_t^K \psi(u_t) K_{i,t-1} \quad \ldots(10)$$

where, the production function $\left(Y_{i,t}^D\right)$ and cost of capacity utilization $(\Psi(u_t))$ are as follows:

$$Y_{i,t}^D = \chi_t^{TFP}\left(u_t K_{i,t-1}\right)^{\alpha_k} E N_{i,t}^{\alpha_o}\left(\chi_t^{LAT} N_{i,t}\right)^{1-\alpha_k-\alpha_o} K_t^{g^{v_g}} \quad \ldots(11)$$

$$\psi(u_t) = \psi_a(u_t - 1) + \frac{\psi_b}{2}(u_t - 1)^2 \quad \ldots(12)$$

The optimal choice of the firm yields the demand for capital, labour, energy input and capacity utilisation, and determines the return from the capital, respectively. In this optimisation problem of IG firms, χ_t^{TFP}, χ_t^{LAT} and P_t^E are considered as the time-varying exogenous variables driving the total

(Contd.)

Model Appendix: Analytical Framework of DSGE Model *(Contd.)*

factor productivity, labour augmenting technology and energy price, respectively[8].

A.2.4 Final Goods Producing Firms

Competitive distributors package the intermediate goods (Y_t^D) to deliver final goods (Y_t) to the household using the following CES technology:

$$Y_t^D = \left[\int_0^1 Y_{i,t}^{D\,\frac{\chi_{D,t}-1}{\chi_{D,t}}}\, di\right]^{\frac{\chi_{D,t}}{\chi_{D,t}-1}}$$

where, $\chi_{D,t}$ is the exogenous time-varying elasticity of intra-sectoral substitution across the differentiated products. The firm chooses its price in a monopolistically competitive environment with one-to-one conversion from $Y_{i,t}^D$ to $Y_{i,t}$. The goods are differentiated due to packaging with different brands at zero cost. These differentiated final goods are sold at price $P_{i,t}$. The price setting problem can be written as:

$$Max_{P_{i,t}} E_t \sum_{t=0}^{\infty} \Lambda_{0,t} \left[\begin{array}{c} \left(\frac{P_{i,t}}{P_t}\right) Y_{i,t} - mc_t^D Y_{i,t} - \\ \frac{\vartheta_{pd}}{2}\left\{\frac{P_{i,t}}{P_{i,t-1}} - (1+\pi_{t-1})^{\theta_{pd}}(1+\pi)^{1-\theta_{pd}}\right\}^2 Y_t \end{array} \right] \quad ...(13)$$

where, mc_t^D is the real marginal cost of intermediate goods, the consumer price index (CPI) is defined as: $P_t = \left[\int_0^1 P_{i,t}^{1-\chi_{D,t}}\, di\right]^{\frac{1}{1-\chi_{D,t}}}$; the gross rate of CPI inflation is defined as: $\left(\frac{P_t}{P_{t-1}}\right) = (1+\pi_t)$; and π denotes steady-state level of CPI inflation rate. ϑ_{pd} denotes the price adjustment cost and θ_{pd} is the size of past inflation indexation. The above optimisation problem is solved subject to the sequence of demand constraints:

$$Y_{i,t} = \left(\frac{P_{i,t}}{P_t}\right)^{-\chi_{D,t}} Y_t \quad ...(14)$$

The price of final goods is subject to the mark-up shock due to presence of exogenously time-varying price elasticity of demand $(\chi_{D,t})$.

A.3. Banking Sector

Following Anand et al. (2014), we incorporate the banking sector into our model. The representative bank $j \in [0,1]$ intermediates in all financial transactions among the economic agents which includes deposit collection (D_t) and catering the demand for credit $(L_t = \kappa_w W_t N_t + P_t^k K_t)$. It works using two branches, namely retail branch and wholesale branch.

A.3.1 Retail Branch

The retail branch operates in a monopolistically competitive environment and set (a) the deposit rate for differentiated deposit contracts for the households, and (b) the lending rate for the IG firms, subject to interest rate adjustment costs. While solving their optimal interest rate setting problem, they face upward sloping deposit supply function and downward sloping loan demand function.

A.3.2 Wholesale Branch

The wholesale branch, on the other hand, decides on the allocation of financial resources in a competitive environment subject to the institutional mandate of cash reserve ratio (α_c), statutory liquidity ratio (α_s) and the capital adequacy ratio requirement (κ_b). It has a law of motion for its own net worth and incurs an exogenous time varying loan monitoring cost (χ_t^{rp}) in proportion to the size of total loan. The wholesale unit has the access to borrow from the central bank at interest rate i_t^C which we consider as the policy rate in the model. The branch makes optimal choice for (a) selling of deposit contract to the retail deposit branch; (b) selling of loan contract to the retail loan branch, and (c) borrowing from the central bank subject to balance sheet constraint.

From the optimisation exercise of the wholesale branch and retail branch, one can derive the relationships between (i) the retail lending rate (i_t^L) and policy rate, and (ii) retail deposit rate (i_t^D) and policy rate – which serve the basis for bank lending

(Contd.)

[10] For an empirically plausible analysis, we disaggregate the productivity shock into two components, namely shocks to total factor productivity and labour augmenting technology, and dissect their differential impacts on the business cycles.

Model Appendix: Analytical Framework of DSGE Model *(Concld.)*

channel and interest rate transmission mechanism in the model.

A.4. Central Bank

The central bank uses policy interest rate (i_t^c) as the key instrument for conducting its monetary policy. It follows a Taylor-type interest rate rule as given below.

$$\left(\frac{1+i_t^C}{1+i^C}\right) = \left(\frac{1+i_{t-1}^C}{1+i^C}\right)^{\rho_C} \left[\left(\frac{1+\pi_{t+1}}{1+\pi}\right)^{\varphi_\pi} \left(\frac{Y_t}{Y_{t-1}}\right)^{\varphi_y}\right]^{1-\rho_C} exp\{\chi_t^{i^c}\} \quad ...(15)$$

where, ρ_c is interest rate smoothing parameter, φ_π is inflation stabilising coefficient and φ_y is output growth stabilising coefficient, and $\chi_t^{i^c}$ is the monetary policy shock.

A.5. Fiscal Authority

In case of fiscal authority, the nominal budget constraint of the government is:

$$B_t^H + B_t^C + \tau_t^x W_t^R N_t^R + \tau_t^c P_t C_t + P_t LS_t + \tilde{\Omega}_t^G = (1 + i_{t-1}^G)(B_{t-1}^H + B_{t-1}^C) + P_t G_t + P_t TR_t + P_t I_t^{kg} \quad ...(16)$$

where, $G_t = g_y Y_t \chi_t^G$, $TR_t = tr_y Y_t \chi_t^{TR}$, $I_t^{kg} = ikg_y Y_t \chi_t^{I^{kg}}$. χ_t^G, χ_t^{TR}, $\chi_t^{I^{kg}}$, τ_t^x and τ_t^c – all are exogenous forcing processes for public spending, payments for benefit transfer to non-Ricardian consumers, spending for capital expenditure, tax rate on labour income of the Ricardian households, and tax rate on private consumption, respectively. Lumpsum taxes (LS_t) are assumed to be set in reaction to the evolution of debt to GDP ratio. $\tilde{\Omega}_t^G$ denotes the non-tax revenue of the government as per its share in the production system and banking sector. The interest rate on government bonds (i_t^G) is set as per the following rule:

$$(1 + i_t^G) = \left[1 + \chi_B \left(\frac{B_t^H + B_t^C}{P_t Y_t}\right)\right](1 + i_t^C) \quad ...(17)$$

where, $B_t^C = \alpha_s D_t$ follows from the binding constraint of SLR to the commercial banks holding a portion of the deposit in the form of government bond; B_t^H appears from Ricardian household's government bond holding; $\left(\frac{B_t^H + B_t^C}{P_t Y_t}\right)$ defines the movements of the public debt to GDP ratio and χ_B denotes the risk premium on the government bonds. Further, we assume that the law of motion of the public capital goods evolves in the following way:

$$K_t^g = (1 - \delta_g) K_{t-1}^g + I_t^g \quad ...(18)$$

A.6. Closing the Model

Under the assumption of symmetric equilibrium and using market clearing conditions of the factor markets, goods market and credit market, the model is closed with the following resource constraint that specifies the aggregate demand of the underlying economy:

$$Y_t = C_t + I_t^k + G_t + I_t^{kg} + \Psi_t^C \quad ...(19)$$

where, Ψ_t^C includes all forms of quadratic adjustment costs involved in price setting, interest rate setting, investment adjustment, bank capital adequacy ratio requirement; the loss of economic resources due to variable capacity utilisation of IG firms, loan monitoring cost and managerial cost of the commercial banks.

A.7. Exogenous Shocks

We have twelve forcing variables which follow AR(1) process with the exogenous shocks: $\{\xi_t^{tfp}, \xi_t^{lat}, \xi_t^i, \xi_t^p, \xi_t^{rp}, \xi_t^g, \xi_t^{\tau^x}, \xi_t^{\tau^c}, \xi_t^{tr}, \xi_t^{i^c}, \xi_t^{ikg}, \xi_t^{en}\}_{t=0}^{\infty}$, that drive the aggregate dynamics of our model.

A.8. Solving the Model

All the decision rules derived from the first principle of the dynamic optimisation and the resource constraints are taken together and log-linearised around the steady state of the respective variables. Using a plausible set of parameterisation, the linearised system of equations is solved. The calibrated parameters are in line with Indian macroeconomic data, economic characteristics and policy mandates.

Headline and Core Inflation Dynamics: Have the Recent Shocks Changed the Core Inflation Properties for India?

*by Asish Thomas George, Shelja Bhatia, Joice John and Praggya Das^*

In the light of the unprecedented inflation shocks seen in recent years, Consumer Price Index (CPI) core inflation measures – exclusion-based, trimmed means, reweighted CPI, and trend CPI – for the period January 2012 to December 2023 are assessed for their desirable properties. The core inflation properties, viz., ease of communication, equality of means, lower variance, predictability, co-integration, unbiasedness and attractor conditions, were tested for the pre-COVID and full sample period. Findings suggest that exclusion-based measures of core inflation and reweighted CPI measures based on historical standard deviations and principal components, were relatively more robust to the recent inflation shocks.

I. Introduction

Inflation process in India has seen a drastic change since the early 2020, primarily driven by the spillovers from a series of global shocks unprecedented in recent times – that *inter alia* include COVID-19 and lockdowns, pent-up demand post-COVID lockdowns and the related supply-side disruptions, the conflict in Ukraine and adverse climate events. These have had a significant impact on the inflation dynamics in India, driving the headline Consumer Price Index (CPI) inflation that was close to the target rate of 4 per cent in the pre-COVID period to edge up above the upper tolerance limit of 6 per cent in 2020-21 (averaging at 6.1 per cent during June 2020-March 2021[1]). Further, headline inflation remained above 6 per cent for three consecutive quarters and beyond beginning Q4:2021-22, thus triggering accountability procedures mandated by the Reserve Bank of India (RBI) Act. During June 2020 to March 2023, CPI inflation excluding food and fuel which abstract the volatile and transitory components from the aggregate index, also rose and remained sticky at elevated levels, with the average inflation during the period brushing 6.0 per cent. Thereafter, in 2023-24 so far, CPI inflation excluding food and fuel has seen sharp correction. Taking into account these developments, this article attempts to re-evaluate CPI core inflation measures – *viz.* exclusion-based, trimmed means, reweighted CPI, and trend CPI – for their desirable properties.

Core inflation measures are widely used by central banks to filter out the impact of noise or volatile inflation components for a better understanding of the underlying inflation trends. While inflation targets are largely expressed in terms of headline inflation, core measures of inflation often serve as the operational guide to achieving the target rate over the medium term. This also makes core inflation the anchor for arriving at headline inflation projections. Different approaches have been used to derive measures of core or underlying inflation. These are broadly classified into the following. First, fixed exclusion-based measures, which exclude components like food and fuel which generally exhibit volatile price movements. Second, trimmed mean measures or temporary exclusion-based measures, which exclude components in the inflation distribution experiencing large relative price changes each month; and the weighted median measure, which trims all but the midpoint of the distribution of price changes (Clark, 2001). Such measures are also known as limited influence estimators of core inflation as they are designed to exclude large and influential price changes (Silver, 2006; Rich *et al.*, 2022). Third, frequency-

^ The authors are from the Monetary Policy Department, Reserve Bank of India. Inputs from Shubhi Chauhan are gratefully acknowledged. The authors are thankful to Dr. Rajiv Ranjan for his encouragement in preparing this article. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

[1] The imputed CPI prints for April and May 2020 have been regarded as a break in the CPI series.

based exclusion measures, wherein transitory items are filtered to arrive at the persistent component of inflation (Ehrmann *et al.,* 2018).

Any measure of core inflation, for its use in monetary policy analysis as a true measure of underlying inflation trends, needs to conform to a certain set of desirable properties. To begin with, a desirable core inflation measure should be transparent in its computation and easy to communicate. In terms of its statistical properties, the measure should be more stable (or less volatile) than the headline inflation measure. Additionally, over a long period of time, the average rate of core inflation should match the average rate of headline inflation so that there is no systematic divergence between the two. This would also require that the movements in the core inflation should trace the trend rate of inflation. Accordingly, with core measures containing more information about the future trend of inflation than the headline inflation, projections of core measures should also enhance the predictability of overall or headline inflation.

Given this importance of core inflation measures in informing monetary policy decisions, studies such as Eckstein, 1981; Bryan and Cecchetti, 1994; Marques *et al.,* 2002; Schembri, 2017; and Bańbura *et al.,* 2023, among others, have regularly attempted to evaluate the statistical performance of alternative measures of core inflation to evaluate their usefulness and adequacy. The drastic change in inflation process and its heightened volatility since 2020 across the globe has also resulted in a renewed focus on core inflation as a reliable measure of underlying inflation for the monetary policy process. Ball *et al.* (2021) found trimmed mean core inflation measures exhibiting the least volatility in the US during the COVID-19 period. In Canada, Khan and Sullivan (2022) finds outlier-exclusion measures of core, such as CPI-trim and CPI-median, as more reliable indicators of underlying inflation throughout the pandemic. Ball *et al.* (2023), based on a cross country analysis, show that weighted median inflation measures outperformed the exclusion-based measures of core inflation, even when COVID-19 period was included. Carlomagno *et al.* (2023) demonstrated that optimally selecting CPI components for exclusion improves core inflation measure properties, and the result was robust to the COVID-19 data period. For the Euro area, Bańbura *et al.* (2023) found that properties and forecasting performance are relatively better for core inflation measures of Harmonised Index of Consumer Prices (HICP) excluding energy, food, air travel-related items, clothing and footwear (HICPXX), domestic inflation measure which consists of HICP excluding energy and food (HICPX) items with low import intensity, and the persistent and common components of inflation (PCCI) measure.

Core inflation studies in the context of Indian economy were initially based on the wholesale price index (WPI) (Samanta, 1999; Mohanty *et al.,* 2000; Durai and Ramachandran, 2007; Kar, 2009; Das *et al.,* 2009; Goyal and Pujari, 2005; Raj and Misra, 2011; Bicchal *et al.,* 2012; Ball *et al.,* 2016). Following the move towards CPI inflation based flexible inflation targeting (FIT) framework for monetary policy in India since 2014, which was formally adopted in 2016 with an inflation target based on the then newly released all India CPI-Combined, studies have focused on evaluating the properties of CPI based core inflation measures, with CPI-Industrial Workers (IW) and backcasted CPI-Combined series. Anand and Tulin (2016) use the backcasted CPI-Combined series based on CPI-IW to show that headline inflation does not revert to core inflation. Instead, it is core inflation that returns to headline inflation, indicating the possibility of persistent food shocks or significant second-round effects. Contrary to this, Dholakia and Kadiyala (2018) utilised CPI-Combined series to show that headline inflation tends to revert to core inflation and not otherwise. On the issue of the appropriate measure of core inflation, employing an array of core measures, which includes exclusion-based measures as well as statistical measures based on the new CPI-Combined series for the period January

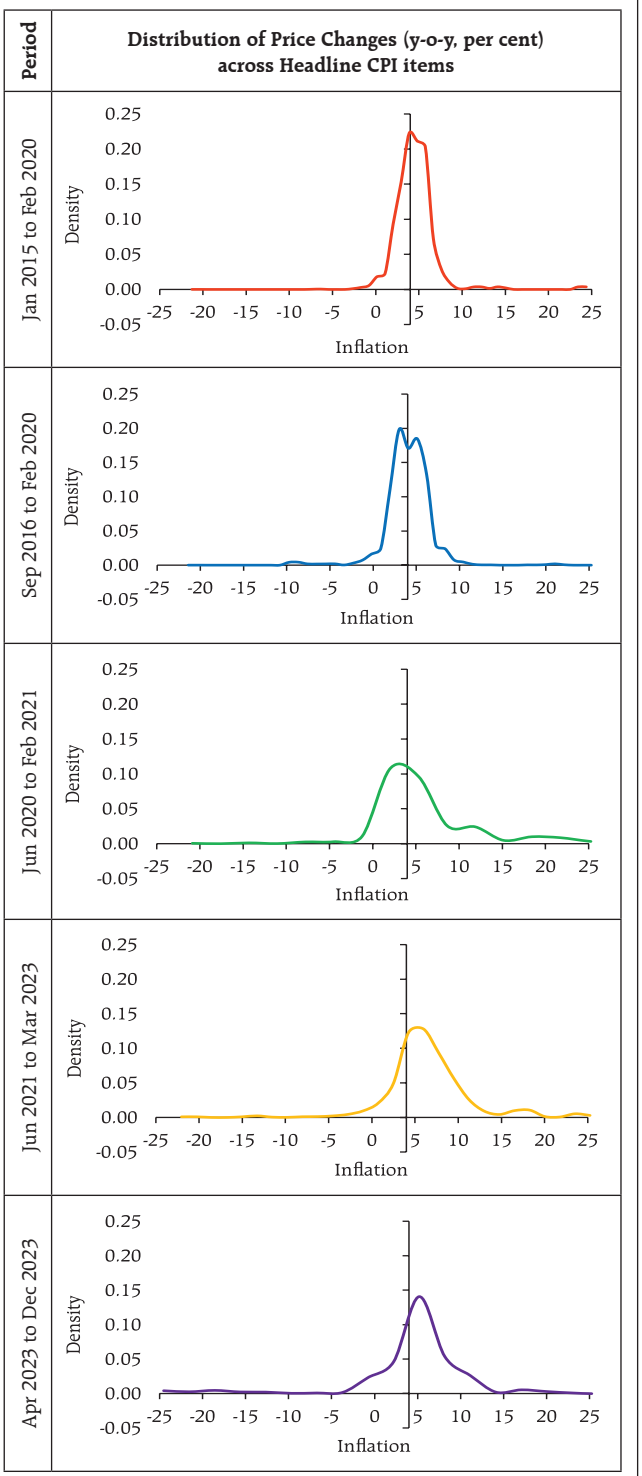
2012-September 2019, Raj *et al.* (2020) showed that no core inflation measure satisfied all the desirable properties, though exclusion-based measures satisfied most of the desirable properties. At the same time, Sahu (2021) found that 20 per cent trimmed mean measure as a good indicator for the underlying trend in the headline inflation. Using the data for the pre-COVID period, RBI (2021) estimated that deviations in non-core components of inflation from core inflation to correct within a span of one year. Evidence of non-core components or headline influencing core were also seen, especially in the short-run, indicative of spillovers to core inflation through increased costs as well as unanchored inflation expectations. A more recent examination of the bias-adjusted weighted median measures of core inflation points towards presence of persistence in core inflation in the post-COVID era, with headline inflation converging to core inflation (Patra *et al.*, 2023).

Against this backdrop, this article formally re-examines the properties of core measures in India based on exclusion-based measures and statistical measures in line with Raj *et al.* (2020). This is supplemented by the inclusion of the bias-adjusted weighted median measure proposed in Ball *et al.* (2023) and trend measures. The paper draws on the methodology followed by Das *et al.* (2009) and Raj *et al.* (2020) to evaluate various core inflation measures and is organised into four sections. Section II provides an overview of the core inflation measures examined for analysis, along with their key stylised facts. Section III tests the various candidates of core inflation against the desirable properties. Section IV concludes the paper.

II. Core Inflation – Empirical Analysis for India

The distribution of CPI inflation over the last decade has witnessed considerable variations along with a sharp rise in the mean inflation rates since the 2020s as compared with the pre-COVID FIT period (Chart 1). From a low inflation phase characterised by low volatility, though exhibiting high inflation

Chart 1: CPI Inflation Distribution



Notes: 1. Jan 2015 to Feb 2020 represents the pre-COVID period.
2. Sep 2016 to Feb 2020 represents the pre-COVID FIT period.
3. Jun 2020 to Feb 2021 represents the first wave of COVID.
4. Jun 2021 to Mar 2023 represents the continuing impact of COVID shock along with the Ukraine war.
5. Apr 2023 to Dec 2023 represents the period of moderation in core inflation.

Sources: National Statistical Office (NSO), GoI; and authors' estimates.

outliers in the pre-COVID period, inflation picked up along with an increase in volatility during 2020-21. However, the 2021-23 period was marked by high inflation and lower volatility, which is indicative of generalised inflation. Since April 2023 there was an easing of inflationary pressures, though food price shocks kept headline inflation volatile. Given the sharp movements in commodity prices inducing large volatility in inflation, which can even also lead to generalisation, robust measures of core inflation are critical for monetary policy to understand the durable trends in inflation, a key element in arriving at the medium-term inflation outlook and the monetary policy stance.

Based on the available literature the following 14 measures for core inflation (details in Annex II) are considered:

Fixed Exclusion based Measures

1. CPI excluding food and fuel
2. CPI excluding food, fuel, petrol and diesel
3. CPI excluding food, fuel, petrol, diesel, gold and silver
4. CPI excluding food, fuel, petrol, diesel, gold, silver and housing

Trimmed Mean Measures

5. Trimmed mean (5 per cent)
6. Trimmed mean (10 per cent)
7. Trimmed mean (20 per cent)
8. Median
9. Bias Adjusted Median

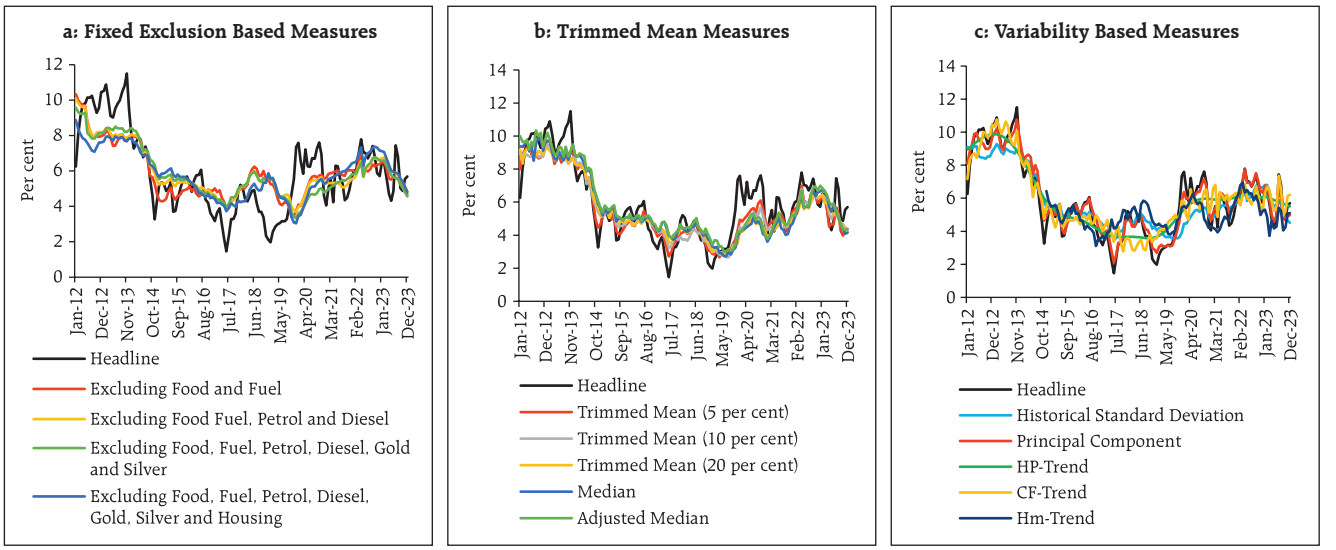
Reweighted and Trend Measures (Variability based measures)

10. Historical Standard Deviation
11. Principal Component
12. Hodrick-Prescott trend (HP trend)
13. Christiano-Fitzgerald trend (CF trend)
14. Hamilton trend (Hm trend)

The first four candidates are obtained by excluding the highly volatile sub-groups/items. Excluding the 'food and fuel group' is most common across countries to arrive at the core as it is generally the most volatile group, usually impacted by supply shocks (weather, seasonality, production shortfalls, *etc.*). Apart from food and fuel, some other items, *viz.*, petrol and diesel (which belong to the transport sub-group in CPI), and gold and silver (which belong to the personal care and effects sub-group) are also found to be highly volatile in the Indian context. Housing also may show considerable price variations, especially in times of revision of imputed house rentals for accommodation provided by the Government and the public sector. The next set of five core inflation measures (5 to 9) have been computed using trimming of CPI inflation distribution; and the last set of measures (10 to 14) have been computed by either re-weighting CPI indices based on historical volatility or by estimating the trend component of CPI inflation. The historical standard deviation-based core measure and the ones derived based on statistical filters are proximate alternatives to core measures estimated based on the persistence in components of inflation.

Monthly CPI item level data (base 2012=100) for the period January 2012 to December 2023 were used for the study. Since the CPI item level inflation data (base 2012=100) is available only from January 2015, the CPI item level data for the base years 2012 and 2010 were spliced to obtain CPI item level time series data from 2012. In the current series, the published headline index numbers do not always match with the ones arrived from aggregation of item level indices (Das and George, 2023). For the purpose of this study, item level CPI was adjusted to derive the headline CPI inflation from aggregation of items, consistent with published headline CPI inflation. The adjustment assumes importance as it enables an accurate and consistent assessment of the desirable properties of various core inflation measures since the distortion

Chart 2: Trends in Various Measures of Core Inflation (y-o-y)



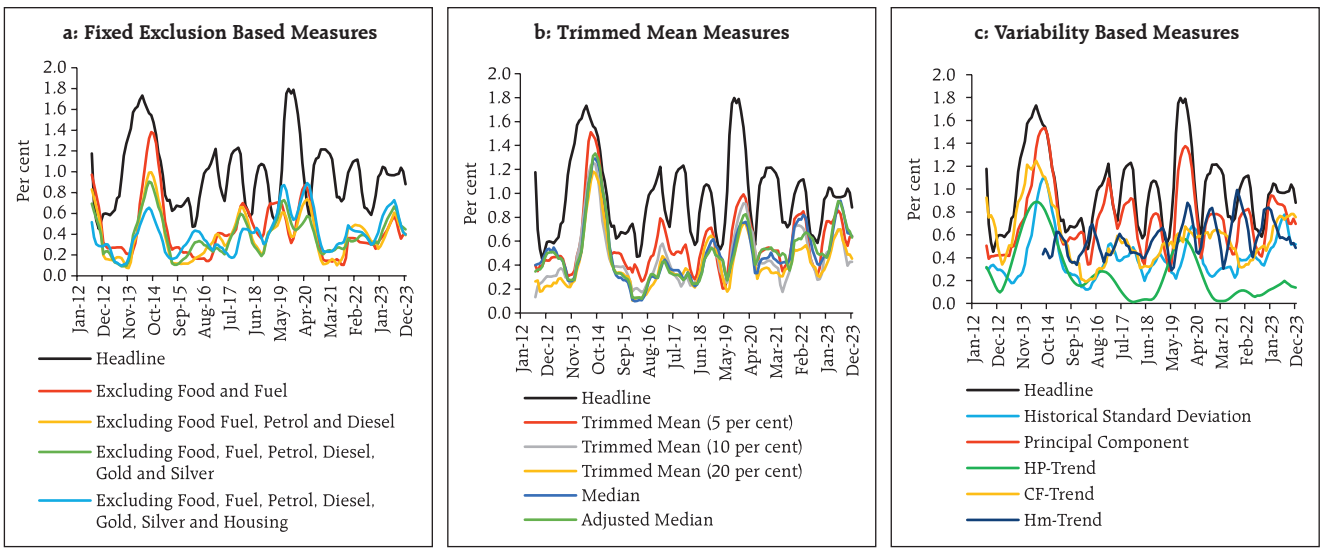
Sources: NSO; and authors' estimates.

caused due to the aggregation method is taken care of. Various core inflation measures obtained using the above approach for the study period experienced relatively lower peaks and troughs (Chart 2).

Since core measures are meant to filter out transitory movements in headline inflation, a good measure should be relatively stable over time and hence less volatile. All the core measures exhibited lower volatility than the headline measure (Chart 3).

Between January 2012 and December 2023, the various core inflation measures considered were seen to largely follow the same trend. The average core inflation across various measures was in the range of 4.99 per cent to 5.99 per cent. Among the core

Chart 3: Core Inflation Volatility – 12-month Rolling Standard Deviation



Sources: NSO; and authors' estimates.

Table 1: CPI Core Inflation Measures – Summary Statistics

Headline and Core Measures	Wt. in CPI	Pre-COVID Sample (Jan 2012 to Feb 2020)				Full Sample (Jan 2012 to Dec 2023)			
		Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
CPI Headline	100	5.88#	2.64	1.46	11.51	5.91	2.25	1.46	11.51
Fixed Exclusion Based Measures									
1. Excluding Food and Fuel	47.3	5.90	1.74	3.47	10.34	5.87	1.46	3.47	10.34
2. Excluding Food, Fuel and Petrol & Diesel	45.0	6.07	1.66	3.67	10.09	5.95	1.42	3.67	10.09
3. Excluding Food, Fuel, Petrol & Diesel and Gold & Silver	43.8	6.10	1.67	3.33	9.58	5.92	1.46	3.33	9.58
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	33.7	5.78	1.49	3.04	8.87	5.85	1.32	3.04	8.87
Trimmed Mean Measures									
5. Trimmed Mean (5 per cent)		5.62	2.23	2.66	9.72	5.54	1.89	2.66	9.72
6. Trimmed Mean (10 per cent)		5.64	2.21	2.66	9.49	5.53	1.86	2.66	9.49
7. Trimmed Mean (20 per cent)		5.73	2.15	2.82	9.29	5.53	1.84	2.82	9.29
8. Median		5.94	2.28	2.72	9.99	5.68	1.99	2.72	9.99
9. Bias-Adjusted Median		6.13	2.33	3.02	10.34	5.87	2.01	3.02	10.34
Reweighted and Trend Measures									
10. Historical Standard Deviation		5.94	1.97	3.46	9.28	5.84	1.67	3.46	9.28
11. Principal Component		5.96	2.45	2.11	10.76	5.99	2.07	2.11	10.76
12. Hodrick-Prescott trend		5.89	2.32	3.58	9.88	5.91	1.91	3.58	9.88
13. Christiano-Fitzgerald trend		5.87	2.41	2.78	10.77	5.90	2.01	2.80	10.78
14. Hamilton trend*		4.73	0.71	3.11	6.44	4.99	0.80	3.26	7.03

Notes: *: Hamilton trend CPI inflation was computed based on 36-month lag.
#: Headline CPI inflation during the pre-COVID FIT period (Oct-16 to Mar-20) was 3.9 per cent.
Sources: NSO; and author's calculations..

inflation measures, higher volatility was observed in the trimmed mean, reweighted and trend core inflation measures *vis-à-vis* fixed exclusion-based measures. There were instances where headline inflation fell below core inflation for certain periods, attesting to the considerable impact of favourable food price dynamics and relative price shocks on headline inflation (Table 1).

III. Properties and Performance of Various Candidates of Core Inflation

As mentioned above, a measure of core inflation must adhere to certain desirable properties to serve as a reliable indicator of underlying inflation trends in the context of monetary policy analysis. These properties, which include ease of communication, equality of means, lower volatility, unbiasedness, predictability, co-integration and attraction condition, are tested for the various core measures in this section.

III.1. Ease of Communication

A major criterion for a good measure of core inflation is that it should possess qualities of timeliness, credibility (*i.e.*, independent agents should be able to verify these) and ease of comprehension by the general public (Roger, 1998). By construct, the exclusion-based core inflation measures satisfy these criteria better as compared to the statistical measures as the former can be readily verified by the independent agents and are easier to communicate.

III.2. Equality of Means and Lower Variance

A necessary condition of a good core inflation measure is that it should, on average, closely align

with the headline inflation while exhibiting lower variability (Clark, 2001). This can be tested by checking whether (a) the means of headline and core inflation are statistically similar; and (b) the variability of the core inflation is statistically lower than the headline inflation.

(a) Test of Equality of Means

The standard t-tests for checking the equality of the means of the headline inflation series and different candidates of core inflation measures were conducted. In the pre-COVID period, all core inflation measures satisfied the equality of means criterion. This is consistent with the results obtained by Raj *et al.* (2020). Expanding the sample to cover the period since June 2020, the results are still seen to hold, indicating that even after accounting for the shocks of COVID-19 and Ukraine war in 2022, core inflation rates (on an average), derived from these various measures, were not statistically different from those of headline (Table 2).

(b) Variance Ratio Test

As per this criterion, core inflation should have lower variance than the headline. Table 3 presents the ratio of variances and p-values corresponding to the hypothesis of lower variance of the core inflation series using F-test. For the pre-COVID period, the fixed exclusion based core measures, trimmed mean measures (barring bias-adjusted median), historical standard deviation measure and the Hamilton trend CPI inflation measure satisfied this criterion. For the full sample period (January 2012 to December 2023) the principal component and the Christiano-Fitzgerald

Table 2. Equality of Means

Core Measures	Pre-COVID (Jan 2012 to Feb 2020)			Full Sample (Jan 2012 to Dec 2023)		
	Difference* in Mean	p-value @	Remarks	Difference* in Mean	p-value@	Remarks
Fixed Exclusion Based Measures						
1. Excluding Food and Fuel	-0.022	0.944	Satisfied	0.044	0.844	Satisfied
2. Excluding Food, Fuel and Petrol & Diesel	-0.195	0.537	Satisfied	-0.039	0.860	Satisfied
3. Excluding Food, Fuel, Petrol & Diesel and Gold & Silver	-0.229	0.469	Satisfied	-0.005	0.983	Satisfied
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	0.094	0.759	Satisfied	0.064	0.768	Satisfied
Trimmed Mean Measures						
5. Trimmed Mean (5 per cent)	0.256	0.465	Satisfied	0.375	0.127	Satisfied
6. Trimmed Mean (10 per cent)	0.236	0.499	Satisfied	0.385	0.116	Satisfied
7. Trimmed Mean (20 per cent)	0.141	0.683	Satisfied	0.384	0.114	Satisfied
8. Median	-0.071	0.840	Satisfied	0.235	0.348	Satisfied
9. Bias-Adjusted Median	-0.252	0.480	Satisfied	0.036	0.885	Satisfied
Reweighted and Trend Measures						
10. Historical Standard Deviation	-0.058	0.861	Satisfied	0.073	0.754	Satisfied
11. Principal Component	-0.081	0.824	Satisfied	-0.076	0.767	Satisfied
12. Hodrick-Prescott trend	0.000	1.000	Satisfied	0.000	1.000	Satisfied
13. Christiano-Fitzgerald trend	0.016	0.964	Satisfied	0.007	0.976	Satisfied
14. Hamilton trend	0.000	1.000	Satisfied	0.000	1.000	Satisfied

Notes: * Headline inflation minus core inflation

@: Test of equality of means based on t-test with $H_0 : \mu_1 = \mu_2$ Vs $H_1 : \mu_1 \neq \mu_2$ where μ_1 and μ_2 are means of headline inflation and core inflation, respectively.

Source: Authors' estimates

Table 3. Variance Ratio Test

Core Measures	Pre-COVID (Jan 2012 to Feb 2020)			Full Sample (Jan 2012 to Dec 2023)		
	Ratio@ of SD	p-value #	Remarks	Ratio@ of SD	p-value #	Remarks
Fixed Exclusion Based Measures						
1. Excluding Food and Fuel	1.522	0.000	Satisfied*	1.543	0.000	Satisfied*
2. Excluding Food, Fuel and Petrol & Diesel	1.591	0.000	Satisfied*	1.587	0.000	Satisfied*
3. Excluding Food, Fuel, Petrol & Diesel and Gold & Silver	1.583	0.000	Satisfied*	1.539	0.000	Satisfied*
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	1.775	0.000	Satisfied*	1.704	0.000	Satisfied*
Trimmed Mean Measures						
5. Trimmed Mean (5 per cent)	1.183	0.050	Satisfied***	1.189	0.039	Satisfied**
6. Trimmed Mean (10 per cent)	1.198	0.038	Satisfied**	1.208	0.025	Satisfied**
7. Trimmed Mean (20 per cent)	1.228	0.022	Satisfied**	1.222	0.018	Satisfied**
8. Median	1.159	0.074	Satisfied***	1.132	0.138	Not Satisfied
9. Bias-Adjusted Median	1.137	0.104	Not Satisfied	1.119	0.182	Not Satisfied
Reweighted and Trend Measures						
10. Historical Standard Deviation	1.344	0.002	Satisfied *	1.349	0.000	Satisfied*
11. Principal Component	1.078	0.461	Not Satisfied	1.086	0.323	Not Satisfied
12. Hodrick-Prescott trend	1.131	0.229	Not Satisfied	1.177	0.053	Satisfied***
13. Christiano-Fitzgerald trend	1.096	0.371	Not Satisfied	1.119	0.179	Not Satisfied
14. Hamilton trend	3.445	0.001	Satisfied *	2.828	0.000	Satisfied*

Notes: @ Headline inflation over core inflation.
Test of equality of variance based on F-test with $H_0 : \sigma_1^2 = \sigma_2^2$ Vs $H_1 : \sigma_1^2 > \sigma_2^2$ where σ_1^2 and σ_2^2 are variances of headline inflation and core inflation, respectively.
***: at 10 per cent level of significance. **: at 5 per cent level of significance. *: at 1 per cent level of significance.
Source: Authors' estimates

trend inflation measures, the weighted median and the bias-adjusted median did not significantly satisfy the criteria of lower variance than the headline inflation series.

III.3. Inflation Predictability

Another desirable property of a core inflation measure, suggested by Cecchetti and Moessner (2008), is that a good core inflation series should predict future changes in inflation by the right magnitude. This is empirically examined by the inflation-prediction test suggested by Cogley (2002), and Dholakia and Kadiyala (2018). If $\pi^c(t)$ is the core inflation, $\pi(t)$ is headline inflation and $u(t)$ is the error term at time period *t*, then for any sufficiently large time horizon H, the regression:

$$\pi(t+H) - \pi(t) = \alpha + \beta\,(\pi(t) - \pi^c(t)) + u(t+H) \quad ...(1)$$

should satisfy $\alpha = 0$ and $\beta = -1$, implying that deviation in inflation between headline and core should be inversely related to future changes in headline inflation. If the slope coefficient is less (greater) than one in absolute terms, it suggests that the measure of core inflation is over (under) predicting the magnitude of subsequent changes in inflation. As in Raj *et al.* (2020), the predictability is tested for the forecasting horizon of six months, *i.e.*, H = 6.

For the pre-COVID period, there was evidence of a negative β coefficient for all the core inflation measures considered. However, the exclusion-based core inflation measures could not satisfy the joint hypothesis (*i.e.* $\alpha = 0$ and $\beta = -1$) in equation (1). Raj *et al.* (2020) also obtained a similar result and

Table 4. Predictability for Pre-COVID period (Jan 2012 to Feb 2020)

Core Measures	α	β	Test@ $\alpha = 0$ and $\beta = -1$	Remarks
Fixed Exclusion Based Measures				
1. Excluding Food and Fuel	-0.268	-0.485	0.000	Not Satisfied
2. Excluding Food, Fuel and Petrol & Diesel	-0.383	-0.582	0.000	Not Satisfied
3. Excluding Food Fuel, Petrol & Diesel and Gold & Silver	-0.412	-0.568	0.000	Not Satisfied
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	-0.221	-0.509	0.000	Not Satisfied
Trimmed Mean Measures				
5. Trimmed Mean (5 per cent)	-0.073	-0.785	0.627	Satisfied**
6. Trimmed Mean (10 per cent)	-0.108	-0.764	0.380	Satisfied**
7. Trimmed Mean (20 per cent)	-0.192	-0.760	0.213	Satisfied**
8. Median	-0.344	-0.680	0.012	Satisfied*
9. Bias-Adjusted Median	-0.497	-0.749	0.001	Not Satisfied
Reweighted and Trend Measures				
10. Historical Standard Deviation	-0.336	-0.766	0.031	Satisfied*
11. Principal Component	-0.271	-0.574	0.110	Satisfied**
12. Hodrick-Prescott trend	-0.258	-1.290	0.024	Satisfied*
13. Christiano-Fitzgerald trend	-0.231	-1.180	0.167	Satisfied**
14. Hamilton trend	-0.067	-1.098	0.857	Satisfied**

Note: @: p-values are reported; ** at 5 per cent level of significance and * at 1 per cent level of significance.
Source: Authors' estimates.

Table 5. Predictability – Full Sample (Jan 2012 to Dec 2023)

Core Measures	α	β	Test@ $\alpha = 0$ and $\beta = -1$	Remarks
Fixed Exclusion Based Measures				
1. Excluding Food and Fuel	-0.121	-0.470	0.000	Not Satisfied
2. Excluding Food, Fuel and Petrol & Diesel	-0.160	-0.508	0.000	Not Satisfied
3. Excluding Food Fuel, Petrol & Diesel and Gold & Silver	-0.146	-0.466	0.000	Not Satisfied
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	-0.107	-0.452	0.000	Not Satisfied
Trimmed Mean Measures				
5. Trimmed Mean (5 per cent)	-0.086	-0.639	0.035	Satisfied*
6. Trimmed Mean (10 per cent)	-0.079	-0.584	0.002	Not Satisfied
7. Trimmed Mean (20 per cent)	-0.053	-0.522	0.000	Not Satisfied
8. Median	-0.052	-0.400	0.000	Not Satisfied
9. Bias-Adjusted Median	-0.133	-0.441	0.000	Not Satisfied
Reweighted and Trend Measures				
10. Historical Standard Deviation	-0.103	-0.611	0.003	Not Satisfied
11. Principal Component	-0.196	-0.662	0.124	Satisfied**
12. Hodrick-Prescott trend	-0.141	-1.130	0.204	Satisfied**
13. Christiano-Fitzgerald trend	-0.112	-1.032	0.605	Satisfied**
14. Hamilton trend	0.011	-0.678	0.019	Satisfied**

Notes: @: p-values are reported.
** at 5 per cent level of significance and *at 1 per cent level of significance.
Source: Authors' estimates.

attributed it to the unusually low and persistent food inflation during the sample period. Most of the trimmed means and the historical standard deviation and other trend inflation measures satisfied the predictability property, while the bias-adjusted median measure did not satisfy it (Table 4).

Extending the data to cover the period since the outbreak of COVID-19 in 2020, all the exclusion-based measures and the trimmed measures (barring 5 per cent trimmed mean) failed to satisfy the predictability test. Though the β coefficients were seen to be negative (indicating the predictive power of core inflation for determining the headline inflation), the joint hypothesis of $\alpha = 0$ and $\beta = -1$ in equation (1) was not satisfied. On the other hand, the trend core inflation measures satisfied the predictability conditions. In contrast to the pre-COVID period, the multiple adverse supply shocks and the resultant high food inflation in the recent years also contributed to some persistence in headline inflation even as core inflation moderated (Patra *et al.*, 2024). This could have caused the weakening of the predictive power of some core measures in explaining headline inflation movements (Table 5).

III.4. Convergence

Marques *et al.* (2003), using cointegration and vector-error correction models (VECM), presented a set of testable properties for a good core inflation measure. In this cointegration framework (when both core and headline are non-stationary), a good core inflation measure should statistically show the following properties: first, core inflation and headline inflation should be co-integrated; second, core inflation measure should be unbiased with respect to the headline inflation; and third, in the short-run, core inflation should cause headline, while the reverse should not be true.

III.4.1: Cointegration and Unbiasedness

First, we test for cointegration between core and headline inflation. Furthermore, if there is long-run cointegration, the core inflation measure should be unbiased with respect to $\pi(t)$, *i.e.,* when there are no shocks, $\pi(t) = \pi^c(t)$. For gauging the unbiasedness property, Marques *et al.* (2003) proposed a test for $\beta = 1$ in the cointegrating equation (2) when $\alpha = 0$.

$$\pi(t) = \alpha + \beta\,\pi^c(t) + u(t) \qquad \ldots(2)$$

III.4.2: Attractor Conditions

In the short run, if headline and core inflation deviates, there should exist an error correction mechanism wherein headline inflation adjusts to core inflation trends. This implies that in the error correction process, core inflation is strongly exogenous (with respect to headline), but headline is not; or when there are episodes of divergence between headline and core inflation, a good core measure should be an attractor of headline inflation that results in headline inflation converging to core inflation over the long run (Figueiredo *et al.*, 2002). This property is distinct from the predictability condition. In the evaluation criterion based on Marques *et al.* (2003), the emphasis is not on the predictive power of core inflation measure to explain future headline inflation movements fully in the short to medium term, but on the long-run equilibrium relationship between headline and core inflation. The attractor condition can be tested in an error correction framework as follows:

$$\Delta\pi(t) = \sum_{j=1}^{m} \alpha_j \Delta\pi(t-j) + \sum_{j=1}^{n} \eta_j \Delta\pi^c(t-j) - \gamma(\pi(t-1) - \pi^c(t-j)) + \varepsilon_t \qquad \ldots(3)$$

must have $\gamma \neq 0$ and some $\eta_j \neq 0$.

However, this condition should not apply in the opposite direction, that is, the core measure should not be attracted by inflation (4). Thus $\pi^c(t)$ needs to be strongly exogenous.

$$\Delta\pi^c(t) = \sum_{j=1}^{r} \delta_j \Delta\pi(t-j) + \sum_{j=1}^{s} \theta_j \Delta\pi^c(t-j) - \lambda(\pi(t-1) - \pi^c(t-j)) + \eta_t \qquad \ldots(4)$$

must have $\lambda = 0$ and all $\delta_j = 0$.

The results of the tests for convergence of headline to core inflation are given below.

III.4.3: Testing Cointegration and Unbiasedness

In the pre-COVID sample period, all the core inflation series are found to be non-stationary with null hypothesis of unit root not getting rejected. Johannsen tests of co-integrating long-run relationship between core and headline inflation was satisfied for all exclusion-based and trimmed mean measures.[2] It was also satisfied for the historical standard deviation weighted CPI core inflation measure. Among trend measures, while cointegration was observed for principal component and Hodrick-Prescott trend, it was not satisfied for Christiano-Fitzgerald and

[2] Lag lengths are decided based on Bayesian Information Criteria (BIC) and error diagnostics.

Table 6. Cointegration

Core Measures	Pre-COVID (Jan 2012 to Feb 2020)			Full Sample (Jan 2012 to Dec 2023)		
	ADF test on $\pi^c(t)$[$]	Test of Cointegration[@]	Remarks	ADF test on $\pi^c(t)$[$]	Test of Cointegration[@]	Remarks
Fixed Exclusion Based Measures						
1. Excluding Food and Fuel	0.156	2.925	Satisfied	0.036	6.627[&]	Satisfied
2. Excluding Food Fuel and Petrol & Diesel	0.181	3.008	Satisfied	0.041	6.588[&]	Satisfied
3. Excluding Food Fuel, Petrol & Diesel and Gold & Silver	0.437	2.261	Satisfied	0.126	3.555	Satisfied
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	0.789	1.785	Satisfied	0.340	3.467	Satisfied
Trimmed Mean Measures						
5. Trimmed Mean (5 per cent)	0.420	2.655	Satisfied	0.229	5.467[&]	Satisfied
6. Trimmed Mean (10 per cent)	0.850	2.169	Satisfied	0.356	3.234	Satisfied
7. Trimmed Mean (20 per cent)	0.352	1.870	Satisfied	0.186	3.230	Satisfied
8. Median	0.882	2.254	Satisfied	0.409	3.527	Satisfied
9. Bias-Adjusted Median	0.661	2.456	Satisfied	0.441	4.699[&]	Satisfied
Reweighted and Trend Measures						
10. Historical Standard Deviation	0.454	2.172	Satisfied	0.282	3.219	Satisfied
11. Principal Component	0.442	3.130	Satisfied	0.276	4.160[&]	Satisfied
12. Hodrick-Prescott trend	0.317	6.736[&]	Satisfied	0.018	17.604	Not-Satisfied
13. Christiano-Fitzgerald trend	0.680	24.291	Not-Satisfied	0.611	32.299	Not-Satisfied
14. Hamilton trend	0.388	8.077	Not-Satisfied	0.017	10.352[&]	Not-Satisfied

Notes: $: MacKinnon approximate p-value for the Augmented Dickey Fuller Test is given, with null hypotheses of unit root;
@: Johanssen test based on trace statistics for rank=1; 5% critical value (CV) is 3.76.
&: Including a restricted constant in the model; 5% CV is 9.42.
If the test statistic is higher than the CV, the variables are not cointegrated.
Source: Authors' estimates.

Hamilton trend measures (Table 6). For the full period sample also, the test of cointegration was satisfied by all exclusion and trimmed-mean-based measures, along with historical standard deviation and principal component-based measures.

For the pre-COVID period, all the core inflation measures that were seen to be cointegrated satisfied the unbiasedness property (Table 7). The same results were observed when the sample period was extended till December 2023.

III.4.4: Testing Attractor Conditions

For the pre-COVID period, the attractor conditions are satisfied for all exclusion-based and the historical standard deviation-based core measures. However, it was not satisfied for the trimmed mean and most of the trend-based measures. These results are broadly in alignment with Raj *et al.* (2020)[3]. All the exclusion-based measures satisfied the attractor condition when the sample period was extended till December 2023. In case of the trimmed mean-based measures, for the full sample period, the attractor conditions were not satisfied for any, barring the 5 per cent one. Historical standard deviation-based and principal component-based measures of core inflation also satisfied attractor conditions (Table 8).

[3] Raj *et al.* (2020), in contrast, found 5 per cent and 10 per cent trimmed means measures satisfying the attractor conditions. This divergence may be on account of the outsized impact of volatile food inflation movements during December 2019 to February 2020.

Table 7. Unbiasedness

Core Measures	Pre-COVID (Jan 2012 to Feb 2020)		Full Sample (Jan 2012 to Dec 2023)	
	β	Remarks#	β	Remarks#
Fixed Exclusion Based Measures				
1. Excluding Food and Fuel	1.105	Satisfied*	1.075	Satisfied*
2. Excluding Food Fuel and Petrol & Diesel	1.071	Satisfied*	1.065	Satisfied*
3. Excluding Food, Fuel, Petrol & Diesel and Gold & Silver	1.060	Satisfied*	1.068	Satisfied*
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	1.101	Satisfied*	1.060	Satisfied*
Trimmed Mean Measures				
5. Trimmed Mean (5 per cent)	1.090	Satisfied*	1.095	Satisfied*
6. Trimmed Mean (10 per cent)	1.107	Satisfied*	1.105	Satisfied*
7. Trimmed Mean (20 per cent)	1.114	Satisfied*	1.110	Satisfied*
8. Median	1.055	Satisfied*	1.081	Satisfied*
9. Bias-Adjusted Median	1.039	Satisfied*	1.048	Satisfied*
Reweighted and Trend Measures				
10. Historical Standard Deviation	1.092	Satisfied*	1.067	Satisfied*
11. Principal Component	1.014	Satisfied*	1.004	Satisfied*
12. Hodrick-Prescott trend	0.985	Satisfied*	@	@
13. Christiano-Fitzgerald trend	@	@	@	@
14. Hamilton trend	@	@	@	@

Notes: #: Test the hypothesis of $\beta = 1$, when $\alpha = 0$ in (2)
*: at 1 per cent level of significance.
@: Did not estimate since there was no statistically significant evidence of cointegration.
Source: Authors' estimates.

Table 8: Attractor Conditions

Core Measures	Pre-COVID (Jan 2012 to Feb 2020)			Full Sample (Jan 2012 to Dec 2023)		
	Core does not cause Headline%	Headline does not cause Core#	Remarks	Core does not cause Headline%	Headline does not cause Core#	Remarks
Fixed Exclusion Based Measures						
1. Excluding Food and Fuel	0.026	0.135	Satisfied*	0.013	0.140	Satisfied*
2. Excluding Food Fuel and Petrol & Diesel	0.020	0.214	Satisfied*	0.005	0.088	Satisfied*
3. Excluding Food Fuel, Petrol & Diesel and Gold & Silver	0.015	0.154	Satisfied*	0.006	0.051	Satisfied*
4. Excluding Food Fuel, Petrol & Diesel, Gold & Silver and Housing	0.003	0.093	Satisfied*	0.004	0.051	Satisfied*
Trimmed Mean Measures						
5. Trimmed Mean (5 per cent)	0.097	0.008	Not Satisfied	0.014	0.058	Satisfied*
6. Trimmed Mean (10 per cent)	0.033	0.000	Not Satisfied	0.003	0.009	Not Satisfied
7. Trimmed Mean (20 per cent)	0.034	0.000	Not Satisfied	0.008	0.000	Not Satisfied
8. Median	0.039	0.000	Not Satisfied	0.022	0.002	Not Satisfied
9. Bias-Adjusted Median	0.012	0.000	Not Satisfied	0.021	0.001	Not Satisfied
Reweighted and Trend Measures						
10. Historical Standard Deviation	0.011	0.005	Not Satisfied	0.009	0.151	Satisfied*
11. Principal Component	0.065	0.005	Not Satisfied	0.005	0.327	Satisfied*
12. Hodrick-Prescott trend	0.000	0.000	Not Satisfied	@	@	@
13. Christiano-Fitzgerald trend	@	@	@	@	@	@
14. Hamilton trend	@	@	@	@	@	@

Notes: %: p-value of the test of joint hypothesis of all ηjs $= 0$ and $\gamma = 0$ in (3)
#: p-value of the test of joint hypothesis of all δj s $= 0$ and $\lambda = 0$ in (4)
*: at 5 per cent level of significance.
@: Did not estimate since there was no statistically significant evidence of cointegration.
Source: Authors' estimates.

IV. Conclusion

In the backdrop of large adverse supply-side shocks to inflation process since 2020, brought about by COVID-19, the war in Ukraine and adverse climatic events, the study examined the properties of various CPI core inflation measures for their suitability in capturing underlying inflation movements. The findings of the study reveal that the properties of various core inflation measures largely held up *vis-à-vis* the pre-COVID period. The multiple supply side shocks, particularly food price and energy price shocks, however, have led to some degree of persistence in headline inflation. This has caused

spillovers from non-core to core inflation weakening some properties of core inflation, particularly with respect to the predictability criterion, although in the long-run, non-core inflation still converges to core inflation. Properties of the exclusion-based and reweighted CPI-based (derived from historical standard deviations or principal component) measures of core inflation broadly remained unchanged even in the presence these shocks, attesting to their robustness.

References

Anand, R. & Tulin, V. (2016) *Food Inflation in India: What Role for Monetary Policy.* In Anand, R. & Cashin, P. (2016) (Eds.), *Taming Indian Inflation.* International Monetary Fund.

Apel, M., & Jansson, P. (1999). A Parametric Approach for Estimating Core Inflation and Interpreting the Inflation Process. *BIS Review.*

Ball, L. M., Carvalho, C., Evans, C., & Ricci, L. A. (2023). Weighted Median Inflation Around the World: A Measure of Core Inflation (No. w31032). National Bureau of Economic Research.

Ball, L., Chari, A., & Mishra, P. (2016). Understanding Inflation in India (No. w22948). National Bureau of Economic Research.

Ball, L. M., Leigh, D., Mishra, P., & Spilimbergo, A. (2021). Measuring US Core Inflation: The Stress Test of COVID-19 (No. w29609). National Bureau of Economic Research.

Bańbura, Marta, Elena Bobeica, Katalin Bodnár, Bruno Fagandini, Peter Healy and Joan Paredes (2023). Underlying Inflation Measures: An Analytical Guide for The Euro Area. *ECB Economic Bulletin*, Issue 5/2023.

Bicchal, Motilal and Sharma, Naresh Kumar and Kamaiah, B. (2012). Some Measures of Core Inflation for India (November 6, 2012). *The IUP Journal of Applied Economics*, Vol. XI, No. 3, pp. 22-64, July.

Blinder, A. S. (1997), Commentary, *Federal Reserve Bank of St. Louis Review*, Vol. May-June, 157-160.

Bryan, M. F. and Cecchetti, S. G. (1994). Measuring Core Inflation. In N. Gregory Mankiw (ed.), Monetary Policy (Chicago: University of Chicago Press for NBER), 195-215.

Bryan, M. F., & Cecchetti, S. G. (1993). The Consumer Price Index as a Measure of Inflation (No. w4505). National Bureau of Economic Research.

Bryan, M. F., & Pike, C. J. (1991). Median Price Changes: An Alternative Approach to Measuring Current Monetary Inflation. *Federal Reserve Bank of Cleveland Economic Commentary*, *1*.

Bryan, M. F., Cecchetti, S. G., & II, R. L. W. (1997). Efficient Inflation Estimation (No. w6183). National Bureau of Economic Research.

Carlomagno, G., Fornero, J., & Sansone, A. (2023). A Proposal for Constructing and Evaluating Core Inflation Measures. *Latin American Journal of Central Banking*, 4(3), 100094.

Cecchetti, S. G., & Moessner, R. (2008). Commodity Prices and Inflation Dynamics. *BIS Quarterly Review*, 55-66.

Clark, T. E. (2001). Comparing Measures of Core Inflation. *Economic Review-Federal Reserve Bank of Kansas City*, *86*(2), 5-32.

Cogley, T. (2002). A Simple Adaptive Measure of Core Inflation. *Journal of money, credit and banking*, 94-113.

Das, A., John, J., & Singh, S. (2009). Measuring Core Inflation in India. *Indian Economic Review*, 247-273.

Das, P. and George, A. T. (2023). Consumer Price Index: The Aggregation Method Matters, *RBI Bulletin*, Vol. 77(3).

Dholakia, R. H., & Kadiyala, V. S. (2018). Changing Dynamics of Inflation in India. *Economic & Political Weekly*, 65-73.

Durai, S. R. S., & Ramachandran, M. (2007). Core Inflation for India. Journal of Asian Economics, 18(2), 365-383.

Eckstein, O. (1981). *Core Inflation* (Vol. 121). Englewood Cliffs, NJ: Prentice-Hall.

Ehrmann, Michael, Gianluigi Ferrucci, Michele Lenza and Derry O'Brien (2018). Measures of Underlying Inflation for the Euro Area. *ECB Economic Bulletin*, Issue 4/2018.

Figueiredo, F. M. R., & Staub, R. B. (2002). Evaluation and Combination of Core Inflation Measures for Brazil. Central Bank of Brazil, Research Department.

Goyal, A., & Pujari, A. K. (2005). Analyzing Core Inflation in India: A Structural VAR Approach. The IUP Journal of Monetary Economics, 3(2), 76-90.

Kar, S. (2009). Statistical Tools as Measures of Core Inflation for India. *Indian Economic Review*, 225-245.

Khan, M., & Sullivan, E. (2022). Core Inflation over the COVID-19 Pandemic (No. 2022-17). Bank of Canada.

Marques, C. R., Neves, P. D., & Sarmento, L. M. (2003). Evaluating Core Inflation Indicators. *Economic modelling*, *20*(4), 765-775.

Mishkin, F. S. (2007). Headline versus Core Inflation in the Conduct of Monetary Policy. *Business Cycles, International Transmission and Macroeconomic Policies Conference, HEC Montreal, Montreal, Canada*, October.

Mohanty, D., Rath, D. P., & Ramaiah, M. (2000). Measures of Core Inflation for India. *Economic and Political Weekly*, 273-282.

Patra, M. D., John, J., & George, A. T. (2023). Recent Regime Reversal in Inflation: The Indian Experience, *RBI Bulletin*, Vol. 77(4).

Patra, M. D., John, J., & George, A. T. (2024). Are Food Prices the 'True' Core of India's Inflation?, *RBI Bulletin*, Vol. 78(1).

Raj, J., Misra, S., George, A. T., & John, J. (2020). Core Inflation Measures in India: An Empirical Evaluation using CPI Data. *Reserve Bank of India, Working Paper*, Vol. 5.

Raj, J., & Misra, S. (2011). Measures of Core Inflation in India–An Empirical Evaluation. *Reserve Bank of India Occasional Paper, 32(3)*, 37-66.

RBI (2021). *Report on Currency and Finance*, Reserve Bank of India.

Rich, R. W., & Steindel, C. (2007). A Comparison of Measures of Core Inflation. *Economic Policy Review*, *13*(3).

Rich, R., Verbrugge R., Zaman, S. (2022). Adjusting Median and Trimmed-Mean Inflation Rates for Bias Based on Skewness, *Economic Commentary, Federal Reserve bank of Cleveland*, March, 2022-05, 1-7.

Roger, S. (1998). Core Inflation: Concepts, Uses and Measurement. *Reserve Bank of New Zealand Discussion Paper*, (G98/9).

Sahu, P. (2021). A Study on the Dynamic Behaviour of Headline Versus Core Inflation: Evidence from India. *Global Business Review*, 22(6), 1574-1593.

Samanta, G. P. (1999). Core Inflation in India: Measurement and Policy Perspectives. *Reserve Bank of India Occasional Papers*, *20*(1), 23-53.

Silver, M. (2006). Core Inflation Measures and Statistical Issues in Choosing Among Them, *IMF Working Paper*, WP/06/97, April.

Schembri L. L. (2017). Getting to the Core of Inflation, *Remarks at Department of Economics, Western University London, Ontario*, February.

Wynne, M. (2008). Core Inflation: A Review of Some Conceptual Issues. *Federal Reserve Bank of St. Louis Review*, (May), 205-228.

Annex I. Core Inflation – Measures and Properties (January 2012 to December 2023)

	Properties / *Measures*	*Ease of Communication*	*Equality of means*	*Lower variance*	*Predict-ability*	*Cointegra-tion*	*Unbiasedness*	*Attractor Condition*
		(1)	(2a)	(2b)	(3)	(4a1)	(4a2)	(4b)
Fixed Exclusion Based Measures								
1.	Excluding Food and Fuel	√	√	√	x	√	√	√
2.	Excluding Food, Fuel, Petrol and Diesel	√	√	√	x	√	√	√
3.	Excluding Food, Fuel, Petrol, Diesel, Gold and Silver	√	√	√	x	√	√	√
4.	Excluding Food, Fuel, Petrol, Diesel, Gold, Silver and Housing	√	√	√	x	√	√	√
Trimmed Mean Measures								
5.	Trimmed Mean (5 per cent)	x	√	√	√	√	√	√
6.	Trimmed Mean (10 per cent)	x	√	√	x	√	√	x
7.	Trimmed Mean (20 per cent)	x	√	√	x	√	√	x
8.	Median	x	√	x	x	√	√	x
9.	Bias-Adjusted Median	x	√	x	x	√	√	x
Reweighted and Trend Measures								
10.	Historical Standard Deviation	x	√	√	x	√	√	√
11.	Principal Component	x	√	x	√	√	√	√
12.	Hodrick-Prescott trend	x	√	√	√	x	@	@
13.	Christiano-Fitzgerald trend	x	√	x	√	x	@	@
14.	Hamilton trend	x	√	√	√	x	@	@

Note: @: Did not estimate since there was no statistically significant evidence of cointegration.
Source: Authors' computation.

Annex II: Core Inflation Measures – Definitions

Measure		Description
Fixed Exclusion Based Measures		
1.	CPI excluding food and fuel	Excludes food and fuel groups from CPI headline (weight 47.3)
2.	CPI excluding food, fuel, petrol and diesel	Excludes petrol and diesel items in addition to food and fuel groups (weight 45.0)
3.	CPI excluding food, fuel, petrol, diesel, gold and silver	Excludes gold, silver, petrol and diesel items in addition to food and fuel groups (weight 43.8)
4.	CPI excluding food, fuel, petrol, diesel, gold, silver and housing	Excludes housing group, gold, silver, petrol and diesel items in addition to food and fuel groups (weight 33.7)
Trimmed Mean Measures		
5.	Trimmed mean (5 per cent)	Excludes 5, 10 or 20 per cent weight of CPI items, whose inflation rates in a given month are in either tail of the distribution of price changes
6.	Trimmed mean (10 per cent)	
7.	Trimmed mean (20 per cent)	
8.	Median	Corresponds to the price change located at the 50th percentile (in terms of CPI items weights) of the distribution of inflation, each month
9.	Bias Adjusted Median	Corresponds to the price change located at the 50th percentile (in terms of CPI items weights) after adjusting for skewness of the distribution of inflation, each month
Reweighted and Trend Measures		
10.	Historical Standard Deviation	Weighs each CPI component inversely proportional to its historical volatility
11.	Principal Component	Using the first principal component as a core inflation indicator
12.	Hodrick-Prescott trend	Estimating trend using different filter-based data-smoothing techniques.
13.	Christiano-Fitzgerald trend	
14.	Hamilton trend	

Evolving Business Sentiments of Indian Services and Infrastructure Enterprises – A Deep Dive

by Abhilash Arun Satape^, Nivedita Banerjee^ and Supriya Majumdar#

The Services and Infrastructure Outlook Survey (SIOS)[1] conducted by the Reserve Bank of India reflects the sentiments of the domestic services and infrastructure sectors. It aids in tracking the movement of related macroeconomic variables and is quite effective even during highly uncertain times like the COVID-19 pandemic. While sentiments in these sectors waned during the pandemic, corporates echoed the gradual return of their confidence in the overall business climate in the near-term.

Introduction

The services sector spans a large number of activities, *e.g.,* education, healthcare, transport, media, financial services, information technology (IT), *etc.* Given their employment intensity, services activities hold potential for relocating labour from primary agricultural activities for better livelihood opportunities. In India, the services sector also contributes significantly to the overall GDP growth given its high share in overall economic activity; therefore, emerging trends in services sector become an important factor to be reckoned with. Concomitantly, the availability of the appropriate infrastructure through power generation, roads, railways, ports, and airports is critical for achieving sustained high growth. Understanding emerging trends in these two critical sectors, therefore, becomes a crucial element for effective policy making.

Major central banks conduct consumer and business expectations surveys spanning various sectors which provide important inputs for monetary policy formulation.[2] The survey expectations have useful predictive power for key macro variables like GDP and inflation and can be quite effective in understanding the evolving economic trajectory and its likely outturn periods of crisis such as the COVID pandemic. Keeping these in view, the Reserve Bank of India (RBI) has been conducting many forward-looking surveys, which includes the Services and Infrastructure Outlook Survey (SIOS). The SIOS captures the sentiments of enterprises engaged in services and infrastructure activities. It provides insights into the prevailing business conditions in these sectors and also expectations in the near term. The RBI has been conducting the SIOS on a quarterly basis since 2014-15. The first article on the SIOS was brought out in December 2020[3], which was aimed to serve as a metadata on the survey.

The SIOS questionnaire[4] is canvassed among a panel of around 4,000 companies from services and infrastructure sectors. The sample frame is selected to get a reasonable representation of size and industry. Services sector sentiments are broadly covered under major sub-sectors of information technology; trade; transport services; education; healthcare; travel, hotel, and restaurants; financial services; entertainment and communications. Business sentiments in the infrastructure sector are captured from companies engaged in transport and logistics; telecommunication; water and sanitation; energy and construction activities. The representation may vary across survey rounds as participation in the

^ The authors are from the Department of Statistics and Information Management and Financial Markets Regulation Department.

The author is retired Director from the Department of Statistics and Information Management.

The authors are thankful to Dr. G V Nadhanael for providing valuable comments. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

1 The Q2:2023-24 survey data was released on October 06, 2023, on the RBI website (https://rbi.org.in/Scripts/PublicationsView.aspx?id=22057). For details on the SIOS – background, methodological aspects, time series data and aggregated results, please refer to the December 2020 issue of the RBI Bulletin (https://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=19962).

2 See Annex I for a detailed discussion of the practises adopted by various countries.

3 https://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=19962

4 The survey questionnaire can be accessed at: https://rbi.org.in/Scripts/BS_ViewForms.aspx

survey is voluntary. The responses obtained in SIOS about the parameters are summarised in terms of net responses[5] (NR) for the assessment quarter, termed as assessment NR (NRA), and the NR for the expectations quarter which is described as expectations NR (NRE). During Q4:2019-20, when the COVID-19 pandemic hit, a block was introduced in Q1:2020-21, for assessing the business outlook of the corporate sector on critical parameters for two subsequent quarters, in order to capture medium-term expectations.

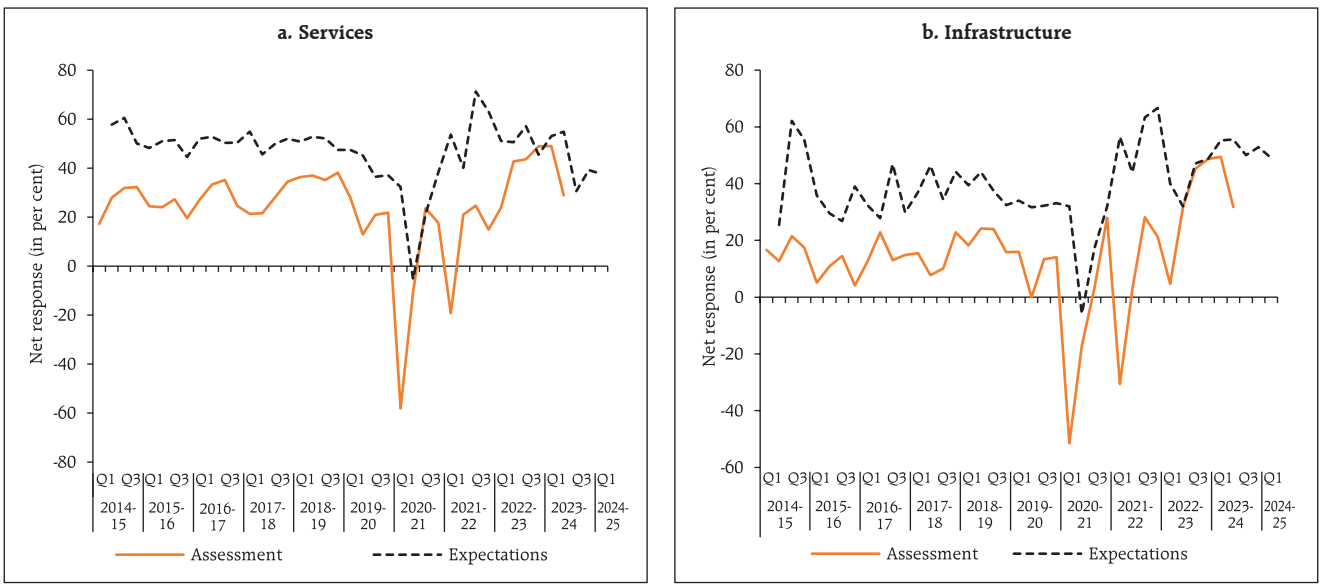
Although quarterly SIOS data are released after each monetary policy announcement, a time series assessment of the key survey results and an evaluation of the survey performance has not been attempted so far. The present article bridges this gap and provides a comprehensive account of the evolution of the qualitative parameters captured in the SIOS during Q1:2014-15 to Q2:2023-24 for both services and infrastructure sectors. Furthermore, an attempt is also made to compare the performance across various sub-sectors. The article also aims to assess the extent of forward-looking information contained in the survey. The rest of the article is organised in four sections. Section II provides stylised facts about the SIOS. Section III presents an assessment of the consistency of survey responses as well as examines their co-movement with key macroeconomic variables. The insights from the survey regarding the recovery path of various sectors in the post-pandemic period is discussed in section IV. Concluding observations are presented in section V.

II. Stylised Facts of SIOS

Recent Trends

Overall sentiments on turnover for services and infrastructure sector *as reflected in the* NRA *and NRE have consistently remained optimistic except in Q1:2020-21 and Q1:2021-22 in terms of assessment (reflecting the impact of the pandemic) and in Q1:2020-21 in terms of expectations* (Charts 1a and 1b).

Chart 1: Sentiments of the Respondents on Turnover



[5] If I, N and D correspond to proportion of 'increase', 'no change' and 'decrease', respectively, for the response to the question on a particular parameter, the NR is calculated as, *NR = 100 X (I – D)* and no change (NC) or status quo is presented as *NC =100 X*. Usually, the NR is calculated as proportion of optimistic responses minus proportions of pessimistic responses; considering an increase as an optimistic response for all parameters, except the cost related parameters; such as cost of inputs, cost of finance, *etc.*, where, the decrease option signifies optimism from the viewpoint of a respondent company. However, NRs have been calculated as *100 X (I – D)*for all parameters in this article, to maintain uniformity and also directly linking with the macro variables.

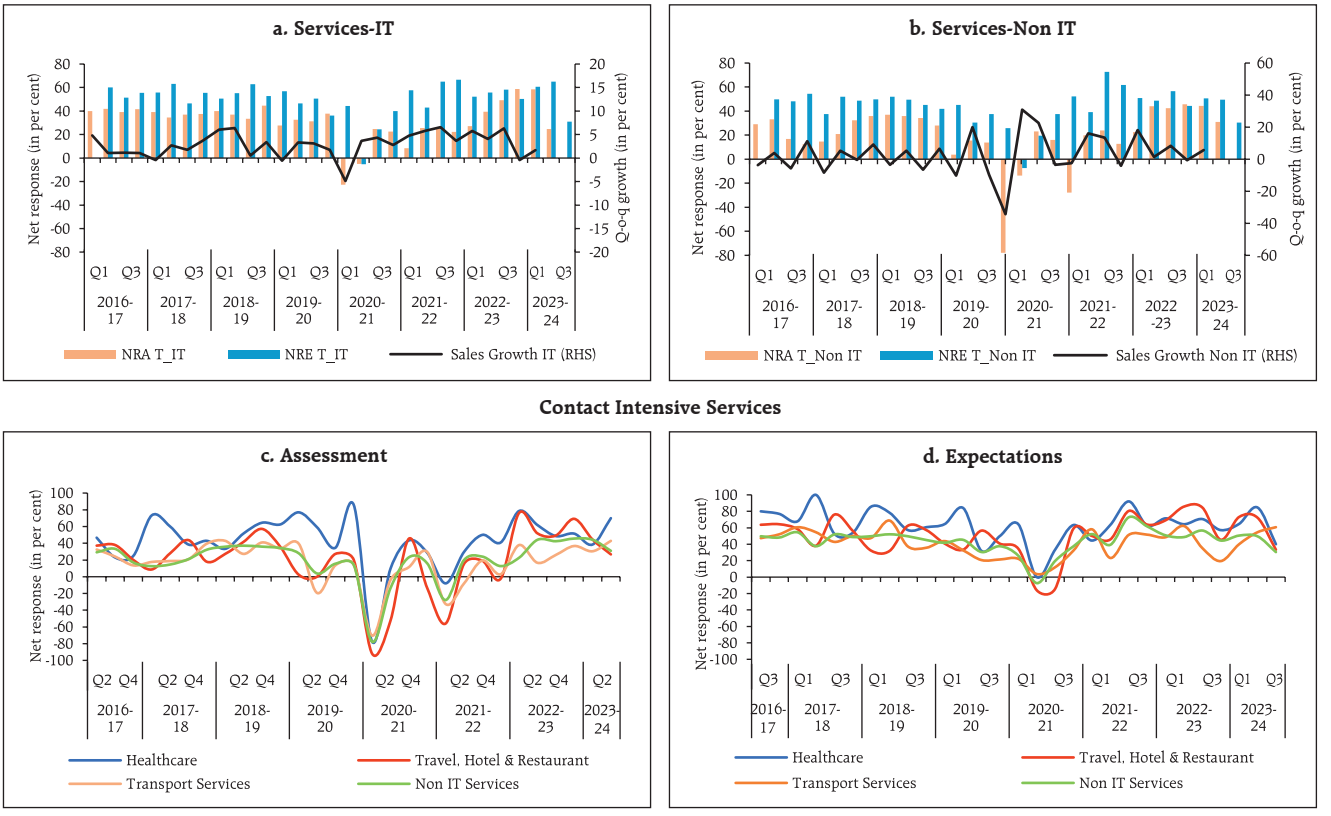
NRE has remained above NRA for most of the quarters, indicating that the expectations have been generally more optimistic than assessment. In the survey round conducted during Q2:2023-24, the sentiments of respondents on turnover remained optimistic, *albeit* with some moderation, for both the services and infrastructure sector. NRE, however, recorded a pick up for Q1:2024-25.

Sector-specific Trends in Sentiments

The subsectors covered under the services sector can be broadly classified into information technology (IT) and non-IT sectors. IT sector firms were less impacted during the COVID-19 pandemic as compared to their non-IT counterparts as the former sector is relatively less contact intensive. Both the assessment and expectations NRs are relatively higher for IT services in terms of turnover throughout the period under study. Further, in both sectors, the second wave was less severe as compared to the first wave (Charts 2a and 2b). Also, the NRs on Turnover for both IT (NRA T_IT & NRE T_IT) and non-IT (NRA T_Non IT & NRE T_Non IT) sectors mostly tracked the respective quarter on quarter (q-o-q) movement of sales growth.

Among the non-IT sectors, travel, hotel, and restaurants sectors were impacted more severely during the pandemic. The sentiments of the healthcare services sector became passive during the first wave but improved later in the pandemic period. The sentiment of the transport services sector remained muted till Q2:2021-22, although negativity reduced from the second wave-hit Q1-2021-22. While other contact-intensive services firms exhibited optimism in Q2:2021-22 as reflected in the recovery of their sentiments, transport services sentiments turned positive only in Q3:2021-22 (Charts 2c and 2d). The sentiments of contact-intensive services moderated

Chart 2: Specific Industries under the Services Sector



Sources: SIOS and Database on Indian Economy, RBI.

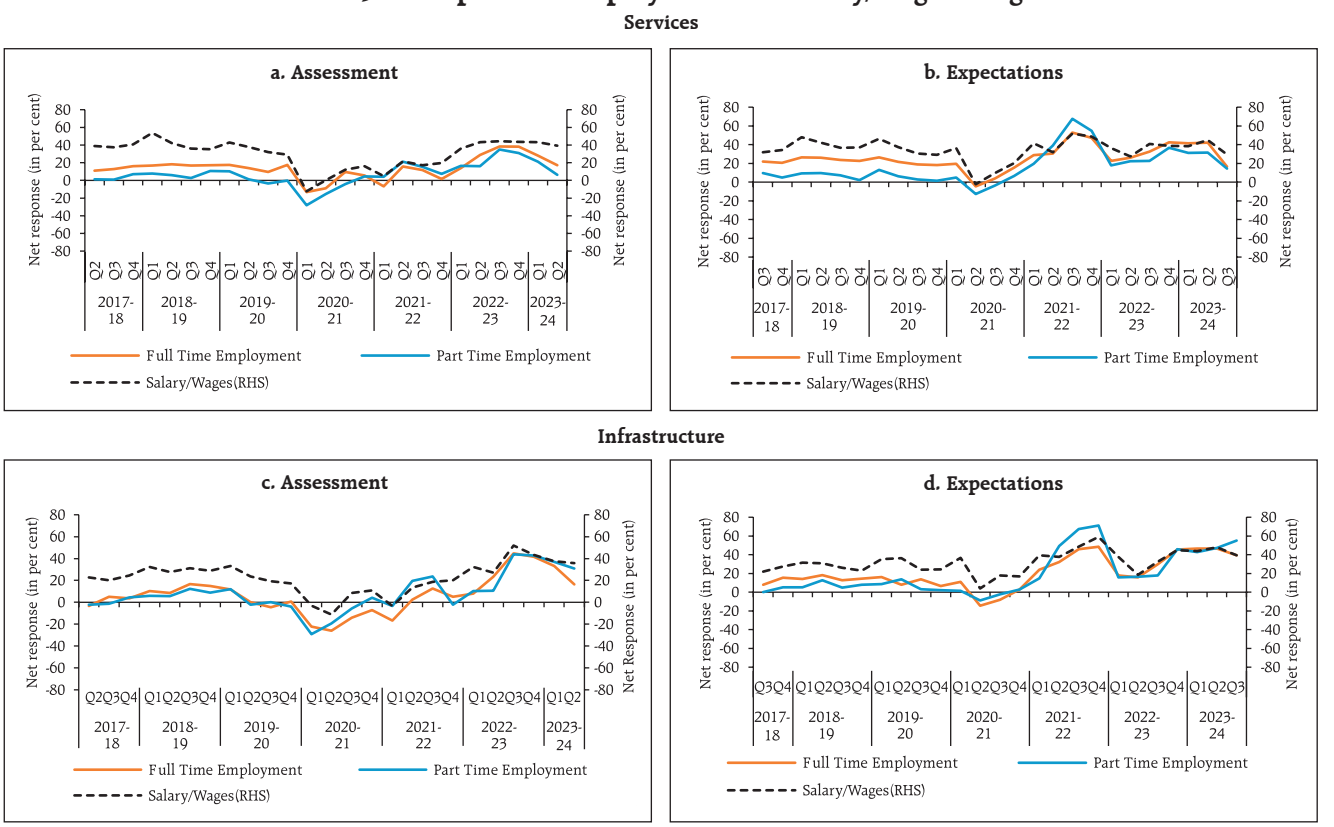
again during the sudden surge of omicron cases but recovered thereafter. Overall, the survey results show that the sentiments in the contact intensive services were hit relatively harder during the pandemic and the recovery has been uneven.

Consistency of Sentiments Across Survey Parameters

Since the survey covers perceptions of enterprises on demand conditions, financing situation, price situation, and overall business situation, the consistency of responses across parameters can help in validation of the survey responses. For example, improvement in the perception of the enterprises on the employment situation in terms of full-time and part-time employment is normally expected to be accompanied with a perception of increase in salary outgo, both in terms of assessment and expectations. Chart 3 plots co-movement among these parameters. It is found that both part-time and full-time employment perceptions tend to co-move with that of wages and salaries.

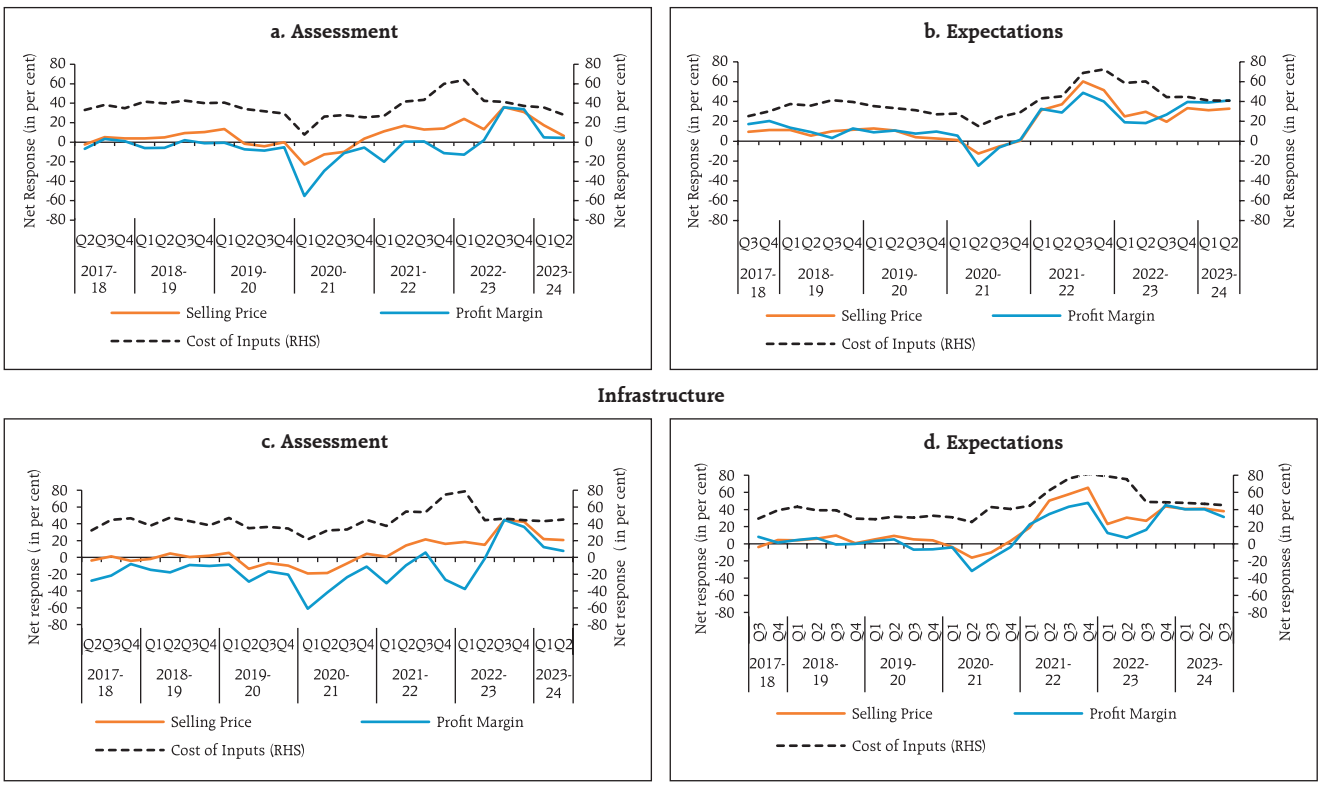
Similarly, when the input cost increase, the respondent enterprises can be expected to either increase the selling prices or absorb the additional cost which would reflect in their profit margins. During the initial period of the pandemic, assessment about the selling prices fell more than that of input costs, which was consistently mirrored in the respondents' assessment of a large fall in profit margins (Chart 4). During the recent period of input cost moderation (since Q1:2022-23), the selling prices NRA and NRE did not fall.

Chart 3: Perception of Employment and Salary/Wages Outgo



Sources: SIOS, RBI.

Chart 4: Perception of Cost of Inputs, Selling Price and Profit Margin



Sources: SIOS, RBI.

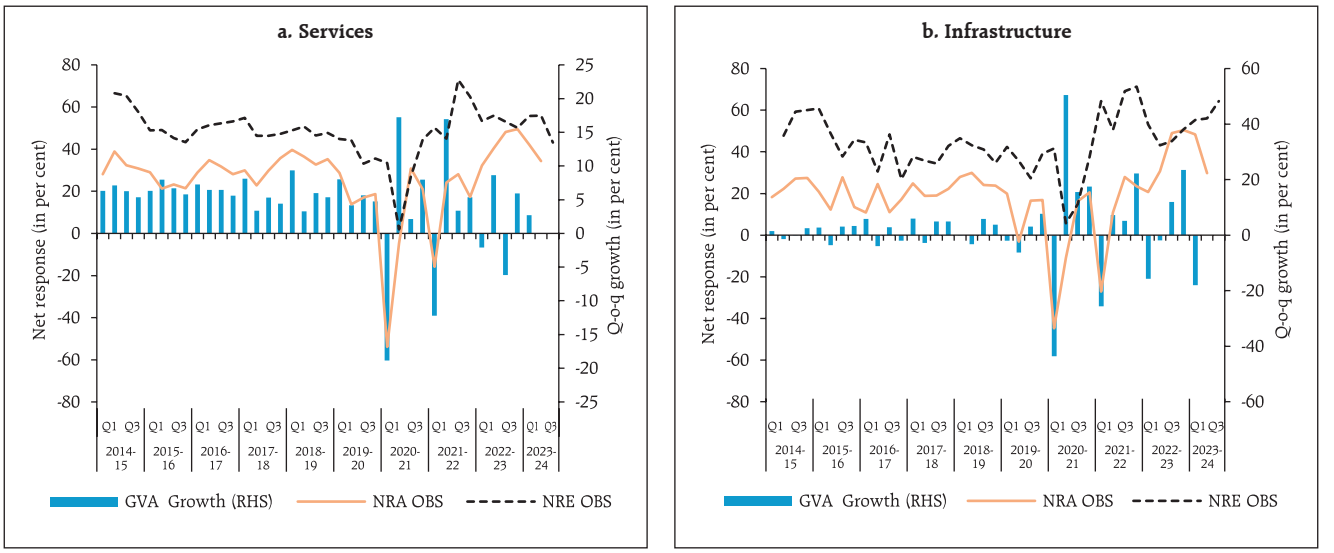
III. SIOS and Forward-looking Assessment of Macroeconomic Variables

We now look at how well the business sentiments captured through SIOS track key macroeconomic variables. For this, the NRs on the parameters Overall Business Situation (OBS), Turnover (T) and Selling Price (SP) have been considered for gauging related observed macro variables, *viz.*, Gross Value Added (GVA), Sales growth and Inflation.[6] The NRs on OBS for the assessment quarter (NRA OBS) and expectations quarter (NRE OBS) mostly tracked the quarter-over-quarter (q-o-q) movement of GVA in respective sectors, *viz.*, services and infrastructure. The NRA OBS reflects the severity of COVID-19 related lockdown better than NRE OBS, as the enterprises could not anticipate the interruption in business situation due to the sudden outbreak of the first and second wave of the pandemic (Charts 5a and 5b). Similar results were found for the NRs on Turnover for the assessment quarter (NRA T) and expectations quarter (NRE T) in tracking the q-o-q movement of sales growth in services and infrastructure sectors (Charts 6a and 6b).

The sentiments on the selling price for the assessment quarter (NRA SP) and expectations quarter (NRE SP) mostly tracked the q-o-q movement of

[6] CPI (Miscellaneous) is used to estimate inflation for services sector.

Chart 5: Overall Business Situation and Gross Value Added

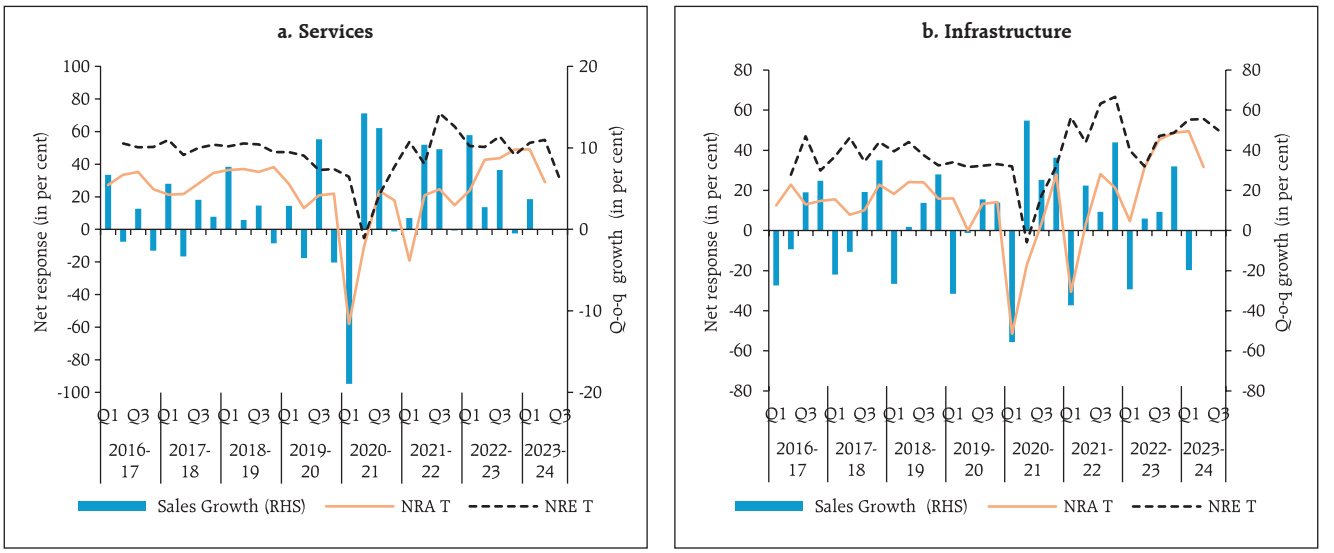


Source: SIOS, RBI; and National Statistics Office.

inflation in services. Further, the NRE SP captures the movement of inflation more appropriately than the NRA SP (Chart 7).

We next examine the correlation between the survey results *vis-à-vis* the relevant macro variables, *viz.*, GVA growth, sales growth, and inflation. Granger causality tests are also undertaken to check the predictive power of the survey parameters for macro variables[7]. The analysis suggests that the NRs of the assessment quarters for the parameters OBS and turnover have a high correlation with the GVA growth and sales growth, respectively, for both services and

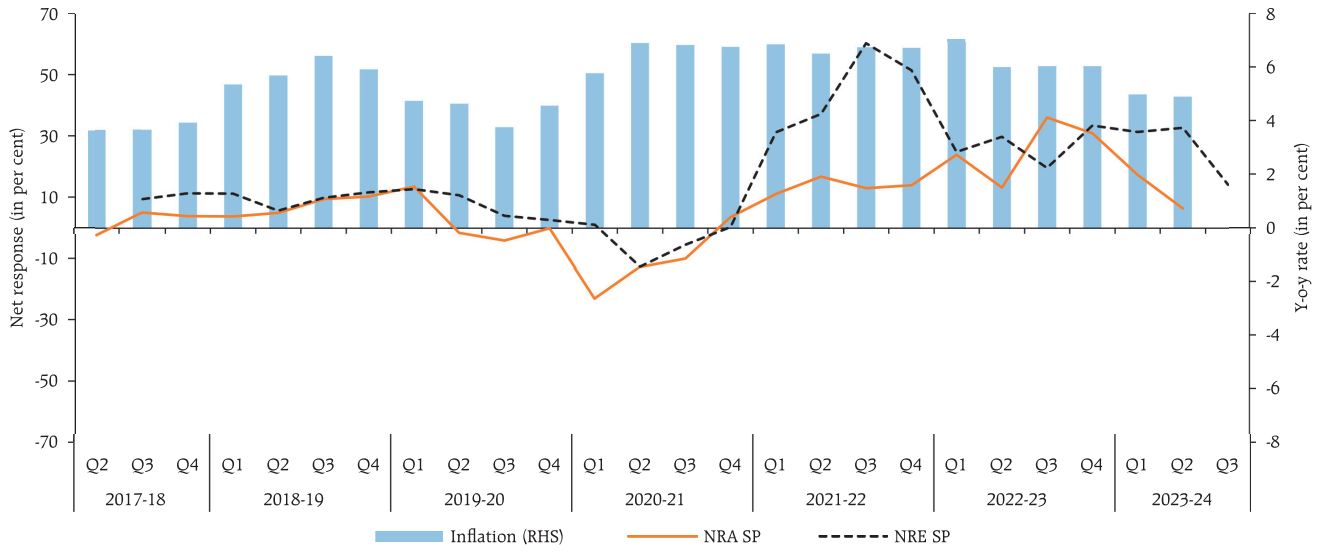
Chart 6: Turnover and Sales Growth



Source: SIOS, Database on Indian Economy, RBI; and National Statistics Office.

[7] The causality and regression results are suggestive in nature in view of limited sample size in some cases (see Table 1 and Table 2).

Chart 7: Selling Price and Inflation (Services)



Sources: SIOS, RBI; and National Statistics Office.

infrastructure sectors (Table 1). Overall, NRA is found to have a higher correlation with macro variables than NRE. In the case of inflation dynamics, however, the NRE for the parameter selling price in the services sector has a higher correlation with the inflation in that sector than NRA.

Pair-wise Granger causality tests have been conducted to find whether the current values of survey parameters hold predictive power for future values of macroeconomic variables. The results suggest that the survey parameters Granger-cause relevant macro variables with different lags (Table 2).

Table 1: Correlation Between Survey Parameters and the Related Macro Variables

Macro Variable	Survey Parameter		
	Sector	Assessment (A)	Expectations (E)
GVA growth	**1. Overall business situation**		
	1.1 Services	0.650	0.262
	1.2 Infrastructure	0.627	0.154
Sales growth	**2. Turnover**		
	2.1 Services (IT + Non-IT)	0.523	0.207
	2.1.1 IT	0.234	0.142
	2.1.2 Non-IT	0.560	0.193
	2.2 Infrastructure	0.485	0.149
Inflation	**3. Selling price**		
	Services	0.325	0.566

Note: Data pertaining to the COVID-19 first wave (Q1:2020-21) has been excluded.
Source: Authors' calculations.

Table 2: Granger Causality Test Results between Survey Results and Related Macro Variables

Null Hypothesis	No. of Observations	Lags	F-Statistics	p-value
NRA of Overall Business Situation of Services sector does not Granger Cause Gross Value Added Growth of Services sector	34	3	3.93	0.02
NRA of Overall Business Situation of Infrastructure sector does not Granger Cause Gross Value Added Growth of Infrastructure sector	35	2	2.84	0.07
NRA of Turnover of Services sector does not Granger Cause Sales _ Growth _of Services sector	28	1	5.66	0.03
NRA of Turnover of Infrastructure sector does not Granger Cause Sales Growth of Infrastructure sector	26	3	3.08	0.05

Note: Granger Causality on Selling Prices and inflation is not attempted given that there are only 21 data points.
Source: Authors' Calculations.

IV. Evolution of Sentiments in Post-COVID Era

After the outbreak of the COVID-19 pandemic in India during Q4:2019-20, in order to capture future expectations for a longer period of time, a block was introduced in the survey since Q1:2020-21 to get the respondents' views on their recovery from the pandemic on critical parameters for two more subsequent quarters. The survey results of the additional block are also disseminated by the Reserve Bank in its quarterly data releases since April 2020. The parameters covered in the additional block include OBS, turnover, full and part time employment, cost of inputs and selling price. In the following section, the evolution of sentiments in response to changes in current situation in the case of three major parameters, *viz.*, OBS, demand conditions and price situation is analysed.

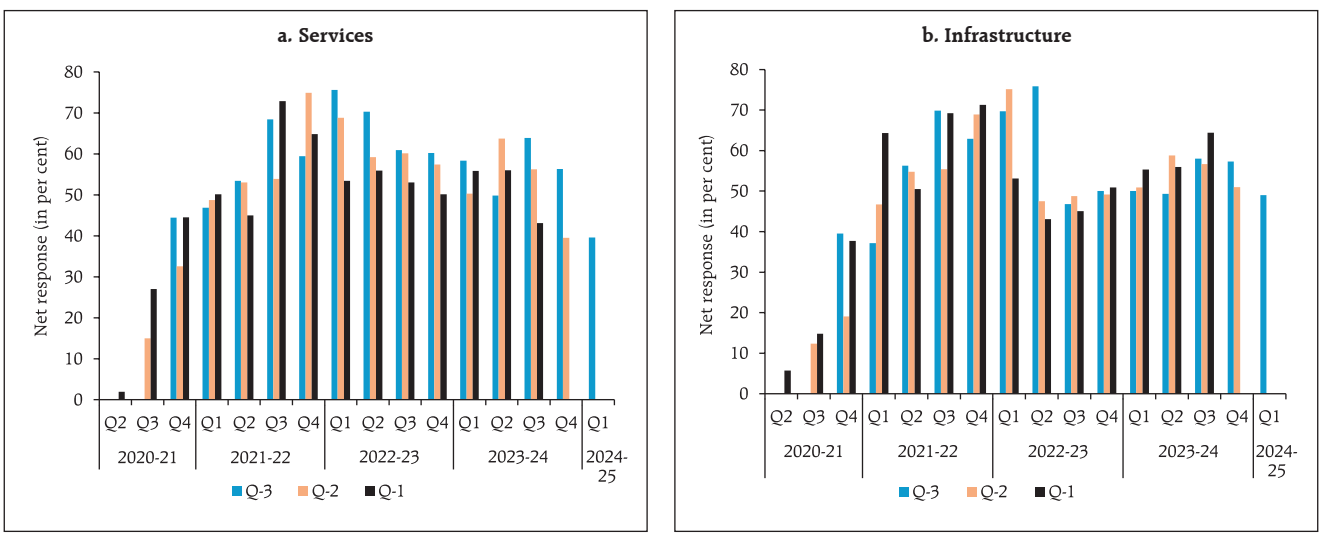
Overall Business Situation

Services and infrastructure firms were seen to be less optimistic about the future of the overall business situation during the first wave of the pandemic. The sentiments, however, recovered swiftly, with improvements recorded in successive rounds, although some ebbing was observed during the delta wave of the pandemic. In 2022-23, the OBS of services recorded moderation and the sentiments turned less optimistic over successive rounds reflecting the impact of heightened uncertainties from the multiple shocks, especially from the Ukraine war and global monetary tightening. Sentiments on infrastructure firms, however, improved since Q3:2022-23 as the overall thrust on capital expenditure by the government provided a fillip to the sector. In the survey round conducted during Q2:2023-24, while the sentiments for Q3:2023-24 recorded a moderation, as compared with the sentiment recorded for the same quarter in the previous round, it improved in the case of infrastructure, corroborating the above discussed trend (Chart 8).

Demand Conditions

Various sector-specific packages and announcements by the Government and the Reserve Bank gave impetus to the services and infrastructure enterprises' expectations on demand parameters as evident from their sentiments recovering swiftly after the first wave. But their outlook again became gloomy during the second wave in successive surveys. The job landscape, as reflected in their

Chart 8: Sentiments on Recovery Process: Overall Business Situation



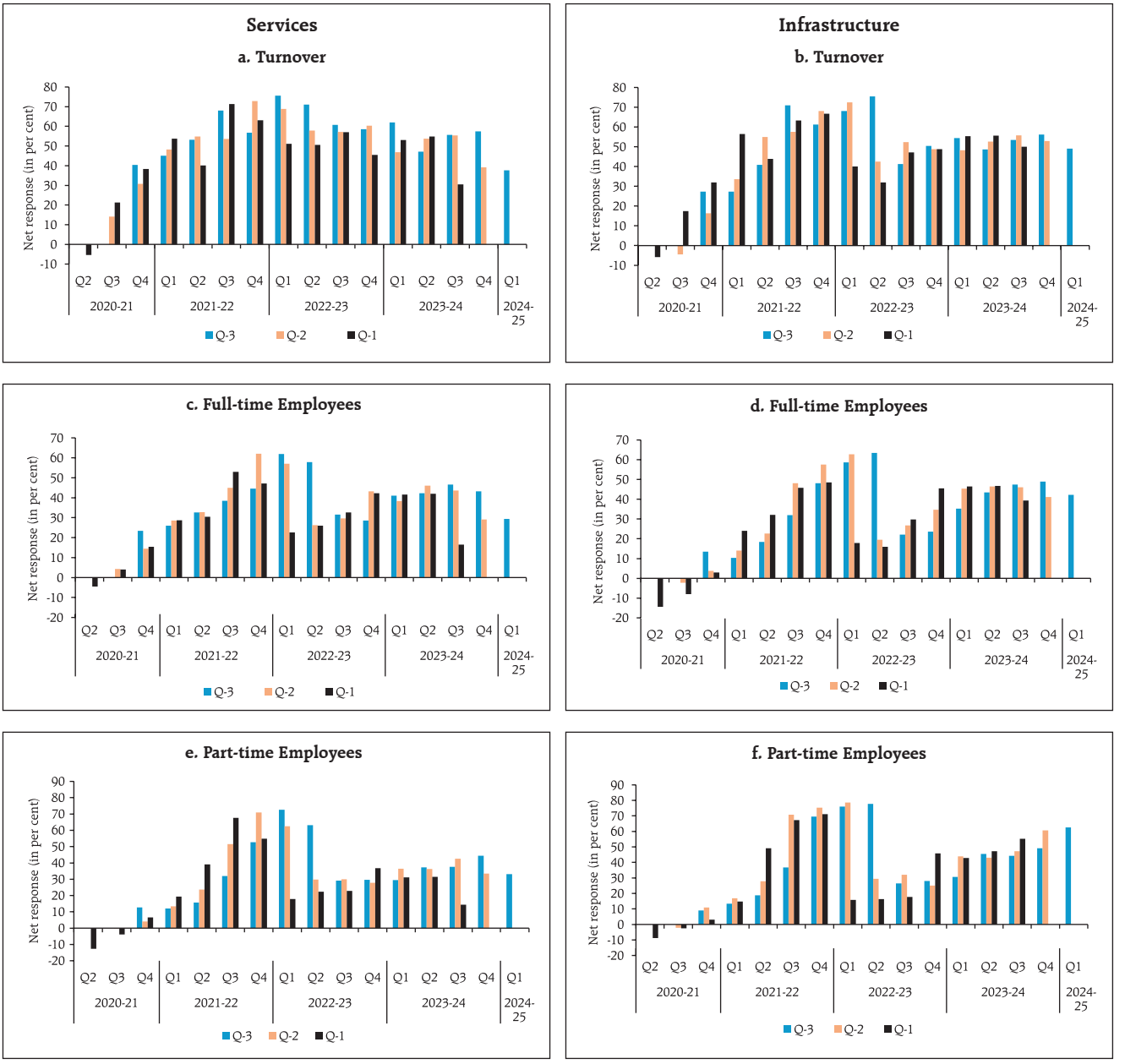
Note: Q-3 , Q-2 and Q-1 represents expectation for the particular quarter given three quarters, two quarters and one quarter before respectively.
Source: SIOS, RBI.

sentiments on full-time and part-time employment started improving, but at a slower pace than that of the turnover (Chart 9).

Price Situation

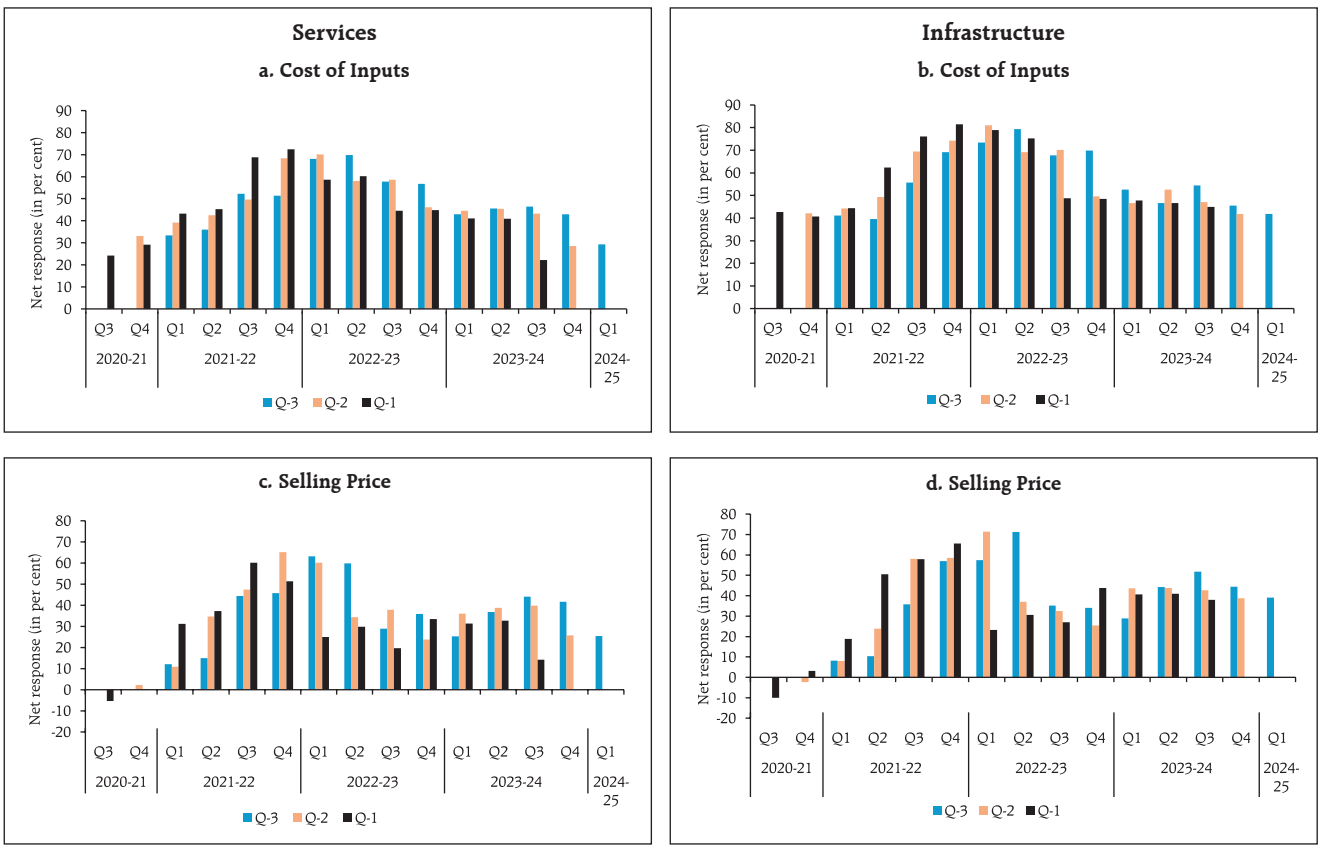
In the pandemic-hit economy, input cost pressures intensified for both services and infrastructure sectors due to global supply chain disruptions. This was also mirrored in firms' expectations of higher selling price growth. However, with improvement in supply chains, input cost pressures started normalising as reflected in subsequent survey rounds. In the recent period, the net response on selling price expectation remains lower than sentiments on cost of inputs (Chart 10).

Chart 9: Sentiments on Recovery Process: Demand Parameters



Source: SIOS, RBI.

Chart 10: Sentiments on Recovery Process: Price Situation



Source: SIOS, RBI.

V. Conclusion

Forward-looking consumer and business expectations surveys aim to extract signals about potential movements in related macro variables. In this article we examined the SIOS results and found it as an effective tool for forward looking assessment. The survey responses provide a useful lead information for comprehending the evolution of output and prices in the services and infrastructure sectors. The survey effectively captures the diversity in sentiments and the pace of activity across sectors. Despite the challenges emanating from the pandemic and the subsequent external shocks, according to survey responses, both the services and infrastructure sectors gradually rebounded as businesses reopened and restrictions eased. The perception of business entities captured by the survey indicates that despite differences in their nature of business, post-COVID, both sectors covered in the SIOS exhibited a recovery of confidence in the economy.

References

Banerjee, N and Majumdar, S. (2022). 'Impact of COVID-19 on Sentiments of Indian Manufacturers', RBI Bulletin, February.

Bank of Canada,' Business Outlook Survey', Quarterly issue,*https://www.bankofcanada.ca/publications/bos/.*

Banque de France, 'Business Surveys', Monthly issue, *https://www.banque-france.fr/en/statistics/business-surveys/business-surveys .*

Bank of Italy, 'Business Outlook Survey of Industrial and Service Firms', Annual issue, *https://www.bancaditalia.it/pubblicazioni/sondaggio-imprese/index.html.*

Federal Reserve Bank of Dallas, Monthly issue, 'Texas Services Sector Outlook Survey', *https://www.dallasfed.org/research/surveys/tssos .*

Federal Reserve Bank of Richmond, Monthly issue, 'Fifth District Survey of Service Sector Activity', *https://www.richmondfed.org/region_communities/regional_data_analysis/surveys/service_sector/about.*

Latey S and Majumdar, S. (2020). 'Services and Infrastructure Outlcook Survey: Recent Trends', RBI Bulletin, December.

Reserve Bank of India (2009), "Report of the Working Group on Surveys". https://rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=557

Annex I: Business Outlook Surveys Conducted by Other Countries

Countries around the world conduct business outlook surveys on the services sector due to its immense importance for policy formulation purposes. Since 1993, the Bank of Italy has conducted a business outlook survey of firms, between September and October on an annual basis. The survey covers approximately 3,000 firms with 20 or more workers in industry excluding construction and 1,000 in non-financial private service firms (including firms in the wholesale and retail trade, hotels and restaurants, transport and communication companies, real-estate activities, IT, and other private services). According to the assessments of firms in industries excluding construction and in services with 20 or more employees, sales were strongly affected by the COVID-19 pandemic in the first nine months of 2020. The expectations collected during that time for the next six months were slightly positive in the industry excluding construction but remained pessimistic in services.

The Federal Reserve Bank of Dallas conducts the Texas Service Sector Outlook Survey (TSSOS), which is a monthly survey of area service sector businesses. Firm executives report on how business conditions have changed for several indicators such as revenue, employment, prices, and company outlook. Respondents are also asked to report on how they perceive broader economic conditions to have changed (general business activity). During the pandemic, Texas business executives were asked supplemental questions on the impact of COVID-19 to know the extent to which their business got affected.

The Banque de France conducts surveys on retail trade and on the manufacturing, services, and construction sectors based on responses from around 10,000 business leaders. These surveys are conducted *via* its network of regional branches. They provide an assessment of economic conditions in the month preceding the publication, together with a GDP growth forecast for the quarter.

The Federal Reserve Bank of Richmond has been surveying the service sector activity since November 1993. The overall goal of the business survey is to better understand changes in business conditions across the Fifth District. The service sector survey includes questions on various aspects of their business, such as revenues, demand, number of employees, average work week, wages, and capital expenditures. The service sector firms report on changes from the previous month and also expectations for the next six months.

Since the autumn of 1997, the regional offices of the Bank of Canada have conducted quarterly business outlook surveys to gather business perspectives on topics of particular interest to the Bank. Every quarter, 100 firms that reflect the diverse composition of the Canadian economy in terms of region, type of business activity, and firm size are interviewed, and they provide an informative barometer of the Canadian economic environment and leading signals of future activity. It also provides information about some important economic concepts; namely, production-capacity constraints, labour shortages, and inflation expectations.

CURRENT STATISTICS

Contents

Notes: .. = Not available.
– = Nil/Negligible.
P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2022-23	2022-23		2023-24	
		Q1	Q2	Q1	Q2
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	7.0	11.9	5.4	7.8	7.4
1.1.1 Agriculture	4.0	2.4	2.5	3.5	1.2
1.1.2 Industry	2.4	7.3	-2.5	4.6	13.2
1.1.3 Services	9.5	16.3	8.9	10.0	6.7
1.1a Final Consumption Expenditure	6.4	16.5	6.6	4.9	4.3
1.1b Gross Fixed Capital Formation	11.4	20.4	9.6	8.0	11.0
	2022-23	**2022**		**2023**	
		Nov.	**Dec.**	**Nov.**	**Dec.**
	1	2	3	4	5
1.2 Index of Industrial Production	5.2	7.6	5.1	2.4	3.8
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	9.6	9.8	9.2	13.5	12.6
				(14.2)	(13.3)
2.1.2 Credit #	15.0	17.3	14.9	16.7	15.7
				(21.1)	(20.0)
2.1.2.1 Non-food Credit #	15.4	17.7	15.3	16.8	15.8
				(21.3)	(20.1)
2.1.3 Investment in Govt. Securities	14.5	10.7	10.6	15.6	15.6
				(17.7)	(17.6)
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	7.8	11.0	10.3	6.7	6.0
2.2.2 Broad Money (M3)	9.0	8.9	8.7	11.2	11.0
				(11.8)	(11.1)
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.50	4.50	4.50	4.50	4.50
3.2 Statutory Liquidity Ratio	18.00	18.00	18.00	18.00	18.00
3.3 Cash-Deposit Ratio	5.0	5.3	5.3	5.2	5.2
				(5.2)	(5.2)
3.4 Credit-Deposit Ratio	75.8	75.0	75.0	77.2	77.1
				(79.6)	(79.5)
3.5 Incremental Credit-Deposit Ratio #	113.0	128.6	111.6	92.3	89.2
				(118.8)	(111.9)
3.6 Investment-Deposit Ratio	30.0	29.3	28.7	29.8	29.5
				(30.2)	(29.8)
3.7 Incremental Investment-Deposit Ratio	43.5	39.7	28.9	27.8	24.7
				(31.8)	(28.2)
4 Interest Rates (%)					
4.1 Policy Repo Rate	6.50	5.90	6.25	6.50	6.50
4.2 Fixed Reverse Repo Rate	3.35	3.35	3.35	3.35	3.35
4.3 Standing Deposit Facility (SDF) Rate *	6.25	5.65	6.00	6.25	6.25
4.4 Marginal Standing Facility (MSF) Rate	6.75	6.15	6.50	6.75	6.75
4.5 Bank Rate	6.75	6.15	6.50	6.75	6.75
4.6 Base Rate	8.65/10.10	8.10/8.80	8.10/9.40	8.95/10.10	8.95/10.25
4.7 MCLR (Overnight)	7.50/8.50	7.05/8.05	7.30/8.15	7.95/8.50	7.95/8.50
4.8 Term Deposit Rate >1 Year	6.00/7.25	6.10/7.25	6.00/7.25	6.00/7.25	6.50/7.25
4.9 Savings Deposit Rate	2.70/3.00	2.70/3.00	2.70/3.00	2.70/3.00	2.70/3.00
4.10 Call Money Rate (Weighted Average)	6.78	6.13	6.38	6.79	6.81
4.11 91-Day Treasury Bill (Primary) Yield	-	6.40	6.31	6.96	6.93
4.12 182-Day Treasury Bill (Primary) Yield	7.28	6.73	6.74	7.16	7.16
4.13 364-Day Treasury Bill (Primary) Yield	7.31	6.87	6.89	7.15	7.13
4.14 10-Year G-Sec Par Yield (FBIL)	7.31	7.29	7.34	7.31	7.20
5 Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (Rs. Per Foreign Currency)	82.22	81.53	82.79	83.37	83.12
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	89.61	84.87	88.15	90.93	92.00
5.3 Forward Premia of US$ 1-month (%)	2.41	2.21	2.17	0.95	1.23
3-month (%)	2.19	2.16	2.17	1.12	1.65
6-month (%)	2.31	2.26	2.22	1.47	1.51
6 Inflation (%)					
6.1 All India Consumer Price Index	6.7	5.9	5.7	5.6	5.7
6.2 Consumer Price Index for Industrial Workers	6.1	5.4	5.5	5.0	4.9
6.3 Wholesale Price Index	9.6	6.1	5.0	0.4	0.7
6.3.1 Primary Articles	10.3	5.9	2.7	5.2	5.8
6.3.2 Fuel and Power	29.4	19.7	18.1	-4.1	-2.4
6.3.3 Manufactured Products	5.7	3.4	3.4	-0.8	-0.7
7 Foreign Trade (% Change)					
7.1 Imports	16.8	7.4	1.5	-4.3	-4.9
7.2 Exports	6.9	9.7	-3.0	-3.1	0.8

Note : Financial Benchmark India Pvt. Ltd. (FBIL) has commenced publication of the G-Sec benchmarks with effect from March 31, 2018 as per RBI circularFMRD.DIRD. 7/14.03.025/2017-18 dated March 31, 2018. FBIL has started dissemination of reference rates w.e.f. July 10, 2018.
#: Bank credit growth and related ratios for all fortnights from December 3, 2021 to November 18, 2022 are adjusted for past reporting errors by select scheduled commercial banks (SCBs).
Figures in parentheses include the impact of merger of a non-bank with a bank.
*: As per Press Release No. 2022-2023/41 dated April 08, 2022.

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

(₹ Crore)

Item	As on the Last Friday/ Friday						
	2022-23	2023		2024			
		Jan.	Dec. 29	Jan. 05	Jan. 12	Jan. 19	Jan. 26
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	3348235	3261992	3330399	3346624	3377903	3375674	3386320
1.1.2 Notes held in Banking Department	9	19	12	10	9	13	13
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**3348245**	**3262010**	**3330410**	**3346635**	**3377912**	**3375687**	**3386333**
1.2 Assets							
1.2.1 Gold	140766	135652	151422	149040	147853	148391	149322
1.2.2 Foreign Securities	3207202	3125922	3178712	3197365	3229687	3226965	3236716
1.2.3 Rupee Coin	277	436	276	230	373	331	296
1.2.4 Government of India Rupee Securities	-	-	-	-	-	-	-
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	1354217	1374659	1660082	1554312	1628625	1682239	1734444
2.1.1.1 Central Government	5001	101	100	101	100	101	100
2.1.1.2 Market Stabilisation Scheme							
2.1.1.3 State Governments	42	42	43	42	42	42	42
2.1.1.4 Scheduled Commercial Banks	868940	813573	939847	952712	919311	959216	933808
2.1.1.5 Scheduled State Co-operative Banks	8100	8592	8036	8320	8129	8081	8039
2.1.1.6 Non-Scheduled State Co-operative Banks	5177	4337	4984	4823	4959	4842	4935
2.1.1.7 Other Banks	48260	44453	48415	46579	46885	46863	47419
2.1.1.8 Others	316490	429497	555420	422410	503558	516650	593671
2.1.1.9 Financial Institution Outside India	102207	74063	103239	119324	145640	146444	146428
2.1.2 Other Liabilities	1642294	1543823	1803066	1747032	1751036	1725952	1732677
2.1/2.2 Total Liabilities or Assets	**2996512**	**2918482**	**3463149**	**3301343**	**3379661**	**3408191**	**3467121**
2.2 Assets							
2.2.1 Notes and Coins	9	19	12	10	10	13	13
2.2.2 Balances Held Abroad	1008993	1052101	1455394	1392010	1361873	1350527	1345848
2.2.3 Loans and Advances							
2.2.3.1 Central Government	48677	-	-	-	-	-	-
2.2.3.2 State Governments	792	16745	2579	21139	16087	18712	12810
2.2.3.3 Scheduled Commercial Banks	112731	121622	271352	146557	232643	270274	337637
2.2.3.4 Scheduled State Co-op.Banks	-	-	-	-	-	-	-
2.2.3.5 Industrial Dev. Bank of India	-	-	-	-	-	-	-
2.2.3.6 NABARD	-	0	-	-	-	-	-
2.2.3.7 EXIM Bank	-	-	-	-	-	-	-
2.2.3.8 Others	24485	9175	3167	3167	3164	3174	3174
2.2.3.9 Financial Institution Outside India	102128	74372	105356	120214	145540	145628	145120
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	-	-	-	-	-	-	-
2.2.4.2 Government Treasury Bills	-	-	-	-	-	-	-
2.2.5 Investments	1408486	1404238	1359690	1357564	1360661	1360115	1360963
2.2.6 Other Assets	290209	240211	265598	260682	259683	259748	261555
2.2.6.1 Gold	230734	223290	250726	245892	243933	243793	245322

* Data are provisional.

No. 3: Liquidity Operations by RBI

(₹ Crore)

Date	Liquidity Adjustment Facility						Standing Liquidity Facilities	OMO (Outright)		Net Injection (+)/ Absorption (-) (1+3+5+7+9-2-4-6-8)
	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo	MSF	SDF		Sale	Purchase	
	1	2	3	4	5	6	7	8	9	10
Dec. 1, 2023	-	-	-	22468	71583	72539	-	-	-	-23424
Dec. 2, 2023	-	-	-	-	5015	17261	-	-	-	-12246
Dec. 3, 2023	-	-	-	-	309	6145	-	-	-	-5836
Dec. 4, 2023	-	-	-	-	55793	54970	-	-	-	823
Dec. 5, 2023	-	-	-	-	47416	51774	-	-	-	-4358
Dec. 6, 2023	-	-	-	-	56997	47292	-	-	-	9705
Dec. 7, 2023	-	-	-	-	67002	43547	-	-	-	23455
Dec. 8, 2023	-	-	-	-	62592	42594	-	-	-	19998
Dec. 9, 2023	-	-	-	-	1859	3587	-	-	-	-1728
Dec. 10, 2023	-	-	-	-	17927	5837	-	-	-	12090
Dec. 11, 2023	-	-	-	-	103010	49142	-	-	-	53868
Dec. 12, 2023	-	-	-	-	90590	49160	-	-	-	41430
Dec. 13, 2023	-	-	-	-	89651	43675	-	-	-	45976
Dec. 14, 2023	-	-	-	-	97618	46132	-	-	-	51486
Dec. 15, 2023	-	-	100006	-	36142	92154	-	-	-	43994
Dec. 16, 2023	-	-	-	-	102304	10801	-	-	-	91503
Dec. 17, 2023	-	-	-	-	2680	2743	-	-	-	-63
Dec. 18, 2023	-	-	-	-	151680	65190	-	-	-	86490
Dec. 19, 2023	-	-	-	-	118258	51491	-	-	-	66767
Dec. 20, 2023	-	-	-	-	152884	41478	-	-	-	111406
Dec. 21, 2023	-	-	-	-	195948	52771	-	10	10	143177
Dec. 22, 2023	-	-	175013	-	124344	52837	-	-	-	246520
Dec. 23, 2023	-	-	-	-	8447	3699	-	-	-	4748
Dec. 24, 2023	-	-	-	-	3016	1707	-	-	-	1309
Dec. 25, 2023	-	-	-	-	6556	7412	-	-	-	-856
Dec. 26, 2023	-	-	-	-	126564	49110	-	-	-	77454
Dec. 27, 2023	-	-	50007	-	60459	38078	-611	-	-	71777
Dec. 28, 2023	-	-	-	-	70377	42574	612	-	-	28415
Dec. 29, 2023	-	-	125020	-	134232	88673	-	-	-	170579
Dec. 30, 2023	-	-	-	-	18693	59640	-	-	-	-40947
Dec. 31, 2023	-	-	-	-	7440	44174	-	-	-	-36734

No. 4: Sale/ Purchase of U.S. Dollar by the RBI

i) Operations in onshore / offshore OTC segment

Item	2022-23	2022	2023	
		Dec.	Nov.	Dec.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1-1.2)	-25516	3842	-1929	2067
1.1 Purchase (+)	187054	12817	34986	31730
1.2 Sale (–)	212570	8975	36915	29663
2 ₹ equivalent at contract rate (₹ Crores)	-217259	29295	-15978	17234
3 Cumulative (over end-March) (US $ Million)	-25516	-26136	15448	17515
(₹ Crore)	-217259	-220407	125085	142319
4 Outstanding Net Forward Sales (-)/ Purchase (+) at the end of month (US $ Million)	23600	10968	-11901	2184

ii) Operations in currency futures segment

Item	2022-23	2022	2023	
		Dec.	Nov.	Dec.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1-1.2)	0	0	0	0
1.1 Purchase (+)	10930	0	1496	1397
1.2 Sale (–)	10930	0	1496	1397
2 Outstanding Net Currency Futures Sales (-)/ Purchase (+) at the end of month (US $ Million)	0	-150	-2782	-1558

No. 4 A : Maturity Breakdown (by Residual Maturity) of Outstanding Forwards of RBI (US $ Million)

Item	As on December 31 , 2023		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	660	8450	-7790
2. More than 1 month and upto 3 months	5415	0	5415
3. More than 3 months and upto 1 year	4559	0	4559
4. More than 1 year	0	0	0
Total (1+2+3+4)	**10634**	**8450**	**2184**

No. 5: RBI's Standing Facilities

(₹ Crore)

Item	As on the Last Reporting Friday							
	2022-23	2023						2024
		Jan. 27	Aug. 25	Sep. 22	Oct. 20	Nov. 17	Dec. 29	Jan. 26
	1	2	3	4	5	6	7	8
1 MSF	28388	27370	73658	168348	124191	111386	134232	32611
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit		-						
2.2 Outstanding		-						
3 Liquidity Facility for PDs								
3.1 Limit	4900	4900	4900	4900	4900	4900	4900	4900
3.2 Outstanding	2442	1675	3122	3054	3181	3181	3167	3174
4 Others								
4.1 Limit	76000	76000	76000	76000	76000	76000	76000	76000
4.2 Outstanding	15900	7500						
5 Total Outstanding (1+2.2+3.2+4.2)	46730	36545	76780	171402	127372	114567	137399	35785

Money and Banking

No. 6: Money Stock Measures

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/ reporting Fridays				
	2022-23	2022	2023		
		Dec. 30	Dec. 01	Dec. 15	Dec. 29
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	3276436	3122236	3250161	3271577	3255680
1.1 Notes in Circulation	3348219	3203037	3317816	3335346	3330296
1.2 Circulation of Rupee Coin	29542	28857	31521	31521	31521
1.3 Circulation of Small Coins	743	743	743	743	743
1.4 Cash on Hand with Banks	102085	110416	100022	96098	106983
2 Deposit Money of the Public	2398359	2404868	2551336	2537337	2661541
2.1 Demand Deposits with Banks	2320598	2341936	2475751	2462242	2580490
2.2 'Other' Deposits with Reserve Bank	77761	62932	75584	75095	81051
3 M1 (1 + 2)	**5674795**	**5527104**	**5801497**	**5808914**	**5917221**
4 Post Office Saving Bank Deposits	209705	199859	211685	211685	211685
5 M2 (3 + 4)	**5884500**	**5726963**	**6013182**	**6020599**	**6128906**
6 Time Deposits with Banks	16668966	16332131	18237784	18159362	18338335
			(18363876)	(18363876)	(18363876)
7 M3 (3 + 6)	22343760	21859235	24039281	23968277	24255556
			(24165373)	(24172791)	(24281097)
8 Total Post Office Deposits	1146809	1097626	1235171	1235171	1235171
9 M4 (7 + 8)	23490569	22956861	25274452	25203448	25490727
			(25400544)	(25407962)	(25516268)

Note: Figures in parentheses include the impact of merger of a non-bank with a bank.

No. 7: Sources of Money Stock (M_3)

(₹ Crore)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2022-23	2022	2023		
		Dec. 30	Dec. 01	Dec. 15	Dec. 29
	1	2	3	4	5
1 Net Bank Credit to Government	**7165533**	**6565472**	**7399638**	**7275741**	**7171807**
			(7504000)	(7376546)	(7272617)
1.1 RBI's net credit to Government (1.1.1–1.1.2)	1451126	1170253	1169687	1113339	979659
1.1.1 Claims on Government	1456169	1412098	1392286	1373622	1360482
1.1.1.1 Central Government	1455377	1407648	1370538	1358410	1357903
1.1.1.2 State Governments	792	4450	21748	15212	2579
1.1.2 Government deposits with RBI	5043	241845	222599	260283	380824
1.1.2.1 Central Government	5001	241802	222556	260240	380781
1.1.2.2 State Governments	42	42	42	42	43
1.2 Other Banks' Credit to Government	5714407	5395219	6229951	6162402	6192149
			(6334313)	(6263207)	(6292959)
2 Bank Credit to Commercial Sector	**14429636**	**14046877**	**15991431**	**15949940**	**16137606**
			(16569624)	(16525346)	(16710678)
2.1 RBI's credit to commercial sector	26549	19852	5231	5231	5080
2.2 Other banks' credit to commercial sector	14403087	14027024	15986200	15944710	16132526
			(16564393)	(16520116)	(16705598)
2.2.1 Bank credit by commercial banks	13675235	13306853	15247263	15204074	15389861
			(15825456)	(15779480)	(15962934)
2.2.2 Bank credit by co-operative banks	710187	702681	721279	723018	725337
2.2.3 Investments by commercial and co-operative banks in other securities	17665	17491	17659	17618	17327
			(17659)	(17618)	(17327)
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**4911766**	**4748786**	**5161770**	**5240977**	**5316262**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	4587355	4490835	4883617	4962823	5038109
3.1.1 Gross foreign assets	4587616	4491094	4883876	4963084	5038371
3.1.2 Foreign liabilities	260	259	259	260	261
3.2 Other banks' net foreign exchange assets	324410	257951	278153	278153	278153
4 Government's Currency Liabilities to the Public	**30285**	**29600**	**32264**	**32264**	**32264**
5 Banking Sector's Net Non-monetary Liabilities	**4193459**	**3531501**	**4545822**	**4530645**	**4402384**
			(5102285)	(5082887)	(4954980)
5.1 Net non-monetary liabilities of RBI	1587565	1494789	1661603	1737080	1792947
5.2 Net non-monetary liabilities of other banks (residual)	2605895	2036712	2884220	2793565	2609437
			(3440683)	(3345807)	(3162033)
M_3(1+2+3+4–5)	**22343760**	**21859235**	**24039281**	**23968277**	**24255556**
			(24165373)	(24092247)	(24376843)

Note: Figures in parentheses include the impact of merger of a non-bank with a bank.

No. 8: Monetary Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2022-23	2022	2023		
		Dec. 30	Dec. 01	Dec. 15	Dec. 29
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1+1.2.1+1.3)	5674795	5527104	5801497	5808914	5917552
NM_2 (NM_1 + 1.2.2.1)	13103413	12807909	13923015	13892716	14080992
			(13979757)	(13948503)	(14135571)
NM_3 (NM_2 +1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	22628165	22147115	24691580	24534911	24817594
			(24817673)	(24658881)	(24938881)
1 Components					
1.1 Currency with the Public	3276436	3122236	3250161	3271577	3256012
1.2 Aggregate Deposits of Residents	18828639	18521504	20523570	20426247	20721466
			(20649663)	(20550217)	(20842754)
1.2.1 Demand Deposits	2320598	2341936	2475751	2462242	2580490
1.2.2 Time Deposits of Residents	16508041	16179568	18047819	17964005	18140977
			(18173911)	(18087975)	(18262264)
1.2.2.1 Short-term Time Deposits	7428619	7280806	8121519	8083802	8163440
			(8178260)	(8139589)	(8218019)
1.2.2.1.1 Certificates of Deposits (CDs)	303993	295397	310104	336290	342514
1.2.2.2 Long-term Time Deposits	9079423	8898762	9926300	9880203	9977537
			(9995651)	(9948386)	(10044245)
1.3 'Other' Deposits with RBI	77761	62932	75584	75095	81051
1.4 Call/Term Funding from Financial Institutions	445329	440444	842265	761992	759065
2 Sources					
2.1 Domestic Credit	22710730	21706697	24507140	24333182	24397438
			(25189695)	(25009394)	(25071321)
2.1.1 Net Bank Credit to the Government	7165533	6565472	7399638	7275741	7171807
			(7504000)	(7376546)	(7272617)
2.1.1.1 Net RBI credit to the Government	1451126	1170253	1169687	1113339	979659
2.1.1.2 Credit to the Government by the Banking System	5714407	5395219	6229951	6162402	6192149
			(6334313)	(6263207)	(6292959)
2.1.2 Bank Credit to the Commercial Sector	15545198	15141224	17107502	17057442	17225631
			(17685695)	(17632847)	(17798704)
2.1.2.1 RBI Credit to the Commercial Sector	26549	19852	5231	5231	5080
2.1.2.2 Credit to the Commercial Sector by the Banking System	15518649	15121372	17102271	17052211	17220551
			(17680464)	(17627617)	(17793624)
2.1.2.2.1 Other Investments (Non-SLR Securities)	1096333	1073798	1101210	1089257	1074161
2.2 Government's Currency Liabilities to the Public	30285	29600	32264	32264	32596
2.3 Net Foreign Exchange Assets of the Banking Sector	4699822	4595397	4861933	4926775	4977214
2.3.1 Net Foreign Exchange Assets of the RBI	4587355	4490835	4883617	4962823	5038109
2.3.2 Net Foreign Currency Assets of the Banking System	112467	104562	-21684	-36048	-60896
2.4 Capital Account	3446786	3507307	3975379	3989827	4020302
2.5 Other items (net)	1365887	677272	1290840	1319725	1121948

Note: Figures in parentheses include the impact of merger of a non-bank with a bank.

No. 9: Liquidity Aggregates

(₹ Crore)

Aggregates	2022-23	2022	2023		
		Dec.	Oct.	Nov.	Dec.
	1	2	3	4	5
1 NM_3	**22628165**	**22147115**	**24247853**	**24462498**	**24817594**
			(24382048)	(24590732)	(24938881)
2 Postal Deposits	668887	648748	697675	702174	702174
3 L_1 (1 + 2)	**23297052**	**22795863**	**24945528**	**25164672**	**25519768**
			(25079723)	(25292906)	(25641055)
4 Liabilities of Financial Institutions	54724	65601	67084	67961	68815
4.1 Term Money Borrowings	1692	963	1148	1214	1305
4.2 Certificates of Deposit	46407	56570	53260	53910	54485
4.3 Term Deposits	6625	8069	12676	12837	13025
5 L_2 (3 + 4)	**23351776**	**22861465**	**25012612**	**25232633**	**25588583**
			(25146807)	(25360867)	(25709870)
6 Public Deposits with Non-Banking Financial Companies	85254	81308	..	..	91373
7 L_3 (5 + 6)	**23437030**	**22942773**	**..**	**..**	**25679956**

Note : 1. Figures in the columns might not add up to the total due to rounding off of numbers.
2. Figures in parentheses include the impact of merger of a non-bank with a bank.

No. 10: Reserve Bank of India Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2022-23	2022	2023		
		Dec. 30	Dec. 1	Dec. 15	Dec. 29
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	3378521	3232652	3350183	3367675	3362995
1.2 Bankers' Deposits with the RBI	930477	899777	999701	997498	1001281
1.2.1 Scheduled Commercial Banks	868940	841612	938484	936401	939847
1.3 'Other' Deposits with the RBI	77761	62932	75584	75095	81051
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	4386759	4195361	4425468	4440268	4445327
2 Sources					
2.1 RBI's Domestic Credit	1356683	1169715	1171190	1182260	1167569
2.1.1 Net RBI credit to the Government	1451126	1170253	1169687	1113339	979659
2.1.1.1 Net RBI credit to the Central Government (2.1.1.1.1 + 2.1.1.1.2 + 2.1.1.1.3 + 2.1.1.1.4 – 2.1.1.1.5)	1450376	1165846	1147982	1098169	977122
2.1.1.1.1 Loans and Advances to the Central Government	48677	-	-	-	-
2.1.1.1.2 Investments in Treasury Bills	-	-	-	-	-
2.1.1.1.3 Investments in dated Government Securities	1406423	1407281	1370272	1358041	1357627
2.1.1.1.3.1 Central Government Securities	1406423	1407281	1370272	1358041	1357627
2.1.1.1.4 Rupee Coins	277	367	266	368	276
2.1.1.1.5 Deposits of the Central Government	5001	241802	222556	260240	380781
2.1.1.2 Net RBI credit to State Governments	749	4408	21705	15169	2537
2.1.2 RBI's Claims on Banks	-120992	-20391	-3728	63690	182830
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	-120992	-20391	-3728	63690	182830
2.1.3 RBI's Credit to Commercial Sector	26549	19852	5231	5231	5080
2.1.3.1 Loans and Advances to Primary Dealers	8476	2376	3167	3167	3167
2.1.3.2 Loans and Advances to NABARD	-	-	-	-	-
2.2 Government's Currency Liabilities to the Public	30285	29600	32264	32264	32596
2.3 Net Foreign Exchange Assets of the RBI	4587355	4490835	4883617	4962823	5038109
2.3.1 Gold	371500	341827	394231	394838	402148
2.3.2 Foreign Currency Assets	4215873	4149026	4489403	4568003	4635979
2.4 Capital Account	1505657	1580164	1685050	1695281	1727402
2.5 Other Items (net)	81908	-85375	-23447	41799	65545

No. 11: Reserve Money - Components and Sources

(₹ Crore)

Item	2022-23	Outstanding as on March 31/last Fridays of the month/Fridays					
		2022	2023				
		Dec. 30	Dec. 1	Dec. 8	Dec. 15	Dec. 22	Dec. 29
	1	2	3	4	5	6	7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 + 2.4 + 2.5 – 2.6)	4386759	4195361	4425468	4400720	4440268	4444907	4445327
1 Components							
1.1 Currency in Circulation	3378521	3232652	3350183	3370397	3367675	3375003	3362995
1.2 Bankers' Deposits with RBI	930477	899777	999701	955302	997498	995079	1001281
1.3 'Other' Deposits with RBI	77761	62932	75584	75021	75095	74824	81051
2 Sources							
2.1 Net Reserve Bank Credit to Government	1451126	1170253	1169687	1122750	1113339	907000	979659
2.2 Reserve Bank Credit to Banks	-120992	-20391	-3728	17236	63690	258620	182830
2.3 Reserve Bank Credit to Commercial Sector	26549	19852	5231	5221	5231	5231	5080
2.4 Net Foreign Exchange Assets of RBI	4587355	4490835	4883617	4912774	4962823	5011558	5038109
2.5 Government's Currency Liabilities to the Public	30285	29600	32264	32264	32264	32264	32596
2.6 Net Non- Monetary Liabilities of RBI	1587565	1494789	1661603	1689525	1737080	1769766	1792947

No. 12: Commercial Bank Survey

(₹ Crore)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2022-23	2022	2023		
		Dec. 30	Dec. 1	Dec. 15	Dec. 29
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	17882989	17581221	19570438	19472229	19769396
			(19696531)	(19596199)	(19890683)
1.1.1 Demand Deposits	2180431	2201751	2334164	2319503	2437504
1.1.2 Time Deposits of Residents	15702559	15379470	17236274	17152725	17331892
			(17362367)	(17276696)	(17453179)
1.1.2.1 Short-term Time Deposits	7066151	6920761	7756323	7718726	7799351
1.1.2.1.1 Certificates of Deposits (CDs)	303993	295397	310104	336290	342514
1.1.2.2 Long-term Time Deposits	8636407	8458708	9479951	9433999	9532541
1.2 Call/Term Funding from Financial Institutions	445329	440444	842265	761992	759065
2 Sources					
2.1 Domestic Credit	20197246	19488545	22281196	22162588	22358880
			(22963751)	(22838800)	(23032763)
2.1.1 Credit to the Government	5414322	5095190	5925721	5858956	5888955
			(6030084)	(5959761)	(5989765)
2.1.2 Credit to the Commercial Sector	14782924	14393355	16355475	16303632	16469925
			(16933668)	(16879038)	(17042997)
2.1.2.1 Bank Credit	13675235	13306853	15247263	15204074	15389861
			(15825456)	(15779480)	(15962934)
2.1.2.1.1 Non-food Credit	13655330	13252881	15205570	15161575	15346723
			(15783763)	(15736981)	(15919795)
2.1.2.2 Net Credit to Primary Dealers	19491	20813	15125	18507	14127
2.1.2.3 Investments in Other Approved Securities	826	854	840	756	737
2.1.2.4 Other Investments (in non-SLR Securities)	1087371	1064836	1092247	1080295	1065199
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1-2.2.2-2.2.3)	112467	104562	-21684	-36048	-60896
2.2.1 Foreign Currency Assets	351387	332964	284194	276075	258410
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	160924	152563	189965	195358	197358
2.2.3 Overseas Foreign Currency Borrowings	77996	75839	115913	116766	121947
2.3 Net Bank Reserves (2.3.1+2.3.2-2.3.3)	833002	960618	1030207	957144	852099
2.3.1 Balances with the RBI	809907	841612	938484	936401	939847
2.3.2 Cash in Hand	90263	98615	87995	84432	95083
2.3.3 Loans and Advances from the RBI	67168	-20391	-3728	63690	182830
2.4 Capital Account	1916959	1902972	2266159	2270375	2268729
2.5 Other items (net) (2.1+2.2+2.3-2.4-1.1-1.2)	897438	629089	610857	579088	352894
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	711655	676799	836939	914468	811858
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	44733	30579	176616	184379	174832

Note: Figures in parentheses include the impact of merger of a non-bank with a bank.

No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

Item	As on March 24, 2023	2022	2023		
		Dec. 30	Nov. 17	Dec. 15	Dec. 29
	1	2	3	4	5
1 SLR Securities	5415148	5096044	6069868	5960517	5990503
			(5963364)	(5859712)	(5889692)
2 Other Government Securities (Non-SLR)	182265	182263	179418	180543	180084
3 Commercial Paper	65058	54045	55974	56342	58090
4 Shares issued by					
4.1 PSUs	9736	9402	9025	10354	8750
4.2 Private Corporate Sector	71099	70997	83365	82474	81517
4.3 Others	4500	4881	5500	5498	5605
5 Bonds/Debentures issued by					
5.1 PSUs	92304	90235	92351	94520	95236
5.2 Private Corporate Sector	325035	326708	291312	279254	287882
5.3 Others	99384	98924	110949	110316	111164
6 Instruments issued by					
6.1 Mutual funds	48810	36748	81106	78823	56810
6.2 Financial institutions	189180	190633	182535	182173	180062

Note: 1. Data since July 14, 2023 include the impact of the merger of a non-bank with a bank.
2. Figures in parentheses exclude the impact of the merger.

No. 14: Business in India - All Scheduled Banks and All Scheduled Commercial Banks

(₹ Crore)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks				All Scheduled Commercial Banks			
	2022-23	2022	2023		2022-23	2022	2023	
		Dec.	Nov.	Dec.		Dec.	Nov.	Dec.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	212	212	210	210	137	137	137	137
1 Liabilities to the Banking System	**355252**	**329579**	**580351**	**528876**	**351843**	**326294**	**576160**	**524747**
1.1 Demand and Time Deposits from Banks	228517	220832	299509	269437	226119	218463	296162	266043
1.2 Borrowings from Banks	67566	51597	208377	189114	67199	51284	208262	189078
1.3 Other Demand and Time Liabilities	59170	57150	72465	70324	58524	56548	71735	69626
2 Liabilities to Others	**19730504**	**19369545**	**22045232**	**22235648**	**19278894**	**18926865**	**21597261**	**21780912**
2.1 Aggregate Deposits	18477677	18157728	20223466	20524222	18043914	17733784	19791862	20088041
			(20096397)	(20402935)			(19664793)	(19966754)
2.1.1 Demand	2225416	2245942	2437425	2485076	2180431	2201751	2391662	2437504
2.1.2 Time	16252261	15911786	17786041	18039146	15863483	15532033	17400201	17650537
2.2 Borrowings	449945	445126	897811	763584	445329	440444	893404	759065
2.3 Other Demand and Time Liabilities	802881	766691	923954	947842	789651	752638	911995	933805
3 Borrowings from Reserve Bank	**165085**	**127472**	**207355**	**271352**	**165085**	**127472**	**207355**	**271352**
3.1 Against Usance Bills /Promissory Notes	-	-	-	-	-	-	-	-
3.2 Others	165085	127472	207355	271352	165085	127472	207355	271352
4 Cash in Hand and Balances with Reserve Bank	920953	962643	1044258	1056910	900170	940227	1022095	1034929
4.1 Cash in Hand	92788	101119	92836	97584	90263	98615	90354	95083
4.2 Balances with Reserve Bank	828165	861524	951421	959326	809907	841612	931741	939847
5 Assets with the Banking System	**397974**	**381952**	**452124**	**430078**	**326601**	**316528**	**392008**	**364041**
5.1 Balances with Other Banks	232378	231028	264403	246725	193422	190298	222542	202063
5.1.1 In Current Account	18939	23689	26481	13181	15528	19998	23574	10360
5.1.2 In Other Accounts	213440	207339	237922	233543	177894	170301	198969	191703
5.2 Money at Call and Short Notice	49763	38715	40804	34836	24864	18843	25361	17201
5.3 Advances to Banks	45330	46616	51793	45516	41184	44875	51217	44105
5.4 Other Assets	70503	65594	95123	103001	67130	62511	92887	100672
6 Investment	**5560664**	**5241307**	**6121207**	**6138889**	**5415148**	**5096044**	**5971730**	**5990503**
			(6014836)	(6038078)			(5865359)	(5889692)
6.1 Government Securities	5553702	5234518	6114549	6132263	5414322	5095190	5970890	5989765
6.2 Other Approved Securities	6963	6789	6657	6625	826	854	840	737
7 Bank Credit	**14078261**	**13697649**	**16159763**	**16386294**	**13675235**	**13306853**	**15751806**	**15962934**
			(15580023)	(15813221)			(15172066)	(15389861)
7a Food Credit	65,622	99690	96147	95534	19,906	53,972	44,182	43,139
7.1 Loans, Cash-credits and Overdrafts	13824693	13456163	15887441	16094127	13424906	13068326	15482411	15673632
7.2 Inland Bills-Purchased	39446	35326	47263	52280	39435	35310	47254	52269
7.3 Inland Bills-Discounted	165428	159217	185727	198816	162910	156955	183414	196536
7.4 Foreign Bills-Purchased	19758	18911	16384	17624	19545	18727	16157	17404
7.5 Foreign Bills-Discounted	28936	28033	22947	23446	28439	27535	22569	23093

Note: 1. Data since July 2023 include the impact of the merger of a non-bank with a bank.
2. Figures in parentheses exclude the impact of the merger.

No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Crore)

Sector	Outstanding as on				Growth(%)	
	Mar. 24, 2023	2022	2023		Financial year so far	Y-o-Y
		Dec. 30	Nov. 17	Dec. 29	2023-24	2023
	1	2	3	4	%	%
I. Bank Credit (II + III)	**13675235**	**13306853**	**15620554**	**15961345**	**16.7**	**19.9**
			(15039956)	(15388272)	(12.5)	(15.6)
II. Food Credit	**19906**	**53972**	**40261**	**43139**	**116.7**	**-20.1**
III. Non-food Credit	**13655330**	**13252881**	**15580294**	**15918206**	**16.6**	**20.1**
			(14999695)	(15345134)	(12.4)	(15.8)
1. Agriculture & Allied Activities	**1728063**	**1669407**	**1931215**	**1994505**	**15.4**	**19.5**
2. Industry (Micro and Small, Medium and Large)	**3416353**	**3375009**	**3600876**	**3664791**	**7.3**	**8.6**
			(3583164)	(3647315)	(6.8)	(8.1)
2.1 Micro and Small	633587	611948	689502	704065	11.1	15.1
2.2 Medium	268557	267175	283774	290511	8.2	8.7
2.3 Large	2514209	2495885	2627599	2670215	6.2	7.0
3. Services	**3699716**	**3586384**	**4264761**	**4406134**	**19.1**	**22.9**
			(4145875)	(4289319)	(15.9)	(19.6)
3.1 Transport Operators	192323	179650	218897	224270	16.6	24.8
3.2 Computer Software	24927	25566	26444	27571	10.6	7.8
3.3 Tourism, Hotels & Restaurants	69462	67688	76966	77442	11.5	14.4
3.4 Shipping	7074	7787	6727	6986	-1.2	-10.3
3.5 Aviation	28348	28936	40449	45031	58.8	55.6
3.6 Professional Services	139584	131372	155924	157544	12.9	19.9
3.7 Trade	853417	802379	910846	939929	10.1	17.1
3.7.1. Wholesale Trade[1]	422630	402622	457385	471530	11.6	17.1
3.7.2 Retail Trade	430788	399756	453462	468398	8.7	17.2
3.8 Commercial Real Estate	322573	317066	428720	436186	35.2	37.6
			(362185)	(369705)	(14.6)	(16.6)
3.9 Non-Banking Financial Companies (NBFCs)[2] of which,	1342070	1321714	1461751	1520800	13.3	15.1
3.9.1 Housing Finance Companies (HFCs)	318729	315154	304460	328775	3.2	4.3
3.9.2 Public Financial Institutions (PFIs)	175714	181430	190672	212038	20.7	16.9
3.10 Other Services[3]	719936	704227	938037	970376	34.8	37.8
			(900549)	(934558)	(29.8)	(32.7)
4. Personal Loans	**4180838**	**4026281**	**5056524**	**5175423**	**23.8**	**28.5**
			(4612590)	(4737380)	(13.3)	(17.7)
4.1 Consumer Durables	20983	21386	23595	24312	15.9	13.7
4.2 Housing	1988532	1947686	2594106	2640255	32.8	35.6
			(2177221)	(2228607)	(12.1)	(14.4)
4.3 Advances against Fixed Deposits	122116	110149	112983	117474	-3.8	6.7
4.4 Advances to Individuals against share & bonds	7634	7611	7834	8257	8.2	8.5
4.5 Credit Card Outstanding	204708	189913	244689	251880	23.0	32.6
4.6 Education	96853	94294	111868	114952	18.7	21.9
4.7 Vehicle Loans	502377	484212	564785	583297	16.1	20.5
4.8 Loan against gold jewellery	89382	85921	100279	101925	14.0	18.6
4.9 Other Personal Loans	1148253	1085110	1296385	1333071	16.1	22.9
			(1269843)	(1307065)	(13.8)	(20.5)
5. Priority Sector (Memo)						
(i) Agriculture & Allied Activities[4]	1746051	1708058	1960408	2008819	15.0	17.6
(ii) Micro & Small Enterprises[5]	1645484	1593724	1876492	1918338	16.6	20.4
(iii) Medium Enterprises[6]	423888	410012	460435	468942	10.6	14.4
(iv) Housing	622799	619406	740319	747520	20.0	20.7
			(641255)	(649527)	(4.3)	(4.9)
(v) Education Loans	59513	59003	61559	62256	4.6	5.5
(vi) Renewable Energy	4670	4798	4677	4861	4.1	1.3
(vii) Social Infrastructure	2464	2473	2597	2572	4.4	4.0
(viii) Export Credit	20489	21046	12308	12940	-36.8	-38.5
(ix) Others	60835	53150	48865	53282	-12.4	0.2
(x) Weaker Sections including net PSLC- SF/MF	1411633	1348931	1530814	1570568	11.3	16.4

Notes:
(1) Data are provisional. Bank credit, Food credit and Non-food credit data are based on Section-42 return, which covers all scheduled commercial banks (SCBs), while sectoral non-food credit data are based on sector-wise and industry-wise bank credit (SIBC) return, which covers select banks accounting for about 95 per cent of total non-food credit extended by all SCBs, pertaining to the last reporting Friday of the month.
(2) Data since July 28, 2023 include the impact of the merger of a non-bank with a bank. Figures in parentheses exclude the impact of the merger.
1 Wholesale trade includes food procurement credit outside the food credit consortium.
2 NBFCs include HFCs, PFIs, Microfinance Institutions (MFIs), NBFCs engaged in gold loan and others.
3 "Other Services" include Mutual Fund (MFs), Banking and Finance other than NBFCs and MFs and other services which are not indicated elsewhere under services.
4 "Agriculture and Allied Activities" under the priority sector also include priority sector lending certificates (PSLCs).
5 "Micro and Small Enterprises" under the priority sector include credit to micro and small enterprises in industry and services sectors and also include PSLCs.
6 "Medium Enterprises" under the priority sector include credit to medium enterprises in industry and services sectors.

No. 16: Industry-wise Deployment of Gross Bank Credit

(₹ Crore)

Industry	Outstanding as on				Growth(%)	
	Mar. 24, 2023	2022	2023		Financial year so far	Y-o-Y
		Dec. 30	Nov. 17	Dec. 29	2023-24	2023
	1	2	3	4	%	%
2 Industries (2.1 to 2.19)	3416353	3375009	3600876	3664791	7.3	8.6
			(3583164)	(3647315)	(6.8)	(8.1)
2.1 Mining & Quarrying (incl. Coal)	60978	55448	54564	56853	-6.8	2.5
2.2 Food Processing	185709	177932	180389	195982	5.5	10.1
2.2.1 Sugar	22934	17943	14036	17167	-25.1	-4.3
2.2.2 Edible Oils & Vanaspati	19850	18962	20597	22673	14.2	19.6
2.2.3 Tea	5219	5491	6055	5913	13.3	7.7
2.2.4 Others	137706	135535	139701	150229	9.1	10.8
2.3 Beverage & Tobacco	23975	20618	27487	28541	19.0	38.4
2.4 Textiles	236374	226287	251928	256133	8.4	13.2
2.4.1 Cotton Textiles	93054	86749	98857	98806	6.2	13.9
2.4.2 Jute Textiles	4044	4029	4166	4387	8.5	8.9
2.4.3 Man-Made Textiles	40909	40269	45038	46993	14.9	16.7
2.4.4 Other Textiles	98366	95241	103867	105947	7.7	11.2
2.5 Leather & Leather Products	12086	12048	12239	12313	1.9	2.2
2.6 Wood & Wood Products	21370	19803	22925	23637	10.6	19.4
2.7 Paper & Paper Products	45223	44637	46451	46584	3.0	4.4
2.8 Petroleum, Coal Products & Nuclear Fuels	149962	164287	136192	133529	-11.0	-18.7
2.9 Chemicals & Chemical Products	225174	226538	238082	248147	10.2	9.5
2.9.1 Fertiliser	34680	34867	32540	36073	4.0	3.5
2.9.2 Drugs & Pharmaceuticals	71058	70577	78279	81020	14.0	14.8
2.9.3 Petro Chemicals	20844	21254	20327	22992	10.3	8.2
2.9.4 Others	98592	99840	106936	108062	9.6	8.2
2.10 Rubber, Plastic & their Products	84522	83442	87757	88422	4.6	6.0
2.11 Glass & Glassware	9583	8534	10985	11347	18.4	33.0
2.12 Cement & Cement Products	58244	55305	62105	61352	5.3	10.9
2.13 Basic Metal & Metal Product	352218	339003	376757	389349	10.5	14.9
2.13.1 Iron & Steel	235399	231162	258043	272625	15.8	17.9
2.13.2 Other Metal & Metal Product	116819	107841	118714	116724	-0.1	8.2
2.14 All Engineering	182500	179501	193916	194594	6.6	8.4
2.14.1 Electronics	43563	41562	46034	45501	4.4	9.5
2.14.2 Others	138938	137939	147882	149093	7.3	8.1
2.15 Vehicles, Vehicle Parts & Transport Equipment	103029	103752	110459	112054	8.8	8.0
2.16 Gems & Jewellery	81201	82367	92255	91401	12.6	11.0
2.17 Construction	127186	121871	131412	135305	6.4	11.0
2.18 Infrastructure	1212238	1218261	1280368	1289378	6.4	5.8
2.18.1 Power	623918	622014	632277	645640	3.5	3.8
2.18.2 Telecommunications	111600	115173	145824	143525	28.6	24.6
2.18.3 Roads	288216	288179	305966	305800	6.1	6.1
2.18.4 Airports	9579	9464	7984	6894	-28.0	-27.2
2.18.5 Ports	8197	7853	7377	7153	-12.7	-8.9
2.18.6 Railways	11255	11301	12864	12186	8.3	7.8
2.18.7 Other Infrastructure	159472	164277	168077	168180	5.5	2.4
2.19 Other Industries	244781	235375	284603	289870	18.4	23.2

Note: Data since July 28, 2023 include the impact of the merger of a non-bank with a bank. Figures in parentheses exclude the impact of the merger.

No. 17: State Co-operative Banks Maintaining Accounts with the Reserve Bank of India

(₹ Crore)

Item	Last Reporting Friday (in case of March)/Last Friday/ Reporting Friday								
	2022-23	2022	2023						
		Nov. 25	Sep. 29	Oct. 06	Oct. 20	Oct. 27	Nov. 03	Nov. 17	Nov. 24
	1	2	3	4	5	6	7	8	9
Number of Reporting Banks	33	33	33	33	33	33	33	33	33
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	**144701.9**	**127382.0**	**139499.8**	**138578.6**	**136984.9**	**136454.8**	**136198.3**	**133643.3**	**134731.3**
2 Demand and Time Liabilities									
2.1 Demand Liabilities	**30241.2**	**24932.0**	**30578.4**	**26948.5**	**27395.9**	**27401.2**	**31330.4**	**25474.0**	**25612.9**
2.1.1 Deposits									
2.1.1.1 Inter-Bank	6893.3	5198.0	7067.1	6506.7	6285.6	6210.8	8465.2	6583.1	6378.6
2.1.1.2 Others	18195.4	14221.0	16389.1	15182.8	14773.0	14768.0	15018.3	13511.7	13811.7
2.1.2 Borrowings from Banks	0.0	625.0			25.0	1254.6	1109.7	464.7	299.8
2.1.3 Other Demand Liabilities	5152.4	4888.0	7122.2	5259.0	6312.3	5167.8	6737.2	4914.5	5122.8
2.2 Time Liabilities	**194129.9**	**172192.0**	**179527.1**	**179975.2**	**174370.9**	**173252.2**	**172873.3**	**171680.4**	**172169.3**
2.2.1 Deposits									
2.2.1.1 Inter-Bank	65875.0	54088.0	53493.1	53397.6	49982.8	49258.2	48929.8	48825.3	49028.6
2.2.1.2 Others	126506.5	113161.0	123110.7	123395.8	122211.9	121686.8	121180.0	120131.6	120919.6
2.2.2 Borrowings from Banks	845.8	2519.0	1364.0	1427.2	819.7	889.7	1244.7	1343.7	819.7
2.2.3 Other Time Liabilities	902.6	2424.0	1559.3	1754.6	1356.5	1417.5	1518.8	1379.8	1401.4
3 Borrowing from Reserve Bank	0.0	35.0							
4 Borrowings from a notified bank / Government	84382.5	73687.0	71616.1	73237.4	74442.8	74228.2	74418.0	76207.2	80417.0
4.1 Demand	20545.9	15498.0	18837.6	18837.6	19540.1	19329.5	19005.0	19204.5	21638.3
4.2 Time	63836.7	58189.0	52778.5	54399.8	54902.7	54898.7	55413.0	57002.7	58778.7
5 Cash in Hand and Balances with Reserve Bank	**12386.8**	**10166.0**	**12007.1**	**11817.2**	**11443.3**	**11176.0**	**11248.6**	**10962.3**	**10725.0**
5.1 Cash in Hand	1540.1	778.0	709.5	807.5	703.4	992.9	688.6	732.4	684.5
5.2 Balance with Reserve Bank	10846.7	9388.0	11297.6	11009.7	10739.9	10183.1	10560.0	10229.9	10040.5
6 Balances with Other Banks in Current Account	**3500.7**	**1557.0**	**2034.4**	**2153.1**	**1739.3**	**1685.7**	**1715.8**	**1384.0**	**1598.5**
7 Investments in Government Securities	**80906.4**	**72326.0**	**72473.9**	**72645.8**	**73642.9**	**73744.2**	**73281.0**	**71976.8**	**73325.1**
8 Money at Call and Short Notice	**34771.6**	**18019.0**	**22621.2**	**20713.3**	**19907.6**	**16653.1**	**16151.7**	**15363.8**	**21174.1**
9 Bank Credit (10.1+11)	**124978.1**	**120652.0**	**119241.1**	**120828.6**	**122898.6**	**123771.7**	**127545.7**	**126785.7**	**127421.9**
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	**124928.2**	**120613.0**	**119187.8**	**120774.0**	**122842.1**	**123727.6**	**127477.0**	**126701.9**	**127336.5**
10.2 Due from Banks	131095.9	117682.0	119129.5	120984.0	121532.4	122092.6	122943.2	123801.8	125133.8
11 Bills Purchased and Discounted	49.9	40.0	53.3	54.6	56.5	44.1	68.7	83.8	85.4

Prices and Production

No. 18: Consumer Price Index (Base: 2012=100)

Group/Sub group	2022-23			Rural			Urban			Combined		
	Rural	Urban	Combined	Jan.23	Dec.23	Jan.24 (P)	Jan.23	Dec.23	Jan.24 (P)	Jan.23	Dec.23	Jan.24 (P)
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	**173.9**	**179.7**	**176.0**	**175.0**	**188.8**	**187.7**	**179.5**	**195.3**	**194.2**	**176.7**	**191.2**	**190.1**
1.1 Cereals and products	163.3	165.3	164.0	174.0	186.2	187.6	173.3	185.6	187.0	173.8	186.0	187.4
1.2 Meat and fish	208.7	215.2	211.0	208.3	208.0	209.8	215.2	217.5	219.4	210.7	211.3	213.2
1.3 Egg	174.7	177.1	175.6	192.9	197.1	204.9	197.0	200.8	206.1	194.5	198.5	205.4
1.4 Milk and products	170.1	170.7	170.3	174.3	182.4	182.6	175.2	182.5	182.8	174.6	182.4	182.7
1.5 Oils and fats	197.0	181.1	191.2	192.6	162.4	161.2	178.0	156.7	155.8	187.2	160.3	159.2
1.6 Fruits	164.1	169.6	166.7	156.3	172.6	169.7	160.5	178.9	174.6	158.3	175.5	172.0
1.7 Vegetables	160.8	198.7	173.6	142.9	188.4	179.8	175.3	234.6	226.0	153.9	204.1	195.5
1.8 Pulses and products	168.1	168.2	168.2	170.7	204.2	202.5	171.2	210.1	207.7	170.9	206.2	204.3
1.9 Sugar and confectionery	119.9	122.2	120.7	120.3	130.2	129.7	122.7	131.4	131.1	121.1	130.6	130.2
1.10 Spices	199.4	193.5	197.5	210.5	249.1	246.0	204.3	238.7	235.5	208.4	245.6	242.5
1.11 Non-alcoholic beverages	175.4	161.3	169.6	176.9	182.0	182.3	163.7	169.2	169.8	171.4	176.7	177.1
1.12 Prepared meals, snacks, sweets	185.1	190.4	187.6	188.5	194.3	195.0	194.3	202.4	203.2	191.2	198.1	198.8
2 Pan, tobacco and intoxicants	**195.0**	**199.9**	**196.3**	**196.9**	**203.1**	**203.2**	**201.6**	**208.4**	**208.9**	**198.2**	**204.5**	**204.7**
3 Clothing and footwear	**184.5**	**172.9**	**179.9**	**188.6**	**194.1**	**194.6**	**176.6**	**182.7**	**183.1**	**183.8**	**189.6**	**190.0**
3.1 Clothing	184.8	175.0	180.9	189.0	194.8	195.2	178.7	184.8	185.1	184.9	190.9	191.2
3.2 Footwear	182.7	161.4	173.9	186.3	190.3	190.4	165.3	171.2	171.8	177.6	182.4	182.7
4 Housing	**--**	**170.0**	**170.0**	**--**	**--**	**--**	**172.1**	**176.9**	**177.6**	**172.1**	**176.9**	**177.6**
5 Fuel and light	**179.7**	**178.4**	**179.2**	**183.2**	**183.1**	**184.1**	**180.1**	**175.5**	**175.7**	**182.0**	**180.2**	**180.9**
6 Miscellaneous	**173.8**	**166.5**	**170.3**	**176.5**	**183.0**	**183.4**	**168.9**	**174.8**	**175.2**	**172.8**	**179.0**	**179.4**
6.1 Household goods and services	173.7	165.1	169.6	177.2	182.5	182.8	168.0	172.7	173.0	172.9	177.9	178.2
6.2 Health	181.3	174.6	178.7	184.7	192.5	193.2	178.5	186.8	187.7	182.3	190.3	191.1
6.3 Transport and communication	167.3	158.8	162.8	168.2	171.8	172.0	159.5	161.9	162.1	163.6	166.6	166.8
6.4 Recreation and amusement	170.0	165.8	167.6	171.8	177.0	177.3	167.8	171.9	172.2	169.5	174.1	174.4
6.5 Education	175.6	169.7	172.2	177.8	185.3	185.8	171.8	180.5	180.8	174.3	182.5	182.9
6.6 Personal care and effects	173.2	173.4	173.3	178.4	188.1	188.6	178.8	189.4	190.0	178.6	188.6	189.2
General Index (All Groups)	**175.8**	**173.5**	**174.7**	**177.8**	**187.6**	**187.3**	**174.9**	**183.6**	**183.5**	**176.5**	**185.7**	**185.5**

Source: National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India.
P: Provisional

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2022-23	2022	2023	
				Dec.	Nov.	Dec.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2016	2.88	131.1	132.3	139.1	138.8
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	1148	1167	1253	1257
3 Consumer Price Index for Rural Labourers	1986-87	-	1160	1179	1262	1267

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

Item	2022-23	2022	2023	
		Dec.	Nov.	Dec.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	52731	53941	60786	62173
2 Silver (₹ per kilogram)	61991	66698	72222	73926

Source: India Bullion & Jewellers Association Ltd., Mumbai for Gold and Silver prices in Mumbai.

No. 21: Wholesale Price Index

(Base: 2011-12 = 100)

Commodities	Weight	2022-23	2023			2024
			Jan.	Nov.	Dec. (P)	Jan. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**152.5**	**150.7**	**153.1**	**151.6**	**151.1**
1.1 PRIMARY ARTICLES	**22.618**	**176.8**	**174.3**	**187.6**	**182.9**	**181.0**
1.1.1 FOOD ARTICLES	**15.256**	**179.5**	**176.6**	**197.0**	**191.3**	**188.7**
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	178.6	187.0	200.0	199.8	198.7
1.1.1.2 Fruits & Vegetables	3.475	200.6	171.2	226.1	202.0	190.3
1.1.1.3 Milk	4.440	167.8	172.9	181.5	181.7	182.2
1.1.1.4 Eggs,Meat & Fish	2.402	170.6	170.0	167.8	165.6	168.5
1.1.1.5 Condiments & Spices	0.529	187.2	195.7	246.0	248.4	246.5
1.1.1.6 Other Food Articles	0.948	178.1	180.8	199.3	198.3	194.9
1.1.2 NON-FOOD ARTICLES	**4.119**	**172.1**	**173.7**	**163.8**	**163.1**	**162.3**
1.1.2.1 Fibres	0.839	203.0	185.0	166.6	162.1	161.1
1.1.2.2 Oil Seeds	1.115	205.2	201.6	185.0	185.1	182.7
1.1.2.3 Other non-food Articles	1.960	131.2	137.6	136.0	134.3	133.8
1.1.2.4 Floriculture	0.204	257.4	321.8	304.7	323.7	328.6
1.1.3 MINERALS	**0.833**	**203.5**	**202.3**	**215.8**	**215.7**	**217.7**
1.1.3.1 Metallic Minerals	0.648	191.7	185.9	205.8	205.8	208.3
1.1.3.2 Other Minerals	0.185	245.2	259.7	250.6	250.4	250.7
1.1.4 CRUDE PETROLEUM & NATURAL GAS	**2.410**	**158.4**	**151.4**	**159.0**	**152.2**	**151.7**
1.2 FUEL & POWER	**13.152**	**159.5**	**155.6**	**156.2**	**154.2**	**154.8**
1.2.1 COAL	**2.138**	**133.3**	**134.3**	**136.7**	**136.7**	**136.2**
1.2.1.1 Coking Coal	0.647	143.4	143.4	143.4	143.4	143.4
1.2.1.2 Non-Coking Coal	1.401	119.8	119.8	125.8	125.8	125.8
1.2.1.3 Lignite	0.090	271.1	294.3	258.1	258.1	246.6
1.2.2 MINERAL OILS	**7.950**	**172.9**	**160.9**	**162.5**	**160.0**	**159.1**
1.2.3 ELECTRICITY	**3.064**	**143.3**	**156.7**	**153.3**	**151.5**	**156.5**
1.3 MANUFACTURED PRODUCTS	**64.231**	**142.6**	**141.4**	**140.2**	**140.1**	**139.8**
1.3.1 MANUFACTURE OF FOOD PRODUCTS	**9.122**	**165.3**	**163.1**	**162.0**	**161.0**	**160.1**
1.3.1.1 Processing and Preserving of meat	0.134	143.7	142.8	145.1	144.5	144.8
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	144.9	141.7	145.2	145.5	142.8
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	125.8	126.9	131.8	131.7	128.6
1.3.1.4 Vegetable and Animal oils and Fats	2.643	181.9	166.1	142.2	141.1	140.0
1.3.1.5 Dairy products	1.165	167.0	171.9	180.2	179.7	178.3
1.3.1.6 Grain mill products	2.010	162.1	171.0	180.0	179.5	180.8
1.3.1.7 Starches and Starch products	0.110	158.9	159.2	157.5	161.1	163.1
1.3.1.8 Bakery products	0.215	163.0	166.0	166.0	165.9	168.1
1.3.1.9 Sugar, Molasses & honey	1.163	126.8	127.1	140.0	138.1	137.7
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	135.9	137.4	140.6	141.1	142.4
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	155.8	154.6	155.1	150.9	150.0
1.3.1.12 Tea & Coffee products	0.371	178.2	166.7	180.0	173.6	163.4
1.3.1.13 Processed condiments & salt	0.163	176.5	181.1	198.1	198.8	200.0
1.3.1.14 Processed ready to eat food	0.024	141.2	141.2	146.7	147.3	147.6
1.3.1.15 Health supplements	0.225	179.4	181.0	180.0	178.8	175.6
1.3.1.16 Prepared animal feeds	0.356	208.8	209.6	212.7	210.6	207.1
1.3.2 MANUFACTURE OF BEVERAGES	**0.909**	**128.9**	**129.8**	**131.7**	**131.8**	**132.5**
1.3.2.1 Wines & spirits	0.408	129.3	130.9	134.5	134.5	134.4
1.3.2.2 Malt liquors and Malt	0.225	134.5	134.4	135.4	135.7	136.9
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	123.7	124.3	124.7	124.7	126.1

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2022-23	2023			2024
			Jan.	Nov.	Dec. (P)	Jan. (P)
	1	2	3	4	5	6
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	**0.514**	**165.3**	**165.9**	**175.0**	**175.3**	**171.6**
1.3.3.1 Tobacco products	0.514	165.3	165.9	175.0	175.3	171.6
1.3.4 MANUFACTURE OF TEXTILES	**4.881**	**142.7**	**137.1**	**134.2**	**133.6**	**134.0**
1.3.4.1 Preparation and Spinning of textile fibres	2.582	133.2	123.8	120.0	118.7	118.5
1.3.4.2 Weaving & Finishing of textiles	1.509	158.9	158.7	156.4	156.6	158.2
1.3.4.3 Knitted and Crocheted fabrics	0.193	129.9	124.2	118.1	119.1	117.9
1.3.4.4 Made-up textile articles, Except apparel	0.299	153.6	152.4	156.7	156.7	157.6
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	156.8	149.4	137.1	136.8	137.5
1.3.4.6 Other textiles	0.201	132.2	129.2	131.2	130.6	130.7
1.3.5 MANUFACTURE OF WEARING APPAREL	**0.814**	**148.7**	**149.1**	**151.4**	**152.4**	**151.8**
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	147.3	147.9	148.8	149.3	148.9
1.3.5.2 Knitted and Crocheted apparel	0.221	152.2	152.3	158.4	160.6	159.8
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	**0.535**	**122.2**	**121.2**	**124.0**	**123.4**	**124.0**
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	105.6	102.2	106.7	104.4	105.4
1.3.6.2 Luggage, HandbAgs, Saddlery and Harness	0.075	141.0	140.4	141.3	140.9	141.3
1.3.6.3 Footwear	0.318	125.2	125.2	127.6	127.8	128.2
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	**0.772**	**143.2**	**143.1**	**147.7**	**147.7**	**147.7**
1.3.7.1 Saw milling and Planing of wood	0.124	137.6	138.6	136.8	136.1	135.5
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	141.8	141.2	147.9	148.4	148.5
1.3.7.3 Builder's carpentry and Joinery	0.036	204.0	203.2	208.7	203.7	209.1
1.3.7.4 Wooden containers	0.119	136.7	137.6	139.6	140.2	138.4
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	**1.113**	**152.0**	**148.3**	**138.4**	**138.5**	**138.8**
1.3.8.1 Pulp, Paper and Paperboard	0.493	158.4	157.3	145.7	145.3	145.5
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	148.3	145.1	140.8	140.7	141.7
1.3.8.3 Other articles of paper and Paperboard	0.306	145.6	137.1	124.4	125.1	125.2
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	**0.676**	**172.5**	**180.7**	**184.0**	**185.4**	**185.5**
1.3.9.1 Printing	0.676	172.5	180.7	184.0	185.4	185.5
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	**6.465**	**145.4**	**143.3**	**136.0**	**135.8**	**135.4**
1.3.10.1 Basic chemicals	1.433	159.2	152.5	139.0	138.5	137.4
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	144.8	147.4	143.0	142.6	141.3
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	143.2	138.0	129.1	129.7	130.9
1.3.10.4 Pesticides and Other agrochemical products	0.454	143.4	141.6	132.8	132.1	131.9
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	145.0	146.3	144.6	143.8	144.1
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	140.8	141.6	138.8	138.8	138.8
1.3.10.7 Other chemical products	0.692	142.1	139.8	133.1	132.9	132.8
1.3.10.8 Man-made fibres	0.296	110.7	105.4	102.8	102.8	102.4
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	**1.993**	**140.9**	**142.2**	**142.4**	**143.2**	**142.9**
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	140.9	142.2	142.4	143.2	142.9
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	**2.299**	**129.7**	**128.6**	**126.8**	**127.4**	**127.6**
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	111.8	113.8	113.5	113.7	113.6
1.3.12.2 Other Rubber Products	0.272	106.4	105.8	107.3	107.4	107.5
1.3.12.3 Plastics products	1.418	141.8	139.3	136.3	137.2	137.4

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2022-23	2023			2024
			Jan.	Nov.	Dec. (P)	Jan. (P)
	1	2	3	4	5	6
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	**3.202**	**133.7**	**135.3**	**134.6**	**135.0**	**134.5**
1.3.13.1 Glass and Glass products	0.295	158.1	165.3	163.4	164.2	163.9
1.3.13.2 Refractory products	0.223	119.0	118.7	119.5	118.9	119.1
1.3.13.3 Clay Building Materials	0.121	135.3	132.9	118.5	117.1	117.3
1.3.13.4 Other Porcelain and Ceramic Products	0.222	118.0	118.7	122.6	122.8	123.3
1.3.13.5 Cement, Lime and Plaster	1.645	137.2	138.9	137.5	138.1	137.1
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	134.4	134.3	137.9	138.5	138.9
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	125.6	126.3	132.2	132.5	131.7
1.3.13.8 Other Non-Metallic Mineral Products	0.169	105.9	107.4	100.1	101.8	101.4
1.3.14 MANUFACTURE OF BASIC METALS	**9.646**	**148.7**	**145.5**	**140.2**	**139.5**	**139.0**
1.3.14.1 Inputs into steel making	1.411	159.7	150.9	138.8	136.7	135.9
1.3.14.2 Metallic Iron	0.653	165.9	158.9	151.8	151.1	150.8
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	127.0	124.9	118.3	117.9	117.3
1.3.14.4 Mild Steel -Long Products	1.081	149.7	148.3	141.2	139.7	138.5
1.3.14.5 Mild Steel - Flat products	1.144	155.0	144.1	142.7	141.4	140.4
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	146.9	145.8	137.0	136.4	133.8
1.3.14.7 Stainless Steel - Semi Finished	0.924	151.9	148.6	133.8	132.3	132.1
1.3.14.8 Pipes & tubes	0.205	175.4	175.3	170.2	171.0	168.4
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	145.9	146.6	143.6	144.0	144.4
1.3.14.10 Castings	0.925	130.7	134.7	143.3	144.5	144.8
1.3.14.11 Forgings of steel	0.271	172.4	173.8	175.1	174.1	174.6
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	**3.155**	**139.0**	**137.9**	**139.3**	**138.8**	**138.4**
1.3.15.1 Structural Metal Products	1.031	132.7	131.8	133.2	133.1	132.5
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	161.1	155.4	157.7	157.3	157.7
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	100.5	103.7	105.9	105.9	105.9
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	135.2	136.7	145.3	145.6	144.9
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	112.2	110.8	109.2	100.4	100.5
1.3.15.6 Other Fabricated Metal Products	0.728	145.0	145.9	143.5	143.9	143.1
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	**2.009**	**116.6**	**117.1**	**120.0**	**119.9**	**119.5**
1.3.16.1 Electronic Components	0.402	115.0	115.4	115.0	114.8	114.5
1.3.16.2 Computers and Peripheral Equipment	0.336	135.0	135.0	135.1	135.1	135.1
1.3.16.3 Communication Equipment	0.310	129.4	129.8	139.4	139.4	139.4
1.3.16.4 Consumer Electronics	0.641	99.7	100.6	104.4	103.9	102.8
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	112.8	113.0	113.8	113.8	113.8
1.3.16.6 Watches and Clocks	0.076	151.2	151.5	158.6	159.2	159.3
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	108.9	108.9	107.1	107.1	109.6
1.3.16.8 Optical instruments and Photographic equipment	0.008	100.5	100.3	103.6	103.6	102.7
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	**2.930**	**128.8**	**130.1**	**131.2**	**131.6**	**131.7**
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	126.3	129.0	130.3	130.3	131.1

No. 21: Wholesale Price Index (Concld.)

(Base: 2011-12 = 100)

Commodities	Weight	2022-23	2023			2024
			Jan.	Nov.	Dec. (P)	Jan. (P)
	1	2	3	4	5	6
1.3.17.2 Batteries and Accumulators	0.236	131.9	131.6	138.6	139.1	139.0
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	116.6	119.9	125.6	127.4	123.1
1.3.17.4 Other electronic and Electric wires and Cables	0.428	146.3	146.4	144.7	145.6	145.5
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	117.2	117.0	116.2	117.1	117.2
1.3.17.6 Domestic appliances	0.366	134.1	133.8	132.5	134.0	132.7
1.3.17.7 Other electrical equipment	0.206	117.4	118.9	120.2	119.5	120.6
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	**4.789**	**126.2**	**127.0**	**129.2**	**129.2**	**129.8**
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	126.9	126.4	129.5	128.9	130.6
1.3.18.2 Fluid power equipment	0.162	128.4	129.9	132.3	132.3	132.3
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	117.6	117.6	117.0	117.3	117.9
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	124.2	125.7	126.5	127.4	128.9
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	79.8	82.3	83.2	84.9	83.0
1.3.18.6 Lifting and Handling equipment	0.285	126.3	127.2	128.7	129.4	129.7
1.3.18.7 Office machinery and Equipment	0.006	130.2	130.2	130.2	130.2	130.2
1.3.18.8 Other general-purpose machinery	0.437	143.0	144.2	145.0	143.0	146.4
1.3.18.9 Agricultural and Forestry machinery	0.833	137.2	139.4	143.2	143.9	144.1
1.3.18.10 Metal-forming machinery and Machine tools	0.224	120.5	121.2	122.9	123.3	123.3
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	84.9	86.1	88.8	88.6	88.7
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	127.7	124.7	124.2	124.3	123.5
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	130.0	131.1	137.9	138.1	135.3
1.3.18.14 Other special-purpose machinery	0.468	140.6	142.1	144.9	144.9	145.0
1.3.18.15 Renewable electricity generating equipment	0.046	69.2	69.7	70.6	70.2	70.7
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	**4.969**	**127.6**	**127.1**	**128.2**	**128.4**	**128.5**
1.3.19.1 Motor vehicles	2.600	126.0	125.7	128.7	128.9	128.5
1.3.19.2 Parts and Accessories for motor vehicles	2.368	129.3	128.7	127.6	127.9	128.5
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	**1.648**	**137.4**	**138.8**	**143.8**	**143.7**	**143.5**
1.3.20.1 Building of ships and Floating structures	0.117	162.5	163.6	163.7	163.6	163.7
1.3.20.2 Railway locomotives and Rolling stock	0.110	105.5	108.4	108.9	108.9	110.2
1.3.20.3 Motor cycles	1.302	137.6	139.1	145.4	145.3	144.9
1.3.20.4 Bicycles and Invalid carriages	0.117	139.8	138.9	138.5	138.0	138.1
1.3.20.5 Other transport equipment	0.002	152.5	157.1	163.0	162.9	159.4
1.3.21 MANUFACTURE OF FURNITURE	**0.727**	**157.2**	**157.9**	**159.2**	**160.3**	**159.6**
1.3.21.1 Furniture	0.727	157.2	157.9	159.2	160.3	159.6
1.3.22 OTHER MANUFACTURING	**1.064**	**147.7**	**151.1**	**161.3**	**166.0**	**160.9**
1.3.22.1 Jewellery and Related articles	0.996	146.5	150.2	161.3	166.3	160.9
1.3.22.2 Musical instruments	0.001	189.3	185.6	186.0	179.2	190.6
1.3.22.3 Sports goods	0.012	150.5	153.0	155.3	155.9	156.2
1.3.22.4 Games and Toys	0.005	159.0	158.7	159.3	160.3	159.6
1.3.22.5 Medical and Dental instruments and Supplies	0.049	170.4	167.2	162.2	162.2	161.2
2 FOOD INDEX	**24.378**	**174.2**	**171.5**	**183.9**	**179.9**	**178.0**

Source: Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

No. 22: Index of Industrial Production (Base:2011-12=100)

Industry	Weight	2021-22	2022-23	April-December		December	
				2022-23	2023-24	2022	2023
	1	2	3	4	5	6	7
General Index	100.00	131.6	138.5	135.9	144.2	145.9	151.5
1 Sectoral Classification							
1.1 Mining	14.37	113.3	119.9	113.3	122.9	132.6	139.4
1.2 Manufacturing	77.63	131.0	137.1	135.0	142.5	144.9	150.6
1.3 Electricity	7.99	170.1	185.2	186.0	199.0	179.4	181.6
2 Use-Based Classification							
2.1 Primary Goods	34.05	129.5	139.2	135.8	145.2	145.0	151.7
2.2 Capital Goods	8.22	88.7	100.3	96.7	103.5	100.1	103.3
2.3 Intermediate Goods	17.22	143.9	149.4	148.1	155.1	154.1	159.3
2.4 Infrastructure/ Construction Goods	12.34	148.2	160.7	156.0	172.0	170.9	177.9
2.5 Consumer Durables	12.84	113.8	114.5	115.3	116.5	108.8	114.0
Consumer non-durables	15.33	146.7	147.7	145.0	152.6	174.4	178.0

Source : Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.

Government Accounts and Treasury Bills

No. 23: Union Government Accounts at a Glance

(Amount in ₹ Crore)

Item	Financial Year	April – December			
	2023-24 (Revised Estimates)	2023-24 (Actuals)	2022-23 (Actuals)	Percentage to Revised Estimates	
				2023-24	2022-23
	1	2	3	4	5
1 Revenue Receipts	**2699713**	**2042289**	**1769994**	**75.6**	**75.4**
1.1 Tax Revenue (Net)	2323918	1729931	1555692	74.4	74.6
1.2 Non-Tax Revenue	375795	312358	214302	83.1	81.9
2 Non Debt Capital Receipt	**56000**	**29650**	**55107**	**52.9**	**66.0**
2.1 Recovery of Loans	26000	19597	16436	75.4	69.9
2.2 Other Receipts	30000	10053	38671	33.5	64.5
3 Total Receipts (excluding borrowings) (1+2)	**2755713**	**2071939**	**1825100**	**75.2**	**75.0**
4 Revenue Expenditure of which :	3540239	2380587	2328132	67.2	67.3
4.1 Interest Payments	1055427	748207	680853	70.9	72.4
5 Capital Expenditure	950246	673630	489944	70.9	67.3
6 Total Expenditure (4+5)	**4490486**	**3054217**	**2818077**	**68.0**	**67.3**
7 Revenue Deficit (4-1)	**840527**	**338298**	**558138**	**40.2**	**50.3**
8 Fiscal Deficit (6-3)	**1734773**	**982278**	**992976**	**56.6**	**56.6**
9 Gross Primary Deficit (8-4.1)	**679346**	**234071**	**312123**	**34.5**	**38.3**

Source: Controller General of Accounts (CGA), Ministry of Finance, Government of India and Interim Union Budget 2024-25.

No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

Item	2022-23	2022	2023					
		Dec. 30	Nov. 24	Dec. 1	Dec. 8	Dec. 15	Dec. 22	Dec. 29
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	6191	11363	7543	6954	6166	6528	8091	9694
1.2 Primary Dealers	20071	15538	23908	26459	23080	17857	19201	16909
1.3 State Governments	8038	47131	21525	18301	18301	17151	15651	24851
1.4 Others	80638	117361	87048	82087	83254	85115	79208	75897
2 182-day								
2.1 Banks	53154	58069	78159	72670	74876	76113	77470	79976
2.2 Primary Dealers	97274	45722	77477	78845	71789	69009	68038	60167
2.3 State Governments	2592	22513	11789	12099	12099	10043	10043	8887
2.4 Others	110072	68459	81564	81685	83539	81082	77496	78861
3 364-day								
3.1 Banks	101834	92615	92052	94768	100462	101272	100742	102529
3.2 Primary Dealers	146080	187403	183144	184085	178545	180046	179626	177911
3.3 State Governments	48284	42776	44278	43204	42900	42819	42875	44909
3.4 Others	149086	130982	158805	158147	160994	161682	165632	168561
4 14-day Intermediate								
4.1 Banks								
4.2 Primary Dealers								
4.3 State Governments	212758	188391	138029	118579	86729	128039	207744	198774
4.4 Others	926	1019	919	716	144	340	754	1780
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	823313	839931	867292	859305	856004	848717	844073	849151

14D intermediate T-Bills are non-marketable unlike 91D, 182D and 364D T-Bills. These bills are 'intermediate' by nature as these are liquidated to replenish shortfall in the daily minimum cash balances of State Governments.
Note: Primary Dealers (PDs) include banks undertaking PD business.

No. 25: Auctions of Treasury Bills

(Amount in ₹ Crore)

Date of Auction	Notified Amount	Bids Received			Bids Accepted			Total Issue (6+7)	Cut-off Price (₹)	Implicit Yield at Cut-off Price (per cent)
		Number	Total Face Value		Number	Total Face Value				
			Competitive	Non-Competitive		Competitive	Non-Competitive			
	1	2	3	4	5	6	7	8	9	10
91-day Treasury Bills										
2023-24										
Nov. 29	7000	109	22843	1534	57	6966	1534	8500	98.29	6.9599
Dec. 6	7000	132	29060	1068	44	6932	1068	8000	98.30	6.9549
Dec. 13	7000	116	28116	2344	39	6956	2344	9300	98.29	6.9781
Dec. 20	7000	105	33873	3039	27	6961	3039	10000	98.30	6.9441
Dec. 27	7000	86	30103	9229	14	6971	9229	16200	98.30	6.9300
182-day Treasury Bills										
2023-24										
Nov. 29	8000	99	15387	339	82	7971	339	8310	96.56	7.1554
Dec. 6	8000	129	19446	1068	87	7936	1068	9004	96.55	7.1690
Dec. 13	8000	99	18840	110	62	7890	110	8000	96.54	7.1939
Dec. 20	8000	133	24558	864	46	7936	864	8800	96.56	7.1387
Dec. 27	8000	108	18202	19	63	7981	19	8000	96.56	7.1554
364-day Treasury Bills										
2023-24										
Nov. 29	9000	150	27636	47	71	8963	47	9011	93.35	7.1476
Dec. 6	9000	147	22417	1620	80	8980	1620	10600	93.34	7.1585
Dec. 13	9000	110	19470	37	76	8987	37	9023	93.31	7.1899
Dec. 20	9000	150	33036	172	25	8984	172	9156	93.38	7.1101
Dec. 27	9000	97	22507	2146	44	8964	2146	11111	93.36	7.1300

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on	Range of Rates	Weighted Average Rates
	Borrowings/ Lendings	Borrowings/ Lendings
	1	2
December 01 ,2023	5.00-6.90	6.75
December 02 ,2023	5.50-6.65	6.18
December 04 ,2023	5.00-6.85	6.74
December 05 ,2023	5.00-6.85	6.72
December 06 ,2023	5.00-6.85	6.70
December 07 ,2023	5.00-6.85	6.70
December 08 ,2023	5.00-6.85	6.71
December 11 ,2023	5.00-6.88	6.77
December 12 ,2023	5.00-6.90	6.76
December 13 ,2023	5.00-6.90	6.78
December 14 ,2023	5.50-6.93	6.76
December 15 ,2023	5.50-6.80	6.72
December 16 ,2023	5.50-6.45	6.13
December 18 ,2023	5.00-6.90	6.75
December 19 ,2023	5.00-7.05	6.80
December 20 ,2023	5.00-6.90	6.80
December 21 ,2023	5.00-6.90	6.80
December 22 ,2023	5.50-6.90	6.79
December 26 ,2023	5.50-7.25	6.82
December 27 ,2023	5.00-7.03	6.82
December 28 ,2023	5.50-7.25	6.83
December 29 ,2023	5.50-7.10	6.79
December 30 ,2023	5.50-6.80	6.43
January 1, 2024	5.50-7.10	6.79
January 2, 2024	5.00-6.90	6.77
January 3, 2024	5.00-6.85	6.75
January 4, 2024	5.00-6.85	6.70
January 5, 2024	5.50-6.80	6.69
January 6, 2024	5.50-6.75	6.28
January 8, 2024	5.00-6.90	6.76
January 9, 2024	5.00-6.85	6.74
January 10, 2024	5.00-6.85	6.75
January 11, 2024	5.00-6.90	6.76
January 12, 2024	5.00-6.85	6.77
January 15, 2024	5.00-6.93	6.78

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2022	2023			
	Dec. 30	Nov. 17	Dec. 1	Dec. 15	Dec. 29
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	293983.09	314547.67	315780.27	341805.23	344752.77
1.1 Issued during the fortnight (₹ Crore)	35845.62	17713.85	46762.02	65939.27	38992.46
2 Rate of Interest (per cent)	6.65-7.88	7.09-7.65	7.12-7.66	7.06-7.96	7.27-7.98

No. 28: Commercial Paper

Item	2022	2023			
	Dec. 31	Nov. 15	Nov. 30	Dec. 15	Dec. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	359673.30	417630.65	394967.95	387266.65	364181.25
1.1 Reported during the fortnight (₹ Crore)	54575.60	41107.05	59808.25	68393.55	42874.35
2 Rate of Interest (per cent)	6.58-13.75	7.10-12.00	6.99-14.34	7.17-11.77	7.02-12.13

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

Item	2022-23	2022	2023					
		Dec. 30	Nov. 24	Dec. 1	Dec. 8	Dec. 15	Dec. 22	Dec. 29
	1	2	3	4	5	6	7	8
1 Call Money	19987	19107	20250	17469	19806	19399	19814	17285
2 Notice Money	2605	4418	176	8956	704	5276	394	5238
3 Term Money	612	867	1740	1768	478	1173	698	598
4 Triparty Repo	697245	790750	584809	740971	634679	708115	603746	708714
5 Market Repo	504418	600368	518692	620918	528526	617802	467414	512436
6 Repo in Corporate Bond	2085	208	879	675	838	620	2071	1207
7 Forex (US $ million)	67793	75159	77712	106187	74088	89151	87077	121622
8 Govt. of India Dated Securities	66200	33290	68986	62592	60456	91058	99405	52022
9 State Govt. Securities	5450	3177	2484	3580	3852	7397	8476	6640
10 Treasury Bills								
10.1 91-Day	4380	2219	4968	1293	3034	4151	4049	7661
10.2 182-Day	4480	2854	2250	4495	3400	3024	2648	5339
10.3 364-Day	2900	2836	3098	3954	5785	3799	4345	5623
10.4 Cash Management Bills								
11 Total Govt. Securities (8+9+10)	83410	44376	81786	75915	76527	109429	118923	77285
11.1 RBI	660	34	2640	986	358	254	535	46

No. 30: New Capital Issues by Non-Government Public Limited Companies

(Amount in ₹ Crore)

Security & Type of Issue	2022-23		2022-23 (Apr.-Dec.)		2023-24 (Apr.-Dec.) *		Dec. 2022		Dec. 2023 *	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
	1	2	3	4	5	6	7	8	9	10
1 Equity Shares	**237**	**45266**	**162**	**40509**	**243**	**57410**	**21**	**5235**	**33**	**9572**
1A Premium	218	42408	150	38170	233	54519	20	5070	32	9325
1.1 Public	164	38515	122	36957	195	50872	18	5119	31	9534
1.1.1 Premium	161	37158	119	35737	195	49226	18	4989	31	9321
1.2 Rights	73	6751	40	3552	48	6538	3	116	2	38
1.2.1 Premium	57	5250	31	2433	38	5293	2	80	1	5
2 Preference Shares	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
2.1 Public	-	-	-	-	-	-	-	-	-	-
2.2 Rights	-	-	-	-	-	-	-	-	-	-
3 Bonds & Debentures	**34**	**9221**	**24**	**6872**	**31**	**12420**	**2**	**249**	**5**	**1502**
3.1 Convertible	-	-	-	-	-	-	-	-	-	-
3.1.1 Public	-	-	-	-	-	-	-	-	-	-
3.1.2 Rights	-	-	-	-	-	-	-	-	-	-
3.2 Non-Convertible	34	9221	24	6872	31	12420	2	249	5	1502
3.2.1 Public	34	9221	24	6872	31	12420	2	249	5	1502
3.2.2 Rights	-	-	-	-	-	-	-	-	-	-
4 Total (1+2+3)	**271**	**54487**	**186**	**47381**	**274**	**69830**	**23**	**5484**	**38**	**11074**
4.1 Public	198	47736	146	43829	226	63292	20	5368	36	11036
4.2 Rights	73	6751	40	3552	48	6538	3	116	2	38

Note : 1. Since April 2020, monthly data on equity issues is compiled on the basis of their listing date.
2. Figures in the columns might not add up to the total due to rounding off numbers.

Source : Securities and Exchange Board of India.

* : Data is Provisional.

External Sector

No. 31: Foreign Trade

Item	Unit	2022-23	2022	2023				
			Dec.	Aug.	Sep.	Oct.	Nov.	Dec.
		1	2	3	4	5	6	7
1 Exports	₹ Crore	3621550	314061	318056	285962	278731	281652	319743
	US $ Million	451070	38085	38419	34433	33487	33813	38394
1.1 Oil	₹ Crore	782303	68857	79731	53582	49196	61692	57066
	US $ Million	97468	8350	9631	6452	5910	7406	6852
1.2 Non-oil	₹ Crore	2839247	245204	238325	232380	229535	219960	262677
	US $ Million	353602	29735	28788	27982	27577	26406	31542
2 Imports	₹ Crore	5749801	504836	518004	452394	528091	453846	485095
	US $ Million	715969	61219	62572	54474	63446	54485	58250
2.1 Oil	₹ Crore	1682475	159545	137144	116167	134410	124404	124433
	US $ Million	209418	19347	16566	13988	16148	14935	14942
2.2 Non-oil	₹ Crore	4067326	345291	380860	336227	393681	329443	360662
	US $ Million	506551	41872	46006	40486	47297	39550	43308
3 Trade Balance	₹ Crore	-2128251	-190774	-199948	-166432	-249360	-172194	-165353
	US $ Million	-264899	-23134	-24153	-20041	-29958	-20672	-19855
3.1 Oil	₹ Crore	-900172	-90688	-57413	-62586	-85214	-62712	-67367
	US $ Million	-111950	-10997	-6935	-7536	-10238	-7529	-8089
3.2 Non-oil	₹ Crore	-1228079	-100087	-142536	-103847	-164146	-109483	-97985
	US $ Million	-152949	-12137	-17217	-12504	-19721	-13143	-11766

Source: DGCI&S and Ministry of Commerce & Industry.

No. 32: Foreign Exchange Reserves

Item	Unit	2023			2024			
		Feb. 03	Dec. 22	Dec. 29	Jan. 05	Jan. 12	Jan. 19	Jan. 26
		1	2	3	4	5	6	7
1 Total Reserves	**₹ Crore**	**4708587**	**5158895**	**5185784**	**5133694**	**5132462**	**5118229**	**5126070**
	US $ Million	**575267**	**620441**	**623200**	**617303**	**618937**	**616143**	**616733**
1.1 Foreign Currency Assets	₹ Crore	4155330	4571034	4590152	4546115	4548412	4534331	4539360
	US $ Million	507695	549747	551615	546650	548508	545855	546144
1.2 Gold	₹ Crore	358335	394739	402148	394932	391785	392185	394644
	US $ Million	43781	47474	48328	47489	47247	47212	47481
	Volume (Metric Tonnes)	787.37	803.58	803.58	804.68	804.68	810.46	810.46
1.3 SDRs	SDRs Million	13662	13688	13688	13688	13688	13688	13688
	₹ Crore	151777	152383	152822	152173	151836	151361	151673
	US $ Million	18544	18327	18365	18298	18310	18221	18248
1.4 Reserve Tranche Position in IMF	₹ Crore	43145	40739	40662	40474	40429	40353	40393
	US $ Million	5247	4894	4892	4866	4872	4854	4860

* Difference, if any, is due to rounding off.

No. 33: Non-Resident Deposits

(US $ Million)

Scheme	Outstanding				Flows	
	2022-23	2022	2023		2022-23	2023-24
		Dec.	Nov.	Dec. (P)	Apr.-Dec.	Apr.-Dec.(P)
	1	2	3	4	5	6
1 NRI Deposits	**138879**	**134485**	**144489**	**146909**	**5408**	**9338**
1.1 FCNR(B)	19363	17558	21860	22815	640	3452
1.2 NR(E)RA	95817	94469	96795	97692	1813	2916
1.3 NRO	23699	22458	25834	26403	2955	2970

P: Provisional.

No. 34: Foreign Investment Inflows

(US $ Million)

Item	2022-23	2022-23	2023-24	2022	2023	
		Apr.-Dec.	Apr.-Dec.	Dec.	Nov.	Dec.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1-1.1.2)	**27986**	**21632**	**9691**	**1870**	**2868**	**-3852**
1.1.1 Direct Investment to India (1.1.1.1-1.1.1.2)	**42006**	**32687**	**19235**	**3575**	**3696**	**-2159**
1.1.1.1 Gross Inflows/Gross Investments	**71355**	**55498**	**51503**	**6507**	**5064**	**4523**
1.1.1.1.1 Equity	47600	37892	33102	4548	2973	2511
1.1.1.1.1.1 Government (SIA/FIPB)	692	653	327	90	31	103
1.1.1.1.1.2 RBI	37097	29649	21067	3988	1854	1278
1.1.1.1.1.3 Acquisition of shares	8245	6445	10643	333	952	993
1.1.1.1.1.4 Equity capital of unincorporated bodies	1566	1146	1065	137	137	137
1.1.1.1.2 Reinvested earnings	19105	14128	14449	1689	1689	1689
1.1.1.1.3 Other capital	4650	3477	3952	270	402	324
1.1.1.2 Repatriation/Disinvestment	**29349**	**22811**	**32268**	**2932**	**1368**	**6682**
1.1.1.2.1 Equity	27094	20839	29607	2644	1258	5717
1.1.1.2.2 Other capital	2255	1971	2660	288	109	965
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3-1.1.2.4)	**14020**	**11055**	**9544**	**1705**	**829**	**1693**
1.1.2.1 Equity capital	8771	6648	5509	1283	455	848
1.1.2.2 Reinvested Earnings	4412	3309	3409	368	368	368
1.1.2.3 Other Capital	4714	3749	3546	353	181	742
1.1.2.4 Repatriation/Disinvestment	3877	2650	2919	298	175	264
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3-1.2.4)	**-5152**	**-3488**	**32301**	**-688**	**4035**	**9590**
1.2.1 GDRs/ADRs	-	-	-	-	-	-
1.2.2 FIIs	-4828	-3240	32912	-719	3950	9507
1.2.3 Offshore funds and others	-	-	-	-	-	-
1.2.4 Portfolio investment by India	324	247	611	-31	-85	-82
1 Foreign Investment Inflows	**22834**	**18144**	**41992**	**1182**	**6903**	**5738**

No. 35: Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals

(US $ Million)

Item	2022-23	2022	2023		
		Dec.	Oct.	Nov.	Dec.
	1	2	3	4	5
1 Outward Remittances under the LRS	**27140.65**	**2068.26**	**2176.98**	**1878.67**	**2402.07**
1.1 Deposit	1011.07	60.49	26.28	25.19	26.64
1.2 Purchase of immovable property	188.73	13.26	11.02	10.31	12.17
1.3 Investment in equity/debt	1256.15	119.58	83.86	41.30	101.43
1.4 Gift	3005.27	202.76	184.79	181.55	190.77
1.5 Donations	12.78	0.87	0.96	0.54	0.71
1.6 Travel	13662.15	1137.93	1368.98	1180.42	1548.65
1.7 Maintenance of close relatives	4174.06	274.79	206.16	206.63	219.71
1.8 Medical Treatment	55.74	4.36	8.53	8.02	7.79
1.9 Studies Abroad	3427.81	237.65	269.19	207.55	267.56
1.10 Others	346.89	16.59	17.22	17.15	26.65

No. 36: Indices of Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) of the Indian Rupee

Item	2021-22	2022-23	2023		2024
			Jan	Dec	Jan
	1	2	3	4	5
40-Currency Basket (Base: 2015-16=100)					
1 Trade-Weighted					
1.1 NEER	93.13	91.27	89.09	90.27	90.74
1.2 REER	104.67	102.86	100.23	103.59	103.72
2 Export-Weighted					
2.1 NEER	93.55	93.03	91.05	92.77	93.25
2.2 REER	103.48	101.12	98.70	101.18	101.31
6-Currency Basket (Trade-weighted)					
1 Base : 2015-16 =100					
1.1 NEER	87.04	85.93	83.14	82.91	83.18
1.2 REER	102.12	101.80	98.59	101.74	102.07
2 Base : 2021-22 =100					
2.1 NEER	100.00	98.72	95.51	95.25	95.57
2.2 REER	100.00	99.69	96.54	99.63	99.95

No. 37: External Commercial Borrowings (ECBs) – Registrations

(Amount in US $ Million)

Item	2022-23	2022	2023	
		Dec.	Nov.	Dec.
	1	2	3	4
1 Automatic Route				
1.1 Number	1093	99	64	95
1.2 Amount	24156	2768	1146	3693
2 Approval Route				
2.1 Number	9	0	0	3
2.2 Amount	2473	0	0	1450
3 Total (1+2)				
3.1 Number	1102	99	64	98
3.2 Amount	26629	2768	1146	5143
4 Weighted Average Maturity (in years)	5.72	7.20	4.50	4.90
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over alternative reference rate (ARR) for Floating Rate Loans@	1.68	1.68	1.61	1.85
5.2 Interest rate range for Fixed Rate Loans	0.00-11.80	0.00-10.35	0.00-11.80	0.00-10.50
Borrower Category				
I. Corporate Manufacturing	6925	522	502	519
II. Corporate-Infrastructure	8396	28	163	2623
a.) Transport	333	0	120	240
b.) Energy	2235	6	0	1963
c.) Water and Sanitation	32	0	0	0
d.) Communication	1538	22	0	0
e.) Social and Commercial Infrastructure	530	0	30	0
f.) Exploration,Mining and Refinery	2085	0	5	420
g.) Other Sub-Sectors	1643	0	8	0
III. Corporate Service-Sector	1773	36	87	58
IV. Other Entities	1805	0	0	750
a.) units in SEZ	6	0	0	0
b.) SIDBI	0	0	0	0
c.) Exim Bank	1800	0	0	750
V. Banks	0	0	0	0
VI. Financial Institution (Other than NBFC)	0	0	0	0
VII. NBFCs	7540	2148	379	1131
a). NBFC- IFC/AFC	3031	1418	103	700
b). NBFC-MFI	313	3	0	11
c). NBFC-Others	4196	727	276	420
VIII. Non-Government Organization (NGO)	0	0	0	0
IX. Micro Finance Institution (MFI)	0	0	0	0
X. Others	189	34	15	62

Note: Based on applications for ECB/Foreign Currency Convertible Bonds (FCCBs) which have been allotted loan registration number during the period.
@ With effect from July 01, 2023, the benchmark rate is changed to Alternative Reference Rate (ARR)

No. 38: India's Overall Balance of Payments

(US$ Million)

Item	Jul-Sep 2022			Jul-Sep 2023 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance Of Payments (1+2+3)	**375274**	**405653**	**-30379**	**434954**	**432436**	**2519**
1 Current Account (1.1+ 1.2)	**225322**	**256224**	**-30902**	**231599**	**239918**	**-8319**
1.1 Merchandise	**111852**	**190165**	**-78313**	**108468**	**169502**	**-61034**
1.2 Invisibles (1.2.1+1.2.2+1.2.3)	**113470**	**66059**	**47411**	**123131**	**70416**	**52715**
1.2.1 Services	79981	45555	34426	83362	43411	39950
1.2.1.1 Travel	5775	7539	-1764	7482	8662	-1180
1.2.1.2 Transportation	9529	11337	-1809	7062	7277	-215
1.2.1.3 Insurance	756	586	170	829	821	8
1.2.1.4 G.n.i.e.	183	219	-36	140	244	-104
1.2.1.5 Miscellaneous	63738	25873	37865	67850	26408	41442
1.2.1.5.1 Software Services	36228	3546	32681	39570	4333	35237
1.2.1.5.2 Business Services	19141	13964	5178	21472	13673	7799
1.2.1.5.3 Financial Services	2113	1600	514	2069	1183	887
1.2.1.5.4 Communication Services	803	399	403	887	365	522
1.2.2 Transfers	27462	2688	24773	28145	3193	24952
1.2.2.1 Official	52	269	-217	23	240	-217
1.2.2.2 Private	27410	2419	24991	28123	2954	25169
1.2.3 Income	6027	17816	-11788	11624	23811	-12187
1.2.3.1 Investment Income	4398	16961	-12564	9864	22894	-13030
1.2.3.2 Compensation of Employees	1630	854	775	1760	917	843
2 Capital Account (2.1+2.2+2.3+2.4+2.5)	**149953**	**148492**	**1461**	**202511**	**192518**	**9994**
2.1 Foreign Investment (2.1.1+2.1.2)	**99783**	**87042**	**12741**	**128612**	**123952**	**4660**
2.1.1 Foreign Direct Investment	18104	11895	6209	16626	16913	-287
2.1.1.1 In India	16900	7803	9097	15762	12686	3076
2.1.1.1.1 Equity	10699	7111	3588	9879	12278	-2399
2.1.1.1.2 Reinvested Earnings	4672	0	4672	4815		4815
2.1.1.1.3 Other Capital	1529	692	837	1068	409	660
2.1.1.2 Abroad	1204	4092	-2888	864	4227	-3363
2.1.1.2.1 Equity	1204	1782	-578	864	1489	-626
2.1.1.2.2 Reinvested Earnings	0	1103	-1103	0	1153	-1153
2.1.1.2.3 Other Capital	0	1207	-1207	0	1585	-1585
2.1.2 Portfolio Investment	81678	75146	6532	111986	107040	4947
2.1.2.1 In India	81375	74473	6901	111127	105841	5286
2.1.2.1.1 FIIs	81375	74473	6901	111127	105841	5286
2.1.2.1.1.1 Equity	72212	66210	6003	101529	97937	3593
2.1.2.1.1.2 Debt	9163	8264	899	9598	7905	1693
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	303	673	-370	859	1198	-339
2.2 Loans (2.2.1+2.2.2+2.2.3)	**24578**	**23971**	**607**	**27809**	**26358**	**1451**
2.2.1 External Assistance	2017	1523	494	2600	1774	826
2.2.1.1 By India	8	23	-15	7	23	-16
2.2.1.2 To India	2009	1501	508	2592	1751	842
2.2.2 Commercial Borrowings	5409	5606	-197	7462	10352	-2890
2.2.2.1 By India	359	100	258	2853	3926	-1073
2.2.2.2 To India	5051	5506	-455	4609	6426	-1817
2.2.3 Short Term to India	17152	16842	310	17748	14232	3516
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	17152	15041	2111	17632	14232	3400
2.2.3.2 Suppliers' Credit up to 180 days	0	1801	-1801	116	0	116
2.3 Banking Capital (2.3.1+2.3.2)	**15567**	**24013**	**-8447**	**34020**	**29686**	**4333**
2.3.1 Commercial Banks	15567	24012	-8445	34020	29614	4405
2.3.1.1 Assets	134	10646	-10512	8673	11210	-2538
2.3.1.2 Liabilities	15433	13366	2067	25347	18404	6943
2.3.1.2.1 Non-Resident Deposits	13993	11504	2490	21257	18048	3209
2.3.2 Others	0	2	-2	0	72	-72
2.4 Rupee Debt Service	**0**	**1**	**-1**	**0**	**1**	**-1**
2.5 Other Capital	**10025**	**13464**	**-3439**	**12070**	**12520**	**-449**
3 Errors & Omissions	**0**	**937**	**-937**	**844**	**0**	**844**
4 Monetary Movements (4.1+ 4.2)	**30379**	**0**	**30379**	**0**	**2519**	**-2519**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	30379	0	30379	0	2519	-2519

Note: P: Preliminary.

No. 39: India's Overall Balance of Payments

(₹ Crore)

Item	Jul-Sep 2022			Jul-Sep 2023 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance Of Payments (1+2+3)	**2994541**	**3236952**	**-242411**	**3595402**	**3574583**	**20819**
1 Current Account (1.1+ 1.2)	**1797977**	**2044566**	**-246589**	**1914436**	**1983202**	**-68765**
1.1 Merchandise	**892533**	**1517441**	**-624907**	**896615**	**1401132**	**-504517**
1.2 Invisibles (1.2.1+1.2.2+1.2.3)	**905444**	**527125**	**378319**	**1017821**	**582069**	**435752**
1.2.1 Services	638217	363513	274704	689083	358846	330237
1.2.1.1 Travel	46081	60160	-14079	61845	71601	-9756
1.2.1.2 Transportation	76035	90467	-14432	58377	60151	-1774
1.2.1.3 Insurance	6031	4676	1355	6850	6785	66
1.2.1.4 G.n.i.e.	1463	1751	-288	1154	2018	-863
1.2.1.5 Miscellaneous	508608	206460	302148	560857	218292	342565
1.2.1.5.1 Software Services	289082	28298	260784	327091	35818	291272
1.2.1.5.2 Business Services	152740	111423	41317	177488	113019	64469
1.2.1.5.3 Financial Services	16862	12764	4098	17106	9777	7329
1.2.1.5.4 Communication Services	6405	3185	3219	7334	3015	4319
1.2.2 Transfers	219132	21450	197682	232654	26397	206257
1.2.2.1 Official	413	2145	-1732	189	1981	-1792
1.2.2.2 Private	218719	19305	199414	232466	24416	208049
1.2.3 Income	48094	142162	-94067	96084	196826	-100742
1.2.3.1 Investment Income	35091	135345	-100254	81540	189247	-107707
1.2.3.2 Compensation of Employees	13003	6816	6187	14544	7579	6965
2 Capital Account (2.1+2.2+2.3+2.4+2.5)	**1196564**	**1184907**	**11657**	**1673990**	**1591381**	**82609**
2.1 Foreign Investment (2.1.1+2.1.2)	**796226**	**694559**	**101667**	**1063129**	**1024610**	**38518**
2.1.1 Foreign Direct Investment	144465	94920	49545	137433	139804	-2370
2.1.1.1 In India	134857	62266	72591	130295	104866	25429
2.1.1.1.1 Equity	85372	56743	28629	81661	101488	-19827
2.1.1.1.2 Reinvested Earnings	37283	0	37283	39803	0	39803
2.1.1.1.3 Other Capital	12202	5523	6678	8831	3378	5453
2.1.1.2 Abroad	9608	32654	-23046	7138	34938	-27800
2.1.1.2.1 Equity	9608	14223	-4615	7138	12309	-5171
2.1.1.2.2 Reinvested Earnings	0	8801	-8801	0	9530	-9530
2.1.1.2.3 Other Capital	0	9630	-9630	0	13098	-13098
2.1.2 Portfolio Investment	651761	599639	52122	925695	884807	40889
2.1.2.1 In India	649339	594268	55071	918597	874902	43695
2.1.2.1.1 FIIs	649339	594268	55071	918597	874902	43695
2.1.2.1.1.1 Equity	576224	528326	47898	839257	809559	29698
2.1.2.1.1.2 Debt	73116	65943	7173	79340	65343	13997
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	2422	5371	-2949	7099	9905	-2806
2.2 Loans (2.2.1+2.2.2+2.2.3)	**196127**	**191281**	**4846**	**229873**	**217877**	**11996**
2.2.1 External Assistance	16095	12155	3940	21491	14665	6826
2.2.1.1 By India	63	180	-117	61	192	-131
2.2.1.2 To India	16032	11975	4057	21430	14473	6957
2.2.2 Commercial Borrowings	43165	44735	-1570	61678	85571	-23893
2.2.2.1 By India	2861	799	2062	23582	32453	-8871
2.2.2.2 To India	40304	43936	-3632	38096	53118	-15022
2.2.3 Short Term to India	136866	134391	2475	146704	117640	29063
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	136866	120023	16843	145745	117640	28105
2.2.3.2 Suppliers' Credit up to 180 days	0	14368	-14368	958	0	958
2.3 Banking Capital (2.3.1+2.3.2)	**124217**	**191617**	**-67400**	**281213**	**245392**	**35820**
2.3.1 Commercial Banks	124217	191604	-67387	281213	244798	36415
2.3.1.1 Assets	1070	84951	-83881	71689	92667	-20978
2.3.1.2 Liabilities	123147	106652	16494	209524	152131	57393
2.3.1.2.1 Non-Resident Deposits	111661	91794	19867	175715	149187	26528
2.3.2 Others	0	13	-13	0	594	-594
2.4 Rupee Debt Service	**0**	**10**	**-10**	**0**	**12**	**-12**
2.5 Other Capital	**79995**	**107440**	**-27445**	**99776**	**103490**	**-3714**
3 Errors & Omissions	**0**	**7480**	**-7480**	**6975**	**0**	**6975**
4 Monetary Movements (4.1+ 4.2)	**242411**	**0**	**242411**	**0**	**20819**	**-20819**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	242411	0	242411	0	20819	-20819

Note: P: Preliminary.

No. 40: Standard Presentation of BoP in India as per BPM6

(US$ Million)

Item	Jul-Sep 2022			Jul-Sep 2023 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**225318**	**256203**	**-30885**	**231599**	**239899**	**-8300**
1.A Goods and Services (1.A.a+1.A.b)	**191833**	**235720**	**-43887**	**191830**	**212914**	**-21084**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**111852**	**190165**	**-78313**	**108468**	**169502**	**-61034**
1.A.a.1 General merchandise on a BOP basis	111538	180388	-68850	107580	156950	-49369
1.A.a.2 Net exports of goods under merchanting	313	0	313	888	0	888
1.A.a.3 Nonmonetary gold	0	9776	-9776		12553	-12553
1.A.b Services (1.A.b.1 to 1.A.b.13)	**79981**	**45555**	**34426**	**83362**	**43411**	**39950**
1.A.b.1 Manufacturing services on physical inputs owned by others	311	28	283	283	39	244
1.A.b.2 Maintenance and repair services n.i.e.	50	542	-492	56	308	-251
1.A.b.3 Transport	9529	11337	-1809	7062	7277	-215
1.A.b.4 Travel	5775	7539	-1764	7482	8662	-1180
1.A.b.5 Construction	858	833	26	954	677	277
1.A.b.6 Insurance and pension services	756	586	170	829	821	8
1.A.b.7 Financial services	2113	1600	514	2069	1183	887
1.A.b.8 Charges for the use of intellectual property n.i.e.	324	2224	-1900	422	3341	-2919
1.A.b.9 Telecommunications, computer, and information services	37111	4140	32971	40546	4968	35578
1.A.b.10 Other business services	19141	13964	5178	21472	13673	7799
1.A.b.11 Personal, cultural, and recreational services	917	1654	-737	1211	2080	-869
1.A.b.12 Government goods and services n.i.e.	183	219	-36	140	244	-104
1.A.b.13 Others n.i.e.	2913	890	2023	836	140	696
1.B Primary Income (1.B.1 to 1.B.3)	**6027**	**17816**	**-11788**	**11624**	**23811**	**-12187**
1.B.1 Compensation of employees	1630	854	775	1760	917	843
1.B.2 Investment income	3559	16855	-13296	8645	22481	-13836
1.B.2.1 Direct investment	2145	9945	-7799	2028	12357	-10328
1.B.2.2 Portfolio investment	55	2917	-2862	84	3657	-3573
1.B.2.3 Other investment	146	3947	-3802	520	6250	-5730
1.B.2.4 Reserve assets	1213	46	1167	6013	217	5796
1.B.3 Other primary income	838	106	732	1219	413	806
1.C Secondary Income (1.C.1+1.C.2)	**27458**	**2667**	**24791**	**28145**	**3174**	**24971**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	27410	2419	24991	28123	2954	25169
1.C.1.1 Personal transfers (Current transfers between resident and/non-resident households)	26686	1750	24935	27335	2040	25296
1.C.1.2 Other current transfers	724	669	55	787	914	-127
1.C.2 General government	48	248	-200	22	220	-198
2 Capital Account (2.1+2.2)	**136**	**119**	**17**	**151**	**199**	**-48**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	6	36	-30	9	91	-82
2.2 Capital transfers	130	83	47	142	108	34
3 Financial Account (3.1 to 3.5)	**180199**	**148394**	**31806**	**202361**	**194857**	**7504**
3.1 Direct Investment (3.1A+3.1B)	**18104**	**11895**	**6209**	**16626**	**16913**	**-287**
3.1.A Direct Investment in India	16900	7803	9097	15762	12686	3076
3.1.A.1 Equity and investment fund shares	15371	7111	8260	14694	12278	2417
3.1.A.1.1 Equity other than reinvestment of earnings	10699	7111	3588	9879	12278	-2399
3.1.A.1.2 Reinvestment of earnings	4672	0	4672	4815		4815
3.1.A.2 Debt instruments	1529	692	837	1068	409	660
3.1.A.2.1 Direct investor in direct investment enterprises	1529	692	837	1068	409	660
3.1.B Direct Investment by India	1204	4092	-2888	864	4227	-3363
3.1.B.1 Equity and investment fund shares	1204	2885	-1681	864	2642	-1778
3.1.B.1.1 Equity other than reinvestment of earnings	1204	1782	-578	864	1489	-626
3.1.B.1.2 Reinvestment of earnings	0	1103	-1103		1153	-1153
3.1.B.2 Debt instruments	0	1207	-1207	0	1585	-1585
3.1.B.2.1 Direct investor in direct investment enterprises	0	1207	-1207		1585	-1585
3.2 Portfolio Investment	**81678**	**75146**	**6532**	**111986**	**107040**	**4947**
3.2.A Portfolio Investment in India	81375	74473	6901	111127	105841	5286
3.2.1 Equity and investment fund shares	72212	66210	6003	101529	97937	3593
3.2.2 Debt securities	9163	8264	899	9598	7905	1693
3.2.B Portfolio Investment by India	303	673	-370	859	1198	-339
3.3 Financial derivatives (other than reserves) and employee stock options	**7454**	**7308**	**145**	**5476**	**7362**	**-1887**
3.4 Other investment	**42584**	**54043**	**-11460**	**68273**	**61023**	**7250**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	13993	11505	2488	21257	18120	3137
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	2	-2	0	72	-72
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	13993	11504	2490	21257	18048	3209
3.4.2.3 General government	0	0	0			0
3.4.2.4 Other sectors	0	0	0			0
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	9000	19637	-10638	22824	23693	-869
3.4.3.A Loans to India	8634	19515	-10881	19964	19743	220
3.4.3.B Loans by India	366	123	244	2860	3949	-1089
3.4.4 Insurance, pension, and standardized guarantee schemes	59	1	59	144	10	134
3.4.5 Trade credit and advances	17152	16842	310	17748	14232	3516
3.4.6 Other accounts receivable/payable - other	2380	6058	-3679	6300	4969	1331
3.4.7 Special drawing rights	0	0	0	0		0
3.5 Reserve assets	**30379**	**0**	**30379**	**0**	**2519**	**-2519**
3.5.1 Monetary gold	0	0	0			0
3.5.2 Special drawing rights n.a.	0	0	0		0	0
3.5.3 Reserve position in the IMF n.a.	0	0	0			0
3.5.4 Other reserve assets (Foreign Currency Assets)	30379	0	30379	0	2519	-2519
4 Total assets/liabilities	**180199**	**148394**	**31806**	**202361**	**194857**	**7504**
4.1 Equity and investment fund shares	96603	84188	12416	123566	121427	2139
4.2 Debt instruments	50837	58147	-7310	72495	65942	6553
4.3 Other financial assets and liabilities	32758	6058	26700	6300	7488	-1188
5 Net errors and omissions	**0**	**937**	**-937**	**844**	**0**	**844**

Note: P: Preliminary.

No. 41: Standard Presentation of BoP in India as per BPM6

(₹ Crore)

Item	Jul-Sep 2022			Jul-Sep 2023 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**1797946**	**2044398**	**-246452**	**1914433**	**1983040**	**-68606**
1.A Goods and Services (1.A.a+1.A.b)	**1530750**	**1880954**	**-350204**	**1585698**	**1759978**	**-174280**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**892533**	**1517441**	**-624907**	**896615**	**1401132**	**-504517**
1.A.a.1 General merchandise on a BOP basis	890032	1439429	-549396	889277	1297370	-408093
1.A.a.2 Net exports of goods under merchanting	2501	0	2501	7339	0	7339
1.A.a.3 Nonmonetary gold	0	78012	-78012	0	103763	-103763
1.A.b Services (1.A.b.1 to 1.A.b.13)	**638217**	**363513**	**274704**	**689083**	**358846**	**330237**
1.A.b.1 Manufacturing services on physical inputs owned by others	2480	223	2256	2339	320	2019
1.A.b.2 Maintenance and repair services n.i.e.	396	4323	-3927	465	2544	-2078
1.A.b.3 Transport	76035	90467	-14432	58377	60151	-1774
1.A.b.4 Travel	46081	60160	-14079	61845	71601	-9756
1.A.b.5 Construction	6848	6643	205	7887	5598	2289
1.A.b.6 Insurance and pension services	6031	4676	1355	6850	6785	66
1.A.b.7 Financial services	16862	12764	4098	17106	9777	7329
1.A.b.8 Charges for the use of intellectual property n.i.e.	2589	17749	-15161	3485	27618	-24133
1.A.b.9 Telecommunications, computer, and information services	296127	33035	263092	335161	41064	294097
1.A.b.10 Other business services	152740	111423	41317	177488	113019	64469
1.A.b.11 Personal, cultural, and recreational services	7319	13197	-5878	10012	17193	-7180
1.A.b.12 Government goods and services n.i.e.	1463	1751	-288	1154	2018	-863
1.A.b.13 Others n.i.e.	23247	7102	16146	6913	1160	5753
1.B Primary Income (1.B.1 to 1.B.3)	**48094**	**142162**	**-94067**	**96084**	**196826**	**-100742**
1.B.1 Compensation of employees	13003	6816	6187	14544	7579	6965
1.B.2 Investment income	28402	134499	-106097	71464	185831	-114368
1.B.2.1 Direct investment	17120	79356	-62236	16768	102143	-85375
1.B.2.2 Portfolio investment	442	23280	-22838	692	30227	-29535
1.B.2.3 Other investment	1162	31499	-30336	4298	51664	-47365
1.B.2.4 Reserve assets	9677	364	9313	49705	1797	47908
1.B.3 Other primary income	6690	846	5843	10076	3415	6661
1.C Secondary Income (1.C.1+1.C.2)	**219101**	**21283**	**197819**	**232651**	**26235**	**206416**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	218719	19305	199414	232466	24416	208049
1.C.1.1 Personal transfers (Current transfers between resident and/non-resident households)	212941	13968	198973	225958	16860	209099
1.C.1.2 Other current transfers	5779	5337	442	6507	7557	-1049
1.C.2 General government	382	1978	-1596	186	1819	-1633
2 Capital Account (2.1+2.2)	**1089**	**953**	**136**	**1245**	**1645**	**-400**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	50	289	-239	74	755	-680
2.2 Capital transfers	1039	664	375	1170	890	280
3 Financial Account (3.1 to 3.5)	**1437917**	**1184122**	**253796**	**1672748**	**1610717**	**62031**
3.1 Direct Investment (3.1A+3.1B)	**144465**	**94920**	**49545**	**137433**	**139804**	**-2370**
3.1.A Direct Investment in India	134857	62266	72591	130295	104866	25429
3.1.A.1 Equity and investment fund shares	122656	56743	65912	121464	101488	19976
3.1.A.1.1 Equity other than reinvestment of earnings	85372	56743	28629	81661	101488	-19827
3.1.A.1.2 Reinvestment of earnings	37283	0	37283	39803	0	39803
3.1.A.2 Debt instruments	12202	5523	6678	8831	3378	5453
3.1.A.2.1 Direct investor in direct investment enterprises	12202	5523	6678	8831	3378	5453
3.1.B Direct Investment by India	9608	32654	-23046	7138	34938	-27800
3.1.B.1 Equity and investment fund shares	9608	23024	-13416	7138	21839	-14701
3.1.B.1.1 Equity other than reinvestment of earnings	9608	14223	-4615	7138	12309	-5171
3.1.B.1.2 Reinvestment of earnings	0	8801	-8801	0	9530	-9530
3.1.B.2 Debt instruments	0	9630	-9630	0	13098	-13098
3.1.B.2.1 Direct investor in direct investment enterprises	0	9630	-9630	0	13098	-13098
3.2 Portfolio Investment	**651761**	**599639**	**52122**	**925695**	**884807**	**40889**
3.2.A Portfolio Investment in India	649339	594268	55071	918597	874902	43695
3.2.1 Equity and investment fund shares	576224	528326	47898	839257	809559	29698
3.2.2 Debt securities	73116	65943	7173	79340	65343	13997
3.2.B Portfolio Investment by India	2422	5371	-2949	7099	9905	-2806
3.3 Financial derivatives (other than reserves) and employee stock options	**59477**	**58316**	**1161**	**45263**	**60858**	**-15595**
3.4 Other investment	**339803**	**431246**	**-91443**	**564356**	**504430**	**59927**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	111661	91807	19854	175715	149782	25933
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	13	-13	0	594	-594
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	111661	91794	19867	175715	149187	26528
3.4.2.3 General government	0	0	0	0	0	0
3.4.2.4 Other sectors	0	0	0	0	0	0
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	71816	156699	-84883	188667	195847	-7180
3.4.3.A Loans to India	68892	155720	-86828	165024	163202	1822
3.4.3.B Loans by India	2924	979	1945	23643	32645	-9002
3.4.4 Insurance, pension, and standardized guarantee schemes	471	4	467	1194	85	1109
3.4.5 Trade credit and advances	136866	134391	2475	146704	117640	29063
3.4.6 Other accounts receivable/payable - other	18988	48344	-29356	52077	41076	11001
3.4.7 Special drawing rights	0	0	0	0	0	0
3.5 Reserve assets	**242411**	**0**	**242411**	**0**	**20819**	**-20819**
3.5.1 Monetary gold	0	0	0	0	0	0
3.5.2 Special drawing rights n.a.	0	0	0	0	0	0
3.5.3 Reserve position in the IMF n.a.	0	0	0	0	0	0
3.5.4 Other reserve assets (Foreign Currency Assets)	242411	0	242411	0	20819	-20819
4 Total assets/liabilities	**1437917**	**1184122**	**253796**	**1672748**	**1610717**	**62031**
4.1 Equity and investment fund shares	770858	671784	99073	1021414	1003733	17681
4.2 Debt instruments	405661	463993	-58333	599256	545089	54168
4.3 Other financial assets and liabilities	261399	48344	213056	52077	61895	-9818
5 Net errors and omissions	**0**	**7480**	**-7480**	**6975**	**0**	**6975**

Note: P: Preliminary.

No. 42: India's International Investment Position

(US$ Million)

Item	As on Financial Year/Quarter End							
	2022-23		2022		2023			
			Sep.		Jun.		Sep.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1. Direct investment Abroad/in India	225592	523312	217331	510132	227886	532300	231249	528599
1.1 Equity Capital*	142071	493896	136252	481978	143548	501438	145327	497714
1.2 Other Capital	83521	29416	81079	28153	84338	30862	85923	30885
2. Portfolio investment	10966	243522	10983	244349	11325	258453	11664	259385
2.1 Equity	4958	138958	6312	137013	8698	152928	7939	154634
2.2 Debt	6008	104564	4671	107335	2627	105525	3726	104751
3. Other investment	87717	503281	85860	478823	92599	515584	102181	525685
3.1 Trade credit	27507	124304	24618	123158	29718	119301	31088	122821
3.2 Loan	10714	202514	8084	190195	14499	207119	9739	208956
3.3 Currency and Deposits	30526	141133	33528	135621	30584	144069	43364	146150
3.4 Other Assets/Liabilities	18970	35330	19630	29850	17798	45094	17991	47758
4. Reserves	578449		532664		595051		587714	
5. Total Assets/ Liabilities	902725	1270115	846837	1233303	926862	1306336	932809	1313670
6. Net IIP (Assets - Liabilities)	-367390		-386466		-379474		-380861	

Note: * Equity capital includes share of investment funds and reinvested earnings.

Payment and Settlement Systems

No.43: Payment System Indicators

PART I - Payment System Indicators - Payment & Settlement System Statistics

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2022-23	2022	2023		FY 2022-23	2022	2023	
		Dec.	Nov.	Dec.		Dec.	Nov.	Dec.
	1	2	3	4	5	6	7	8
A. Settlement Systems								
Financial Market Infrastructures (FMIs)								
1 CCIL Operated Systems (1.1 to 1.3)	41.44	3.42	3.08	3.41	258797336	22326077	21011085	22228644
1.1 Govt. Securities Clearing (1.1.1 to 1.1.3)	15.00	1.19	1.24	1.29	172251292	15144169	13568124	14220985
1.1.1 Outright	7.99	0.60	0.64	0.69	10090700	711065	939382	1009116
1.1.2 Repo	4.07	0.36	0.41	0.40	68032487	6125370	5919154	5903343
1.1.3 Tri-party Repo	2.94	0.23	0.19	0.20	94128105	8307734	6709589	7308526
1.2 Forex Clearing	25.16	2.16	1.74	2.01	78932050	6670289	6922315	7392675
1.3 Rupee Derivatives @	1.27	0.07	0.10	0.11	7613994	511620	520645	614984
B. Payment Systems								
I Financial Market Infrastructures (FMIs)	-	-	-	-	-	-	-	-
1 Credit Transfers - RTGS (1.1 to 1.2)	2425.62	215.03	219.20	230.39	149946286	13736057	13591443	15888778
1.1 Customer Transactions	2411.19	213.80	218.05	229.23	131667176	12180091	12078797	14244586
1.2 Interbank Transactions	14.43	1.23	1.15	1.16	18279111	1555966	1512645	1644192
II Retail								
2 Credit Transfers - Retail (2.1 to 2.6)	983620.84	90675.95	128072.73	134755.92	55009620	4928331	5673303	5917191
2.1 AePS (Fund Transfers) @	5.90	0.32	0.30	0.32	356	21	19	23
2.2 APBS $	17833.95	1157.66	3221.01	1580.49	247535	20670	47635	27013
2.3 IMPS	56532.64	4858.37	4723.84	4987.93	5585441	486552	535002	570126
2.4 NACH Cr $	19257.19	1515.84	1380.65	1310.99	1541815	157435	142415	128244
2.5 NEFT	52847.43	4854.81	6394.01	6673.93	33719541	2981681	3208491	3368836
2.6 UPI @	837143.73	78288.95	112352.92	120202.26	13914932	1281971	1739741	1822949
2.6.1 of which USSD @	17.21	1.92	2.69	2.06	197	21	37	26
3 Debit Transfers and Direct Debits (3.1 to 3.3)	15343.05	1357.72	1527.84	1557.74	1289611	116425	142456	152705
3.1 BHIM Aadhaar Pay @	214.22	12.71	18.82	14.09	6791	446	590	478
3.2 NACH Dr $	13502.52	1198.55	1376.66	1403.46	1280219	115737	141646	151991
3.3 NETC (linked to bank account) @	1626.31	146.46	132.36	140.19	2601	242	220	237
4 Card Payments (4.1 to 4.2)	63324.72	5223.57	4742.56	4983.16	2152245	185150	210038	213058
4.1 Credit Cards (4.1.1 to 4.1.2)	29145.24	2556.47	2970.90	3215.00	1432255	126524	160644	165119
4.1.1 PoS based $	15598.46	1405.79	1583.66	1706.70	541932	48611	59015	58300
4.1.2 Others $	13546.79	1150.68	1387.24	1508.29	890323	77913	101629	106819
4.2 Debit Cards (4.2.1 to 4.2.1)	34179.48	2667.10	1771.66	1768.17	719989	58626	49394	47939
4.2.1 PoS based $	22904.86	1859.33	1301.95	1302.84	476520	39574	34379	32254
4.2.2 Others $	11274.61	807.77	469.71	465.32	243470	19052	15015	15684
5 Prepaid Payment Instruments (5.1 to 5.2)	74667.44	6354.65	6510.09	7235.20	287111	22648	24248	26173
5.1 Wallets	59112.76	5012.71	5308.63	5960.57	221896	18400	19853	21732
5.2 Cards (5.2.1 to 5.2.2)	15554.69	1341.94	1201.46	1274.63	65215	4248	4394	4441
5.2.1 PoS based $	1013.09	61.58	662.14	709.65	14777	722	891	915
5.2.2 Others $	14541.60	1280.37	539.32	564.98	50438	3527	3504	3526
6 Paper-based Instruments (6.1 to 6.2)	7109.28	608.14	525.55	547.23	7172904	619903	558866	592972
6.1 CTS (NPCI Managed)	7109.28	608.14	525.55	547.23	7172904	619903	558866	592972
6.2 Others	0.00	–	–	–	–	–	–	–
Total - Retail Payments (2+3+4+5+6)	1144065.34	104220.03	141378.76	149079.25	65911490	5872457	6608910	6902099
Total Payments (1+2+3+4+5+6)	1146490.96	104435.06	141597.96	149309.63	215857776	19608515	20200353	22790877
Total Digital Payments (1+2+3+4+5)	1139381.68	103826.92	141072.41	148762.40	208684872	18988611	19641487	22197905

PART II - Payment Modes and Channels

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2022-23	2022	2023		FY 2022-23	2022	2023	
		Dec.	Nov.	Dec.		Dec.	Nov.	Dec.
	1	2	3	4	5	6	7	8
A. Other Payment Channels								
1 Mobile Payments (mobile app based) (1.1 to 1.2)	805338.23	74415.83	108174.95	115823.37	22031628	1991763	2641060	2798250
1.1 Intra-bank $	62306.61	5560.78	6927.98	7372.04	4191430	375775	478326	508669
1.2 Inter-bank $	743031.61	68855.05	101246.97	108451.33	17840197	1615988	2162734	2289581
2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2)	42630.64	3661.95	3622.58	3836.26	91539296	8544692	8033440	9388569
2.1 Intra-bank @	10703.78	949.91	988.62	1050.96	53506133	4926079	4130936	4862519
2.2 Inter-bank @	31926.86	2712.04	2633.96	2785.31	38033163	3618612	3902504	4526051
B. ATMs								
3 Cash Withdrawal at ATMs $ (3.1 to 3.3)	69468.87	5891.78	5542.64	5463.57	3305008	280465	276530	269287
3.1 Using Credit Cards $	88.37	8.13	7.89	8.19	4296	392	391	405
3.2 Using Debit Cards $	68975.18	5850.33	5505.75	5428.44	3286749	278927	275032	267841
3.3 Using Pre-paid Cards $	405.32	33.33	28.99	26.94	13963	1146	1107	1041
4 Cash Withdrawal at PoS $ (4.1 to 4.2)	27.73	2.37	0.75	0.66	278	23	7	6
4.1 Using Debit Cards $	27.41	2.36	0.75	0.66	276	23	7	6
4.2 Using Pre-paid Cards $	0.33	0.02	0.01	0.00	2	0	0	0
5 Cash Withrawal at Micro ATMs @	12375.16	934.53	1079.59	929.51	333966	25484	28972	24592
5.1 AePS @	12375.16	934.53	1079.59	929.51	333966	25484	28972	24592

PART III - Payment Infrastructures (Lakh)

System	As on March 2023	2022	2023	
		Dec.	Nov.	Dec.
	1	2	3	4
Payment System Infrastructures				
1 Number of Cards (1.1 to 1.2)	10465.62	10206.53	10725.00	10587.99
1.1 Credit Cards	853.03	811.87	960.01	979.05
1.2 Debit Cards	9612.59	9394.66	9764.99	9608.94
2 Number of PPIs @ (2.1 to 2.2)	16185.22	16234.69	16944.31	17544.34
2.1 Wallets @	13384.65	13346.64	13758.21	14293.01
2.2 Cards @	2800.57	2888.05	3186.10	3251.33
3 Number of ATMs (3.1 to 3.2)	2.59	2.57	2.58	2.58
3.1 Bank owned ATMs $	2.23	2.20	2.24	2.24
3.2 White Label ATMs $	0.36	0.37	0.34	0.34
4 Number of Micro ATMs @	16.11	14.19	15.87	16.89
5 Number of PoS Terminals	77.90	75.50	84.32	85.67
6 Bharat QR @	53.82	49.59	58.74	59.57
7 UPI QR *	2563.77	2361.82	3087.39	3170.66

@: New inclusion w.e.f. November 2019
#: Data reported by Co-operative Banks, LABs and RRBs included with effect from December 2021.
$: Inclusion separately initiated from November 2019 - would have been part of other items hitherto.
*: New inclusion w.e.f. September 2020; Includes only static UPI QR Code
Note : 1. Data is provisional.
2. ECS (Debit and Credit) has been merged with NACH with effect from January 31, 2020.
3. The data from November 2019 onwards for card payments (Debit/Credit cards) and Prepaid Payment Instruments (PPIs) may not be comparable with earlier months/ periods, as more granular data is being published along with revision in data definitions.
4. Only domestic financial transactions are considered. The new format captures e-commerce transactions; transactions using FASTags, digital bill payments and card-to-card transfer through ATMs, etc.. Also, failed transactions, chargebacks, reversals, expired cards/ wallets, are excluded.
Part I-A. Settlement systems
1.1.3: Tri- party Repo under the securities segment has been operationalised from November 05, 2018.
Part I-B. Payments systems
4.1.2: 'Others' includes e-commerce transactions and digital bill payments through ATMs, etc.
4.2.2: 'Others' includes e-commerce transactions, card to card transfers and digital bill payments through ATMs, etc.
5: Available from December 2010.
5.1: includes purchase of goods and services and fund transfer through wallets.
5.2.2: includes usage of PPI Cards for online transactions and other transactions.
6.1: Pertain to three grids – Mumbai, New Delhi and Chennai.
6.2: 'Others' comprises of Non-MICR transactions which pertains to clearing houses managed by 21 banks.
Part II-A. Other payment channels
1: Mobile Payments –
o Include transactions done through mobile apps of banks and UPI apps.
o The data from July 2017 includes only individual payments and corporate payments initiated, processed, and authorised using mobile device. Other corporate payments which are not initiated, processed, and authorised using mobile device are excluded.
2: Internet Payments – includes only e-commerce transactions through 'netbanking' and any financial transaction using internet banking website of the bank.
Part II-B. ATMs
3.3 and 4.2: only relates to transactions using bank issued PPIs.
Part III. Payment systems infrastructure
3: Includes ATMs deployed by Scheduled Commercial Banks (SCBs) and White Label ATM Operators (WLAOs). WLAs are included from April 2014 onwards.

Occasional Series

No. 44: Small Savings

(₹ Crore)

Scheme		2022-23	2022	2023		
			Jun.	Apr.	May	Jun.
		1	2	3	4	5
1 Small Savings	**Receipts**	**173993**	**15622**	**11765**	**23911**	**21300**
	Outstanding	**1636935**	**1505765**	**1648604**	**1672117**	**1693172**
1.1 Total Deposits	**Receipts**	**125209**	**12260**	**9359**	**15655**	**14690**
	Outstanding	**1137451**	**1044441**	**1146809**	**1162464**	**1177156**
1.1.1 Post Office Saving Bank Deposits	Receipts	20680	2808	593	-4398	1612
	Outstanding	209112	193247	209705	205307	206919
1.1.2 Sukanya Samriddhi Yojna	Receipts	29003	1611	1525	2975	1825
	Outstanding	87787	64161	89313	92288	94113
1.1.3 National Saving Scheme, 1987	Receipts	-244	-29	0	0	0
	Outstanding	0	1787	0	0	0
1.1.4 National Saving Scheme, 1992	Receipts	-20	-2	0	0	0
	Outstanding	0	-186	0	0	0
1.1.5 Monthly Income Scheme	Receipts	6492	810	1696	4504	2709
	Outstanding	242313	237855	244008	248512	251221
1.1.6 Senior Citizen Scheme 2004	Receipts	17971	1727	3783	6740	4162
	Outstanding	137304	123943	141087	147827	151990
1.1.7 Post Office Time Deposits	Receipts	29155	3199	685	2735	1783
	Outstanding	280436	261310	281120	283855	285638
1.1.7.1 1 year Time Deposits	Outstanding	125951	121273	126177	127451	128180
1.1.7.2 2 year Time Deposits	Outstanding	9497	8242	9574	9824	9955
1.1.7.3 3 year Time Deposits	Outstanding	7543	6858	7627	7864	7998
1.1.7.4 5 year Time Deposits	Outstanding	137445	124937	137742	138716	139505
1.1.8 Post Office Recurring Deposits	Receipts	21552	2136	1105	3152	2634
	Outstanding	178422	162225	179527	182679	185313
1.1.9 Post Office Cumulative Time Deposits	Receipts	0	0	0	0	0
	Outstanding	0	-19	0	0	0
1.1.10 Other Deposits	Receipts	288	0	-28	-53	-35
	Outstanding	1745	23	1717	1664	1629
1.1.11 PM Care for children	Receipts	332	0	0	0	0
	Outstanding	332	95	332	332	333
1.2 Saving Certificates	**Receipts**	**33965**	**3145**	**2238**	**7991**	**6435**
	Outstanding	**366317**	**342047**	**368460**	**376052**	**382241**
1.2.1 National Savings Certificate VIII issue	Receipts	10793	1057	631	1898	1417
	Outstanding	165836	157941	166467	168366	169782
1.2.2 Indira Vikas Patras	Receipts	0	0	0	0	0
	Outstanding	0	142	0	0	0
1.2.3 Kisan Vikas Patras	Receipts	-1892	-308	0	0	0
	Outstanding	0	-8566	0	0	0
1.2.4 Kisan Vikas Patras - 2014	Receipts	25064	2396	913	3321	2209
	Outstanding	199624	181210	200537	203858	206066
1.2.5 National Saving Certificate VI issue	Receipts	0	0	0	0	0
	Outstanding	0	-22	0	0	0
1.2.6 National Saving Certificate VII issue	Receipts	0	0	0	0	0
	Outstanding	0	-44	0	0	0
1.2.7 M.S. Certificates	Receipts			694	2772	2809
	Outstanding			694	3466	6275
1.2.8 Other Certificates	Outstanding	857	11386	762	362	118
1.3 Public Provident Fund	**Receipts**	**14819**	**217**	**168**	**265**	**175**
	Outstanding	**133167**	**119277**	**133335**	**133601**	**133775**

Note : Data on receipts from April 2017 are net receipts, *i.e.,* gross receipt *minus* gross payment.
Source: Accountant General, Post and Telegraphs.

No. 45 : Ownership Pattern of Central and State Governments Securities

(Per cent)

Central Government Dated Securities					
Category	2022		2023		
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(A) Total (in ₹. Crore)	**9098788**	**9373372**	**9645776**	**9898751**	**10383607**
1 Commercial Banks	36.44	36.13	36.61	36.58	37.96
2 Co-operative Banks	1.80	1.70	1.64	1.56	1.52
3 Non-Bank PDs	0.38	0.44	0.49	0.73	0.66
4 Insurance Companies	25.94	26.14	25.97	26.21	26.05
5 Mutual Funds	2.58	2.87	2.81	2.69	3.02
6 Provident Funds	4.66	4.67	4.71	4.59	4.42
7 Pension Funds	3.84	3.91	3.98	4.18	4.32
8 Financial Institutions	0.98	1.07	0.98	1.20	0.54
9 Corporates	1.58	1.57	1.62	1.22	1.21
10 Foreign Portfolio Investors	1.38	1.31	1.36	1.59	1.61
11 RBI	15.28	14.73	14.26	13.78	13.06
12 Others	5.14	5.45	5.57	5.67	5.64
12.1 State Governments	1.83	1.88	2.03	2.03	2.04

State Governments Securities					
Category	2022		2023		
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(B) Total (in ₹. Crore)	**4589128**	**4712902**	**4929079**	**5050874**	**5161642**
1 Commercial Banks	34.37	34.34	33.91	34.13	33.87
2 Co-operative Banks	3.89	3.80	3.64	3.68	3.60
3 Non-Bank PDs	0.36	0.44	0.62	0.50	0.61
4 Insurance Companies	27.71	27.42	26.80	26.73	26.97
5 Mutual Funds	2.08	2.02	1.94	2.08	1.86
6 Provident Funds	20.18	20.31	21.29	21.19	21.70
7 Pension Funds	4.73	4.74	4.81	4.84	4.82
8 Financial Institutions	1.71	1.77	1.84	1.82	1.65
9 Corporates	1.85	1.94	2.00	1.92	1.87
10 Foreign Portfolio Investors	0.02	0.02	0.02	0.02	0.02
11 RBI	0.79	0.75	0.72	0.70	0.69
12 Others	2.32	2.45	2.42	2.39	2.34
12.1 State Governments	0.21	0.24	0.27	0.27	0.27

Treasury Bills					
Category	2022		2023		
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(C) Total (in ₹. Crore)	**920205**	**839931**	**823313**	**1012301**	**925317**
1 Commercial Banks	50.91	49.15	53.92	47.64	56.35
2 Co-operative Banks	1.48	1.27	1.29	1.20	1.20
3 Non-Bank PDs	2.12	2.17	2.85	1.99	0.54
4 Insurance Companies	5.46	5.81	6.11	4.93	5.26
5 Mutual Funds	11.98	14.23	15.30	17.04	12.74
6 Provident Funds	3.21	1.37	0.10	1.46	1.52
7 Pension Funds	0.02	0.02	0.07	0.01	0.01
8 Financial Institutions	4.17	4.52	3.72	7.96	4.10
9 Corporates	3.86	3.59	4.99	4.42	4.00
10 Foreign Portfolio Investors	0.53	0.50	0.40	0.12	0.10
11 RBI	0.00	0.00	0.00	0.00	0.00
12 Others	16.25	17.37	11.25	13.23	14.17
12.1 State Governments	12.27	13.38	7.16	10.33	11.36

No. 46: Combined Receipts and Disbursements of the Central and State Governments

(₹ Crore)

Item	2018-19	2019-20	2020-21	2021-22	2022-23 RE	2023-24 BE
	1	2	3	4	5	6
1 Total Disbursements	**5040747**	**5410887**	**6353359**	**7098451**	**8376972**	**9045119**
1.1 Developmental	2882758	3074492	3823423	4189146	5073367	5426440
1.1.1 Revenue	2224367	2446605	3150221	3255207	3838714	3836447
1.1.2 Capital	596774	588233	550358	861777	1146013	1471534
1.1.3 Loans	61617	39654	122844	72163	88639	118460
1.2 Non-Developmental	2078276	2253027	2442941	2810388	3188699	3490946
1.2.1 Revenue	1965907	2109629	2271637	2602750	2988556	3277722
1.2.1.1 Interest Payments	894520	955801	1060602	1226672	1403183	1589435
1.2.2 Capital	111029	141457	169155	175519	196688	208268
1.2.3 Loans	1340	1941	2148	32119	3455	4957
1.3 Others	79713	83368	86995	98916	114906	127733
2 Total Receipts	**5023352**	**5734166**	**6397162**	**7156342**	**8258187**	**9149787**
2.1 Revenue Receipts	3797731	3851563	3688030	4823821	5706246	6337126
2.1.1 Tax Receipts	3278947	3231582	3193390	4160414	4837048	5477428
2.1.1.1 Taxes on commodities and services	2030050	2012578	2076013	2626553	2967610	3372525
2.1.1.2 Taxes on Income and Property	1246083	1216203	1114805	1530636	1865298	2100430
2.1.1.3 Taxes of Union Territories (Without Legislature)	2814	2800	2572	3225	4140	4473
2.1.2 Non-Tax Receipts	518783	619981	494640	663407	869198	859698
2.1.2.1 Interest Receipts	36273	31137	33448	35250	37974	45199
2.2 Non-debt Capital Receipts	140287	110094	64994	44077	88273	119373
2.2.1 Recovery of Loans & Advances	44667	59515	16951	27665	25661	34501
2.2.2 Disinvestment proceeds	95621	50578	48044	16412	62611	84872
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**1102729**	**1449230**	**2600335**	**2230553**	**2582453**	**2588620**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	1097210	1440548	2530155	2194406	2558579	2566503
3A.1.1 Net Bank Credit to Government	387091	571872	890012	627255	687904	.....
3A.1.1.1 Net RBI Credit to Government	325987	190241	107493	350911	529	.....
3A.1.2 Non-Bank Credit to Government	710119	868676	1640143	1567151	1870675	.....
3A.2 External Financing	5519	8682	70180	36147	23874	22118
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	1097210	1440548	2530155	2194406	2558579	2566503
3B.1.1 Market Borrowings (net)	795845	971378	1696012	1213169	1776747	1902862
3B.1.2 Small Savings (net)	88961	209232	458801	526693	403838	441189
3B.1.3 State Provident Funds (net)	51004	38280	41273	28100	36454	37114
3B.1.4 Reserve Funds	-18298	10411	4545	42153	3524	24429
3B.1.5 Deposits and Advances	66289	-14227	25682	42203	82485	58404
3B.1.6 Cash Balances	17395	-323279	-43802	-57891	118784	-104667
3B.1.7 Others	96014	548753	347643	399980	136748	207172
3B.2 External Financing	5519	8682	70180	36147	23874	22118
4 Total Disbursements as per cent of GDP	*26.7*	*26.9*	*32.0*	*30.2*	*30.8*	*30.0*
5 Total Receipts as per cent of GDP	*26.6*	*28.5*	*32.3*	*30.5*	*30.3*	*30.3*
6 Revenue Receipts as per cent of GDP	*20.1*	*19.2*	*18.6*	*20.6*	*20.9*	*21.0*
7 Tax Receipts as per cent of GDP	*17.3*	*16.1*	*16.1*	*17.7*	*17.8*	*18.2*
8 Gross Fiscal Deficit as per cent of GDP	*5.8*	*7.2*	*13.1*	*9.5*	*9.5*	*8.6*

… : Not available; RE: Revised Estimates; BE: Budget Estimates
Source : Budget Documents of Central and State Governments.
Note: GDP data is based on 2011-12 base. GDP for 2023-24 is from Union Budget 2023-24.
Data pertains to all States and Union Territories.
1 & 2: Data are net of repayments of the Central Government (including repayments to the NSSF) and State Governments.
1.3: Represents compensation and assignments by States to local bodies and Panchayati Raj institutions.
2: Data are net of variation in cash balances of the Central and State Governments and includes borrowing receipts of the Central and State Governments.
3A.1.1: Data as per RBI records.
3B.1.1: Borrowings through dated securities.
3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).
This data may vary from previous publications due to adjustments across components with availability of new data.
3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.
3B.1.7: Include Treasury Bills, loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

No. 47: Financial Accommodation Availed by State Governments under various Facilities

(₹ Crore)

Sr. No	State/Union Territory	During December-2023					
		Special Drawing Facility (SDF)		Ways and Means Advances (WMA)		Overdraft (OD)	
		Average amount availed	Number of days availed	Average amount availed	Number of days availed	Average amount availed	Number of days availed
	1	2	3	4	5	6	7
1	Andhra Pradesh	825.02	23	1905.45	21	2173.85	12
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	1235.83	20	14.26	1	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	424.08	10	-	-	-	-
6	Goa	-	-	-	-	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	361.87	16	314.33	9	-	-
9	Himachal Pradesh	-	-	355.44	16	374.93	3
10	Jammu & Kashmir UT	-	-	743.37	25	674.82	5
11	Jharkhand	-	-	-	-	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	226.11	28	1472.22	23	1119.36	15
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	13.59	17	177.20	17	89.07	6
17	Meghalaya	119.08	23	132.73	11	2.42	1
18	Mizoram	40.23	20	122.23	15	42.54	7
19	Nagaland	79.39	19	188.98	8	33.88	5
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	1512.00	30	322.93	12	-	-
23	Rajasthan	3487.28	24	74.92	2	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	884.77	20	1573.61	20	861.20	14
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	432.07	18	409.55	10	46.70	5
29	West Bengal	-	-	-	-	-	-

Notes: 1. SDF is availed by State Governments against the collateral of Consolidated Sinking Fund (CSF), Guarantee Redemption Fund (GRF) & Auction Treasury Bills (ATBs) balances and other investments in government securities.
2. WMA is advance by Reserve Bank of India to State Governments for meeting temporary cash mismatches.
3. OD is advanced to State Governments beyond their WMA limits.
4. Average amount availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.
5. - : Nil.

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Crore)

Sr. No	State/Union Territory	As on end of December 2023			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	10676	1052	0	0
2	Arunachal Pradesh	2431	5	0	3500
3	Assam	6419	82	0	0
4	Bihar	10070	-	0	1200
5	Chhattisgarh	6783	5	1	3550
6	Goa	877	423	0	0
7	Gujarat	12370	617	0	10500
8	Haryana	1878	1568	0	0
9	Himachal Pradesh	-	-	0	0
10	Jammu & Kashmir UT	-	-	0	0
11	Jharkhand	1665	-	0	700
12	Karnataka	16882	484	0	25700
13	Kerala	2825	-	0	0
14	Madhya Pradesh	-	1181	0	0
15	Maharashtra	63156	1549	0	4000
16	Manipur	64	129	0	0
17	Meghalaya	1091	86	0	0
18	Mizoram	393	45	0	0
19	Nagaland	1649	43	0	0
20	Odisha	16819	1886	108	18807
21	Puducherry	498	-	0	1100
22	Punjab	8508	0	0	0
23	Rajasthan	-	-	129	8000
24	Tamil Nadu	8604	-	0	1365
25	Telangana	7296	1592	0	0
26	Tripura	1035	22	0	225
27	Uttarakhand	4643	195	0	0
28	Uttar Pradesh	7062	-	89	0
29	West Bengal	11919	859	239	0
	Total	**205615**	**11823**	**566**	**78647**

Notes: 1. CSF and GRF are reserve funds maintained by some State Governments with the Reserve Bank of India.
2. ATBs include Treasury bills of 91 days, 182 days and 364 days invested by State Governments in the primary market.
3. - : Not Applicable (not a member of the scheme).

No. 49: Market Borrowings of State Governments

(₹ Crore)

Sr. No.	State	2021-22		2022-23		2023-24						Total amount raised, so far in 2023-24	
						October		November		December			
		Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	Gross	Net
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra Pradesh	46443	36103	57478	45814	5450	4743	4000	3414	4000	2932	54950	47654
2	Arunachal Pradesh	563	530	559	389	-	-100	500	500	170	170	670	570
3	Assam	12753	10753	17100	16105	2000	2000	1000	500	1500	1500	12750	12250
4	Bihar	28489	24334	36800	27467	4000	1500	6000	6000	4000	3000	28000	14422
5	Chhattisgarh	4000	913	2000	-2287	1000	200	2000	2000	-	-	8000	5000
6	Goa	2000	1450	1350	500	200	200	500	350	250	250	2100	1400
7	Gujarat	31054	13554	43000	28300	1000	-469	2000	1000	6000	3000	17000	5431
8	Haryana	30500	20683	45158	28638	2500	1560	4500	4500	3000	1708	32000	21070
9	Himachal Pradesh	4000	1875	14000	11941	1000	1000	800	800	1200	900	5300	3873
10	Jammu & Kashmir UT	8562	5373	8473	5969	700	260	4100	4100	2400	2400	12173	10533
11	Jharkhand	5000	3191	4000	-155	-	-	-	-	-	-	-	-800
12	Karnataka	59000	49000	36000	26000	3000	1000	9000	7000	15000	9800	27000	14198
13	Kerala	27000	18120	30839	15620	1000	-250	3000	1750	3100	2100	26900	16200
14	Madhya Pradesh	22000	13900	40158	26849	4000	3000	4000	3000	-	-	23000	18000
15	Maharashtra	68750	40790	72000	42815	4000	748	17000	14140	-	-3610	60000	36359
16	Manipur	1476	1326	1422	1147	100	100	100	100	-	-100	1100	900
17	Meghalaya	1608	1298	1753	1356	322	322	170	70	172	172	1364	1004
18	Mizoram	747	447	1315	1129	60	60	-	-	90	30	660	450
19	Nagaland	1727	1222	1854	1199	-	-	350	220	501	501	1751	1361
20	Odisha	0	-6473	0	-7500	-	-500	-	-1000	-	-	-	-3000
21	Puducherry	1374	841	1200	698	-	-	-	-	-	-270	-	-395
22	Punjab	25814	12428	45500	33660	2352	1752	4206	3606	941	441	35987	26004
23	Rajasthan	51149	38243	46057	30110	3000	1030	11500	10000	1049	49	46549	30267
24	Sikkim	1511	1471	1414	1320	400	355	-	-	-	-90	950	770
25	Tamil Nadu	87000	72500	87000	65722	10000	7750	6000	2250	8000	4500	77000	46180
26	Telangana	45716	39256	40150	30922	3000	2495	4500	4081	1400	637	35900	30685
27	Tripura	300	0	0	-645	-	-	-	-	-	-	-	-
28	Uttar Pradesh	62500	42355	55612	41797	12000	9774	19200	18450	8000	7422	54700	45913
29	Uttarakhand	3200	1800	3200	1450	1300	1300	-	-	500	500	2800	2800
30	West Bengal	67390	45199	63000	42500	5000	3434	6500	4000	6410	4910	35410	20410
	Grand Total	701626	492483	758392	518829	67384	43263	110926	90831	67683	42852	604014	409509

- : Nil.

Note: The State of J&K has ceased to exist constitutionally from October 31, 2019 and the liabilities of the State continue to remain as liabilities of the new UT of Jammu and Kashmir.

Source: Reserve Bank of India.

No. 50 (a): Flow of Financial Assets and Liabilities of Households - Instrument-wise

(Amount in ₹ Crore)

Item	2020-21				
	Q1	Q2	Q3	Q4	Annual
Net Financial Assets (I-II)	**583412.7**	**554437.6**	**463583.5**	**679174.4**	**2280608.2**
Per cent of GDP	*15.0*	*11.7*	*8.5*	*11.8*	*11.5*
I. Financial Assets	**788786.3**	**592945.3**	**633317.9**	**1047276.1**	**3062325.6**
Per cent of GDP	*20.3*	*12.5*	*11.6*	*18.2*	*15.4*
of which:					
1.Total Deposits (a+b)	**297412.4**	**278631.7**	**158172.2**	**506213.3**	**1240429.7**
(a) Bank Deposits	**281191.3**	**264565.3**	**147096.0**	**507719.3**	**1200571.8**
i. Commercial Banks	279010.5	262033.7	143558.6	462689.8	1147292.5
ii. Co-operative Banks	2180.8	2531.6	3537.3	45029.5	53279.3
(b) Non-Bank Deposits	**16221.1**	**14066.4**	**11076.3**	**-1506.0**	**39857.9**
of which:					
Other Financial Institutions (i+ii)	**11040.9**	**8886.2**	**5896.0**	**-6686.2**	**19137.0**
i. Non-Banking Financial Companies	1441.0	3763.0	3514.8	3521.2	12240.0
ii. Housing Finance Companies	9599.9	5123.2	2381.3	-10207.3	6897.0
2. Life Insurance Funds	**124387.9**	**143462.2**	**157535.1**	**142216.5**	**567601.8**
3. Provident and Pension Funds (including PPF)	**114496.3**	**107087.9**	**105344.6**	**175769.3**	**502698.2**
4. Currency	**202432.7**	**21286.9**	**91456.0**	**66800.5**	**381976.1**
5. Investments	**6249.8**	**-12956.4**	**67659.3**	**63624.0**	**124576.7**
of which:					
(a) Mutual Funds	-16021.0	-28837.7	57675.4	51267.0	64083.8
(b) Equity	18599.4	8291.5	5307.1	6333.3	38531.2
6. Small Savings (excluding PPF)	**42751.6**	**54377.4**	**52095.1**	**91597.0**	**240821.1**
II. Financial Liabilities	**205373.6**	**38507.7**	**169734.4**	**368101.7**	**781717.4**
Per cent of GDP	*5.3*	*0.8*	*3.1*	*6.4*	*3.9*
Loans/Borrowings					
1. Financial Corporations (a+b)	**205490.3**	**38624.3**	**169851.0**	**368219.1**	**782184.7**
(a) Banking Sector	**211058.8**	**13213.0**	**139622.0**	**276579.8**	**640473.6**
of which:					
i. Commercial Banks	211259.3	13213.8	140514.3	240050.4	605037.9
(b) Other Financial Institutions	**-5568.6**	**25411.3**	**30229.0**	**91639.4**	**141711.1**
i. Non-Banking Financial Companies	-15450.4	21627.1	15921.2	64881.1	86979.0
ii. Housing Finance Companies	10516.6	2875.1	13048.5	25336.1	51776.2
iii. Insurance Corporations	-634.8	909.2	1259.3	1422.2	2955.9
2. Non-Financial Corporations (Private Corporate Business)	**33.8**	**33.8**	**33.8**	**33.0**	**134.4**
3. General Government	**-150.4**	**-150.4**	**-150.4**	**-150.4**	**-601.7**

No. 50 (a): Flow of Financial Assets and Liabilities of Households - Instrument-wise (Contd.)

(Amount in ₹ Crore)

Item	2021-22				
	Q1	Q2	Q3	Q4	Annual
Net Financial Assets (I-II)	**370115.8**	**334234.9**	**489774.4**	**503089.0**	**1696155.6**
Per cent of GDP	*7.2*	*6.0*	*7.9*	*7.7*	*7.2*
I. Financial Assets	**364661.7**	**527896.1**	**818355.4**	**887657.3**	**2597511.9**
Per cent of GDP	*7.1*	*9.4*	*13.1*	*13.6*	*11.1*
of which:					
1.Total Deposits (a+b)	**-82726.1**	**204033.6**	**426977.3**	**277625.7**	**824852.1**
(a) Bank Deposits	**-106428.9**	**197105.1**	**422392.9**	**264882.9**	**777952.1**
i. Commercial Banks	-107940.7	195441.8	418267.0	262326.1	768094.3
ii. Co-operative Banks	1511.8	1663.4	4125.9	2556.8	9857.8
(b) Non-Bank Deposits	**23702.8**	**6928.5**	**4584.5**	**12742.8**	**46900.0**
of which:					
Other Financial Institutions (i+ii)	**16950.0**	**170.7**	**-2178.3**	**5960.0**	**20902.3**
i. Non-Banking Financial Companies	4972.6	-765.5	73.3	4211.8	8492.2
ii. Housing Finance Companies	11977.3	936.2	-2251.6	1748.2	12410.1
2. Life Insurance Funds	**114711.5**	**127449.8**	**103248.6**	**121541.6**	**466951.5**
3. Provident and Pension Funds (including PPF)	**127624.0**	**115463.1**	**98146.0**	**221372.4**	**562605.5**
4. Currency	**128660.2**	**-68631.2**	**62793.3**	**146845.0**	**269667.4**
5. Investments	**24929.6**	**82305.4**	**69760.9**	**50972.1**	**227967.9**
of which:					
(a) Mutual Funds	14573.0	63151.3	37912.2	44963.7	160600.1
(b) Equity	4502.5	13218.5	27808.2	3084.1	48613.3
6. Small Savings (excluding PPF)	**50405.2**	**66218.1**	**56372.0**	**68243.2**	**241238.4**
II. Financial Liabilities	**-5454.1**	**193661.2**	**328581.0**	**384568.3**	**901356.3**
Per cent of GDP	*-0.1*	*3.5*	*5.3*	*5.9*	*3.8*
Loans/Borrowings					
1. Financial Corporations (a+b)	**-5562.3**	**193553.0**	**328472.8**	**384460.1**	**900923.7**
(a) Banking Sector	**21436.5**	**138722.6**	**267950.7**	**348360.4**	**776470.2**
of which:					
i. Commercial Banks	26978.6	140268.7	265271.5	337009.8	769528.5
(b) Other Financial Institutions	**-26998.8**	**54830.4**	**60522.2**	**36099.7**	**124453.5**
i. Non-Banking Financial Companies	-34757.9	28876.8	29476.5	-2163.2	21432.2
ii. Housing Finance Companies	7132.0	24403.8	29494.8	37436.2	98466.8
iii. Insurance Corporations	627.1	1549.8	1550.9	826.7	4554.5
2. Non-Financial Corporations (Private Corporate Business)	**33.8**	**33.8**	**33.8**	**33.8**	**135.1**
3. General Government	**74.4**	**74.4**	**74.4**	**74.4**	**297.4**

No. 50 (a): Flow of Financial Assets and Liabilities of Households - Instrument-wise (Concld.)

(Amount in ₹ Crore)

Item	2022-23				
	Q1	Q2	Q3	Q4	Annual
Net Financial Assets (I-II)	**297770.4**	**293705.1**	**279460.1**	**505937.8**	**1376873.5**
Per cent of GDP	*4.6*	*4.5*	*4.0*	*7.0*	*5.1*
I. Financial Assets	**586920.5**	**646714.8**	**750856.7**	**974558.5**	**2959050.5**
Per cent of GDP	*9.0*	*9.8*	*10.8*	*13.6*	*10.9*
of which:					
1.Total Deposits (a+b)	**183072.0**	**315216.2**	**276593.9**	**324746.6**	**1099628.6**
(a) Bank Deposits	**163162.9**	**299545.0**	**256363.7**	**307491.6**	**1026563.1**
i. Commercial Banks	158613.3	300565.0	248459.8	284968.0	992606.2
ii. Co-operative Banks	4549.6	-1020.1	7903.8	22523.6	33956.9
(b) Non-Bank Deposits	**19909.1**	**15671.3**	**20230.2**	**17255.0**	**73065.5**
of which:					
Other Financial Institutions (i+ii)	**6314.4**	**2076.7**	**6635.6**	**3660.4**	**18687.1**
i. Non-Banking Financial Companies	4040.2	3267.2	1800.9	5372.2	14480.5
ii. Housing Finance Companies	2274.2	-1190.5	4834.7	-1711.8	4206.6
2. Life Insurance Funds	**73669.9**	**152049.5**	**167894.1**	**141206.6**	**534820.1**
3. Provident and Pension Funds (including PPF)	**155604.2**	**132126.0**	**140204.4**	**235093.2**	**663027.7**
4. Currency	**66438.9**	**-54579.3**	**76760.1**	**148990.2**	**237609.8**
5. Investments	**51603.2**	**48630.6**	**49879.2**	**64168.5**	**214281.5**
of which:					
(a) Mutual Funds	35443.5	44484.0	40205.9	58954.5	179087.8
(b) Equity	13560.9	1378.2	6434.1	1664.9	23038.1
6. Small Savings (excluding PPF)	**54375.1**	**51114.5**	**37367.7**	**58196.2**	**201053.5**
II. Financial Liabilities	**289150.0**	**353009.7**	**471396.5**	**468620.7**	**1582177.0**
Per cent of GDP	*4.4*	*5.4*	*6.8*	*6.5*	*5.8*
Loans/Borrowings					
1. Financial Corporations (a+b)	**289141.6**	**353001.2**	**471388.1**	**468612.3**	**1582143.3**
(a) Banking Sector	**234845.3**	**263782.5**	**368167.4**	**349555.0**	**1216350.1**
of which:					
i. Commercial Banks	230283.8	261265.3	365304.6	331292.5	1188146.3
(b) Other Financial Institutions	**54296.3**	**89218.8**	**103220.8**	**119057.3**	**365793.1**
i. Non-Banking Financial Companies	29281.6	54439.6	75878.8	80295.9	239895.9
ii. Housing Finance Companies	22336.7	33031.2	24903.3	36745.8	117017.0
iii. Insurance Corporations	2678.0	1747.9	2438.7	2015.6	8880.3
2. Non-Financial Corporations (Private Corporate Business)	**33.7**	**33.7**	**33.7**	**33.7**	**135.0**
3. General Government	**-25.3**	**-25.3**	**-25.3**	**-25.3**	**-101.3**

Notes :1. Net Financial Savings of households refer to the net financial assets, which are measured as difference of financial asset and liabilities flows.
2. Preliminary estimates for 2022-23 and revised estimates for 2020-21 and 2021-22.
3. The preliminary estimates for 2022-23 will undergo revision with the release of first revised estimates of national income, consumption expenditure, savings, and capital formation, 2022-23 by the NSO.
4. Non-bank deposits apart from other financial institutions, comprises state power utilities, co-operative non credit societies etc.
5. Figures in the columns may not add up to the total due to rounding off.

No. 50 (b): Stocks of Financial Assets and Liabilities of Households- Select Indicators

(Amount in ₹ Crore)

Item	Jun-2020	Sep-2020	Dec-2020	Mar-2021
Financial Assets (a+b+c+d+e+f+g+h)	**20405824.2**	**21066027.8**	**21906338.5**	**22874301.5**
Per cent of GDP	*107.2*	*111.5*	*114.0*	*115.4*
(a) Bank Deposits (i+ii)	**9977865.6**	**10242430.9**	**10389526.9**	**10897246.1**
i. Commercial Banks	9192702.5	9454736.2	9598294.8	10060984.6
ii. Co-operative Banks	785163.1	787694.7	791232.1	836261.6
(b) Non-Bank Deposits				
of which:				
Other Financial Institutions	**180857.4**	**189743.6**	**195639.6**	**188953.5**
i. Non-Banking Financial Companies	51463.0	55226.1	58740.8	62262.0
ii. Housing Finance Companies	129394.4	134517.6	136898.8	126691.5
(c) Life Insurance Funds	**4102000.7**	**4274424.9**	**4551882.0**	**4752932.3**
(d) Currency	**2434693.7**	**2455980.6**	**2547436.6**	**2614237.0**
(e) Mutual funds	**1343752.0**	**1443784.4**	**1648999.0**	**1730461.0**
(f) Public Provident Fund (PPF)	**663478.0**	**671884.3**	**678997.2**	**742189.5**
(g) Pension Funds	**464705.0**	**494930.0**	**548913.0**	**578025.0**
(h) Small Savings (excluding PPF)	**1238471.7**	**1292849.1**	**1344944.2**	**1370257.1**
Financial Liabilities (a+b)	**7190710.8**	**7229335.1**	**7399186.1**	**7767405.3**
Per cent of GDP	*37.8*	*38.3*	*38.5*	*39.2*
Loans/Borrowings				
(a) Banking Sector	**5728735.3**	**5741948.3**	**5881570.2**	**6158150.0**
of which:				
i. Commercial Banks	5226482.2	5239696.0	5380210.4	5620260.7
ii. Co-operative Banks	500870.2	500865.3	499968.8	536494.1
(b) Other Financial Institutions	**1461975.5**	**1487386.9**	**1517615.9**	**1609255.3**
of which:				
i. Non-Banking Financial Companies	687643.6	709270.7	725191.9	790073.0
ii. Housing Finance Companies	673118.3	675993.4	689041.8	714377.9
iii. Insurance Corporations	101213.7	102122.8	103382.2	104804.4

No. 50 (b): Stocks of Financial Assets and Liabilities of Households- Select Indicators (Contd.)

(Amount in ₹ Crore)

Item	Jun-2021	Sep-2021	Dec-2021	Mar-2022
Financial Assets (a+b+c+d+e+f+g+h)	**23318920.4**	**23991428.3**	**24700622.2**	**25435684.2**
Per cent of GDP	*110.7*	*109.3*	*108.7*	*108.4*
(a) Bank Deposits (i+ii)	**10790817.3**	**10987922.4**	**11410315.3**	**11675198.2**
i. Commercial Banks	9953043.9	10148485.7	10566752.7	10829078.8
ii. Co-operative Banks	837773.4	839436.7	843562.6	846119.4
(b) Non-Bank Deposits				
of which:				
Other Financial Institutions	**205903.4**	**206074.1**	**203895.8**	**209855.7**
i. Non-Banking Financial Companies	67234.6	66469.1	66542.3	70754.2
ii. Housing Finance Companies	138668.8	139605.0	137353.4	139101.6
(c) Life Insurance Funds	**4929725.2**	**5142278.8**	**5213527.2**	**5357350.2**
(d) Currency	**2742897.3**	**2674266.1**	**2737059.4**	**2883904.4**
(e) Mutual funds	**1855000.1**	**2064363.5**	**2126112.0**	**2152140.5**
(f) Public Provident Fund (PPF)	**757397.8**	**762264.0**	**767287.3**	**834147.6**
(g) Pension Funds	**616517.0**	**667379.0**	**699173.0**	**736592.0**
(h) Small Savings (excluding PPF)	**1420662.3**	**1486880.4**	**1543252.3**	**1586495.5**
Financial Liabilities (a+b)	**7755119.8**	**7868215.0**	**8256715.7**	**8668329.0**
Per cent of GDP	*36.8*	*35.9*	*36.3*	*36.9*
Loans/Borrowings				
(a) Banking Sector	**6172863.3**	**6231128.1**	**6559106.7**	**6934620.2**
of which:				
i. Commercial Banks	5640516.1	5700327.0	6025626.4	6389789.3
ii. Co-operative Banks	530937.1	529376.2	532040.6	543376.3
(b) Other Financial Institutions	**1582256.5**	**1637086.9**	**1697609.1**	**1733708.8**
of which:				
i. Non-Banking Financial Companies	755315.1	784191.9	813668.4	811505.2
ii. Housing Finance Companies	721510.0	745913.7	775408.5	812844.7
iii. Insurance Corporations	105431.4	106981.2	108532.1	109358.8

No. 50 (b): Stocks of Financial Assets and Liabilities of Households- Select Indicators (Concld.)

(Amount in ₹ Crore)

Item	Jun-2022	Sep-2022	Dec-2022	Mar-2023
Financial Assets (a+b+c+d+e+f+g+h)	**25689017.4**	**26240728.5**	**27208717.9**	**28083947.0**
Per cent of GDP	*103.2*	*101.5*	*102.4*	*103.1*
(a) Bank Deposits (i+ii)	**11911196.2**	**11956360.9**	**12421907.5**	**12701761.3**
i. Commercial Banks	11060527.2	11106712.0	11564354.7	11821685.0
ii. Co-operative Banks	850669.0	849648.9	857552.8	880076.4
(b) Non-Bank Deposits				
of which:				
Other Financial Institutions	**216170.2**	**218246.9**	**224882.5**	**228542.9**
i. Non-Banking Financial Companies	74794.4	78061.6	79862.5	85234.7
ii. Housing Finance Companies	141375.8	140185.3	145020.0	143308.2
(c) Life Insurance Funds	**5325967.3**	**5559681.9**	**5786592.6**	**6038630.4**
(d) Currency	**2950343.2**	**2895763.9**	**2972524.0**	**3121514.2**
(e) Mutual funds	**2048097.3**	**2260209.7**	**2355315.8**	**2367792.5**
(f) Public Provident Fund (PPF)	**851913.4**	**858591.1**	**864730.6**	**939814.6**
(g) Pension Funds	**744459.2**	**799889.0**	**853412.0**	**898342.0**
(h) Small Savings (excluding PPF)	**1640870.6**	**1691985.1**	**1729352.9**	**1787549.1**
Financial Liabilities (a+b)	**8957470.6**	**9310471.8**	**9781859.9**	**10253472.2**
Per cent of GDP	*36.0*	*36.0*	*36.8*	*37.6*
Loans/Borrowings				
(a) Banking Sector	**7169465.5**	**7433248.0**	**7801415.3**	**8153970.3**
of which:				
i. Commercial Banks	6620073.1	6881338.5	7246643.0	7580935.6
ii. Co-operative Banks	547894.8	550354.8	553201.4	571339.8
(b) Other Financial Institutions	**1788005.1**	**1877223.8**	**1980444.6**	**2099501.9**
of which:				
i. Non-Banking Financial Companies	840786.9	895226.5	971105.3	1051401.1
ii. Housing Finance Companies	835181.3	868212.5	893115.8	929861.7
iii. Insurance Corporations	112036.9	113784.8	116223.5	118239.1

Note : 1. Data as ratios to GDP have been calculated based on the Provisional Estimates of National Income 2022-23, released by NSO on May 31, 2023.
2. Pension funds comprises funds with the National Pension Scheme.
3. Outstanding deposits with Small Savings are sourced from the Controller General of Accounts, Government of India.
4. Non-bank deposits apart from other financial institutions, comprises state power utilities, co-operative non credit societies etc. Data for outstanding deposits are available only for other financial institutions.
5. Figures in the columns may not add up to the total due to rounding off.

Explanatory Notes to the Current Statistics

Table No. 1

1.2& 6: Annual data are average of months.
3.5 & 3.7: Relate to ratios of increments over financial year so far.
4.1 to 4.4, 4.8,4.9 &5: Relate to the last friday of the month/financial year.
4.5, 4.6 & 4.7: Relate to five major banks on the last Friday of the month/financial year.
4.10 to 4.12: Relate to the last auction day of the month/financial year.
4.13: Relate to last day of the month/ financial year
7.1&7.2: Relate to Foreign trade in US Dollar.

Table No. 2

2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.
2.2.2: Include cash, fixed deposits and short-term securities/bonds, e.g., issued by IIFC (UK).

Table No. 4

Maturity-wise position of outstanding forward contracts is available at http://nsdp.rbi.org.in under ''Reserves Template''.

Table No. 5

Special refinance facility to Others, *i.e.* to the EXIM Bank, is closed since March 31, 2013.

Table No. 6

For scheduled banks, March-end data pertain to the last reporting Friday.
2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11

3.1 in Table 7 and 2.4 in Table 11: Include foreign currency denominated bonds issued by IIFC (UK).

Table No. 8

NM_2 and NM_3 do not include FCNR (B) deposits.
2.4: Consist of paid-up capital and reserves.
2.5: includes other demand and time liabilities of the banking system.

Table No. 9

Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.
L_1 and L_2 are compiled monthly and L_3 quarterly.
Wherever data are not available, the last available data have been repeated.

Table No. 13

Data against column Nos. (1), (2) & (3) are Final and for column Nos. (4) & (5) data are Provisional.

Table No. 14

Data in column Nos. (4) & (8) are Provisional.

Table No. 17

2.1.1: Exclude reserve fund maintained by co-operative societies with State Co-operative Banks

2.1.2: Exclude borrowings from RBI, SBI, IDBI, NABARD, notified banks and State Governments.

4: Include borrowings from IDBI and NABARD.

Table No. 24

Primary Dealers (PDs) include banks undertaking PD business.

Table No. 30

Exclude private placement and offer for sale.

1: Exclude bonus shares.

2: Include cumulative convertible preference shares and equi-preference shares.

Table No. 32

Exclude investment in foreign currency denominated bonds issued by IIFC (UK), SDRs transferred by Government of India to RBI and foreign currency received under SAARC and ACU currency swap arrangements. Foreign currency assets in US dollar take into account appreciation/depreciation of non-US currencies (such as Euro, Sterling, Yen and Australian Dollar) held in reserves. Foreign exchange holdings are converted into rupees at rupee-US dollar RBI holding rates.

Table No. 34

1.1.1.1.2 & 1.1.1.1.1.4: Estimates.

1.1.1.2: Estimates for latest months.

'Other capital' pertains to debt transactions between parent and subsidiaries/branches of FDI enterprises.

Data may not tally with the BoP data due to lag in reporting.

Table No. 35

1.10: Include items such as subscription to journals, maintenance of investment abroad, student loan repayments and credit card payments.

Table No. 36

Increase in indices indicates appreciation of rupee and *vice versa*. For 6-Currency index, base year 2021-22 is a moving one, which gets updated every year. REER figures are based on Consumer Price Index (combined). The details on methodology used for compilation of NEER/REER indices are available in December 2005, April 2014 and January 2021 issues of the RBI Bulletin.

Table No. 37

Based on applications for ECB/Foreign Currency Convertible Bonds (FCCBs) which have been allotted loan registration number during the period.

Table Nos. 38, 39, 40 & 41

Explanatory notes on these tables are available in December issue of RBI Bulletin, 2012.

Table No. 43

Part I-A. Settlement systems

1.1.3: Tri- party Repo under the securities segment has been operationalised from November 05, 2018.

Part I-B. Payments systems

4.1.2: 'Others' includes e-commerce transactions and digital bill payments through ATMs, *etc.*

4.2.2: 'Others' includes e-commerce transactions, card to card transfers and digital bill payments through ATMs, *etc.*

5: Available from December 2010.

5.1: includes purchase of goods and services and fund transfer through wallets.

5.2.2: includes usage of PPI Cards for online transactions and other transactions.

6.1: Pertain to three grids – Mumbai, New Delhi and Chennai.

6.2: 'Others' comprises of Non-MICR transactions which pertains to clearing houses managed by 21 banks.

Part II-A. Other payment channels

1: Mobile Payments –
- Include transactions done through mobile apps of banks and UPI apps.
- The data from July 2017 includes only individual payments and corporate payments initiated, processed, and authorised using mobile device. Other corporate payments which are not initiated, processed, and authorised using mobile device are excluded.

2: Internet Payments – includes only e-commerce transactions through 'netbanking' and any financial transaction using internet banking website of the bank.

Part II-B. ATMs

3.3 and 4.2: only relates to transactions using bank issued PPIs.

Part III. Payment systems infrastructure

3: Includes ATMs deployed by Scheduled Commercial Banks (SCBs) and White Label ATM Operators (WLAOs). WLAs are included from April 2014 onwards.

Table No. 45

(-) represents nil or negligible

The table format is revised since June 2023 issue of the bulletin.

State Government Securities include special bonds issued under Ujjwal DISCOM Assurance Yojana (UDAY).

Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

The category 'Others' comprises State Governments, DICGC, PSUs, Trusts, Foreign Central Banks, HUF/ Individuals *etc.*

Data since September 2023 includes the impact of the merger of a non-bank with a bank.

Table No. 46

GDP data is based on 2011-12 base. GDP for 2023-24 is from Union Budget 2023-24.

Data pertains to all States and Union Territories.

1 & 2: Data are net of repayments of the Central Government (including repayments to the NSSF) and State Governments.

1.3: Represents compensation and assignments by States to local bodies and Panchayati Raj institutions.

2: Data are net of variation in cash balances of the Central and State Governments and includes borrowing receipts of the Central and State Governments.

3A.1.1: Data as per RBI records.

3B.1.1: Borrowings through dated securities.

3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).

This data may vary from previous publications due to adjustments across components with availability of new data.

3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.

3B.1.7: Include Treasury Bills, loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

Table No. 47

SDF is availed by State Governments against the collateral of Consolidated Sinking Fund (CSF), Guarantee Redemption Fund (GRF) & Auction Treasury Bills (ATBs) balances and other investments in government securities.

WMA is advance by Reserve Bank of India to State Governments for meeting temporary cash mismatches.

OD is advanced to State Governments beyond their WMA limits.

Average amount Availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.

- : Nil.

Table No. 48

CSF and GRF are reserve funds maintained by some State Governments with the Reserve Bank of India.

ATBs include Treasury bills of 91 days, 182 days and 364 days invested by State Governments in the primary market.

--: Not Applicable (not a member of the scheme).

The concepts and methodologies for Current Statistics are available in Comprehensive Guide for Current Statistics of the RBI Monthly Bulletin **(https://rbi.org.in/Scripts/PublicationsView.aspx?id=17618)**

Time series data of 'Current Statistics' is available at https://dbie.rbi.org.in.

Detailed explanatory notes are available in the relevant press releases issued by RBI and other publications/releases of the Bank such as **Handbook of Statistics on the Indian Economy**.

Recent Publications of the Reserve Bank of India

Name of Publication	Price	
	India	Abroad
1. Reserve Bank of India Bulletin 2024	₹350 per copy ₹250 per copy (concessional rate*) ₹4,000 (one year subscription) ₹3,000 (one year concessional rate*)	US$ 15 per copy US$ 150 (one-year subscription) (inclusive of air mail courier charges)
2. Handbook of Statistics on the Indian States 2022-23	₹550 (Normal) ₹600 (inclusive of postage)	US$ 24 (inclusive of air mail courier charges)
3. Handbook of Statistics on the Indian Economy 2022-23	₹600 (Normal) ₹650 (inclusive of postage) ₹450 (concessional) ₹500 (concessional with postage)	US$ 50 (inclusive of air mail courier charges)
4. State Finances - A Study of Budgets of 2023-24	₹600 per copy (over the counter) ₹650 per copy (inclusive of postal charges)	US$ 24 per copy (inclusive of air mail courier charges)
5. Report on Currency and Finance 2022-23	₹575 per copy (over the counter) ₹625 per copy (inclusive of postal charges)	US$ 22 per copy (inclusive of air mail courier charges)
6. Reserve Bank of India Occasional Papers Vol. 43, No. 2, 2022	₹200 per copy (over the counter) ₹250 per copy (inclusive of postal charges)	US$ 18 per copy (inclusive of air mail courier charges)
7. Finances of Panchayati Raj Institutions	₹300 per copy (over the counter) ₹350 per copy (inclusive of postal charges)	US$ 16 per copy (inclusive of air mail courier charges)
8. Report on Trend and Progress of Banking in India 2022-23	Issued as Supplement to RBI Bulletin January, 2024	
9. Financial Stability Report, December 2023	Issued as Supplement to RBI Bulletin January, 2024	
10. Monetary Policy Report - October 2023	Included in RBI Bulletin October 2023	

Notes

1. Many of the above publications are available at the RBI website (www.rbi.org.in).
2. Time Series data are available at the Database on Indian Economy (http://dbie.rbi.org.in).
3. The Reserve Bank of India History 1935-2008 (5 Volumes) are available at leading book stores in India.

* Concession is available for students, teachers/lecturers, academic/education institutions, public libraries and Booksellers in India provided the proof of eligibility is submitted.

General Instructions

1. All communications should be addressed to:
   Director, Division of Reports and Knowledge Dissemination,
   Department of Economic and Policy Research (DRKD, DEPR),
   Reserve Bank of India, Amar Building, Ground Floor,
   Sir P. M. Road, Fort, P. B. No.1036, Mumbai - 400 001.
   Telephone: 022- 2260 3000 Extn: 4002, Email: spsdepr@rbi.org.in.
2. Publications are available for sale between 10:30 am to 3:00 pm (Monday to Friday).
3. Publications will not be supplied on a cash-on-delivery basis.
4. Publications once sold will not be taken back.
5. Back issues of the publication are generally not available.
6. Wherever concessional price is not indicated, a discount of 25 per cent is available for students, faculty, academic/education institutions, public libraries, and book sellers in India provided the proof of eligibility is submitted.
7. Subscription should be made preferably by NEFT and transaction details including payer's name, subscription number (if any), account number, date and amount should be emailed to **spsdepr@rbi.org.in**, or sent by post.
   a. Details required for NEFT transfer are as follows:

Beneficiary Name	Department of Economic and Policy Research, RBI
Name of the Bank	Reserve Bank of India
Branch and address	Fort, Mumbai
IFSC of Bank Branch	RBIS0MBPA04
Type of Account	Current Account
Account Number	41-8024129-19

   b. In case of subscription through non-digital modes, please send the demand draft/cheque payable at Mumbai in favour of Reserve Bank of India, Mumbai.
8. Complaints regarding 'non-receipt of publication' may be sent within a period of two months.