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GOVERNOR'S STATEMENT

Governor's Statement

Governor's Statement*

Shaktikanta Das

As I set out the first monetary policy statement of the new year, I am reminded of the historical significance of 2023 for the Reserve Bank of India. From being a Joint Stock Company, the Reserve Bank was brought into public ownership on January 1, 1949.¹ Thus, 2023 marks the 75th year of public ownership of the Reserve Bank and its emergence as a national institution. This is an opportune moment to briefly reflect upon the evolution of monetary policy over this period. In the two decades after independence, the Reserve Bank's role was to support the credit needs of the economy under the five-year plans. The following two decades were characterised by bank nationalisation in 1969, oil shocks, monetisation of large budget deficits and sharp rise in money supply and inflation. Monetary targeting was adopted in the mid-1980s to contain growth in money supply and curb inflation pressures. Since the early 1990s, the Reserve Bank focused on market reforms and institution building. A multiple indicator approach was adopted in April 1998 under which a host of indicators were monitored for policy making. In the aftermath of the global financial crisis and the taper tantrum, as inflationary conditions worsened in India, flexible inflation targeting (FIT) was formally adopted in June 2016 to provide a credible nominal anchor for monetary policy. As we know, the primary objective of monetary policy under the FIT framework is to maintain price stability while keeping in mind the objective of growth.

Coming to present times, the unprecedented events of the last three years have put to test monetary policy frameworks globally. In a very short

period, monetary policies across the world have veered from one extreme to the other in response to a series of overlapping shocks. In contrast to the Great Moderation era of the 1990s and the early years of this century, monetary policy was confronted with an unprecedented contraction in economic activity followed by a surge in global inflation. This calls for a deeper understanding of the structural changes in the global economy and inflation dynamics, and their implications for the conduct of monetary policy.

In the current unsettled global environment, emerging market economies (EMEs) are facing sharp trade-offs between supporting economic activity and controlling inflation, while preserving policy credibility. As global fault lines emerge in trade, technology and investment flows, there is an urgent need to reinforce global cooperation. The world is looking to India, now at the helm of G-20, to energise global partnership in several critical areas. This reminds me of what Mahatma Gandhi had said: *"I do believe that...India...can make a lasting contribution to the peace and solid progress of the world."*²

Decisions and Deliberations of the Monetary Policy Committee (MPC)

The Monetary Policy Committee (MPC) met on 6th, 7th and 8th February 2023. Based on an assessment of the macroeconomic situation and its outlook, the MPC decided by a majority of 4 members out of 6 to increase the policy repo rate by 25 basis points to 6.50 per cent, with immediate effect. Consequently, the standing deposit facility (SDF) rate will stand revised to 6.25 per cent; and the marginal standing facility (MSF) rate and the Bank Rate to 6.75 per cent. The MPC also decided by a majority of 4 out of 6 members to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.

* Governor's Statement - February 8, 2023.

¹ The ownership of RBI was transferred to the Government through a Central Government notification under "The Reserve Bank (Transfer to Public Ownership) Act, 1948".

² Young India, 1927-1928, Unity in Variety, 11th August, 1927.

Let me now explain the MPC's rationale for these decisions on the policy rate and the stance. The global economic outlook does not look as grim now as it did a few months ago. Growth prospects in major economies have improved, while inflation is on a descent, though it still remains well above the target in major economies. The situation remains fluid and uncertain. Reflecting the recent optimism, the IMF has revised upwards the global growth estimates for 2022 and 2023.³ As price pressures wane, several central banks have opted for slower rate hikes or pauses. The US dollar has retreated sharply from its highest level in two decades. Tighter financial conditions caused by aggressive monetary policy actions, volatile financial markets, debt distress, protracted geopolitical hostilities and fragmentation continue to impart high uncertainty to the outlook for the global economy.

Amidst these volatile global developments, the Indian economy remains resilient. Real GDP growth is estimated at 7.0 per cent in 2022-23, according to the first advance estimate of the National Statistical Office (NSO). Higher *rabi* acreage, sustained urban demand, improving rural demand, robust credit expansion, gains in consumer and business optimism and the government's enhanced thrust on capital expenditure and infrastructure in the Union Budget 2023-24 should support economic activity in the coming year. Weak external demand and the uncertain global environment, however, would be a drag on domestic growth prospects.

Consumer price inflation in India moved below the upper tolerance level during November-December 2022, driven by a strong decline in prices of vegetables. Core inflation, however, remains sticky.

Looking ahead, while inflation is expected to moderate in 2023-24, it is likely to rule above the 4

per cent target. The outlook is clouded by continuing uncertainties from geopolitical tensions, global financial market volatility, rising non-oil commodity prices and volatile crude oil prices. At the same time, economic activity in India is expected to hold up well. The rate hikes since May 2022 are still working their way through the system. On balance, the MPC was of the view that further calibrated monetary policy action is warranted to keep inflation expectations anchored, break the persistence of core inflation and thereby strengthen the medium-term growth prospects. Accordingly, the MPC decided to raise the policy repo rate by 25 basis points to 6.50 per cent. The MPC will continue to maintain strong vigil on the evolving inflation outlook so as to ensure that it remains within the tolerance band and progressively aligns with the target.

Inflation is expected to average 5.6 per cent in Q4:2023-24 while the policy repo rate is 6.50 per cent. Adjusted for inflation, the policy rate still trails its pre-pandemic levels. Liquidity remains in surplus, with an average daily absorption of ₹1.6 lakh crore under the LAF in January 2023. The overall monetary conditions, therefore, remain accommodative and hence, the MPC decided to remain focused on withdrawal of accommodation.

Assessment of Growth and Inflation

Growth

Available data for Q3 and Q4:2022-23 indicate that economic activity in India remains resilient. Urban consumption demand has been firming up, driven by sustained recovery in discretionary spending, especially on services such as travel, tourism and hospitality. Passenger vehicle sales and domestic air passenger traffic posted robust year-on-year (y-o-y) growth. Domestic air passenger traffic crossed pre-pandemic levels for the first time in December 2022. Rural demand continues to show signs of improvement as tractor sales and two-wheeler sales expanded in

³ According to the International Monetary Fund's January 2023 update of World Economic Outlook, the global growth for 2022 has been revised upwards from 3.2 per cent to 3.4 per cent, while that of 2023 has been raised to 2.9 per cent from 2.7 per cent projected in October 2022.

December. Several high frequency indicators⁴ also point towards strengthening of activity.

Investment activity continues to gain traction. Non-food bank credit expanded by 16.7 per cent (y-o-y) as on January 27, 2023. The total flow of resources to the commercial sector has increased by ₹20.8 lakh crore during 2022-23 so far as against ₹12.5 lakh crore a year ago. Indicators of fixed investment – cement output; steel consumption; and production and import of capital goods – registered robust growth in November and December. In several sectors such as cement, steel, mining and chemicals, there are signs that additional capacity is being created in the private sector. According to the RBI's survey, seasonally adjusted capacity utilisation increased to 74.5 per cent in Q2:2022-23. The drag from net external demand, on the other hand, continued as merchandise exports contracted in Q3:2022-23.

On the supply side, agricultural activity remains strong with good *rabi* sowing, higher reservoir levels, good soil moisture, favourable winter temperature and comfortable availability of fertilisers.⁵ PMI manufacturing and PMI services remained in expansion at 55.4 and 57.2 respectively, in January 2023.

Turning to the outlook, the expected higher *rabi* output has improved the prospects of agriculture and rural demand. The sustained rebound in contact-intensive sectors should support urban consumption. Broad-based credit growth, improving capacity utilisation, government's thrust on capital spending and infrastructure should bolster investment activity. According to our surveys, manufacturing, services and infrastructure sector firms are optimistic about

the business outlook. On the other hand, protracted geopolitical tensions, tightening global financial conditions and slowing external demand may continue as downside risks to domestic output. Taking all these factors into consideration, real GDP growth for 2023-24 is projected at 6.4 per cent with Q1 at 7.8 per cent; Q2 at 6.2 per cent; Q3 at 6.0 per cent; and Q4 at 5.8 per cent. The risks are evenly balanced.

Inflation

Headline CPI inflation moderated by 105 basis points during November-December 2022 from its level of 6.8 per cent in October 2022. This was due to a softening in food inflation on the back of a sharp deflation in vegetable prices, which more than offset the inflationary pressures from cereals, protein-based food items and spices. As a result of this earlier than anticipated and steeper seasonal decline in vegetable prices, inflation for Q3:2022-23 has turned out to be lower than our projections. Core CPI inflation (*i.e.*, CPI excluding food and fuel), however, remained elevated.

Going ahead, the food inflation outlook will benefit from a likely bumper *rabi* harvest led by wheat and oilseeds. *Mandi* arrivals and *kharif* paddy procurement have been robust, resulting in improvement in buffer stocks of rice. All these developments augur favourably for the food inflation outlook in 2023-24.

Considerable uncertainties remain on the likely trajectory of global commodity prices, including price of crude oil. Commodity prices may remain firm with the easing of COVID-19 related restrictions in some parts of the world. The ongoing pass-through of input costs, especially in services, could keep core inflation at elevated levels. The commitment to fiscal consolidation that has been carried forward in the Union Budget 2023-24 and the future trajectory of reducing the gross fiscal deficit will engender an environment of macroeconomic stability. This augurs well for the inflation outlook. Further, the low volatility

⁴ Port freight traffic; railway freight traffic; toll collections; E-way bills; diesel consumption; and electricity consumption.

⁵ *Rabi* sowing, as on February 3, 2023, was 3.3 per cent higher than a year ago (9.3 per cent higher than normal as on date). As of February 02, 2023, reservoir levels were at 63 per cent of the full capacity and above the decadal average of 53 per cent.

of the Indian rupee relative to peer currencies limits the impact of imported price pressures and other global spillovers. Taking into account these factors and assuming an average crude oil price (Indian basket) of US\$ 95 per barrel, inflation is projected at 6.5 per cent in 2022-23, with Q4 at 5.7 per cent. On the assumption of a normal monsoon, CPI inflation is projected at 5.3 per cent for 2023-24, with Q1 at 5.0 per cent, Q2 at 5.4 per cent, Q3 at 5.4 per cent and Q4 at 5.6 per cent. The risks are evenly balanced.

Headline inflation has moderated with negative momentum in November and December 2022, but the stickiness of core or underlying inflation is a matter of concern. We need to see a decisive moderation in inflation. We have to remain unwavering in our commitment to bring down inflation. Thus, monetary policy has to be tailored to ensuring a durable disinflation process. A rate hike of 25 basis points is considered as appropriate at the current juncture. The reduction in the size of the rate hike provides the opportunity to evaluate the effects of the actions taken so far on the inflation outlook and on the economy at large. It also provides elbow room to weigh all incoming data and forecasts to determine appropriate actions and policy stance, going forward. Monetary policy will continue to be agile and alert to the moving parts in the inflation trajectory to effectively address the challenges to the economy.

Liquidity and Financial Market Conditions

As we approach the end of 2022-23, it is worthwhile to recapitulate the key developments on the monetary policy front over the last one year. After the onset of the war in Europe, which drastically altered the growth-inflation dynamics across the world, including India, we have taken a series of steps in the best interest of the Indian economy. We accorded primacy to price stability over growth in April 2022; we instituted a major reform in the monetary policy operating procedure through the

introduction of the standing deposit facility (SDF); we restored the width of the policy corridor to its pre-pandemic level; we raised the repo rate by 40 bps and the cash reserve ratio (CRR) by 50 bps in an off-cycle meeting in May; we shifted the policy stance to focus on withdrawal of accommodation; we continued the rate tightening cycle in every meeting of the MPC; and we adopted a nimble and flexible approach to liquidity management by conducting both variable rate reverse repo (VRRR) and variable rate repo (VRR) operations as per requirement. As a result of all these measures, the real policy rate has been nudged into positive territory; the banking system has moved out of the *Chakravyuh*⁶ of excess liquidity; inflation is moderating; and economic growth continues to be resilient.

As I make this statement, system liquidity remains in surplus, though of a lower order compared to April 2022. In the period ahead, while higher government expenditure and the anticipated return of forex inflows are likely to augment systemic liquidity, it would get modulated by the scheduled redemption of LTRO and TLTRO⁷ funds during February to April 2023. The Reserve Bank will remain flexible and responsive towards meeting the productive requirements of the economy. We will conduct operations on either side of the LAF, depending on the evolving liquidity conditions.

As part of our gradual move towards normalising liquidity and market operations, it has now been decided to restore market hours for the Government Securities market to the pre-pandemic timing of 9 am

⁶ *Chakravyuh*: a military formation used to surround enemies, depicted in the Indian epic Mahabharata. It resembles a labyrinth of multiple defensive walls, from which coming out is very difficult and known only to a handful of very skilled warriors.

⁷ The Reserve Bank provided low cost funds at the repo rate of up to 3-years maturity to banks during February to April 2020 to improve monetary transmission, mitigate the impact of the COVID-pandemic and alleviate liquidity stress in entities/specific sectors under long-term repo operations (LTROs) and targeted long-term repo operations (TLTROs).

to 5 pm.⁸ Moreover, as part of our ongoing endeavour to further develop the government securities market, we propose to permit lending and borrowing of G-secs. This will provide investors with an avenue to deploy their idle securities, enhance portfolio returns and facilitate wider participation. This measure will also add depth and liquidity to the G-sec market; aid efficient price discovery; and work towards a smooth completion of the market borrowing programme of the centre and states.

The pace of transmission of monetary policy actions to lending and deposit rates has strengthened in the current tightening cycle. The weighted average lending rates (WALR) on fresh rupee loans and outstanding loans increased by 137 bps and 80 bps respectively, during May to December 2022. The weighted average domestic term deposit rate on fresh deposits and outstanding deposits increased by 213 bps and 75 bps respectively.

The Indian Rupee has remained one of the least volatile currencies among its Asian peers in calendar year 2022 and continues to be so this year also.⁹ Similarly, the depreciation and the volatility of the Indian rupee during the current phase of multiple shocks is far lower than during the global financial crisis and the taper tantrum.¹⁰ In a fundamental sense,

the movements of the rupee reflect the resilience of the Indian economy.

External Sector

The current account deficit (CAD) for the first half of 2022-23 stood at 3.3 per cent of GDP. The situation has shown improvement in Q3:2022-23 as imports moderated in the wake of lower commodity prices, resulting in narrowing of the merchandise trade deficit. Further, services exports rose by 24.9 per cent (y-o-y) in Q3:2022-23, driven by software, business and travel services. Global software and IT services spending is expected to remain strong in 2023. Remittance growth for India in H1 of 2022-23 was around 26 per cent – more than twice the World Bank's projection for the year. This is likely to remain robust owing to better growth prospects of the Gulf countries. The net balance under services and remittances are expected to remain in large surplus, partly offsetting the trade deficit. The CAD is expected to moderate in H2:2022-23 and remain eminently manageable and within the parameters of viability.¹¹

On the financing side, net foreign direct investment (FDI) flows remain strong at US\$ 22.3 billion during April-December 2022 (US\$ 24.8 billion in the corresponding period last year). Foreign portfolio flows have shown signs of improvement with positive flows of US\$ 8.5 billion during July to February 6, led by equity flows (foreign portfolio flows are, however, negative during the financial year so far). Net inflows under non-resident deposits increased to US\$ 3.6 billion during April-November 2022 from US\$ 2.6 billion a year ago, boosted by the Reserve Bank's July 6th measures. Foreign exchange reserves have rebounded from US\$ 524.5 billion on October 21, 2022 to US\$ 576.8 billion as on January 27, 2023 covering around 9.4 months of projected imports for 2022-23.

⁸ We had earlier restored market hours from 9.00 am to 5.00 pm in several segments of the money market in December 2022.

⁹ Volatility measured in terms of coefficient of variation was 3.5 per cent for INR during calendar year 2022 as compared to 3.7 per cent for Malaysian ringgit, 4.7 per cent for Thai Baht, and 4.8 per cent for Philippine peso.

¹⁰ During the global financial crisis, the Indian Rupee depreciated by 23 per cent against the US dollar between April 1, 2008 and March 3, 2009. Similarly, it depreciated by 22 per cent during the taper tantrum between May 01, 2013 and Aug 28, 2013. However, the extent of Rupee depreciation was lower in each subsequent episode of turbulence. In the initial days of the pandemic, i.e., between February 17, 2020 and April 21, 2020, the Rupee depreciated by only 7 per cent. Even during the period of geopolitical tensions emerging out of Ukraine in 2022, while the Rupee lost 9 per cent against the US dollar between February 24, 2022 and October 19, 2022, it outperformed the currencies of most advanced and many emerging market economies. The 1-month implied volatility of the Rupee touched a high of 25 per cent during the global financial crisis on October 10, 2008 and 20 per cent during the taper tantrum period on August 29, 2013. During the COVID-19 pandemic, however, the implied volatility peaked at 10 per cent on March 24, 2020.

¹¹ Das, Shaktikanta (2023); "Financial markets in India: In pursuit of stability and development"; Keynote Address at the 22nd FIMMDA-PDAI Annual Conference, Dubai on January 27, 2023.

India's external debt ratios are low by international standards.¹²

Additional Measures

I shall now announce certain additional measures.

Penal Charges on Loans

At present, Regulated Entities (REs) are required to have a policy for levy of penal interest on advances. The REs, however, follow divergent practices on levying of such charges. In certain cases, these charges are founded to be excessive. To further enhance transparency, reasonableness and consumer protection, draft guidelines on levy of penal charges will be issued to obtain comments from stakeholders.

Climate Risk and Sustainable Finance

Recognising the importance of climate related financial risks which may have financial stability implications, the Reserve Bank had issued a Discussion Paper on Climate Risk and Sustainable Finance in July 2022. Based on the feedback received, it has been decided to issue guidelines for REs on (i) a broad framework for acceptance of Green Deposits; (ii) disclosure framework on Climate-related Financial Risks; and (iii) guidance on Climate Scenario Analysis and Stress Testing.

Expanding the Scope of TReDS

For the benefit of MSMEs, the Reserve Bank had introduced a framework in 2014 to facilitate financing of their trade receivables through Trade Receivables Discounting System (TReDS). It is now proposed to expand the scope of TReDS by (i) providing insurance facility for invoice financing; (ii) permitting all entities/institutions undertaking factoring business to participate as financiers in TReDS; and (iii) permitting re-discounting of invoices

(that is, developing a secondary market in TReDS). These measures are expected to improve the cash flows of the MSMEs.

Extending UPI for Inbound Travellers to India

UPI has become hugely popular for retail digital payments in India. It is now proposed to permit all inbound travellers to India to use UPI for their merchant payments (P2M) while they are in the country. To begin with, this facility will be extended to travellers from G-20 countries arriving at select international airports.

QR Code based Coin Vending Machine - Pilot project

The Reserve Bank of India will launch a pilot project on QR Code based Coin Vending Machine (QCVM) in 12 cities. These vending machines will dispense coins against debit to the customer's account using UPI instead of physical tendering of banknotes. This will enhance the ease of accessibility to coins. Based on the learnings from the pilot, guidelines will be issued to banks to promote distribution of coins using these machines.

Conclusion

As we begin a new year, it is a good time to reflect upon our journey so far and what lies ahead. When I look back, it is heartening to note that the Indian economy successfully dealt with multiple major shocks in the last three years and has emerged stronger than before. India has the inherent strength, an enabling policy environment, and strong macroeconomic fundamentals and buffers to deal with the future challenges. I am reminded here of the words of Netaji Subhas Chandra Bose: "*.....never lose your faith in the destiny of India*".¹³

Thank you. Namaskar.

¹² India's external debt/GDP ratio fell from 19.9 per cent in March 2022 to 19.2 per cent in September. The debt service ratio declined from 5.2 per cent in 2021-22 to 5.0 per cent in September 2022.

¹³ "India will be free"- Message of August 17, 1945 to Indians in East Asia - Selected Speeches of Subhas Chandra Bose, Publications Division, Ministry of Information and Broadcasting, Government of India.

MONETARY POLICY STATEMENT FOR 2022~23

Resolution of the Monetary Policy Committee (MPC)
February 6-8, 2023

*Monetary Policy Statement, 2022-23 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, 2023) decided to:

- Increase the policy repo rate under the liquidity adjustment facility (LAF) by 25 basis points to 6.50 per cent with immediate effect.

Consequently, the standing deposit facility (SDF) rate stands adjusted to 6.25 per cent and the marginal standing facility (MSF) rate and the Bank Rate to 6.75 per cent.

- The MPC also decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, 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.

The main considerations underlying the decision are set out in the statement below.

Assessment

Global Economy

2. The outlook on global growth has improved in recent months, despite the persistence of geopolitical hostilities and the impact of monetary policy tightening by central banks across the world.

Nonetheless, global growth is expected to decelerate during 2023. Inflation is exhibiting some softening from elevated levels, prompting central banks to moderate the size and pace of rate actions. However, central banks are reiterating their commitment to bring down inflation close to their targets. Bond yields remain volatile. The US dollar has come off its recent peak, and equity markets have moved higher since the last MPC meeting. Weak external demand in major advanced economies (AEs), the rising incidence of protectionist policies, volatile capital flows and debt distress could, however, weigh adversely on prospects for emerging market economies (EMEs).

Domestic Economy

3. The first advance estimates (FAE) released by the National Statistical Office (NSO) on January 6, 2023, placed India's real gross domestic product (GDP) growth at 7.0 per cent year-on-year (y-o-y) for 2022-23, driven by private consumption and investment. On the supply side, gross value added (GVA) was estimated at 6.7 per cent.

4. High frequency indicators suggest that economic activity has remained strong in Q3 and Q4:2022-23. Rabi acreage exceeded last year's area by 3.3 per cent as on February 3, 2023. Industrial production expanded by 7.1 per cent in November, after contracting by 4.2 per cent in October. Capacity utilisation in manufacturing is now above its long period average. Port freight traffic, e-way bills and toll collections were buoyant in December. Purchasing managers' indices (PMIs) for manufacturing as well as services remained in expansion in January, despite some moderation compared to the previous month.

5. Domestic demand has been sustained by strong discretionary spending. Urban demand exhibited resilience as reflected in healthy passenger vehicle sales and domestic air passenger traffic. Rural demand is improving. Investment activity is gradually gaining ground. Non-oil non-gold imports expanded in

* Released on February 8, 2023.

December. Merchandise exports, on the other hand, contracted in December on weak global demand.

6. CPI headline inflation moderated to 5.7 per cent (y-o-y) in December 2022 – after easing to 5.9 per cent in November – on the back of double digit deflation in vegetable prices. On the other hand, inflationary pressures accentuated across cereals, protein-based food items and spices. Fuel inflation edged up primarily from an uptick in kerosene prices. Core CPI (i.e., CPI excluding food and fuel) inflation rose to 6.1 per cent in December due to sustained price pressures in health, education and personal care and effects.

7. The overall liquidity remains in surplus, with average daily absorption under the LAF increasing to ₹1.6 lakh crore during December-January from an average of ₹1.4 lakh crore in October-November. On a y-o-y basis, money supply (M3) expanded by 9.8 per cent as on January 27, 2023, while non-food bank credit rose by 16.7 per cent. India's foreign exchange reserves were placed at US\$ 576.8 billion as on January 27, 2023.

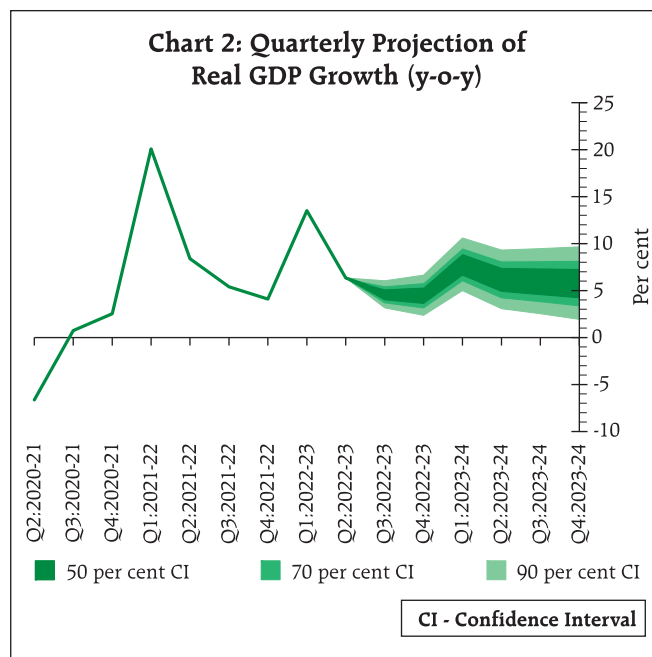
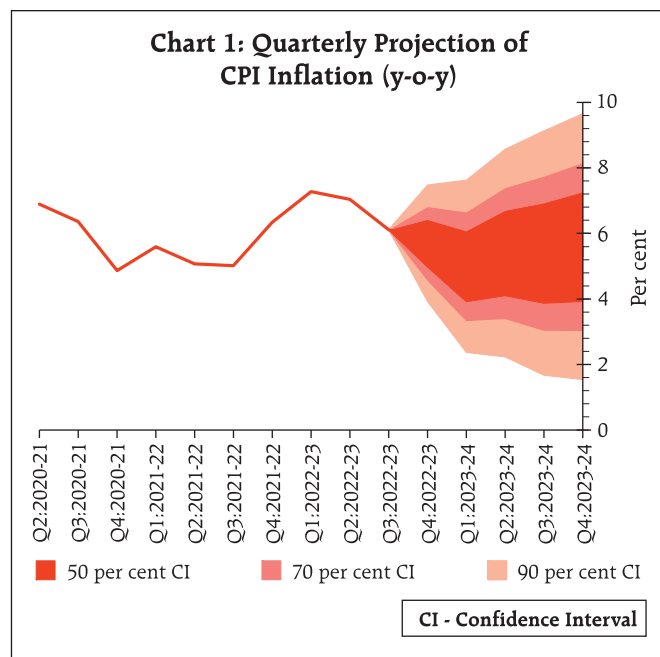
Outlook

8. The outlook for inflation is mixed. While prospects for the *rabi* crop have improved, especially for wheat and oilseeds, risks from adverse weather events remain. The global commodity price outlook, including crude oil, is subject to uncertainties on demand prospects as well as from risks of supply disruptions due to geopolitical tensions. Commodity prices are expected to face upward pressures with the easing of COVID-related mobility restrictions in some parts of the world. The ongoing pass-through of input costs to output prices, especially in services, could continue to exert pressures on core inflation. The Reserve Bank's enterprise surveys point to some softening of input cost and output price pressures in manufacturing. Taking into account these factors and assuming an average crude oil price (Indian basket) of US\$ 95 per barrel, inflation is projected at 6.5 per cent

in 2022-23, with Q4 at 5.7 per cent. On the assumption of a normal monsoon, CPI inflation is projected at 5.3 per cent for 2023-24, with Q1 at 5.0 per cent, Q2 at 5.4 per cent, Q3 at 5.4 per cent and Q4 at 5.6 per cent, and risks evenly balanced (Chart 1).

9. The stronger prospects for agricultural and allied activities are likely to boost rural demand. The rebound in contact-intensive sectors and discretionary spending is expected to support urban consumption. Businesses and consumers surveyed by the Reserve Bank are optimistic about the outlook. Strong credit growth, resilient financial markets, and the government's continued thrust on capital spending and infrastructure create a congenial environment for investment. On the other hand, external demand is likely to be dented by a slowdown in global activity, with adverse implications for exports. Taking all these factors into consideration, real GDP growth for 2023-24 is projected at 6.4 per cent with Q1 at 7.8 per cent, Q2 at 6.2 per cent, Q3 at 6.0 per cent and Q4 at 5.8 per cent, and risks broadly balanced (Chart 2).

10. The easing of inflation in the last two months was driven by strong deflation in vegetables, which may dissipate with the summer season uptick. Headline inflation excluding vegetables has been rising well above the upper tolerance band and may remain elevated, especially with high core inflation pressures. Inflation, therefore, remains a major risk to the outlook. Domestic economic activity is expected to remain resilient aided by the sustained focus on capital and infrastructure spending in the Union Budget 2023-24, even as continuing fiscal consolidation creates space for private investment. While the policy repo rate increases undertaken since May 2022 are working their way through the system, it is imperative to remain alert on inflation so as to ensure that it remains within the tolerance band and progressively aligns with the target. On balance, the MPC is of the view that further calibrated monetary policy action is warranted to keep inflation expectations anchored, break core inflation persistence and thereby strengthen



medium-term growth prospects. Accordingly, the MPC decided to increase the policy repo rate by 25 basis points to 6.50 per cent. The MPC also decided to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth.

11. Dr. Shashanka Bhide, Dr. Rajiv Ranjan, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted to increase the policy repo rate by 25 basis points. Dr. Ashima Goyal and Prof. Jayanth R. Varma voted against the repo rate hike.

12. Dr. Shashanka Bhide, Dr. Rajiv Ranjan, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted to remain focused on withdrawal of accommodation to ensure that inflation remains within the target going forward, while supporting growth. Dr. Ashima Goyal and Prof. Jayanth R. Varma voted against this part of the resolution.

13. The minutes of the MPC's meeting will be published on February 22, 2023.

14. The next meeting of the MPC is scheduled during April 3, 5 and 6, 2023.

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) Regulation; (iii) Payment and Settlement Systems and (iv) Currency Management.

I. Financial Markets

1. Introduction of Securities Lending and Borrowing in Government Securities

A well-functioning market for securities lending and borrowing will add depth and liquidity to the Government securities market, aiding efficient price discovery. It is, therefore, proposed to permit lending and borrowing of Government securities which will augment the existing market for 'special repos'. The system is expected to facilitate wider participation in the securities lending market by providing investors an avenue to deploy idle securities and enhance portfolio returns. Draft Directions will be issued separately for stakeholder comments.

II. Regulation

2. Recovery of Penal Charges on Loans

In terms of extant guidelines, Regulated Entities (REs) have the operational autonomy to formulate Board approved policy for levy of penal interest on advances which shall be fair and transparent. The intent of penal interest was essentially to inculcate a sense of credit discipline among borrowers through negative incentives but such charges are not meant to be used as a revenue enhancement tool over and above the contracted rate of interest. Supervisory reviews have indicated divergent practices amongst REs with regard to levy of penal interest which were excessive in certain cases, leading to customer grievances and disputes.

The extant regulatory guidelines on levy of penal interest have been reviewed in the above context. It has been decided that any penalty for delay/default in servicing of the loan or any other non-compliance of material terms and conditions of loan contract by the borrower shall be in the form of 'penal charges' in a reasonable and transparent manner and shall not be levied in the form of 'penal interest' that is added to the rate of interest being charged on the advances. Further, there shall be no capitalisation of penal charges (*i.e.*, the same shall be recovered separately and shall not be added to the principal outstanding). However, in case of any deterioration in credit risk profile of the borrower, REs shall be free to alter the credit risk premium under extant guidelines on interest rate. Draft guidelines to the above effect shall be placed on RBI website shortly, for comments from stakeholders.

3. Regulatory Initiatives on Climate Risk and Sustainable Finance

Being a full-service central bank with financial stability as part of its mandate, the Reserve Bank recognises that climate change can translate into climate-related financial risks for Regulated Entities (REs) which can have broader financial stability implications. Therefore, to prepare a strategy based on global best practices on mitigating the adverse impacts of climate change, a Discussion Paper (DP) on Climate Risk and Sustainable Finance was placed on RBI website on July 27, 2022, for public comments and feedback. Based on analysis of the feedback received in this regard, it has been decided to issue the following guidelines for REs:

- a. Broad framework for acceptance of Green Deposits;
- b. Disclosure framework on Climate-related Financial Risks, and;
- c. Guidance on Climate Scenario Analysis and Stress Testing.

The guidelines will be issued in a phased manner. Further, the Reserve Bank shall have a dedicated webpage on its website which will consolidate all instructions, press releases, publications, speeches and related RBI communication on climate risk and sustainable finance.

III. Payment and Settlement Systems

4. Expanding the scope of Trade Receivables Discounting System (TReDS)

The guidelines on Trade Receivables Discounting System (TReDS) were issued in December 2014 with the objective of facilitating the financing of trade receivables of MSMEs. Subsequently, three entities started operating TReDS platforms and two more entities have been granted in-principle authorisation. These entities process about ₹60,000 crore worth of transactions annually.

To provide further impetus to TReDS platforms, their scope of activity is proposed to be expanded as stated below. These measures will help in further improving the cash flows of MSMEs.

- i. Insurance facility will now be permitted on TReDS. This will encourage financing / discounting of payables of buyers irrespective of their credit ratings. Accordingly, insurance companies will be permitted to participate as a "fourth participant" on TReDS, apart from the MSME sellers, buyers and financiers.
- ii. All entities / institutions eligible to undertake factoring business under the Factoring Regulation Act will be permitted to participate as financiers in TReDS.
- iii. Secondary market operations will now be enabled on TReDS platforms. This would allow financiers to offload their existing portfolio to other financiers within the same TReDS platform, if required.

5. Extending UPI for Inbound Travellers to India

Unified Payments Interface (UPI) has become a ubiquitous payment instrument for retail electronic payments in India. An enhancement has recently been made to provide UPI access to non-resident Indians who have international mobile numbers linked to their NRE / NRO accounts. It is now proposed to permit all inbound travellers to India also to access UPI for their merchant payments (P2M) while they are in the country. To start with, this facility will be extended to travellers from the G-20 countries, arriving at select international airports. Going forward, this facility will be enabled across all other entry points in the country. Necessary operational instructions will be issued shortly.

IV. Currency Management

6. QR Code based Coin Vending Machine - Pilot project

To improve distribution of coins among members of the public, the Reserve Bank of India is preparing a pilot project on QR Code based Coin Vending Machine (QCVN) in collaboration with a few leading banks. The QCVN is a cashless coin dispensation machine which would dispense coins against a debit to the customer's bank account using Unified Payments Interface (UPI).

Unlike cash-based traditional Coin Vending Machine, the QCVN would eliminate the need for physical tendering of banknotes and their authentication. Customers will also have the option to withdraw coins in required quantity and denominations in QCVNs.

The pilot project is planned to be initially rolled out at 19 locations in 12 cities across the country. These vending machines are intended to be installed at public places such as railway stations, shopping malls, marketplaces to enhance ease and accessibility. Based on the learnings from the pilot tests, guidelines would be issued to banks to promote better distribution of coins using QCVNs.

SPEECH

Financial markets in India: In Pursuit of Stability and Development
Shaktikanta Das

*Financial markets in India: In Pursuit of Stability and Development**

Shaktikanta Das

It is my pleasure to be part of the Annual FIMMDA¹-PDAI² Conference today. I would like to place on record the Reserve Bank's appreciation of the critical role played by FIMMDA and PDAI in the development of financial markets in India over the years, and more recently, in partnering with the RBI in guiding the markets and the economy through the turbulent times of COVID-19, the war in Ukraine and the turmoil in financial markets.

Today, as I speak before keen market players, veterans and experts, I thought this would be an opportune moment to recapture the journey of our financial markets in the last decade or so and reflect on where we are and what we think about the course ahead. An attempt to draw from the past and forge ahead, so to speak.

From the global financial crisis to the Eurozone sovereign debt crisis; from the taper tantrum to Brexit; from unprecedented quantitative easing to among the most accelerated monetary tightening in recent memory; from a pandemic which brought humankind to a standstill to a geopolitical crisis which threatens the world order as it exists today - it would not be an exaggeration to say that the world has moved from one storm to another in the years since the global financial crisis.

Against this backdrop, the journey of Indian financial markets has been driven by two key objectives

– stability and development. Crisis management has been a key component of this journey. Nonetheless, the pursuit of developmental reforms, with the key objective of widening and deepening of financial markets was continued even amidst the worst storms.

The Journey so far

Let me take a moment to reflect on the journey of Indian financial markets over the past few decades. Right up to the end of the 1980s, the Indian economy was characterised by an administered interest rate regime, fixed exchange rates, a captive government securities market and current and capital account restrictions. Policy measures during the decade of the 1990s set the stage for a transition to market-determined interest and exchange rates, shift to a multiple indicator approach and eventually to flexible inflation targeting in the conduct of monetary policy, convertibility in the current account and gradual liberalisation of the capital account. The policy measures were bolstered by several key legislative changes: the Foreign Exchange Management Act (FEMA), 1999; the Government Securities Act, 2006; the amendments to the RBI Act in 2006 to give explicit regulatory powers to the Reserve Bank over government securities, derivatives, and money market instruments; and the Payment and Settlement Systems Act, 2007. The Clearing Corporation of India Ltd. was set up in 2001 to provide clearing and guaranteed settlement for money, government securities, forex and derivative markets. A Real Time Gross Settlement System (RTGS) and the NDS-OM platform were operationalised. A Trade Repository was put in place for derivatives. Some of these initiatives became important at a global level only after the G20 rolled out its reforms agenda in the 2009 Pittsburgh Summit.

After the global financial crisis (2008), the Indian financial markets were nascent but growing. The approach to foreign participation in most market segments was cautious. Derivative markets, the markets for the purpose of hedging risks, were limited

* Keynote Address by Shri Shaktikanta Das, Governor, Reserve Bank of India - January 27, 2023 - at the 22nd FIMMDA-PDAI Annual Conference, Dubai

¹ Fixed Income Money Market and Derivatives Association of India (FIMMDA)

² Primary Dealers' Association of India (PDAI)

in terms of participants and products. Meanwhile, the BIS Triennial survey published in 2013 showed that there was growing interest in the Indian Rupee overseas. The onshore and offshore markets for the Rupee, however, remained segmented, with the spreads between the onshore and offshore forex and interest rates being wide.

Headwinds and Tailwinds

Coming to more recent times, many of our policies over the last decade have been guided by the learnings from crisis management as well as the developmental objectives our country aspires to achieve. As the world moved through one storm after another, we were compelled to navigate through the spillovers of major global headwinds.

Equally compelling in guiding policy were the needs of the economy. As the real sector grew over the last decade, expectations from the financial markets also grew. The needs of the economy reflect these developments. To place this in perspective, let's look at some figures. Nominal GDP increased four-fold from ₹64 lakh crore for FY 2010 to ₹273 lakh crore for FY 2023.³ External trade also increased over four-fold from ₹29 lakh crore to ₹137 lakh crore during the same period.⁴ The ratio of trade to GDP⁵ has risen to 45 per cent in 2021 from 25 per cent in 2000. Foreign Direct Investment (FDI)⁶ in the country has risen sharply by two and a half times since 2010. The flow of resources to the commercial sector in India almost doubled from ₹12 lakh crore in FY 2012 to ₹22 lakh crore in FY 2022.⁷ While banks continue to be a dominant source of financing, market borrowings⁸ of

the commercial sector increased from ₹74,000 crore in FY 2012 to ₹3,16,000 crore in FY 2022. As our economy and financial markets grew, the integration with the world economy and global financial markets has also risen. The growing economy and our aspirations to be and remain among the fastest growing economies has expanded our funding needs. All these necessitate larger and deeper financial markets.

The policy response to headwinds

It is relevant to look at some of our policy responses in recent times, especially to major global headwinds. Each successive episode of turmoil over the last decade and half has posed a specific set of challenges for the economy. Each has warranted a specific response.

In 2008, policy actions were aimed at ensuring comfortable system liquidity; augmenting forex reserves and maintaining a crisis management framework to support the economy through the global financial crisis. Conventional tools such as policy interest rates and cash reserve ratio (CRR) were used. Measures to manage forex liquidity included, *inter alia*, relaxing the interest rate ceiling on foreign currency deposits by non-resident Indians and external commercial borrowings (ECB) for corporates. Unconventional measures included a rupee-dollar swap facility for Indian banks, a refinance window for mutual funds and a special purpose vehicle for supporting nonbanking financial companies.

Post the announcement of early taper of quantitative easing by the Federal Reserve in 2013, the need for restoring confidence of market participants and containing the pressure on the Rupee guided the Reserve Bank's policy responses. Monetary conditions were tightened through unconventional tools. Forex market measures included both direct intervention and administrative measures to manage capital flows. These included import restrictions of non-essential items, opening of a special dollar swap window for

³ Source: Ministry of Statistics and Programme Implementation

⁴ Source: Ministry of Statistics and Programme Implementation, RBI Balance of Payment Statistics

⁵ Source: World Bank

⁶ Source: Reserve Bank of India

⁷ Source: RBI Handbook of Statistics

⁸ Market borrowing includes public & rights issues by non-financial entities, gross private placements by non-financial entities and net issuance of commercial papers subscribed to by non-banks.

PSU oil companies, a concessional swap window for Foreign Currency Non-Resident (FCNR-B) deposits, increased overseas borrowing limits of banks, enhanced foreign investment limits in government debt and restrictions on outward investment flows, Liberalised Remittance Scheme (LRS) entitlements as well as exchange-traded derivatives.

The outbreak of the COVID-19 pandemic in March 2020 necessitated swift and focussed policy responses to address the emerging or potential market dislocations. As in the past, policy rates were reduced and systemic liquidity was expanded. But, this time, the policy corridor was asymmetrically widened and the fixed rate reverse repo became the effective anchor for the evolution of short and longer-term interest rates. To improve transmission of policy rates and ensure flow of credit to the affected sectors, unconventional measures were used viz., the Long-Term Repo Operations (LTROs), targeted LTROs and special refinance facilities to All India Financial Institutions. A special liquidity facility for mutual funds aimed at assuaging redemption pressures was also instituted. For the first time, the Reserve Bank pledged its balance sheet to revive the economy through a Government Securities Acquisition Programme (G-SAP) which provided an upfront commitment on the amounts to be purchased. Special open market operations involving simultaneous purchase and sale of securities (Operation Twist) were undertaken for orderly evolution of the yield curve and liquidity management. Forward guidance gained prominence with the emergence of time and state-contingent guidance, with assurances on the Reserve Bank's commitment to maintain congenial financial conditions. Communication became a significant part of our monetary policy toolkit.

The onset of the war in Ukraine again weakened risk sentiment, with commodity prices and inflation rising to multi-decade highs. As major central banks accelerated policy rate hikes and tightened liquidity

to tackle inflationary pressures, financial market volatility spiralled, and the Rupee came under considerable pressure. The policy response this time eschewed administrative measures to contain outflows and instead focused on measures to enhance inflows through incentivising non-resident deposits, foreign investments in debt instruments and ECBs. To promote exports and support the increasing global interest in the Rupee, an additional arrangement for invoicing, payment and settlement of exports/imports in Rupees was put in place.

The point I want to emphasise here is that while there were clear common strands in the Reserve Bank's response to various episodes of turmoil, the response was customised to each episode in terms of policy objectives and choices, and use of toolkits. Every response was a function of the underlying macroeconomic conditions and reflected learnings from earlier crises. In this context, I would like to mention three distinctive features of our policy responses. First, all liquidity management operations by the Reserve Bank, including measures for mutual funds and NBFCs, have always been through banks which are the liquidity conduits for the Reserve Bank even in peace times. Second, the measures entailed no dilution of collateral standards and ensured that the central bank remained cushioned from counterparty risks. Third, most of the measures this time around were time-bound and expired as per their originally defined maturity. Illustratively, the G-SAP was discontinued, relaxations with respect to CRR were allowed to normalise and the liquidity management framework was tweaked in April 2022 to operationalise the standing deposit facility (SDF). This approach has enabled us to get out of a potential liquidity trap, the Chakravayuh.

Interestingly and perhaps paradoxically, the measures to reform and develop financial markets have taken place at an unprecedented pace during a decade of unprecedented challenges. The reforms

were aimed at deepening onshore financial markets and increasing the efficiency of price discovery. The more recent reforms sought to (i) remove market segmentation by simultaneously easing access of non-residents to domestic markets and permitting residents to access offshore markets; (ii) expand the participation base by encouraging non-resident participation in financial markets and retail participation through the provision of easy access, for example through the Retail Direct and FX Retail platforms; (iii) facilitate more sophisticated users to access markets for their hedging needs and to express their views on market movements; (iv) promote innovation through the introduction of a larger suite of products which can be customised to the needs of individual market participants;⁹ and (v) ensure fair user conduct through protection of the retail user and a sound, receptive and a customer suitability framework. A robust infrastructure and conduct framework has been put in place through efficient clearing and settlement arrangements, benchmark reforms, transparency requirements and stipulations on market abuse, among others.

India has also come a long way towards achieving higher levels of capital account convertibility. Liberalisation of Foreign Direct Investment (FDI) flows continued over the last decade, with FDI becoming unrestricted except in certain sensitive / strategic sectors. Limits for non-resident investments in domestic market markets were liberalised. The Voluntary Retention Route (VRR) was introduced to facilitate non-resident investment in government and corporate bonds. A Fully Accessible Route (FAR) which places no limit on non-resident investment in specified benchmark government securities was introduced as

part of further liberalisation of portfolio debt inflows. The ECB framework was comprehensively liberalised and is now subject only to an overall soft limit and a few "end use" restrictions. Regulations for Overseas Direct Investments (ODI) have also been rationalised and liberalised. The LRS is now available for both current and capital account transactions.

Where do we stand today?

In the aftermath of multiple shocks, the global economy is projected to contract significantly in 2023. The worst for the global economy, both in terms of growth and inflation, seems to be behind us. Lately, with some ebbing of COVID-related restrictions and cooling of inflation in various countries, though still elevated, central banks have started what appears to be a pivot towards lower rate hikes or pauses. At the same time, they continue to emphatically reiterate their resolve to bring inflation down closer to targets. High policy rates for a longer duration appear to be a distinct possibility, going forward. On the growth front, projections are now veering around to a softer recession as against a severe and more widespread recession projected a few months back.

In this hostile and uncertain international environment, the Indian economy remains resilient, drawing strength from its macroeconomic fundamentals. Our financial system remains robust and stable. Banks and corporates are healthier than before the crisis. Bank credit is growing in double digits. India is widely seen as a bright spot in an otherwise gloomy world. Our inflation remains elevated, but there has been a welcome softening during November and December 2022. Core inflation, however, remains sticky and elevated.

On the external front, de-globalisation and protectionism are gaining ground as witnessed during the recent global supply-chain shock. It is thus necessary to build and strengthen bilateral trade relations to deal with such challenges. India

⁹ The directions on market making in OTC derivatives which came into effect from January 2022 permitted market makers to offer a variety of derivative products to residents to efficiently design strategies to hedge their risks. Subsequently, several new products, e.g., FX barrier option, binary option, targeted range forwards in the forex market and swaptions and total return swaps in the interest rate market have been introduced.

has recently signed bilateral trade agreements with the UAE and Australia and more such agreements are works in progress. The average current account deficit to GDP ratio stands at 3.3 per cent during H1:2022-23. The slowing global demand is weighing on merchandise exports; but our exports of services and remittances remain strong. The net balance under services and remittances remains in a large surplus, partly offsetting the trade deficit. Consequently, the current account deficit is eminently manageable and within the parameters of viability.

On the financing side, net FDI flows remain strong and foreign portfolio flows have resumed since July 2022, with intermittent outflows from time to time. The size of forex reserves is comfortable and has gone up from USD 524 billion on October 21, 2022 to USD 572 billion as on January 13, 2023. Further, India's external debt ratios are low by international standards. This has enabled the Reserve Bank to eschew measures to control capital flows and take steps to further internationalise the domestic currency, even during episodes of significant capital outflows.

Every global risk-off episode resulted in an appreciating US dollar imposing downward pressures on most other currencies. Comparison of the performance¹⁰ of the Rupee across successive crisis episodes tells its own tale. During the global financial crisis, the Rupee witnessed its worst depreciation - between April 1, 2008 and March 3, 2009 - when it lost 23 per cent against the US dollar. Similarly, it depreciated by 22 per cent during the taper tantrum between May 01, 2013 and Aug 28, 2013. However, the extent of Rupee depreciation was lower in each subsequent episode of turbulence. In the initial days of the pandemic, *i.e.*, between February 17, 2020 and April 21, 2020, the Rupee depreciated by only 7 per

cent. Even during the period of geopolitical tensions emerging out of Ukraine in 2022, while the Rupee lost 9 per cent against the US dollar between February 24, 2022 and October 19, 2022, it outperformed the currencies of most advanced and many emerging market economies.

Importantly, the Rupee's performance in terms of volatility remained impressive. For example, the 1-month implied volatility of the Rupee touched a high of 25 per cent during the global financial crisis on October 10, 2008 and 20 per cent during the taper tantrum period on August 29, 2013. During the COVID-19 pandemic, however, the implied volatility peaked at 10 per cent on March 24, 2020 and has remained well anchored¹¹ thereafter, despite the uncertainties associated with the war and monetary tightening by major central banks. The Government bond market has also remained resilient, with average bid-ask spreads being the lowest among peer nations. The yield curve has also evolved in an orderly manner without any undue volatility, despite the significantly higher government borrowing.

Looking ahead

Today, when we look ahead, we still see challenges, but we can prepare for them with optimism and confidence. The Indian financial markets have developed appreciably over the years. Liquidity in the government securities and the overnight money markets have grown. Bid-ask spreads remain narrow, reflecting efficiency in price discovery. In the forex market, overall trading volumes have grown, and a suite of hedging products have emerged. Volumes in the interest rate swap market have grown consistently and new products in these markets are also developing. Onshore and offshore markets are getting increasingly

¹⁰ Source: Data from Bloomberg has been used to evaluate the performance of Rupee.

¹¹ Daily average 1-month implied volatility of Rupee was 5 per cent between January 1, 2022 and January 20, 2023 and reached a high of 8 per cent on March 7, 2022.

Source: Bloomberg.

integrated with narrowing of forex and interest rates across the markets. Non-resident participation in markets is growing, *albeit* gradually.

The global economy is still marred by shocks and uncertainty. Financial markets remain volatile and the geopolitical situation continues to be tense. International food, energy and commodity prices have eased but uncertainties do remain. Inflation remains high and broad-based across countries. The IMF has projected contractions in over one-third of the global economy.

In India, we have come a long way in the development of financial markets, but this remains work in progress. The Reserve Bank and stakeholders like FIMMDA and PDAI need to work together and focus on certain specific areas. Secondary market liquidity in g-secs is concentrated in a few securities and tenors. The MIBOR-based OIS remains the only major liquid product in the interest rate derivative market. A term money market remains absent, notwithstanding a host of facilitative policy measures. Access of the retail segment to markets, especially derivative markets, needs to improve further. In the forex markets, while corporates benefit from the tight bid-ask spreads,

smaller users continue to face pricing disadvantages notwithstanding regulatory requirements for fair and transparent pricing. Likewise, there remains a need for improvement in ensuring liquidity for retail investors in the government securities markets.

Conclusion

The journey of Indian financial markets through the last decade has been a story of steady progress with stability. We have been steadfast in our commitment and consistent in our approach to keep the ship stable while continuing to move ahead. Going forward, greater challenges will emerge as the footprints of Indian banks increase in the offshore markets, the range of products expand, non-resident participation in domestic markets grows and as capital account convertibility increases. Market participants will have to prepare themselves to manage the changes and the risks associated with globally integrated markets. The achievement of desired outcomes is contingent on financial institutions and market participants taking forward the reform agenda so that we have more vibrant and resilient financial markets.

Thank you.

ARTICLES

State of the Economy

A Recalibrated Quarterly Projection Model (QPM 2.0) for India

Union Budget 2023-24: An Assessment

ESG Disclosures and Performances: Cross-Country Evidence

Bankers' Sentiments on Credit Demand – Post Pandemic Recovery

The Long Shadow of Federal Reserve's Actions:
Monetary Policy and Uncertainty Spillovers to India

State of the Economy*

The year 2023 will probably be characterised by a milder global slowdown than earlier anticipated but the trajectory remains unpredictable. In India, domestic consumption and investment stand to benefit from stronger prospects for agricultural and allied activities, strengthening business and consumer confidence, and strong credit growth. Supply responses and cost conditions are poised to improve even though inflation witnessed a rebound in January. The Union Budget 2023-24's emphasis on capital expenditure is expected to crowd-in private investment, strengthen job creation and demand, and raise India's potential growth.

We live in an age of perfect uncertainty – everything we know is well known to all – the explosive information revolution ensures it. Everything we do not know is anybody's best guess – as John Kenneth Galbraith wrote nearly three decades ago, "there are two kinds of forecasters: those who don't know, and those who don't know they don't know."¹ Yet, when everyone guesses in the same direction, it usually comes true.

A good example is the last week of January 2023 during which the dialling down of monetary policy moves by the so-called systemic central banks² was perfectly anticipated by triumphal financial markets. By executing a pirouette to lower orders of rate increases, they gave us a glimpse of the global economic outlook as seen through their lens. In the first week of February, more than ten central banks from both advanced but mostly emerging economies slowed or paused, followed by five more central banks

in the second week, consolidating the view that the year 2023 will probably be characterised by a milder global slowdown than earlier anticipated.

The International Monetary Fund (IMF) in its World Economic Outlook Update released on January 30 also confirmed this somewhat more optimistic view of the future, as set out in the following section. A noteworthy feature of the IMF's forecast is the strength of emerging and developing economies, with Asia in the lead. China and India will generate half of global growth in 2023.

Global inflation may ease grudgingly – from 8.8 per cent in 2022 to 6.6 per cent in 2023, according to the IMF, as re-openings, lower commodity prices and restitution of supply chains boost demand – but may still remain elevated relative to targets at 4.3 per cent in 2024. The risks are slanted to the downside, but a turning point has been passed³, and the central banks know it. Yet none of them are revealing any mood to ease off in spite of financial markets betting against them in a game-theoretic interaction that they will not just pause but also cut rates later this year.

Central banks know that inflation is on its way down but they are on guard that the irrational exuberance of markets in bidding up financial prices could in fact re-fuel a resurgence of demand and inflation. Hence, remembering the GOAT's costly policy error⁴, central banks would rather err on the

* This article has been prepared by G. V. Nadhanael, Madhuresh Kumar, Kunal Priyadarshi, Harshita Keshan, Ramesh K Gupta, Pankaj Kumar, Harendra Behera, Arjit Shivhare, Rashika Arora, Anoop K Suresh, Love K Shandilya, Rohan Bansal, Sudhanshu Goyal, Priyanka Sachdeva, Satyam Kumar, Akshara Awasthi, Yuvraj Kashyap, Anshu Kumari, Ashish S Khobragade, Rajesh Kavediya, Supriya Majumdar, Vivek Kumar, Sourajyoti Sardar, Nivedita Banerjee, Bichitrananda Seth, Sujata Kundu, Shesadri Banerjee, Ipsita Padhi, Saksham Sood, Vineet Kumar Srivastava, Samir Ranjan Behera, Deba Prasad Rath and Michael Debabrata Patra. Views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

¹ John Kenneth Galbraith, *Wall Street Journal*, January 22, 1993.

² The US Federal Reserve; the European Central Bank; the Bank of England.

³ Pierre-Olivier Gourinchas, IMF, World Economic Outlook Update Proceedings, January 31, 2023. <https://www.imf.org/en/News/Articles/2023/01/31/tr-13123-world-economic-outlook-update>.

⁴ "Paul Volcker is regarded as the greatest of all time (GOAT) central banker. Less known, however, is the serious policy mistake that he made in 1980. With the unemployment rate rising by more than a percentage point to more than 7 per cent in May after a recession began, the Fed decided to reverse course and sharply lower the federal funds rate by more than 7 percentage points. This action was taken despite the fact that inflation reached a peak of 14.7 per cent in April. The Fed had blinked and Volcker's credibility as an inflation fighter took a hit. Inflation expectations stayed stubbornly high and actual inflation remained above 12 per cent through to the end of 1980. With the recession ending in July 1980, the Fed got back into the inflation fighting business and started to raise the federal funds rate again. But this time, to re-establish its credibility, the Fed had to raise the federal funds rate to a crushing level of nearly 20 per cent by the middle of 1981. The ensuing recession that started in July 1981 became the most severe downturn since the second world war." (Frederic Mishkin, *Financial Times*, September 14, 2022).

side of caution and do more rather than less. If a soft landing is almost assured, rates can always be cut if growth slows more than expected, once low inflation is achieved on a durable basis. As inflation pressures ebb, financial conditions will likely improve, and this will support growth.

Financial markets, on the other hand, are driven by a wager that the descent of inflation will be a once-in-a-generation decline, as revealed in market-based gauges of inflation such as break-even rates and swap curves. Equities are steadying and bonds have rallied while inflation optimism has spread to riskier assets. The US dollar has lost ground and is likely to decline further as macroeconomic conditions improve in the rest of the world.

Can incoming data continue to beat expectations? The heaviest drag from the tightening of monetary policy through 2022 is yet to grip. A global economy on the cusp of recession remains unpredictable. 2023 would still be a challenging year. Central banks will find it difficult to gauge where to pause and ease. The worst of their fears can come true if indeed global growth slows but inflation remains elevated.

Flexibility is called for, including in interpreting the incoming data, especially the labour market – adjusted for still weak labour participation, resignations, the greater incidence of part-time work and the recent large firm lay-offs, it may not be as red hot as unemployment rates and earnings data suggest. As more stability in the outlook accrues, it would become important to realistically assess the scars of the repeated shocks of the pandemic and geopolitics on the structural characteristics of inflation. Has the golden mean been shattered, shifting up trend inflation inexorably? Will advanced economies have to accept inflation targets of say 4 per cent while emerging economies have to adopt even higher inflation goals.

Graver risks are building up in the international

environment for trade, commerce, financial and technology flows. World trade may be fragmented by forceful moves towards protectionism or friend shoring, with each country seeking control over the production of strategic materials and industries through the use of subsidies and other incentives. Over time, other sectors may turn strategic as muscular trade, industrial and technology policies are unleashed.

The IMF estimates the costs of these developments between 0.2 per cent of global output in a limited fragmentation scenario to almost 7 per cent in a severe scenario – roughly equivalent to the combined annual output of Germany and Japan. If technological decoupling is added to the mix, some countries could see losses of up to 12 per cent of GDP. The IMF has warned that the global flow of goods and capital is levelling off and a surge in restrictions is making the world a much smaller place. Financial regionalisation and a fragmented global payments system can amplify the losses from trade restrictions. With less international risk-sharing, macroeconomic volatility could get amplified, and more severe crises could impose not just greater pressures on national buffers but also weaken the ability of the global community to support countries in crises, including indebtedness.⁵

Keeping to the tradition of looking at macroeconomic prospects as revealed in central bank speak, the last meeting of India's monetary policy committee (MPC) was accompanied by the public release on February 8, 2023 of projections for the Indian economy for 2023-24. In the Delphic part of its forward guidance⁶, the MPC pointed to stronger prospects for agricultural and allied activities, the

⁵ Kristalina Georgieva, *Confronting Fragmentation Where It Matters Most: Trade, Debt, and Climate Action*, IMF Blog, January 16, 2023

⁶ A distinction has been drawn between Odyssean forward guidance, which publicly and explicitly commits the central bank to a future action, and Delphic forward guidance, which forecasts macroeconomic performance with likely monetary policy actions implicit in them (Campbell, J.R., Charles E Evans, Jonas D M Fisher and Alejandro Justiniano, *Macroeconomic Effects of Federal Reserve Forward Guidance*, Brookings Papers on Economic Activity, Spring 2012)

rebound in contact-intensive sectors and discretionary spending, strengthening business and consumer confidence, strong credit growth, resilient financial markets, and the government's continued thrust on capital spending and infrastructure as factors creating a congenial environment for domestic consumption and investment. In its view, these factors would offset the adverse implications for exports due to the global slowdown.

Accordingly, real GDP growth for 2023-24 was projected at 6.4 per cent. On the outlook for inflation, the MPC cited improving crop prospects while recognising risks from adverse weather events, the uncertainties surrounding the global commodity price outlook, and the ongoing pass-through of input costs to output prices, especially in services, to project CPI inflation at 5.3 per cent for 2023-24, down from 6.5 per cent in 2022-23. In the opinion of the MPC, inflation remains a major risk to the outlook in which domestic economic activity is expected to remain resilient. Accordingly, it judged that it is imperative to remain alert on inflation so as to ensure that it remains within the tolerance band and progressively aligns with the target. Hence, "further calibrated monetary policy action is warranted to keep inflation expectations anchored, break core inflation persistence and thereby strengthen medium-term growth prospects."⁷

In this meeting, the MPC decided to increase the policy repo rate by 25 basis points to 6.50 per cent and retained the stance of withdrawal of accommodation. The MPC's decision needs to be seen in the context of the journey that began in the second half of 2021-22 with the cessation of pandemic-induced liquidity injections, winding down of pandemic facilities, modulation of liquidity through variable rate reverse repo auctions and increases in the cash reserve ratio,

all of which prepared the ground for the restoration of normal liquidity management operations and market timings.

Policy rate increases were initially front-loaded but large hikes of 75 basis points that characterised the actions of systemic central banks were eschewed to avoid destabilising domestic economic activity. Inflation peaked in June 2022 and grudgingly eased thereafter. From December 2022, conditions became congenial for calibrating lower orders of rate increases and by February 2023, the policy rate regained positive territory when adjusted for four quarters ahead inflation. Importantly, there have been no backslides or reversals and the size of the rate change has been the best form of forward guidance.

The MPC has been astute in communicating its resolve to bring inflation down to the target. To quote from Governor Shri Shaktikanta Das's monetary policy statement of February 8, 2023, "*We need to see a decisive moderation in inflation. We have to remain unwavering in our commitment to bring down inflation. Thus, monetary policy has to be tailored to ensuring a durable disinflation process.... The reduction in the size of the rate hike provides the opportunity to evaluate the effects of the actions taken so far on the inflation outlook and on the economy at large. It also provides elbow room to weigh all incoming data and forecasts to determine appropriate actions and policy stance, going forward. Monetary policy will continue to be agile and alert to the moving parts in the inflation trajectory to effectively address the challenges to the economy.*"

The impact of monetary policy actions is being reflected in the channels of transmission, but the road ahead is daunting. Over the year ahead, the retreat of inflation is expected to be stubborn and beset by supply shocks. Almost every other component of the consumer price index – statistical and exclusion-based measures – is showing a hardening of price pressures. Households' inflation expectations have flat-lined and

⁷ Monetary Policy Statement, 2022-23 Resolution of the Monetary Policy Committee (MPC) February 6-8, 2023.

manufacturing corporations are facing moderation in growth of sales and revenues. With pressures building on profits, capital expenditure remains restrained. Hence, the stance of monetary policy will need to remain disinflationary for consumer spending and business investment to pick up on a durable basis and provide a solid foundation for an acceleration of growth.

Medium-term policies for expanding India's productive potential are emphasising domestic manufacturing and trade policies that incentivise domestic production and reshoring of value chains, or what has been termed as 'productivism'⁸. Revival of activity is already evident across the hinterland night lights luminescence. With digital public goods infrastructure taking centre-stage in India's G20 presidency, the country is ready to take leadership in digital innovations and realise India's techade. Greening of the economy is gathering pace, with the issue of the maiden offering of sovereign green bonds, with plans for a green hydrogen ecosystem, electric vehicles and semi-conductor production, and surging renewables. A more confident India is aiming high with a 2047 vision. In the concluding section, we underscore how the Union Budget 2023-24 makes a sure-footed stride to actualise this vision.

Set against this backdrop, the remainder of the article is structured into four sections. Section II sketches the rapidly evolving developments in the global economy. The evolution of the domestic economy is laid out in Section III. Section IV evaluates the domestic financial conditions, while the last Section sets out concluding remarks.

II. Global Setting









The outlook for the global economy turned less gloomy as moderating inflation assuaged fears of further aggressive monetary tightening. Combined

with reopening of some parts of the world from pandemic restrictions, the prospects for a milder slowdown than earlier anticipated have improved. Considerable uncertainty continues to prevail, however, as incoming data are parsed.

In its January 2023 update of the World Economic Outlook (WEO), the IMF revised global growth for 2023 upwards by 20 basis points (bps) to 2.9 per cent *vis-a-vis* its October projection. The revision takes into account positive surprises such as a stronger boost from pent-up demand, faster fall in inflation and the likely easing of financial conditions. Notably, a global recession is no longer the baseline assessment. For advanced economies (AEs), growth for 2023 was revised upward by 10 basis points to 1.2 per cent while for emerging market economies (EMEs), it

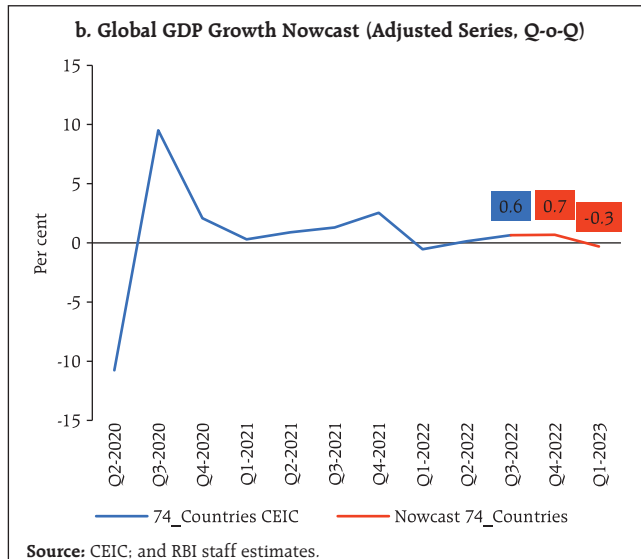
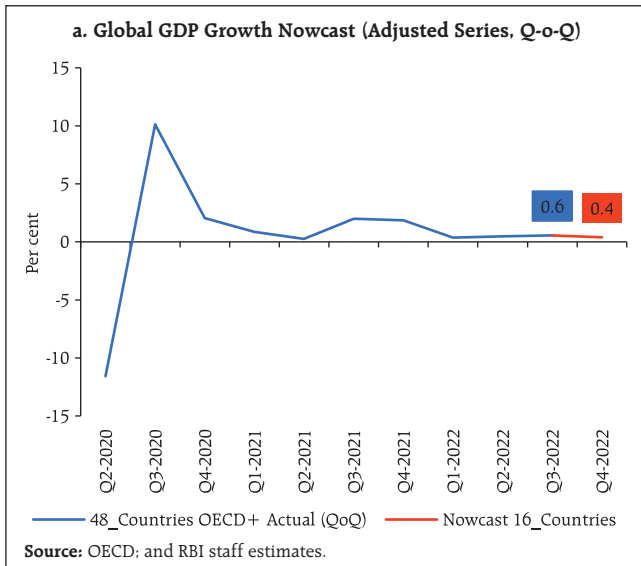
**Table 1: GDP Growth Projections –
Select AEs and EMEs**

(Per cent)

| Projection for Month of projection | 2023 | | 2024 | |
|--|-----------------|-----------------|-----------------|-----------------|
| | January 2023 | October 2022 | January 2023 | October 2022 |
|  World | 2.9 | 2.7 | 3.1 | 3.2 |
| Advanced Economies | | | | |
|  US | 1.4 | 1.0 | 1.0 | 1.2 |
|  UK | -0.6 | 0.3 | 0.9 | 0.6 |
|  Euro area | 0.7 | 0.5 | 1.6 | 1.8 |
|  Japan | 1.8 | 1.6 | 0.9 | 1.3 |
| Emerging Market Economies | | | | |
|  Brazil | 1.2 | 1.0 | 1.5 | 1.9 |
|  Russia | 0.3 | -2.3 | 2.1 | 1.5 |
|  India | 6.1 | 6.1 | 6.8 | 6.8 |
|  China | 5.2 | 4.4 | 4.5 | 4.5 |
|  South Africa | 1.2 | 1.1 | 1.3 | 1.3 |

Source: IMF.

⁸ Dani Rodrick, July 5, 2022, Project Syndicate.

Chart 1: Global GDP Nowcasts

is estimated to be 30 basis points higher at 4.0 per cent in 2023 (as compared with WEO October 2022 projections) [Table 1].

Against this backdrop, our model based nowcast, incorporating data for 74 countries, projects a decline in global growth momentum to -0.3 per cent in Q1: 2023 (Chart: 1a & 1b).

Among high frequency indicators, the global composite purchasing managers' index (PMI) at 49.8 in January 2023 posted an uptick, but remained in contractionary zone for the sixth successive month (Chart 2). The global manufacturing purchasing managers' index at 49.1 in January remained below the neutral mark for the fifth consecutive month, although the contraction showed signs of easing in both output and new orders, with employment posting a slight increase. The services PMI rebounded to expansionary mode after six months.

World trade volume contracted in November 2022 by 1.5 per cent (y-o-y) due to steep negative momentum and an unfavourable base effect (Chart 3a). The Baltic Dry Index - a measure of shipping charges for dry bulk

commodities - fell precipitously, shedding over 50 per cent of its value in January 2023 as capsize demand remained numb along with weak demand across all vessel segments (Chart 3b). The IMF expects global trade in goods and services to decelerate to 2.4 per cent in 2023 from 5.4 per cent in 2022.

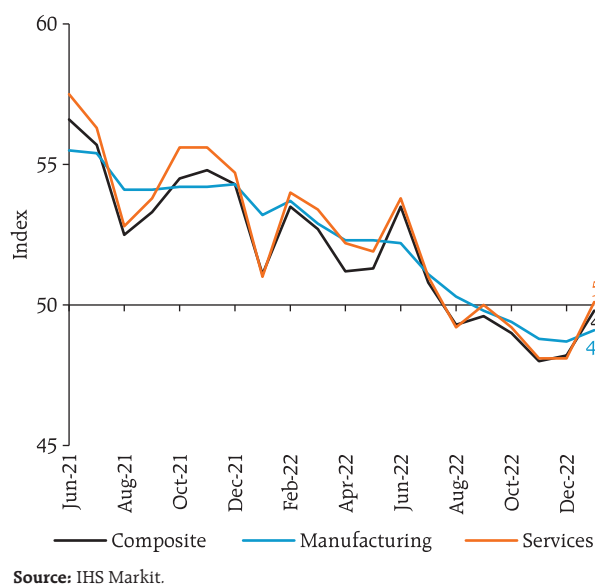
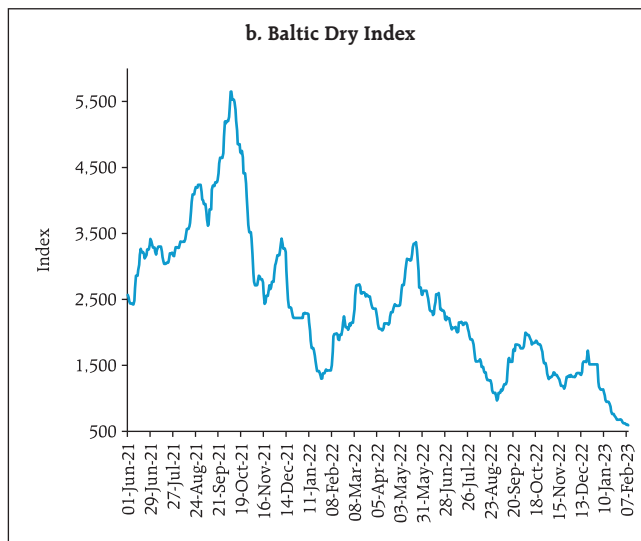
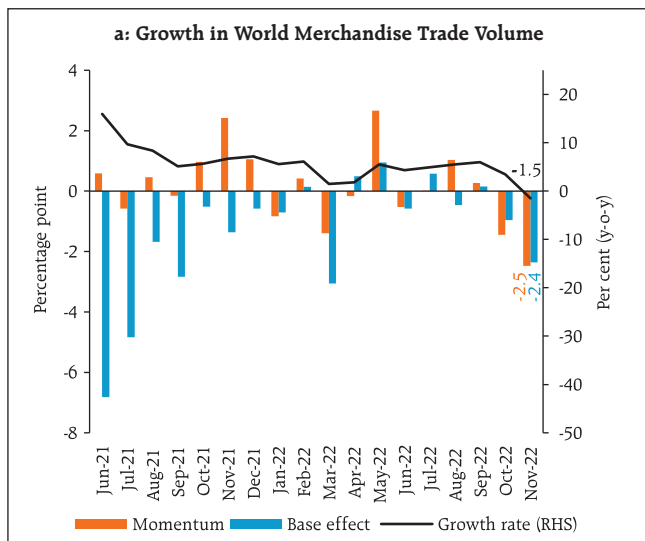
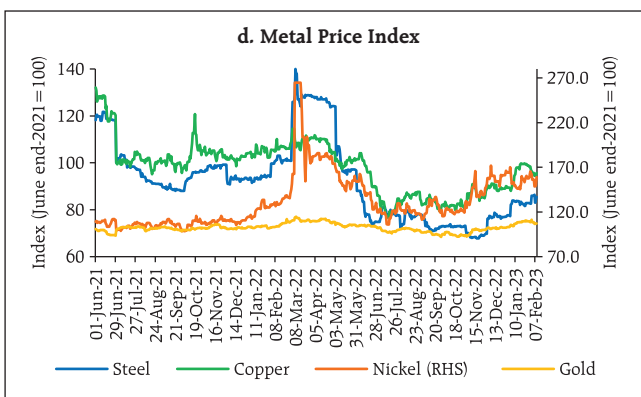
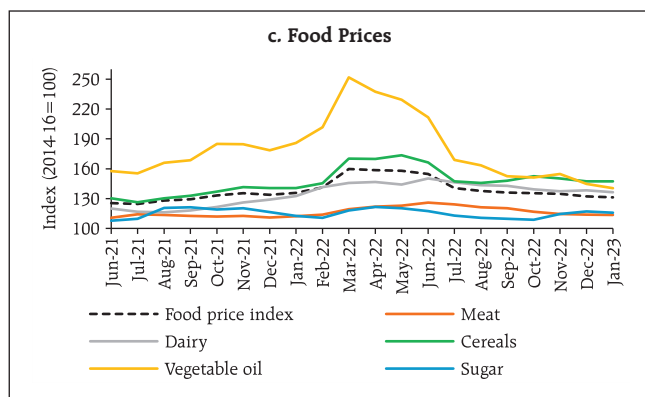
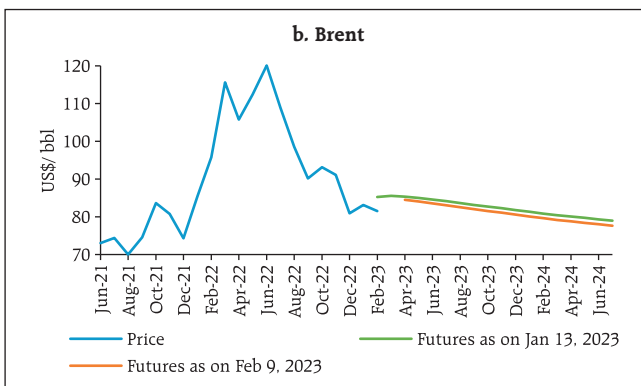
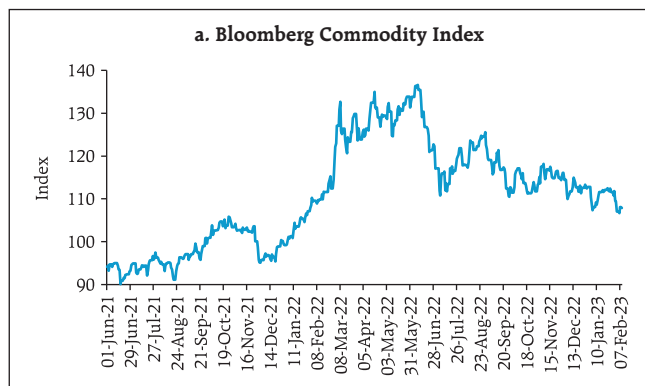
Chart 2: Global PMIs

Chart 3: World Trade and Shipping Costs

Sources: CPB Netherlands; and Bloomberg.

Global commodity prices exhibited volatility as the still weak global economic outlook continues to weigh on demand (Chart 4a). Crude oil prices traded

at an average of US\$ 83 per barrel in January and February (up to February 15, 2023) following the uncertainty lingering around evolving geopolitical

Chart 4: Commodity and Food Prices

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

concerns, supply shortages and shutdown of a major export terminal after the earthquake in Turkey (Chart 4b). The Food and Agricultural Organization (FAO) food price index⁹ declined for the tenth consecutive month in January, driven down by vegetable oils, dairy and sugar, while prices of cereals and meat remained largely stable (Chart 4c).

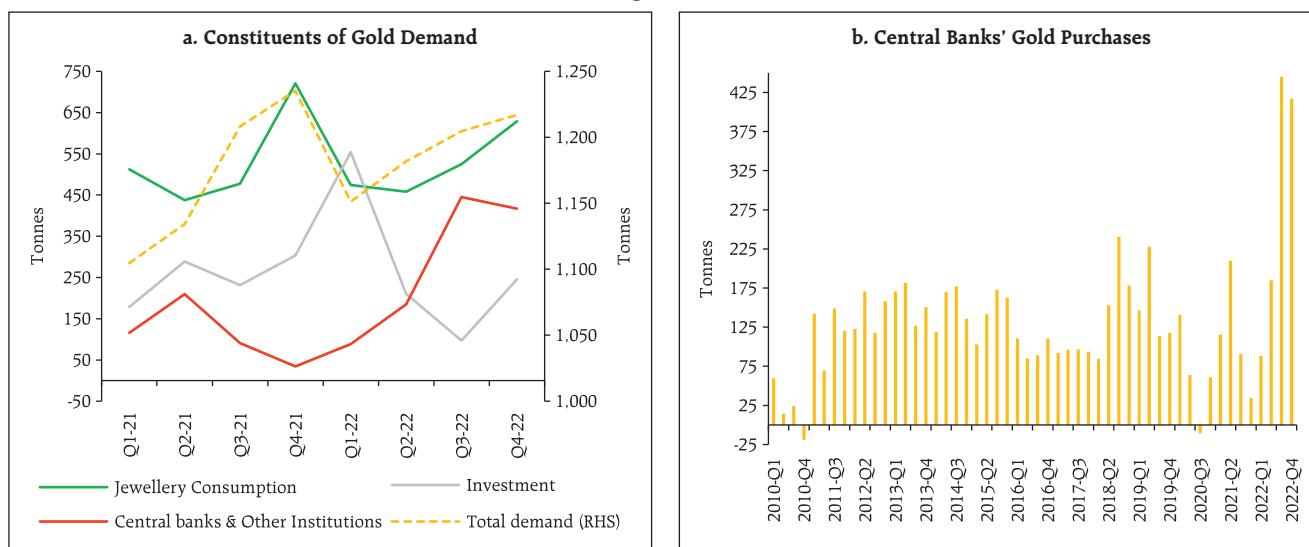
Metal prices increased on reopening plans and expectations of higher demand as pandemic restrictions were eased and on higher growth in global electronics industry. Gold prices inched up in January on safe haven demand (Chart 4d). Demand for gold has been increasing from all the major stakeholders, with central banks' purchases of gold reaching the highest levels since 1967 in Q4:2022 (Chart 5a & 5b).

Headline inflation eased across most AEs and EMEs. Although global headline inflation seems to have peaked in Q3:2022, the IMF warned that core inflation stays well above pre-pandemic levels in most economies. In the US, headline CPI inflation moderated marginally to 6.4 per cent in January 2023

from 6.5 per cent a month ago. Inflation based on Personal Consumption Expenditure (PCE) index eased markedly to 5.0 per cent in December 2022 (Chart 6a). In January, inflation slowed in the Euro area and in the UK to 8.5 per cent and 10.1 per cent, respectively. In Japan, CPI (all items less fresh food) inflation soared to a 41-year high of 4.0 per cent in December 2022. Among the EMEs, inflation eased further in Brazil (5.8 per cent), Russia (11.9 per cent), and South Africa (7.2 per cent) in December 2022 (Chart 6b). China, however, registered a 20 basis points increase in CPI inflation to 1.8 per cent in December.

Global equity markets commenced 2023 with renewed optimism as incoming data suggested moderation in inflation and less aggressive rate hikes expectations, with EMEs faring better than AEs (Chart 7a). Markets, however, corrected in early February, especially in EMEs, as investors turned risk averse reflecting the expectation of higher interest rates in AEs especially after the release of robust nonfarm payroll and low unemployment rate data in the US.

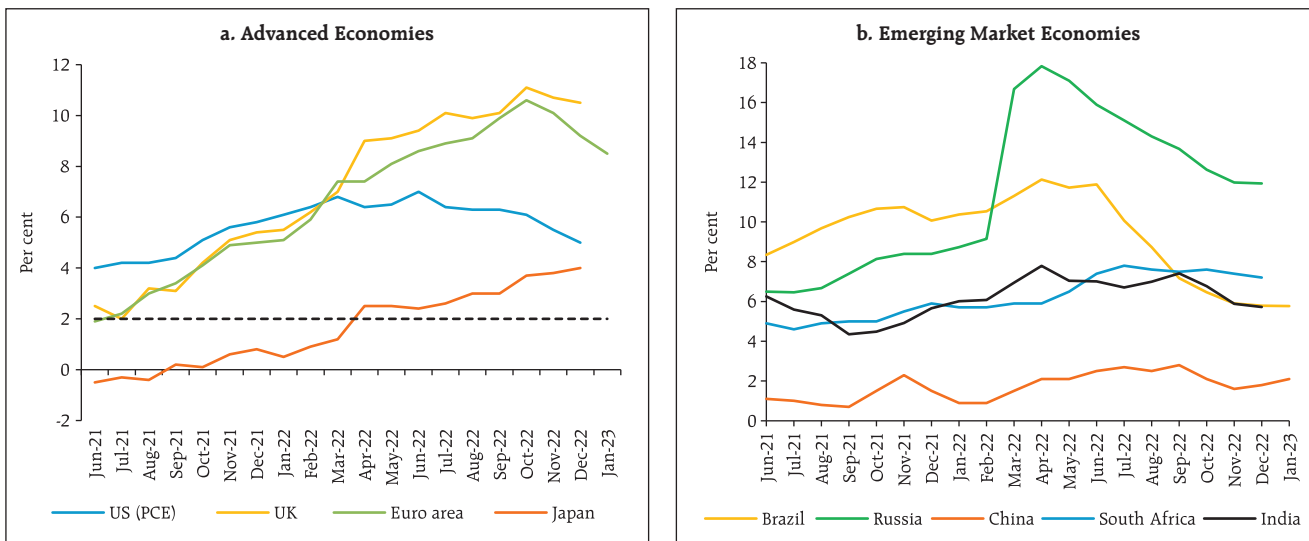
Chart 5: Rising Demand for Gold



Source: Bloomberg.

⁹ Sub-indices include cereal, vegetable oil, dairy, meat and sugar price indices.

Chart 6: Inflation

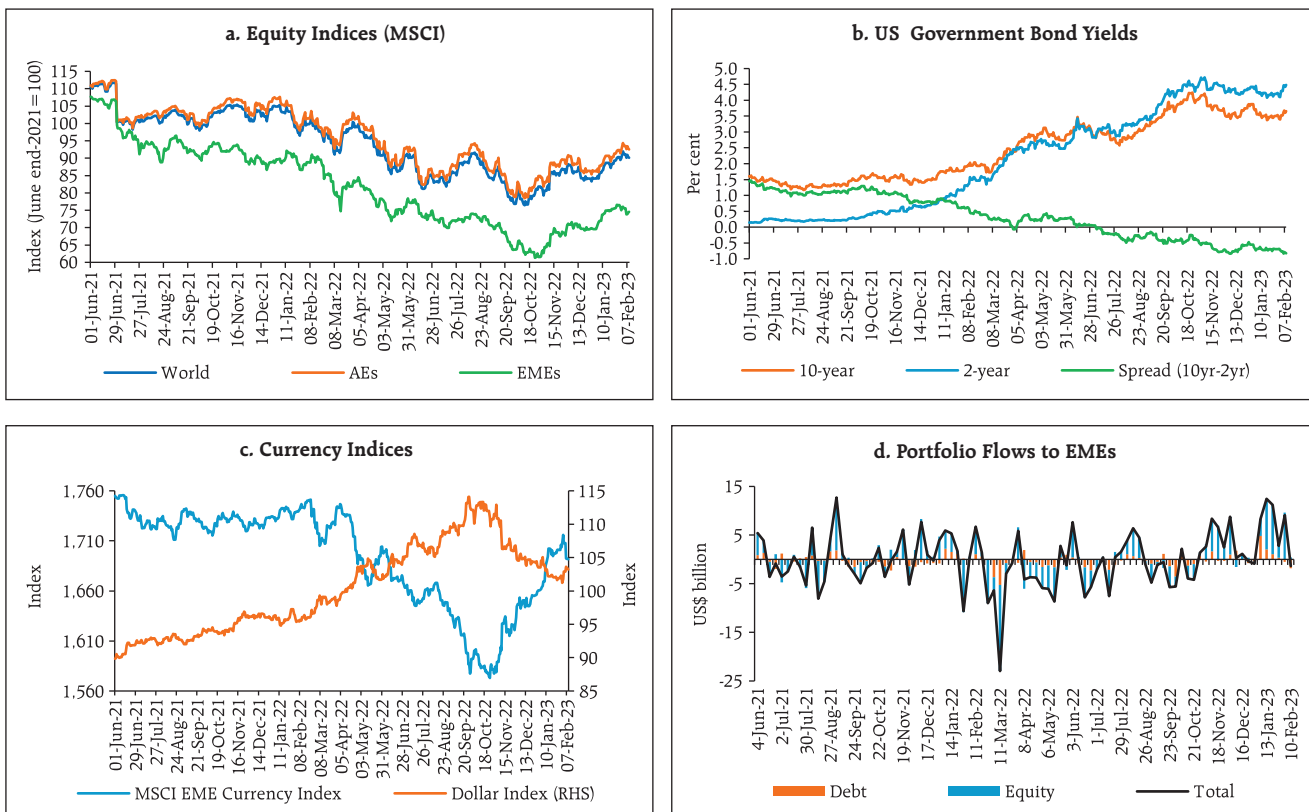


Sources: Bloomberg; and OECD.

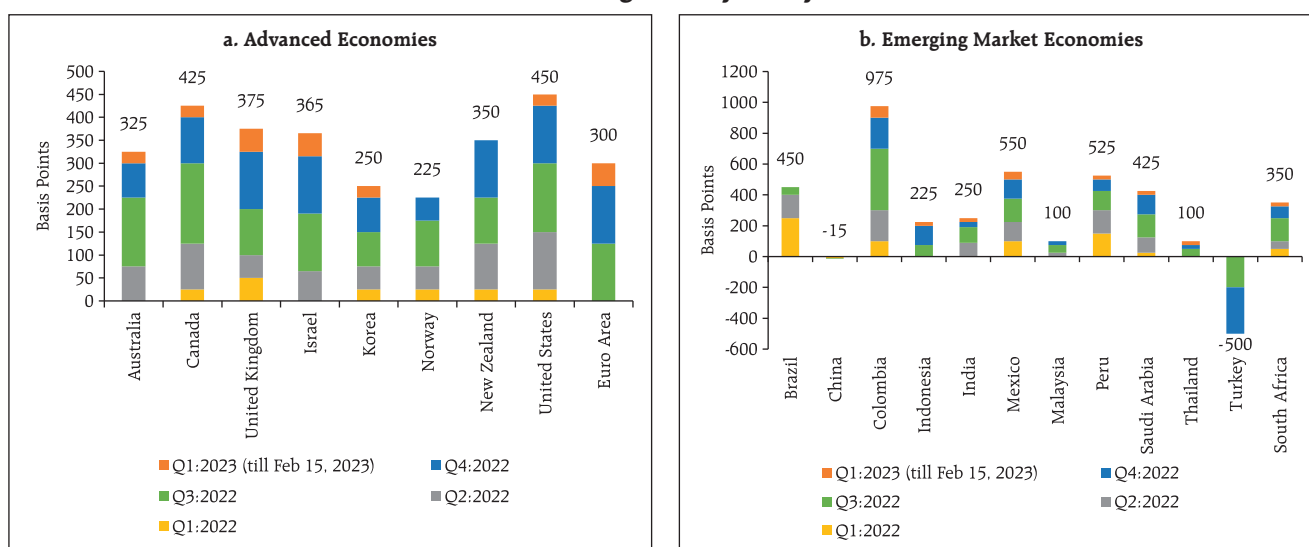
During January 2023, the 10-year G-sec yields softened across major AEs on lower-than-expected

inflation prints in most countries, including the US, resulting in the 10-year US treasury yield shedding 37

Chart 7: Financial Markets



Sources: Bloomberg; and IIF.

Chart 8: Change in Key Policy Rate

Source: Bloomberg.

basis points and the 2-year G-sec yield decreasing by 22 bps. This increased the magnitude of yield curve inversion (Chart 7b). In February, however, US bond yields hardened on the higher than anticipated US non-farm payroll data with the 2-year G-sec yield gaining over 20 bps (up to February 08, 2023). The US dollar reversed its rally after peaking in September 2022 and lost 1.4 per cent in January on expectations of less aggressive policy rate hikes. Concomitantly, the MSCI currency index for EMEs gained momentum, rising 2.6 per cent on the back of capital inflows (Chart 7c & 7d).

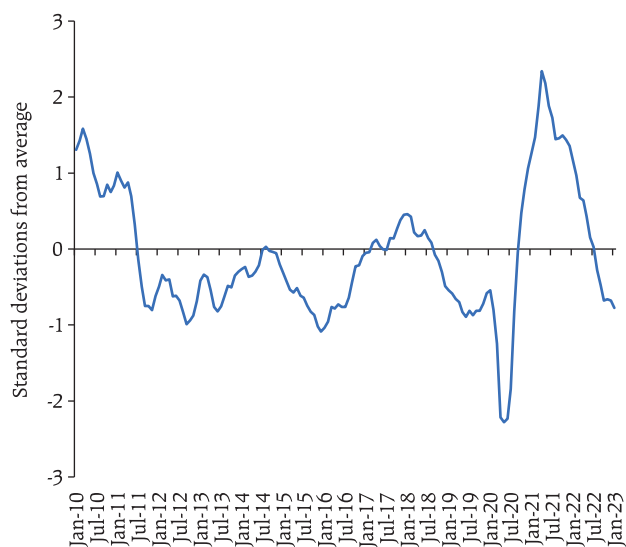
Central banks of most AEs and EMEs slowed the pace of tightening in recent months (Chart 8a). The US Federal Reserve raised the target range of the Federal Funds rate by 25 bps to 4.50-4.75 per cent, reducing the magnitude of its rate hike for the second time in a row. The European Central Bank (ECB) and the Bank of England (BoE) decided to raise their key rates by 50 bps each in February 2023. Canada slowed its pace of tightening as it hiked its policy rate by 25 bps

in January and Australia continued hiking its rate by 25 bps in its February meeting. Japan has continued to diverge by maintaining an accommodative stance; however, it expanded its range for 10-year government bonds yield fluctuations.

Most EME central banks have also continued with policy tightening while a few others have paused (Chart 8b). In December, South Africa moderated the pace of hike in its policy rate to 25 bps from 75 bps and Saudi Arabia slowed to 25 bps from 50 bps in its January meeting. Indonesia and Thailand raised their policy rates by 25 bps each in January. Brazil in February and Malaysia, Chile and Hungary in January held their key rates unchanged. China, on the contrary, continued with monetary accommodation.

III. Domestic Developments

Supply responses and overall cost conditions in the Indian economy are poised to improve. Supply chain pressures continued to ease as indicated by our index of supply chain pressure for India (ISPI) [Chart 9].

Chart 9: Index of Supply Chain Pressure for India

Source: RBI staff estimates.

In consonance, the economic activity index (EAI) showed an uptick in activity in November and December 2022 (Chart 10a). Accordingly, our nowcast

of GDP for Q3:2022-23 is placed at 4.4 per cent (Chart 10b).

Aggregate Demand

Lead indicators point towards sustained momentum in economic activity. E-way bill volumes and toll collections continued to increase, *albeit* at a moderate pace (Chart 11).

Fuel consumption came off the nine-month high recorded in December due to seasonal factors. Sales of automobiles (passenger and commercial vehicles), sales of two wheelers, and vehicle registrations (transport and non-transport vehicles) picked up, buoyed by higher demand. Better crop prices have aided the pick-up in tractor sales. Sales of motorcycle and three-wheelers also picked up, with the latter more than doubling over January 2022 (Chart 12).

In the tourism sector, average room rates continued to increase even as hotel occupancy rates remained flat. Revenue per available room

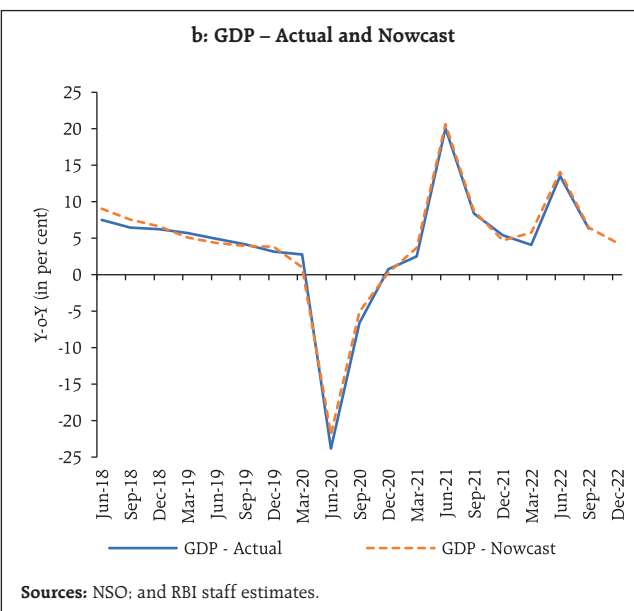
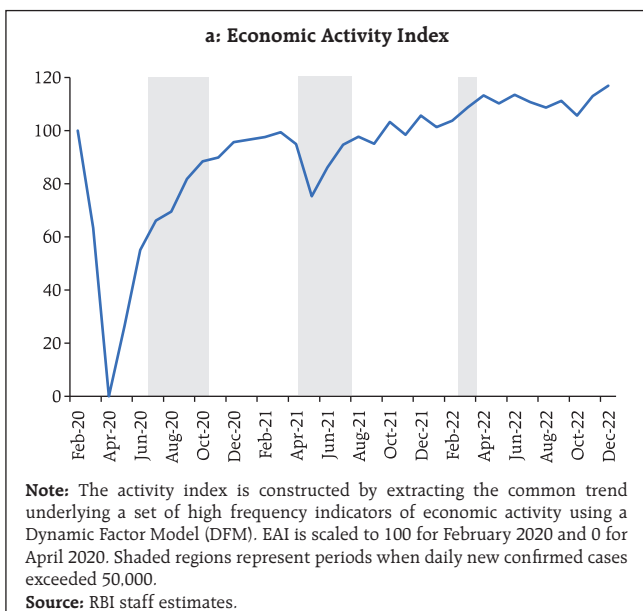
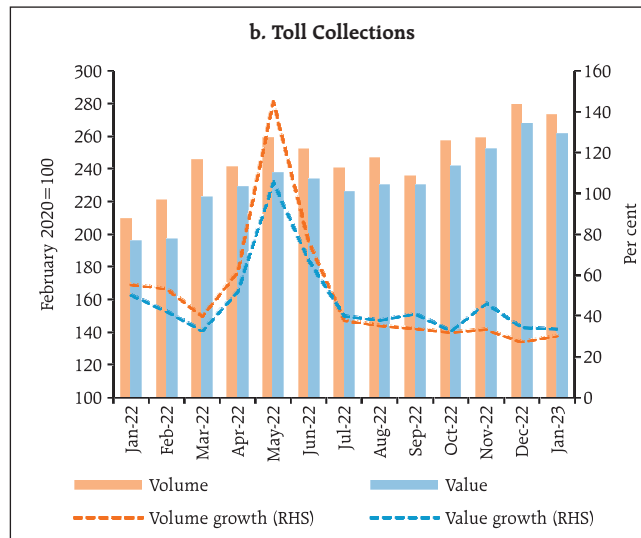
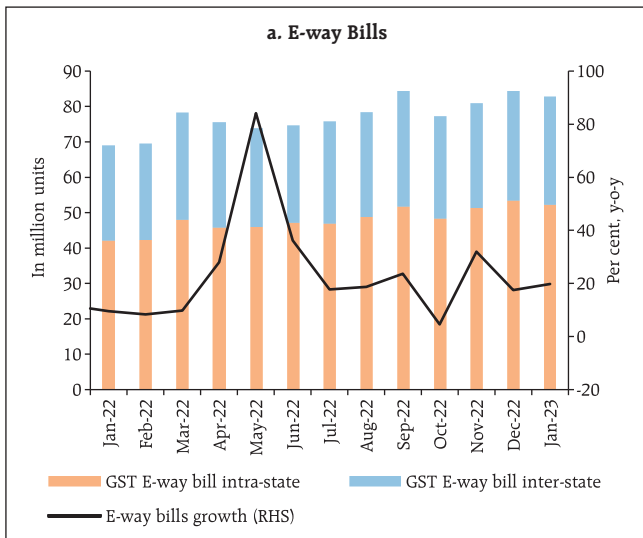
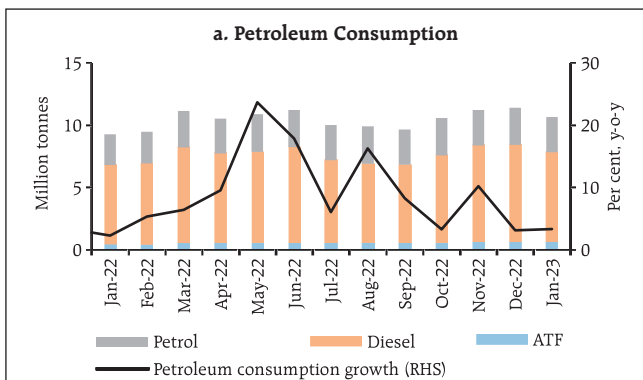
Chart 10: Economic Activity and GDP Nowcast

Chart 11: E-way Bills and Toll Collections

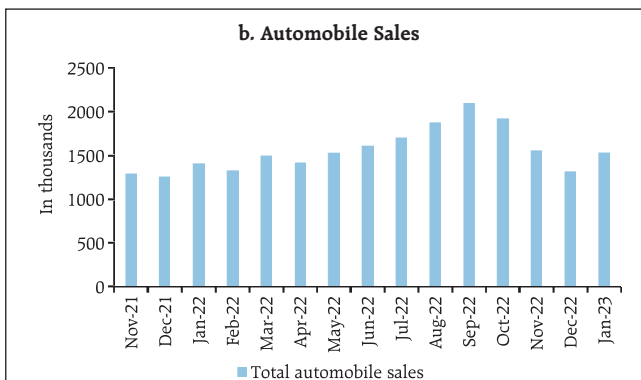
Sources: GSTN; RBI; and RBI staff estimates.

(RevPAR), increased after recording a dip in November (Chart 13).

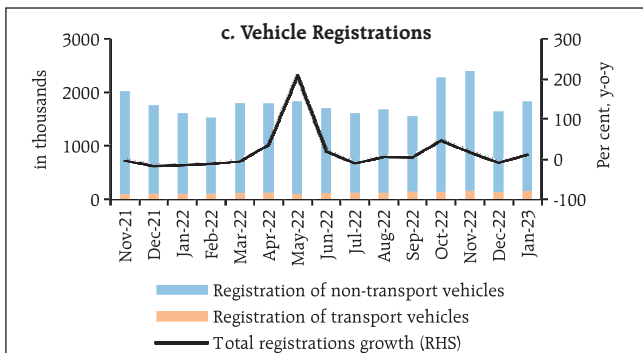
Households' assessment and outlook for economic conditions reported in the Reserve Bank's

Chart 12: Automobile Sector Indicators

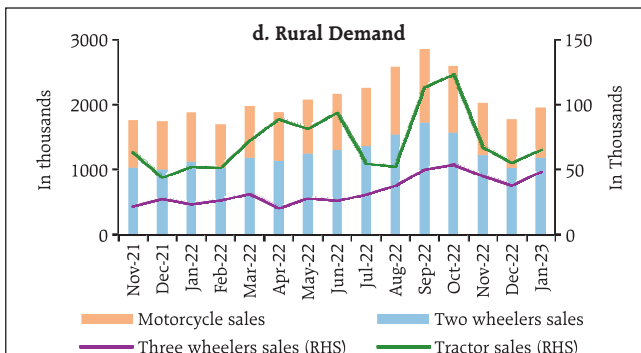
Sources: Petroleum Planning and Analysis Cell; and RBI staff estimates.



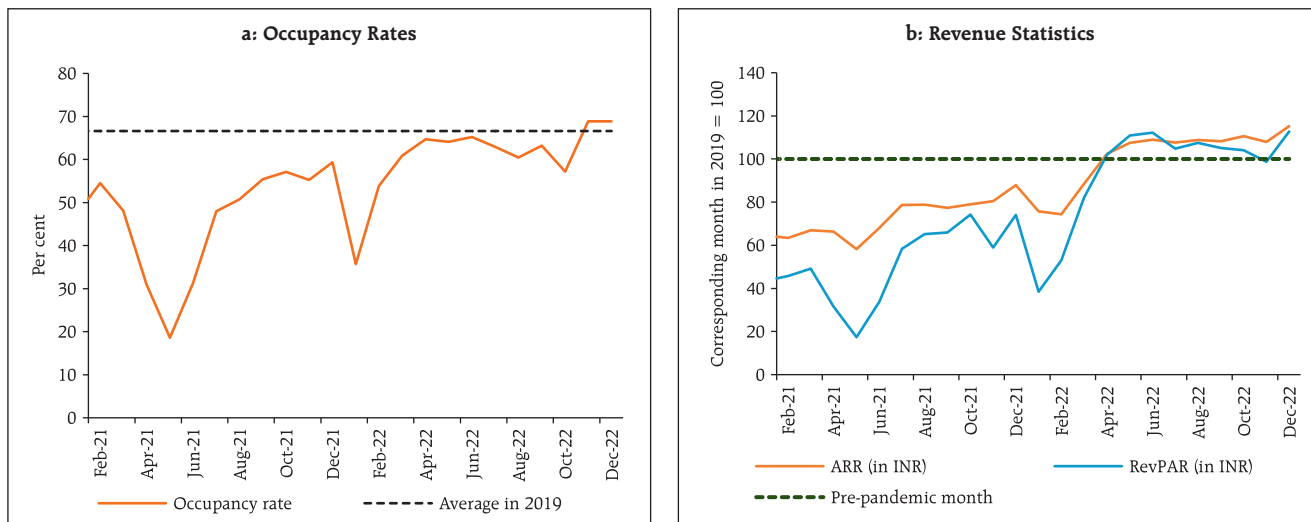
Sources: SIAM; and RBI staff estimates.



Sources: Ministry of Road Transport and Highways; RBI staff estimates.



Sources: ISIAM; TMA; and RBI staff estimates.

Chart 13: Hotel Sector Indicators

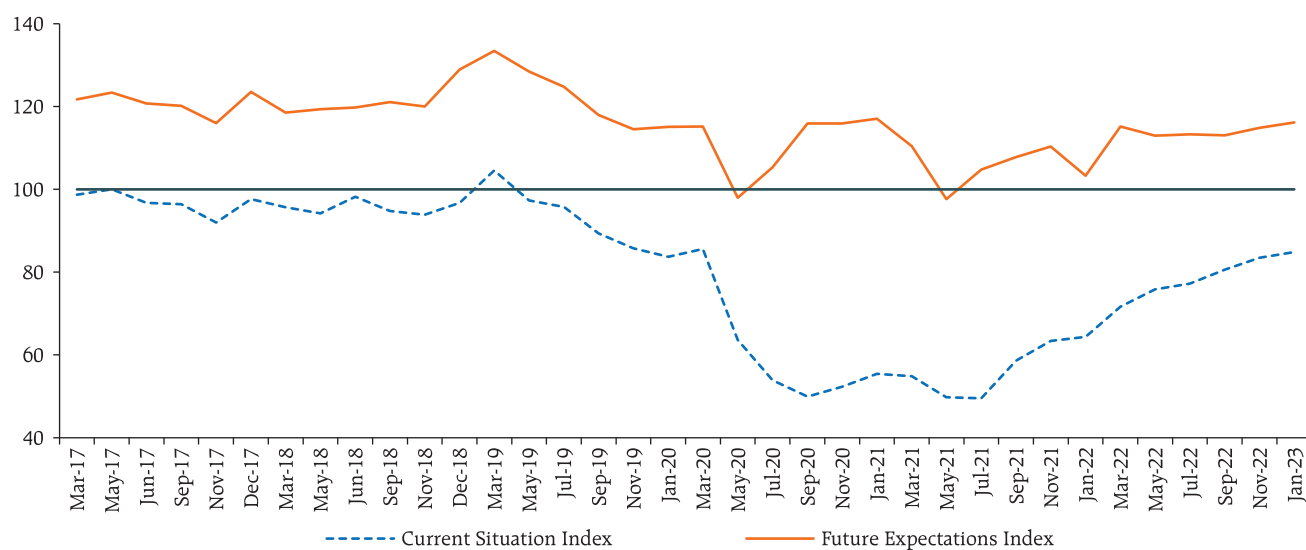
Note: ARR: Average room rate.

Sources: HVS Anarock; and RBI staff estimates.

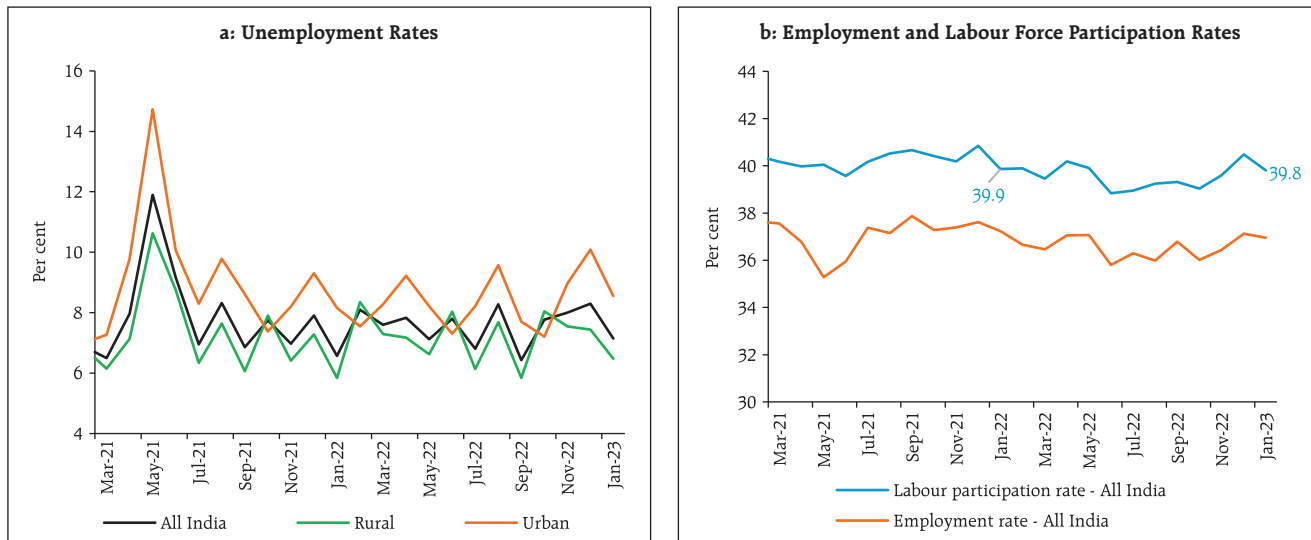
Consumer Confidence Survey (CCS) point towards rising confidence reflected in the current situation index (CSI) as well as the future expectations index (FEI) over a one-year horizon (Chart 14).

Led by a relatively larger fall in urban unemployment, the all-India unemployment rate

eased to 7.1 per cent in January 2023 from 8.3 per cent in December 2022 (Chart 15a). The labour force participation rate (LFPR), however, moderated to 39.8 per cent in January from 40.5 per cent in the previous month, with the employment rate (ER) stayed largely flat (Chart 15b).

Chart 14: Consumer Confidence Indices

Source: RBI.

Chart 15: Labour Market Conditions

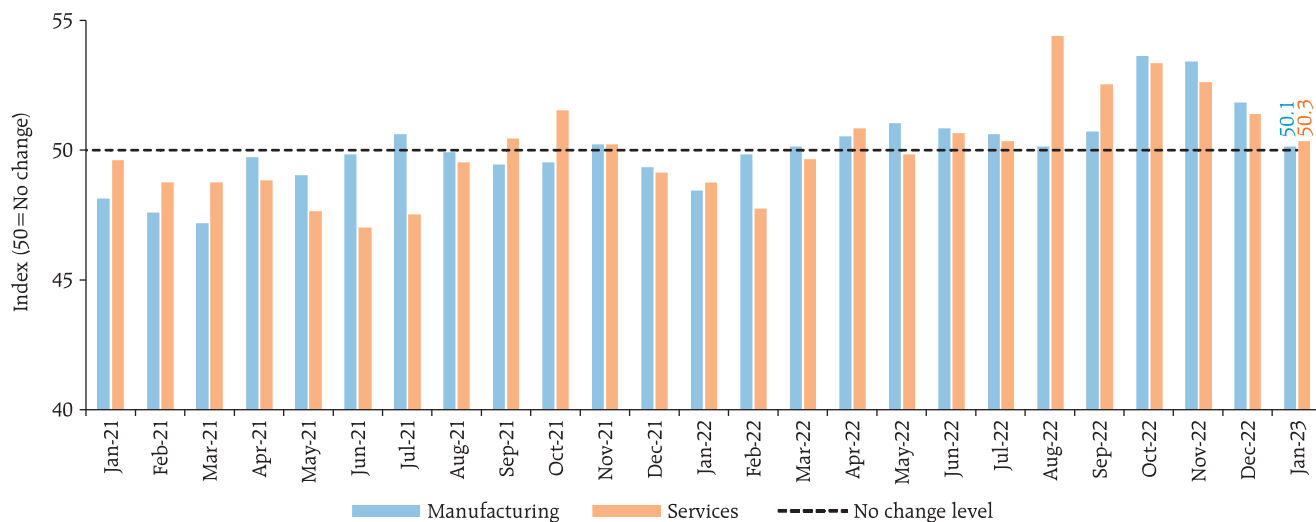
Source: CMIE.

PMI Employment Index remained broadly unchanged in January 2023 (Chart 16).

Demand for work under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) declined on a y-o-y basis reflecting pick-

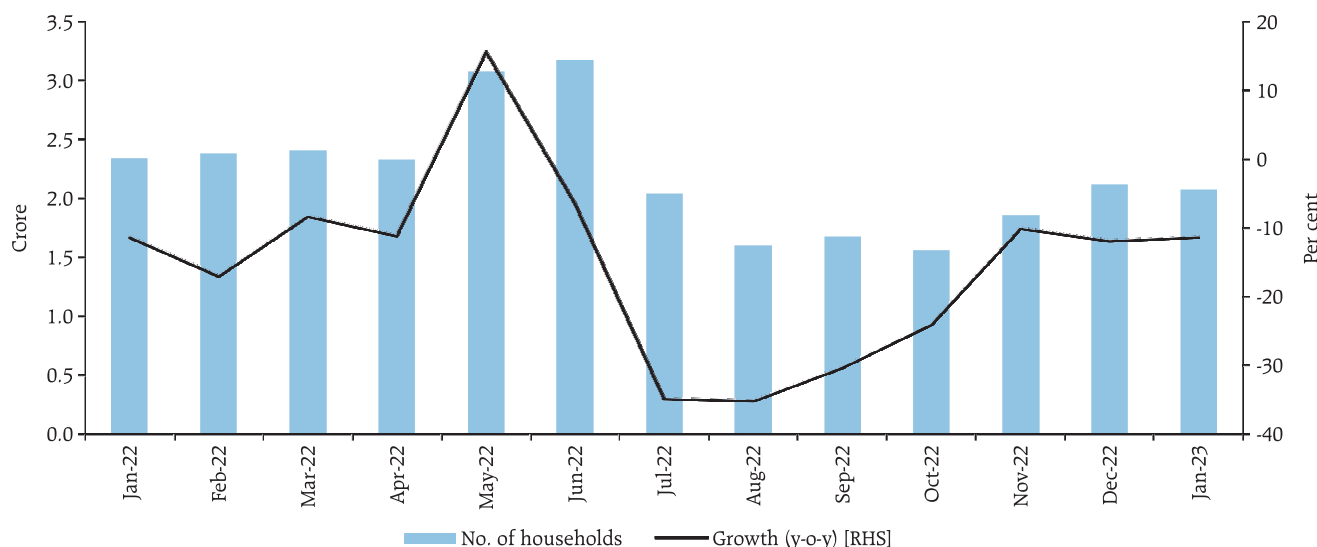
up in labour demand in other activities especially *Rabi* sowing (Chart 17).

India's merchandise exports at US\$ 32.9 billion in January 2023, recorded a contraction of 6.6 per cent y-o-y and 13.5 per cent on a sequential basis

Chart 16: PMI Employment Indices

Note: Purchasing managers' index (PMI) value of above 50 indicates expansion.

Source: S&P Global.

Chart 17: Demand for Work under MGNREGS

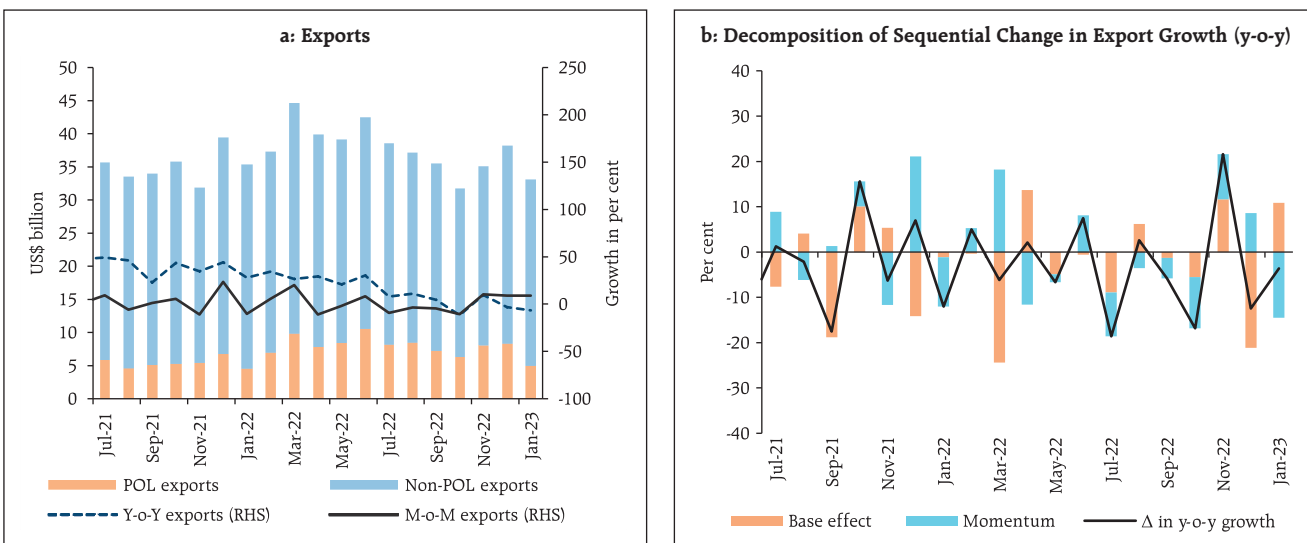
Source: Ministry of Rural Development.

(Chart 18). During April-January 2022-23, cumulative merchandise exports grew by 8.5 per cent to reach US\$ 369.3 billion.

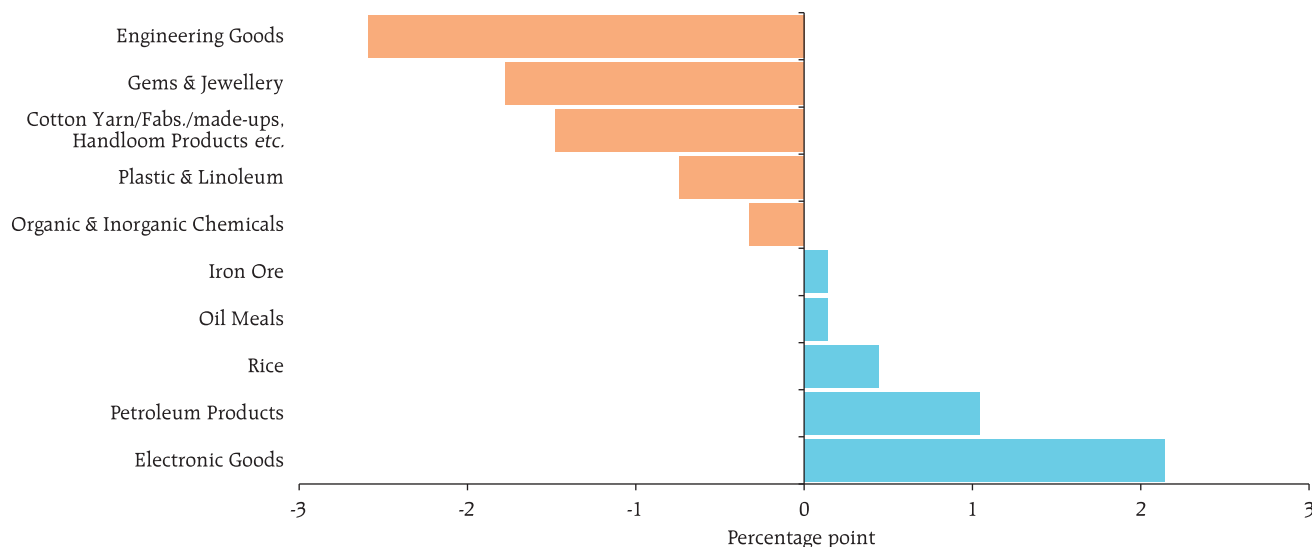
Non-oil exports contracted by 8.7 per cent on y-o-y basis in January 2023, with engineering goods, gems and jewellery, and cotton yarn and fabrics accentuating the decline (Chart 19). On the other hand, petroleum products, electronic goods and rice contributed positively to overall exports.

India's services exports at US\$ 31.3 billion expanded robustly at 20.4 per cent in December 2022 (US\$ 26.0 billion in December 2021) on the back of earnings from software and travel services.

Merchandise imports at US\$ 50.7 billion contracted by 3.6 per cent (y-o-y) in January 2023, partly reflecting the fall in prices of crude oil, certain fertilisers and vegetable oils. On a sequential basis, the decline in

Chart 18: Trend in Merchandise Exports of India

Source: DGC&S.

Chart 19: India's Merchandise Exports – Relative Contributions (December 2022 over December 2021)

imports was even sharper at 15.8 per cent (Chart 20). Gold, electronic goods and pearls and precious stones were the main items that dragged the imports down while petroleum, oil and lubricants (POL), iron and steel and project goods were the commodities that contributed positively (Chart 21).

With international gold prices reaching a 9-month high in January 2023, India's gold imports fell to a 20-month low of US\$ 697 million declining by 70.8 per cent (y-o-y). After remaining in expansionary zone for 25 consecutive months, non-oil non-gold (NONG) imports contracted by 6.7 per cent in January 2023.

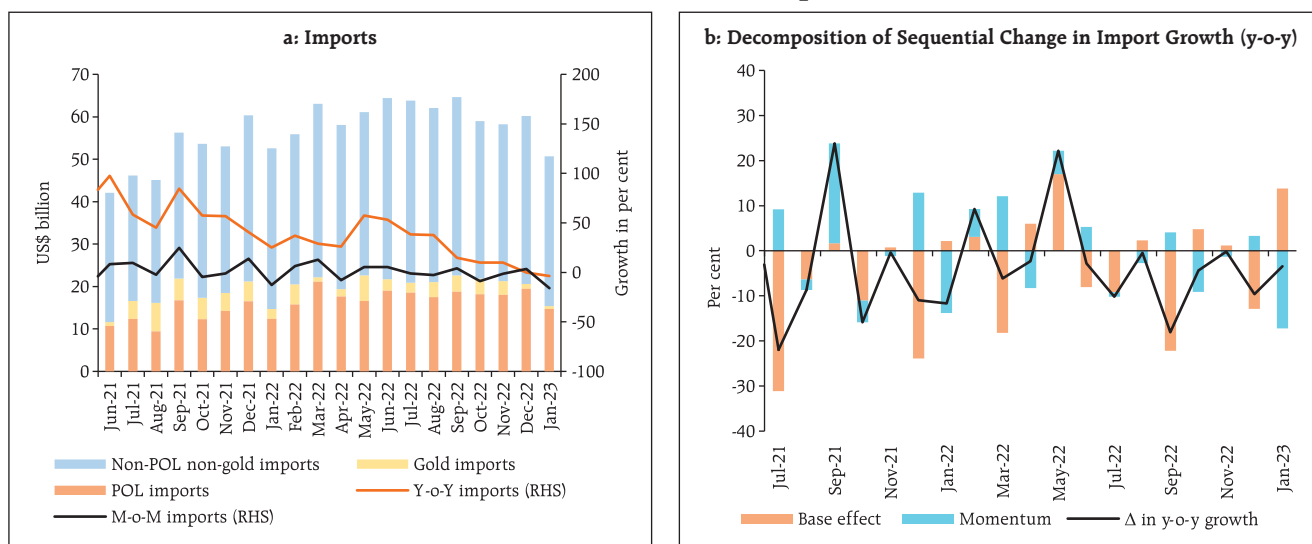
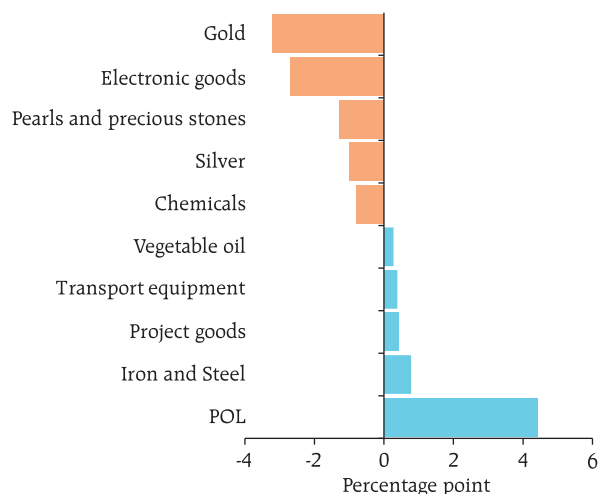
Chart 20: Trend in Merchandise Imports of India

Chart 21: India's Merchandise Imports – Relative Contributions (December 2022 over December 2021)



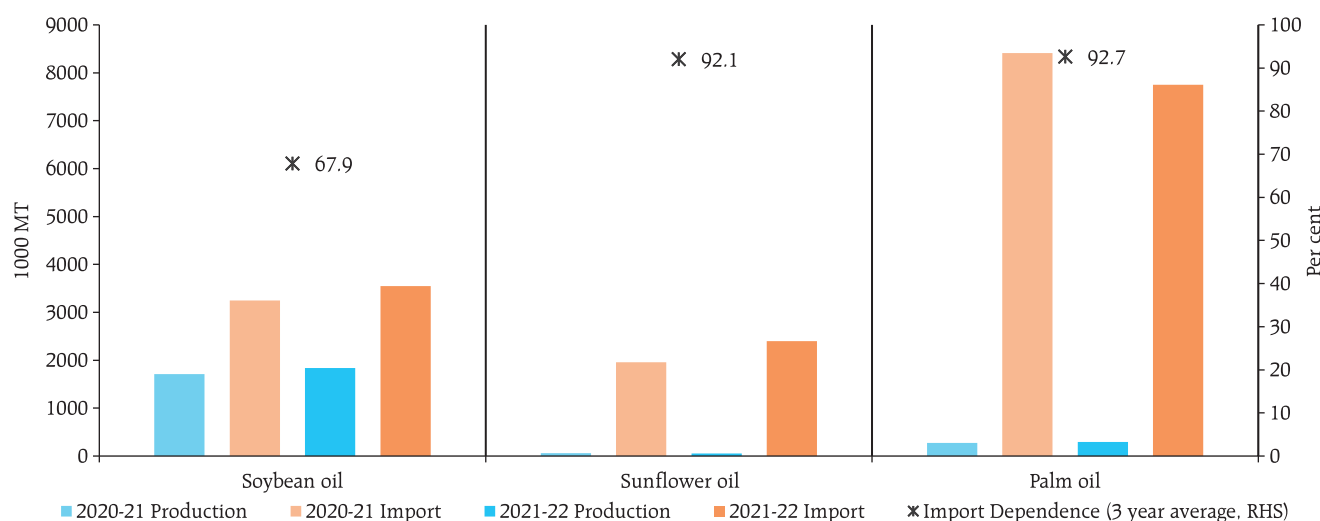
Source: DGCI&S.

Edible oils – for which India is heavily dependent on import¹⁰ – recorded 28 per cent y-o-y growth in volume to reach 15.6 lakh metric tonnes (MT) in

December 2022.¹¹ While palm oil constituted 71 per cent of edible oil imports, sunflower and soybean oil constituted the rest (Chart 22). International palm oil prices, however, jumped sharply in the second week of February after Indonesia, the world's largest exporter, indicated that some export permits will be suspended.¹² During November-December 2022, Indonesia was India's major supplier of refined bleached deodorised (RBD) palmolein and crude palm oil.¹³

On a positive note, mustard seed production is likely to hit a record in the 2022-23 crop year due to highest-ever sowing coverage of 9.8 million hectare and conducive weather conditions in key growing regions. As mustard oil has the largest share in domestic edible oil production, a bumper output of the crop could help reduce imports of other edible oils.¹⁴ Also, the Government's 'National Mission on Edible Oils – Oil Palm', introduced in 2021, is aimed at reducing import

Chart 22: India's Edible Oil Import Dependence



Note: India's edible oils production and imports are for marketing year (October-September).

Source: US Department of Agriculture, Foreign Agricultural Service.

¹⁰ Around 55 per cent of India's domestic demand for edible oil is met through imports.

¹¹ Solvent Extractors' Association of India.

¹² <https://www.reuters.com/markets/commodities/indonesia-suspend-some-palm-oil-export-permits-senior-official-2023-02-06/>

¹³ Solvent Extractors' Association of India.

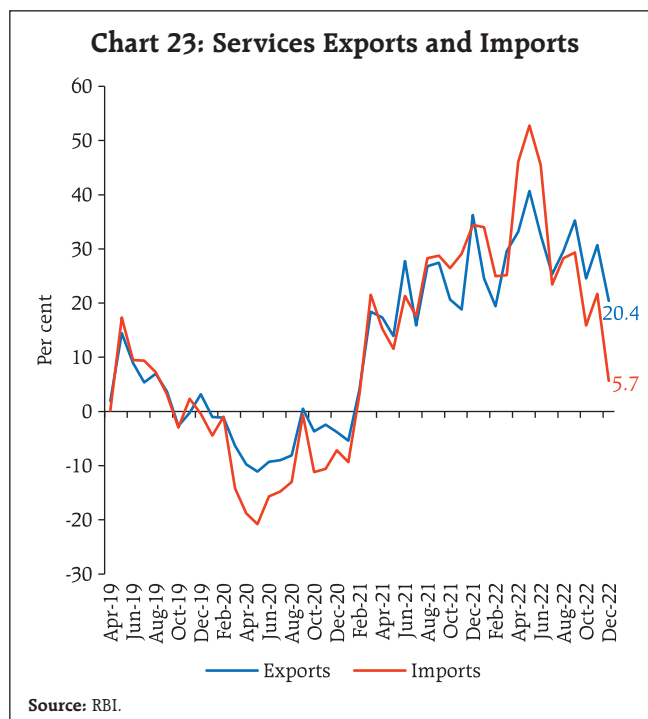
¹⁴ https://www.agriwatch.com/newsdetails.php?st=NEWS&commodity_id=11&sid=631435

dependence on palm oil by increasing domestic crude palm oil production to 11.20 lakh MT by 2025-26 from 0.27 lakh MT in 2019-20. Due to a sharper decline in imports viz-a-viz exports, the merchandise trade deficit fell to a 12-month low of US\$ 17.7 billion in January 2023.

Service imports at US\$ 15.8 billion moderated on account of high base and a decline in transport services. Accordingly, net services earnings are estimated at US\$ 15.5 billion for December 2022 (Chart 23).

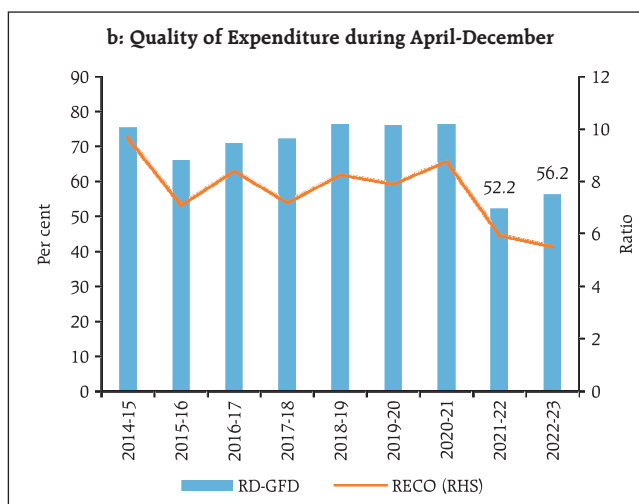
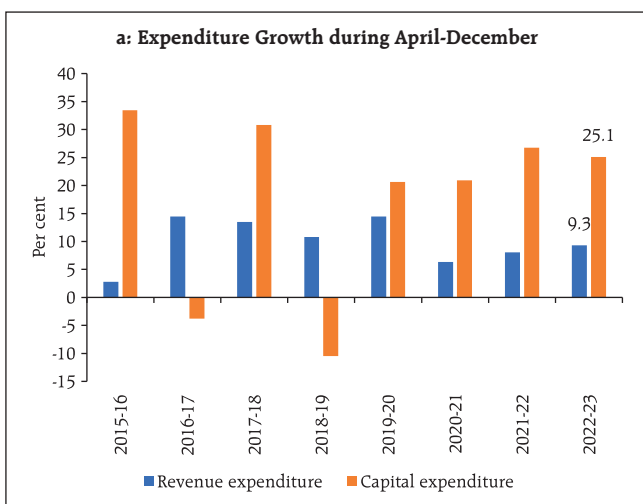
The gross fiscal deficit (GFD) of the central government at 56.6 per cent of revised estimates (RE) during April-December 2022 was higher than in the corresponding period last year (47.7 per cent) due to a pickup in expenditure. Capital outlay grew by 17.6 per cent (y-o-y) while revenue expenditure recorded a modest growth of 9.3 per cent, leading to a marked improvement in the quality of spending (Chart 24).

Gross tax revenue grew by 12.5 per cent during April-December, with collections improving across the board except for excise duty (due to the cut in excise duty on petrol and diesel in May 2022). Direct and



indirect taxes increased by 17.6 per cent and 7.2 per cent (y-o-y), respectively (Chart 25). Non-tax revenues, however, contracted by 17.4 per cent. Non-debt capital receipts increased by 93.6 per cent (y-o-y), led by the successful initial public offer (IPO) of Life Insurance Corporation (LIC).

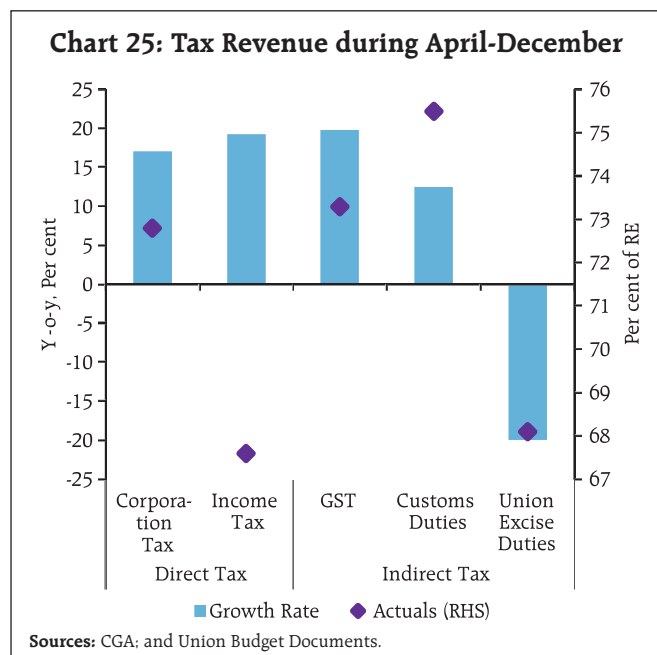
Chart 24: Trends in Government Expenditure



Notes: 1. RD-GFD: Ratio of revenue deficit to gross fiscal deficit (expressed in per cent terms).

2. RECO: Ratio of revenue expenditure to capital outlay.

Sources: Controller General of Accounts (CGA); and Union Budget Documents.

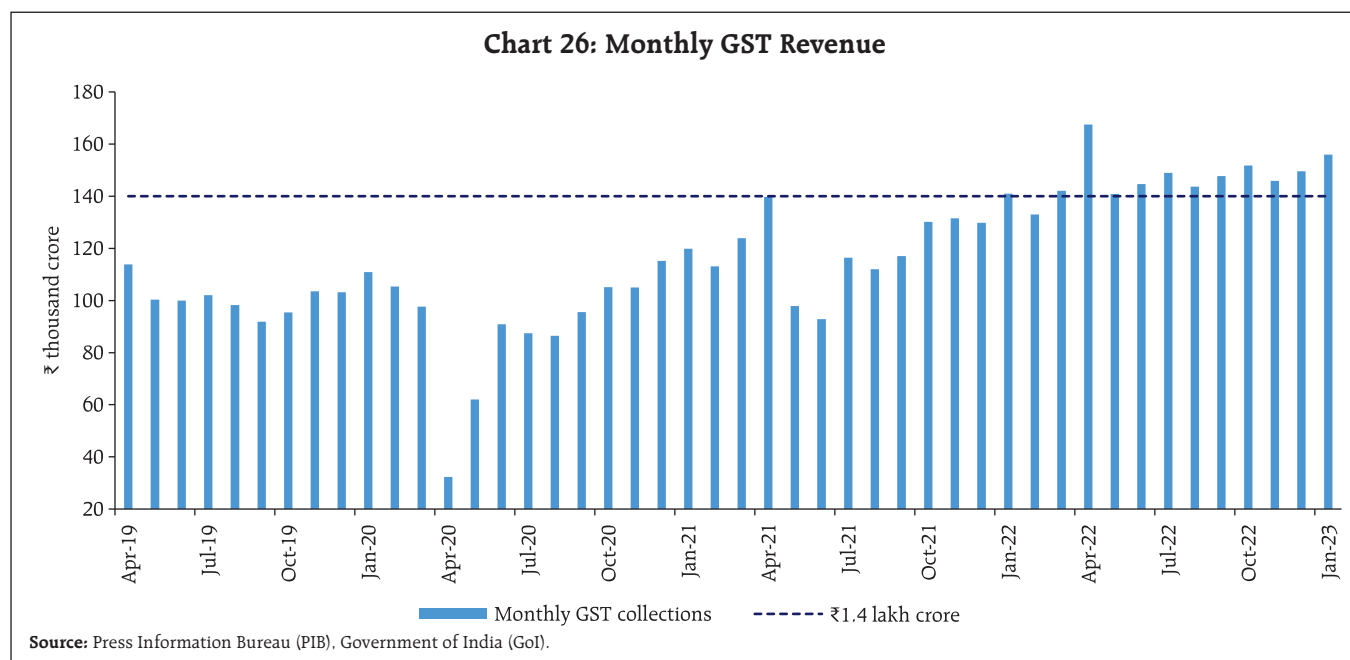


The GST collections (Centre *plus* States) grew by 10.6 per cent (y-o-y) in January 2023 to ₹1.55 lakh crore, highest since April 2022 (Chart 26).

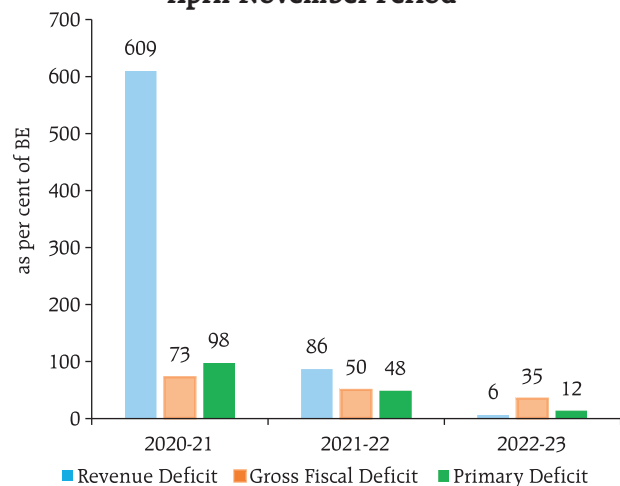
The finances of the States have continued to improve, as reflected by the decline in budgetary deficits during April-November 2022 (Chart 27).¹⁵

Growth in revenue receipts remained robust, driven by the high growth in SGST collections and tax devolution from the Centre. The pace in the revenue expenditure has also been maintained. Capital expenditure picked up with a growth of 9.3 per cent (y-o-y) in the concerned period (Chart 28). This momentum in capex is expected to sustain in Q4:2022-23 with growth in tax devolution and increased offtake under the Special Assistance to States for Capital Investment 2022-23.

The Union Budget 2023-24 laid emphasis on infrastructure development focusing on capital expenditure which is expected to crowd-in private investment and strengthen job creation and demand. The government adhered to the budgeted fiscal target of 6.4 per cent of GDP in 2022-23 (as per revised estimate, RE). In absolute terms, however, the GFD surpassed budget estimates (BE) by ₹94,123 crore as the increase in revenue expenditure outweighed the increase in receipts. In 2023-24 (BE), the GFD is budgeted at 5.9 per cent of GDP, in line with the medium-term target of bringing GFD below 4.5 per cent by 2025-26.

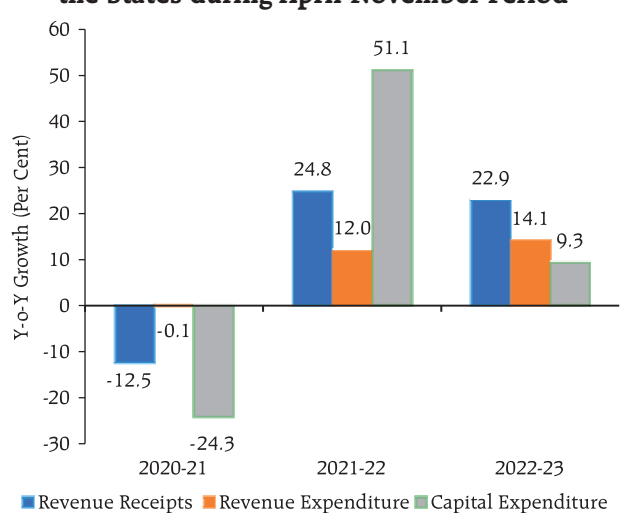


¹⁵ The data pertains to 24 States.

Chart 27: Budgetary Deficits of the States during April-November Period

Note: The data pertains to 24 States.

Sources: Comptroller and Auditor General of India (CAG); and Budget documents of States.

Chart 28: Trends in Revenue and Expenditure of the States during April-November Period

Note: The data pertains to 24 States.

Source: Comptroller and Auditor General of India.

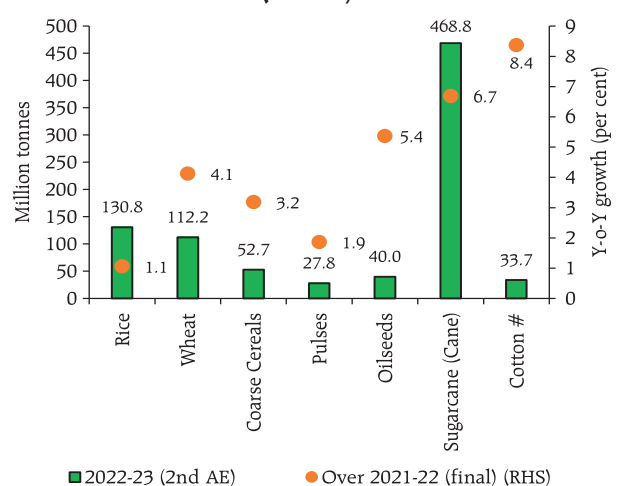
In 2023-24, capital expenditure is budgeted at ₹10 lakh crore which constitute 3.3 per cent of GDP. Effective capital expenditure, which includes capital expenditure of the Centre plus grants-in-aid to States for creation of capital assets, is budgeted at 4.5 per cent of GDP in 2023-24 (BE). By contrast, revenue expenditure is projected to grow by 1.2 per cent. Gross market borrowing through dated securities for 2023-24 is budgeted to increase by 8.6 per cent to ₹15.4 lakh crore while the net market borrowings at ₹11.8 lakh crore is budgeted to increase by 6.6 per cent during 2023-24.

The Union Budget 2023-24 fixed the States' gross fiscal deficit (GFD) limit at 3.5 per cent of gross state domestic product (GSDP), of which 0.5 will be tied to power sector reforms. The Centre has also decided to continue providing interest-free 50-year loans to the States with the enhanced allocation of ₹1.3 trillion during 2023-24 to augment their capital expenditure.

Aggregate Supply

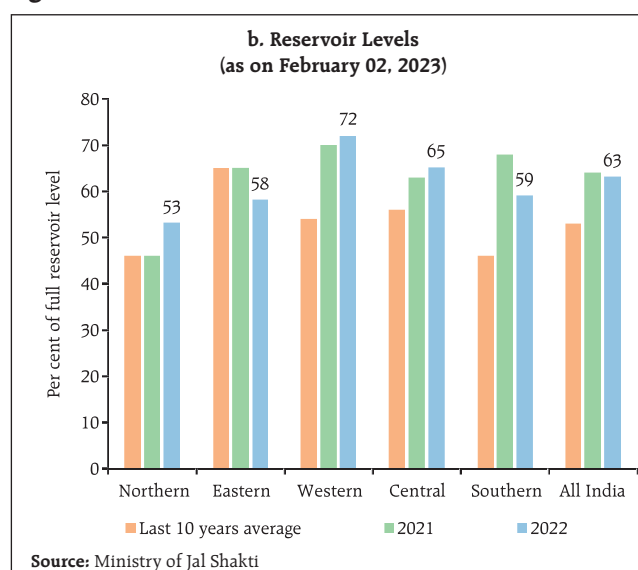
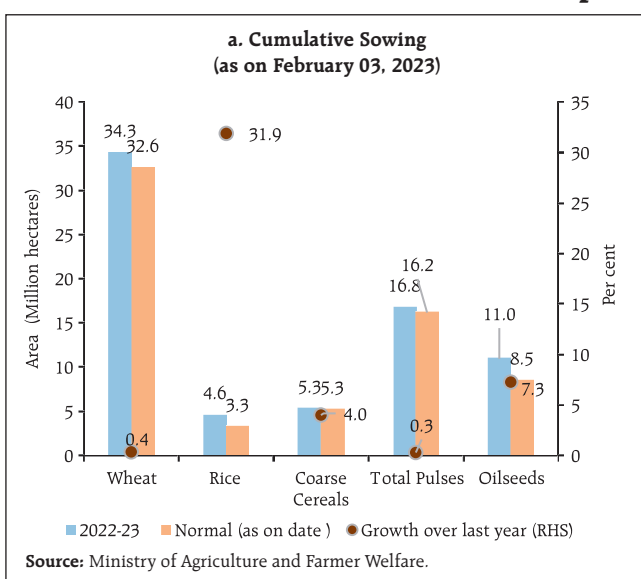
As per the second Advance Estimates (AE) of the agriculture crop production, total foodgrains production in India is projected to reach 323.6 million tonnes in 2022-23, representing a 2.5 per cent

increase over the final estimates for 2021-22. The growth of *rabi* crops at 6.2 per cent has more than offset the decline of 1.2 per cent in *kharif* foodgrains production, resulting in a record production. Fresh production records are estimated for wheat (a *rabi* staple), maize, and pulses in the food crop category, as well as oilseeds and sugarcane among commercial crops. Cotton production has recorded the highest growth rate according to the AEs (Chart 29).

Chart 29: Agriculture Production in 2022-23 (2nd AE)

Million bales of 170kg each.

Source: Ministry of Agriculture and Farmers' Welfare.

Chart 30: Rabi Crops Sowing and Reservoir Status

The *Rabi* crop sowing season ended with a record acreage of 72.1 million hectares, with substantial increase under all the crops (Chart 30a). Reservoir levels remained comfortable (Chart 30b).

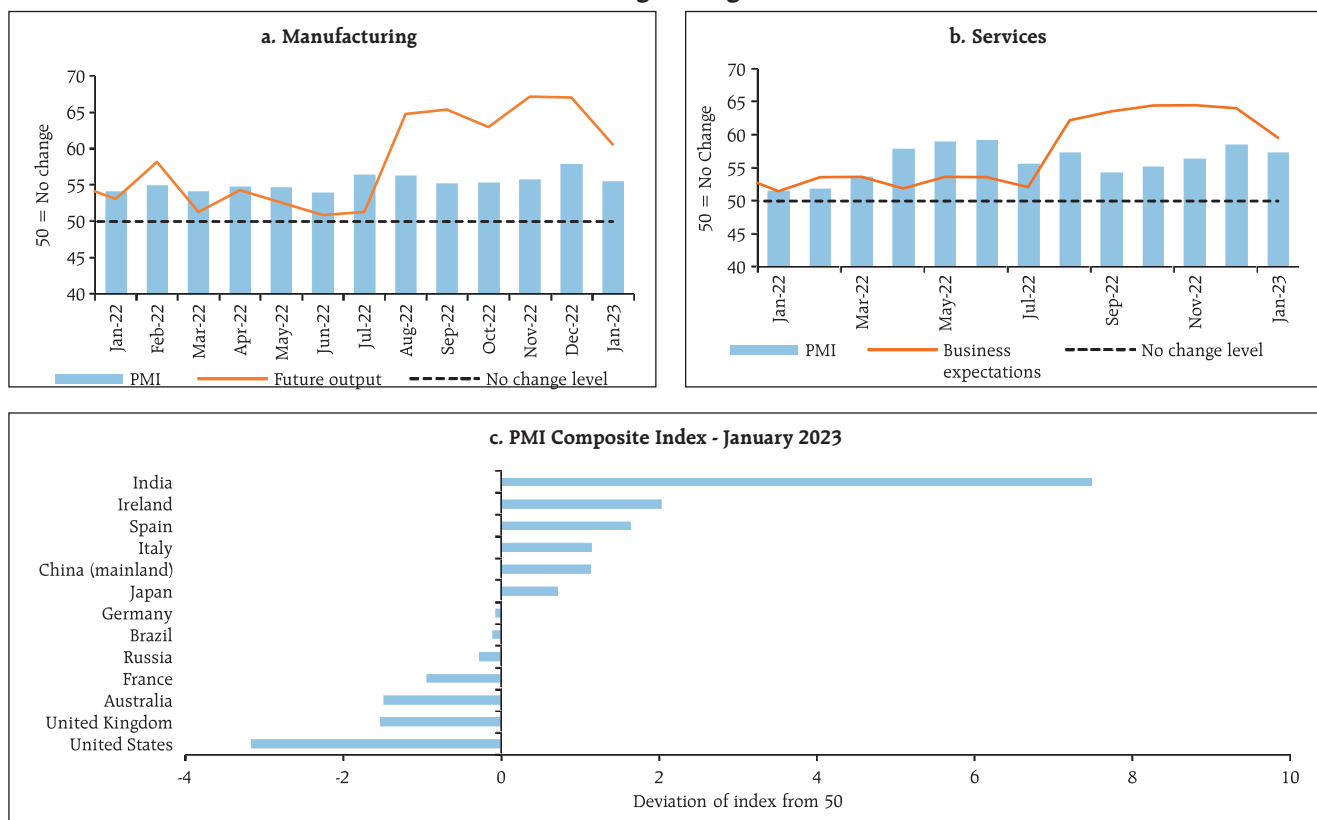
As on February 09, 2023 the cumulative rice procurement (including unmilled paddy) was marginally lower than a year ago, but *mandi* arrivals of paddy in the ongoing *Kharif* marketing season have been higher by 36.9 per cent y-o-y (as on February 09, 2023). As on February 01, 2023 public stocks of rice and wheat remained comfortable at 6.2 and 1.1 times of the buffer norms, respectively. On January 25, 2023 the Government announced the open market sale of 3 million tonnes of wheat through various channels from the central pool. Firstly, as on February 16, 2023. It has already sold 1.3 million metric tonnes of wheat through two e-auctions. Secondly, the Government has also allocated 3 lakh metric tonnes of wheat at a concessional rate to the PSUs/ cooperatives/ Federations, *Kendriya Bhandar* and NCCF/NAFED.

The Union Budget 2023-24 focused on wide-ranging reforms and policies in the agriculture

and rural sectors including: (i) an increase in the production and consumption of millets; (ii) diversification and promotion of allied sectors; (iii) boosting logistics infrastructure for last-mile connectivity; (iv) thrust on agricultural exports; (v) cooperative-based development and growth; and (vi) strengthening agricultural extension through digital public infrastructure. The Government also intends to nurture an agri-tech start-up ecosystem through the Agriculture Accelerator Fund to promote innovation and entrepreneurship.

The headline PMI for manufacturing and services at 55.4 and 57.2, respectively, remained in expansionary zone in January 2023 despite a sequential blip (Chart 31a and 31b). The outlook for manufacturing and services remains buoyant, and above the historical average. A cross-country comparison shows that India had the highest PMI readings among major economies (Chart 31c).

Capacity utilisation in the manufacturing sector surpassed its long-term average in Q2:2022-23. Manufacturers expect further improvements

Chart 31: Purchasing Managers' Index (PMI)

Source: S&P Global.

in subsequent quarters. Firms in manufacturing, infrastructure and services sectors exude high optimism on demand conditions up to H1:2023-24, as reflected in the Reserve Bank's outlook surveys (Annex 1).

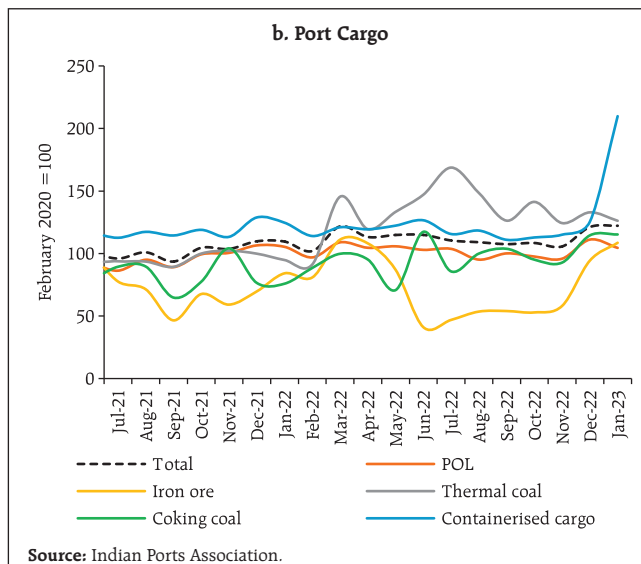
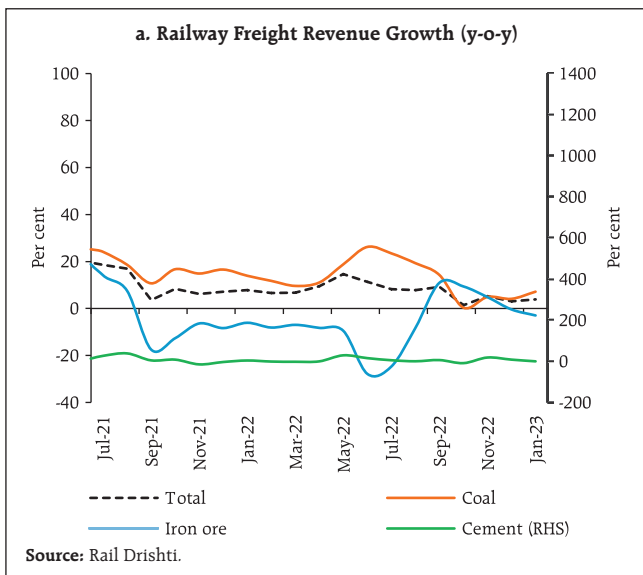
In the services sector, transport indicators recorded expansion, with railway freight earnings growing on both month-on-month (m-o-m) and y-o-y basis in January 2023 enabled by the Indian Railways' Hunger for Cargo initiative (Chart 32a). Cargo traffic at major ports gathered momentum in January due to an upturn in cargo of coking coal and containerised cargo (Chart 32b).

In the construction sector, steel consumption recorded y-o-y growth of 2.7 per cent in January

2023 as compared to 0.5 per cent a year ago. Growth in cement production decelerated over a high base (Chart 33).

High frequency indicators in the service sector point towards positive momentum continuing generally, except for international passenger movement and air cargo traffic (Table 2).

In terms of key policy initiatives at the State level, Tamil Nadu launched the Tamil Nadu Emerging Sector Seed Fund (TNESSF) aimed at providing investments for start-ups in emerging/sunrise sectors. West Bengal introduced a scheme offering various fiscal incentives to the textile sector. Odisha floated a global tender to disinvest 49 per cent of its

Chart 32: Railway and Cargo Traffic

stake in the Odisha Power Generation Corporation (OPGC). The Uttar Pradesh Government has approved

a new scheme to facilitate development of private industrial parks in the State.

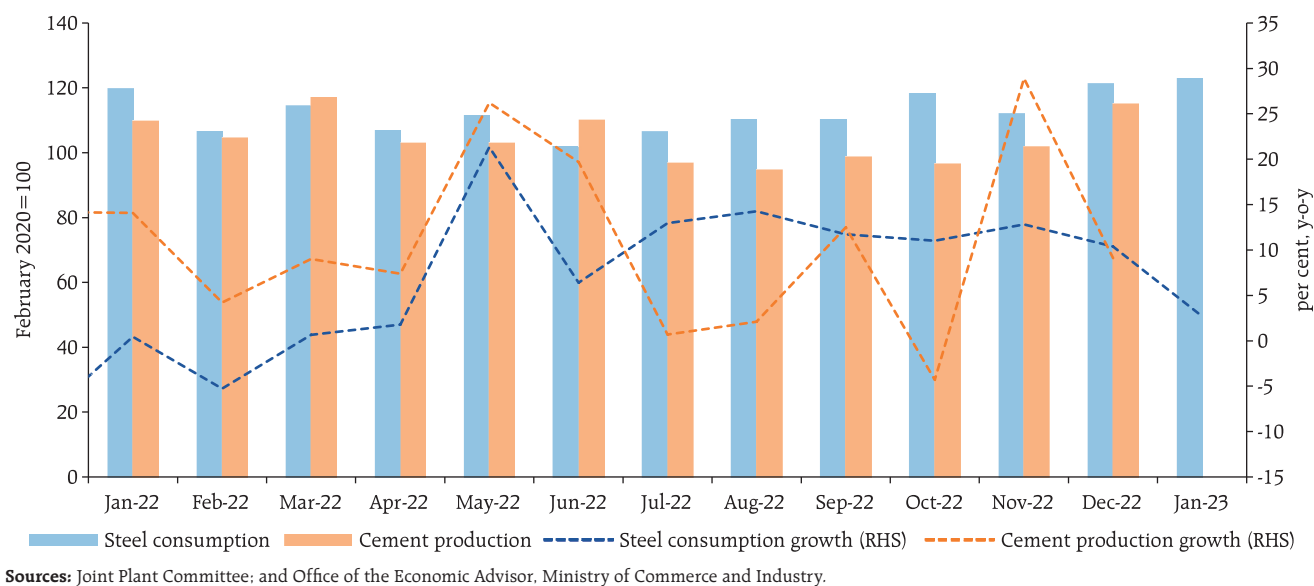
Chart 33: Steel Consumption and Cement Production

Table 2: High Frequency Indicators – Services

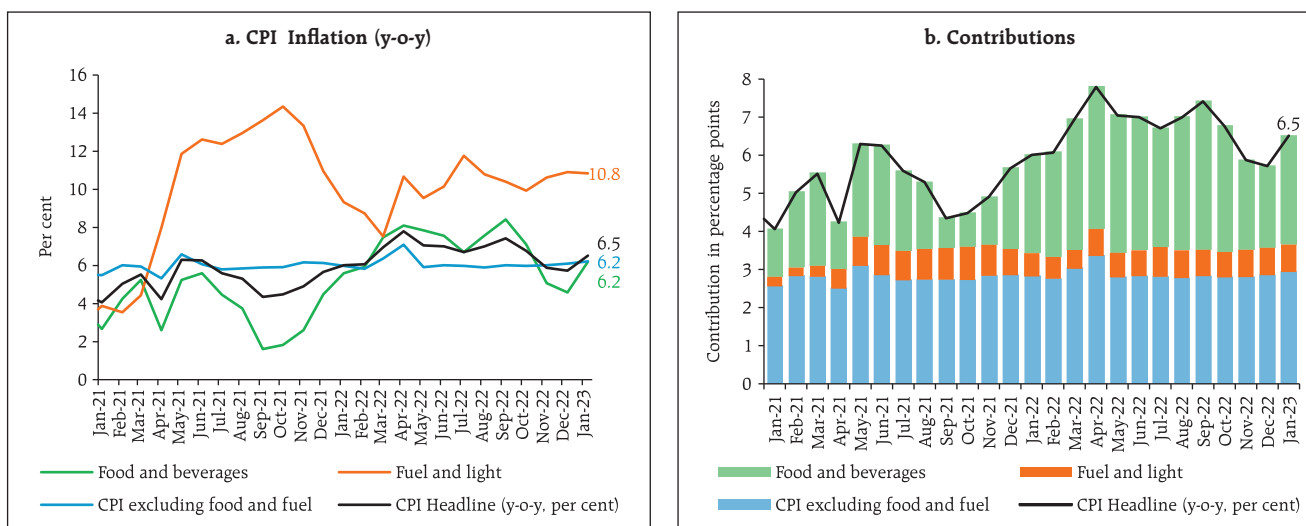
| Services Growth (y-o-y, per cent) | | Oct-22 | Nov-22 | Dec-22 | Jan-23 |
|---|-------------------------------------|--------|--------|--------|--------|
| Sector | Indicator | | | | |
| Urban Demand | Passenger Vehicles Sales | 28.6 | 28.1 | 7.2 | 17.2 |
| | Two Wheeler Sales | 2.3 | 16.5 | 3.9 | 5.0 |
| Rural Demand | Three Wheeler Sales | 70.4 | 103.2 | 37.6 | 103.0 |
| | Tractor Sales | 6.8 | 6.5 | 25.6 | 24.4 |
| Trade, hotels, transport, communication | Commercial Vehicles Sales | 16.6 | | | |
| | Railway Freight Traffic | 1.4 | 5.2 | 3.1 | 3.8 |
| | Port Cargo Traffic | 3.1 | 1.8 | 10.3 | |
| | Domestic Air Cargo Traffic | -8.3 | 3.7 | -3.6 | |
| | International Air Cargo Traffic | -18.7 | -6.0 | -7.4 | |
| | Domestic Air Passenger Traffic | 30.4 | 12.6 | 14.6 | |
| | International Air Passenger Traffic | 115.0 | 97.5 | 85.9 | |
| | GST E-way Bills (Total) | 4.6 | 32.0 | 17.5 | 19.7 |
| | GST E-way Bills (Intra State) | 12.0 | 37.7 | 23.2 | 24.1 |
| | GST E-way Bills (Inter State) | -5.9 | 23.1 | 8.6 | 12.8 |
| | Tourist Arrivals | 243.2 | 191.3 | 204.2 | |
| Construction | Steel Consumption | 11.0 | 12.8 | 10.3 | 2.7 |
| | Cement Production | -4.3 | 28.9 | 9.1 | |
| PMI Index | Services | 55.1 | 56.4 | 58.5 | 57.2 |

Sources: CMIE; CEIC data; IHS Markit; SIAM; Airports Authority of India; and Joint Plant Committee.

Inflation

As per the provisional data released by the National Statistical Office (NSO) inflation – as measured by y-o-y changes in the all-India

consumer price index (CPI) – increased sharply to 6.5 per cent in January 2023 from 5.7 per cent in December 2022 (Chart 34a). The index increased by 46 bps m-o-m, which along with an unfavourable

Chart 34: Trends and Drivers of CPI Inflation

Note: CPI inflation for April-May 2021 was computed based on imputed CPI indices for April-May 2020.

Sources: National Statistical Office (NSO); and RBI staff estimates.

base effect (m-o-m change in prices a year ago) of 30 bps, resulted in a rise in headline inflation by around 80 bps between December and January.

Price pressures mainly emanated from m-o-m increases in the food and beverages group (45 bps) and in the 'core' (CPI excluding food and fuel) group (52 bps). The index for fuel group, however, remained unchanged during the month.

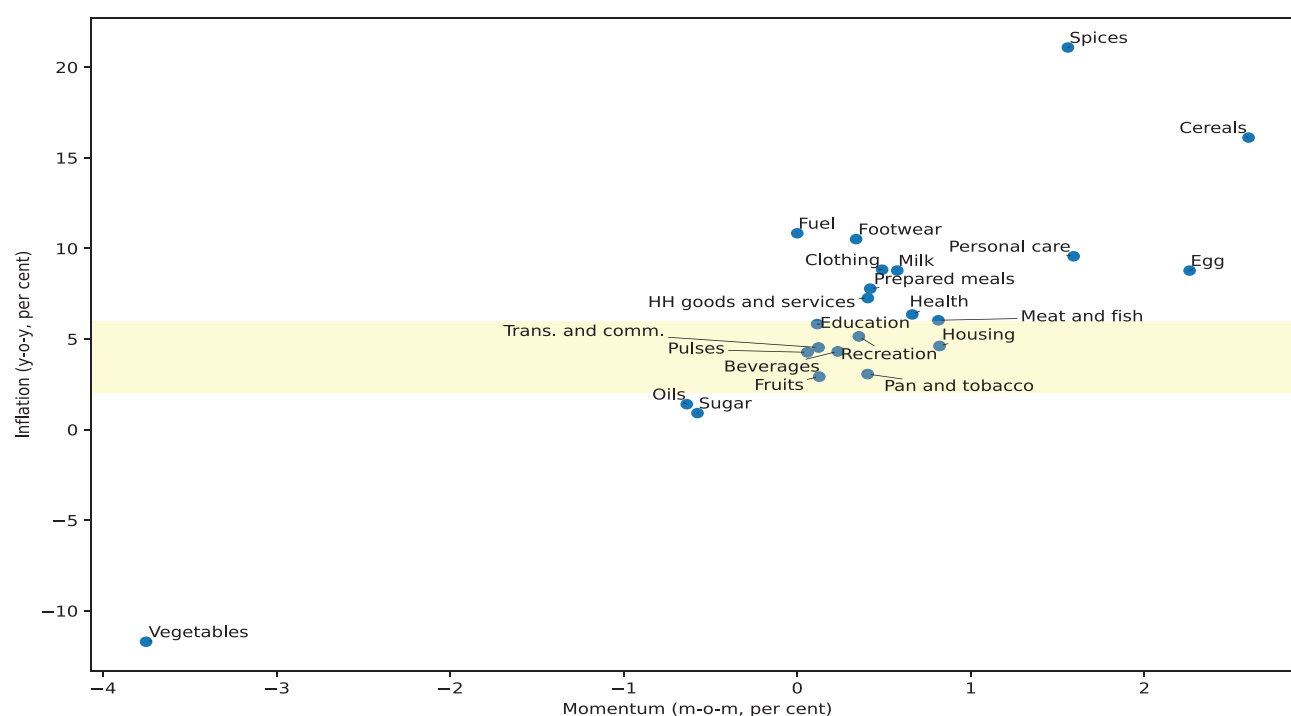
CPI food inflation rose sharply to 6.2 per cent in January from 4.6 per cent a month ago (Chart 34b). Within the food group, inflation rose significantly in cereals to 16.1 per cent - the highest since June 2013 - and in spices, to 21.1 per cent - the highest in the current CPI series (Chart 35). Other sub-groups such as fruits, edible oils, sugar, protein-based food (pulses, eggs, meat, fish and milk), and non-alcoholic beverages posted increases in inflation during the

month. Vegetables registered lower deflation in January 2023 *vis-à-vis* December 2022 (Chart 36).

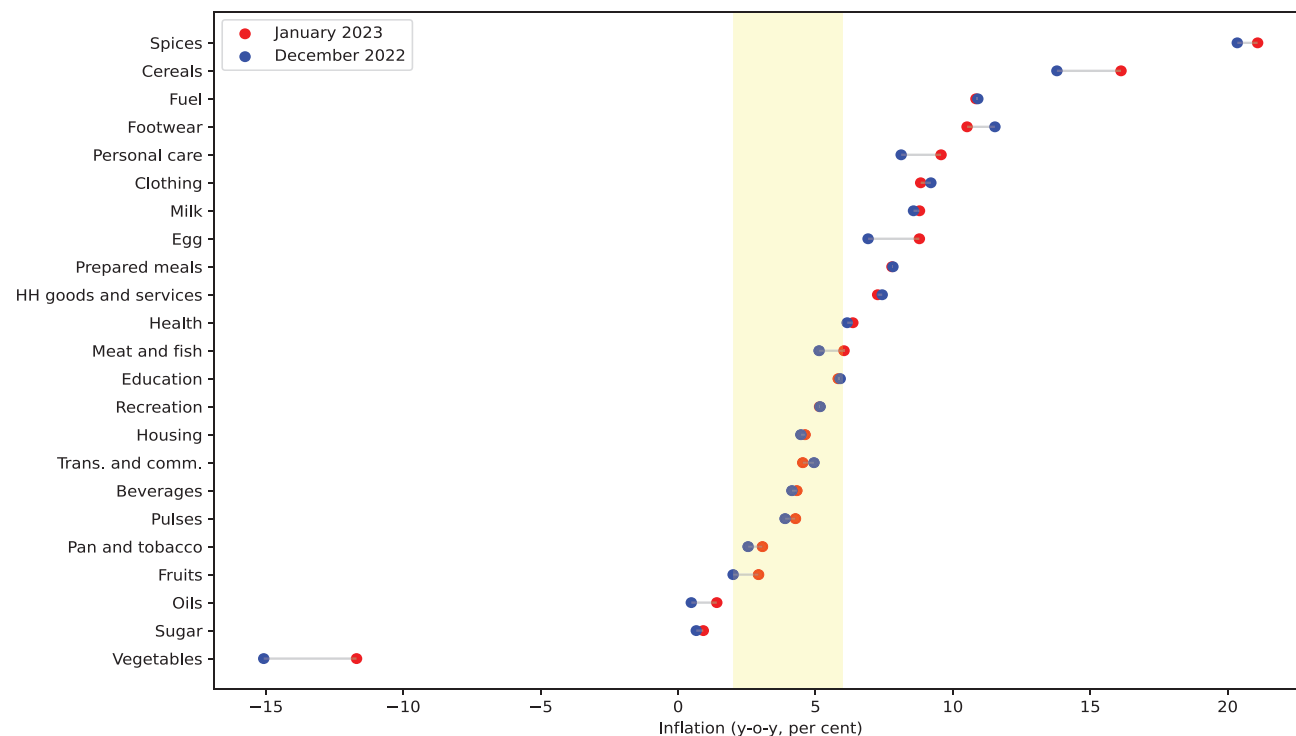
Inflation in the fuel and light group softened marginally to 10.8 per cent in January from 10.9 per cent in December. While inflation in kerosene-PDS and electricity registered some moderation, liquefied petroleum gas (LPG) posted a higher order of price increase than a month ago. The fuel group with a weight of 6.8 per cent in the CPI basket contributed 11.3 per cent of headline inflation in January.

CPI core inflation increased to 6.2 per cent in January from 6.1 per cent in December driven by pick-up in inflation under sub-groups such as pan, tobacco and intoxicants, housing, health, and personal care and effects. On the other hand, clothing and footwear, household goods and services, transport and communication and education sub-groups witnessed a softening of inflation in January.

Chart 35: Annual Inflation (y-o-y) and Momentum (m-o-m) across Sub-groups



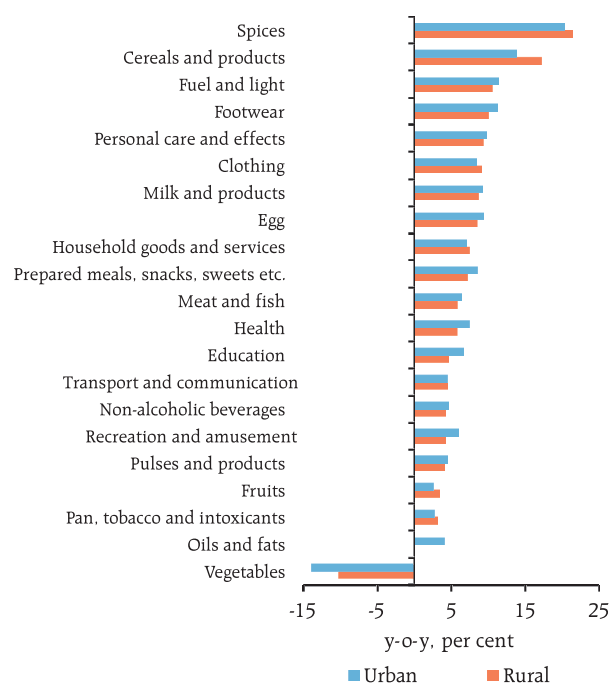
Sources: NSO; and RBI staff estimates.

Chart 36: Annual Inflation across Sub-groups (January 2023 vs December 2022)

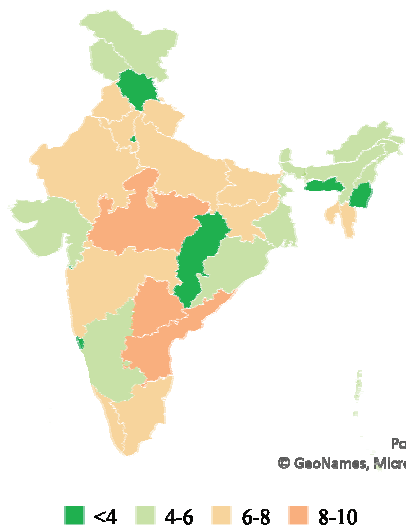
Rural inflation at 6.85 per cent continued to outpace urban inflation (6.00 per cent) in January 2023. While inflation in cereals, fruits, clothing were higher in rural areas, milk, eggs, meat, and fuel and light registered higher inflation in urban centres (Chart 37).

Among States, Andhra Pradesh, Madhya Pradesh and Telangana experienced inflation in excess of 8 per cent whereas Chhattisgarh, Daman and Diu, Delhi, Goa, Himachal Pradesh, Manipur and Meghalaya recorded inflation below 4 per cent (Chart 38).

High frequency data on food prices for February 2023 (up to February 13) show that prices continued to increase for rice and wheat. Barring for moong, pulses prices edged down. Edible oil and vegetable prices continued to witness a decline in February (Chart 39).

Chart 37: Inflation in Select Items (Rural versus Urban)

**Chart 38: Spatial Distribution of Inflation
January 2023 (CPI- Combined, y-o-y)**



Sources: NSO; and RBI Staff Estimates.

Retail selling prices of petrol and diesel in the four major metros remained steady in February so

Table 3: Petroleum Products Prices

| Item | Unit | Domestic Prices | | | Month-over-month (per cent) | |
|-----------------------|------------|-----------------|---------|----------|-----------------------------|--------|
| | | Feb-22 | Jan-23 | Feb-23 ^ | Jan-23 | Feb-23 |
| Petrol | ₹/litre | 102.87 | 102.92 | 102.92 | 0.0 | 0.0 |
| Diesel | ₹/litre | 90.51 | 92.72 | 92.72 | 0.0 | 0.0 |
| Kerosene (subsidised) | ₹/litre | 42.11 | 53.67 | 55.79 | -9.0 | 4.0 |
| LPG (non-subsidised) | ₹/cylinder | 910.13 | 1063.25 | 1063.25 | 0.0 | 0.0 |

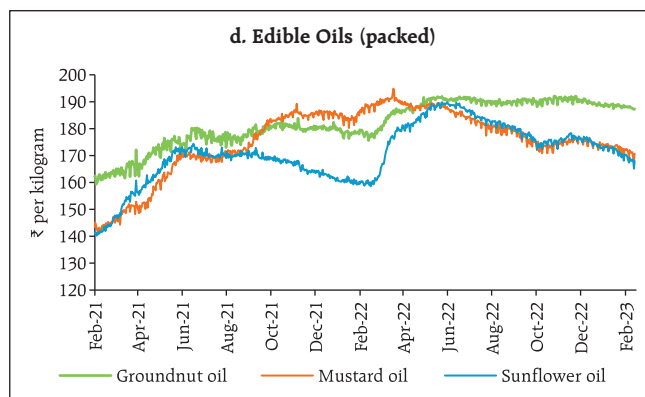
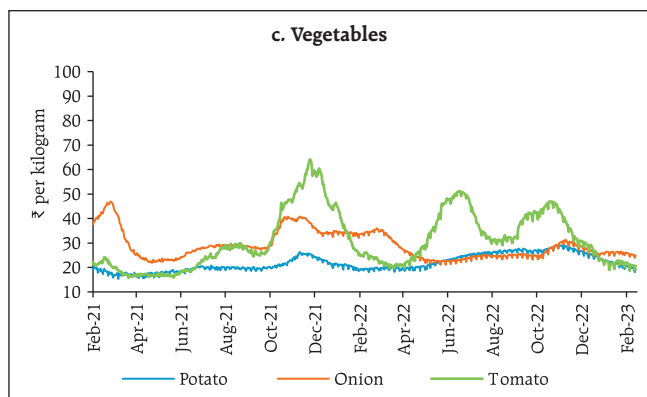
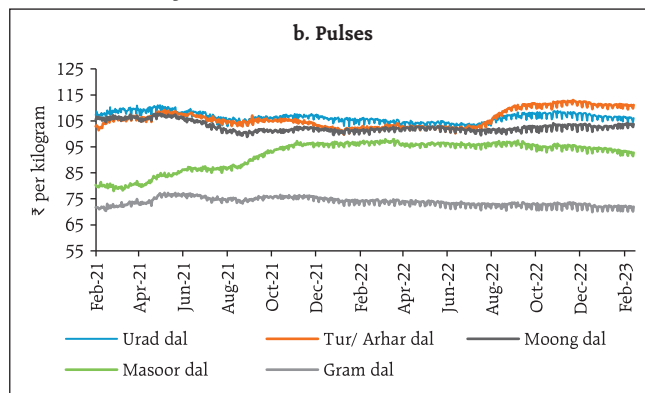
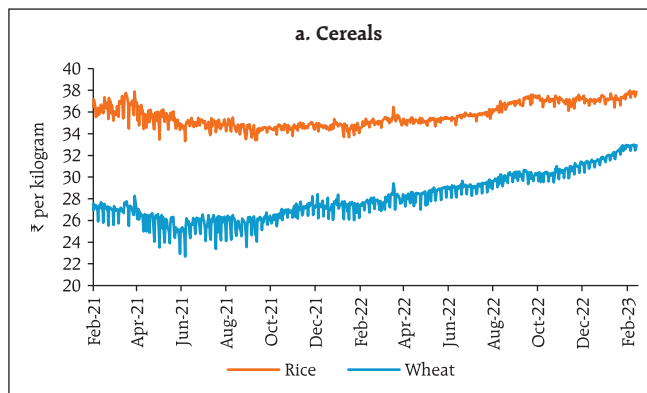
^ : For the period February 1-13, 2023.

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.

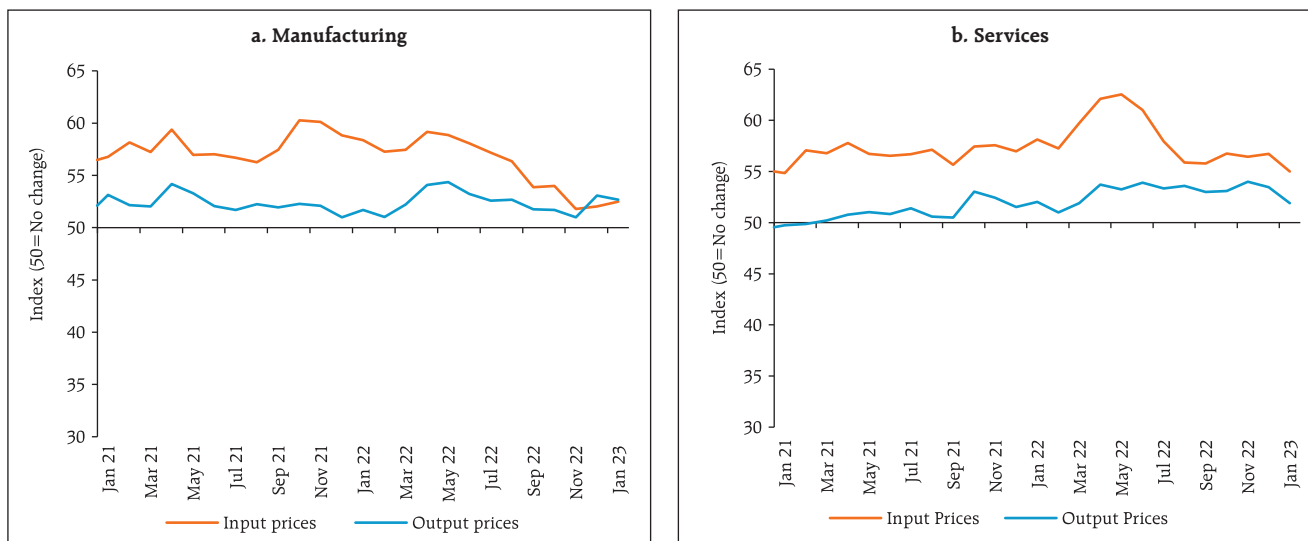
Sources: IOCL; Petroleum Planning and Analysis Cell (PPAC); and RBI staff estimates.

far. While LPG prices were kept unchanged, kerosene prices increased after declining sharply in January (Table 3).

Chart 39: DCA Essential Commodity Prices



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

Chart 40: PMI: Input and Output Prices

Source: S&P Global.

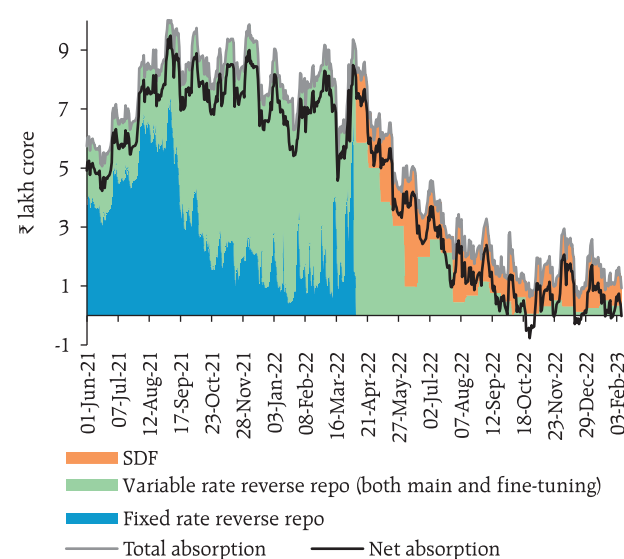
Input costs and selling prices, as reflected in the PMIs, remained in expansionary mode for both manufacturing and services (Chart 40), with the latter witnessing a sequential moderation in the pace of increase.

IV. Financial Conditions

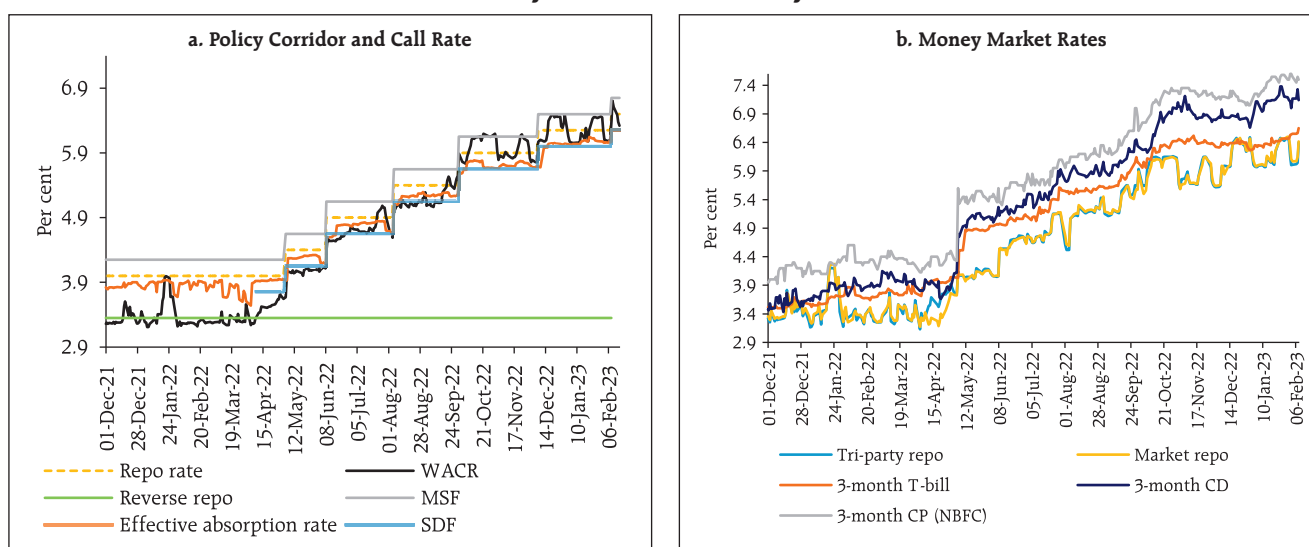
Surplus liquidity moderated in the second half of January 2023 due to outflows on account of GST collections¹⁶, but government spending at the beginning of February expanded system liquidity again. Overall, average daily absorptions under the liquidity adjustment facility (LAF) narrowed to ₹1.3 lakh crore during January 16 through February 8, 2023 from ₹1.5 lakh crore during mid-December through January 15, 2023 (Chart 41). Of the daily average surplus liquidity during this period, ₹0.4 lakh crore was absorbed through the overnight standing deposit facility (SDF), while the remaining was mopped up through variable rate reverse repo (VRRR) auctions.

¹⁶ The monthly GST collections of January 2023 at ₹1.56 lakh crore was second highest after ₹1.68 lakh crore in April 2022.

Declining surplus liquidity prompted some banks to access the marginal standing facility (MSF), which averaged ₹0.06 lakh crore during the same period. Banks resorting to the MSF in the backdrop of large placement of surplus funds under the SDF is reflective of skewed liquidity distribution in the system. On a net

Chart 41: Liquidity Conditions

Source: RBI.

Chart 42: Policy Corridor and Money Market Rates

Sources: RBI; Bloomberg; and RBI staff estimates.

basis (adjusted for injections through repo and MSF), average absorption declined to ₹0.34 lakh crore during the period under review from ₹0.51 lakh crore in the preceding period with net LAF slipping intermittently into deficit mode. The amount parked under the fortnightly VRRR auctions was also lower at ₹0.35 lakh crore for the fortnight beginning January 27, 2023 (₹0.52 lakh crore during the previous auction).

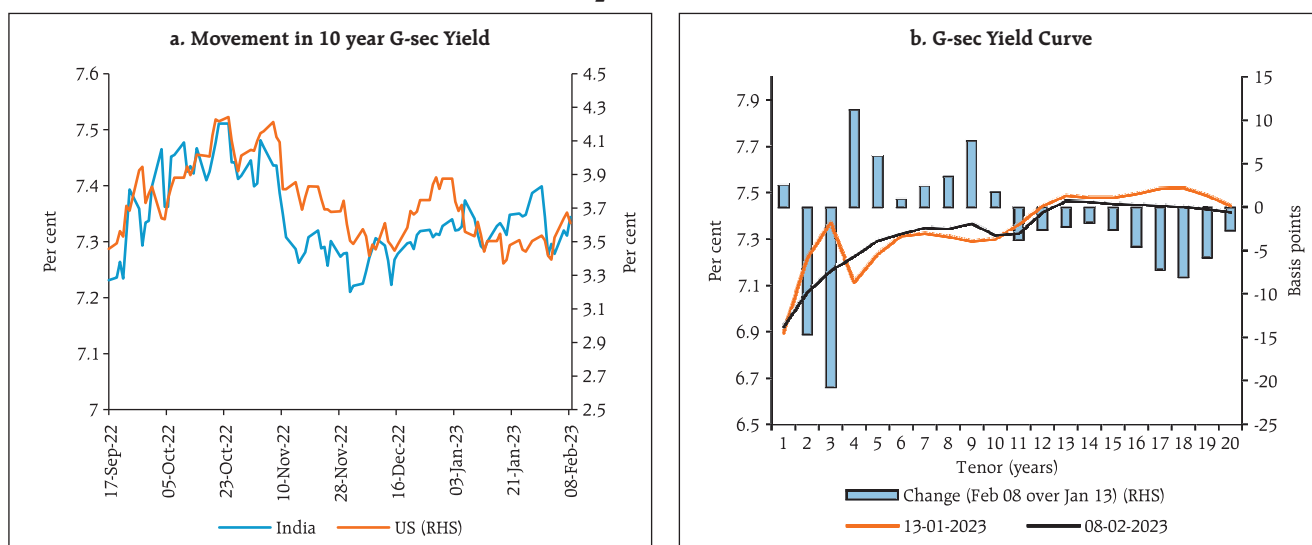
Amidst moderating surplus liquidity conditions and upcoming maturity of long term repo operations, the Reserve Bank, for the first time under the revised liquidity framework, conducted 14-day variable rate repo (VRR) operation on February 10, 2023 for which bids received amounted to ₹1.34 lakh crore, as against the notified amount of ₹0.50 lakh crore. Going ahead, the likely increase in government spending as evident from the revised estimates for 2022-23 presented in Union Budget 2023-24 would help offset the expected liquidity drainage from the usual expansion in currency in circulation during February -March and the maturity of LTRO and TLTRO (partially) during March-April 2023.¹⁷

¹⁷ ₹13,517 crore will mature in February-March 2023 and ₹61,131 crore will mature in April 2023.

The weighted average call rate (WACR) briefly touched the upper bound of the LAF corridor towards the end of January 2023, but softened thereafter. During the period under review, the WACR averaged 6.28 per cent, trading (on an average) close to the policy repo rate (Chart 42a). Activity in the call market picked up, with average daily volume at ₹14,420 crores during January 16 through February 8, 2023, up from ₹11,343 crore during December 13, 2022 to January 15, 2023.

Concomitantly, rates in the collateralised segment also firmed up – while the triparty repo rate traded 4 bps below the policy repo rate, market repo rates traded close to the policy repo rate. Across the term money segment, the rate on 3-month treasury bill (T-bill) traded 7 bps below the MSF rate while the 3-month rates for certificates of deposit (CDs) and commercial papers (CPs) for NBFCs ruled 67 bps and 102 bps, respectively, above the MSF rate (Chart 42b).

In the primary market, fund mobilisation through CD issuances was robust at ₹5.2 lakh crore during the year so far (up to January 13), higher than ₹1.3 lakh crore for the corresponding period last year, reflecting banks' additional demand for funds on account of

Chart 43: Developments in the G-sec Market

Sources: Bloomberg; CCIL; and RBI staff estimates.

buoyant credit offtake. CP issuances declined to ₹10.9 lakh crore during the year so far (up to January 15) from ₹17.2 lakh crore in the corresponding period last year, with recourse to bank credit emerging as the preferred mode of funds mobilisation. The average risk premia in the money market (3-month CP *minus* 91-day treasury bill) remained elevated at 110 bps during this period, reflecting the moderation in surplus liquidity.

The 10-year benchmark g-sec yield eased in response to the commitment to fiscal consolidation in the Union Budget 2023-24 and the announcement of lower than anticipated gross market borrowings (Chart 43a). After peaking at an intra-day high of 7.40 per cent, the benchmark yield eased to 7.28 per cent by the end of the trading session on the budget announcement day, *i.e.*, February 1, 2023. Subsequently, the G-sec yield exhibited a hardening bias in tandem with US treasury yields and closed at 7.34 per cent. Across the term structure, g-sec yields moderated sharply at the short end of the yield curve, which is indicative of lower rate hike expectations, going forward (Chart 43b).

Corporate bond yields and spreads hardened across rating categories, particularly for 3-5 years maturities where issuances are mostly concentrated (Table 4). Funds mobilised through corporate bond

Table 4: Financial Markets - Rates and Spread

| Instrument | Interest Rates (per cent) | | | Spread (bps) (Over Corresponding Risk-free Rate) | | |
|------------------------|--------------------------------------|--------------------------------------|-----------------------|--|--------------------------------------|-----------------------|
| | Dec 13, 2022 – Jan 15, 2023 | Jan 16, 2023 – Feb 07, 2023 | Variation (in bps) | Dec 13, 2022 – Jan 15, 2023 | Jan 16, 2023 – Feb 07, 2023 | Variation (in bps) |
| 1 | 2 | 3 | (4 = 3-2) | 5 | 6 | (7 = 6-5) |
| Corporate Bonds | | | | | | |
| (i) AAA (1-year) | 7.87 | 7.87 | 0 | 91 | 88 | -3 |
| (ii) AAA (3-year) | 7.77 | 7.79 | 2 | 59 | 62 | 3 |
| (iii) AAA (5-year) | 7.76 | 7.86 | 10 | 40 | 52 | 12 |
| (iv) AA (3-year) | 8.49 | 8.49 | 0 | 130 | 132 | 2 |
| (v) BBB-(3-year) | 12.14 | 12.13 | -1 | 496 | 497 | 1 |

Note: Yields and spreads are computed as monthly averages.

Sources: FIMMDA; and Bloomberg.

issuances increased to ₹1.37 lakh crore during December from ₹0.77 lakh crore in November 2022. The average risk premia in the bond market (5 year AAA minus 5 year g-sec) firmed up to 52 bps during January 16 through February 8, 2023 from 40 bps during December 13, 2022 to January 15, 2023.

Reserve money (RM) excluding the first-round impact of change in cash reserve ratio (CRR) grew by 8.8 per cent (y-o-y) as on February 10, 2023 (7.7 per cent a year ago) [Chart 44a]. Currency in circulation (CiC), the largest component of RM, grew by 8.15 per cent (8.2 per cent last year). Money supply (M3) grew by 9.8 per cent as on January 27, 2023 (8.4 per cent last year), primarily driven by its largest component - aggregate deposits with banks - which grew by 10.0 per cent. Scheduled commercial banks' (SCBs') credit growth remained resilient at 16.3 per cent as on January 27, 2023 (8.2 per cent last year). With the pick-up in deposit mobilisation, the incremental C-D ratio has moderated since mid-December 2022 (Chart 44b).

Banks have revised their external benchmark-based lending rates (EBLRs) upwards by a magnitude of 225 bps during May 2022 to January 2023. The

1-year median marginal cost of funds-based lending rate (MCLR) of SCBs has increased by 120 bps. Consequently, the weighted average lending rates (WALR) on fresh and outstanding rupee loans of SCBs increased to 137 bps and 80 bps, respectively, during May-December 2022. The weighted average domestic term deposit rate (WADTDR) on outstanding deposits of SCBs increased by 75 bps during the same period (Table 5).

The Government of India revised the rates on various small savings schemes for Q4:2022-23 in the range of 20 to 110 bps on December 30, 2022, with the highest increase in time deposits (Chart 45). The interest rates on post office term deposits of up to 3-year tenor are now closely aligned with formula-based rates. A new scheme, *i.e.*, *Mahila Samman* Savings Certificate, was announced in the Union Budget 2023-24 which would offer a deposit facility up to ₹2 lakh for a tenor of 2 years at a fixed interest rate of 7.5 per cent for female depositors. The term deposit rates offered by banks are, in general, lower than those on small savings deposits of similar maturity for up to 3-year tenor.

Chart 44: Monetary and Credit Conditions

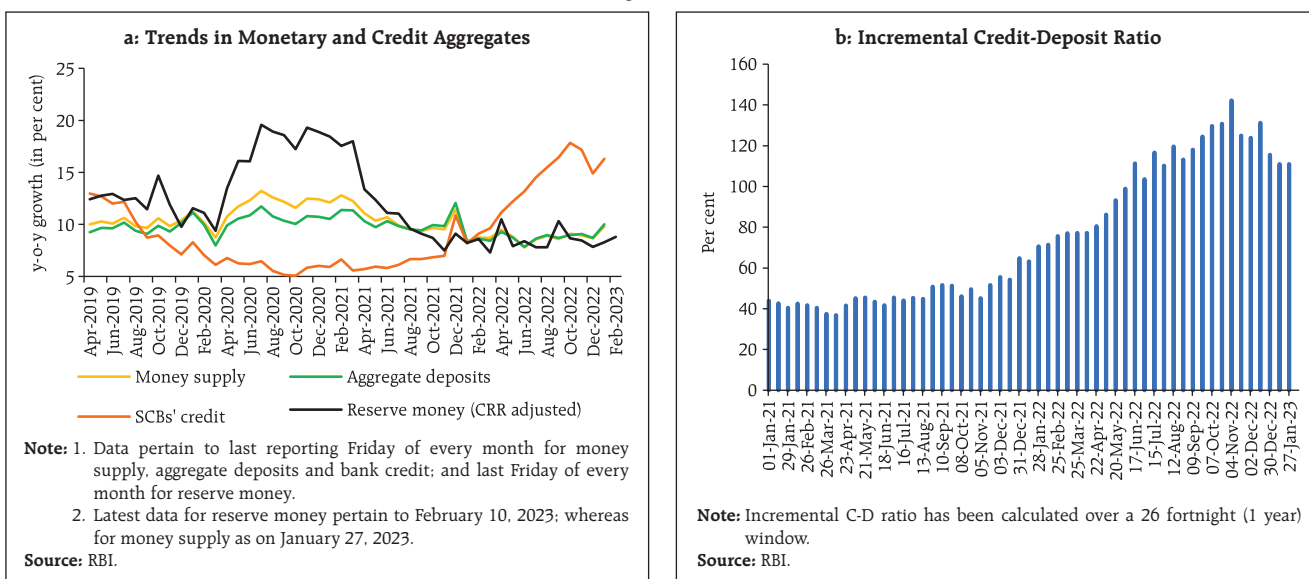


Table 5: Transmission to Banks' Deposit and Lending Rates

(Variation in basis points)

| Period | Repo Rate (bps) | Term Deposit Rates (bps) | | Lending Rates (bps) | | |
|--|-----------------|---------------------------------------|------------------------------|----------------------|--------------------------|-------------------------------|
| | | Median Term Deposit Rates (Card Rate) | WADTDR- Outstanding Deposits | 1-Year MCLR (Median) | WALR - Fresh Rupee Loans | WALR- Outstanding Rupee Loans |
| Easing Cycle Feb 2019 to Mar 2022 | -250 | -208 | -188 | -155 | -232 | -150 |
| Tightening Period May 2022 to Jan* 2023 | +225 | 78 | 75 | 120 | 137 | 80 |

Note: * Latest data on WALRs and WADTDR pertain to December 2022.

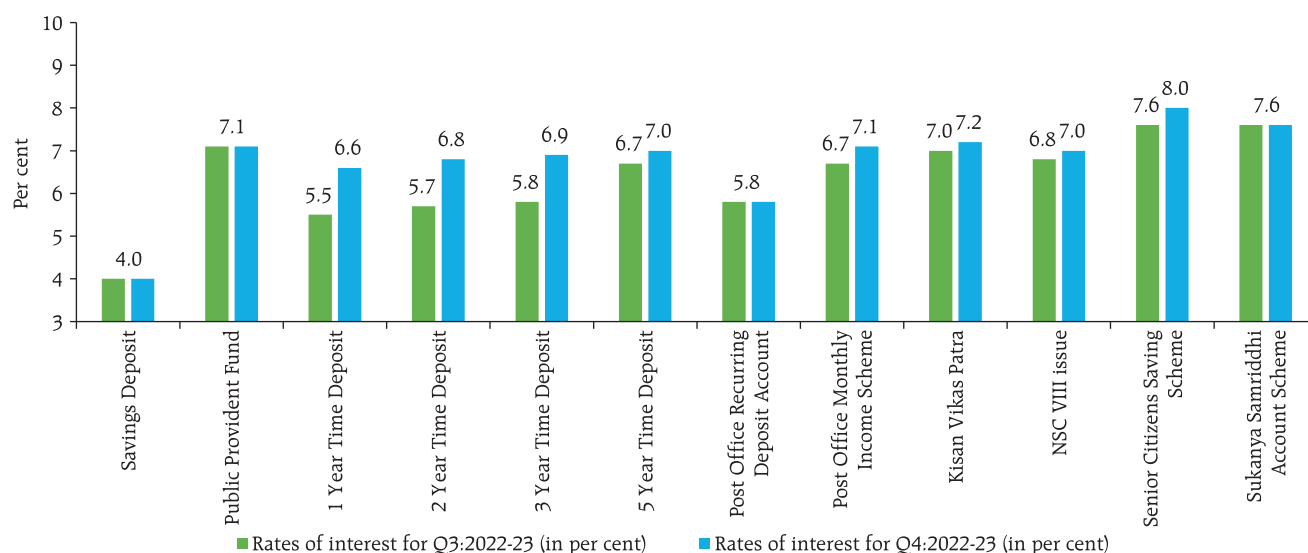
WALR: Weighted Average Lending Rate. WADTDR: Weighted Average Domestic Term Deposit Rate;

MCLR: Marginal Cost of Funds-based Lending Rate.

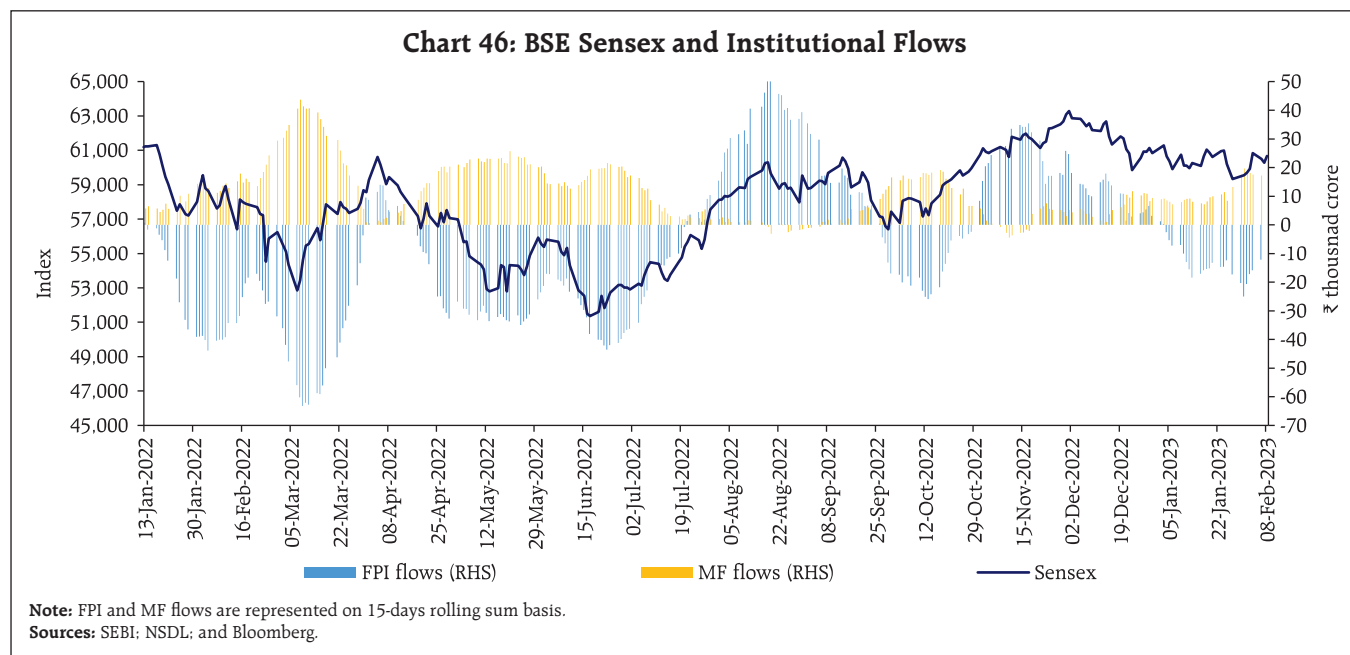
Source: RBI.

After remaining rangebound in the first half of January 2023, domestic equity markets initially moved higher in the second half, tracking the reduction in windfall tax on crude oil. Sentiments turned negative towards the end of the month, following the unusual price movement in the stocks of a business conglomerate. Overall, with FPIs turning net sellers, the BSE Sensex declined by 2.1 per cent during

January 2023 (Chart 46). Nevertheless, the Union Budget 2023-24 announcements relating to increase in capital expenditure and select direct tax reliefs¹⁸, statements by financial sector regulators re-affirming soundness of domestic financial and macroeconomic conditions helped boost market sentiments. The BSE Sensex gained 2.9 per cent during February 2023 (up to February 15, 2023).

Chart 45: Interest Rates on Small Savings Schemes**Source:** Government of India.

¹⁸ The Finance Minister proposed several changes in the new personal income tax regime, such as enhancing the income limit for a rebate of income tax from ₹5 lakh to ₹7 lakh, rationalisation of the tax slabs, provision of standard deduction for the salaried class, reduction of highest surcharge rate from 37 per cent to 25 per cent, etc. along with tax benefits for MSMEs, co-operatives, and start-ups. These measures are expected to cost ₹37,000 crore in forgone direct tax revenues.



The Indian equity market completed its transition to a faster settlement mechanism on January 27, 2023, with all securities in the equity segment moving to T+1 settlement. This marks the culmination of a process that began in September 2021, making India one of the global leaders with the shortest settlement cycles that will help reduce risks associated with settlement, counterparty and operations and also have a positive impact on trading volumes.

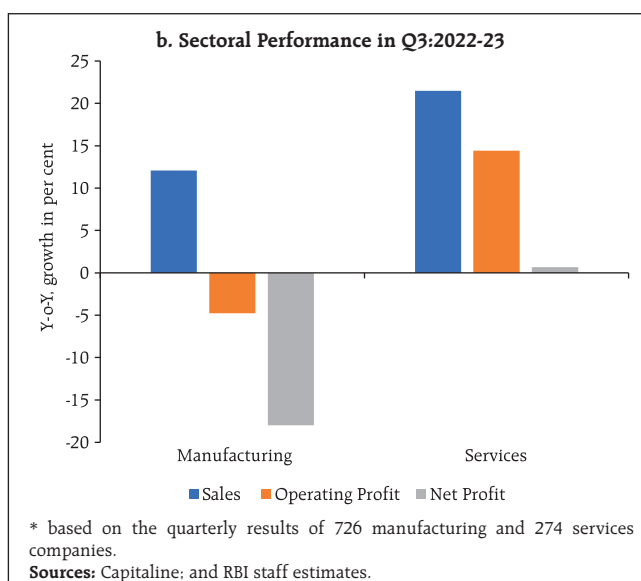
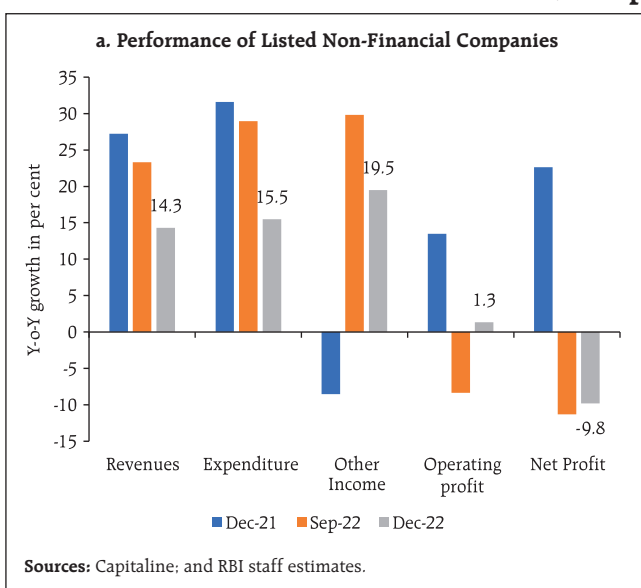
Corporate earnings results declared by 1,109 non-financial sector companies¹⁹ for Q3:2022-23 showed that revenue growth of companies witnessed moderation (Chart 47a). Despite growth in expenditure out-pacing revenue, operating profit improved marginally on a y-o-y basis supported by other income. Operating profit margin showed an improvement on a sequential basis as input cost pressures eased. Other income, which includes the income from treasury management activities of the

corporates, exhibited growth. Overall, net profit growth (y-o-y) of non-financial corporates remained negative for the second consecutive quarter. Services sector reported robust growth in sales and operating profit. Higher interest costs and other expenses, primarily in the iron and steel industry, led to a fall in net profits of manufacturing companies by 18.0 per cent (y-o-y) [Chart 47b].

Earnings of banks and other financial sector companies²⁰ remained robust with strong double-digit expansion in revenues (y-o-y) aided by credit growth (Chart 48). Other income, which *inter alia* includes profit/loss from security transactions, fees and commissions, also registered a sharp increase. With expenditure rising slower than the top-line, operating profits increased. Provisioning costs remained flat on y-o-y basis and in turn aggregate net profits of banks and financial sector companies registered a strong growth.

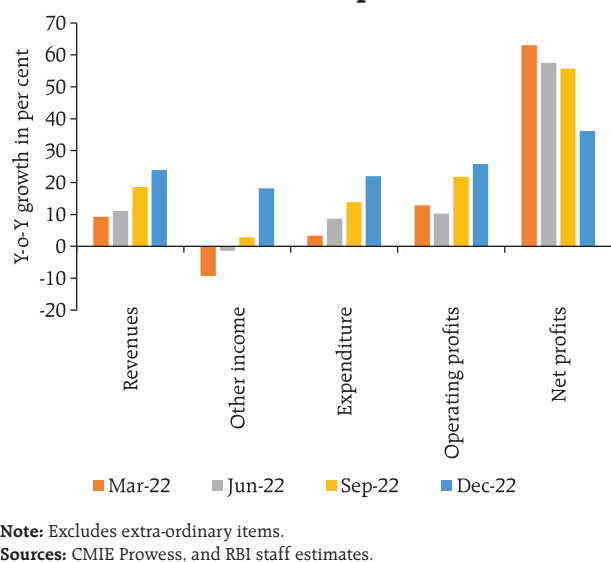
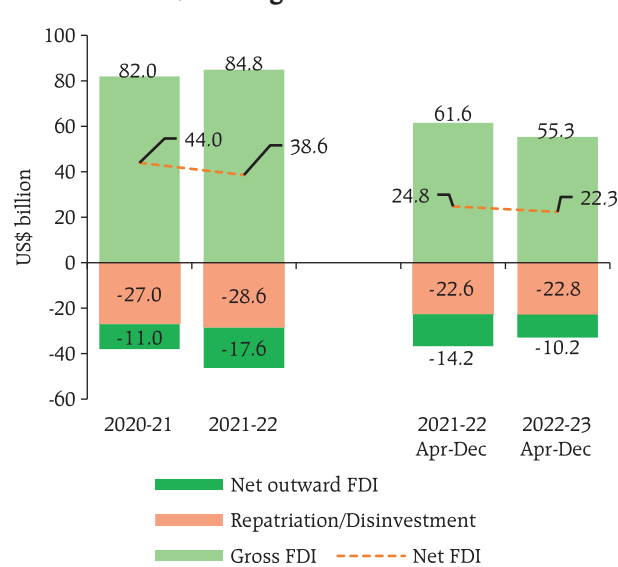
¹⁹ The early results cover 74.3 per cent of total sale size covered in RBI study on 'Performance of Private Corporate Business Sector during Q3:2021-22'.

²⁰ Based on results of 862 banks and other financial sector companies which represent around 89 per cent of the market capitalisation.

Chart 47: Corporate Performance

Gross inward foreign direct investment (FDI) moderated to US\$ 55.3 billion during April-December 2022 from US\$ 61.6 billion a year ago (Chart 49). Net FDI worked out to US\$ 22.3 billion during this period compared to US\$ 24.8 billion a year ago, mainly reflecting a decline in equity inflows. The bulk of

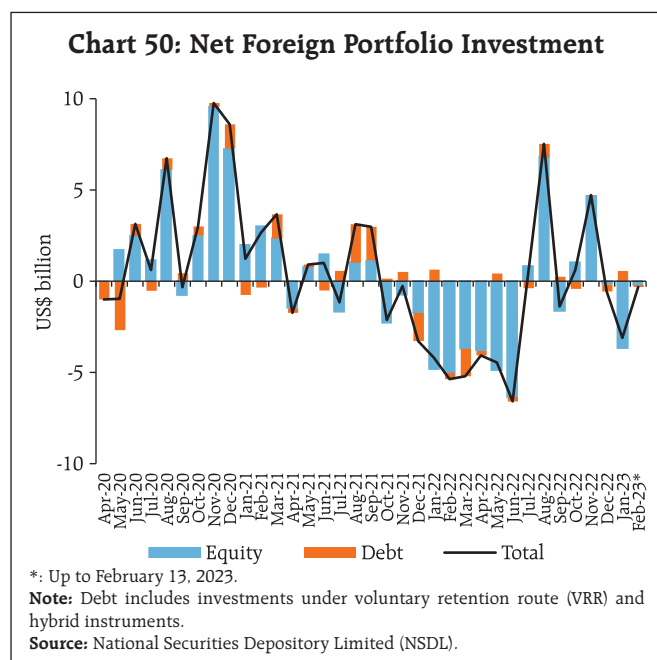
FDI equity inflows were received by manufacturing, financial services, computer services, retail and wholesale trade, and communication services during April-December 2022. The US, Singapore, and Mauritius were the major source countries of FDI during this period.

Chart 48: Performance of Listed Financial Companies**Chart 49: Foreign Direct Investment**

The theme of 'Infrastructure and Investment' and 'Green Growth' of the Union Budget augurs well for the FDI outlook in 2023-24. India ranks second in the 'FDI Standout Watchlist' which assesses the FDI trajectory of the world's top 50 FDI destinations.²¹

FPIs turned net sellers in domestic capital markets in January 2023 (Chart 50). Net FPI outflows from India were to the tune of US\$ 3.1 billion in January 2023, led by the equity segment. However, the debt segment witnessed inflows of US\$ 0.6 billion during January 2023. Financial services, automobile and auto components, and metals and mining sectors attracted the bulk of portfolio investment in the equity market. On the other hand, disinvestment was reported in information technology, consumable fuels and capital goods stocks.

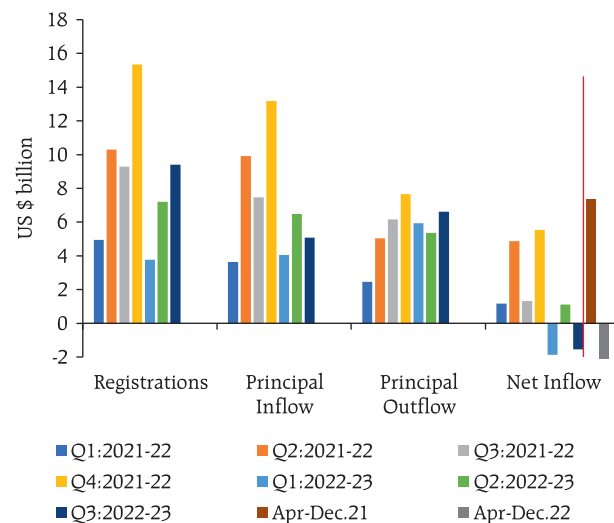
External commercial borrowing (ECB) registration amounts²² stood at US\$ 20.4 billion during April-



²¹ FDI outlook 2023, fDi Intelligence.

²² Registration amounts capture the sanctioned borrowing amount through ECB route.

Chart 51: ECB Registrations, Inflows and Outflows

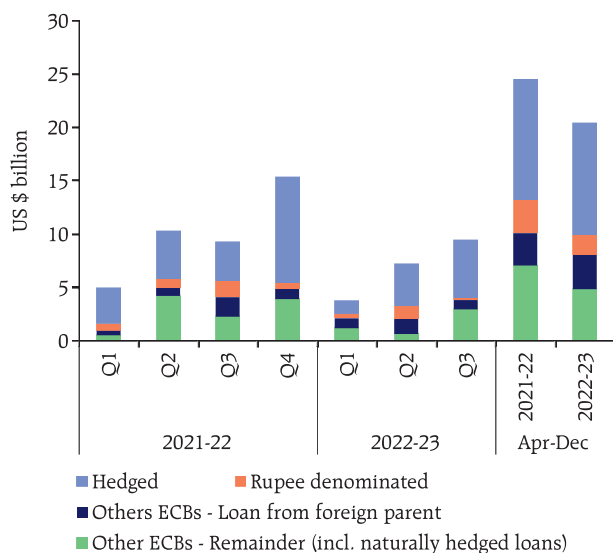


Source: RBI.

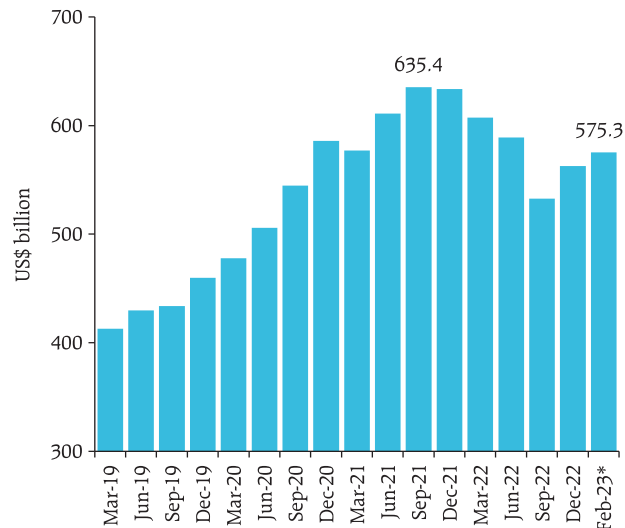
December 2022 as against US\$ 24.5 billion in the corresponding period last year. Intra-year movements show that after a dip in Q1:2022-23, registration amounts picked up, partly supported by the liberalising measures announced by the Reserve Bank on July 6, 2022. Although gross disbursements of ECBs to India were at US\$ 15.6 billion during April-December 2022, net ECB turned negative due to higher repayments, and a significant portion of the recent ECB registrations being earmarked to be drawn later (Chart 51).

Over three-fourths of the ECB agreement amount during April-December 2022 remained effectively hedged and the remainder included loans with natural hedges (*i.e.*, borrowers' earnings are in foreign currency) [Chart 52].

India's foreign exchange reserves increased by US\$ 42.6 billion since end-September 2022 and stood at US\$ 575.3 billion as on February 3, 2023, covering more than nine months of imports projected for 2022-23 (Chart 53).

Chart 52: ECB Agreements - Hedging Position

Source: RBI.

Chart 53: Foreign Exchange Reserves

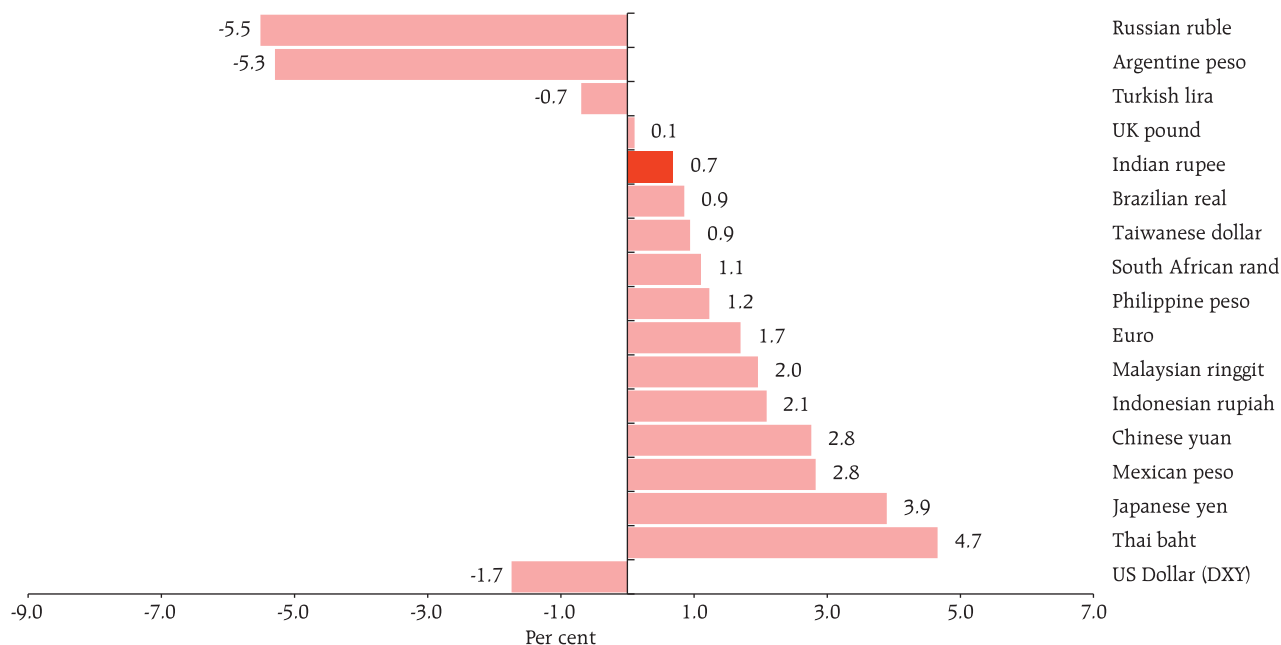
*: Up to February 03, 2023.

Source: RBI.

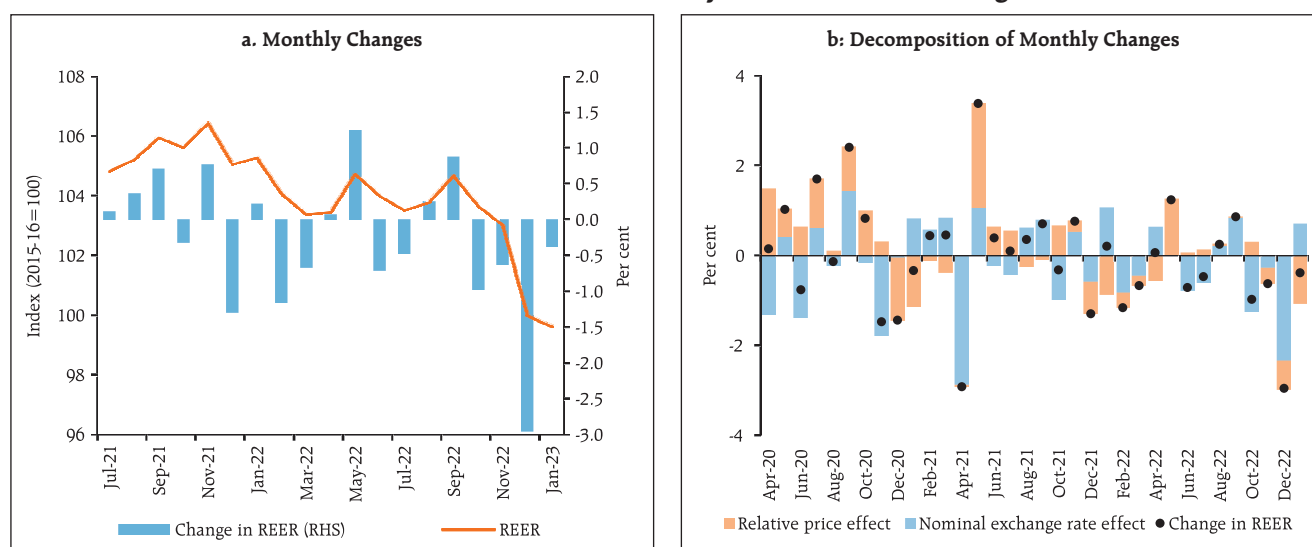
In the foreign exchange market, the Indian rupee (INR) appreciated by 0.7 per cent *vis-à-vis* the US dollar (m-o-m) in January 2023, as the US Fed adopted a less hawkish stance and the US dollar depreciated by 1.7 per cent (Chart 54). The performance of the

rupee was in line with many other EMEs and reserve currencies.

In terms of the 40-currency real effective exchange rate (REER), the INR depreciated by 0.4 per cent in January 2023 (m-o-m) (Chart 55).

Chart 54: Movements of Major Currencies against the US Dollar (January 2023, m-o-m)

Sources: FBIL; IMF; and Thomson Reuters.

Chart 55: Movements in 40-Currency Real Effective Exchange Rate

Source: RBI.

Payment Systems

Digital transactions advanced across various modes and the retail segment continued to gain strong traction, led by the Unified Payments Interface (UPI) [Table 6]. On the supply side, the number of payment acceptance devices deployed under the Payment Infrastructure Development Fund (PIDF) Scheme expanded by 59 per cent during April-December 2022.

The Statement on Developmental and Regulatory Policies of February 8, 2023 proposed

measures to expand the scope of activity on the Trade Receivables Discounting System (TReDS) by allowing participation of insurance companies and agencies undertaking factoring business, and the enabling of secondary market operations on the TReDS platforms. It also proposed extension of the UPI (for merchant payments) for all inbound travellers to India while they are in the country. Additionally, the National Payments Corporation of India (NPCI) has enabled onboarding of non-resident Indians from 10 countries on the UPI platform.²³

Table 6: Growth Rates in Select Payment Systems

(y-o-y in per cent)

| Payment System Indicators | Transaction Volume | | | | Transaction Value | | | |
|---------------------------|--------------------|--------|--------|--------|-------------------|--------|--------|--------|
| | Dec-21 | Dec-22 | Jan-22 | Jan-23 | Dec-21 | Dec-22 | Jan-22 | Jan-23 |
| RTGS | 17.9 | 11.5 | 15.7 | 12.6 | 21.7 | 5.9 | 13.9 | 20.1 |
| NEFT | 22.3 | 29.0 | 26.2 | 32.2 | 6.5 | 9.4 | 12.8 | 15.0 |
| UPI | 104.4 | 71.4 | 100.5 | 74.1 | 98.7 | 55.0 | 93.0 | 56.1 |
| IMPS | 24.5 | 9.7 | 27.0 | 7.8 | 35.6 | 22.7 | 34.1 | 23.4 |
| NACH | -2.7 | 10.5 | 28.8 | -10.4 | 5.1 | 34.5 | 26.4 | 14.4 |
| NETC | 74.9 | 27.2 | 54.8 | 30.2 | 59.7 | 34.3 | 50.0 | 33.6 |
| BBPS | 137.0 | 60.4 | 130.2 | 59.8 | 165.2 | 63.6 | 148.8 | 66.6 |

Source: RBI.

²³ NPCI Circular, January 2023.

As a testament to growing digital adoption, the recently released Reserve Bank's Digital Payments Index (RBI-DPI) showed a growth (y-o-y) of 24.1 per cent in September 2022. Going ahead in 2023, the user penetration rate of digital payments in India is expected to exceed that of the world.²⁴

The Union Budget 2023-24 also announced various measures to build robust digital public infrastructure. They include continuing fiscal support of ₹1500 crore to incentivise adoption of digital payment modes, establishing an agriculture accelerator fund, enabling safer access to anonymised data through a National Data Governance Policy, expanding the scope of documents available through DigiLocker²⁵, creating an 'Entity DigiLocker' for storing and sharing information by businesses, training MSMEs for developing digital capabilities, establishing centres of excellence to promote development of Artificial Intelligence (AI) startups, setting up of 100 labs for developing applications using 5G services and simplifying the know your customer (KYC) process.

Conclusion

We believe that India will decouple from macroeconomic projections of current vintage and also from the rest of the world. In our view, the instrument of decoupling will be the Union Budget by (a) raising India's growth prospects over the period 2023-27; and (b) raising India's potential growth.

Turning to the immediate growth prospects, the Union Budget has won appreciation from all quarters on several counts. Besides the promises kept on consolidation and capital expenditure, the tax changes proposed in the Budget will put at least ₹35,000 crore in the hands of households. The implications of these three aspects on the outlook for growth are profound. First, the saving on taxes will boost spending by households on consumption. With India's marginal

propensity to consume (MPC) estimated at 0.54, the tax multiplier works out to be 1.16. Hence, India's real GDP growth would get a boost of 15 basis points in 2023-24 from tax reductions alone.

Second, the increase in the allocation for capital expenditure (including loan assistance to States, railways, logistics and grants-in-aid for creation of capital assets which are excluded under the effective revenue deficit and hence added to the capital account) works out to ₹3.2 lakh crore in 2023-24.²⁶ This increased capital spending will generate additional output of ₹10.3 lakh crore during 2023-27 - unlike the tax multiplier which has a short-run impact, the dynamic capital expenditure multiplier rises from 1 in the first year to 2.45 in the second year, 3.14 in the third year and peaks at 3.25 in 2026-27. Capex on railways and loan assistance to States will contribute 43 per cent of this increased income while investment in logistics (₹60,000 crore) is expected to generate income of ₹1.95 lakh crore over 2023-27 or 19 per cent of the increased income.

Third, fiscal consolidation can free up productive resources for the private sector and also contribute to lowering the cost of capital. In the Union Budget, total expenditure is budgeted to decline by 0.41 per cent of GDP.²⁷ This will free up resources for private investment. In conjunction with the expenditure multiplier²⁸, this can raise the growth rate of the economy in 2023-24 by 10 basis points.

Putting all these together and taking the Economic Survey's growth projection of 6.5 per cent

²⁴ Source: Statista database accessed as on February 03, 2023.

²⁵ DigiLocker is a secure cloud-based platform for storage, sharing and verification of citizens' documents and certificates.

²⁶ The effective capital expenditure of the Union government is budgeted to increase to ₹13.7 lakh crore in 2023-24 (BE) from ₹10.5 lakh crore in 2022-23 (RE).

²⁷ In 2023-24 (BE) total expenditure is budgeted to decline to 14.92 per cent of GDP from 15.33 per cent of GDP in the previous year, resulting in a decline of 0.41 per cent of GDP.

²⁸ The expenditure multiplier in an expansionary phase of the business cycle is estimated at (-) 0.22 over four quarters, unlike the positive expenditure multiplier in a period of slowdown when the private sector demand for credit generally weakens (Report on Currency and Finance, 2022).

as the base, the Union Budget's tax, capex and fiscal consolidation proposals can take India's real GDP growth close to 7.0 per cent in 2023-24 if they are effectively implemented.

Turning to India's potential, the Union Budget will expand the productive capacity of the economy by (a) the thrust on capex; (b) the exploitation of new technologies such as digitization and greening the economy; and (c) by seizing the demographic dividend which together can expand the production possibility frontier of the Indian economy. First, besides the sustained emphasis on capex, setting up Skill India Digital Platform, Centers of Excellence for Artificial Intelligence, National Data Governance Policy, and simplification of KYC norms could impart a positive productivity shock and lead to an increase in total factor productivity (TFP) that can raise potential growth by 10 basis points per annum.

Second, the Union Budget speech proposes 12 schemes under the green growth priority with a concrete outlay of ₹85 thousand crore already outlined under four schemes.²⁹ This could crowd in ₹1.7 lakh crore of private investment (taking a crowd-in factor of 2)³⁰, bringing the total green investment to ₹2.6 lakh crore and an increase in GDP of ₹3.3 lakh crore or around 100 basis points of potential output up to 2030. Seizing the demographic dividend by skilling youth and teachers alongside setting up physical and digital libraries could raise potential GDP growth by 5 basis points to 15 basis points a year.³¹

The environment of macroeconomic stability engendered by fiscal consolidation and hence reduction of debt is expected to bring down inflation

in the medium run, with a consequent reduction in macroeconomic volatility and country risk premium, ushering in a virtuous cycle. Estimates suggest that on a standalone basis, *i.e.*, without taking into account other factors that influence the inflation trajectory, this could lead to a reduction in inflation by an average of 26 basis points per annum over the next five years³² which, in turn, would push up potential growth by another 10 basis points.³³

Taking all these factors into account, potential growth is expected to shift upwards from 6.0 per cent (estimated by the IMF in 2022-23³⁴) to 6.8 per cent.³⁵ With the raising of India's potential growth due to measures announced in the Budget, there is likely to be a faster consolidation of Union Government debt to 54.3 per cent of GDP by 2027-28.

In mythologies across civilisations, the sun is depicted as riding a chariot typically drawn by four horses. This is so, for instance, for Apollo in Greece; Ra in Egypt; Sol in Rome. In Indian mythology, however, the sun's chariot is drawn by seven horses. Many interpretations are available as to what the horses signify – various scriptures assign them the seven colours of the rainbow; the seven *vedic* meters or prosodies; and the like. The seventh horse represents dreams, aspirations and the future. It is said that even if the other six horses are injured or exhausted, the seventh horse can take the sun's chariot to its destination. This is the subject of a celebrated book by Dr. Dharamvir Bharati and also of an eponymous film by Shyam Benegal called *Suraj ka Satvan Ghoda* (सूरज का सातवाँ घोड़ा). In our view, the Union Budget 2023-24 is the seventh horse of the sun.

²⁹ The budget outlines 12 proposals including green hydrogen mission, energy transition, energy storage projects, renewable energy evacuation, green credit programme, PM-PRANAM, GOBARdhan scheme, *Bhartiya Prakritik Kheti* Bio-Input Resource Centres, mangrove initiative for shoreline habitats & tangible incomes (MISHTI), *Amrit Dharohar*, coastal shipping and vehicle replacement.

³⁰ see IEA (2012), IMF (2021), Inter-American Development Bank (2006), European Commission (2013).

³¹ Some of the references include Tilak (1989); Tabar *et al.*, (2016); Gemmell *et al.*, (2016); and De Ridder *et al.*, (2020).

³² Internal estimates based on Van Bon, N. (2015).

³³ Internal estimates based on Mohaddes and Raissi (2014).

³⁴ Article IV Consultations, December 2022.

³⁵ The higher potential growth assessment is based on estimation of impact of different growth supportive measures in the budget individually which are then aggregated, and not in a dynamic model framework to capture cross effects among all these key measures. The assessed increase in potential growth is also likely to materialise over the next few years and not in 2023-24 as the full impact of some of the measures, as mentioned above, would materialise by 2026-27 and even later by 2030.

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

Key takeaways from the Reserve Bank's enterprise surveys³⁶ conducted during Q3:2022-23 are:

- Firms are upbeat on overall business conditions which are expected to sustain expansion through the first half of 2023-24 (Chart A1 and A2).
- Job opportunities are likely to expand further for both full-time and part-time employees (Chart A3).
- Businesses remain optimistic on production, order books, employment condition, capacity utilisation and the overall business situation.
- Capacity utilisation (CU) and seasonally adjusted CU exceeded the long-term average CU in Q2:2022-23; the improvement is likely to persist (Chart A4 and A5).

Chart A1: Sentiments on Production/Turnover

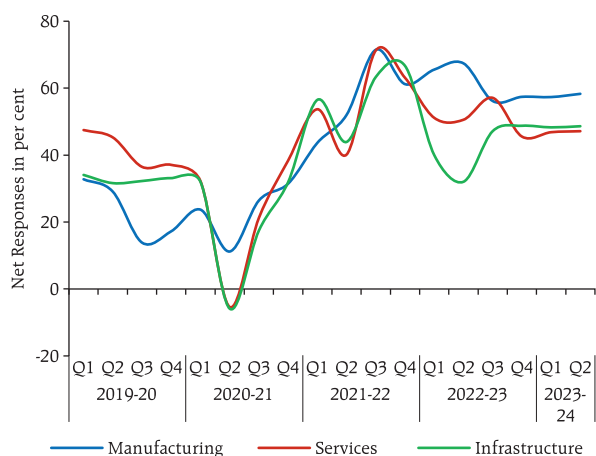


Chart A2: Sentiments on Overall Business Situation

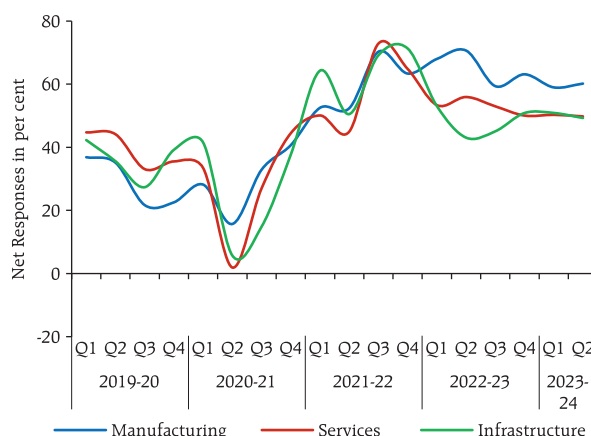


Chart A3: Sentiments on Employment Situation

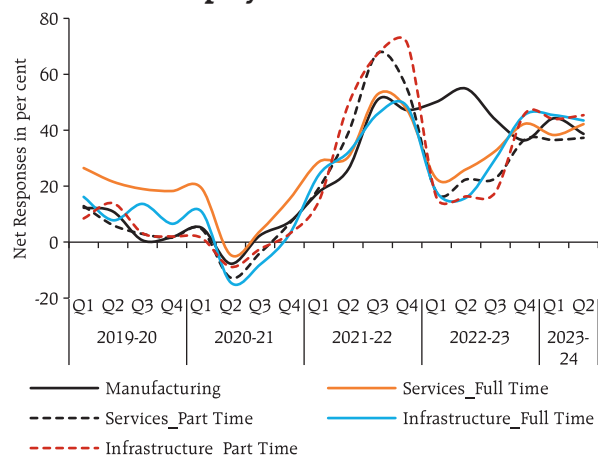


Chart A4: Capacity Utilisation in Manufacturing Sector*



*: long-term CU excludes Q1:2020-21, which encompassed the nation-wide lockdown period.

Source: RBI.

³⁶ https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=55184

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

- Senior loan officers expect the recent growth in loan demand from banks to sustain during H1:2023-24 (Chart A6).
- On the back of elevated input cost pressures and return of pricing power, more firms expect rise in selling prices (Charts A7 and A8).

Chart A5: Manufacturers' Sentiments on Capacity Utilisation

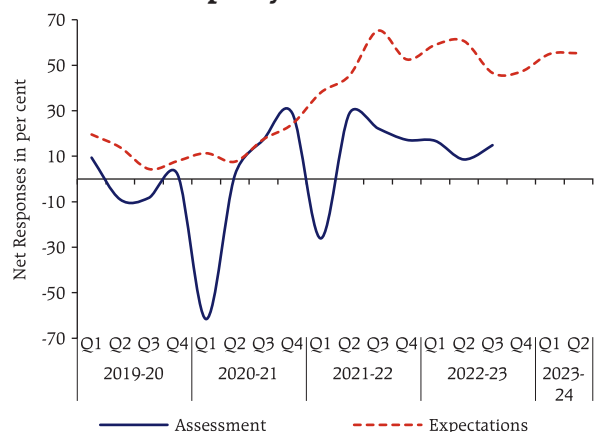


Chart A6: Senior Loan Officers' Expectations on Credit Demand

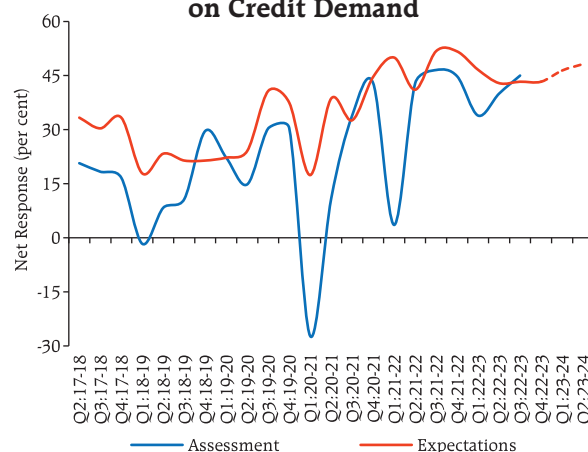


Chart A7: Sentiments on Input Cost

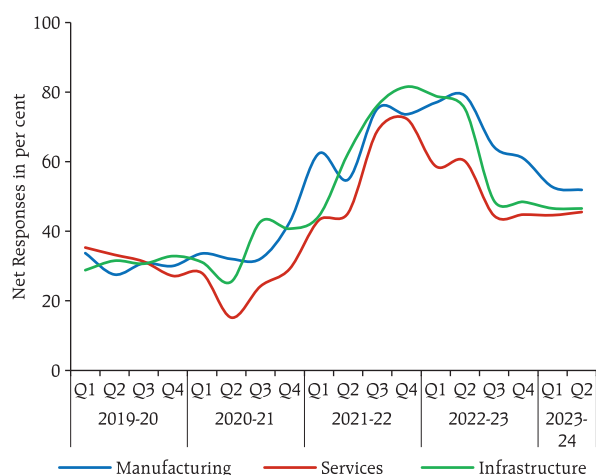
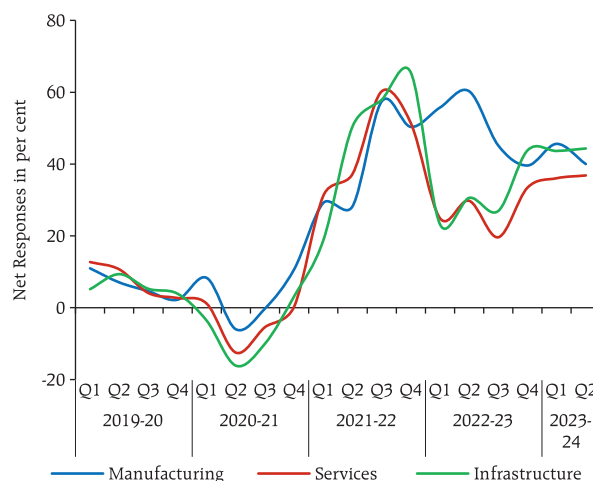


Chart A8: Sentiments on Selling Price



Note: 'Net response' is the difference between the percentage of respondents reporting optimism and those reporting pessimism. It ranges between -100 and 100; any value greater than zero indicates expansion/optimism and value less than zero indicates contraction/pessimism.

Source: RBI.

A Recalibrated Quarterly Projection Model (QPM 2.0) for India

by Joice John, Deepak Kumar, Asish Thomas George, Pratik Mitra, Muneesh Kapur and Michael Debabrata Patra[^]

The recalibrated quarterly projection model (QPM 2.0) presented in this article is a forward-looking open economy gap model calibrated to generate forecasts, undertake risk assessment and provide policy analysis for the Indian economy. QPM 2.0 augments QPM 1.0 with fiscal-monetary policy interaction, a more nuanced modelling of domestic fuel pricing dynamics, capital flows, exchange rate dynamics and central bank's forex market interventions for a more informed judgement.

The Reserve Bank of India (RBI)'s Quarterly Projection Model (QPM) is a calibrated, forward-looking, open economy, new-Keynesian gap model incorporating specific characteristics of the Indian economy. Its main purpose is to generate medium-term projections and policy analysis consistent with achieving targets/mandate set under the flexible inflation targeting (FIT) framework. The documentation of its predecessor, *i.e.*, QPM version 1 (QPM 1.0) was published in 2016 (Benes *et al.*, 2016a; b). Armed with the lessons of experience, since then, the model structure and parameters were recalibrated to enhance the model with more India-centric characteristics in order to enrich its performance and relevance.¹

The major enhancements brought about in version 2 (QPM 2.0) are as follows:

- a. fiscal-monetary policy interaction;

- b. domestic fuel pricing dynamics (oil prices, exchange rates and fuel taxes);
- c. capital flows and exchange rate dynamics; and
- d. re-parametrisation, incorporating data till Q4:2019 (pre-COVID period)².

The rest of the article is arranged into six sections. Section II provides the model structure. The equations and approach to calibration are explained in section III. Model properties in terms of impulse response functions (IRF) are described in section IV. Historical decompositions of major macroeconomic variables are discussed in section V. Section VI presents forecast performance and Section VII concludes.

II. Model Structure

QPM 2.0 embodies the standard new-Keynesian small open-economy framework. It has 6 blocks, *viz.*, i) an aggregate demand block comprising the output gap and credit conditions; ii) an aggregate supply block modelling inflation, inflation expectations and central bank credibility; iii) short-term interest rates (policy reaction function and operating target) and transmission to long-term interest rates; iv) fiscal block; v) the exchange rate via the modified risk-adjusted uncovered interest parity condition, capital flows and forex market intervention; and vi) foreign sector block (Chart 1).

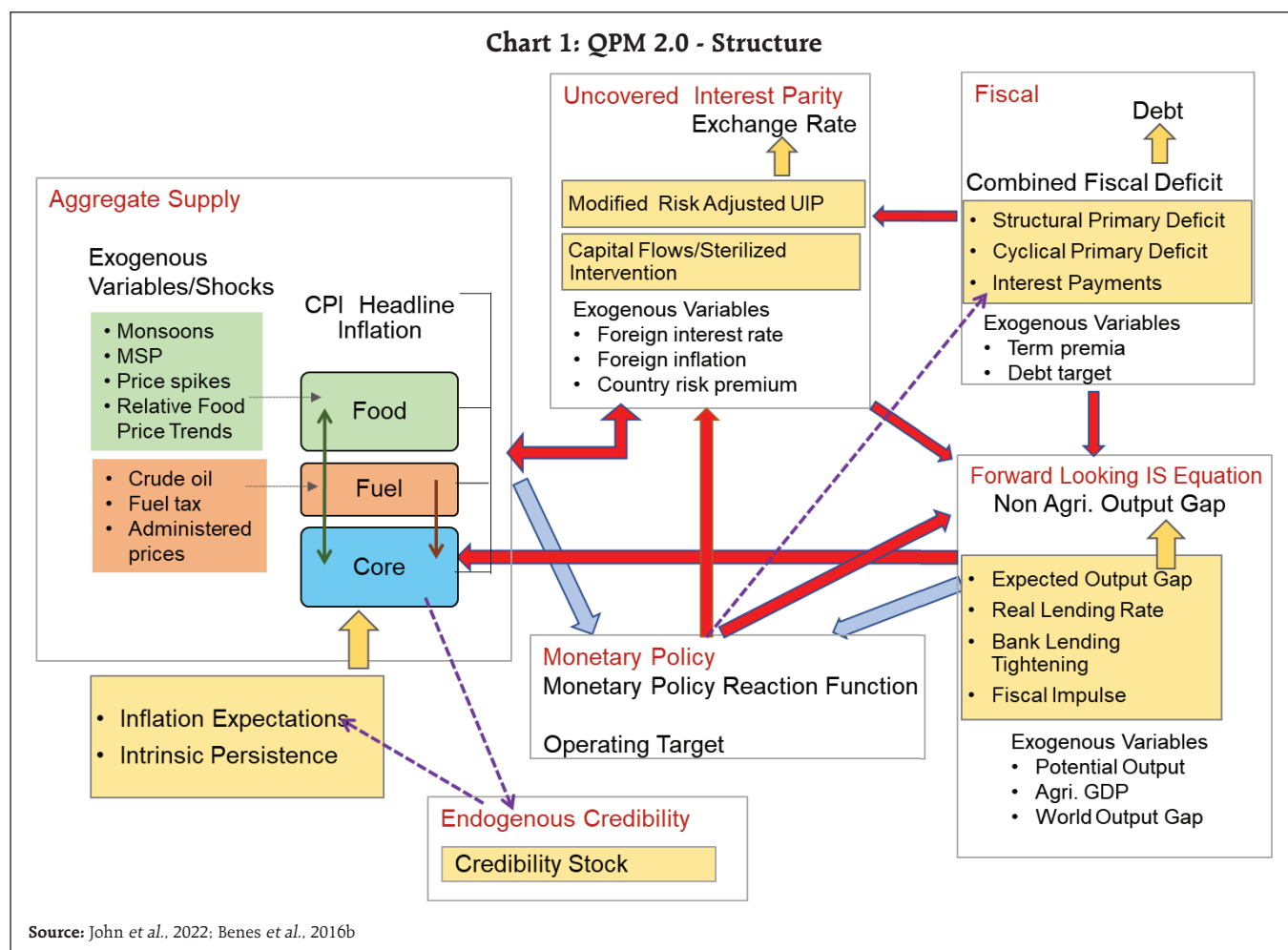
II.1. Fiscal-Monetary Policy Interaction

Fiscal policy dynamics can have sizeable effects on output and inflation. Therefore, appropriate modelling of monetary and fiscal policy interaction is vital for improving the understanding of output and inflation behaviour in the context of attaining price stability and sustained growth (Woodford, 2001; Canzoneri *et al.* 2011). Hence, the overall fiscal

[^] 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 This project was carried out under UTKARSH 2022, the medium-term strategy framework of the RBI.

² Data for the period after 2019 were not used as extreme volatility induced by COVID-19 and other developments could affect the average model properties.



deficit is decomposed into the primary deficit and interest payments. The primary deficit has structural (cyclically adjusted) and cyclical (automatic stabilisers) components. The cyclical component is modelled as a function of the output gap. Unanticipated changes in the structural deficit in the form of government consumption impacting private consumption and thereby domestic economic cycles form fiscal impulses (Blanchard and Perotti, 2002). Debt dynamics incorporate a) the relationship between debt and the overall fiscal deficit and b) the overall deficit that is compatible with a sustainable level of debt (Escolano, 2010). The steady state structural deficit is linked to the steady state debt level and nominal output growth. Deviations from the long-term debt target affect the country risk premium and the exchange rate through

the modified risk-adjusted uncovered interest parity (MRUIP) condition. Changes in aggregate demand and the exchange rate affect inflation, leading to changes in monetary policy. At the same time, monetary policy affects the fiscal deficit through interest payments – short-term interest rate affects long-term rate.

II.2. Fuel Pricing

India has a distinctive system of fuel pricing. Some components of fuel consumption like petrol and diesel are priced on the basis of market variables – international crude oil prices and exchange rates. Some items like liquefied petroleum gas (LPG) and kerosene are market determined but with a lagged pass-through. Prices of another set of fuel items like electricity are administered. Prices of petrol and diesel

include a substantial portion of non-*ad valorem* taxes, which impedes the full pass-through of crude oil price changes to inflation. Considering these factors, the fuel section has three different components: a) 'market fuel 1', comprising petrol and diesel prices, is determined by changes in crude oil prices, exchange rates and fuel taxes (excise duty and VAT); b) 'market fuel 2' consisting of LPG and kerosene for which prices are determined by international fuel prices and exchange rates, but with a lag; and c) 'administered fuel' *i.e.*, electricity and other items in the fuel and light subgroup of the CPI. Fuel prices have a substantial role in determining input cost pressures in the economy, which are modelled through spillovers from fuel to non-fuel components of inflation.

II.3. Capital Flows and Exchange Rate Dynamics

The standard approach to capital flows, exchange rates and monetary policy dynamics is based on the 'trilemma' (Mundell, 1963; Fleming, 1962). This was further developed into the new-Keynesian open economy framework, incorporating implications of global financial cycle and dominant currency paradigm (Obstfeld and Rogoff, 2000; Galí and Monacelli, 2005; Gopinath *et al.* 2020; Miranda-Agrippino and Rey, 2022). Volatility in capital flows and exchange rates has implications for macroeconomic management. The orthodox view holds that successful inflation targeting (IT) requires a high degree of exchange rate flexibility. In the context of emerging market economies (EMEs), however, it is observed that it is sub-optimal to overlook the costs associated with volatility in exchange rates due to sudden surges or reversals in capital flows.³ This has prompted many EMEs to adopt policy tools like forex market

interventions for managing exchange rate volatility even under an IT framework (RBI, 2021).

III. Key Behavioural Equations and Calibration

QPM 2.0 has 154 equations (including identities), of which 57 are behavioural equations (Table 1).

III.1. Aggregate Demand: A Forward-Looking IS Curve

Domestic demand is represented by the non-agricultural output gap (\hat{y}_t^{nag}), which is defined as the difference between non-agricultural output (y_t^{nag}) and its potential (\bar{y}_t^{nag}), expressed in natural logarithms.⁴

$$\hat{y}_t^{nag} = \alpha_1 * E_t(\hat{y}_{t+1}^{nag}) + \alpha_2 * \hat{y}_{t-1}^{nag} - \alpha_3 * \hat{r}_t^m + \alpha_4 * \hat{y}_t^f + \alpha_5 * \hat{Z}_t - \alpha_6 * \eta_t^{BL} + \alpha_7 * FIMP_t - \alpha_8 * \widehat{rfuel}_t + \varepsilon_t^{\hat{y}^{nag}}$$

$$\alpha_1 = 0.1; \alpha_2 = 0.5; \alpha_3 = 0.25; \alpha_4 = 0.25; \alpha_5 = 0.06; \alpha_6 = 0.4; \alpha_7 = 0.25; \alpha_8 = 0.01. \quad \dots(1)$$

where \hat{y}_t^{nag} is determined by its lagged values (\hat{y}_{t-1}^{nag}) and model-based rational expectations ($E_t(\hat{y}_{t+1}^{nag})$), long-term market real interest rate gap (\hat{r}_t^m), global demand captured by foreign output gap (\hat{y}_t^f), real exchange rate gap (\hat{Z}_t), bank lending (BL) based on credit conditions (η_t^{BL}), real fuel price gap (\widehat{rfuel}_t), fiscal impulse ($FIMP_t$) and shocks to aggregate demand ($\varepsilon_t^{\hat{y}^{nag}}$) (Appendix and Benes *et al.*, 2016b).

Table 1: QPM 2.0 - Dimension

| | |
|---------------------------------|-----|
| Number of equations | 154 |
| of which | |
| Number of behavioural equations | 57 |
| Number of identities | 97 |
| Number of variables | 154 |
| Number of stochastic shocks | 57 |
| Number of measurement equations | 33 |
| Number of observed variables | 33 |
| Number of parameters | 116 |

Source: Authors' calculations.

³ In the face of capital flows shocks, the exchange rate tends to move significantly away from its long-run equilibrium, causing exchange rate passthrough to inflation and economic dislocation. Hence, central banks care about the exchange rate in addition to inflation. However, paying attention to the exchange rate using monetary policy tools can undermine the credibility in an inflation targeting regime making monetary policy actions costlier (Blanchard *et al.*, 2016; Ghosh *et al.*, 2016).

⁴ All the real trends are system consistent, filtered using Kalman filter. In QPM 2.0, with the incorporation of fuel prices in the aggregate demand equation (equation 1), the world output gap coefficient reflects only the direct effect and has been calibrated accordingly. In QPM 1.0, it reflected the direct effect as well as the indirect impact of crude oil prices.

III.2. Aggregate Supply: Inflation

Considering the unique characteristics of inflation dynamics in India, separate equations are formulated for food, fuel and core⁵ components (analogous to the structure of QPM 1.0) (Benes *et al.*, 2016b).

Food inflation (π_t^{food}) depends on its own past (π_{t-1}^{food}). The terms ($\pi_{t-1}^{headline} - \pi_{t-1}^{food}$) and ($p_{t+4}^{food} - p_{t+4}^{core} - \bar{r}p_{t+4}^{food}$) ensure that food inflation converges to overall inflation in the long run. In the short run, food inflation is driven by three shocks: monsoon shock ($\varepsilon_t^{monsoon}$); shock to minimum support prices (ε_t^{MSP}); and shock to vegetable prices ($\varepsilon_t^{vegetables}$), each with different short-term effects. The dynamics of these shocks are given by the moving average polynomials $\Gamma_{monsoon}(L)$, $\Gamma_{MSP}(L)$, and $\Gamma_{vegetables}(L)$.

$$\begin{aligned} \pi_t^{food} = & \pi_{t-1}^{food} + \varphi_1(\pi_{t-1}^{headline} - \pi_{t-1}^{food}) - \\ & \varphi_2(p_{t+4}^{food} - p_{t+4}^{core} - \bar{r}p_{t+4}^{food}) + \\ & \Gamma_{monsoon}(L)\varepsilon_t^{monsoon} + \Gamma_{MSP}(L)\varepsilon_t^{MSP} + \\ & \Gamma_{vegetables}(L)\varepsilon_t^{vegetables} + \varepsilon_t^{food} \end{aligned}$$

$$\varphi_1 = 0.025; \varphi_2 = 0.75 \quad \dots(2)$$

Core inflation (π_t^{core}) depends on expected inflation ($E_t^h(\pi_{t+1}^{core})$), its own past (π_{t-1}^{core}) to capture the persistence in inflation, the domestic output gap (\hat{y}_t^{nag}) and the real exchange rate gap (\hat{z}_t). ($p_t^{energy,mkt} - p_t^{core} - \bar{r}p_t^{energy,mkt}$), ($p_{t+4}^{food} - p_{t+4}^{core} - \bar{r}p_{t+4}^{food}$) represent spillovers from fuel and food components, respectively.⁶

$$\begin{aligned} \pi_t^{core} = & \beta_1 * E_t^h(\pi_{t+1}^{core}) + (1 - \beta_1) * \pi_{t-1}^{core} + \\ & \beta_2 * (\hat{y}_t^{nag} + \beta_3 * \hat{z}_t) + \beta_4 * \\ & (\pi_{t-1}^{headline} - \pi_{t-1}^{core}) + \\ & \beta_5(p_t^{energy,mkt} - p_t^{core} - \bar{r}p_t^{energy,mkt}) + \\ & \beta_6(p_{t+4}^{food} - p_{t+4}^{core} - \bar{r}p_{t+4}^{food}) + \varepsilon_t^{core} \end{aligned}$$

⁵ Core inflation is defined as inflation excluding food, fuel, petrol and diesel components.

⁶ Inflation expectations formation and an endogenous credibility building process is modelled similar to QPM 1.0 (Appendix and Benes *et al.*, 2016b). π denotes quarter-on-quarter (annualised) inflation, while π_4 denotes year-on-year (y-o-y) inflation. The increase in nominal (S_t) and real (Z_t) exchange rates depicts depreciation and vice versa. The relative food price trend is modelled similar to QPM 1.0 (Appendix and Benes *et al.*, 2016b).

$$\begin{aligned} \beta_1 = 0.33; \beta_2 = 0.15; \beta_3 = 0.05; \\ \beta_4 = 0.01; \beta_5 = 0.02; \beta_6 = 0.04. \end{aligned} \quad \dots(3)$$

In the fuel block, inflation (π_t^{fuel}) is determined as the weighted average of petrol and diesel inflation ($\pi_t^{fuel,mkt1}$), LPG and kerosene inflation ($\pi_t^{fuel,mkt2}$) and administered fuel inflation ($\pi_t^{fuel,adm}$).⁷

$$\begin{aligned} \pi_t^{fuel} = & wt_{fuel,mkt1} \pi_t^{fuel,mkt1} + \\ & wt_{fuel,mkt2} \pi_t^{fuel,mkt2} + \\ & (1 - wt_{fuel,mkt1} - \\ & wt_{fuel,mkt2}) \pi_t^{fuel,adm} \end{aligned}$$

$$wt_{fuel,mkt1} = 0.25; wt_{fuel,mkt2} = 0.20. \quad \dots(4)$$

Petrol and diesel inflation is determined by changes in the Indian basket of crude oil prices (Δp_t^{oil}), changes in the exchange rate (ΔS_t) and changes in fuel taxes ($\pi_t^{fuel,tax}$).

$$\begin{aligned} \pi_t^{fuel,mkt1} = & \beta_1^{fm1} \pi_{t-1}^{fuel,mkt1} + \beta_2^{fm1} \pi_t^{fuel,tax} + \\ & (1 - \beta_1^{fm1} - \beta_2^{fm1}) 4(\Delta S_t + \Delta p_t^{oil} - \Delta \bar{Z}_t) \\ & + \varepsilon_t^{fuel,mkt1} \end{aligned}$$

$\beta_1^{fm1} = 0.00$ for immediate and full passthrough and > 0.00 for delayed passthrough

$$\beta_2^{fm1} = 0.47.^8 \quad \dots(5)$$

The changes in tax is assumed to be driven by exogenous factors, i.e.,

$$\pi_t^{fuel,tax} = \pi_{t-1}^{fuel,tax} + \varepsilon_t^{\pi^{fuel,tax}} - \varepsilon_{t-1}^{\pi^{fuel,tax}} \quad \dots(6)$$

LPG and kerosene inflation is determined by changes in the Indian basket of crude oil prices (Δp_t^{oil}) and changes in the exchange rate (ΔS_t).

$$\begin{aligned} \pi_t^{fuel,mkt2} = & \beta_1^{fm2} \pi_{t-1}^{fuel,mkt2} + \\ & (1 - \beta_1^{fm2}) 4(\Delta S_t + \Delta p_t^{oil} - \Delta \bar{Z}_t) + \varepsilon_t^{fuel,mkt2} \end{aligned}$$

⁷ In QPM 1.0, fuel inflation incorporated two types of fuel viz. market and administered. Market fuel inflation was determined by the Indian basket crude oil prices and exchange rate, while the administered component in fuel pricing was largely modelled as an exogenous process (Benes *et al.*, 2016b).

⁸ The coefficient 0.47 corresponds to crude oil prices at around US\$80 per barrel.

$\beta_1^{fm2} = 0.00$ for immediate and full passthrough and > 0.00 for delayed passthrough ... (7)

Administered fuel inflation is exogenously determined.

$$\begin{aligned} \pi_t^{fuel,adm} &= \pi_{t-1}^{fuel,adm} + \\ \beta_1^{fa} (\pi_{t-1}^{core} - \pi_{t-1}^{fuel,adm}) &+ \varepsilon_t^{\pi^{fuel,adm}} \\ \beta_1^{fa} &= 0.05. \end{aligned} \quad \dots (8)$$

III.3. Interest Rates Block

The monetary policy repo rate equation follows an inflation forecast-based Taylor-type reaction function with an interest rate smoothing parameter (Benes *et al.*, 2016b).

$$\begin{aligned} i_t &= \lambda_1 i_{t-1} + (1 - \lambda_1) \{ \bar{r}_t + \pi 4_t^* + \lambda_2 * \\ &[E_t(\pi 4_{t+3}^{core}) - \pi 4_t^*] + \lambda_3 [E_t(\pi 4_{t+3}^{headline}) - \\ &\pi 4_t^*] + \lambda_4 \hat{y}_t^{nag} \} + \varepsilon_t^i \\ \lambda_1 &= 0.88; \lambda_2 = 1.50; \lambda_3 = 0.50; \lambda_4 = 0.50. \end{aligned} \quad \dots (9)$$

where i_t is the policy repo rate, \bar{r}_t is the natural rate of interest, $\pi 4_t^*$ is the inflation target, $E_t(\pi 4_{t+3}^{core})$ and $E_t(\pi 4_{t+3}^{headline})$ are the three quarters ahead core and headline inflation forecasts, respectively and \hat{y}_t^{nag} is the output gap. The reaction function contains both core and headline inflation, *i.e.*, monetary policy reacts not only to demand side developments and the underlying inflationary pressures as reflected in core inflation forecasts, but also to supply side pressures pre-emptively as to prevent the second-round effects of food and fuel prices on core inflation. This specification also enables monetary policy to see through transient supply side shocks.

QPM 2.0 incorporates an additional equation for the operating target of monetary policy – weighted average call money rate (WACR) – as follows:

$$\tilde{i}_t = i_t + Spread_t \quad \dots (10)$$

where \tilde{i}_t is WACR and $Spread_t$ is the wedge between the operating target and the policy rate. The steady

state value for $Spread_t$ is taken as 0 indicating that in long run, the policy rate and the operating target converge. The transmission from short-term rate to long-term interest rate – relevant for private credit – depends on the term structure of interest rates as well as term premium (Appendix and Benes *et al.*, 2016b).

III.4 Fiscal Block

The fiscal deficit (as per cent of nominal GDP), (FD_t) is the sum of the primary deficit (PD_t) and interest payments (IP_t), *i.e.*,

$$FD_t = PD_t + IP_t \quad \dots (11)$$

The primary deficit is decomposed into structural (PD^s_t) and cyclical (PD^c_t) components, *i.e.*,

$$PD_t = PD^s_t + PD^c_t \quad \dots (12)$$

The cyclical primary fiscal deficit (PD^c_t), the automatic stabiliser, is modelled as a function of the economic cycle measured by the output gap (\hat{y}^{nag}).

$$\begin{aligned} PD^c_t &= -\xi_1 * \hat{y}_t^{nag} + \varepsilon^{PD^c}_t \\ \xi_1 &= 0.2. \end{aligned} \quad \dots (13)$$

The structural component of the fiscal deficit (PD^s_t) is modelled as the weighted average of the one quarter lag of the structural primary deficit and the primary deficit target (\overline{PD}_t^s). Fuel tax changes affect the primary deficit through changes in revenue, *i.e.*,

$$\begin{aligned} PD_t^s &= \rho^{PD^s} * PD_{t-1}^s + (1 - \rho^{PD^s}) * \\ &\overline{PD}_t^s - \xi_2 (\pi_t^{fuel,tax} - \pi 4_t^*) + \varepsilon^{PD^s}_t \\ \rho^{PD^s} &= 0.80; \xi_2 = 0.002. \end{aligned} \quad \dots (14)$$

The primary deficit target is calibrated in line with the Fiscal Responsibility and Budget Management (FRBM) path of fiscal consolidation:

$$\begin{aligned} \overline{PD}_t^s &= \rho^{\overline{PD}^s} * \overline{PD}_{t-1}^s + (1 - \rho^{\overline{PD}^s}) * \overline{PD}_t^s + \varepsilon^{\overline{PD}^s}_t \\ \rho^{\overline{PD}^s} &= 0.70. \end{aligned} \quad \dots (15)$$

Deviations of the structural primary deficit from its target capture fiscal impulse ($FIMP_t$):

$$FIMP_t = PD_t^s - \overline{PD}_t^s \quad \dots(16)$$

Debt accumulation dynamics is modelled as follows:

$$B_t = FD_t + B_{t-1} \left(\frac{1}{1 + \frac{\pi 4_t^* + Y 4_t^*}{100}} \right) \quad \dots(17)$$

where current debt (as per cent of nominal GDP) (B_t) is determined by the current fiscal deficit (FD_t) and the previous level of debt (B_{t-1}) adjusted for nominal GDP growth ($\pi 4_t^* + Y 4_t^*$).

The steady state fiscal deficit (FD^*) is related to steady debt dynamics (B^*) as follows:

$$FD^* = B^* \left(1 - \frac{1}{\left(1 + \frac{(\pi 4_t^* + Y 4_t^*)}{100} \right)} - \frac{i_t^n}{\left(1 + \frac{(\pi 4_t^* + Y 4_t^*)}{100} \right)} h^{3M} - \frac{i_t^n + prem^{10y*}}{\left(1 + \frac{(\pi 4_t^* + Y 4_t^*)}{100} \right)} (1 - h^{3M}) \right) \quad \dots(18)$$

$$h^{3M} = 0.05.$$

where i_t^n is the nominal natural rate of interest, which is equal to the real natural rate of interest plus the inflation target. For ease of modelling, we assume that government finances the fiscal deficit by issuing two types of bonds, one of short-term maturity (91-day Treasury Bill) and the other with long-term maturity (10-year G-Sec bonds). h^{3M} represents the share of short-term bonds and $(1 - h^{3M})$ represents the share of long-term bonds. $prem^{10y*}$ represents the average spread between short-term and long-term interest rates.

Finally, the debt target (\overline{B}_t) anchors government's behaviour and is represented by the following equation:

$$\overline{B}_t = \rho^{\overline{B}} \overline{B}_{t-1} + (1 - \rho^{\overline{B}}) B^* + \varepsilon_t^{\overline{B}} \quad \dots(19)$$

$$\rho^{\overline{B}} = 0.99.$$

Overall interest payments (IP_t) are the sum of interest payments on short-term (IP_t^{3M}) and long-term (IP_t^{10Y}) bonds.

$$IP_t = IP_t^{3M} + IP_t^{10Y} \quad \dots(20)$$

Interest payment on short-term bonds is the product of the previous period short-term rate (i_{t-1}) and the portion of outstanding debt held as short-term bonds in the previous period ($h^{3M} * B_{t-1}$), adjusted for the changes in nominal GDP growth.

$$IP_t^{3M} = i_{t-1} h^{3M} B_{t-1} \frac{1}{\left(1 + \frac{(\pi 4_t^* + Y 4_t^*)}{100} \right)} \quad \dots(21)$$

Interest payment on long-term bonds is the product of the previous period interest rate (i_{t-1}^{10y}) and the portion of outstanding debt held as long-term bonds in the previous period ($(1 - h^{3M}) * B_{t-1}$), adjusted for the changes in nominal GDP growth.

$$IP_t^{10Y} = i_{t-1}^{10y} * (1 - h^{3M}) B_{t-1} \frac{1}{\left(1 + \frac{(\pi 4_t^* + Y 4_t^*)}{100} \right)} \quad \dots(22)$$

The interest rate (i_t^{10y}) on long-term government securities can be represented as the average of forward-looking short-term interest rates and the term premium ($prem_t^{10y}$).

$$i_t^{10y} = \frac{1}{40} \sum_{i=0}^{39} i_{t+i} + prem_t^{10y} \quad \dots(23)$$

The term premium ($prem_t^{10y}$) is assumed to converge to the long-term average spread between short term and long-term interest rates ($prem^{10y*}$) in the absence of any shock.

$$prem_t^{10y} = \rho^{prem^{10y}} prem_{t-1}^{10y} + (1 - \rho^{prem^{10y}}) prem^{10y*} + \varepsilon_t^{prem^{10y}}$$

$$\rho^{prem^{10y}} = 0.75. \quad \dots(24)$$

III.5 Modified Risk-adjusted Uncovered Interest Parity (MRUIP)

The uncovered interest rate parity (UIP) condition, wherein interest rate differentials determine the expected exchange rate, has been popularly used in small open economy models for monetary policy analysis. However, the UIP relation has been consistently and decisively rejected in the data (see Froot and Thaler, 1990; Lewis, 1995 and Engel, 1996 for comprehensive surveys). To reflect this empirical disconnect, time varying country risk premia and

purchasing power parity conditions are introduced to moderate the effects of interest rates on exchange rates (Benes *et al.*, 2016b).

Exchange rate dynamics captured through the MRUIP equation have been modified to incorporate features of external sector: a) an adjustment process for capital flows; b) determinants of current account; c) the balance of payments identity relating the current and capital accounts to the accumulation of reserves; and, d) forex interventions.

$$K_t = \varsigma_1 K_{t-1} + \varsigma_2 (rr_t - rr_t^{rw}) - \varsigma_3 \Delta S_t + \varsigma_4 (\hat{y}_t^{nag} - \hat{y}_t^f) + \varepsilon_t^K$$

$$\varsigma_1 = 0.55; \varsigma_2 = 0.05; \varsigma_3 = 0.20; \varsigma_4 = 0.08. \quad \dots(25)$$

where K represents capital flows (as per cent of nominal GDP), which are driven by the real interest rate gap ($rr_t - rr_t^{rw}$); changes in nominal exchange rate (ΔS_t); and the difference between domestic and global output gaps ($\hat{y}_t^{nag} - \hat{y}_t^f$);

$$CA_t = \tau_1 CA_{t-1} + \tau_2 \hat{Z}_t - \tau_3 \hat{y}_t^{nag} - \tau_4 \widehat{Oil}_t + \varepsilon_t^{CA}$$

$$\tau_1 = 0.50; \tau_2 = 0.07; \tau_3 = 0.10; \tau_4 = 0.015. \quad \dots(26)$$

where CA is the current account balance (as per cent of nominal GDP), which is determined by \widehat{Oil} representing the crude oil price gap⁹, domestic demand conditions (\hat{y}_t^{nag}) and the real exchange rate gap (\hat{Z}_t).

The change in reserves (as a per cent of nominal GDP (ΔRes)) represents the balance of payments identity conditioned by forex interventions (Int) which, in turn, determines the impact of capital flows on the exchange rate.

$$Int(CA_t + K_t) = \Delta Res_t$$

$$Int = 0 \text{ for no intervention and } 1 \text{ for full intervention.} \quad \dots(27)$$

Incorporating the added features, the MRUIP equation is expressed as follows:

$$\gamma_1 * [\tilde{i}_t - (i_t^f + \sigma_t + \gamma_2 * BIMP_t + \gamma_3 * FIMP_t)] + (1 - \gamma_1) * [4\Delta\bar{Z}_{t-1} + (\pi 4_{t-1}^{core} - \pi 4_{t-1}^f)] + (1 - Int) * \gamma_4 * K_t = 4 * (E_t S_{t+1} - S_t) + \varepsilon_t^S$$

$$\gamma_1 = 0.55; \gamma_2 = 2.0; \gamma_3 = 2.0; Int = 0 \text{ to } 1; \gamma_4 = 3.33. \quad \dots(28)$$

$$E_t S_{t+1} = \delta_1 * S_{t+1} + (1 - \delta_1) * \{S_{t-1} + 2 * [\Delta\bar{Z}_t + (\pi 4_t^* - \pi 4_t^{*f})/4]\}$$

$$\delta_1 = 0.63. \quad \dots(29)$$

where, S_t is exchange rate, $E_t S_{t+1}$ is expected exchange rate, \tilde{i}_t is short-term nominal interest rate, i_t^f is foreign nominal interest rate¹⁰, σ_t is time-varying country risk premium, $\pi 4_t^f$ is foreign inflation, $\pi 4_t^{core}$ is domestic core inflation, $\Delta\bar{Z}_t$ is change in real exchange rate trend, $\pi 4_t^*$ and $\pi 4_t^{*f}$ are inflation targets of the domestic and foreign economies, $FIMP_t$ is fiscal impulse, $BIMP_t$ is debt impulse and K_t is capital flows.

III.6. Foreign Block

The foreign block in QPM has two parts – the United States (US) block and rest of the world (RoW) block. The US block is a barebone new-Keynesian model with three behavioural equations – the IS curve, the Philips curve and the Taylor rule:

$$\hat{y}_t^{US} = a_1 * E_t(\hat{y}_{t+1}^{US}) + a_2 * \hat{y}_{t-1}^{US} - \alpha_3 * \hat{r}_t^{US} + \varepsilon_t^{\hat{y}^{US}}$$

$$a_1 = 0.25; a_2 = 0.55; a_3 = 0.20. \quad \dots(30)$$

$$\pi_t^{US} = b_1 * E_t(\pi_{t+1}^{US}) + (1 - b_1) * \pi_{t-1}^{US} + b_2 * \hat{y}_t^{US} + \varepsilon_t^{\pi^{US}}$$

$$b_1 = 0.75; b_2 = 0.10. \quad \dots(31)$$

$$i_t^{US} = c_1 i_{t-1}^{US} + (1 - c_1) * \{\bar{r}_t^{US} + \pi 4_t^{*US} + c_2 * [E_t(\pi 4_{t+3}^{US}) - \pi 4_t^{*US}] + c_3 * \hat{y}_t^{US}\} + \varepsilon_t^{i^{US}}$$

$$c_1 = 0.70; c_2 = 1.50; c_3 = 0.20. \quad \dots(32)$$

⁹ Deviation of crude oil price from its long-term trend.

¹⁰ The foreign interest rate (i_t^f) is approximated using fed funds rate (i_t^{US}).

where \hat{y}_t^{US} is the US output gap, \hat{r}_t^{US} is the US real interest rate gap, π_t^{US} is the US inflation, i_t^{US} is the Fed funds rate, π_4^{*US} is the US inflation target and \bar{r}_t^{US} is real natural rate of interest of the US.

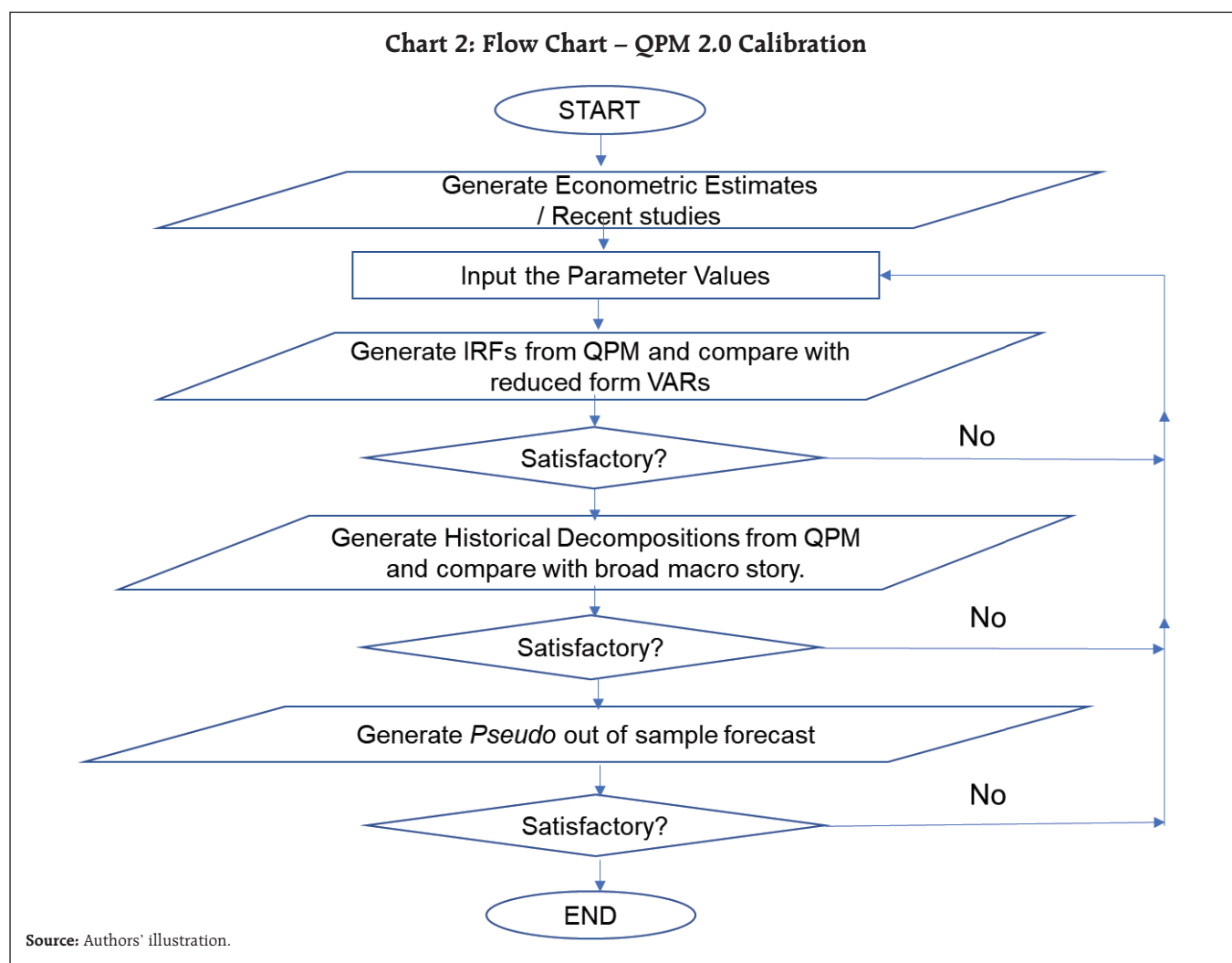
The RoW section of the foreign block incorporates an exogenous equation for crude oil price movements. The forecasts of foreign variables are exogenously provided, based on the information available from agencies like the United States Federal Reserve (US Fed), the International Monetary Fund (IMF) and the International Energy Association (IEA).

III.7. Calibration

The calibration of parameters of QPM 2.0 has been carried out through multiple iterations

(Chart 2). This process includes a) generating econometric estimates by using linear regression models, non-linear regression models and vector auto regression (VAR) models; (b) using estimates from other empirical studies (Khundrakpam and Jain, 2012; Misra and Trivedi, 2016; Behera *et al.* 2017; Patra *et al.*, 2018; Kapur, 2018; RBI, 2018; Goyal and Parab, 2019; Raj *et al.*, 2018; RBI, 2019; Patra *et al.*, 2021; Pattanaik *et al.*, 2022); and (c) evaluating the fit by using model generated IRFs, historical decompositions and rolling forecasts.

Model solutions, simulations, historical decompositions and forecasts are carried out using the IRIS toolbox in MATLAB through following steps. First, the model needs to be linearised around a



steady state. Second, dynamic solutions involving the forward-looking variables have to be obtained. Third, unobserved variables have to be filtered out from the state-space representation. Fourth, forecasts and policy simulations have to be generated.

Steady states are computed by using a nonlinear Newton-type algorithm. The dynamic model solution is obtained from a nonlinear particle swarm optimizer (PSO), and a generalised Schur decomposition is used to integrate future expectations. The unobserved variables are filtered out by employing a multivariate Kalman filter (MvKF) with an exact nonlinear prediction step. The simulations generated from the model are based on a first-order approximate solution calculated around the steady state. The forecasts are generated by applying equation-selective nonlinear simulator with shanks acceleration.

IV. Model Simulations

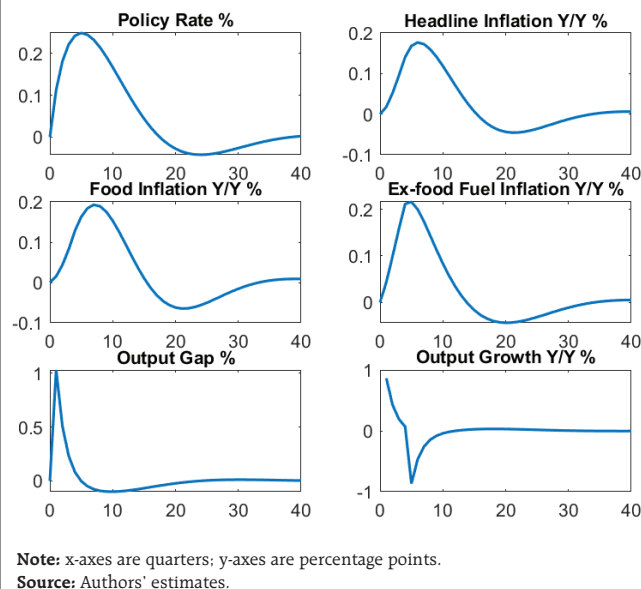
IV.1. Output Gap (Demand) Shock

A positive demand shock of 1 percentage point (ppt) increases core inflation by 20 basis points (bps) at its peak. Headline inflation increases by around 20 bps. Both the output gap and the deviation of inflation from its target require an increase in the real interest rate, which is achieved through a hike in the policy interest rate. These changes dampen demand and over the medium-term, output returns to its potential level. With the elimination of excess demand, inflation returns to the target and all the real variables return to their long-term equilibrium (Chart 3).

IV.2. Core Inflation (Cost-push) Shock

A cost-push shock to core inflation presents monetary policy with a difficult trade-off. The policy rate has to be increased to ensure that inflation returns to target in the medium-term, but this opens up a negative output gap (Chart 4). With the unwinding of the interest rate as inflation falls to target, the output gap closes and output returns to its potential level.

Chart 3: Response to a 1 Percentage Point Increase in the Output Gap



IV.3. Policy Rate Shock

A policy interest rate increase by 1 percentage point results in a fall in domestic demand by around 20 bps and a negative output gap opens up (Chart 5). Along with anchoring of inflation expectations and enhanced

Chart 4: Response to a 1 Percentage Point Increase in Core Inflation

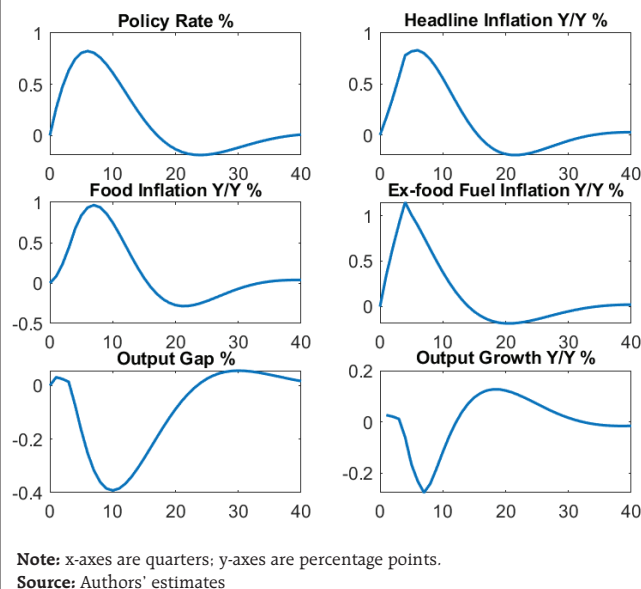
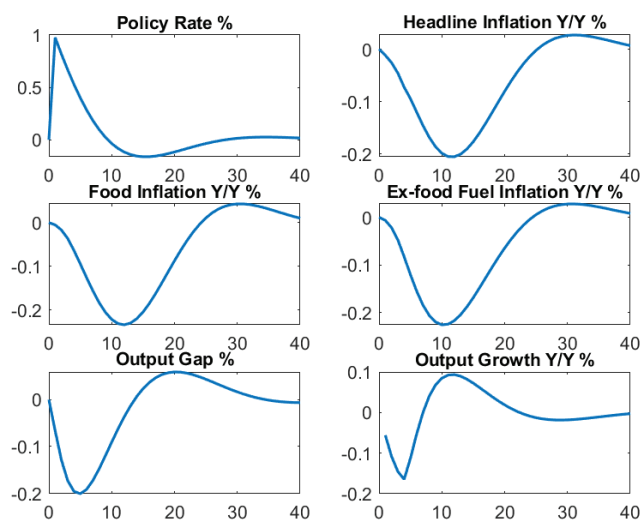
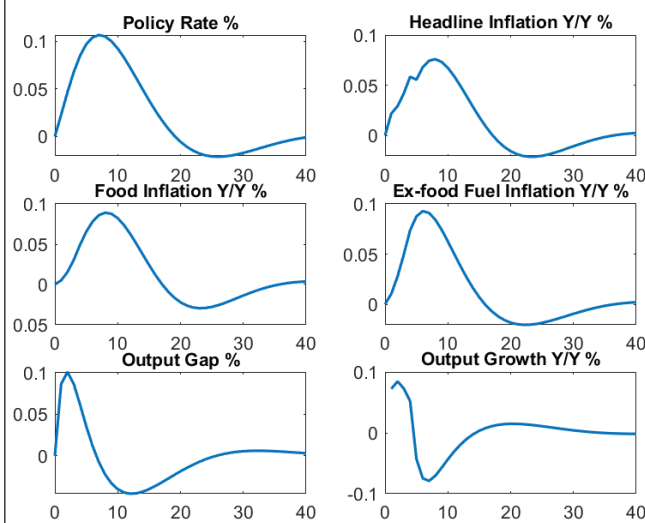


Chart 5: Response to a 1 Percentage Point Increase in the Policy Rate

Note: x-axes are quarters; y-axes are percentage points.
Source: Authors' estimates

Chart 6: Response to a 1 Per cent Increase in the Exchange Rate

Note: x-axes are quarters; y-axes are percentage points.
Source: Authors' estimates

central bank credibility, this leads to a decline in core inflation by around 25 bps and headline inflation by around 20 bps. These effects, however, hold only in the short run. Over time, as inflation returns to the target, the interest rate decreases, which closes the output gap and neutralises the disinflationary effect of the initial interest rate increase.

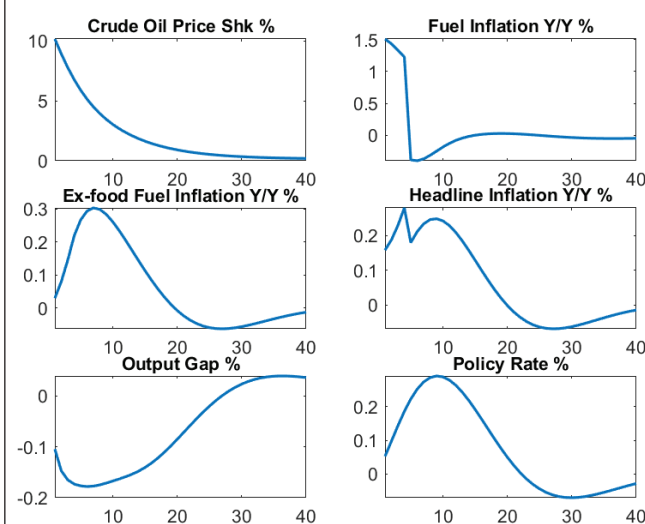
IV.4. Exchange Rate Shock

A depreciation in the exchange rate by 1 per cent leads to increase of around 7 bps in inflation *via* an exchange rate pass-through (ERPT) of 7 per cent (Chart 6). The output gap initially increases as a result of gains in external competitiveness. The increase in inflation and the output gap warrants monetary tightening. This leads to undershooting of the output gap, creating negative growth responses in the medium-term.

IV.5. Crude Oil Price Shock

An increase in global crude oil prices has direct effects on petrol, diesel, LPG and kerosene prices. The increase in market fuel prices induces a cost push shock and core inflation goes up. Higher crude oil

prices also induce depreciation of the Indian Rupee (INR). This will have additional second round effects on inflation. Together, an increase in crude oil price by 10 per cent results in inflation increasing up by 30 bps at its peak (Chart 7). Aggregate demand slows down as

Chart 7: Response to a 10 Per cent Increase in the Crude Oil Price

Note: x-axes are quarters; y-axes are percentage points/Per cent.
Source: Authors' estimates

firms take a hit on their profit margins, cash flows and investment. The increase in inflationary pressures, however, warrants a monetary policy response to bring inflation back to target.

IV.6. World Output Gap (Demand) Shock

An increase in world demand by 1 percentage point leads to increase in domestic demand by 30 bps (Chart 8), which pushes up inflation. The increase in world demand also raises international crude oil prices. With India being an importer of crude oil, the higher crude oil prices exert additional pressure on headline and core inflation. The increase in domestic demand and inflation warrants tightening of monetary policy.

IV.7. Fuel Tax Shock

Fuel tax increases are sporadic and non-mean reverting. Hence, in QPM 2.0, the shocks to fuel taxes are assumed not to revert to their original values unless and until they are reversed exogenously. An increase in the fuel tax by ₹10 per litre leads to an increase in fuel prices and hence core inflation through

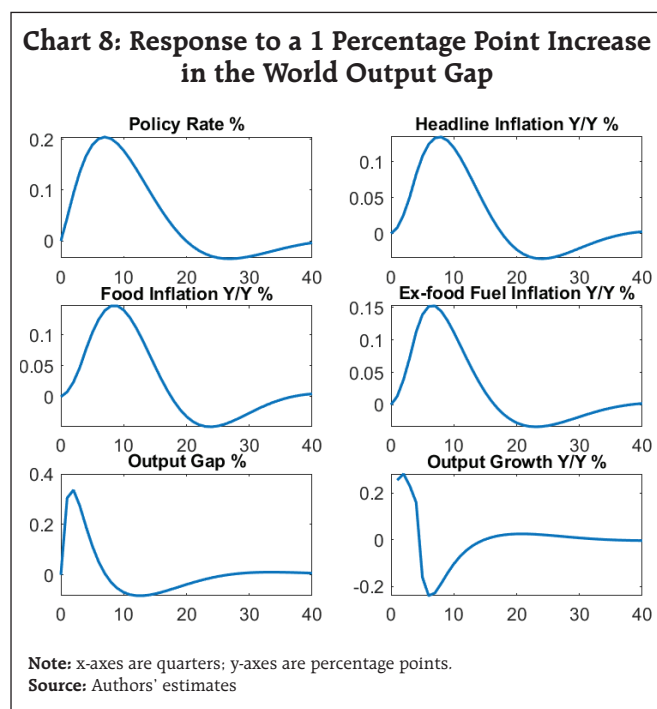
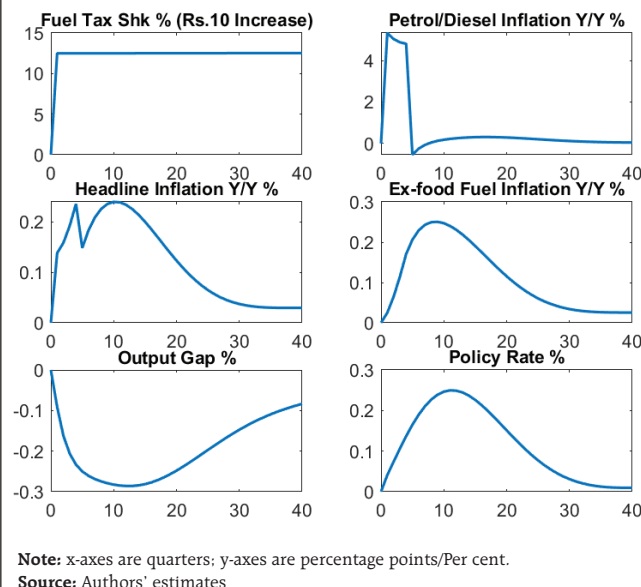


Chart 9: Response to a ₹10 per litre Increase in the Fuel Taxes



the cost push channel. Inflation goes up by 25 bps (Chart 9). Inflationary pressures remain entrenched in the system due to the non-reversal of the increases. Demand conditions also remain subdued for a longer period for the same reason. The policy rate needs to increase to anchor inflationary expectations and neutralise second-round effects.

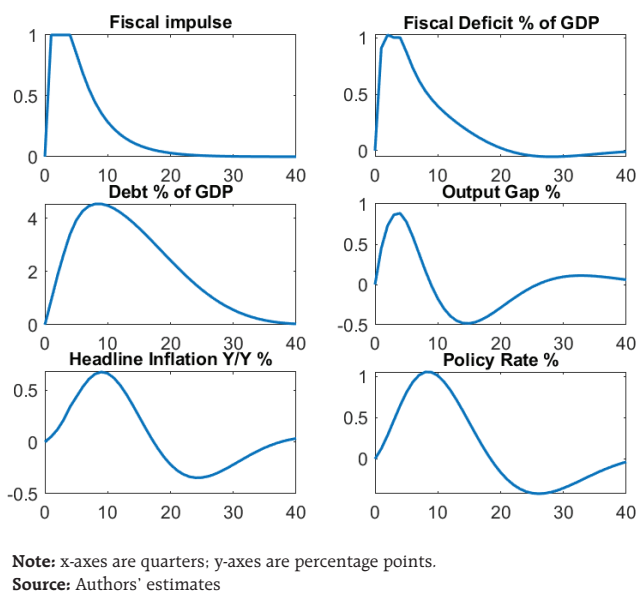
IV.8. Structural Primary Fiscal Deficit Shock

An increase in the structural primary fiscal deficit by 1 percentage point of GDP contributes to demand and opens up a positive output gap (Chart 10). The overall fiscal deficit goes up by the same amount, leading to accumulation of debt, which contributes to depreciation of the INR through country risk premium. The positive output gap and currency depreciation lead to higher inflation, warranting monetary policy action.

IV.9. Capital Flow Shock

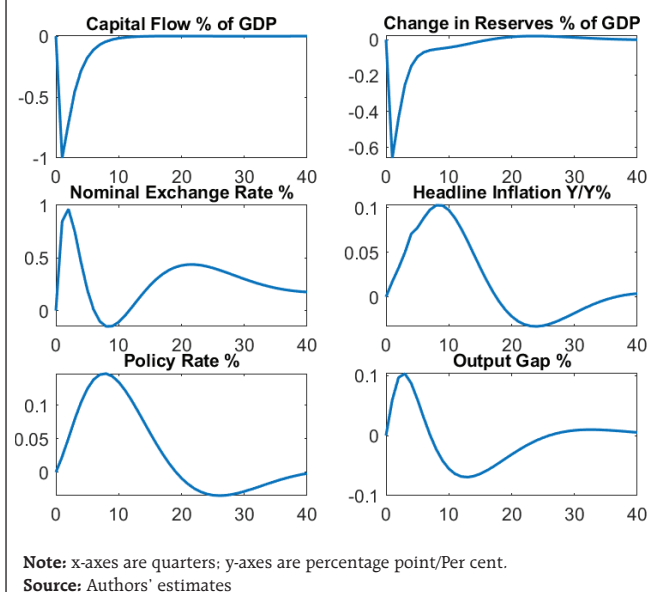
The impact of capital flow shock (one percentage point of GDP) is conditional on the RBI's decision to intervene and sterilise. In case of a capital outflow

Chart 10: Response to a 1 Percentage Point Increase in the Structural Primary Deficit



shock, assuming the RBI intervenes and sterilises 70 per cent, the reserves will deplete by 0.7 percentage point of nominal GDP. In this scenario, the exchange rate could depreciate by close to 1 per cent, inducing inflation of around 10 bps (Chart 11).

Chart 11: Response to a 1 Percentage Point Decline in Capital Flows



If the central bank decides not to intervene, there will be no depletion of reserves; however, the depreciation could be higher, leading to higher inflation and higher policy rates and imparting volatility to the exchange rate, inflation and policy rate. On the other hand, if the central bank chooses to intervene fully, an equal amount of reserves will be depleted and the exchange rate will remain more or less unchanged, warranting no monetary policy rate changes but with volatility in reserves.

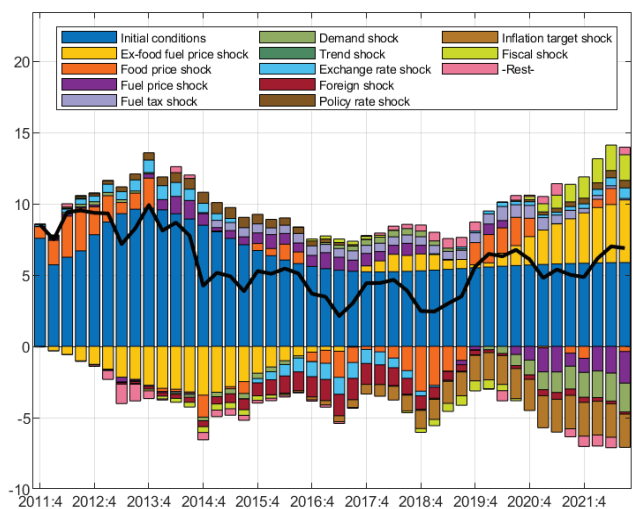
V. Historical Decompositions

A historical decomposition (HD) of the major macro variables for the period 2011-2022 helps to understand the role of various shocks and policies in driving the trajectory of macroeconomic developments.

V.1. Headline Inflation

Prior to 2014 – the period which laid down the initial conditions of the FIT – headline inflation was in double digits. Food price shocks emanating from the monsoon and MSP, the lack of a nominal anchor, exchange rate depreciation and high fuel prices drove inflation up during that period (Chart 12). During 2014 to 2016, when a *de facto* FIT framework was pursued, the factors that contributed to high inflation during the pre-2014 period dissipated. Cost push shocks became disinflationary on the back of benign global commodity prices and exchange rate stability was restored as the external environment turn favourable. From 2014 onwards, fuel taxes started to contribute positively to inflation, offsetting the negative impact of the crude oil price decline. Owing to these factors, inflation steered close to 4 per cent by the time FIT was institutionalised in 2016.

From 2016 onwards, the nominal anchor set out by the FIT contributed favourably to inflation. Fiscal prudence also contributed to the disinflationary process. Up till Q3:2019, food price shocks led to a fall in inflation. Fuel price shocks were also favourable during this period.

Chart 12: Historical Shock Decomposition of Headline Inflation

Source: Authors' estimates

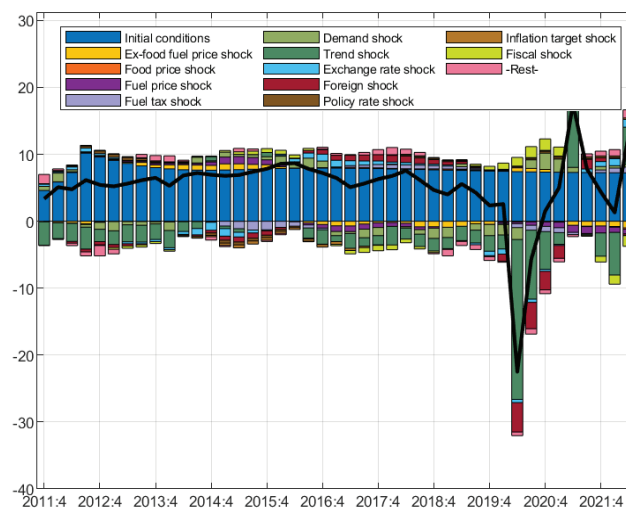
During the 2020-22 period, food price and cost-push shocks emanating from persistent supply chain disruptions due to the COVID pandemic and the war in Ukraine exerted upside pressure on headline inflation, partly offset by subdued demand conditions.

V.2. GDP Growth

The HD of GDP growth suggests that potential output shocks and structural factors were mostly responsible for the GDP growth slowdown during 2016-19 (Chart 13). The pandemic induced lockdown, supply chain bottlenecks and weak external demand adversely impacted domestic output and demand during 2020-22.

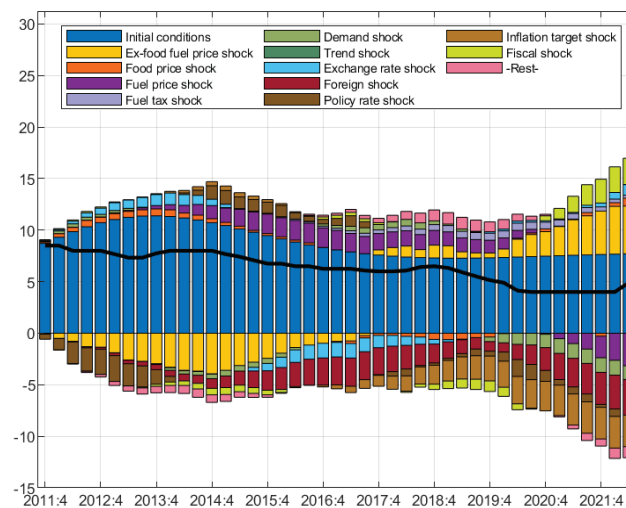
V.3. Policy Repo Rate

In the 2014-16 period, the stability in the exchange rate, favourable cost-push shocks and a conducive external environment contributed negatively to the policy rate. During the FIT period (2016 -2019), favourable food and fuel price shocks, external developments and fiscal prudence supported a lower policy rate environment (Chart 14). Most interestingly, the nominal anchor set out by the FIT

Chart 13. Historical Shock Decomposition of GDP Growth

Source: Authors' estimates

contributed negatively to the policy rate during this phase. In other words, in the absence of a nominal anchor, the policy rate could have been higher in order to achieve the same level of inflation. This indicates that with an explicit nominal anchor, the monetary policy rates can afford to be raised less than otherwise for disinflating the economy.

Chart 14. Historical Shock Decomposition of Policy Repo Rate

Source: Authors' estimates

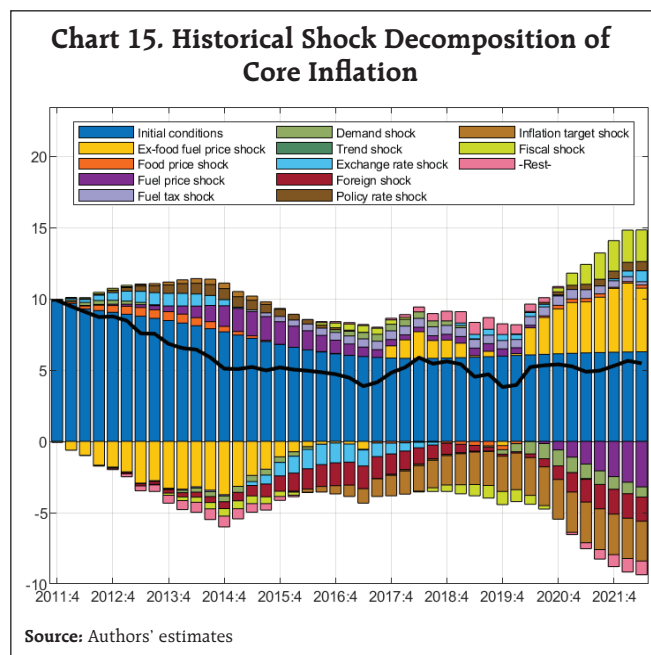
During 2020-22, a large negative output gap due to the pandemic caused monetary policy to follow an accommodative stance. From May 2022, the policy repo rate has been increased in a calibrated manner in view of headline inflation ruling above the target along with elevated core inflation.

V.4. Core Inflation

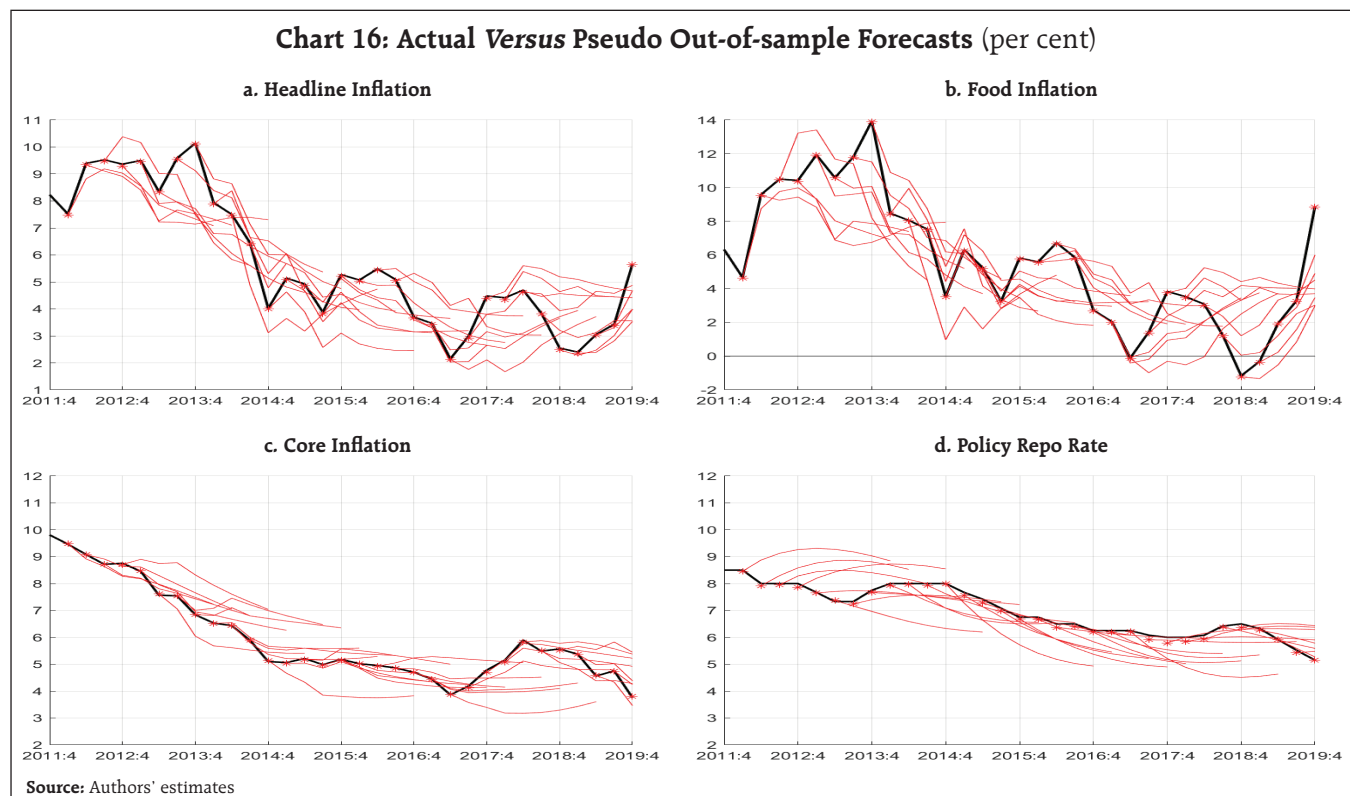
HD of core inflation is similar to that of headline inflation. The institution of the FIT regime, benign crude oil prices, fiscal prudence and favourable external environment provided cushions to core inflation during 2016-19, which more than offset the upside pressures from the increase in fuel taxes (Chart 15). Pandemic induced supply chain disruptions and cost push shocks led to elevated core inflation in 2020-22.

VI. Forecast Performance

This section evaluates the forecast performance of QPM 2.0 by generating *pseudo* out-of-sample forecasts of up to 8 quarters ahead and calculating the



pseudo out-of-sample root mean square errors (RMSE) of major macroeconomic variables for the period from 2011 to 2019 (Chart 16).



The hairline charts indicate that the forecasts of food inflation and headline inflation appear to be directionally consistent. Core inflation and policy rate forecasts seem to be less noisy than food and headline inflation forecasts.

A formal evaluation of the forecast is conducted by generating the *pseudo* out-of-sample RMSEs over various forecast horizons (Table 2).

The RMSEs of the headline inflation forecasts in the short to medium horizon (1-4 quarters) are marginally higher than that of time series forecasts and are comparable with that of the Survey of Professional Forecasters (SPF) (John *et al.*, 2020; Raj *et al.*, 2020). RMSEs of the best time series forecasts are 0.2 to 0.6 percentage points lower in 1-4 quarters. This behaviour is expected as large macroeconomic models tend to produce larger errors in the short-term relative to models based on time series and full information matrices. This is also the reason why the QPM uses forecasts from short-term forecasters as its initial condition. The forecast performance substantially improves in the medium horizon (5-8 quarters), which matters for the monetary policy decision. In the eight-quarter ahead forecasts, QPM turns out to be better than time series models (John *et al.*, 2020) by a substantial margin.

The RMSEs of core inflation forecasts are substantially lower than that of the headline inflation,

as expected. As in the case of headline inflation, RMSEs of core inflation forecasts from QPM are higher than time series forecasts and comparable to SPF forecasts over the 1-4 quarter horizon (John *et al.*, 2020). In the medium horizon, however, QPM 2.0's forecast accuracy is better than time series model forecasts (John *et al.*, 2020) by considerable margins.

VII. Conclusion

Given the transmission lags which characterise the impact of monetary policy on output and inflation, forward-looking responses to expected inflation and output are warranted to maximize welfare. Both inflation and output are also shaped by expectations of future interest rates, as also inflation expectations of households and firms. Thus, inflation and output are the outcome of a complex web of interactions and feedback mechanisms in the economy. Accordingly, consistent and reliable forecasts of inflation and output are important as they assume the role of intermediate target of monetary policy. It is in this context that theoretically consistent and empirically well-founded models adapting country-specific features are at the heart of monetary policy formulation among modern central banks.

In India, the adoption of a flexible inflation targeting framework has been underpinned by a Quarterly Projection Model, which fulfils the requirement set out in Section 45ZM of the RBI Act of setting out inflation forecasts for 6-18 months in a half-yearly Monetary Policy Report (MPR).

QPM 2.0 takes that endeavour to the next level by enriching the existing new-Keynesian monetary model (QPM 1.0) with fiscal-monetary policy interactions, a more nuanced modelling of India-specific fuel pricing, capital flows, exchange rate dynamics and central bank's forex market interventions. The QPM 2.0 thus takes monetary policy modelling closer to a general equilibrium framework that is more representative of India's macroeconomic dynamics and helps to

Table 2: Pseudo Out-of-sample RMSEs

(percentage points)

| Variable / Horizon(Quarters) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|------|------|------|------|------|------|------|------|------|
| Headline Inflation (Per cent, y-o-y) | 0.05 | 0.80 | 1.07 | 1.40 | 1.61 | 1.50 | 1.34 | 1.30 | 1.21 |
| Food Inflation (Per cent, y-o-y) | 0.05 | 1.60 | 2.04 | 2.59 | 2.91 | 2.63 | 2.48 | 2.55 | 2.32 |
| Core Inflation (Per cent, y-o-y) | 0.03 | 0.32 | 0.54 | 0.73 | 0.96 | 0.98 | 0.99 | 0.99 | 0.96 |
| Policy Rate (Per cent) | 0.09 | 0.34 | 0.58 | 0.73 | 0.82 | 0.91 | 0.92 | 0.88 | 0.79 |

Source: Authors' estimates.

generate internally consistent forecasts and policy scenarios. This provides policymakers with relevant information and scenarios for a more informed judgement.

Historical decompositions generated from QPM 2.0 show that the inflationary surge in the wake of the pandemic and the war in Ukraine was triggered by successive supply shocks but as their impact waned, rising demand unleashed by the strengthening domestic recovery enabled pass-through of pent-up input costs, adding persistence to elevated inflationary pressures (Patra *et al.*, 2022). The disinflation strategy adopted during this period has been strongly supported by improved precision in forecasts generated by QPM 2.0 relative to competing models.

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Appendix

Bank-Lending (BL) Condition

BL variable¹¹ captures frictions in the transmission mechanism of monetary policy on account of bank credit supply conditions. BL not only affects the output gap but is also affected by it. Deviations of the BL from its equilibrium level are, therefore, modelled proportional to future output gap (\hat{y}_{t+4}^{nag}) and adjusted for the shock (ε_t^{BL}):

$$BL_t - \overline{BL}_t = -\kappa_1 \cdot \hat{y}_{t+4}^{nag} + \varepsilon_t^{BL},$$

$$\kappa_1 = 5. \quad \dots(33)$$

The output gap is affected by a distributed lag of ε_t^{BL} , denoted by η_t^{BL} , which takes the following form:

$$\eta_t^{BL} = \theta \cdot (0.04\varepsilon_{t-1}^{BL} + 0.08\varepsilon_{t-2}^{BL} + 0.12\varepsilon_{t-3}^{BL} + 0.16\varepsilon_{t-4}^{BL} + 0.20\varepsilon_{t-5}^{BL} + 0.16\varepsilon_{t-6}^{BL} + 0.12\varepsilon_{t-7}^{BL} + 0.08\varepsilon_{t-8}^{BL} + 0.04\varepsilon_{t-9}^{BL}),$$

$$\theta = 1. \quad \dots(34)$$

Inflation Expectations

Inflation expectations are determined by the following process:

$$E_t^h(\pi_{t+1}^{core}) = (1 - c_t) \cdot \pi_{t-1}^{core} + c_t \cdot \pi_{t+1}^{core} + \eta_t^{E(\pi_{t+1}^{core})}$$

$$\eta_t^{E(\pi_{t+1}^{core})} = \rho \eta^{E(\pi_{t+1}^{core})} \cdot \eta_{t-1}^{E(\pi_{t+1}^{core})} + \varepsilon_t^{E(\pi_{t+1}^{core})}.$$

$$\rho \eta^{E(\pi_{t+1}^{core})} = 0.4. \quad \dots(35)$$

Inflation expectations are a weighted sum of one-quarter lagged year-on-year core inflation, and the model-based rational expectation of year-on-year inflation one quarter ahead. The weights depend on the stock of policy credibility (c_t). c_t can range from 0 (no credibility), in which case expectations are completely backward looking, to 1 (perfect credibility), in which case inflation expectations are perfectly forward looking.

¹¹ The increase in BL variable depicts tightening of bank lending condition and vice versa.

Credibility Stock Building

Credibility, as noted above, is modelled as a stock (c_t) measured between 0 and 1. Credibility changes non-linearly *i.e.*, at lower levels of credibility, monetary policy needs to be sufficiently aggressive to achieve the disinflation. However, as credibility stock increases, the policy reactions can be lower to achieve the same quantum of disinflation.

Credibility can improve only gradually over time, especially, in the initial periods of FIT. Credibility responds to a signal (ξ_t), that is good – if inflation has been converging to the target (π^{good}), and that is bad – if rising towards a high-inflation state (π^{bad}).

$$c_t = \rho^c \cdot c_{t-1} + (1 - \rho^c) \cdot \xi_t.$$

$$\rho^c = 0.95. \quad \dots(36)$$

The credibility signal weighs the relative likelihood of inflation converging to the target. It is higher if the current realised inflation is closer to the target. The error under the bad (good) regime is defined as the difference between the realised inflation and the expected inflation under the bad (good) regime.

$$\xi_t = \frac{(\varepsilon_t^{bad})^2}{(\varepsilon_t^{bad})^2 + (\varepsilon_t^{good})^2}. \quad \dots(37)$$

$$\varepsilon_t^{bad} = \pi_{t-1} - [\rho^\varepsilon \cdot \pi_{t-1} + (1 - \rho^\varepsilon) \cdot \pi^{bad}]. \quad \dots(38)$$

$$\varepsilon_t^{good} = \pi_{t-1} - [\rho^\varepsilon \cdot \pi_{t-1} + (1 - \rho^\varepsilon) \cdot \pi^{good}].$$

$$\rho^\varepsilon = 0.5; \pi^{bad} = 8.0; \pi^{good} = 4.0. \quad \dots(39)$$

ρ^ε is taken to be 0.5 assuming an equal weight for past and expected inflation under the bad (good) regime. The good regime is characterized by 4.0 per cent inflation and the bad regime is characterised by the high levels of inflation (8 per cent).

Long run Interest Rates

The relation between the short-term rate (\tilde{i}_t) and the long-term rate (i_t^m) depends on term structure (i_t^4) as well as term premium (i_t^{RISK}).

$$i_t^m = \rho^{i^m} \cdot i_{t-1}^m + (1 - \rho^{i^m}) \cdot (i_t^4 + i_t^{RISK}) + \varepsilon_t^{i^m}$$

$$\rho^{i^m} = 0.1. \quad \dots(40)$$

The term structure of interest rate (i_t^4) is the 4 quarter ahead average of short term rates and term premium is the weighted average of past value as well as the steady state value for i_t^{RISK} .

Long-term real interest rate (r_t^m) is long-term rate (i_t^m) minus expected inflation ($E_t^h(\pi_{t+1}^{core})$) and real interest rate gap (\hat{r}_t^m) is the deviation of real interest rate (r_t^m) from the natural rate of interest (\bar{r}_t^m).

$$r_t^m = i_t^m - E_t^h(\pi_{t+1}^{core}) \quad \dots(41)$$

$$\hat{r}_t^m = r_t^m - \bar{r}_t^m \quad \dots(42)$$

Relative Food Price Trends

$$\bar{rp}_t^{food} = \rho^{\bar{rp}^{food}} \bar{rp}_{t-1}^{food} + (1 - \rho^{\bar{rp}^{food}}) \bar{rp}^{food*} + \eta_t^{\bar{rp}^{food}} + \theta \cdot \varepsilon_t^{MSP} + \varepsilon_{1,t}^{\bar{rp}^{food}} \quad \dots(43)$$

$$\eta_t^{\bar{rp}^{food}} = \rho^{\eta^{\bar{rp}^{food}}} \cdot \eta_{t-1}^{\bar{rp}^{food}} + (1 - \rho^{\eta^{\bar{rp}^{food}}}) \cdot \varepsilon_{2,t}^{\bar{rp}^{food}}. \quad \dots(44)$$

$$\rho^{\bar{rp}^{food}} = 0.9; \theta = 0.4; \rho^{\eta^{\bar{rp}^{food}}} = 0.9.$$

The relative food price trend (\bar{rp}_t^{food}) depends on its past value (\bar{rp}_{t-1}^{food}), steady state level (\bar{rp}^{food*}), a moving average process ($\eta_t^{\bar{rp}^{food}}$), shocks to MSPs (ε_t^{MSP}) and idiosyncratic shocks ($\varepsilon_{1,t}^{\bar{rp}^{food}}$).

Union Budget 2023-24: An Assessment*

*by Saksham Sood, Ipsita Padhi,
Anoop K. Suresh, Bichitrananda Seth and
Samir Ranjan Behera*

The Union Budget 2023-24 envisages capital expenditure as a key lever of growth and commits to credible fiscal consolidation for strengthening macro-stability. Public debt levels have moderated as the government resorted to prudent fiscal management notwithstanding the challenges induced by the pandemic. Budget proposals for infrastructure creation, digitisation, green transition and youth empowerment are expected to yield dividends beyond the near-term by lifting the economy's growth potential.

Introduction

The Union Budget 2023-24 comes at a time when India is being viewed globally as a bright spot, in an otherwise uninspiring global economic landscape. It strikes the right chords through measures aimed at accelerating growth and job creation while promoting macroeconomic stability. The Budget adopts seven priorities that complement each other viz., inclusive development, infrastructure and investment, reaching the last mile, unleashing the potential, green growth, youth power and financial sector to guide its policy objectives. These initiatives would lift the economy's potential, providing productivity benefits into the long-term.

According due attention to fiscal prudence, the union government has managed to adhere to the budgeted fiscal deficit target of 6.4 per cent of GDP

in 2022-23 (RE) despite the supply-side disruptions emanating largely from the war in Europe. In 2023-24, the gross fiscal deficit is budgeted to further consolidate to 5.9 per cent of GDP. The government has also reiterated its commitment to reduce the fiscal deficit to below 4.5 per cent of GDP by 2025-26, which was first announced in the Union Budget 2021-22.

The Budget proposes measures to simplify the tax structure and widen the tax base through measures aimed at reducing the compliance burden of the taxpayers, formalisation of the supply chains and improvement in the ease of doing business. Redrawing of the personal income tax slabs will help boost consumption, especially at a time when global recessionary fears continue. On the expenditure front, revenue expenditure growth has been contained at 1.2 per cent, while capital expenditure is budgeted to increase to 3.3 per cent of GDP in 2023-24 (BE) as against an average of 1.7 per cent during 2010-20. Furthermore, to incentivise States to undertake capital expenditure, the scheme for providing financial assistance to the States for capital expenditure¹ has been extended to 2023-24 (BE) with an enhanced allocation of ₹1.3 lakh crore.²

Against this backdrop, the rest of the article is divided into seven sections. Section II discusses the underlying dynamics of the fiscal deficit. Section III and IV make an assessment of the trends in receipts and expenditure of the union government. Section V delineates the outstanding liabilities of the union government. Section VI discusses the major sources of financing the fiscal deficit whereas Section VII dwells upon the transfer of resources to States. Section VIII sets out the concluding observations.

* The authors are from Department of Economic and Policy Research. The authors are thankful to Dr. Deba Prasad Rath and Dr. GV Nadhanal for their valuable inputs and to Supriya Abhinav Sutar for data support. The views expressed in this article are those of the authors and do not necessarily represent the views of the Reserve Bank of India.

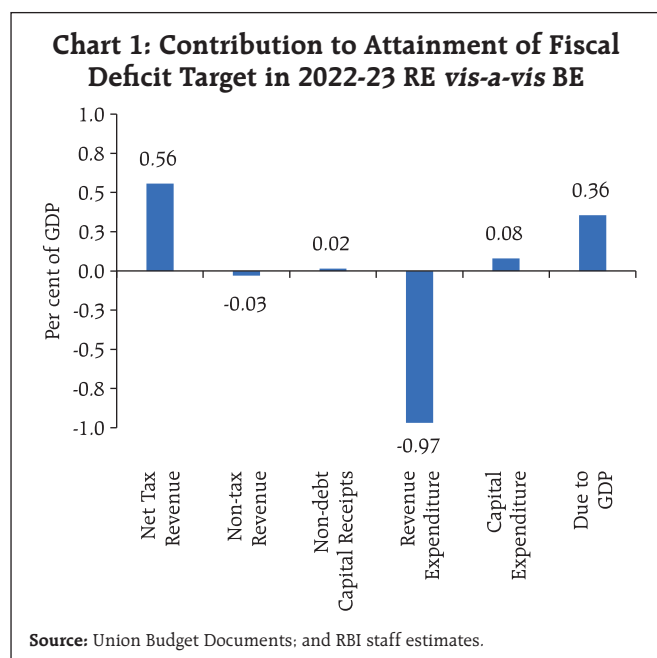
¹ Under the Scheme for Special Assistance to States for Capital Investment, the Centre provides 50-year interest free loans to States for spending on capital investment projects.

² For detailed budget proposals please refer to Annex 2.

II. Fiscal Deficit – The Underlying Dynamics

The government adhered to the budgeted fiscal target of 6.4 per cent of GDP in 2022-23 (RE).³ In absolute terms, however, the gross fiscal deficit (GFD) surpassed budget estimates by ₹94,123 crore as the increase in revenue expenditure outweighed the higher receipts. Revenue expenditure surpassed the budget estimates by ₹2.6 lakh crore while capital expenditure fell short by ₹21,972 crore, resulting in a net increase in total expenditure by ₹2.4 lakh crore. On the receipts side, net tax revenue overshot the budgeted target by ₹1.5 lakh crore and non-debt capital receipts are estimated to exceed the budget estimates by ₹4,209 crore. This was partly offset by lower non-tax collections, which witnessed a shortfall of ₹7,900 crore (Chart 1).

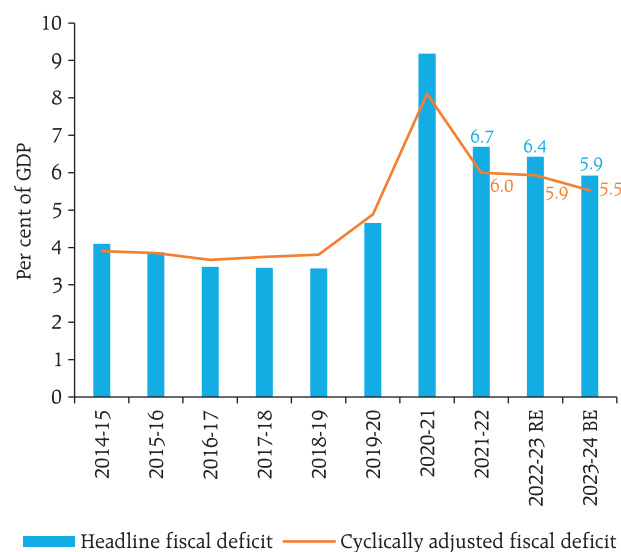
For 2023-24, the GFD is budgeted at 5.9 per cent of GDP⁴ - a consolidation of 51 basis points over



³ In 2016-17, the budgeted fiscal deficit target (3.5 per cent of GDP) was adhered to by the Union Government. However, from 2017-18 to 2020-21 the Union Government was unable to meet its budgeted fiscal deficit target.

⁴ Nominal GDP for 2023-24 (BE) has been projected at ₹3,01,75,065 crore assuming 10.5 per cent growth over the preceding year (viz., ₹2,73,07,751 crore as per the first advance estimates for 2022-23 released by the Ministry of Statistics and Programme Implementation, Government of India on January 06, 2023).

Chart 2: Cyclically Adjusted Fiscal Deficit



2022-23 (RE). Considering the underlying economic cycle, the cyclically-adjusted fiscal deficit for 2023-24 stands lower at 5.5 per cent (Chart 2).⁵ Further, the government remains committed to attain the medium-term target of achieving GFD of below 4.5 per cent by 2025-26. The consolidation in 2023-24 is sought to be achieved through containment of revenue expenditure to 11.6 per cent of GDP, even as capital expenditure is budgeted to rise to a high of 3.3 per cent of GDP (Table 1). Fiscal consolidation can free up productive resources for the private sector and contribute to lowering the cost of capital, thereby raising the growth rate of the economy in 2023-24.

Decomposition of GFD

The revenue deficit, which pre-empted around 70 per cent of the GFD during 2018-19 to 2020-21,

⁵ Cyclically adjusted fiscal deficit is the fiscal deficit that would prevail if the economy operates at full employment. It is computed as the difference between cyclically adjusted expenditure (E^*) and cyclically adjusted revenue (R^*) such that $R^* = R \left(\frac{Y^*}{Y} \right)^{\epsilon_r}$, $E^* = E \left(\frac{Y^*}{Y} \right)^{\epsilon_e}$ where R and E are actual revenue and expenditure; Y is actual output; Y^* is potential output and ϵ_r and ϵ_e are the elasticities of revenue and expenditure with respect to the output gap (Fedelino et al., 2009). Tax revenue elasticity is estimated at 1.5 and expenditure elasticity is assumed to be zero due to absence of expenditure related automatic stabilizers.

Table 1: Key Indicators⁶

(Per cent of GDP)

| | 2021-22 | 2022-23 | | 2023-24 |
|------------------------------|---------|---------|------|---------|
| | Actuals | BE | RE | BE |
| 1 | 2 | 3 | 4 | 5 |
| 1. Fiscal Deficit | 6.7 | 6.4 | 6.4 | 5.9 |
| 2. Revenue Deficit | 4.4 | 3.8 | 4.1 | 2.9 |
| 3. Primary Deficit | 3.3 | 2.8 | 3.0 | 2.3 |
| 4. Gross Tax Revenue | 11.4 | 10.7 | 11.1 | 11.1 |
| 5. Non-Tax Revenue | 1.5 | 1.0 | 1.0 | 1.0 |
| 6. Revenue Expenditure | 13.5 | 12.4 | 12.7 | 11.6 |
| 7. Capital Expenditure | 2.5 | 2.9 | 2.7 | 3.3 |
| of which: | | | | |
| Capital Outlay | 2.3 | 2.4 | 2.3 | 2.8 |
| 8. Debt | 59.6 | 61.0 | 57.8 | 57.8 |
| 9. Effective Revenue Deficit | 3.3 | 2.6 | 2.9 | 1.7 |

Note: 1. Capital outlay is capital expenditure less loans and advances.

2. Effective revenue deficit is the difference between revenue deficit and grant-in-aid for creation of capital assets.

Source: Union Budget Documents.

is estimated to decline to 63.3 per cent in 2022-23 (RE) and further to 48.7 per cent in 2023-24 (BE). On the other hand, the contribution of growth-inducing capital outlay is budgeted to rise to 46.9 per cent

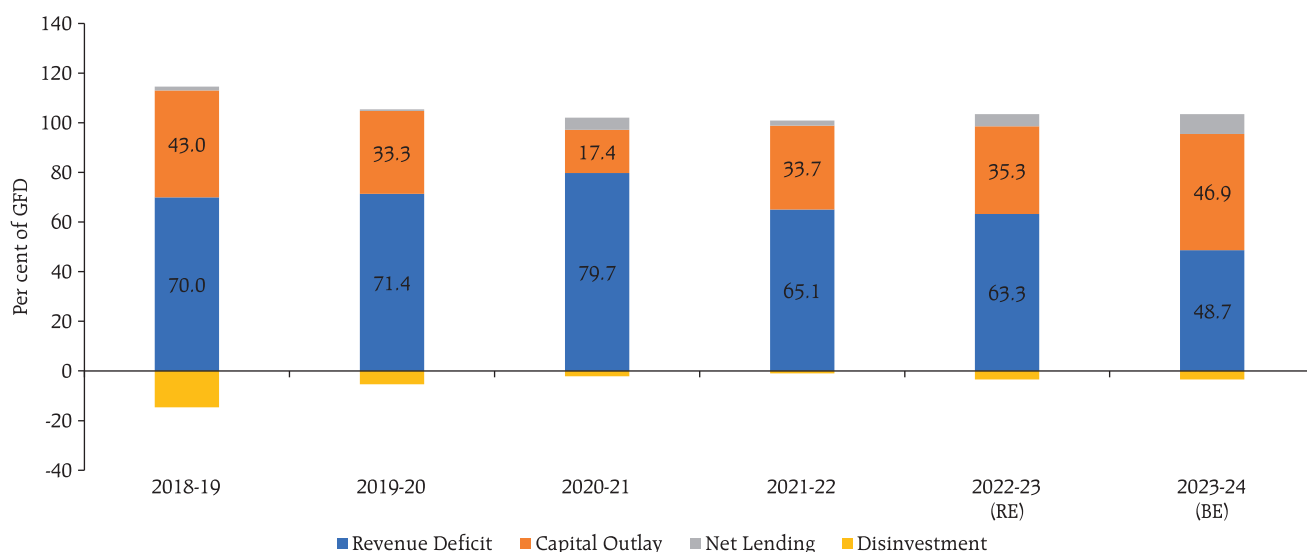
in 2023-24 from an average of 36.5 per cent of GFD during 2010-11 to 2019-20 (Chart 3).

III. Receipts

Total receipts comprising net tax revenues, non-tax revenues and non-debt capital receipts, stood at 8.91 per cent of GDP in 2022-23 (RE), marginally exceeding the budgeted level of 8.85 per cent as tax revenues surpassed budget estimates, outweighing the shortfall in non-tax receipts. For 2023-24, total receipts are budgeted to rise to 9.0 per cent of GDP.

Tax Revenues

Gross tax revenues exhibited robust performance in 2022-23 (RE), despite the macroeconomic consequences of the war in Ukraine. Gross tax revenue exceeded the budget estimates by ₹2.9 lakh crore, on account of higher than budgeted collections in corporation tax, income tax and GST. In 2023-24, gross tax revenue is budgeted to increase by 10.4 per cent, with a budgeted buoyancy of 0.99 that is close to the trend level (proxied by the average for 2010-11 to 2018-19) [Table 2].

Chart 3: Decomposition of GFD**Source:** Union Budget Documents.

⁶ For details please refer to Annex 1

Table 2: Tax Buoyancy

| | Average Tax Buoyancy (2010-11 to 2018-19) | 2021-22 | 2022-23 (BE) | 2022-23 (RE) | 2023-24 (BE) |
|----------------------|---|---------|--------------|--------------|--------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Gross Tax Revenue | 1.11 | 1.72 | 0.86 | 0.80 | 0.99 |
| 2. Direct Taxes | 1.03 | 2.51 | 1.22 | 1.11 | 1.00 |
| (i) Corporation Tax | 0.92 | 2.85 | 1.20 | 1.12 | 1.00 |
| (ii) Income Tax | 1.27 | 2.21 | 1.28 | 1.13 | 1.00 |
| 3. Indirect taxes | 1.25 | 1.04 | 0.51 | 0.46 | 0.99 |
| (i) GST | - | 1.39 | 1.40 | 1.45 | 1.14 |
| (ii) Customs Duty | 0.31 | 2.47 | 1.14 | 0.33 | 1.05 |
| (iii) Excise Duty | 0.91 | 0.04 | -1.34 | -1.23 | 0.57 |

Note: '-': Not Applicable. Tax buoyancy is defined as the responsiveness of tax revenue to changes in nominal GDP and to discretionary changes in tax policies; calculations for 2022-23 (BE) are made over 2021-22 (RE).

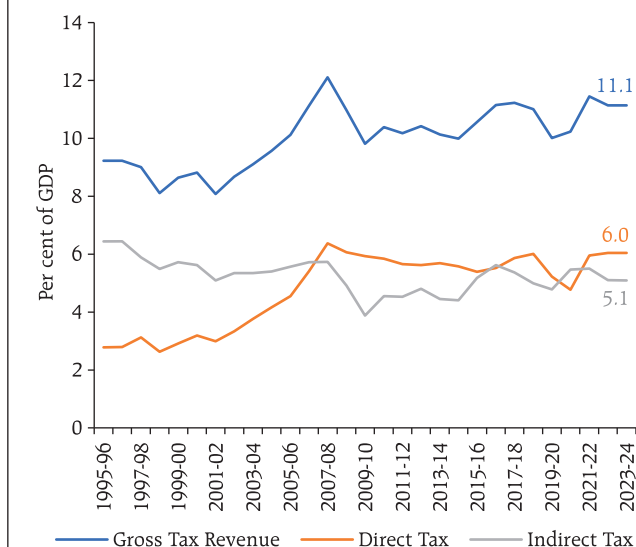
Source: RBI staff estimates based on Union Budget Documents.

Direct Taxes

After registering a growth of 17.2 per cent in 2022-23 (RE), direct taxes are budgeted to grow by 10.5 per cent to reach 6.0 per cent of GDP in 2023-24 (Chart 4). Several direct tax changes have been proposed in the Budget to simplify and rationalise various provisions, to reduce the compliance burden and provide tax relief to citizens. Under personal income tax, the Budget proposes the following major changes to the new tax regime – (i) an increase in rebate limit to ₹7 lakh from ₹5 lakh, (ii) a reduction in the number of slabs to five from six and an increase in the tax exemption limit to ₹3 lakh from ₹2.5 lakh and (iii) extension of standard deduction benefit for salaried class and pensioners to the new tax regime. The highest surcharge rate was also brought down from 37 per cent to 25 per cent in the new tax regime, which would result in a reduction of the maximum tax rate to 39 per cent from the current rate at 42.74 per cent.

Indirect Taxes

Indirect tax collections in 2022-23 (RE) exceeded the BE by ₹55,247 crore, as GST collections exceeded budget estimates by ₹74,000 crore, offsetting the shortfall in customs (₹3,000 crore) and excise duty collections

Chart 4: Tax-GDP Ratio

Source: Union Budget Documents; and RBI staff estimates.

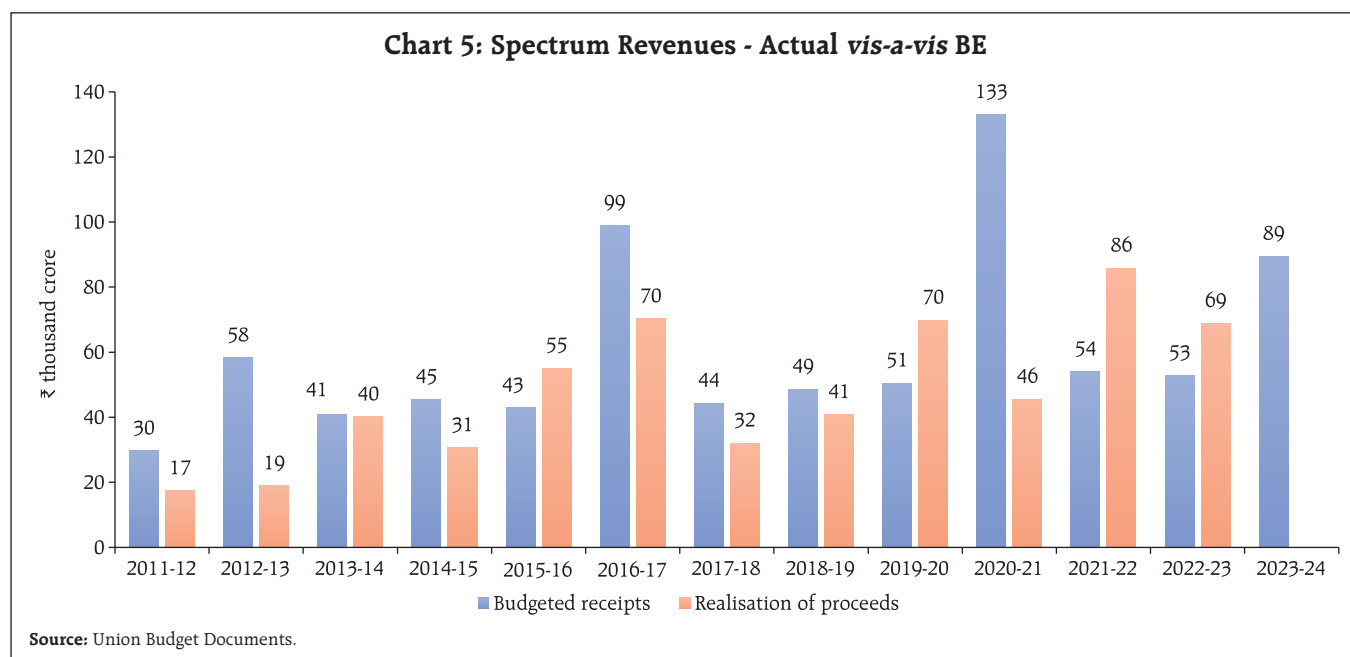
(₹15,000 crore). While the cut in excise duty on fuel in May 2022 contributed to lower excise duty collections in 2022-23 (RE), GST collections recorded a buoyancy of 1.45, reflecting the improvement in economic activity and the impact of efforts to increase the tax base and improve compliance. In 2023-24 (BE), indirect taxes are budgeted to grow by 10.4 per cent with GST, customs and excise budgeted to increase by 12.0 per cent, 11.0 per cent and 5.9 per cent, respectively.

The tax changes (direct and indirect) proposed in the Budget are expected to increase disposable income by ₹35,000 crore. This is estimated to increase the real GDP growth by 15 basis points in 2023-24 by boosting personal consumption.⁷

Non-Tax Revenues

Receipts from non-tax sources fell short of budgeted targets in 2022-23 (RE) by ₹7,900 crore as the lower than budgeted surplus transfer by the Reserve Bank was partly offset by higher interest receipts, dividends from public sector enterprises and spectrum revenues (Chart 5). In 2023-24, non-tax revenues are budgeted to increase by 15.2 per cent to ₹3.0 lakh crore.

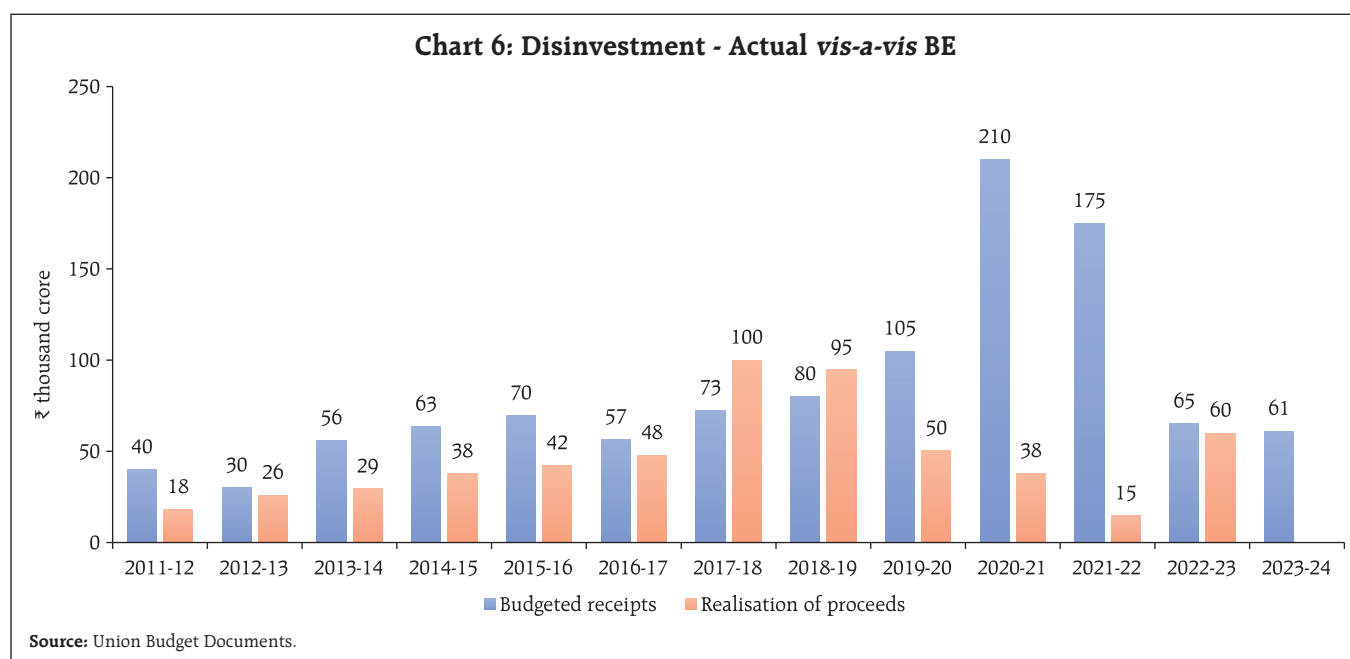
⁷ For details, refer to the article on "State of the Economy" RBI Bulletin (February 2023).



Non-debt Capital Receipts

In 2022-23 (RE), disinvestment receipts⁸ are placed at ₹60,000 crore, as against the budgeted target of ₹65,000 crore of which only ₹38,671 crore has been garnered till end December 2022. In 2023-24 (BE), the disinvestment target has been

pegged at ₹61,000 crore (Chart 6). Recoveries of loans and advances exceeded budget estimates in 2022-23 (RE) by ₹9,209 crore, outweighing the shortfall in disinvestment receipts. In 2023-24, recovery in loans is budgeted to decline by 2.1 per cent over 2022-23 (RE).



⁸ Disinvestment receipts refers to miscellaneous capital receipts, which include disinvestment and other receipts.

IV. Expenditure

Total expenditure is budgeted to grow by 7.5 per cent in 2023-24, lower than the 10.4 per cent growth recorded in 2022-23 (RE). In 2023-24, revenue expenditure is budgeted to grow by only 1.2 per cent as expenditure on major subsidies is budgeted to contract by 28.2 per cent due to the rationalisation of food subsidy and softening of urea prices. Noteworthy from the point of view of reviving investment and growth is the continued thrust provided to capital expenditure in the post pandemic period as the capital expenditure is budgeted to increase to 3.3 per cent of GDP in 2023-24 from an average of 1.7 per cent during 2010-20 (Table 3).

In 2023-24, capital expenditure is budgeted at ₹10 lakh crore, which is close to three times the amount spent in 2019-20. Ministry-wise allocation of capital expenditure indicates that the Ministry of Railways and Road Transport and Highways account for almost half of the budgeted capital expenditure for 2023-24

(Chart 7). The increase in effective capital expenditure (capital expenditure *plus* grants-in-aid for creation of capital assets), through its multiplier effect, will generate additional output of ₹10.3 lakh crore during 2023-27 of which railways and loan assistance to States will contribute 43 per cent, while investment in logistics will contribute 19 per cent.⁹

Next, we decompose the total expenditure of the union government into committed expenditure, which includes establishment expenditure¹⁰, interest payments, grants recommended by the Finance Commission and GST compensation to States; and discretionary expenditure which includes central sector schemes, centrally sponsored schemes and transfers to States (excluding Finance Commission grants and GST compensation). Prior to the pandemic, the share of committed expenditure was higher than discretionary expenditure. However, with the end of GST compensation regime and introduction of interest free loans to States for capital expenditure,

Table 3: Expenditure of Central Government

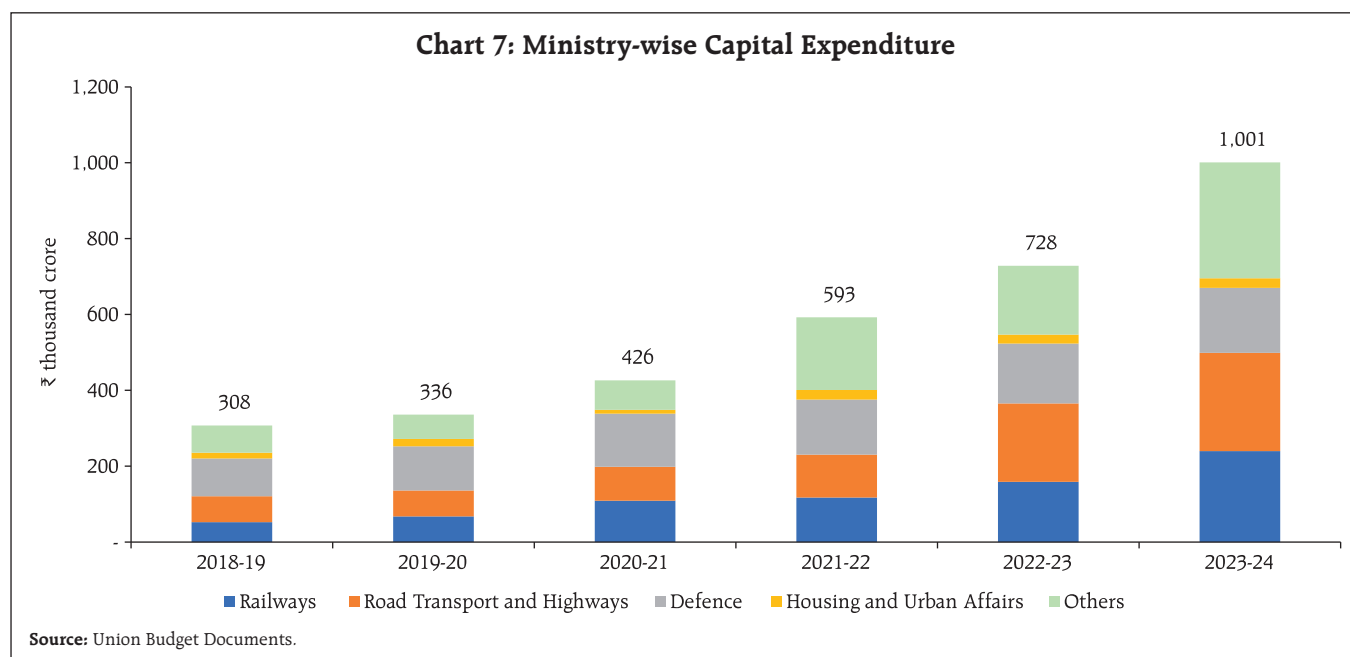
| | ₹ thousand crore | | | | Growth Rate (per cent) | | |
|--|------------------|--------------|--------------|--------------|------------------------|--------------|--------------|
| | 2021-22 | 2022-23 (BE) | 2022-23 (RE) | 2023-24 (BE) | 2022-23 (BE) | 2022-23 (RE) | 2023-24 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. Total Expenditure | 3,794 | 3,945 | 4,187 | 4,503 | 4.0 | 10.4 | 7.5 |
| 2. Revenue Expenditure (<i>of which</i>) | 3,201 | 3,195 | 3,459 | 3,502 | -0.2 | 8.1 | 1.2 |
| (i) Interest Payments | 805 | 941 | 941 | 1,080 | 16.8 | 16.8 | 14.8 |
| (ii) Major Subsidies | 446 | 318 | 522 | 375 | -28.8 | 16.9 | -28.2 |
| Food | 289 | 207 | 287 | 197 | -28.4 | -0.6 | -31.3 |
| Fertilizer | 154 | 105 | 225 | 175 | -31.6 | 46.5 | -22.3 |
| Petroleum | 3 | 6 | 9 | 2 | 69.8 | 167.9 | -75.4 |
| (iii) MGNREGA | 98 | 73 | 89 | 60 | -25.9 | -9.2 | -32.9 |
| (iv) PM-KISAN | 67 | 68 | 60 | 60 | 1.8 | -10.2 | 0.0 |
| (v) Defence (Revenue) | 229 | 233 | 260 | 270 | 1.9 | 13.5 | 4.1 |
| 3. Capital Expenditure | 593 | 750 | 728 | 1,001 | 26.5 | 22.8 | 37.4 |
| (i) Capital Outlay | 534 | 610 | 620 | 837 | 14.2 | 16.0 | 35.0 |
| 4. Effective Capital Expenditure | 836 | 1,068 | 1,054 | 1,371 | 27.8 | 26.1 | 30.1 |

Note: Effective capital expenditure is the sum of capital expenditure and grants-in-aid for creation of capital assets.

Source: Union Budget Documents.

⁹ For details, refer to the article "State of the Economy" RBI Bulletin (February 2023).

¹⁰ Establishment expenditure includes expenditure on salaries, wages, pensions and office expenses.



the share of committed expenditure stands reduced to 45.1 per cent of total expenditure in 2023-24 (BE) (Chart 8).

V. Outstanding Debt

After peaking at 62.8 per cent of GDP in 2020-21 due to the impact of the pandemic, the

total outstanding debt of the Union government is budgeted to consolidate to 57.8 per cent of GDP in 2023-24 (BE). The ratio of interest payments to revenue receipts, however, is budgeted to increase to 41.0 per cent (Chart 9a). The interest rate growth differential (IRGD), an indicator of debt sustainability, continues to remain favourable, even though its magnitude has

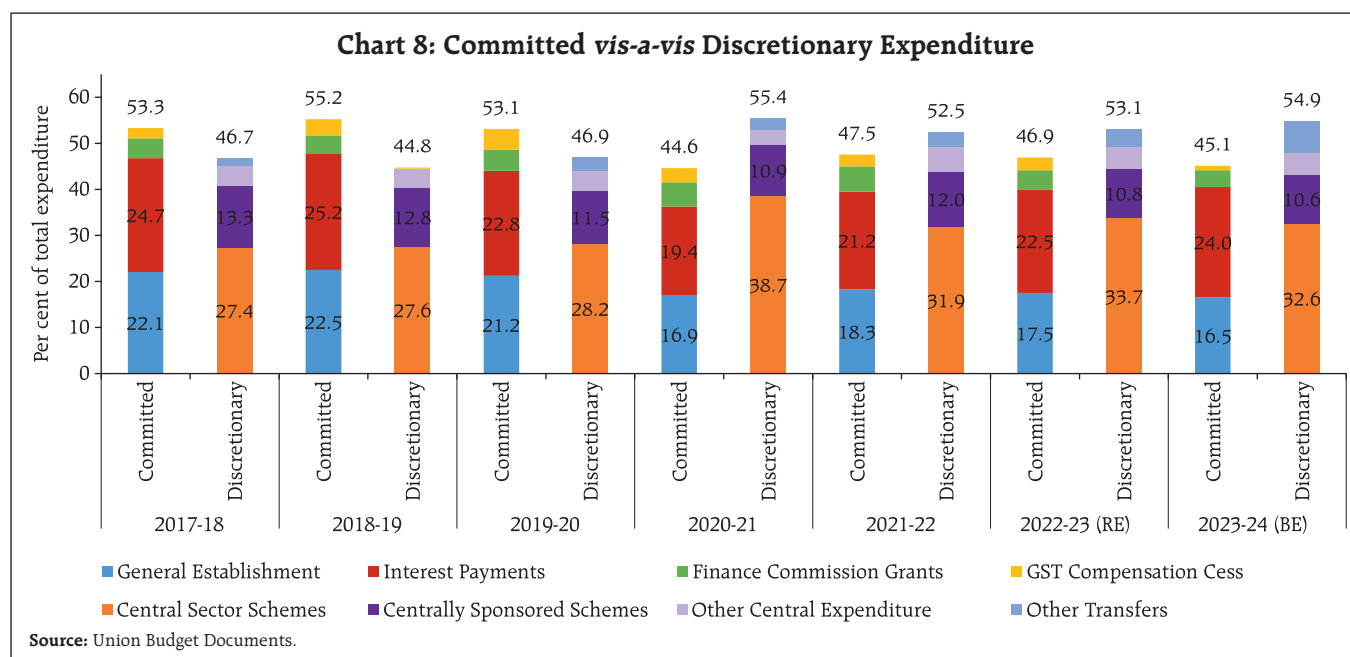
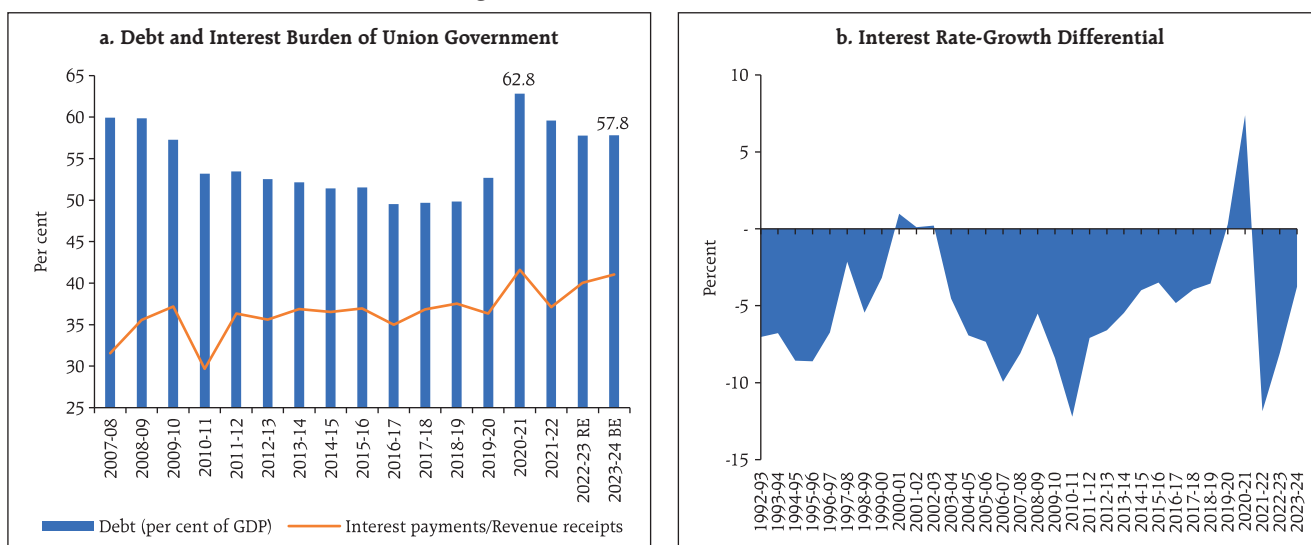


Chart 9: Outstanding Liabilities and Interest Rate Growth Differential

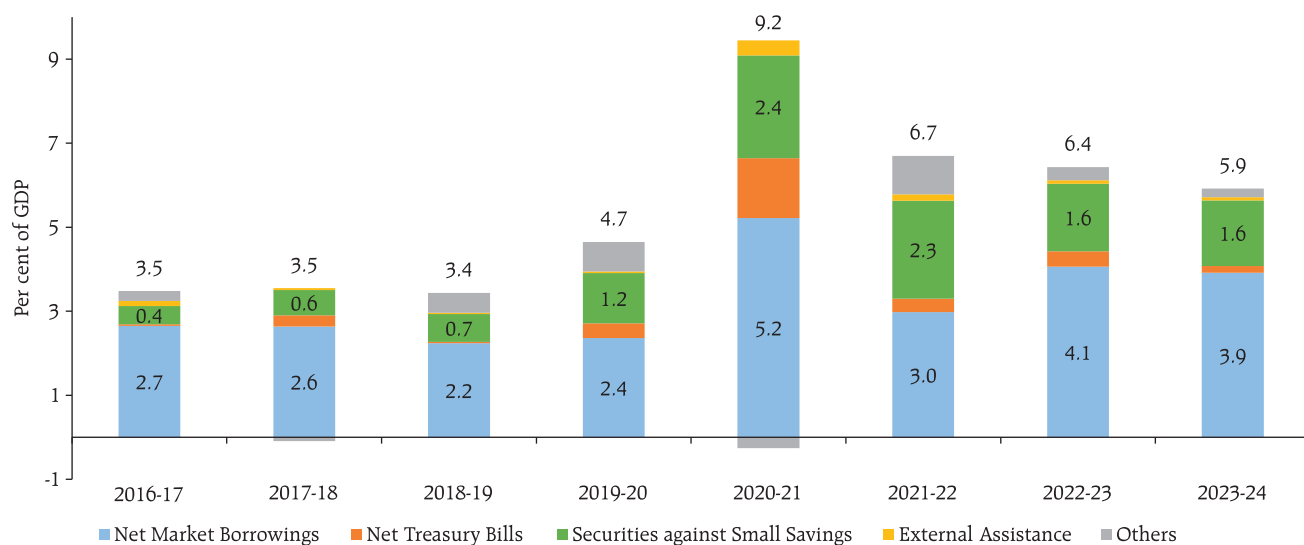
Sources: Union Budget Documents and Staff calculations.

declined in the recent years (Chart 9b). However, as the union government debt still remains elevated *vis-à-vis* pre-pandemic trend, there is a need to stay on the path of fiscal consolidation.

VI. Gross Fiscal Deficit Financing

As per the revised estimates (RE) for 2022-23, the budgeted fiscal deficit target of 6.4 per cent of the GDP

is likely to be met. In 2023-24 (BE) gross fiscal deficit (GFD) is budgeted at 5.9 per cent of GDP. Market borrowings are the main source of financing GFD for the union government, followed by securities issued against small savings (Chart 10). In 2023-24, gross and net market borrowings are budgeted at ₹15.4 lakh crore and ₹11.8 lakh crore, up from ₹14.2 lakh

Chart 10: Sources of Financing Gross Fiscal Deficit

Source: Union Budget Documents.

Table 4: Market Borrowings of Union Government

(₹ crore)

| | Gross Market Borrowings | Net Market Borrowings |
|--------------|-------------------------|-----------------------|
| 2018-19 | 5,71,000 (3.0) | 4,22,735 (2.2) |
| 2019-20 | 7,10,000 (3.5) | 4,73,968 (2.4) |
| 2020-21 | 12,60,116 (6.4) | 10,32,907 (5.2) |
| 2021-22 | 9,68,382 (4.1) | 7,04,097 (3.0) |
| 2022-23 (RE) | 14,21,000 (5.2) | 11,08,183 (4.1) |
| 2023-24 (BE) | 15,43,000 (5.1) | 11,80,911 (3.9) |

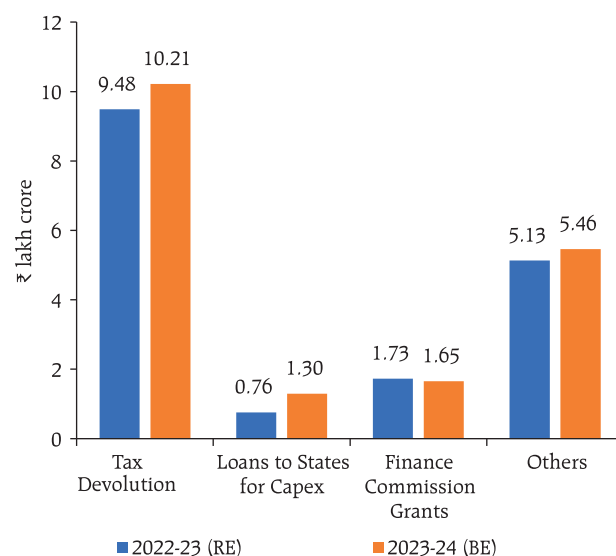
Note: Figures in parentheses are as per cent of GDP.**Source:** Union Budget Documents.

crore and ₹11.1 lakh crore, respectively in 2022-23 (RE) (Table 4). The gradual downscaling in the market borrowing requirements (as per cent of GDP) of the union government towards pre-pandemic level will open up space for private investment.

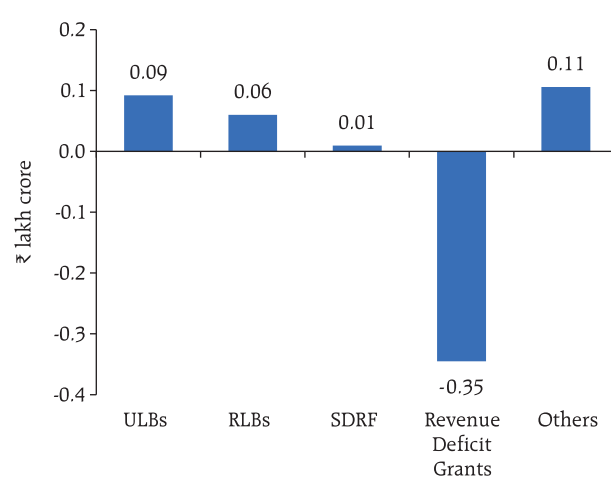
VII. Resource Transfer from Centre to States

The Centre has fixed States' gross fiscal deficit at 3.5 per cent of the gross state domestic product (GSDP) for 2023-24, of which 0.5 per cent will be tied to power sector reforms. The gross transfer to the States is budgeted to increase in 2023-24 (BE), largely due to enhanced tax devolution and an increase in allocation for special assistance to States for capital expenditure (Chart 11, Annex 3). The Finance Commission Grants are expected to decline in 2023-24, primarily due to lower transfers under Post-Devolution Revenue Deficit Grants, while the transfers to the local bodies and health sector have seen a sharp rise (Chart 12).

To spur States' investment in infrastructure and incentivise them to undertake complementary policy actions, the Centre has decided to continue with the 50-year interest-free loan to States for one more

Chart 11: Resource Transfer to States**Source:** Union Budget Documents.

year with an enhanced allocation of ₹1.3 lakh crore.¹¹ The loan amount will have to be spent in 2023-24. While most of the loan will be at the discretion of the States, a part of it will be contingent on States

Chart 12: Y-o-Y Change in Finance Commission Grants in 2023-24 (BE)**Note:** ULBs: Urban local bodies; RLBs: Rural local bodies; SDRF: State Disaster Response Fund.**Source:** Union Budget Documents.

¹¹ In 2022-23 (BE), this amount was budgeted at ₹1 lakh crore, however as per 2022-23 (RE) the allocation stands at ₹76,000 crore.

increasing their actual capital expenditure. A part of the outlay will also be linked to, or allocated for, scrapping old government vehicles, urban planning reforms and actions, financing reforms in urban local bodies (to make them creditworthy for municipal bonds), housing for police personnel above or as part of police stations, constructing Unity Malls, children and adolescents' libraries and digital infrastructure, and States' share of capital expenditure of central schemes. The Union Budget also proposes to incentivise cities to improve their creditworthiness for municipal bonds through property tax governance reforms and ring-fencing user charges on urban infrastructure. Additionally, an Urban Infrastructure Development Fund (UIDF) is proposed to be established. It will be managed by the National Housing Bank and used by public agencies to create urban infrastructure in Tier 2 and Tier 3 cities.

VIII. Conclusion

The Union Budget 2023-24 aims to strengthen growth momentum (through higher capital expenditure) and promote macroeconomic stability by strengthening the economic foundations with commitment to fiscal consolidation. While higher capital expenditure would generate multiplier effects and crowd-in private investment, fiscal consolidation would free up productive resources for the private sector. Further, infrastructure development, supported by integrated and coordinated planning, measures to promote digitisation and green economy, and skilling initiatives to harness the demographic dividend are expected to yield dividends beyond the near-term and raise the economy's growth potential in the medium-run, as expounded in the accompanying article on "State of the Economy".

Annex 1: Union Budget 2023-24: Key Fiscal Indicators

| | ₹ thousand crore | | | | | Per cent of GDP | | Growth Rate | |
|---|------------------|---------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2020-21 | 2021-22 | 2022-23 (BE) | 2022-23 (RE) | 2023-24 (BE) | 2022-23 (RE) | 2023-24 (BE) | 2022-23 (RE) | 2023-24 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. Direct Tax | 945 | 1,408 | 1,420 | 1,650 | 1,823 | 6.0 | 6.0 | 17.2 | 10.5 |
| (i) Corporation | 458 | 712 | 720 | 835 | 923 | 3.1 | 3.1 | 17.3 | 10.5 |
| (ii) Income | 470 | 673 | 680 | 790 | 873 | 2.9 | 2.9 | 17.4 | 10.5 |
| 2. Indirect Tax | 1,082 | 1,301 | 1,338 | 1,393 | 1,538 | 5.1 | 5.1 | 7.1 | 10.4 |
| (i) GST | 549 | 698 | 780 | 854 | 957 | 3.1 | 3.2 | 22.3 | 12.0 |
| (ii) Customs | 135 | 200 | 213 | 210 | 233 | 0.8 | 0.8 | 5.1 | 11.0 |
| (iii) Excise | 392 | 395 | 335 | 320 | 339 | 1.2 | 1.1 | -18.9 | 5.9 |
| 3. Gross tax revenue (1+2) | 2,027 | 2,709 | 2,758 | 3,043 | 3,361 | 11.1 | 11.1 | 12.3 | 10.4 |
| 4. Assignment to States | 595 | 898 | 817 | 948 | 1,021 | 3.5 | 3.4 | 5.6 | 7.7 |
| 5. NCCD Transfers | 6 | 6 | 6 | 8 | 9 | 0.0 | 0.0 | 30.5 | 9.7 |
| 6. Net tax Revenue (3-4-5) | 1,426 | 1,805 | 1,935 | 2,087 | 2,331 | 7.6 | 7.7 | 15.6 | 11.7 |
| 7. Non-tax Revenue | 208 | 365 | 270 | 262 | 302 | 1.0 | 1.0 | -28.3 | 15.2 |
| (i) Dividends and Profits | 97 | 161 | 114 | 84 | 91 | 0.3 | 0.3 | -47.7 | 8.4 |
| (ii) Interest Receipts | 17 | 22 | 18 | 25 | 25 | 0.1 | 0.1 | 12.6 | 0.7 |
| 8. Revenue Receipts (6+7) | 1,634 | 2,170 | 2,204 | 2,348 | 2,632 | 8.6 | 8.7 | 8.2 | 12.1 |
| 9. Non-debt Capital Receipts | 58 | 39 | 79 | 84 | 84 | 0.3 | 0.3 | 112.1 | 0.6 |
| (i) Disinvestment Receipts | 38 | 15 | 65 | 60 | 61 | 0.2 | 0.2 | 309.9 | 1.7 |
| (ii) Recovery of Loans | 20 | 25 | 14 | 24 | 23 | 0.1 | 0.1 | -5.0 | -2.1 |
| 10. Total Receipts (ex. borrowings) (8+9) | 1,692 | 2,209 | 2,284 | 2,432 | 2,716 | 8.9 | 9.0 | 10.1 | 11.7 |
| 11. Revenue Expenditure | 3,084 | 3,201 | 3,195 | 3,459 | 3,502 | 12.7 | 11.6 | 8.1 | 1.2 |
| (i) Interest Payments | 680 | 805 | 941 | 941 | 1,080 | 3.4 | 3.6 | 16.8 | 14.8 |
| (ii) Major Subsidies | 708 | 446 | 318 | 522 | 375 | 1.9 | 1.2 | 16.9 | -28.2 |
| Food | 541 | 289 | 207 | 287 | 197 | 1.1 | 0.7 | -0.6 | -31.3 |
| Fertilizer | 128 | 154 | 105 | 225 | 175 | 0.8 | 0.6 | 46.5 | -22.3 |
| Petroleum | 38 | 3 | 6 | 9 | 2 | 0.0 | 0.0 | 167.9 | -75.4 |
| 12. Capital Expenditure (i + ii) | 426 | 593 | 750 | 728 | 1,001 | 2.7 | 3.3 | 22.8 | 37.4 |
| (i) Capital Outlay | 316 | 534 | 610 | 620 | 837 | 2.3 | 2.8 | 16.0 | 35.0 |
| (ii) Loans & Advances | 110 | 58 | 140 | 108 | 164 | 0.4 | 0.5 | 85.1 | 51.6 |
| 13. Total Expenditure (11+12) | 3,510 | 3,794 | 3,945 | 4,187 | 4,503 | 15.3 | 14.9 | 10.4 | 7.5 |
| 14. Fiscal Deficit (13-10) | 1,818 | 1,585 | 1,661 | 1,755 | 1,787 | 6.4 | 5.9 | 10.8 | 1.8 |

Source: Union Budget Documents.

Annex 2: Highlights of the Union Budget 2023-24

The economic agenda presented in the Budget focuses on three things: first, facilitating ample opportunities for citizens, especially the youth, to fulfil their aspirations; second, providing strong impetus to growth and job creation; and third, strengthening macro-economic stability. Following four opportunities can be transformative to service the above-mentioned focus areas.

1. Economic Empowerment of Women: Facilitation of the women self-help groups (SHGs), mobilised by DAY-NRLM (*Aajivika* – National Rural Livelihood Mission) to attain next level of economic empowerment through formation of large producer enterprises or collectives.
2. PM *Vishwakarma KAushal Samman* (PM VIKAS): Scheme to integrate traditional artisans and craftspeople with micro, small and medium-scale enterprises (MSMEs) value chains.
3. Tourism: Promotion of tourism on mission mode with active participation of States, convergence of government programmes and public-private partnerships.
4. Green Growth: Implementation of programmes for green fuel, green energy, green farming and green mobility for efficient use of energy across various economic sectors.

The Budget has announced seven priorities. The major policy actions proposed by the Budget under each priority are listed below.

Priority 1: Inclusive Development

Agriculture and Cooperation

- Establishment of an Agriculture Accelerator Fund to provide innovative and affordable solutions, promote use of modern technologies and encourage young entrepreneurs in rural areas.
- An open-source, open standard and interoperable public good digital infrastructure is proposed for agricultural sector which will enable inclusive, farmer centric solutions and support for growth of agri-tech industry and start-ups.
- Targeted agriculture credit of ₹20 lakh crore with focus on animal husbandry, dairy and fisheries.
- Set-up of *Atmanirbhar* Clean Plant Program to boost the availability of disease-free, quality planting material for high-value horticultural crops.
- Indian Institute of Millet Research, Hyderabad will be supported as the Centre of Excellence (CoE) to enable India to become Global hub for millets.
- Massive decentralization of storage capacity to help farmers realize remunerative prices through sale at appropriate times.

Health, Education and Skilling

- 157 new nursing colleges will be established.
- A Mission to eliminate Sickle Cell Anaemia by 2047 will be launched.
- Promotion of research and innovation in pharmaceuticals through Centers of Excellence (CoE) will be undertaken.
- Facilitation of joint public and private medical research through selected Indian Council of Medical Research (ICMR) labs.
- Re-envision of teachers' training through innovative pedagogy and curriculum transaction. The District Institutes of Education and Training will be developed as vibrant institutes of excellence for this purpose.

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

- A National Digital Library for children and adolescents will be set-up for facilitating availability of quality books across geographies, languages, genres and levels, and device agnostic accessibility. States will be encouraged to set up physical libraries at Panchayat and ward levels. To inculcate financial literacy, financial sector regulators and organizations will be encouraged to provide age-appropriate reading material to these libraries.

Priority 2: Reaching the Last Mile

- Launch of the Aspirational Blocks Programme covering 500 blocks for saturation of essential government services across multiple domains.
- *Pradhan Mantri* PVTG Development Mission will be launched to improve socio-economic conditions of the particularly vulnerable tribal groups (PVTGs).
- Recruitment of 38,800 teachers and support staff for the 740 *Eklavya* Model Residential Schools which serves tribal students.
- Financial assistance of ₹5,300 crores will be given for micro-irrigation under Upper Bhadra Project for drought-prone central area of Karnataka.
- Provision of free food grains to all *Antyodaya* and priority households for one year, under *Pradhan Mantri Garib Kalyan Anna Yojana* (PMGKAY).
- Enhancement of outlay for PM Aawas Yojana by 66 per cent.

Priority 3: Infrastructure and Investment

- The capital investment outlay has been increased by 33 per cent to ₹10 lakh crore, which will account for 3.3 per cent of the GDP. The direct capital investment by the Centre is complemented by the provision made for creation of capital assets through Grants-in-Aid to States.; taking the 'Effective Capital

Expenditure' of the Centre to 4.5 per cent of GDP.

- The special assistance to the States for capital expenditure in the form of 50-year interest free loan will be continued for one more year with enhanced outlay of ₹1.3 lakh crore.
- Infrastructure Finance Secretariat will assist all stakeholders for more private investment in infrastructure.
- One hundred critical transport infrastructure projects, for end-to-end connectivity, last and first mile connectivity for ports, coal, steel, fertilizer, and food grains sectors will be taken up on priority basis.
- Fifty additional airports, heliports, water aerodromes and advance landing grounds will be revived for improving regional air connectivity.

Urban Development

- Cities will be incentivized to improve their credit worthiness for municipal bonds, through property tax governance reforms and ring-fencing user charges on urban infrastructure
- An Urban Infrastructure Development Fund (UIDF) will be established through use of priority sector lending shortfall which will be managed by the National Housing Bank and will be used by public agencies to create urban infrastructure in Tier 2 and Tier 3 cities.
- All cities and towns will be enabled for 100 per cent mechanical desludging of septic tanks and sewers for transition from manhole to machine-hole mode.

Priority 4: Unleashing the Potential

- Under Mission *Karmayogi*, the government has also launched an integrated online training platform, iGOT *Karmayogi*, to provide continuous learning opportunities for lakhs of government employees to upgrade their skills.

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

- For realizing the vision of 'Make AI in India and Make AI work for India', three centres of excellence for Artificial Intelligence will be set-up in top educational institutions.
 - To unleash innovation and research by start-ups and academia, a National Data Governance Policy will be brought out. This will enable access to anonymized data.
 - The know your customer (KYC) process will be simplified adopting a 'risk-based' instead of 'one size fits all' approach. The financial sector regulators will also be encouraged to have a KYC system fully amenable to meet the needs of Digital India.
 - A one stop solution for reconciliation and updation of identity and address of individuals maintained by various government agencies, regulators and regulated entities will be established using DigiLocker service and Aadhaar as foundational identity.
 - For the business establishments required to have a Permanent Account Number (PAN), the PAN will be used as the common identifier for all digital systems of specified government agencies. This will bring ease of doing business; and it will be facilitated through a legal mandate.
 - For obviating the need for separate submission of same information to different government agencies, a system of 'Unified Filing Process' will be set-up.
 - *Vivad se Vishwas* I scheme is aimed at less stringent contract execution for MSMEs.
 - *Vivad se Vishwas* II scheme is aimed at easier settlement of contractual disputes of government and government undertakings for MSMEs.
 - To better allocate scarce resources for competing development needs, the financing of select schemes will be changed, on a pilot basis, from 'input-based' to 'result-based'.
 - For efficient administration of justice, Phase-3 of the E-Courts project will be launched with an outlay of ₹7,000 crore.
 - Fintech services in India have been facilitated by our digital public infrastructure including Aadhaar, PM *Jan Dhan Yojana*, Video KYC, India Stack and unified payment interface (UPI). To enable more Fintech innovative services, the scope of documents available in DigiLocker for individuals will be expanded.
 - An Entity DigiLocker will be set up for use by MSMEs, large business and charitable trusts. This will be towards storing and sharing documents online securely, whenever needed, with various authorities, regulators, banks and other business entities.
 - One hundred labs for developing applications using 5G services will be set up in engineering institutions to realise a new range of opportunities, business models, and employment potential.
- Priority 5: Green Growth**
- To facilitate transition of the economy to low carbon intensity and reduce dependence on fossil fuel imports, National Green Hydrogen Mission was recently launched with an outlay of ₹19,700 crore.
 - The budget provides ₹35,000 crore for priority capital investments towards energy transition and net zero objectives, and energy security by Ministry of Petroleum and Natural Gas. Battery Energy Storage Systems with capacity of 4,000 MWH will be supported with Viability Gap Funding.

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

- The Inter-state transmission system for evacuation and grid integration of 13 GW renewable energy from Ladakh will be constructed with investment of ₹20,700 crore including central support of ₹8,300 crore.
- To incentivize environmentally sustainable and responsive actions by companies, individuals and local bodies, a Green Credit Programme will be notified under the Environment (Protection) Act.
- PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth (PM-PRANAM) will be launched to incentivize States and Union Territories to promote alternative fertilizers and balanced use of chemical fertilizers.
- With a total investment of ₹10,000 crore, 500 new 'waste to wealth' plants under GOBARDhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme will be established for promoting circular economy.
- 10,000 Bio-Input Resource Centres will be set-up to facilitate 1 crore farmers to adopt natural farming over the next 3 years.
- Afforestation initiative for mangrove forests will be launched titled 'Mangrove Initiative for Shoreline Habitats & Tangible Incomes' (MISHTI).
- A new scheme, *Amrit Dharohar*, will be implemented over the next three years to encourage optimal use of wetlands, and enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities.
- Coastal shipping will be promoted for both freight and passengers through PPP mode with viability gap funding.

Priority 6: Youth Power**Skilling**

- *Pradhan Mantri Kaushal Vikas Yojana* 4.0 will be launched to skill lakhs of youth within next three years. The scheme will also cover new age courses for Industry 4.0 like coding, artificial intelligence (AI), robotics, mechatronics, internet of things (IoT), 3D printing, drones, and soft skills. To skill youth for international opportunities, 30 Skill India International Centres will be set up.
- A unified Skill India Digital platform to further strengthen the digital skilling ecosystem will be launched.
- Direct Benefit Transfer under a pan-India National Apprenticeship Promotion Scheme will be rolled out to benefit 47 lakh youth in next 3 years.

Tourism

- States will be encouraged to set up a Unity Mall for promotion and sale of their own ODOPs (One District One Product), geographical indications (GI) products and other handicraft products.
- At least 50 destinations to be selected and developed as a complete package for domestic and foreign tourists.

Priority 7: Financial Sector

- Expanded corpus of ₹9,000 crore under a revamped credit guarantee scheme for MSMEs is proposed to enable additional collateral-free guarantee credit of ₹2 lakh crore.
- A national financial information registry will be set up to serve as the central repository of financial and ancillary information. This will facilitate efficient flow of credit, promote financial inclusion, and foster financial stability. A new legislative framework will govern this

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

credit public infrastructure, and it will be designed in consultation with the Reserve Bank.

- To meet the needs of *Amrit Kaal* and to facilitate optimum regulation in the financial sector, public consultation, as necessary and feasible, will be brought to the process of regulation-making and issuing subsidiary directions.
- To simplify, ease and reduce cost of compliance, financial sector regulators will be requested to carry out a comprehensive review of existing regulations. For this, they will consider suggestions from public and regulated entities. Time limits to decide the applications under various regulations will also be laid down.
- Gujarat International Finance Tec-City (GIFT) International Financial Services Centre (IFSC): To enhance business activities in GIFT IFSC, the following measures will be taken:
 - o Delegating powers under the special economic zone (SEZ) Act to International Financial Services Centres Authority (IFSCA) to avoid dual regulation.
 - o Setting up a single window information technology (IT) system for registration and approval from International Financial Services Centre Authority (IFSCA), SEZ authorities, Goods and Services Tax Network (GSTN), Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI) and Insurance Regulatory Development Authority of India (IRDAI).
 - o Permitting acquisition financing by IFSC Banking Units of foreign banks.
 - o Establishing a subsidiary of Export Import (EXIM) Bank for trade re-financing.
- o Amending IFSCA Act for statutory provisions for arbitration, ancillary services, and avoiding dual regulation under SEZ Act.
- o Recognizing offshore derivative instruments as valid contracts.
- To improve bank governance and to enhance investors' protection, certain amendments to the Banking Regulation Act, the Banking Companies Act and the Reserve Bank of India Act are proposed.
- To build capacity of functionaries and professionals in the securities market, SEBI will be empowered to maintain standards for education in the National Institute of Securities Markets.
- A Central Data Processing Centre will be setup for faster handling of administrative work under the Companies Act.
- An integrated IT portal will be established for investors to reclaim unclaimed shares and unpaid dividends from the Investor Education and Protection Fund Authority.
- Digital payments continue to find wide acceptance. In 2022, they recorded an increase of 76 per cent in transactions and 91 per cent in value. Fiscal support for this digital public infrastructure will be continued in 2023-24.
- A one-time new small savings scheme, *Mahila Samman* Savings Certificate, will be made available for a two-year period up to March 2025. This will offer deposit facility up to ₹2 lakh in the name of women or girls for a tenor of 2 years at fixed interest rate of 7.5 per cent with partial withdrawal option.
- The maximum deposit limit for Senior Citizen Savings Scheme will be enhanced from ₹15 lakh to ₹30 lakh. The maximum deposit limit

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

for Monthly Income Account Scheme will be enhanced from ₹4.5 lakh to ₹9 lakh for single account and from ₹9 lakh to ₹15 lakh for joint account.

Fiscal Management

- Fifty-year interest free loan to States: The entire fifty-year loan to States has to be spent on capital expenditure within 2023-24. Most of this will be at the discretion of States, but a part will be conditional on States increasing their actual capital expenditure. Parts of the outlay will also be linked to, or allocated for, the following purposes:
 - o Scrapping old government vehicles.
 - o Urban planning reforms and actions.
 - o Financing reforms in urban local bodies to make them creditworthy for municipal bonds.
 - o Housing for police personnel above or as part of police stations.
 - o Constructing Unity Malls.
 - o Children and adolescents' libraries and digital infrastructure.
 - o State share of capital expenditure of central schemes.
- States will be allowed a fiscal deficit of 3.5 per cent of gross state domestic product (GSDP) of which 0.5 per cent will be tied to power sector reforms.

Tax Proposals**Indirect Tax Proposals**

- The Union Budget proposes to reduce the number of basic customs duty rates on goods, other than textiles and agriculture, from 21 to 13. As a result, there are minor changes in the basic custom duties, cesses and surcharges on

some items including toys, bicycles, automobiles and naphtha.

Sector Specific Indirect Tax Proposals

- Green mobility: The Budget proposes to exempt excise duty on GST-paid compressed biogas contained in blended compressed natural gas. Customs duty exemption is being extended to import of capital goods and machinery required for manufacture of lithium-ion cells for batteries used in electric vehicles.
- Electronics: The Budget proposes to provide relief in customs duty on import of certain parts and inputs like camera lens and continue the concessional duty on lithium-ion cells for batteries for another year. The basic customs duty on parts of open cells of television panels is reduced by 2.5 per cent.
- Electrical: The basic customs duty on electric kitchen chimney is being increased from 7.5 per cent to 15 per cent and that on heat coils is proposed to be reduced from 20 per cent to 15 per cent.
- Chemicals and Petrochemicals: To facilitate energy transition and support the Ethanol Blending Programme, basic customs duty exemption is given to Denatured ethyl alcohol. Basic customs duty is also being reduced on acid grade fluorspar and crude glycerin.
- Marine Products: To enhance the export competitiveness of marine products, reduction in duties on key inputs for domestic manufacture of shrimp feed is proposed.
- Lab Grown Diamonds: To sustain India's global leadership in cutting and polishing of diamonds, the Budget has proposed to reduce basic customs duty on seeds used to manufacture Lab Grown Diamonds (LGDs).

Annex 2: Highlights of the Union Budget 2023-24 (Contd.)

- **Precious Metals:** The Budget proposes to increase the duties on articles made from gold and platinum. The import duty on silver dore, bars and articles are also increased.
- **Compounded Rubber:** The basic customs duty rate on compounded rubber is being increased from 10 per cent to '25 per cent or ₹30/kg' whichever is lower.
- **Cigarettes:** National Calamity Contingent Duty (NCCD) on specified cigarettes is proposed to be revised upwards by about 16 per cent.

Direct Tax Proposals

- **MSMEs and Professionals:** The Budget proposes to enhance the limits of presumptive taxation to ₹3 crore for Micro Enterprises and ₹75 lakh for professionals with cash payments less than 5 per cent.
- **Cooperatives:** In line with the new manufacturing companies, the new co-operatives that commence manufacturing activities shall also benefit from a lower tax rate of 15 per cent. The threshold limit for cooperatives to withdraw cash without tax deducted at source (TDS) increased to ₹3 crore.
- An opportunity would be provided to sugar co-operatives to claim payments made to sugarcane farmers for the period prior to the assessment year 2016-17 as an expenditure. This is expected to provide them with a relief of almost ₹10,000 crores.
- The proposal has been made for a higher limit of ₹2 lakh per member for penalty exemption of cash deposits to and loans in cash by Primary Agricultural Co-operative Societies (PACS) and Primary Co-operative Agriculture and Rural Development Banks (PCARDBs).

- **Start-Ups:** The date of incorporation for income tax benefits to start-ups has been extended till March 31, 2024. It is also proposed to provide the benefit of carry forward of losses on change of shareholding of start-ups from seven year of incorporation to ten years.
- **Appeals:** To reduce the pendency of appeals, it is proposed to deploy about 100 Joint Commissioners for disposal of small appeals.
- **Better targeting of Tax Concessions:** The budget proposed to cap deduction from capital gains on investment in residential house under sections 54 and 54F to ₹10 crore.
- **Rationalisation:** Income of Authorities, Boards and Commissions set up by statutes of the Union or State for the purpose of housing, development of cities, towns and villages, and regulating and developing an activity is proposed to be exempted from income tax.

Personal Income Tax

- It is proposed to increase the rebate limit to ₹7 lakh in the new tax regime. Thus, no income tax for persons with income up to ₹7 lakh in the new tax regime.
- The budget proposed to change the tax structure under the new personal income tax regime by reducing the number of slabs to five and increasing the tax exemption limit to ₹3 lakh. The revised new tax regime is as follows:

| Income | Tax rate |
|-----------------|-------------|
| ₹ 0-3 lakh | Nil |
| ₹ 3-6 lakh | 5 per cent |
| ₹ 6-9 lakh | 10 per cent |
| ₹ 9-12 lakh | 15 per cent |
| ₹ 12-15 lakh | 20 per cent |
| Above ₹ 15 lakh | 30 per cent |

Annex 2: Highlights of the Union Budget 2023-24 (Concl'd.)

- The standard deduction of ₹50,000 to salaried people and deduction up to ₹15,000 for pensioners under the new tax regime.
- It is also proposed to reduce the highest surcharge rate from 37 per cent to 25 per cent in the new tax regime. This would result in reduction of the maximum tax rate from 42.74 per cent to 39 per cent.
- The limit for tax exemption on leave encashment on retirement of non-government salaried employees is proposed to be increased from the current ₹3 lakh to ₹25 lakh.
- The new income tax regime will be made as the default tax regime. However, citizens will continue to have the option to avail the benefit of the old tax regime.

Annex 3: Resource Transfers from Centre to States and UTs with Legislature

| | 2021- 2022 | 2022- 2023 (RE) | 2023- 2024 (BE) | 2021- 2022 | 2022- 2023 (RE) | 2023- 2024 (BE) | 2021- 2022 | 2022- 2023 (RE) | 2023- 2024 (BE) |
|---|---------------|-----------------------|-----------------------|-----------------------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| | ₹ crore | | | As per cent of Gross Transfers | | | Y-o-Y Growth (Per cent) | | |
| I Devolution of States Share in Taxes | 898,392 | 948,406 | 1,021,448 | 52.7 | 55.4 | 54.8 | 51.0 | 5.6 | 7.7 |
| II Some Important Items of Transfer of which: | 202,808 | 125,177 | 183,613 | 11.9 | 7.3 | 9.9 | 23.0 | -38.3 | 46.7 |
| 1. Back-to-Back Loans to States in lieu of GST Compensation Shortfall | 147,866 | - | - | 8.7 | 0.0 | 0.0 | 34.2 | - | - |
| 2. Externally Aided Projects-Loan | 23,083 | 29,580 | 24,550 | 1.4 | 1.7 | 1.3 | -13.8 | 28.1 | -17.0 |
| 3. Special Assistance as Loan to States for Capital Expenditure | 14,186 | 76,000 | 130,000 | 0.8 | 4.4 | 7.0 | 19.9 | 435.7 | 71.1 |
| III Finance Commission Grants of which: | 207,435 | 173,257 | 165,480 | 12.2 | 10.1 | 8.9 | 12.7 | -16.5 | -4.5 |
| 1. Grant for local bodies - Urban Bodies | 16,147 | 15,026 | 24,222 | 0.9 | 0.9 | 1.3 | -39.5 | -6.9 | 61.2 |
| 2. Grant for local bodies - Rural Bodies | 40,312 | 41,000 | 47,018 | 2.4 | 2.4 | 2.5 | -33.6 | 1.7 | 14.7 |
| 3. Grants-in-Aid for SDRF | 17,747 | 18,635 | 19,573 | 1.0 | 1.1 | 1.1 | -20.3 | 5.0 | 5.0 |
| 4. Post Devolution Revenue Deficit Grants | 118,452 | 86,201 | 51,673 | 6.9 | 5.0 | 2.8 | 59.3 | -27.2 | -40.1 |
| IV Total Transfer to States [other than I+II+III] | 345,847 | 395,334 | 426,996 | 20.3 | 23.1 | 22.9 | 6.3 | 14.3 | 8.0 |
| 1. Under Centrally Sponsored Schemes (Revenue) | 334,581 | 346,992 | 364,270 | 19.6 | 20.3 | 19.6 | 8.5 | 3.7 | 5.0 |
| 2. Under Central Sector Schemes (Revenue) | 9,994 | 46,687 | 60,942 | 0.6 | 2.7 | 3.3 | -38.1 | 367.2 | 30.5 |
| 3. Under Other Categories of Expenditure (Revenue) | 1,270 | 1,552 | 1,681 | 0.1 | 0.1 | 0.1 | 26.6 | 22.2 | 8.3 |
| 4. Capital Transfers | 2 | 102 | 103 | 0.0 | 0.0 | 0.0 | -5.0 | 5268.4 | 1.0 |
| V Transfer to Delhi, Puducherry and Jammu and Kashmir | 51,128 | 68,654 | 65,337 | 3.0 | 4.0 | 3.5 | 0.9 | 34.3 | -4.8 |
| VI Gross Transfers to States/UTs (I+II+III+IV+V) | 1,705,610 | 1,710,828 | 1,862,874 | 100.0 | 100.0 | 100.0 | 29.2 | 0.3 | 8.9 |
| VII Less Recovery of Loans and Advances | 17,569 | 9,105 | 8,296 | 1.0 | 0.5 | 0.4 | 9.1 | -48.2 | -8.9 |
| VIII Net Transfers (VI-VII) | 1,688,041 | 1,701,723 | 1,854,578 | 99.0 | 99.5 | 99.6 | 29.5 | 0.8 | 9.0 |
| IX Gross Transfers / GDP (per cent) | 7.2 | 6.3 | 6.2 | - | - | - | - | - | - |
| X Net Transfers / GDP (per cent) | 7.1 | 6.2 | 6.1 | - | - | - | - | - | - |

Source: Union Budget Documents.

ESG Disclosures and Performances: Cross-Country Evidence*

by Saurabh Ghosh[^] and Siddhartha Nath[^]

We present a cross-country empirical analysis indicating that the Environmental, Social and Governance (ESG) indices performed better than their broad market counterparts. In the literature there are debates surrounding whether ESG activities are in the interest of shareholders or the outcome of agency problems. Our article fits at the heart of this debate and suggests that the ESG indices withstood the unanticipated shock (COVID19) better than the broad market indices. In the backdrop of these findings, we discuss some policy options to encourage undertaking of ESG initiatives by the Indian corporates.

Introduction

The term "Environmental, Social and Governance (ESG)" risks refer to the risks that the governments, corporates and financial institutions are exposed to due to large scale trends, e.g., climate change, resource scarcity, demographic shifts etc. In the context of corporate finance, discussions on ESG frequently include how companies integrate and manage these risks as part of their business models, and to what extent investors integrate them into their decisions. The growing emphasis on ESG risks by the public authorities across the globe shows the paramount importance of managing these risks to ensure sustainable growth process. The most effective way to institutionalise this practice would be to integrate these principles into the investment policy and practices.

Public authorities across the globe are paying increasing attention to the integration of these principles into their regulatory frameworks (BIS, 2021). Building on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), the International Sustainability Standards Board (ISSB) released its first set of proposed sustainability standards for comment. These standards also include industry-based disclosure requirements derived from the Sustainability Accounting Standards Board (SASB). Most of the large economies around the world including India have already come a long way by making sustainability disclosures mandatory for listed corporations. However, transparency and reporting standards of these disclosures continue to remain as a challenge for broad-based implementation of this policy (Bouye et. al. (2021)).

While it is almost unanimous that better disclosure standards will benefit regulators in the long-term, there are some debates relating to their short-term consequences. A large body of available literature (Cai et. al. (2016), Liang and Renneboog (2017a and 2017b))¹ suggests that the ESG related performances by the corporations in a country are associated with the country's economic development, legal systems promoting competition, civil liberties, political rights, harmony, autonomy etc. At the firm-level, higher ESG considerations are associated with better corporate governance, higher institutional ownership, balanced gender-political leaning of the board members etc., (Gillan et. al. (2021)). In the context of business, increasing ESG considerations are generally found to be associated with goodwill, reputation and positive consumer perception (Schiller (2018), Dai et. al. (2020)). This provides a company with fair justifications why they might choose to integrate these principles into their business models. Despite these evidences favouring ESG considerations, there are debates surrounding

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* Views expressed in this article are solely of the authors' and do not represent the views of the Reserve Bank of India.

¹ See Gillan et. al., (2021) for a comprehensive review of literature.

whether ESG activities are in the broader interest of shareholders or the outcome of agency problems (Gillan et. al., (2021)). Moreover, undertaking ESG initiatives by the corporations might be mixed with scepticism, especially by the smaller, capital starved entities. In fact, a branch of literature suggests that higher disclosures of ESG risks and stricter screening by the authorities may lead to lower stock prices and higher cost of raising capital for a firm (Heinkel et. al., (2001), Chava (2014), Ng and Rezaee (2015) etc.), potentially discouraging them from undertaking ESG disclosures and initiatives.

Our article fits at the heart of this debate, and the evidences presented in this article suggest that the stock price indices of companies leading in ESG initiatives have generally outperformed the broad market indices over the long-term in most of the advanced and emerging market economies. This means that undertaking ESG considerations may be associated with better financial market returns than not undertaking such considerations.

The rest of this article is organised as following: Section 2 explains the data used for our analysis, followed by cross-country exploratory data analysis in Section 3. In Section 4, we use two empirical models (difference-and-difference and Market Model) to substantiate that stock prices of companies that led in terms of ESG initiatives performed better than the overall market during the COVID-19 pandemic. Finally, Section 5 concludes the paper.

II. Data

We have used Morgan Stanley Capital International (MSCI) ESG indices for our analysis. We chose 18 countries for our analysis, 10 emerging economies, viz., Brazil, China, India, Indonesia, South Korea, Malaysia, Russia, South Africa, Taiwan and Thailand: and 8 advanced economies, viz., Australia, Canada, Hong Kong, Japan, Sweden, Switzerland, UK and USA. The sample period for our analysis ranges from September 2010 to August 2021.

MSCI ESG leaders' indices are constructed on the basis of ESG ratings for the companies given by MSCI. MSCI ESG ratings for the companies measure a company's exposure and resilience to those long-run ESG risks that are financially relevant. MSCI ESG ratings are designed to pick up certain risks that are overlooked by the conventional assessment of financial risks, which could impact the financial performance, once they materialise². Along with the exposure of a company to certain risks, MSCI ESG ratings also look at how the company is managing those risks³. Companies are provided ratings based on these aspects and ESG ratings help identifying companies that are leading or lagging within their industry peers. As a result, MSCI ESG indices are designed to facilitate integration of ESG considerations into an investor's investment decisions.

To assess companies' and the sectors' exposure to and management of ESG related risks, MSCI collects data from a variety of sources that are mostly publicly available, e.g., academia, government, NGO databases, Transparency International, US EPA, and World Bank (MSCI, 2022). Company specific information are collected from various disclosures from the companies, government databases on ESG compliances and controversies, media reports, NGOs, stakeholder sources etc. MSCI identifies 35 'key issues' under 10 broad themes covering all pillars; environmental, social and governance (Table 1 in the Annex). The final ESG rating of a company is defined as a weighted average of ratings on individual key issues. Company ratings are then normalised relative to their industry peers. The weights are defined for

² For example, how water shortages in the near-future can pose threat to a mining company is captured by the ESG ratings, but it is not captured by the conventional financial indicators, or the stock prices.

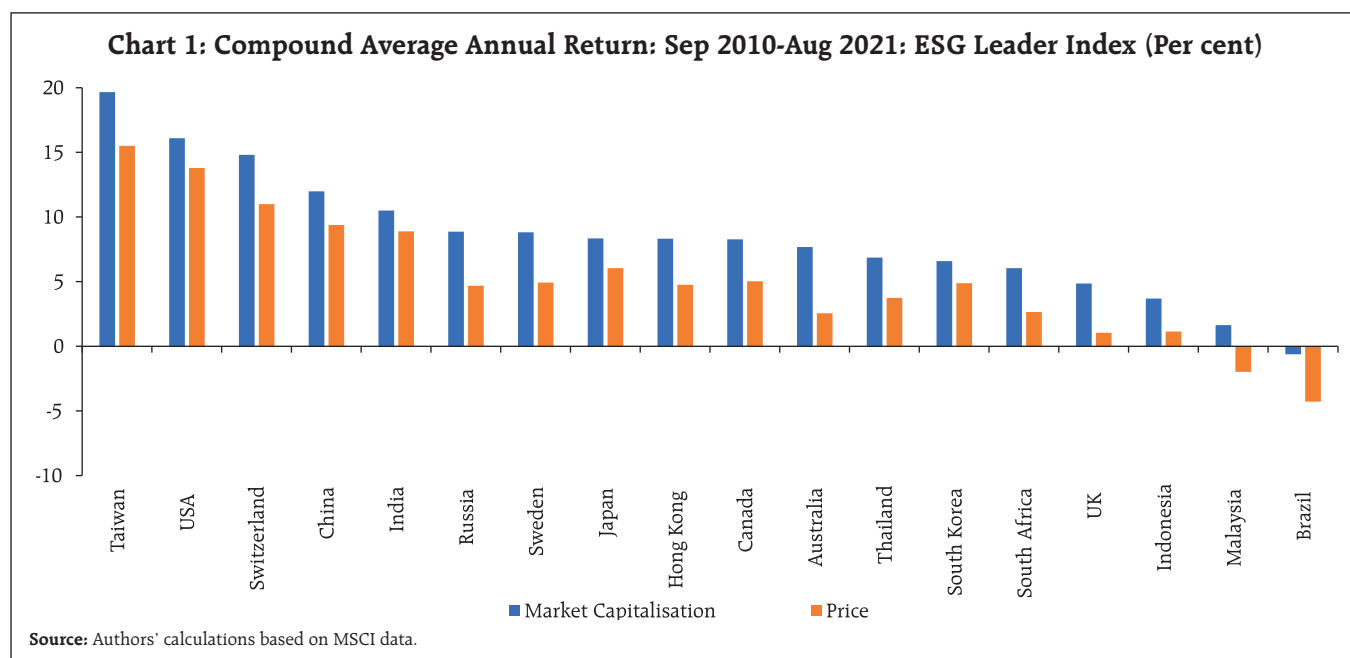
³ ESG disclosures have been made compulsory for large manufacturing companies for major economies including EU, China, and India. In addition to their disclosures into their annual report/director's reports, MSCI gathers information on the company's exposures to risks from several independent sources such as news articles, reports on disputes, other business/academia reports etc. while building the ESG ratings. This is expected to minimise the chances of biases that may arise due to 'moral hazard' etc.

an industry by considering both the positive and negative impacts of that industry's operations on environment and society, and the timeline within which these impacts are expected to materialise. For instance, a key issue identified as "High Impact" and "Short Term" would be weighted three times higher than a key issue identified as "Low Impact" and "Long Term". The industry weights are applied on each company's score on each of the key issues to arrive at the aggregate performance of that company, which is then normalised within its own industry, and provided ratings between best (AAA) and worst (CCC). The index compositions *i.e.*, the number of constituents/companies and the weights of top constituents in both in MSCI broad and MSCI ESG Leaders index for the sample countries are provided in Table 2 in the Annex.

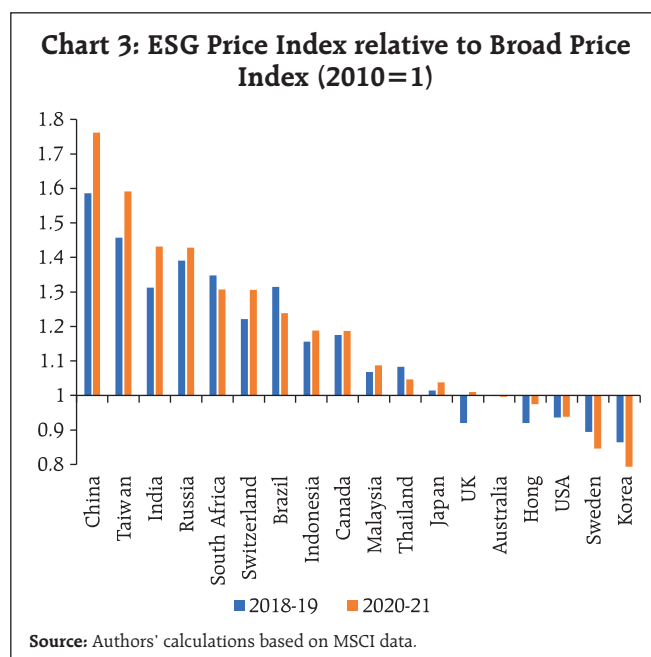
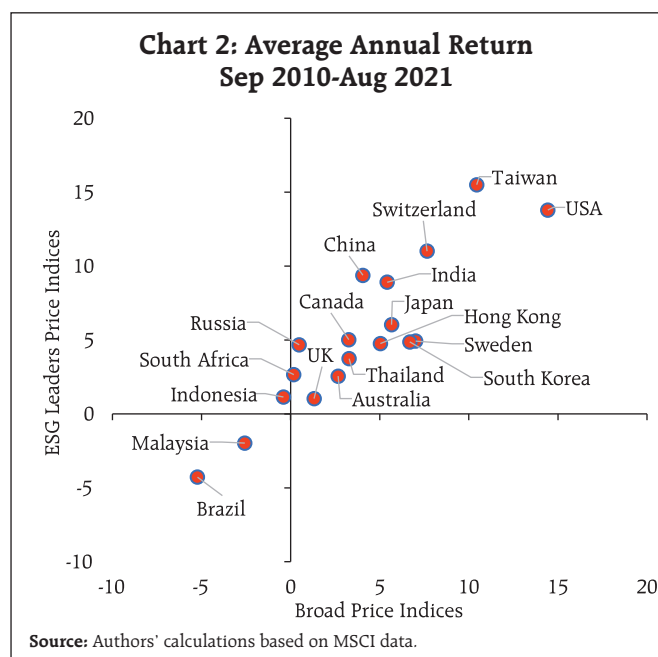
There is one caveat that needs to be mentioned. For most of the countries, the Broad MSCI index is generally a superset, as they mostly include companies that are in MSCI ESG leaders' index. Notwithstanding

this shortcoming, we continue with this study, as it is difficult to get watertight compartmentalised indices with only ESG leaders or non-ESG-leaders, and as it does not alter any of our conclusions.

MSCI provides both price and market capitalisation indices consisting of the companies which lead in terms of ESG considerations. These companies are also referred to as the ESG leaders within the countries⁴. Alongside the ESG indices, we have also used the MSCI broad market indices based on both market capitalisation and prices in this article. For all the countries in our sample, the growth in ESG market capitalisation indices were higher than the growth in ESG leaders' price indices (Chart 1). These gaps suggest that all the countries (except Malaysia and Brazil) have experienced growth in the volume, or the number of shares issued by the ESG leaders in their countries. We would, however, focus on the ESG price indices in the remaining part of this article because of two reasons. First, ESG market



⁴ The market capitalisation, or the ESG Gross index measure the overall size of the market, *i.e.*, each outstanding share being multiplied by their respective market prices for each period, and then aggregated across all the shares. ESG leaders' price indices are the company-level market capitalisation weighted aggregate price indices for ESG leaders. The ESG market capitalization and ESG price indices represent the market capitalisation and price indices for the set of industries that are leaders in ESG considerations.



capitalization and the ESG price indices moved quite closely among the sample countries (Chart 1), and second, price movement captures forward-looking investors' expectations about the ESG leaders' better than the number of issuances.

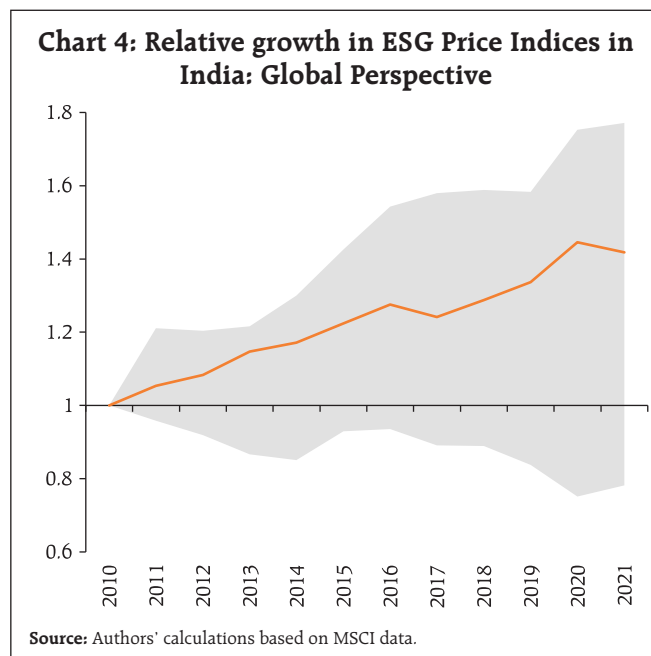
III. Exploratory Data Analysis

Cross-Country Evidence

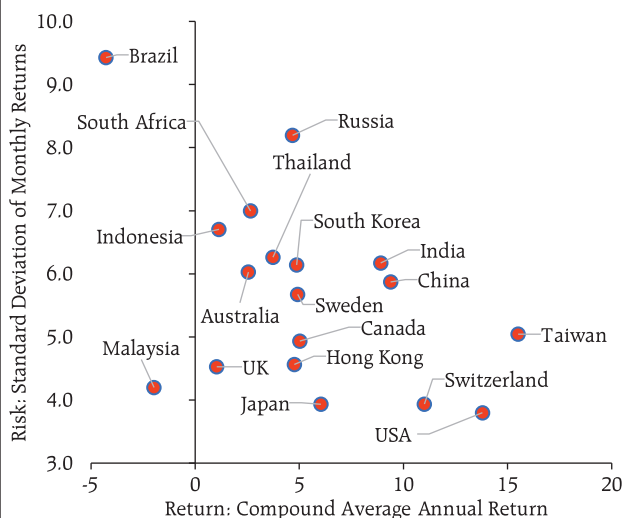
The average annual returns in ESG price indices were consistent with the returns in broad price indices (Chart 2). The ESG leaders' indices have outperformed the broad indices for most of the countries in our sample (Chart 3). In chart 3, we normalised each indicator with respect to 2010, and then took the ratio between ESG indices and the Broad market indices. A higher ratio indicates that the ESG leaders' index has outperformed the broad index. This suggests that the companies which managed and disclosed their ESG related risks better were associated with higher prices for their equities, compared to a larger set of listed companies.

India ranks ahead of all the countries except China and Taiwan in terms of the relative returns in ESG leaders' index. The relative growth in India's ESG

index was also among the toppers during this period within the set of 18 countries in our sample as shown in Chart 4, where the orange line indicates India's ESG leaders' index relative to India's broad market index, both rebased to 2010⁵. The lower end of the shaded



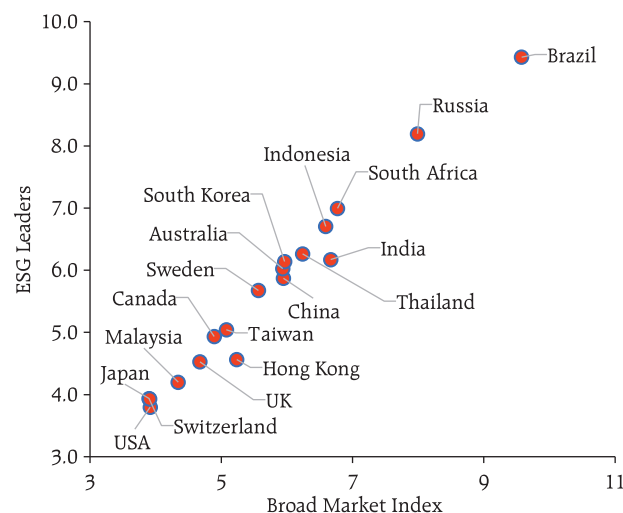
⁵ 2010 is the year since when we could obtain ESG indices for all the countries in our sample. MSCI reported ESG indices only some of these countries prior to 2010. Hence, for better comparability, we have used 2010 as the starting point for all the countries.

Chart 5: Return vs. Risk in the ESG Leaders Price Index: Sep 2010-Aug 2021

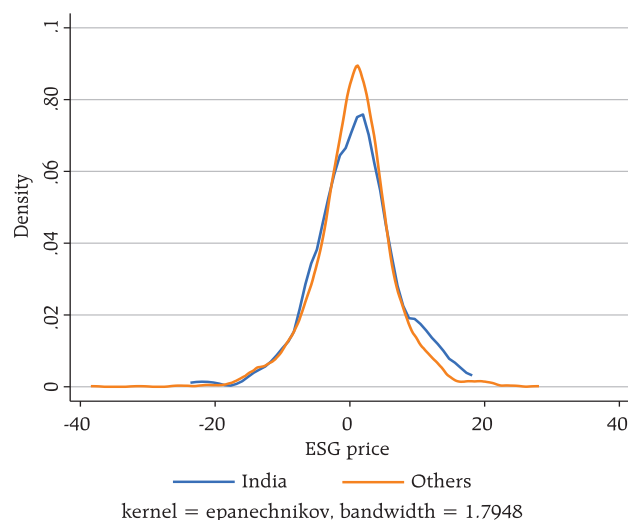
boundaries indicates the minimum value of this measure among the sample countries and the upper end of the shaded boundaries indicates the maximum value.

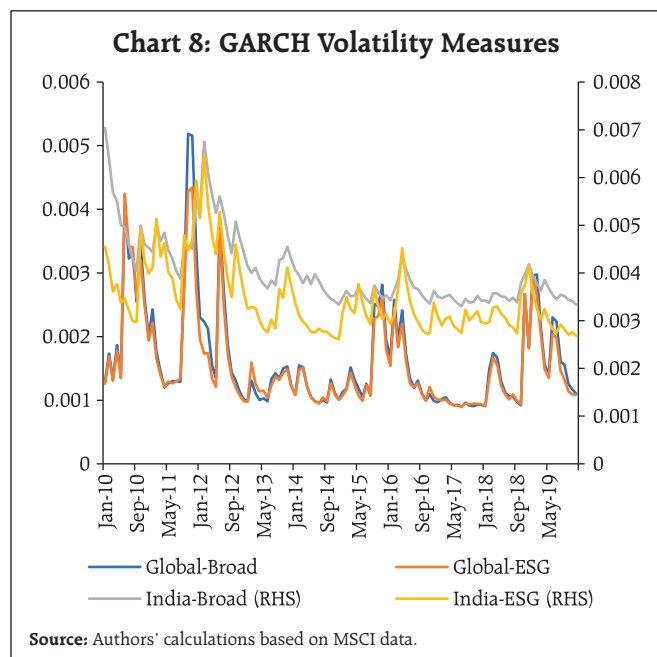
During the sample period, there is no clear association between the average annual returns and the average risks in the ESG leaders' price indices among the set of countries (Chart 5).

The risks in ESG indices, however, were broadly in line with the risks in the broad indices across countries (Chart 6). In general, the risk in both broad indices and ESG indices were higher in EMEs as compared with the AEs. India is not an exception, where risks in both ESG and the broad indices were higher than majority of the countries (Chart 6). A Kernel Density plot for the monthly ESG returns for India, and for all other countries in our sample (excluding India) suggests that India's monthly ESG returns generally have a fat right tail, indicating larger probability of higher return (Chart 7). For India the return distribution was rather Platykurtic compared to the rest of the world, which explains why the standard deviation of the monthly ESG index return was more for India. We also analyse

Chart 6: Standard Deviation of Monthly Returns (Per cent) in Price Indices: Sep 2010-Aug 2021

the volatility clustering of broad and ESG indices using a GARCH (1,1) equation. Our finding indicates that volatility, in general, was lower in the AEs as compared to EMEs both in the Broad and the ESG indices. For India, ESG index's GARCH volatility was lower than the volatility in the Broad index returns (Chart 8), though the clustering patterns were similar in both the series.

Chart 7: Kernel Density Plot for Monthly ESG Index returns



In line with the volatility clustering, we attempt to quantify the transmission of broad market risks to the price indices of ESG leaders. In Table 1, we first

classify the broad market returns into two categories, "extreme" and "normal" as shown in the first column. To do this, first we observe the monthly returns in broad market index of a single country between September 2010 and August 2021 and observe both the average and standard deviation for the whole period for each country separately. We called a monthly return an "extreme" one if the return for a period is either above or below the one-standard deviation band around the average for that country. Similarly, we categorise the returns in ESG leaders' index. Thereafter, we calculate in how many instances, an "extreme" event in broad market index has also coincided with "extreme" events in the ESG leaders' index. For instance, for India, 78 per cent (*i.e.*, 23 out of 30) of the "extreme" events in the broad index translated into "extreme" events in the ESG leader's index. This serves as a measure of risk transmission from broad market index to ESG leaders' index. Table 1 suggests that this measure of risk transmission was among the

Table 1: Correspondence Between Events in Broad and ESG Leaders Indices

(Per cent)

| Events in Broad Index | Extreme | | Normal | | Percent of 'Extreme' events in Broad Indices translated into 'Extreme' events in ESG Indices |
|-----------------------|-----------|----------|----------|-----------|--|
| Events in ESG Index | Extreme | Normal | Extreme | Normal | |
| Brazil | 29 | 2 | 2 | 68 | 95 |
| China | 25 | 5 | 4 | 67 | 85 |
| India | 23 | 7 | 2 | 68 | 78 |
| Indonesia | 27 | 2 | 2 | 70 | 95 |
| South Korea | 25 | 7 | 5 | 64 | 79 |
| Malaysia | 22 | 4 | 8 | 66 | 85 |
| Russia | 20 | 3 | 5 | 71 | 87 |
| South Africa | 30 | 5 | 5 | 61 | 87 |
| Taiwan | 24 | 5 | 1 | 70 | 84 |
| Thailand | 23 | 5 | 0 | 72 | 81 |
| Australia | 19 | 3 | 4 | 74 | 86 |
| Canada | 20 | 5 | 2 | 73 | 82 |
| Hong Kong | 22 | 8 | 5 | 66 | 74 |
| Japan | 24 | 2 | 0 | 73 | 91 |
| Sweden | 23 | 2 | 2 | 73 | 91 |
| Switzerland | 27 | 2 | 2 | 70 | 95 |
| UK | 24 | 3 | 4 | 69 | 89 |
| USA | 22 | 2 | 2 | 74 | 91 |

Notes:

Sample covers between September 2010 to August 2021.

'Extreme' events are 1 standard deviation above and below the average monthly returns. Event otherwise are classified as 'normal'.

lowest in case of India within the selected countries. Percentage of 'Extreme' events in Broad Indices that got translated into 'Extreme' events in ESG Indices is around 86 per cent on average for our sample set of countries. This suggests that the companies included in the MSCI-ESG index were rather insulated from the broad market price fluctuations to some extent. In case of India, this proportion 78 percent, less than the average of other countries, indicating that the stocks in ESG-index were to some extent shielded from the extreme price movements in the broad markets.

The major takeaways from this section are that companies with ESG disclosures have generally performed better, in terms of their returns and volatilities, relative to a broader set of companies across countries.

IV. Empirical Findings

The stylised facts presented so far suggest that stock price indices' return for ESG leaders have generally exceeded the broad market in the long-term. Empirically, a robust validation of this fact requires us to see the returns around a purely exogenous shock like the COVID-19 pandemic. We do this through two different approaches; first, estimating a difference-in-difference or 'double difference' model and second, by estimating the cumulative average returns (CAR) from a 'Market Model' on country-wise returns in ESG leaders' and broad market indices between September 2010 and October 2020.

(a) *Difference-in-difference Model*

The double differencing would suggest the difference in returns in ESG leaders post-COVID-19 *vis-a-vis* the non-ESG leaders, after accounting for the shocks that might have impacted both sets of firms. In this vein, we used a pooled dataset consisting of monthly returns on country-ESG leaders' (our treatment group that follows and discloses ESG related information) with the broad market indices (control group)

between September 2010 and October 2020. The sample countries remained same as discussed in the data section. We created a dummy variable called "ESG" that took value 1 corresponding to the observation on ESG leaders index returns, and 0, corresponding to the broad market returns.

We chose the post-COVID outbreak period for this impact analysis as January-October 2020 for the following reasons: after the initial outbreak of COVID-19 and associated lockdowns in almost all the major countries worldwide between January-May 2020, the second major spike took place around the end of October 2020 in most of Europe and USA. Although the actual dates of the surge may slightly vary between the countries in Western Europe and USA, pre-November 2020 broadly serves as a reasonable timeline for the impact of first wave across the globe. Post-October 2020, several waves of infections have taken place in most of the countries, but at different points in time, making it difficult to estimate a pure pandemic shock. We, on the other hand, use January 2020 as the starting point of the global outbreak of COVID-19 pandemic and create another dummy variable, "COVID" that assumed value 1 corresponding to all the months since January 2020, zero for the earlier months.

This research design will help us to identify whether following ESG rules and disclosing them are associated with firms to withstand unanticipated shocks better than the others across countries. The empirical estimation of this effect is done by estimating the following regression model:

$$\Delta \log(Index_{itk}) = \text{ESG} + \text{COVID} + \beta * \text{ESG} * \text{COVID} + \sum_{i=2}^n \text{Country}_i + u_{itk} \dots (1)$$

The coefficient β of the interaction term ESG*COVID would measure by how much the returns in ESG indices may have differed from

the returns in broad indices during COVID-19 period, as compared to the pre-COVID period. The β term represents the causal impact of ESG disclosures in the difference-in-difference set-up. Subscripts i , t and k represent country, month and the indices (ESG or broad). The estimation results are presented in Table 2.

It suggests that monthly returns in ESG indices generally exceeded that of the broad indices during an unanticipated shock (e.g., COVID), as the $Esg*Covid$ coefficient is positive and significant at conventional statistical levels. This result could be interpreted as following ESG rules and disclosure could causing better stock performance. For brevity, we do not report the coefficient of country fixed dummies, which we introduced to control for estimates across different countries. The coefficient of the COVID dummy is negative and statistically significant which indicates that the monthly returns on both ESG leaders' and in broad indices on average were lower during the COVID-19 pandemic as compared to the pre-pandemic periods. The ESG coefficient is positive and significant, which indicates that on average ESG indices perform better than the broad market index.

(b) Market Model

The abovementioned difference-in-difference estimates could have a few limitations. First, we do not have any explicit index that capture only the non-ESG leaders. Therefore, some of the companies that are present in the ESG leaders' indices are also present in the broad market indices. Second, in some of the stylised facts presented earlier, we show that the ESG leaders' indices have broadly outperformed the broad market indices and this gap significantly vary across countries, and therefore the assumption that the control group and the treatment group followed common trends before COVID-19 pandemic may not be strictly satisfied. We therefore follow a second methodology where we test how the ESG indices withstood the COVID-19 shock using the *Market Model* (for detailed discussion on Market models, see MacKinlay (1997)).

The pandemic provided a time-test for the ESG indices on their resilience to adverse shocks. To test this, in this sub-section, we estimate the cumulative returns in ESG price indices with respect to the returns in broad indices. Precisely, we regress the monthly returns in MSCI ESG leaders' price indices on the monthly returns of MSCI broad market indices between September 2010 and December 2019. We use a panel data of monthly returns of both ESG leaders' and the broad indices, for all the 18 countries. Our regression controls for the country fixed-effects and the year specific unobserved shocks through dummy variables. To account for country-heterogeneity, we also include interactions between the monthly returns in MSCI broad market index and the country-specific dummy variables. The estimation results are presented in Table 3 in the Annex. The estimated model takes the following form:

Table 2: Difference-in-difference Estimate of ESG Return Differentials during COVID-19

| | Clustered: Year | Clustered: Country | Clustered: Year- Country |
|------------------------|--------------------|-----------------------|--------------------------------|
| | (1) | (2) | (3) |
| Esg | 0.11* (0.048) | 0.11** (0.045) | 0.11*** (0.037) |
| Covid | -1.41*** (0.41) | -1.41*** (0.42) | -1.41*** (0.39) |
| Esg*Covid | 0.24*** (0.048) | 0.24* (0.11) | 0.24** (0.12) |
| Constant | -0.12 (0.81) | -0.12** (0.042) | -0.12 (0.74) |
| Number of observations | 4392 | 4392 | 4392 |
| Root MSE | 5.85 | 5.85 | 5.85 |

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

$$\Delta \log(ESG_{it}) = \sum_{i=1}^n \alpha_i D_i + \beta_1 \Delta \log(Broad_{it}) + \sum_{i=1}^n \beta_i \Delta \log(Broad_{it}) D_i + u_{it} \quad \dots(2)$$

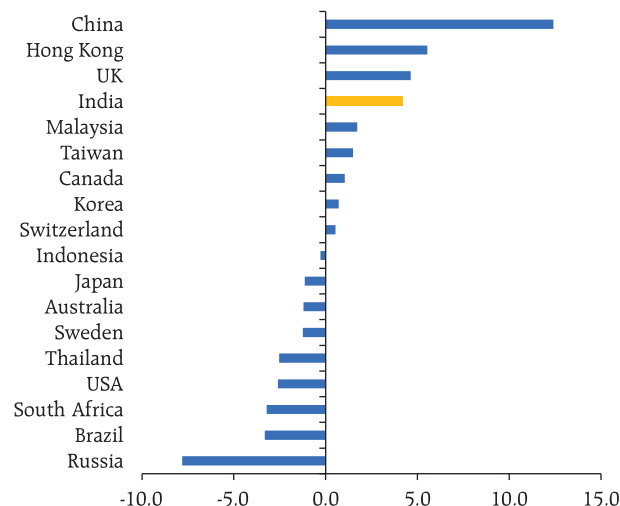
where ESG_{it} and $Broad_{it}$ are the MSCI ESG leaders' indices and the MSCI broad indices for country i in month t . D_i represents the dummy variable for the i^{th} country, n is the number of countries, and u_{it} represent the error term of the regression. Hausman specification test following Hausman (1978) fails to reject the fact that the consistent estimators from random effect model is not systematically different from a fixed effect estimator provided by model (1) above.

In our estimates, we use data up to December 2019, which is the last month before the outbreak of COVID-19 pandemic globally. Using the model estimates, and the observed valued of MSCI broad indices, we obtain the fitted values of the monthly returns in MSCI ESG leaders' indices for each country between January and October, 2020. Using the fitted values, we construct the predicted ESG leaders' index. The Cumulative Average Return (CAR) is the percentage difference between the values for observed/actual ESG leaders' index and the predicted ESG leaders' index.

Our estimates suggest that the CAR by India's ESG leaders was more than 4 percentage points higher than what is predicted by the market model (Chart 9). This figure stands next only to China, Hong Kong and UK. This suggests, in the aftermath of the initial COVID-19 shock, the ESG leaders have significantly outperformed the rest of the market in several economies, and India is among the top performing countries on the basis of this criterion.

ESG disclosures require companies to go extra miles, beyond their traditional assessment of financial risks. This requires disclosing additional information on risks to the companies, and how

Chart 9: Cumulative Average Return (Actual minus Predicted): Between Dec-19 and Oct-20



Source: MSCI data and Authors' calculations.

the companies are managing them. However, empirical evidences, both from difference-in-difference and 'market model' suggest that despite disclosing additional risks to the investors, the gains to the ESG leaders for a large number of countries (Chart 9) are significant. In fact, the cross-country evidences suggest that undertaking ESG considerations and its proper disclosure may indeed be associated with better financial performances and reduced information asymmetries.

V. Conclusion

Public authorities around the world are placing increasing emphasis on ESG risks, indicating their importance in ensuring long-term economic growth. Incorporating these principles into investment practices and policy is the best way to make this practice more enduring. Several major economies, including India, have already made sustainability disclosures for publicly traded companies a requirement, and developed ESG ratings for both the companies and the broader market. In this study, we find empirical evidence across countries indicating

that ESG disclosures are associated with better stock returns and reduced volatility in stock prices.

Using COVID-19 as an unanticipated shock, our findings from difference-and-difference research design indicate that ESG leaders' index outperformed the broad index for a sample of 18 countries. Market model, as an alternative specification, also supports the superior performance of the ESG indices during an unanticipated shock for most countries. The market model framework gives a ranking of the countries in terms of the ESG indices performances, and India ranks high among the sample countries. These findings broadly underline the fact that ESG disclosures may be associated with improved corporate outlook both in the short and long-run.

There could be a large number of policy implications from these findings. Availability of data is the most critical challenge for computing ESG metrics and impact assessments. Public policy could play an important role in streamlining and standardising ESG reporting for corporations. In the years to come, green bonds and green finances are going to play an important role in resources allocation. Evidence of higher yields (or even lower green premium) for these bonds could be due to lack of data, information, and liquidity. It is possible to reduce this gap by developing a credible ESG database, rating, and communication mechanism. If such database is implemented properly, a credible ESG performer may find the cost of raising capital from the bond market at a lower rate than a less credible ESG performer. Therefore, ESG disclosures may be gradually streamlined across all industrial, service activities and in the large informal sector in emerging markets.

In the EMEs, including India, banks play a major role in reducing asymmetric information and in financial intermediation. In the post-COVID era, ESG related risks could be integrated with the banks' risk management framework, and authentic disclosure

is the prerequisite for the same. As authentic data disclosure would play a major role in standardisation, interoperability and analysis, effective oversight of the board of directors and senior management on ESG risks could play an important role in establishing credibility. Such disclosures would eventually culminate into databases that will enable effective monitoring, stress testing and forward-looking analysis. We took an early shot to analyse the available data, found empirical evidence of resilience of ESG leaders, and noted policy suggestion that would facilitate data driven and state contingent decision making.

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Annex**Table 1: MSCI Key Issues**

| 3 Pillars | 10 Themes | 35 ESG Key Issues | |
|--------------------|------------------------------------|--|--|
| Environment | Climate Change | Carbon Emissions Product Carbon Footprint | Financing Environmental Impact Climate Change Vulnerability |
| | Natural Capital | Water Stress Biodiversity & Land Use | Raw Material Sourcing |
| | Pollution & Waste | Toxic Emissions & Waste Packaging Material & Waste | Electronic Waste |
| | Environmental Opportunities | Opportunities in Clean Tech Opportunities in Green Building | Opportunities in Renewable Energy |
| Social | Human Capital | Labor Management Health & Safety | Human Capital Development Supply Chain Labor Standards |
| | Product Liability | Product Safety & Quality Chemical Safety Consumer Financial Protection | Privacy & Data Security Responsible Investment Health & Demographic Risk |
| | Stakeholder Opposition | Controversial Sourcing Community Relations | |
| | Social Opportunities | Access to Communications Access to Finance | Access to Health Care Opportunities in Nutrition & Health |
| Governance | Corporate Governance | Ownership & Control Board | Pay Accounting |
| | Corporate Behavior | Business Ethics Tax Transparency | |

Source: MSCI ESG Ratings Methodology, April 2022.

Table 2: Broad Composition of MSCI Indices

| Country/Region | Number of Constituents | | Index Weight (in per cent) of top 10 constituents (common in both indices) | |
|-------------------------|------------------------|--------------|--|--------------|
| | ESG Leaders | Broad | ESG Leaders | Broad |
| Brazil | 28 | 49 | 60.52 | 24.02 |
| China | 163 | 739 | 68.98 | 36.98 |
| India | 40 | 106 | 72.78 | 39.50 |
| Indonesia | 8 | 23 | 100.00* | 35.27 |
| Malaysia | 26 | 35 | 67.92 | 51.38 |
| South Africa | 27 | 37 | 65.25 | 53.04 |
| South Korea | 42 | 111 | 65.31 | 18.82 |
| Taiwan | 45 | 86 | 75.90 | 59.39 |
| Emerging Markets | 469 | 1,393 | 37.94 | 20.26 |
| Australia | 36 | 61 | 63.84 | 30.61 |
| Canada | 42 | 88 | 60.42 | 31.26 |
| Japan | 134 | 699 | 30.88 | 14.19 |
| Switzerland | 41 | 41 | 74.56 | 73.65 |
| UK | 44 | 81 | 68.64 | 31.48 |
| USA | 268 | 626 | 33.89 | 16.87 |
| Europe | 202 | 429 | 31.08 | 15.70 |
| World | 711 | 1,540 | 23.03 | 11.52 |

Note: As on May 31, 2022.

*: Only for 8 constituents.

Table 3: Coefficients of Monthly Returns in ESG indices on Broad Indices

| | (1) | (2) |
|---|--------------------|---------------------|
| Dependent Variable: $\Delta \log(\text{ESG Index})$ | | |
| $\Delta \log(\text{Broad Index})$ | 0.96*** (0.016) | |
| Broad Index Interacted with country dummies | | |
| Brazil | | 0.97*** (0.0016) |
| China | | 0.93*** (0.0038) |
| India | | 0.89*** (0.0020) |
| Indonesia | | 1.00*** (0.0027) |
| South Korea | | 0.97*** (0.0022) |
| Malaysia | | 0.95*** (0.0029) |
| Russia | | 0.91*** (0.0015) |
| South Africa | | 1.04*** (0.0016) |
| Taiwan | | 0.91*** (0.0021) |
| Thailand | | 0.99*** (0.0017) |
| Australia | | 1.03*** (0.0022) |
| Canada | | 1.01*** (0.0022) |
| Hong Kong | | 0.75*** (0.0039) |
| Japan | | 1.00*** (0.0045) |
| Sweden | | 1.01*** (0.0027) |
| Switzerland | | 0.97*** (0.0046) |
| UK | | 0.96*** (0.0038) |
| USA | | 0.97*** (0.0042) |
| N | 2016 | 2016 |
| R ² | 0.9220 | 0.9262 |
| RMSE | 1.54 | 1.51 |

Notes: Regressions include country-fixed effects, dummy variables for each year, and 12 separate dummy variables in indicate 12 months, that account for possible seasonality in the returns.

Standard errors in parentheses

Meanings of the * values: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

*Bankers' Sentiments on Credit Demand – Post Pandemic Recovery**

by Haridwar Yadav[^] and Supriya Majumdar[^]

The Bank Lending Survey provides sentiments of banks on loan demand, loan terms, and their outlook in the near term across major sectors which acts as a lead indicator for actual credit growth. This article studies the evolution of bankers' sentiments in India during the pandemic. Even though bankers' sentiments on lending conditions were significantly impacted by the pandemic, especially during the first and second waves (April-June 2020 and April-June 2021), respectively, it exhibited a quick improvement thereafter. Lenders' sentiments also co-move significantly with credit growth and borrowers' perceptions in the manufacturing sector.

Introduction

Outlook on credit demand is an important input for policy making in a bank dominated economy like India. Bank credit depends on several factors like macroeconomic outlook, liquidity conditions, borrowers' creditworthiness, uncertainty associated with the concerned sector, expected return including risk premium, portfolio mix and risk management abilities, among others. Many of these are directly observable and therefore bankers' perceptions on credit demand, and terms and conditions, collected through the dedicated Bank Lending Survey (BLS)¹, is

usually supplement the information on bank credit. The BLS provides lender's perspective on credit market conditions qualitatively, especially the impact of changing economic or financial conditions on loan demand and loan terms and conditions set by the banks for different sectors of the economy.

In order to mitigate the impact of the COVID-19 crisis, central banks across the globe undertook a range of credit measures / schemes to support firms and households. The Reserve Bank of India (RBI) announced several measures, such as, reduction in policy rate and cash reserve ratio (CRR), increase in marginal standing facility (MSF) borrowing from 2 per cent of statutory liquidity ratio (SLR) to 3 per cent, special refinance facilities to NABARD, SIDBI and NHB, increase in borrowing limit of the states from 3 per cent to 5 per cent of the gross state domestic product (GSDP) among several other measures. These policy measures helped the economy to stage a quick turnaround in employment and consumption which also led to an increase in credit demand.

Bank lending surveys, which play a crucial role in policy making, were used by a majority of the central banks to capture sentiments of banks and financial institutions on credit demand and terms and conditions during these challenging times when there were lacunae in credible data. The survey facilitated the measurement of the impact of the pandemic as well as evaluation of the timing and pace of the expected recovery process as perceived by the banks. In this article, we look at how the bankers' sentiments evolved during the pandemic across successive waves.

The rest of the article is structured in the following sections. Section II presents the sample frame, questionnaire, and methodology of the survey. Section III provides the key findings of the survey during 2019-22. Section IV discusses its relationship with official statistics and other surveys and Section V offers the perceptions of banks on post-COVID recovery process. Section VI concludes the article.

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* The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India. The latest round of the survey data was released on February 8, 2023 on the Bank's website (<https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21736>). The previous article, the first on the Bank Lending Survey, giving its background, international experience time series data and methodological aspects was published in December 2020 issue of the RBI Bulletin (https://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=19963).

¹ This is also known as senior loan officers' survey or credit condition survey internationally.

II. Sample Frame, Questionnaire and Methodology

The Reserve Bank conducts bank lending survey broadly in line with similar surveys done by other central banks across the world. The survey captures senior loan officers' expectations on future credit demand along with adjustments in its terms and conditions and also seeks feedback on prevailing credit market conditions. It covers a panel of top 30 scheduled commercial banks (SCBs), which account for more than 90 per cent of the total outstanding credit of all SCBs. This panel is updated for each financial year by factoring in banking business/mergers based on credit outstanding at the end of the previous financial year. The target respondents are heads of various credit departments or senior credit officers of various sectors in banks. The survey questionnaire is e-mailed to the banks during the quarter for which assessment is to be made and a two weeks' time is generally given to respond to the survey. The banks participate in the survey voluntarily and the response rate is generally more than 90 per cent.

The survey tracks outlook of banks for two quarters – assessment of credit demand and terms and conditions for the current quarter in which the survey is conducted *vis-a-vis* the previous quarter and expectations for the ensuing quarter *vis-a-vis* the current quarter. The questionnaire consists of qualitative questions with answers on a 5-point scale covering broad economic sectors, *viz.*, agriculture, mining and quarrying, manufacturing, services, infrastructure and retail loans as well as for "all sectors". In case of loan demand, responses are solicited on changes in the current quarter and expectations for the next quarter on a 5-point scale (*viz.*, substantial increase, moderate increase, similar (no change), moderate decrease and substantial decline). Similarly, responses on loan terms and conditions are also marked on a 5-point scale (*viz.*, considerable easing, somewhat easing, similar (no change), somewhat

tightening, considerable tightening). The loan terms and conditions are specific to an approved loan, terms agreed between lender and borrower and laid down in the loan contract. It covers both price and non-price aspects and includes agreed spread over the relevant reference/interest rate, the size of the loan and other non-interest charges (*e.g.*, fee, collateral or guarantee requirement, loan covenants, agreed loan maturity). Loan terms are conditional on borrower's characteristics and may also change with bank's loan approval criteria.

The responses on a 5-point scale collected through the survey and compiled into a single number called the 'Net Response' (NR)², also known as balance statistic (BS) score or net balance, is the weighted difference between the proportions of positive and negative responses. NR can take values ranging from –100 to +100: positive values of NR indicate optimism for the parameter/sector (*e.g.*, banks expecting increase in loan demand or easing of loan terms and conditions), whereas a value below zero reflects pessimism (*e.g.*, anticipating lower loan demand or tightening of loan terms and conditions). Thus, the net response helps in quantifying qualitative responses that indicate the direction of the change in sentiments; however, it does not strictly estimate the magnitude of change.

III. Key Survey Findings

Initiated in 2017, the survey completed its 22nd round with its recent data release in February 2023. Trends in bankers' perceptions on loan demand and its terms and conditions during the two waves of COVID-19 are set out below.

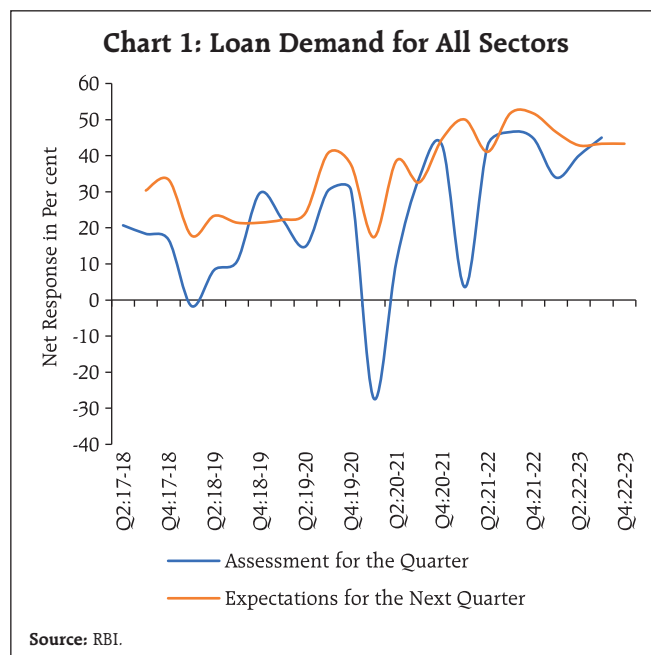
² Net Response (NR) = $\{1 \cdot P_2 + 0.5 \cdot P_1 + 0 \cdot P_0 + (-0.5) \cdot P(-1) + (-1) \cdot P(-2)\}$, where, P_2 = per cent of banks reporting loan demand as 'Substantial increase' or loan terms and conditions as 'Considerable easing', P_1 = per cent of banks reporting loan demand as 'Moderate Increase' or loan terms and conditions as 'Somewhat easing', P_0 = per cent of banks reporting loan demand or loan terms and conditions to remain 'Same/No Change', $P(-1)$ = per cent of banks reporting loan demand as 'Moderate decrease' or loan terms and conditions as 'Somewhat tightening' and $P(-2)$ = per cent of banks reporting loan demand as 'Substantial decrease' or loan terms and conditions as 'Considerable tightening'.

III.1 Loan Demand Conditions

(i) First Wave of COVID-19

During Q4:2019-20 (January-March 2020), the round before the first wave of COVID-19, banks had indicated lower optimism on credit demand for all sectors (Chart 1). The usual survey for January-March 2020 was carried out much before imposition of lockdown on March 25, 2020 in India and thereby, banks did not anticipate the shrinkage in the economy in advance as they could not foresee the full impact of the severe and unexpected nature of the pandemic witnessed later.

The first wave of COVID-19 during Q1:2020-21 (April-June 2020) resulted in a significant shrinkage in loan demand across all sectors, which had led to a drastic decline in the sentiments among Indian banks in terms of assessment. The NRs for all the sectors were negative in the assessed quarter (Chart 2, Annex Chart A1-A6). However, in terms of expectations it largely remained unaffected. In Q2:2020-21, bankers assessed a quick recovery of loan demand across the sectors. While mining and quarrying and infrastructure sectors



recorded lower optimism as compared with other sectors, maximum recovery was observed in personal loans segment which had earlier witnessed the sharpest drop. Banks also expected a continued improvement in loan demand during Q3:2020-21. Thus, while assessments mirrored the overall economic conditions during the first

Chart 2: Sector-wise Loan demand during the First Wave of COVID-19

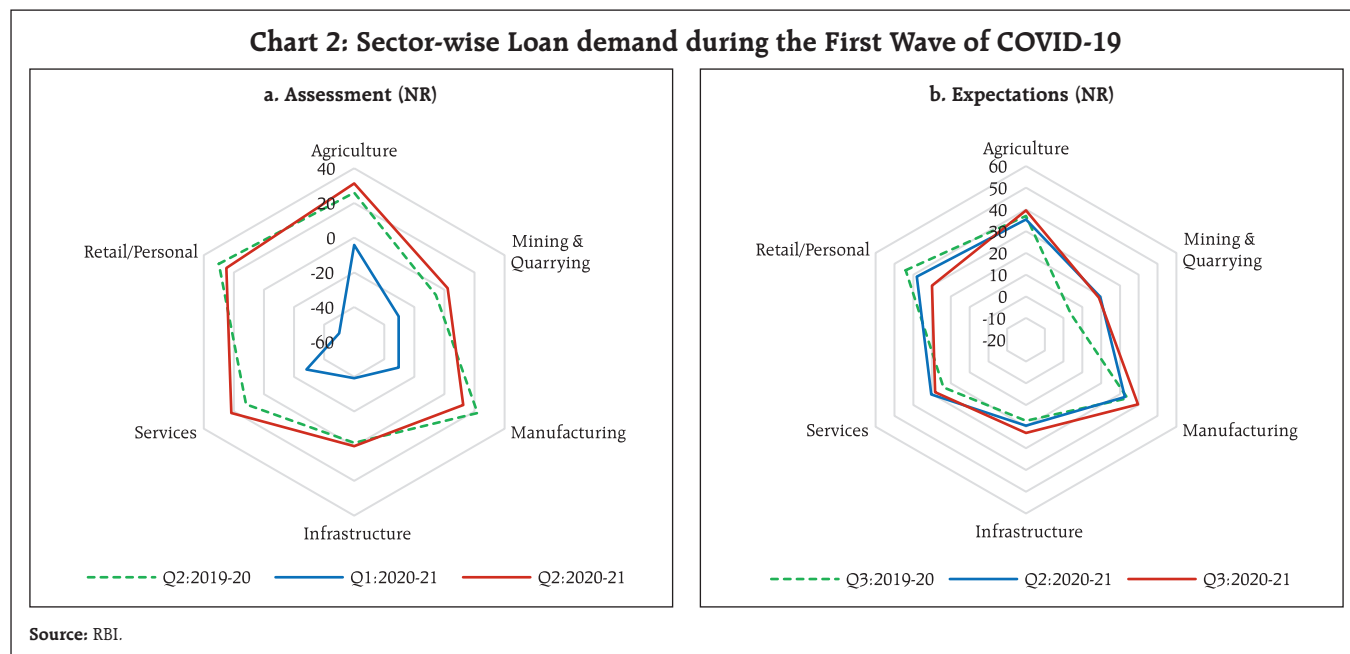
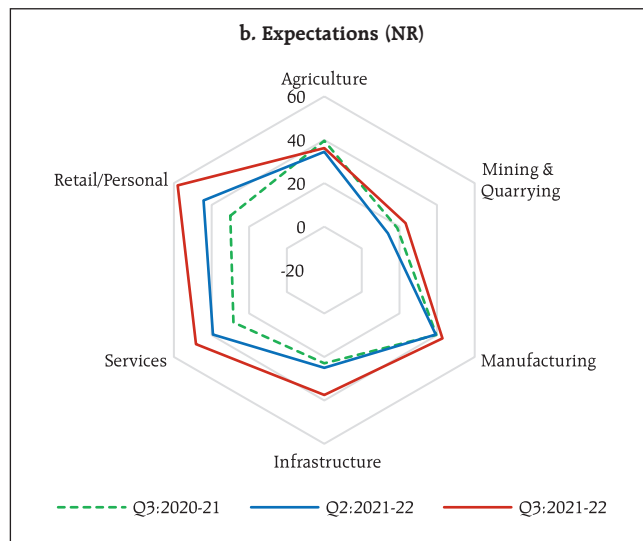
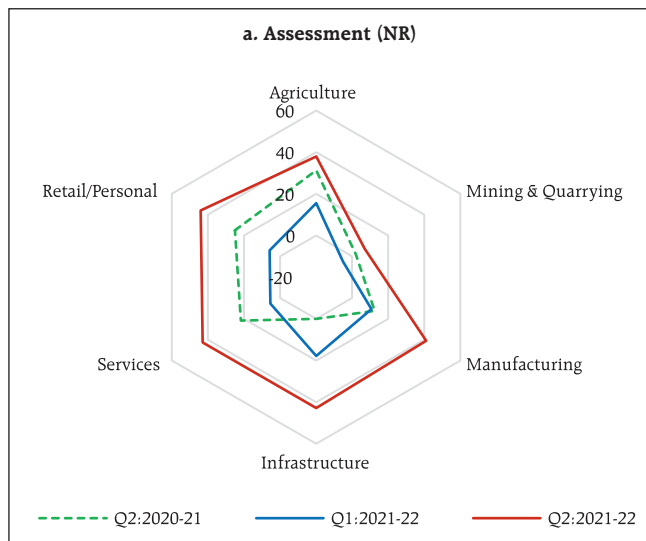


Chart 3: Sector-wise Loan demand during the Second Wave of COVID-19

wave of the pandemic, expectations of credit demand remained unaffected.

(ii) Second Wave of COVID-19

During the second wave of COVID-19 in Q1:2021-22 (April-June 2021), sentiments of banks on loan demand contracted significantly across all sectors (Chart 3, Annex Chart A1-A6). However, the extent of decline was much lower as compared with the first wave of the pandemic as the NRs for all the sectors, except mining and quarrying continued to remain positive. Similar to the first wave, bankers' assessment on loan demand recovered quickly across all the sectors in the next quarter (Q2:2021-22). A sharp recovery was observed in personal loans segment and services sector in the quarter. Bankers' expectations on credit demand were also upbeat for Q3:2021-22 and in fact were higher than that of the previous quarters for most of the sectors.

III.2 Loan Terms and Conditions

The COVID-19 pandemic resulted in a significant downward movement in the sentiments regarding loan terms and conditions among Indian banks during both the waves of the pandemic especially for

assessment. Expectations, however, remained largely unaffected (Chart 4).

(i) First Wave of COVID-19

In the first wave of COVID-19 in Q1:2020-21, NRs on terms and conditions for agriculture, retail loans and manufacturing sector were in the positive terrain, indicating easy loan

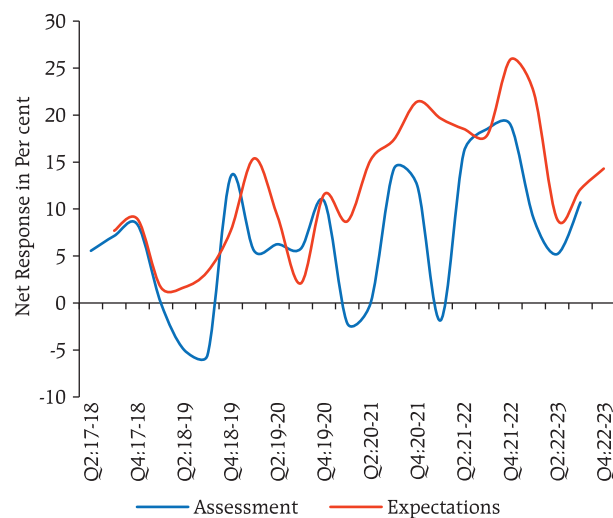
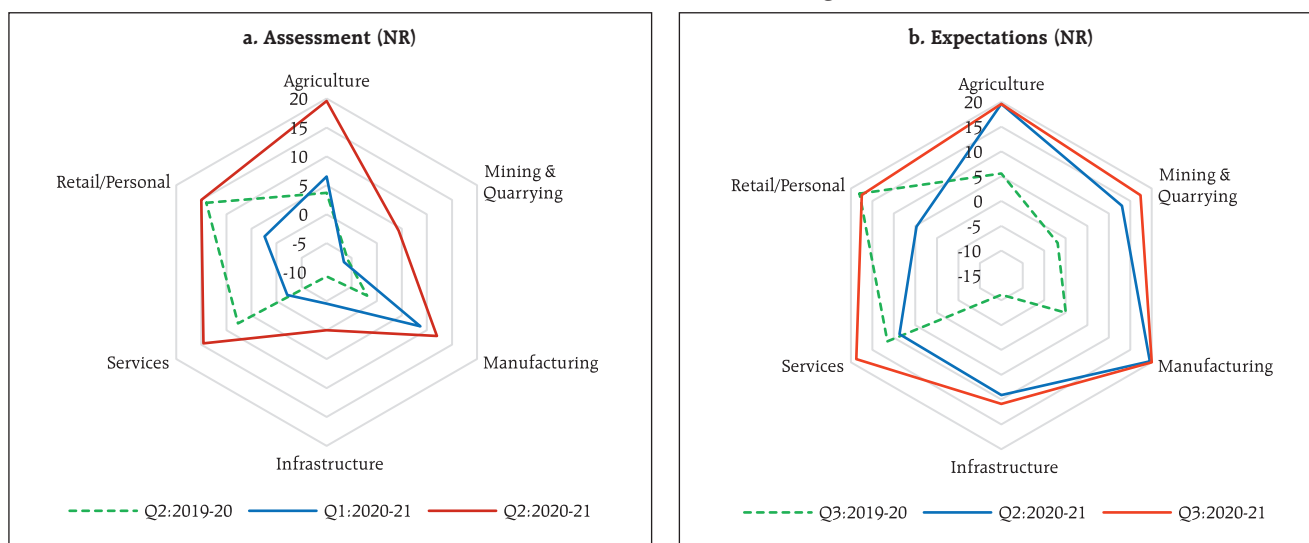
Chart 4: Loan Terms and Conditions for 'All Sectors'

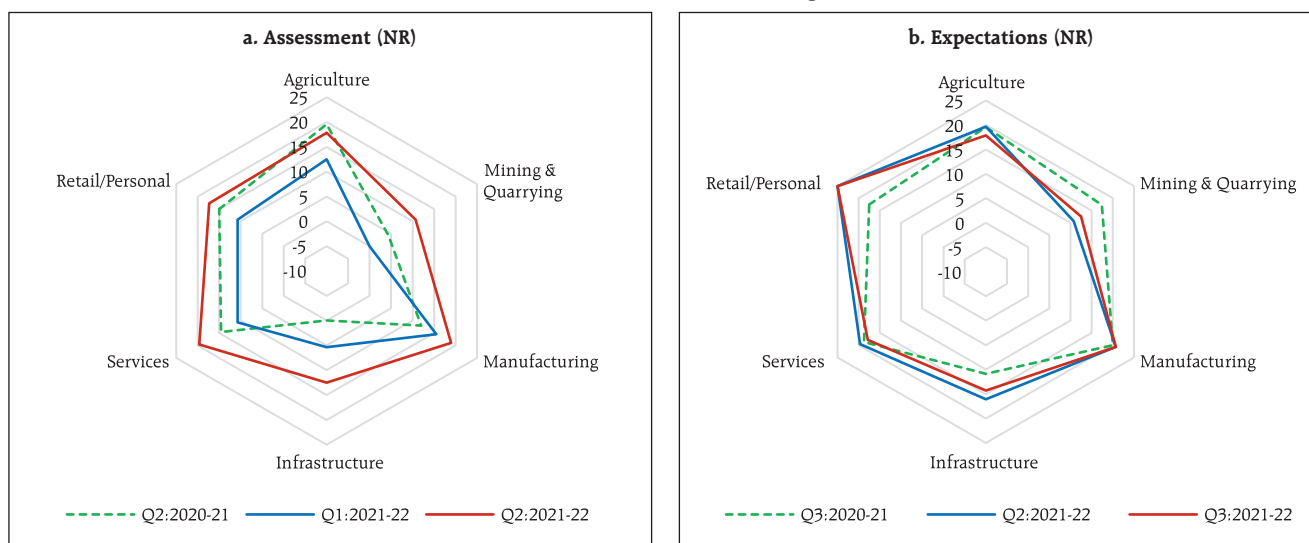
Chart 5: Sector-wise Loan Terms and Conditions during the First Wave of COVID-19

Source: RBI.

terms and conditions in these sectors. For infrastructure and mining and quarrying sector, however, more banks reported some tightening of loan terms. The sentiments on loan terms and conditions for all the sectors indicated easing in Q2:2020-21. Bankers also expected further easing in loans' terms and conditions during Q3:2020-21 (Chart 5).

(ii) Second Wave of COVID-19

Even though the bankers' sentiments on loan terms deteriorated during the second wave as reflected in a fall in value of NRs for all loan segments, it remained in positive territory during the second wave of the pandemic, indicating easier terms and conditions in comparison with the first wave (Chart 6). Furthermore, easing in

Chart 6: Sector-wise Loan Terms and Conditions during the Second Wave of COVID-19

Source: RBI.

the sentiments on loan terms and conditions was recorded by banks in the next quarter Q2:2021-22 for all the major sectors.

IV. Relationship of BLS with Official Statistics and Other Surveys

This section compares the survey results with trends in actual credit as well as other surveys to understand whether information available from these surveys can provide lead information to policy makers.

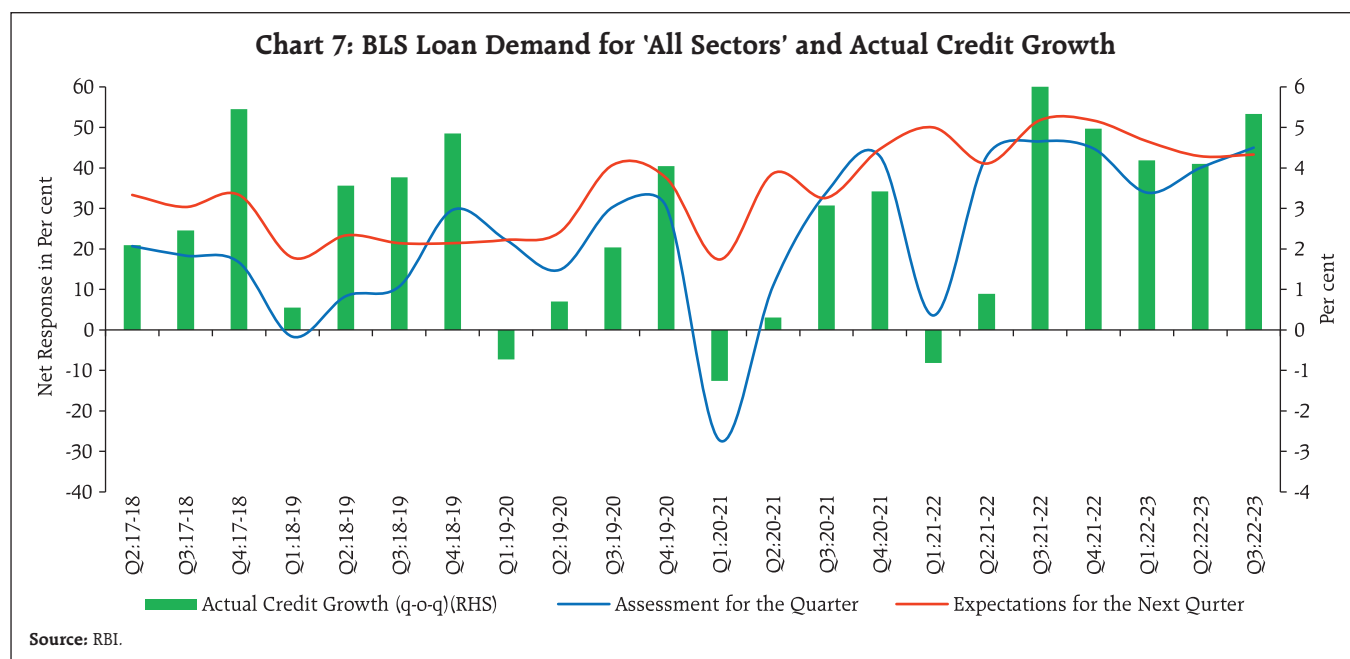
IV.1 Bank Lending Survey and Actual Bank Credit

Bankers' assessment of changes in loan demand in terms of net responses closely tracks the growth in actual credit extended by SCBs. Bankers' perceptions of loan demand broadly capture turning points in credit growth cycle. However, compared to the assessment, their expectations have generally been more upbeat (Chart 7). The correlation coefficient between the NRs

for assessment and the actual credit growth is 0.49 whereas it is 0.23 between the NRs for expectations and the actual credit growth.

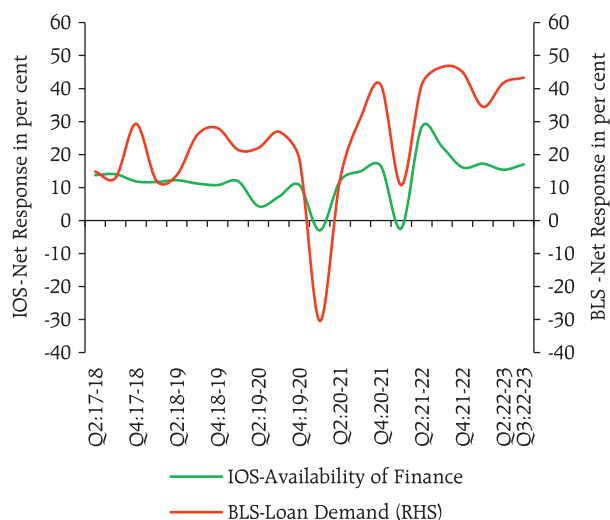
IV.2 Manufacturing Sector - Assessment of Credit Conditions by Borrowers and Lenders

The BLS captures lender's perspectives (supply side view) of loan demand and its terms and conditions whereas RBI's quarterly Industrial Outlook Survey (IOS)³ pursues manufacturers' demand side perspectives on availability of finance from banks and other domestic sources.⁴ The IOS collects assessment and expectations on availability of finance on a 3-point scale (improve / worsen / no change) and results thereof are presented in the form of net responses. Loan demand from manufacturing sector assessed by bankers in the BLS and availability of finance from banks and other sources assessed by manufacturer in the IOS indicate similar directional changes across the study period (Chart 8).

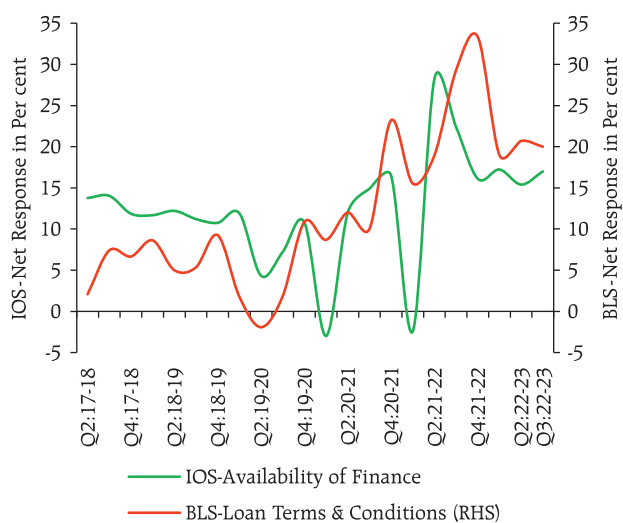


³ The IOS data are released on the RBI website (<https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21734>) on a quarterly basis, the latest was on February 8, 2023).

⁴ Parameters canvassed among manufacturers in the IOS are 'Availability of finance (from banks and other domestic sources viz., financial institutions, capital markets etc.)', 'Availability of Finance (from internal accruals)' and 'Availability of Finance (from overseas)'.

Chart 8: BLS-Manufacturing Sector Loan Demand and IOS-Availability of Finance

Bankers' assessment of loan terms and conditions for manufacturing sector is generally in line with manufacturers' sentiments on availability of finance (Chart 9). Co-movement of the Net Responses stemming from the two surveys indicates that the loan officers' assessments are largely in line with industry expectations.

Chart 9: BLS-Manufacturing Sector Loan Terms and Conditions and IOS-Availability of Finance

V. Perception of Banks on Post-COVID Recovery

V.1 Cross Country Experiences⁵

As the bank lending surveys play an important role to support monetary policy decisions, major central banks used these surveys as instruments to capture the sentiments of the banks on the COVID-19 impact. The Federal Reserve of New York in their April 2020 Round of the Survey reported - "Many banks also provided written comments about the coronavirus (COVID-19) pandemic in addition to answering the standardised survey questions. In these comments, banks reported that the changes in standards and demand across loan categories reported for the first quarter occurred late in March as the economic outlook shifted when news emerged about the rapid global spread of COVID-19." The euro area bank lending survey results showed that sentiments on credit demand and loan terms and conditions reached a trough in the first quarters of 2020-21 and 2021-22, similar to the first and second wave of COVID-19 in India. The Bank of Japan's Senior Loan Officer Opinion Survey on bank lending practices at large Japanese banks also reflected that sentiments of the banks reached to lowest levels during various waves of the COVID-19 pandemic. The Bank of England in its Credit Condition Survey reflected that banks' sentiment on secured as well as unsecured loan demand reached to a trough during the second quarter of 2020 before reviving in the next quarters.

V.2 The Indian Context

Since Q1:2020-21 survey round, a separate block was introduced for assessing the banks' outlook on credit and its terms and conditions for two more subsequent quarters. Thus, data on expectations were collected for a total of three quarters which became extremely useful for policy decisions during the uncertain times. Moreover, expectations were

⁵ Respective websites of the Central Banks (given in references)

also captured for the same quarter over successive survey rounds, enabling policy makers to observe the change in expectations in response to dynamically evolving pandemic and economic scenario. Using this additional block, we look at the expectations on credit demand and loan terms and how they shaped up during post-COVID recovery.

(i) Credit Demand Conditions

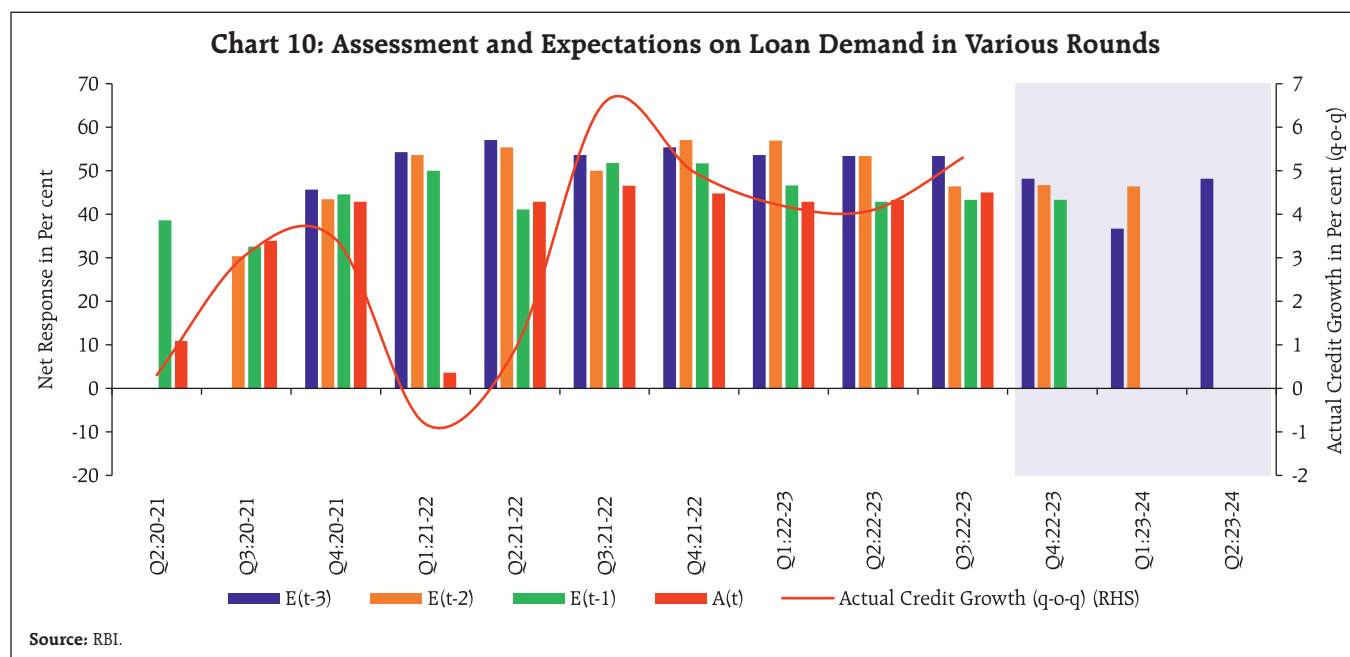
Stimulus packages and measures announced by the Government of India and the Reserve Bank boosted the recovery in banks' sentiments on credit demand during the first two waves of the pandemic. Though the sentiments began firming up after the first wave, these were again clouded due to the second wave, though they reverted quickly (Chart 10)⁶. The banks' sentiments were also observed to be in sync with the SCBs actual credit growth. It is observed that bankers tend to

be more optimistic in terms of two- and three-quarter ahead expectations and the one quarter ahead expectations were able to capture the actual credit growth more closely.

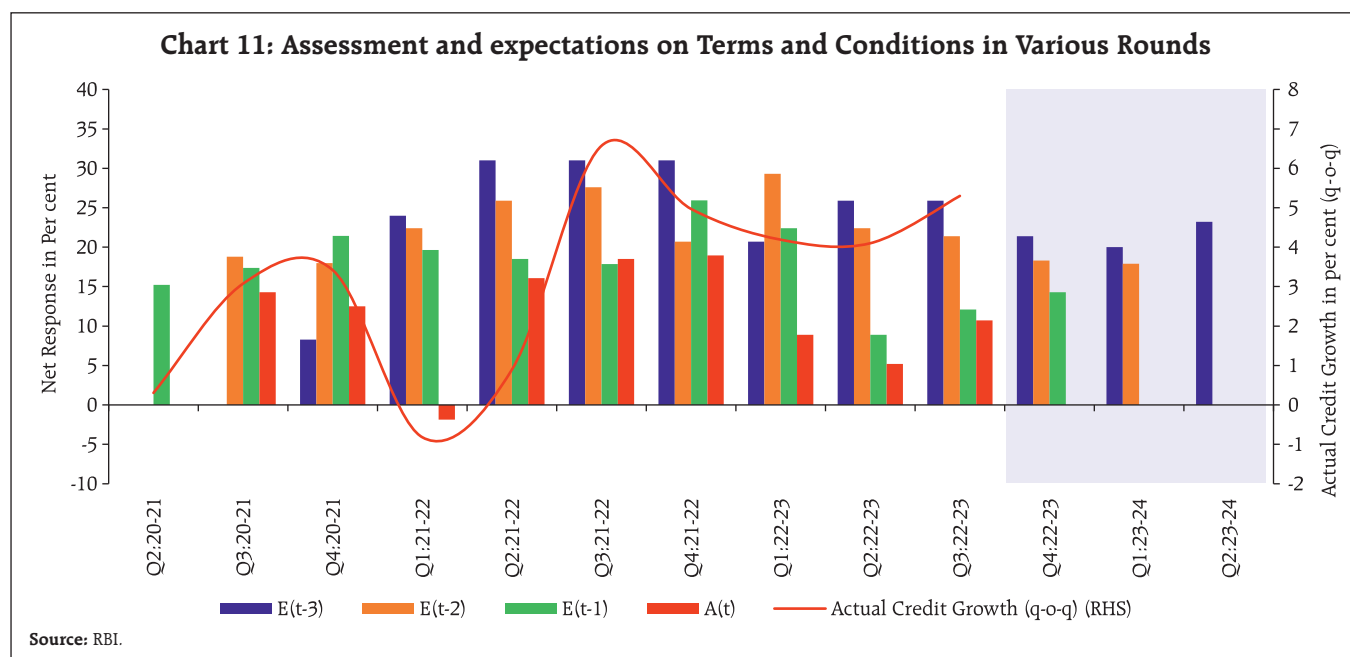
Turning to the recent period, we observe that bankers are highly optimistic of credit demand across all the main sectors in the coming quarters, viz., Q4:2022-23 to Q2:2023-24, as reflected in their higher NRs (Annex Chart A1-A6).

(ii) Loan Terms and Conditions

In terms of loan terms and conditions, after decline during the first wave, expectations indicated easing of credit terms and conditions. However, the sentiments were down again due to the second wave, though there was a quick revival. Data for more recent period indicated bankers are expecting easier terms and conditions for loans, going forward (Chart 11).



⁶ A(t): Assessment for the current quarter (t), E(t-1)/ E(t-2)/ E(t-3): Expectations for the quarter (t) captures at one (-1)/ two (-2)/ three (-3) quarter before.



VI. Conclusion

This article looks at the results of the Bank Lending Survey over successive rounds to understand how the sentiments responded to various shocks during the pandemic period. We find that assessment of lending conditions reacted to the pandemic in a pessimistic way, both during the first and second waves. However, the assessment of credit conditions improved significantly within a quarter indicating that policy measures were effective in instilling confidence during uncertain times. Among sectors, outlook on retail/personal loans were the most severely hit during both the waves of the pandemic, but they recorded a sharper recovery exhibiting fast catch-up.

Information from the Bank Lending Survey tracks actual credit growth with reasonable accuracy and captures the turning points. Hence, it could be a useful tool for policymakers to gauge the underlying trends in credit market, as the survey results are available in advance by almost one quarter ahead. Also, the lenders' perception in the BLS broadly corroborates with the borrowers' perceptions in the Industrial

Outlook Survey, which indicate that the suppliers' assessment is in sync with the demand side of the credit conditions, again proving its usefulness.

Going forward, bankers are positive on credit demand in the ensuing quarters. Expectations on terms and conditions for loans also point to easing in successive quarters.

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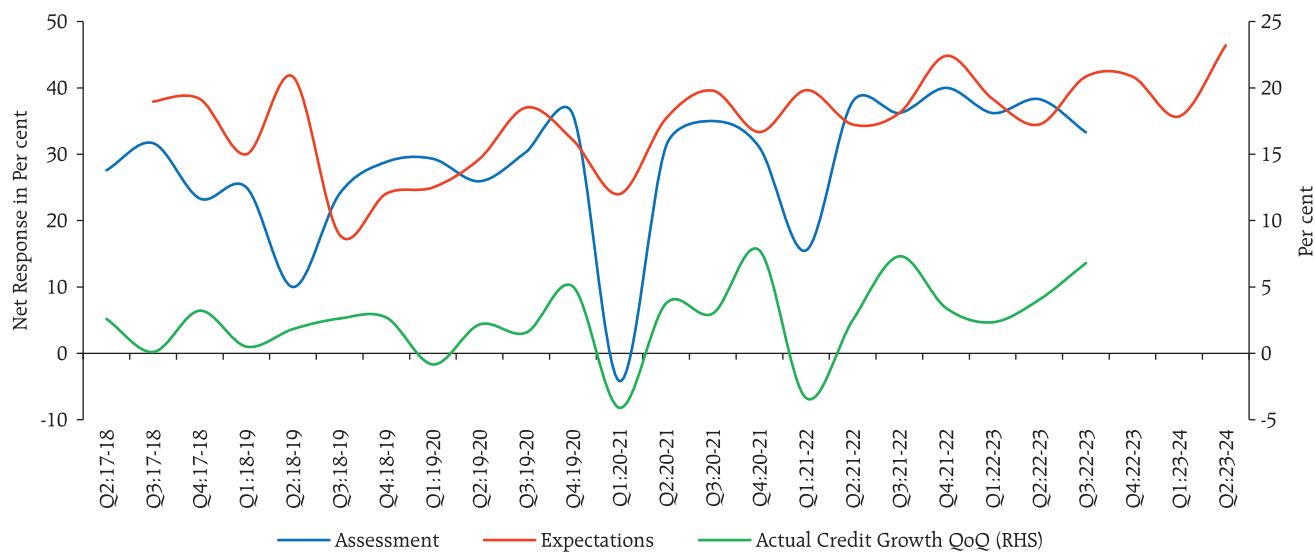
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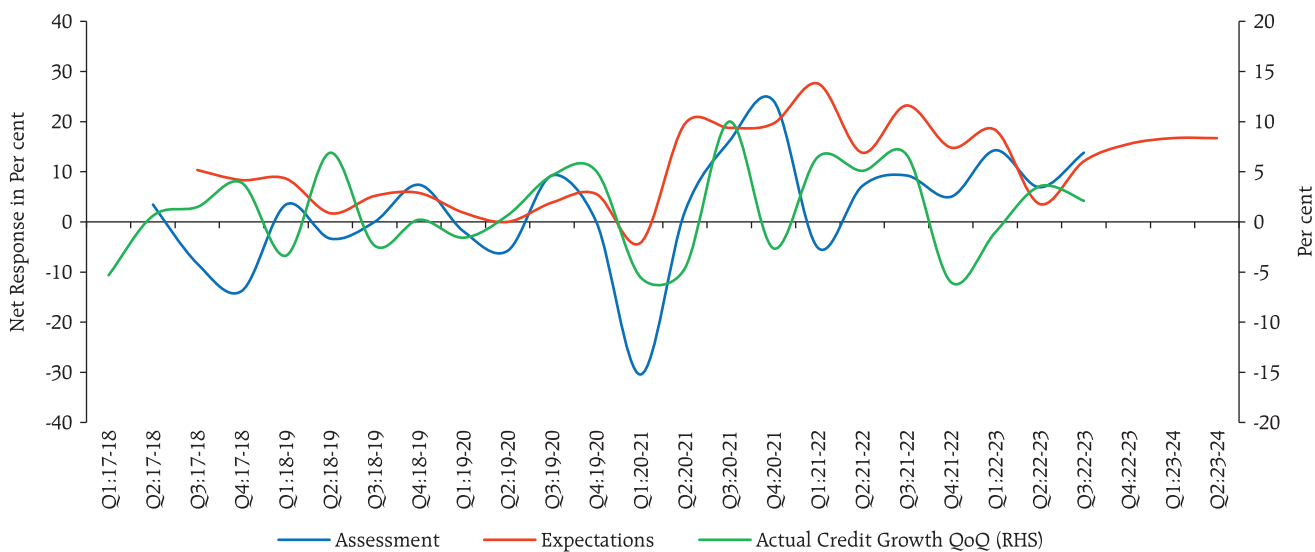
Annex

Chart A1: BLS Loan Demand for 'Agriculture' and Actual Credit Growth

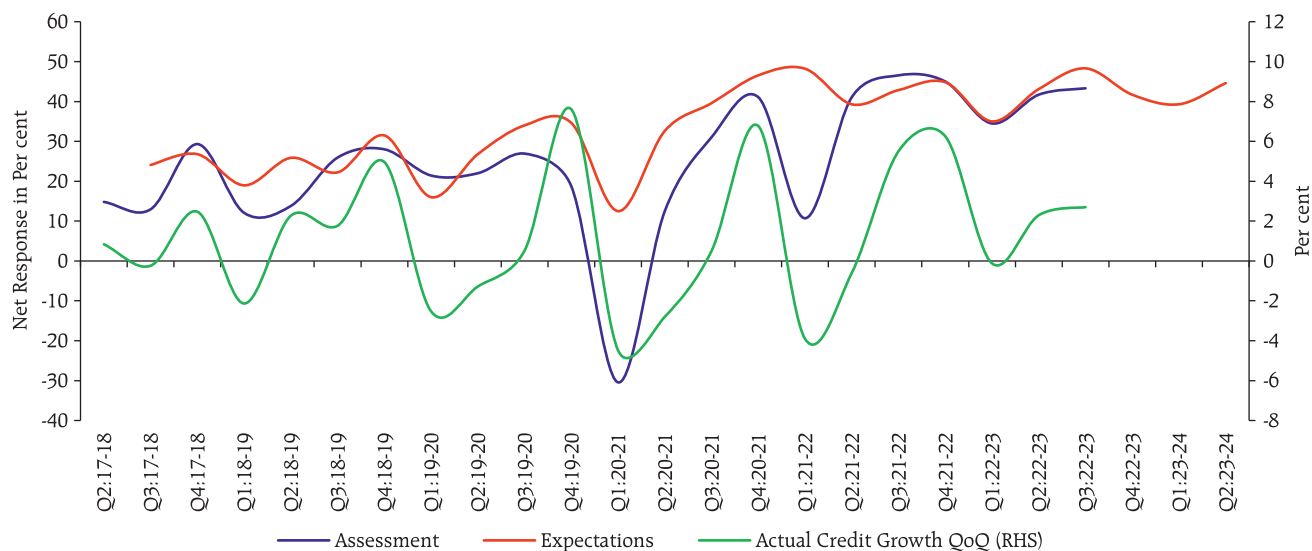


Source: RBI.

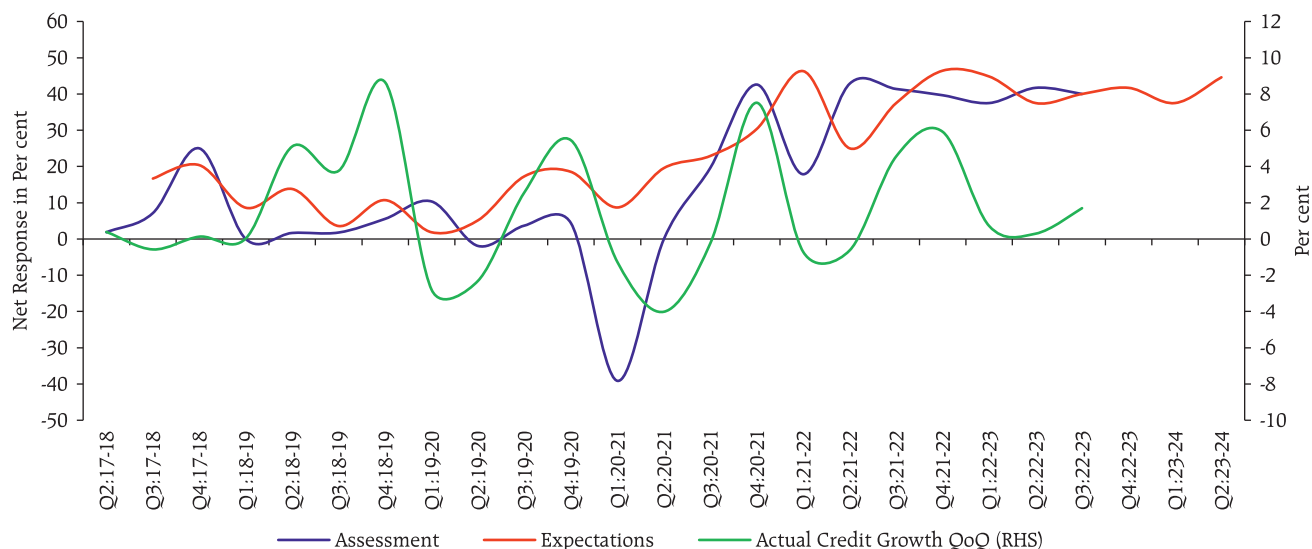
Chart A2: BLS Loan Demand for 'Mining and Quarrying' and Actual Credit Growth



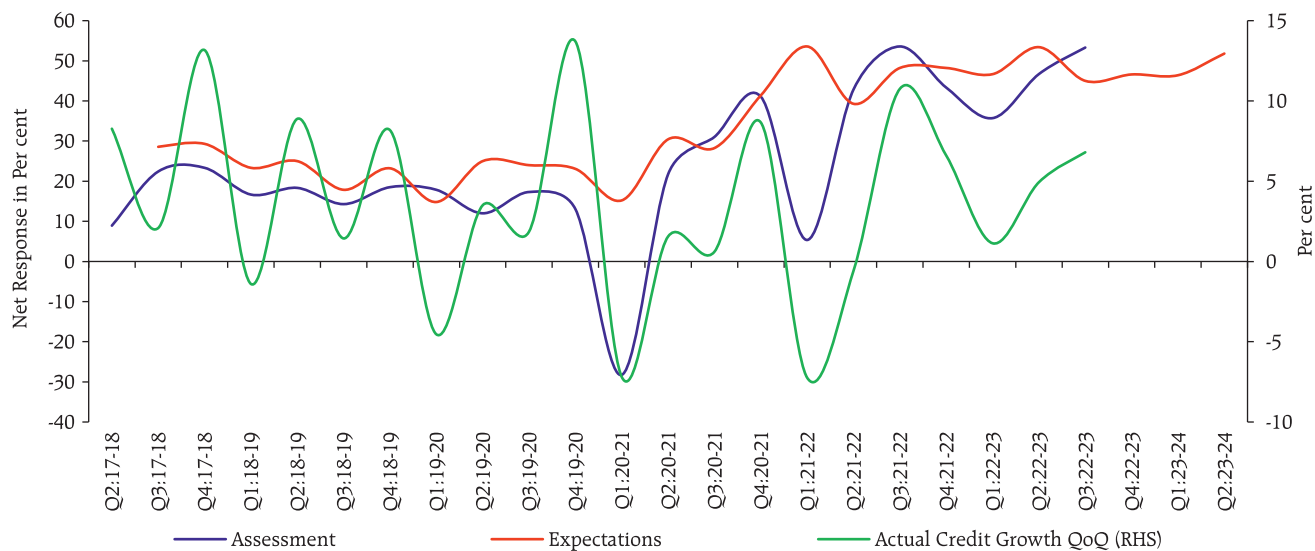
Source: RBI.

Chart A3: BLS Loan Demand for 'Manufacturing' and Actual Credit Growth

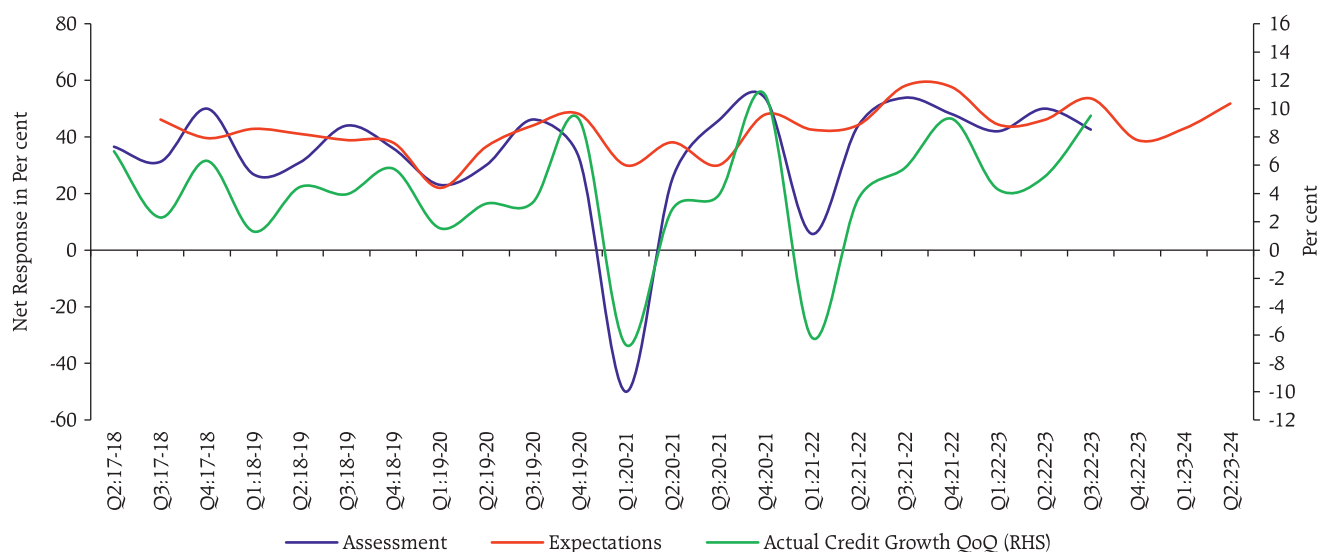
Source: RBI.

Chart A4: BLS Loan Demand for 'Infrastructure' and Actual Credit Growth

Source: RBI.

Chart A5: BLS Loan Demand for 'Services' and Actual Credit Growth

Source: RBI.

Chart A6: BLS Loan Demand for 'Personal loan' and Actual Credit Growth

Source: RBI.

*The Long Shadow of Federal Reserve's Actions: Monetary Policy and Uncertainty Spillovers to India**

by Bhanu Pratap[^] and Thangzason Sonna[^]

This study analyses the transmission of global monetary policy shocks to the Indian economy. Using a sign-restricted vector autoregression (SRVAR) framework to identify US monetary policy (MP) shocks, we find that surprise changes in US monetary policy strongly influences domestic output and inflation. Underlining the time-varying nature of such shocks, US MP surprises were found to have a cost-push effect in the pre-2008 period compared to a significant demand-pull effect after 2008. Moreover, US MP uncertainty also tends to lower domestic aggregate demand. These findings indicate important implications for major central banks in setting their monetary policy stance.

I. Introduction

In a world of interconnected financial markets and globalized finance, transmission of shocks from one market or region to another takes place almost instantaneously. Such financial market linkages give rise to connected economies where macroeconomic fundamentals, such as business cycles and inflation, move in tandem. Furthermore, changes in macroeconomic policy stance in one country/region, especially those harbouring international financial centres, also seem to send ripple effects across borders.

The current global situation, in the aftermath of once-in-a-century pandemic, underlines the

complexity of such macroeconomic and policy developments that can have cross-border implications. While economic recovery was getting entrenched, sustained inflationary pressures have forced the withdrawal and reversal of ultra-accommodative monetary policy by systemically important central banks. With the potential to undo all gains, a mammoth geopolitical shock in the form of the Ukraine-Russia war shook the world accelerating the shift to a tighter monetary policy regime. Central Banks, led by the US Federal Reserve (US Fed) and European Central Bank (ECB), embarked on an aggressive and synchronized policy tightening which reflected a policy stance aimed at bringing down inflation and maintaining their credibility (RBI, 2023).

Financial markets in India are now closely interwoven with the global financial system such that the synchronicity between global and Indian economy has become stronger over the last decade. In the past, such as during the "taper tantrum" episode, India witnessed significant fluctuations in capital flows, excessive exchange rate pressures, financial market volatility and slowdown in GDP growth, cross-border trade, and domestic investments.

In this backdrop, this study analyses the impact of monetary policy actions of the US Fed on the Indian economy. Actions of the US Fed have a significant bearing on the global economy with its influence on financial conditions across the globe. Additionally, uncertainty around US monetary policy also seems to affect emerging market economies (EMEs). While much of the empirical literature uses cross-country panel data to analyse policy spillovers between advanced and EMEs, analysing country-specific transmission of global policy shocks is important given the considerable heterogeneity across emerging economies and the need to design appropriate policies. Our study, therefore, aims to add to the literature on the transmission of global spillovers to the Indian economy by shedding light on the impact

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of US Federal Reserve's policy stance on domestic macroeconomic fundamentals, namely output growth and inflation.

In doing so, we utilize quarterly macro-financial data on the US and Indian economy for the period 1997-2019. We identify US monetary policy shocks using a sign-restricted vector autoregression (SRVAR) model and use impulse response analysis to shed light on US MP spillovers. Our findings suggest that the Indian economy has been prone to significant spillovers from changes in the stance of monetary policy in the US; however, the nature of impact has changed over the years. In particular, we find that prior to the global financial crisis (GFC) of 2008, US monetary policy shocks led to lower domestic output growth and an increase in inflation, indicative of a cost-push effect on the domestic economy in line with an exchange rate channel of global spillovers. In the post-2008 period, however, surprise changes in US monetary policy seem to lower domestic aggregate demand leading to lower growth and inflation in India. However, the overall impact of US Fed's policy in the post-2008 period -- an era synonymous with the pursuit of unconventional monetary policy -- has been relatively lower and less persistent. Finally, we also find evidence for spillovers due to uncertainty surrounding monetary policy in the US. This suggests that it is not only the actions of US Fed but also the uncertainty around those actions that can have a bearing on the domestic economy.

The paper has been organised into five sections. After this brief introduction, Section II provides a short summary of global and Indian literature on policy spillovers. Section III describes our data and the empirical methodology. In section IV, we present our main results based on impulse responses and variance decomposition derived from the SRVAR model. Finally, based on the main findings, we conclude in Section V by drawing policy implications and contours for future research.

II. Brief Review of Literature

Financial spillovers are said to occur when fluctuations in the price of an asset in one country (or region) trigger changes in the prices of the same asset or other assets in another country (or region). The conventional channels through which financial spillovers are typically deemed to occur involve direct and indirect changes in financial prices; cross-border balance sheet exposures; information or confidence effects (including fundamentals-driven changes in expectations); trade linkages; and spillovers related to monetary and fiscal policy (D'Auria et al., 2014; Agenor et al., 2018; Agenor and Pereira da Silva, 2022).

These channels may be interlinked and work simultaneously to cause an impact that is different from what could be achieved if each channel works independently. The impact of cross-border spillovers is most often heterogeneous depending on structural characteristics of the source and the host economy. The impact of cross-border financial spillovers is thus contingent upon the type of shock that generates fluctuations in asset prices in the source country; the economic channels, real and/or financial, through which the shock is transmitted internationally; the amplification or mitigation mechanisms operating in the source and recipient countries; the nature of macroeconomic and macroprudential policy regime in source and recipient countries; and the scope for policymakers in recipient countries to respond in a timely fashion (Agenor et al., 2018; RBI, 2010).

II.1 Global Context

The pre-eminence of advance economy (AE) monetary policy in influencing global financial cycle, particularly with the US Fed at the pilot seat, has been well researched and documented (Rey, 2015 and 2018; Rajan and Mishra, 2015). Since the US dollar serves as a global reserve currency, the impact of monetary policy actions by other systematically important central banks on financial conditions in emerging

markets have been marginal compared with that by the US Fed. The literature has also observed that the intensity of these effects are heterogeneous over time and across countries – stronger in the post-GFC period and larger for countries that are perceived as riskier investments (IMF, 2021).

Studies have observed that the US monetary policy shocks affect the global economy primarily through global asset prices and capital flows. The US dollar, as the dominant currency of the international monetary system, consigns a special role to US monetary policy (Miranda-Agrippino and Rey, 2020; Jordà et al., 2019; Habib and Venditti, 2019). Often, contractions in US monetary policy are followed by significant deleveraging of global financial intermediaries, especially in the EMEs, a rise in aggregate risk aversion, a contraction in global asset prices and in global credit, a widening of corporate bond spreads, and a retrenchment in gross capital flows. Studies have also shown that US monetary policy shocks transmit across border almost irrespective of the exchange rate regime of the recipient country (Dees and Galesi, 2021; Georgiadis, 2017).

During the 2013 "taper tantrum" episode, mere announcement by the then US Fed Chairman Ben S. Bernanke on the possibility of tapering of asset purchases by the US Fed not only led to an increase in domestic interest rates but also raised emerging market yields, caused portfolio outflows, and depreciated emerging market currencies¹.

Almost all the changes in emerging market domestic yields can be accounted for by changes in the term premium suggesting that the perceived riskiness of holding emerging market bonds rises after a surprise tightening of US monetary policy (IMF, 2021). This is consistent with the finding that

countries with higher sovereign risk are relatively more sensitive to cross-border spillovers (Adrian et al., 2013). These findings suggest that perception of risk *i.e.*, the risk channel has emerged as an important channel in the transmission of the spillovers. On the other hand, the release of good news about the US economy, even as it is accompanied by expectations of tighter US monetary policy, is relatively benign for financial conditions in emerging markets (IMF, 2021).

Considering this line of thought, recent studies show that all instances of increases in US interest rate do not lead to financial crisis in EMEs (for example, see Hoek et al., 2021). This differential impact of U.S. monetary policy changes on EMEs has been ascribed to two key factors. First, reason for the increase in US policy rate. From an EME perspective, if the rise in US interest rates is driven by improved growth prospects, then the impact is likely to be benign as benefits from higher US GDP leading to an increased export demand and investor confidence will outweigh the costs from higher interest costs. However, 'hawkish' policy changes *i.e.*, rate increases driven by worries about inflation are likely to be highly disruptive for EMEs. Second, the impact is conditional on domestic vulnerabilities, such that financial conditions in economies susceptible to macroeconomic weaknesses tend to be more sensitive to a given rise in U.S. interest rates (Hoek et al., 2020).

On the contrary, there have also been studies which found that better fundamentals did not provide insulation, particularly, in the case of the "taper talk" of 2013. A more important determinant has been the size of the country's financial market, such that countries with larger markets experienced more pressure on the exchange rate, foreign reserves, and equity prices (Eichengreen and Gupta, 2015). On the other hand, AEs with strong manufacturing sector are particularly sensitive to spillovers due to the international trade channel through commodity prices and global value chains (Miranda-Agrippino et al., 2020). Lastly, there

¹ See Chairman Ben S. Bernanke's testimony before the Joint Economic Committee, U.S. Congress, Washington, D.C., on May 22, 2013: <https://www.federalreserve.gov/newsevents/testimony/bernanke20130522a.htm>.

has been a growing interdependence between AEs and EMEs as well. Typically, spillovers running from AEs to the rest of the world are referred as global spillovers while those emanating from the rest of the world and impacting AEs are commonly referred as global spillbacks. Seen this way, the quantum of global spillbacks over the past 25 years are about one-fifth of the global spillovers running from AEs to EMEs. However, such spillback effects have increased significantly over time because of the evolving interdependence between these two blocks (Arezki and Yang, 2020)².

II.2 Indian context

In the recent past, several empirical studies on the impact of US monetary policy spillovers have been done in the Indian context. These studies have analysed the transmission of cross-border spillovers to India dissecting important channels for such transmission and the policy experience in receiving and dealing with global spillovers.

For instance, according to Patra *et al.* (2016a), quantitative easing (QE) by the US Fed had significantly altered monetary conditions in India, particularly, QE1 that had the largest impact. They conclude that QE-related spillovers worked mainly through the portfolio rebalancing channel followed by the liquidity channel. Further, assessing the impact of unconventional monetary policies on domestic transmission of monetary policy, Patra *et al.* (2016b) observe that monetary policy transmission through money and credit markets tends to remain unaffected by global spillovers. Transmission through debt market, however, was impacted. The study also observed that Indian foreign exchange and equity markets were highly sensitive to global spillovers but there was no strong

evidence of domestic monetary policy losing traction because of such spillovers.

Similarly, Mohanty and Banerjee (2021) observe that US monetary tightening adversely affects the net worth of domestic firms and reduces domestic credit relative to external credit. They also find that contractionary US monetary policy, mainly working through the financial channel of the exchange rate, leads to a significant downturn in the domestic credit and business cycle in India. Using high-frequency financial market data in a time-varying parameter model framework, Lakdawala (2021) finds that US monetary policy decisions has a significant effect on Indian equity markets with this effect getting stronger over time. The study also identified both surprise changes in the policy rate as well as uncertainty - announcements about large scale asset purchases (QEs) - to be the channel through which the spillovers are transmitted. The study also found that Indian stock response to US monetary policy was uniformly sensitive to portfolio decisions of foreign institutional investors, as also exchange rate being sensitive to US monetary policy and the global financial cycle working through volatility and risk aversion.

The current policy environment, especially in the advanced world, reflects the dilemma of policymakers in terms of nurturing economic growth or tackling the unprecedented inflationary bout. Maintaining a fine policy balance is likely to be tricky in the current policy landscape amidst heightened uncertainty. Policymakers in the advanced world must also tread with caution with their choice of delivering macroeconomic and financial stability at home *vis-à-vis* generating spillovers for the rest of the world.

III. Data and Empirical Methodology

III.1 Data

We use quarterly data on the US and the Indian economy for our analysis. For the domestic block, economic activity is proxied by gross domestic product (GDP) by expenditure in constant prices

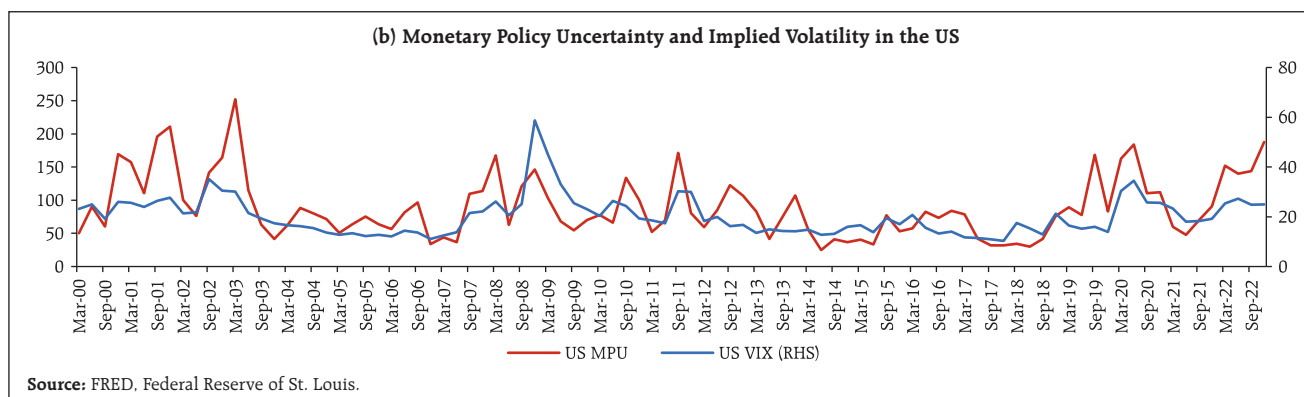
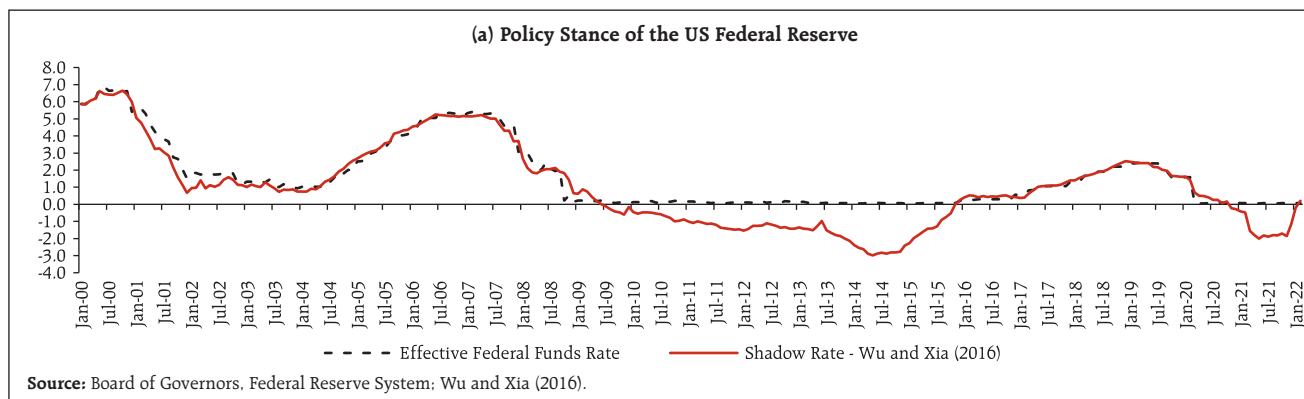
² For instance, while there are large spillover effects on China from major AEs, there are also spillback effects to these economies from China given that it is a major component of the global supply chain. Therefore, any mishap in China, as seen repeatedly during the Covid-19 pandemic, can create global supply bottlenecks.

whereas consumer price index for all items is taken as a measure of inflation. Both are measured in year-on-year percentage change terms. We also include the Nifty 50 index of the National Stock Exchange (NSE) and nominal exchange rate of the Indian Rupee against the US Dollar in the domestic block of our empirical model.

For the foreign block, the implied stock market volatility in the form of US CBOE VIX index is taken as a proxy for risk perception in the US. On the monetary policy front, the federal funds rate remained near zero from December 2008 to December 2015, as well as during the Covid-19 pandemic period. In both these instances, the US Fed relied on unconventional policy tools, such as large-scale asset purchases under the quantitative easing programmes and forward guidance, to influence long-term interest rates and provide stimulus to the economy. Given the *zero lower bound*

on policy rate, literature suggests using shadow policy rates to characterize the stance of monetary policy of the US Fed. In this context, Wu and Xia (2016) propose a shadow rate to summarize the US Fed's monetary policy stance. The proposed shadow rate, constructed using one-month forward rates for $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, 5, 7 and 10 years hence, is not bounded below by 0 per cent. Since the shadow rate accounts for the overall stance of monetary policy, including the period of unconventional monetary policy during 2008-2015, we use the shadow interest rate of Wu and Xia (2016) as a proxy for monetary policy stance of the US Fed (Chart 1a). Finally, to account for uncertainty related to US monetary policy, we leverage the news-based US monetary policy uncertainty indicator proposed by Baker et al. (2016). Increases in uncertainty around monetary policy generally leads to heightened risk perception in the US (see Chart 1b).

Chart 1: Monetary Policy and Risk Perception in the USA



The data is sourced from the Federal Reserve Economic Database (FRED) of the Federal Reserve Bank of St. Louis, CEIC Database and Wu and Xia (2016). Details of the variables and data used in our study have been provided in Table 1.

III.2 Sign-restricted Vector Autoregression (SRVAR) Model

To understand the transmission of monetary policy shocks from advanced economies (AEs), in particular the US, we use a sign-restricted vector autoregression model (SRVAR) model. Illustratively, consider the reduced-form VAR (1) model with n endogenous variables specified as follows:

$$y_t = A \cdot y_{t-1} + \varepsilon_t \text{ for } t = 1, 2, 3 \dots, T.$$

where, y_t is an $n \times 1$ vector of variables, A is an $n \times n$ matrix of coefficients and ε_t is a set of errors with zero mean, no serial correlation and variance-covariance matrix $\Sigma = E[\varepsilon_t \varepsilon_t']$. Since reduced form forecast errors are related to structural innovations, such that $B\varepsilon_t = e_t$ where B is an $n \times n$ matrix of structural parameters and e_t are normally distributed structural shocks with zero mean and unit variance, the structural parameters can be recovered from the following $B \cdot B' = \Sigma = E[\varepsilon_t \varepsilon_t']$. To recover the structural shocks from the estimated $\hat{\varepsilon}_t$, we impose various sign-restrictions on the impulse response of interest. These relatively

weak prior beliefs on the impulse responses usually take the form of "shock to x does not increase/decrease y for m months after the shock".

In our case, a quarterly data sample for period 1997Q1-2019Q4 is used to estimate the SRVAR model for the Indian economy. We estimate the model using Markov chain Monte Carlo (MCMC) sampling technique with 5000 draws taken from the posterior, 1000 burn-in draws and 4000 subdraws to generate impulse responses on which the penalty algorithm is applied. The optimal length is selected using the Bayesian Information Criterion (BIC).

Imposing minimal sign restrictions to identify monetary policy shocks from the US, we choose to remain agnostic about the response of key macroeconomic fundamentals of the domestic economy. Our identification method based on sign-restrictions uses the Uhlig (2005) penalty function approach implemented within a Bayesian framework³.

In line with existing literature, we assume that a US monetary policy shock leads to an increase in the US VIX index, a fall in domestic equity markets and a depreciation of the rupee-dollar exchange rate. We also assume that the monetary policy shock remains in effect until four quarters after the shock while remaining agnostic to the directional responses of domestic output and prices. The sign-restrictions to identify US monetary policy shocks in our model are summarized in Table 2.

Table 1: Variables and Data Sources

| S. No. | Variable | Description | Source |
|-----------------------|--------------------------------|----------------|-------------------|
| Domestic Block | | | |
| 1. | Real Gross Domestic Product | Y-o-Y (%) | FRED, St. Louis |
| 2. | Consumer Price Inflation | Y-o-Y (%) | FRED, St. Louis |
| 3. | Equity Index (Nifty 50) | Y-o-Y (%) | CEIC Database |
| 4. | Exchange Rate (INR-USD) | In logs | CEIC Database |
| Foreign Block | | | |
| 1. | US Monetary Policy | Shadow Rate | Wu and Xia (2016) |
| 2. | US Implied Volatility | CBOE VIX Index | FRED, St. Louis |
| 3. | US Monetary Policy Uncertainty | US MPU | FRED, St. Louis |

Table 2: Sign Restrictions for the identification of US Monetary Policy Shock

| Variables | Foreign Block | | Domestic Block | | | |
|--------------|---------------|----------|----------------|-----------|---------------|----------|
| | US MP | US VIX | Output | Inflation | Equity Prices | INR-USD |
| Restrictions | ≥ 0 | ≥ 0 | ? | ? | ≤ 0 | ≥ 0 |

Source: Authors' calculations.

³ Model estimation and identification was implemented using the *VARsignR* package (Danne, 2015).

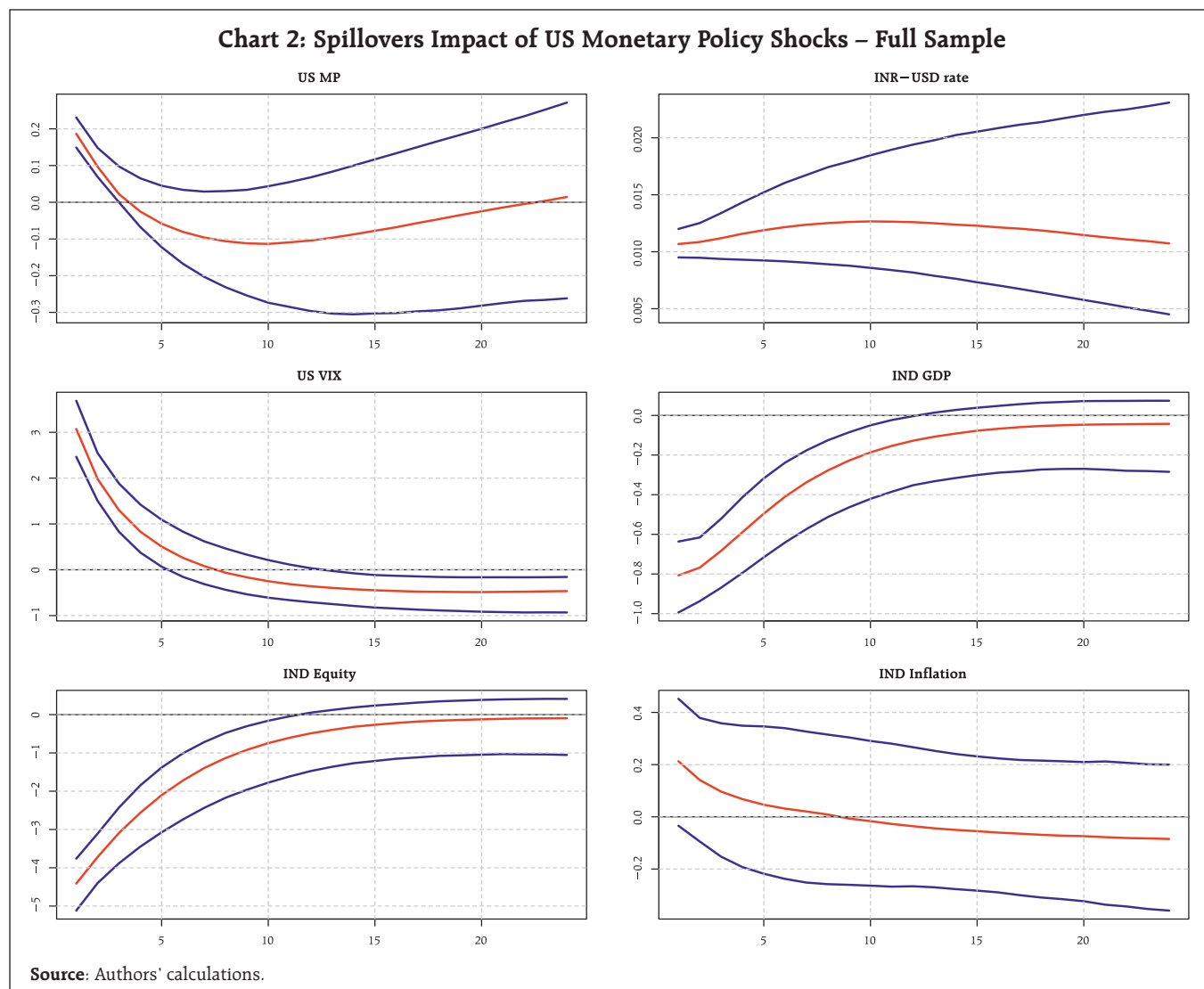
IV. Empirical Results

Spillovers arising due to domestic monetary and fiscal decisions in systematically important countries, such as the US, affect financial markets, bank credit and the real economy in other economies. Even if these changes are optimal from the perspective of the US domestic economy, they may have undesirable effects on foreign economies. It has been argued that the actions of US Fed, whether intended or unintended, has played a major role in propagating credit and asset price booms in the global economy. Similarly, various forms of ultra-accommodative monetary policy pursued by major central banks since

the GFC have exerted significant spillovers on other countries by influencing their interest rates and credit conditions. In this section, we present our results on the impact of US monetary policy shocks on the Indian economy using impulse response analysis and forecast error variance decomposition from our SRVAR model.

IV.1 Spillovers from US Monetary Policy

Based on the Uhlig (2005) penalty function approach, the dynamic responses of domestic macroeconomic variables to monetary policy shocks in the US are provided below in Chart 2. The chart shows the median estimate for impulse responses of



domestic economic activity and inflation (solid red line) to a one standard deviation shock to US policy rate. The blue lines indicate the 68 per cent confidence bands. These results correspond to estimation over the full data sample *i.e.*, from 1997Q1 to 2019Q4. It is evident from the impulse responses that the domestic economy faces an immediate decline in output due to a contractionary US monetary policy shock. The effect is found to persist for almost 12 quarters. The decrease in output is accompanied by an increase in domestic inflation, however, the effect is not statistically significant. The data also suggests that a contractionary US monetary policy shock leads to an increase in global risk aversion (VIX index), which in turn causes domestic equity prices to fall alongside a depreciation of the domestic currency.

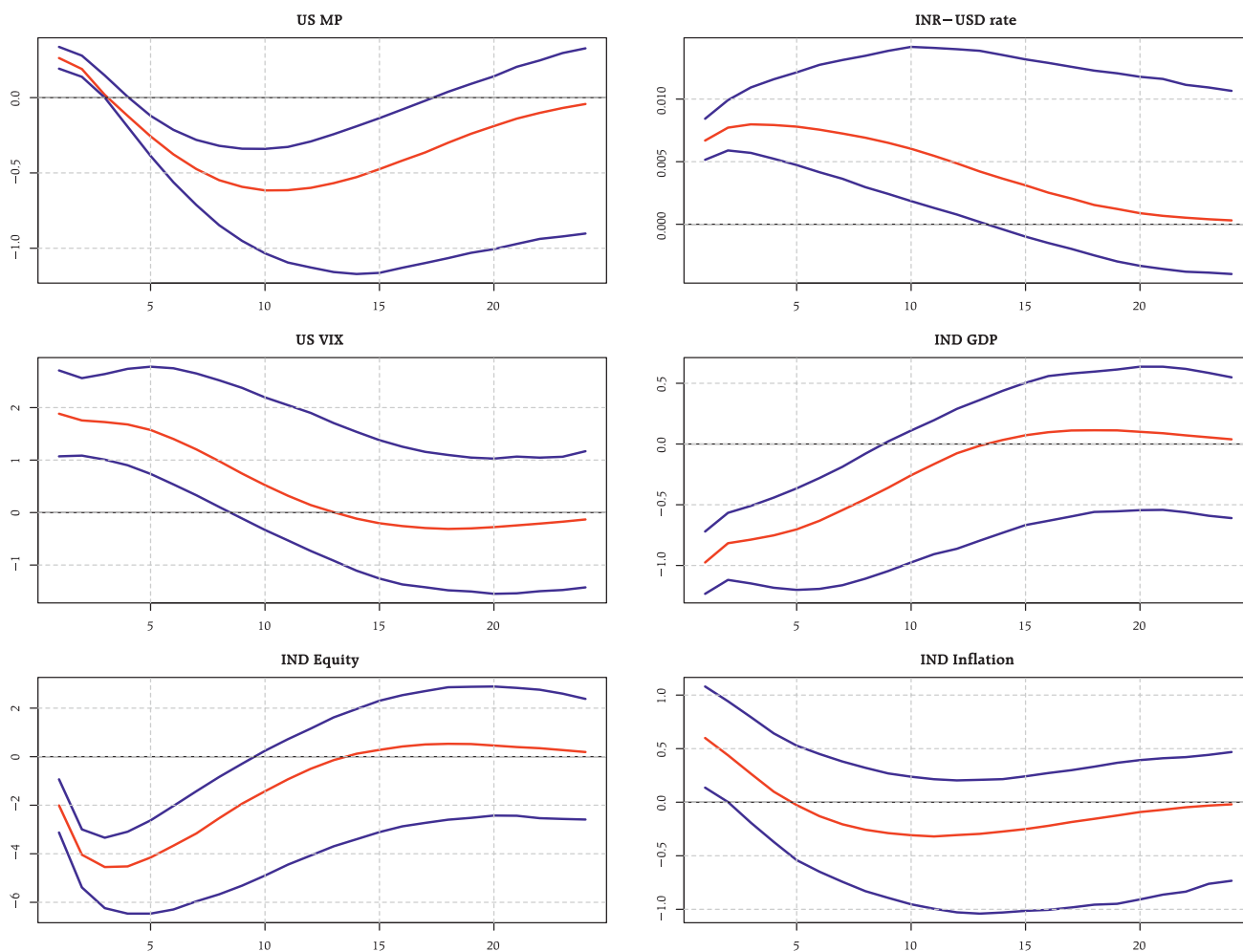
Next, we divide our sample into two subsample period, from 1997Q1 to 2007Q4 and from 2008Q1 to 2019Q4. The former period reflects the period prior to the GFC and use of mainly conventional policy instruments. The latter period, on the other hand, is characterized by the use of both conventional and unconventional policy tools by the US Fed. Note that, Wu and Xia (2016) use monthly data from 2008-09 to 2013-14 to estimate the effects of unconventional monetary policies on the US economy. However, given data constraints, we estimate our model over a larger subsample which includes a period of ultra-accommodative monetary policy stance followed by a calibrated normalisation of policy in the US. We estimate our model separately for these two subsamples and present the impulse responses below.

Chart 3 and 4 present the impulse responses over the two subsamples, 1997Q1:2007Q4 and 2008Q1:2019Q4, respectively. Estimates from the pre-2008 sample suggests that a contractionary US monetary policy shock leads to a decline in domestic output and an increase in inflation. Further, we find that responses of domestic output and inflation, in

addition to being statistically significant, are larger for the pre-2008 sample as compared to the full sample. The response of domestic output, however, is less persistent in this case as it is rendered statistically insignificant after 8-9 quarters. The fall in output coupled with an increase in inflation, suggests that the cross-border transmission of US monetary policy shocks were driven by the *exchange rate channel* in the pre-2008 period (see Caldara et al., 2022). Given that majority of global trade is invoiced in US dollar, depreciation of the domestic currency can lead to an increase in cost of capital for Indian firms. Moreover, crude oil, which acts as an intermediate good, would also get costlier leading to an instantaneous ratcheting up of costs. Overall, such an increase in cost of capital for domestic firms highlights the cost-push effects of an unanticipated tightening of US monetary policy.

On the other hand, in case of post-2008 sample, we find that US monetary policy shocks cause a decline in domestic economic activity as well as domestic inflation. The fall in output growth and inflation is statistically significant and persistent, with output growth and inflation continuing to decrease for more than four quarters. As suggested in the literature, US monetary policy spillovers to EMEs, especially those from unconventional policies, have been primarily driven by the *financial channel*. This channel captures the tightening of long-term interest rates in the US that accompanies policy tightening by the US Fed. Higher long-term yields allows global investors to switch from foreign assets to US assets, thereby hardening foreign financial conditions followed by a reduction in GDP and inflation in EMEs. The responses of domestic output growth and inflation in the post-GFC period, therefore, supports the transmission of global policy spillovers through the financial channel. Overall, our results indicate that US monetary policy after the GFC seems to affect aggregate demand in the domestic economy.

Chart 3: Spillovers from US Monetary Policy - Pre-2008 Sample



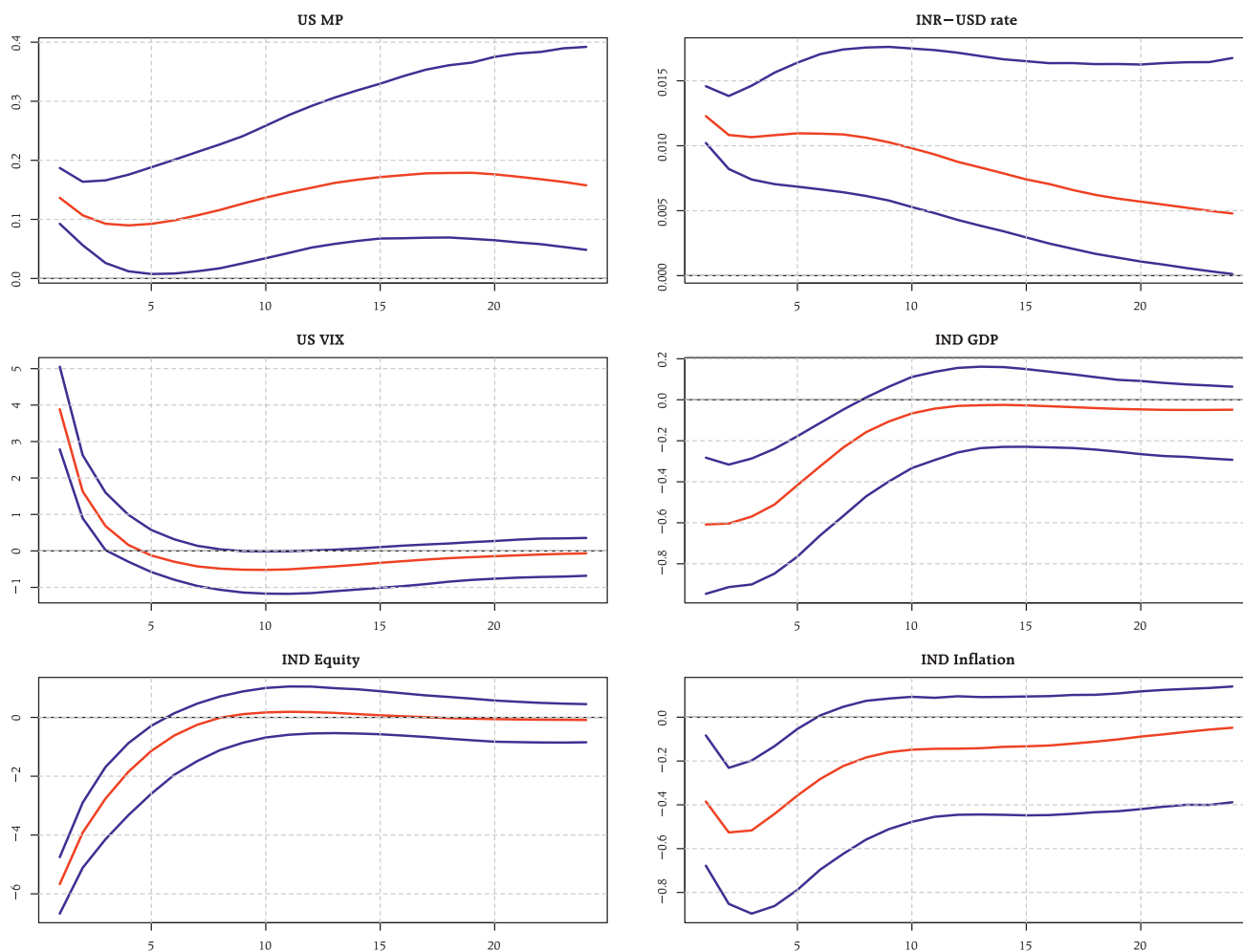
Source: Authors' calculations.

The impulse responses presented in Chart 3 and Chart 4 underline the changing nature and transmission of US monetary policy shocks to the Indian economy. In case of pre-2008 period, synonymous with the use of conventional monetary policy tools in the US, unanticipated changes in the US Fed's policy stance reduced output growth and increased domestic inflation, thereby exhibiting a cost-push shock to the domestic economy through the exchange rate channel. In the post-2008 period, marked by the pursuit of unconventional monetary policies in the US, policy spillovers to India take the form of an aggregate demand shock leading to a

decrease in domestic output growth and inflation in line with the financial channel of global spillovers.

IV.2 Spillovers from US Monetary Policy Uncertainty

Cross-border policy spillovers can also be driven by market participants' perception of changes in economic fundamentals and the stance of monetary policy in the source country. It can also be driven by policy announcements (or lack thereof) rather than the actual realisation of these changes. Such changes in policy perception can be captured by indicators that measure uncertainty around economic policy. Therefore, to ascertain the impact of uncertainty

Chart 4: Spillovers from US Monetary Policy – Post-2008 Sample

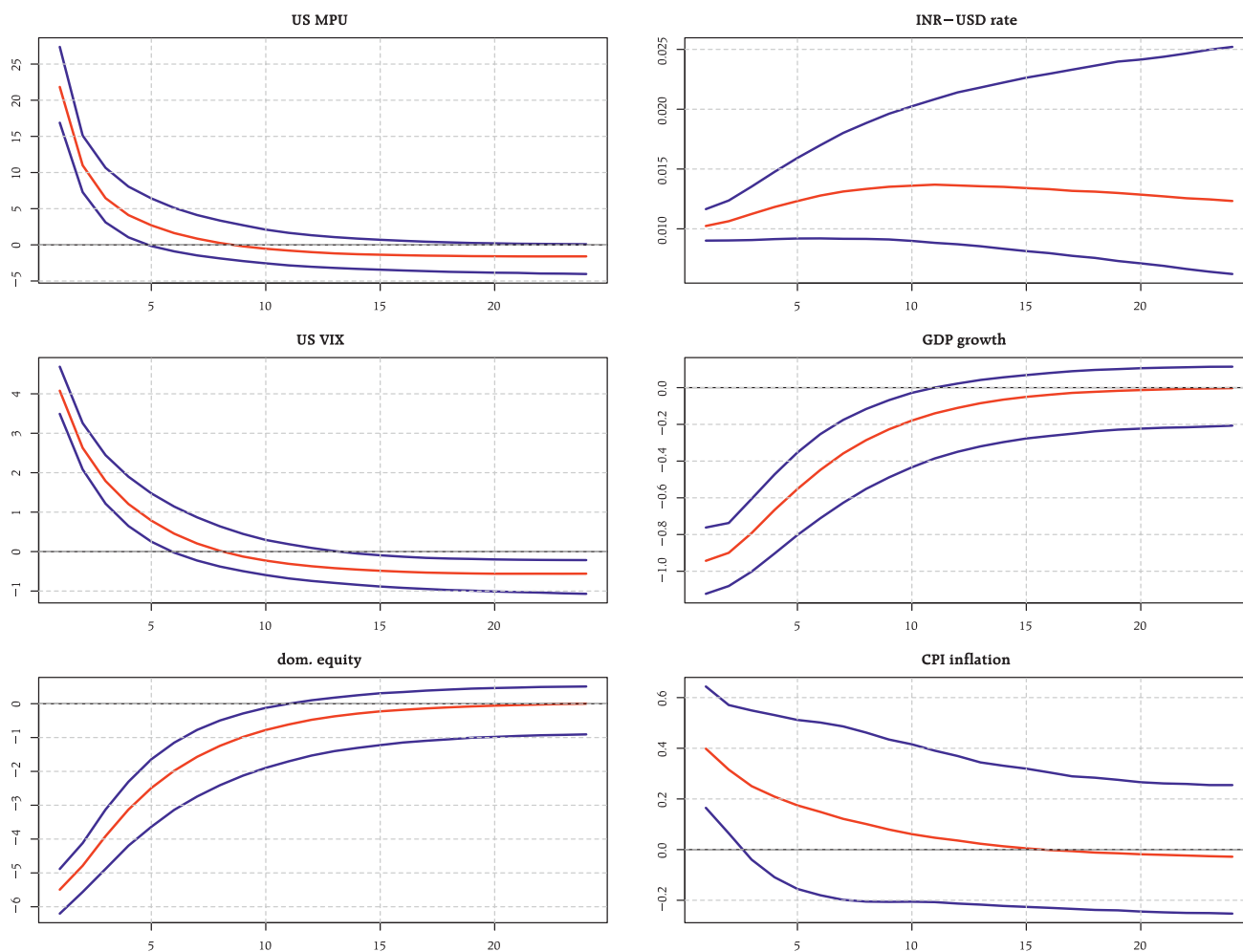
Source: Authors' calculations.

around monetary policy in the US, we estimate our SRVAR model by replacing US shadow interest rate with the news-based US monetary policy uncertainty (MPU) index proposed by Baker et al. (2016). We impose similar sign restrictions as earlier and estimate the model over the full data sample. The resulting impulse response to a one standard deviation shock to US MPU are given in Chart 5.

As observed in Chart 5, unanticipated increases in US monetary policy uncertainty leads to a fall in domestic output growth along with a rise in

domestic inflation. The effect of the shock on domestic GDP growth and inflation are also larger and more persistent as compared to US monetary policy shocks discussed in the previous subsection. This suggests that heightened uncertainty in the context of US monetary policy is akin to a negative supply-side shock for the Indian economy which shows in the form of accelerated inflation along with a persistent decline in output growth. Overall, global monetary policy uncertainty tends to worsen the inflation-output trade-off for domestic monetary policy.

Chart 5: Spillovers from US Monetary Policy Uncertainty – Full Sample



Source: Authors' calculations.

V. Conclusion

The global economic system today is staring in the eyes of a deadly storm amidst a global pandemic that has affected millions of lives and livelihoods, a bounce back of high inflation, heightened uncertainty due to geopolitical tensions and a rollback of ultra-accommodative policy support across the globe.

In this scenario, matters for emerging market economies are further complicated by the fact that they not only have to support domestic economy but must also safeguard themselves against spillovers from AEs. Our study uses quarterly macro-financial data on the

US and Indian economy to shed light on the effects of US monetary policy actions as well as monetary policy uncertainty on the domestic economy. Importantly, we show that monetary policy actions (or uncertainty) of the US Fed can have detrimental effects on the domestic business cycle. In the context of the sharp policy tightening being observed across the globe, our paper suggests that major central banks should be wary of the negative impact of their policy actions as well as communication. In the globalized world of today, destabilization in one region or group of countries can derail the process of global economic recovery from the pandemic. Thus, the global economy would be

better served if major central banks strive to minimize disruptions caused by their policy actions through transparent communication on the future path of their policy.

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CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

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Notes: .. = Not available.
 – = Nil/Negligible.
 P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

| Item | 2021-22 | 2021-22 | | 2022-23 | |
|---|----------------|-------------|-------------|-------------|-------------|
| | | Q1 | Q2 | Q1 | Q2 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Real Sector (% Change) | | | | | |
| 1.1 GVA at Basic Prices | 8.1 | 18.1 | 8.3 | 12.7 | 5.6 |
| 1.1.1 Agriculture | 3.0 | 2.2 | 3.2 | 4.5 | 4.6 |
| 1.1.2 Industry | 9.8 | 40.4 | 6.6 | 6.0 | -3.1 |
| 1.1.3 Services | 8.8 | 15.5 | 10.0 | 17.5 | 9.0 |
| 1.1a Final Consumption Expenditure | 7.0 | 10.2 | 10.2 | 21.3 | 7.7 |
| 1.1b Gross Fixed Capital Formation | 15.8 | 62.5 | 14.6 | 20.1 | 10.4 |
| | 2021-22 | 2021 | | 2022 | |
| | | Nov. | Dec. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| 1.2 Index of Industrial Production | 11.4 | 1.0 | 1.0 | 7.3 | 4.3 |
| 2 Money and Banking (% Change) | | | | | |
| 2.1 Scheduled Commercial Banks | | | | | |
| 2.1.1 Deposits | 8.9 | 8.9 | 10.3 | 9.8 | 9.2 |
| 2.1.2 Credit # | 9.6 | 6.9 | 9.3 | 17.3 | 14.9 |
| 2.1.2.1 Non-food Credit # | 9.7 | 7.1 | 9.4 | 17.7 | 15.3 |
| 2.1.3 Investment in Govt. Securities | 6.0 | 3.6 | 2.8 | 10.7 | 10.6 |
| 2.2 Money Stock Measures | | | | | |
| 2.2.1 Reserve Money (M0) | 13.0 | 12.8 | 14.7 | 11.0 | 10.3 |
| 2.2.2 Broad Money (M3) | 8.8 | 9.5 | 11.4 | 8.9 | 8.7 |
| 3 Ratios (%) | | | | | |
| 3.1 Cash Reserve Ratio | 4.00 | 4.00 | 4.00 | 4.50 | 4.50 |
| 3.2 Statutory Liquidity Ratio | 18.00 | 18.00 | 18.00 | 18.00 | 18.00 |
| 3.3 Cash-Deposit Ratio | 4.7 | 4.8 | 5.0 | 5.3 | 5.3 |
| 3.4 Credit-Deposit Ratio | 72.2 | 71.0 | 71.3 | 75.0 | 75.0 |
| 3.5 Incremental Credit-Deposit Ratio # | 77.2 | 37.3 | 56.1 | 128.6 | 111.5 |
| 3.6 Investment-Deposit Ratio | 28.7 | 29.0 | 28.4 | 29.3 | 28.7 |
| 3.7 Incremental Investment-Deposit Ratio | 19.7 | 17.7 | 12.9 | 39.7 | 28.9 |
| 4 Interest Rates (%) | | | | | |
| 4.1 Policy Repo Rate | 4.00 | 4.00 | 4.00 | 5.90 | 6.25 |
| 4.2 Fixed Reverse Repo Rate | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 |
| 4.3 Standing Deposit Facility (SDF) Rate * | - | - | - | 5.65 | 6.00 |
| 4.4 Marginal Standing Facility (MSF) Rate | 4.25 | 4.25 | 4.25 | 6.15 | 6.50 |
| 4.5 Bank Rate | 4.25 | 4.25 | 4.25 | 6.15 | 6.50 |
| 4.6 Base Rate | 7.25/8.80 | 7.30/8.80 | 7.25/8.80 | 8.10/8.80 | 8.10/9.40 |
| 4.7 MCLR (Overnight) | 6.45/7.00 | 6.50/7.00 | 6.50/7.00 | 7.05/8.05 | 7.30/8.15 |
| 4.8 Term Deposit Rate >1 Year | 5.00/5.60 | 4.90/5.50 | 4.90/5.60 | 6.10/7.25 | 6.00/7.25 |
| 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) | 3.34 | 3.35 | 3.32 | 6.13 | 6.38 |
| 4.11 91-Day Treasury Bill (Primary) Yield | 3.84 | 3.53 | 3.66 | 6.40 | 6.31 |
| 4.12 182-Day Treasury Bill (Primary) Yield | 4.27 | 3.83 | 3.97 | 6.73 | 6.74 |
| 4.13 364-Day Treasury Bill (Primary) Yield | 4.58 | 4.13 | 4.27 | 6.87 | 6.89 |
| 4.14 10-Year G-Sec Par Yield (FBIL) | 6.86 | 6.33 | 6.47 | 7.29 | 7.34 |
| 5 Reference Rate and Forward Premia | | | | | |
| 5.1 INR-US\$ Spot Rate (Rs. Per Foreign Currency) | 76.18 | 74.71 | 74.30 | 81.53 | 82.79 |
| 5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency) | 84.01 | 83.85 | 84.05 | 84.87 | 88.15 |
| 5.3 Forward Premia of US\$ 1-month (%) | 5.67 | 3.69 | 3.96 | 2.21 | 2.17 |
| 3-month (%) | 4.46 | 3.80 | 4.15 | 2.16 | 2.17 |
| 6-month (%) | 4.10 | 4.71 | 4.71 | 2.26 | 2.22 |
| 6 Inflation (%) | | | | | |
| 6.1 All India Consumer Price Index | 5.51 | 4.9 | 5.7 | 5.9 | 5.7 |
| 6.2 Consumer Price Index for Industrial Workers | 5.13 | 4.8 | 5.6 | 5.4 | 5.5 |
| 6.3 Wholesale Price Index | 12.97 | 14.9 | 14.3 | 5.8 | 5.0 |
| 6.3.1 Primary Articles | 10.25 | 10.2 | 13.8 | 5.5 | 2.4 |
| 6.3.2 Fuel and Power | 32.50 | 44.4 | 38.1 | 17.4 | 18.1 |
| 6.3.3 Manufactured Products | 11.10 | 12.3 | 10.7 | 3.6 | 3.4 |
| 7 Foreign Trade (% Change) | | | | | |
| 7.1 Imports | 55.43 | 56.8 | 40.5 | 9.8 | -0.2 |
| 7.2 Exports | 44.62 | 34.6 | 44.3 | 9.7 | -3.1 |

Note : Financial Benchmark India Pvt. Ltd. (FBIL) has commenced publication of the G-Sec benchmarks with effect from March 31, 2018 as per RBI circular FMRD.DIRD.7/14.03.025/2017-18 dated March 31, 2018. FBIL has started dissemination of reference rates w.e.f. July 10, 2018.

*: As per Press Release No. 2022-2023/41 dated April 08, 2022

#: 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)

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

(₹ Crore)

| Item | As on the Last Friday/ Friday | | | | | | |
|---|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 2021-22 | 2022 | | 2023 | | | |
| | | Jan. | Dec. 30 | Jan. 6 | Jan. 13 | Jan. 20 | Jan. 27 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 Issue Department | | | | | | | |
| 1.1 Liabilities | | | | | | | |
| 1.1.1 Notes in Circulation | 3107637 | 3004604 | 3203051 | 3225329 | 3252059 | 3249112 | 3261992 |
| 1.1.2 Notes Held in Banking Department | 15 | 16 | 15 | 13 | 10 | 19 | 19 |
| 1.1/1.2 Total Liabilities (Total Notes Issued) or Assets | 3107652 | 3004619 | 3203066 | 3225342 | 3252070 | 3249132 | 3262010 |
| 1.2 Assets | | | | | | | |
| 1.2.1 Gold | 128208 | 114864 | 129184 | 130632 | 131852 | 134029 | 135652 |
| 1.2.2 Foreign Securities | 2978927 | 2889257 | 3073515 | 3094378 | 3119720 | 3114638 | 3125922 |
| 1.2.3 Rupee Coin | 518 | 498 | 367 | 333 | 497 | 465 | 436 |
| 1.2.4 Government of India Rupee Securities | — | — | — | — | — | — | — |
| 2 Banking Department | | | | | | | |
| 2.1 Liabilities | | | | | | | |
| 2.1.1 Deposits | 1794574 | 1929291 | 1439225 | 1399746 | 1344611 | 1341640 | 1374659 |
| 2.1.1.1 Central Government | 101 | 100 | 100 | 100 | 101 | 101 | 101 |
| 2.1.1.2 Market Stabilisation Scheme | | | | | | | |
| 2.1.1.3 State Governments | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| 2.1.1.4 Scheduled Commercial Banks | 683437 | 681336 | 841612 | 830148 | 800904 | 861612 | 813573 |
| 2.1.1.5 Scheduled State Co-operative Banks | 7123 | 7560 | 8648 | 9055 | 8317 | 8452 | 8592 |
| 2.1.1.6 Non-Scheduled State Co-operative Banks | 4121 | 3766 | 4403 | 4520 | 4450 | 4443 | 4337 |
| 2.1.1.7 Other Banks | 37589 | 36681 | 45114 | 44305 | 44847 | 44728 | 44453 |
| 2.1.1.8 Others | 988819 | 1139410 | 457383 | 425587 | 407855 | 350431 | 429497 |
| 2.1.1.9 Financial Institution Outside India | 73343 | 60395 | 81922 | 85989 | 78095 | 71830 | 74063 |
| 2.1.2 Other Liabilities | 1359254 | 1300073 | 1506375 | 1496017 | 1515004 | 1517021 | 1543823 |
| 2.1/2.2 Total Liabilities or Assets | 3153828 | 3229365 | 2945600 | 2895763 | 2859616 | 2858662 | 2918482 |
| 2.2 Assets | | | | | | | |
| 2.2.1 Notes and Coins | 15 | 16 | 15 | 13 | 10 | 19 | 19 |
| 2.2.2 Balances Held Abroad | 1243853 | 1387051 | 1075884 | 1040773 | 1020375 | 1021574 | 1052101 |
| 2.2.3 Loans and Advances | | | | | | | |
| 2.2.3.1 Central Government | — | — | — | — | — | — | — |
| 2.2.3.2 State Governments | 670 | 716 | 4450 | 17380 | 16688 | 19058 | 16745 |
| 2.2.3.3 Scheduled Commercial Banks | 94299 | 94286 | 127472 | 96723 | 95937 | 96401 | 121622 |
| 2.2.3.4 Scheduled State Co-op. Banks | — | — | — | — | — | — | — |
| 2.2.3.5 Industrial Dev. Bank of India | — | — | — | — | — | — | — |
| 2.2.3.6 NABARD | 24927 | 24770 | — | — | — | — | — |
| 2.2.3.7 EXIM Bank | — | — | — | — | — | — | — |
| 2.2.3.8 Others | 8077 | 811 | 17789 | 16125 | 1662 | 3469 | 9175 |
| 2.2.3.9 Financial Institution Outside India | 72741 | 30404 | 81790 | 86108 | 78656 | 72197 | 74372 |
| 2.2.4 Bills Purchased and Discounted | | | | | | | |
| 2.2.4.1 Internal | — | — | — | — | — | — | — |
| 2.2.4.2 Government Treasury Bills | — | — | — | — | — | — | — |
| 2.2.5 Investments | 1491042 | 1497144 | 1409345 | 1407260 | 1412703 | 1408700 | 1404238 |
| 2.2.6 Other Assets | 218203 | 194167 | 228855 | 231380 | 233584 | 237243 | 240211 |
| 2.2.6.1 Gold | 201354 | 181597 | 212643 | 215026 | 217034 | 220617 | 223290 |

* 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 | | 8 | 9 | 10 |
| Dec. 1, 2022 | - | - | - | - | 0 | 220379 | - | 790 | - | -221169 |
| Dec. 2, 2022 | - | - | - | 31234 | 987 | 246265 | - | 1640 | - | -278152 |
| Dec. 3, 2022 | - | - | - | - | 563 | 13987 | - | - | - | -13424 |
| Dec. 4, 2022 | - | - | - | - | 7 | 3257 | - | - | - | -3250 |
| Dec. 5, 2022 | - | - | - | - | 518 | 227361 | - | 1875 | - | -228718 |
| Dec. 6, 2022 | - | - | - | - | 7 | 158653 | - | 945 | - | -159591 |
| Dec. 7, 2022 | - | - | - | - | 13 | 229671 | -5000 | 1125 | - | -235783 |
| Dec. 8, 2022 | - | - | - | - | 29 | 208605 | -625 | - | - | -209201 |
| Dec. 9, 2022 | - | - | - | - | 5 | 219063 | -3400 | 290 | - | -222748 |
| Dec. 10, 2022 | - | - | - | - | 42 | 5790 | - | - | - | -5748 |
| Dec. 11, 2022 | - | - | - | - | 59 | 7336 | - | - | - | -7277 |
| Dec. 12, 2022 | - | - | - | - | 35 | 204788 | - | 370 | - | -205123 |
| Dec. 13, 2022 | - | - | - | - | 2969 | 208870 | - | 135 | - | -206036 |
| Dec. 14, 2022 | - | - | - | - | 215 | 177306 | - | 1285 | - | -178376 |
| Dec. 15, 2022 | - | - | - | - | 39 | 162303 | 565 | 1360 | - | -163059 |
| Dec. 16, 2022 | - | - | - | 13453 | 21103 | 65736 | 3000 | - | - | -55086 |
| Dec. 17, 2022 | - | - | - | - | 930 | 17563 | - | - | - | -16633 |
| Dec. 18, 2022 | - | - | - | - | 5 | 2432 | - | - | - | -2427 |
| Dec. 19, 2022 | - | - | - | - | 5645 | 54697 | 3129 | - | - | -45923 |
| Dec. 20, 2022 | - | - | - | - | 7091 | 69829 | 2966 | - | - | -59772 |
| Dec. 21, 2022 | - | - | - | - | 2449 | 46987 | -61 | - | - | -44599 |
| Dec. 22, 2022 | - | - | - | - | 937 | 59487 | - | - | - | -58550 |
| Dec. 23, 2022 | - | - | - | - | 2101 | 61426 | -450 | 5 | - | -59780 |
| Dec. 24, 2022 | - | - | - | - | 54 | 17846 | - | - | - | -17792 |
| Dec. 25, 2022 | - | - | - | - | 25 | 3066 | - | - | - | -3041 |
| Dec. 26, 2022 | - | - | - | - | 406 | 75574 | - | - | - | -75168 |
| Dec. 27, 2022 | - | - | - | - | 279 | 82556 | -505 | - | - | -82782 |
| Dec. 28, 2022 | - | - | - | - | 8901 | 98806 | - | - | - | -89905 |
| Dec. 29, 2022 | - | - | - | - | 5440 | 86536 | 506 | - | - | -80590 |
| Dec. 30, 2022 | - | - | - | 27084 | 33224 | 120779 | - | - | - | -114639 |
| Dec. 31, 2022 | - | - | - | - | 269 | 50364 | - | - | - | -50095 |

SDF: Standing Deposit Facility; MSF: Marginal Standing Facility.

**No. 4 A : Maturity Breakdown (by Residual Maturity) of Outstanding
Forwards of RBI (US \$ Million)**

| Item | As on December 31, 2022 | | |
|--|-------------------------|-------------|--------------|
| | Long (+) | Short (-) | Net (1-2) |
| | 1 | 2 | 3 |
| 1. Upto 1 month | 1140 | 5473 | -4333 |
| 2. More than 1 month and upto 3 months | 3806 | 125 | 3681 |
| 3. More than 3 months and upto 1 year | 7731 | 1246 | 6485 |
| 4. More than 1 year | 5135 | 0 | 5135 |
| Total (1+2+3+4) | 17812 | 6844 | 10968 |

No. 5: RBI's Standing Facilities

(₹ Crore)

| Item | As on the Last Reporting Friday | | | | | | | |
|---|---------------------------------|---------|---------|---------|---------|---------|---------|---------|
| | 2021-22 | 2022 | | | | | | 2023 |
| | | Jan. 28 | Aug. 26 | Sep. 23 | Oct. 21 | Nov. 18 | Dec. 30 | Jan. 27 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MSF | 11 | 38 | 4034 | 9657 | 51134 | 3250 | 33224 | 27370 |
| 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 | - | 734 | 0 | 910 | 1022 | 1801 | 2376 | 1675 |
| 4 Others | | | | | | | | |
| 4.1 Limit | 76000 | 76000 | 76000 | 76000 | 76000 | 76000 | 76000 | 76000 |
| 4.2 Outstanding | 32401 | 24401 | 40159 | 31039 | 20249 | 10850 | 15400 | 7500 |
| 5 Total Outstanding (1+2.2+3.2+4.2) | 32412 | 25173 | 44193 | 41606 | 72405 | 15901 | 51000 | 36545 |

Note : 1.Special refinance facility to Others, i.e. to the EXIM Bank, is reopened since May 22, 2020

2.Refinance facility to Others, i.e. to the NABARD/SIDBI/NHB U/S 17(4H) of RBI ACT,1934, since, April 17, 2020.

Money and Banking

No. 6: Money Stock Measures

| Item | (₹ Crore) | | | | |
|--|--|-----------------|-----------------|-----------------|-----------------|
| | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
| | 2021-22 | 2021 | 2022 | | |
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4) | 3035689 | 2881115 | 3093618 | 3127695 | 3122236 |
| 1.1 Notes in Circulation | 3105703 | 2959237 | 3189066 | 3211867 | 3203037 |
| 1.2 Circulation of Rupee Coin | 27270 | 26921 | 28469 | 28641 | 28857 |
| 1.3 Circulation of Small Coins | 743 | 743 | 743 | 743 | 743 |
| 1.4 Cash on Hand with Banks | 98028 | 105786 | 124807 | 113734 | 110416 |
| 2 Deposit Money of the Public | 2271436 | 2257098 | 2262770 | 2237429 | 2404868 |
| 2.1 Demand Deposits with Banks | 2212992 | 2206052 | 2192060 | 2173283 | 2341936 |
| 2.2 'Other' Deposits with Reserve Bank | 58444 | 51045 | 70709 | 64145 | 62932 |
| 3 M₁ (1 + 2) | 5307125 | 5138213 | 5356388 | 5365124 | 5527104 |
| 4 Post Office Saving Bank Deposits | 188433 | 179437 | 196440 | 196440 | 196440 |
| 5 M₂ (3 + 4) | 5495558 | 5317650 | 5552828 | 5561564 | 5723544 |
| 6 Time Deposits with Banks | 15186605 | 14975823 | 16043534 | 16119395 | 16332131 |
| 7 M₃ (3 + 6) | 20493729 | 20114036 | 21399921 | 21484519 | 21859235 |
| 8 Total Post Office Deposits | 1012241 | 969847 | 1088490 | 1088490 | 1088490 |
| 9 M₄ (7 + 8) | 21505970 | 21083883 | 22488411 | 22573009 | 22947725 |

No. 7: Sources of Money Stock (M₃)

(₹ Crore)

| Sources | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|--|--|-----------------|-----------------|-----------------|-----------------|
| | 2021-22 | 2021 | 2022 | | |
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Net Bank Credit to Government | 6477629 | 6100716 | 6612762 | 6525131 | 6565472 |
| 1.1 RBI's net credit to Government (1.1.1–1.1.2) | 1450596 | 1194335 | 1226047 | 1097957 | 1170253 |
| 1.1.1 Claims on Government | 1490991 | 1526753 | 1423456 | 1422205 | 1412098 |
| 1.1.1.1 Central Government | 1489324 | 1520076 | 1417773 | 1410153 | 1407648 |
| 1.1.1.2 State Governments | 1667 | 6677 | 5683 | 12052 | 4450 |
| 1.1.2 Government deposits with RBI | 40394 | 332418 | 197409 | 324248 | 241845 |
| 1.1.2.1 Central Government | 40352 | 332375 | 197366 | 324205 | 241802 |
| 1.1.2.2 State Governments | 42 | 42 | 42 | 42 | 42 |
| 1.2 Other Banks' Credit to Government | 5027033 | 4906381 | 5386715 | 5427174 | 5395219 |
| 2 Bank Credit to Commercial Sector | 12616520 | 12290942 | 13679367 | 13888869 | 14045877 |
| 2.1 RBI's credit to commercial sector | 16571 | 2094 | 14661 | 14282 | 19852 |
| 2.2 Other banks' credit to commercial sector | 12599950 | 12288848 | 13664706 | 13874587 | 14026025 |
| 2.2.1 Bank credit by commercial banks | 11891314 | 11582087 | 12947813 | 13154442 | 13305854 |
| 2.2.2 Bank credit by co-operative banks | 690201 | 688991 | 699569 | 702806 | 702681 |
| 2.2.3 Investments by commercial and co-operative banks in other securities | 18435 | 17769 | 17324 | 17339 | 17491 |
| 3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2) | 4854063 | 4849508 | 4571803 | 4761560 | 4746428 |
| 3.1 RBI's net foreign exchange assets (3.1.1–3.1.2) | 4442479 | 4550652 | 4316211 | 4505968 | 4490835 |
| 3.1.1 Gross foreign assets | 4442720 | 4550897 | 4316456 | 4506213 | 4491094 |
| 3.1.2 Foreign liabilities | 241 | 245 | 246 | 246 | 259 |
| 3.2 Other banks' net foreign exchange assets | 411583 | 298856 | 255593 | 255593 | 255593 |
| 4 Government's Currency Liabilities to the Public | 28013 | 27664 | 29212 | 29384 | 29600 |
| 5 Banking Sector's Net Non-monetary Liabilities | 3482496 | 3154794 | 3493223 | 3720427 | 3528143 |
| 5.1 Net non-monetary liabilities of RBI | 1308500 | 1307042 | 1381545 | 1511272 | 1494789 |
| 5.2 Net non-monetary liabilities of other banks (residual) | 2173996 | 1847752 | 2111678 | 2209154 | 2033355 |
| M₃ (1+2+3+4–5) | 20493729 | 20114036 | 21399921 | 21484519 | 21859235 |

No. 8: Monetary Survey

(₹ Crore)

| Item | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|---|--|----------|----------|----------|----------|
| | 2021-22 | 2021 | 2022 | | |
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| Monetary Aggregates | | | | | |
| NM ₁ (1.1 + 1.2.1+1.3) | 5307125 | 5138213 | 5356388 | 5365124 | 5527104 |
| NM ₂ (NM ₁ + 1.2.2.1) | 12081049 | 11814053 | 12512152 | 12550677 | 12807909 |
| NM ₃ (NM ₂ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5) | 20634885 | 20243385 | 21732947 | 21794816 | 22147115 |
| 1 Components | | | | | |
| 1.1 Currency with the Public | 3035689 | 2881115 | 3093618 | 3127695 | 3122236 |
| 1.2 Aggregate Deposits of Residents | 17266157 | 17041253 | 18093758 | 18141179 | 18521503 |
| 1.2.1 Demand Deposits | 2212992 | 2206052 | 2192060 | 2173283 | 2341936 |
| 1.2.2 Time Deposits of Residents | 15053166 | 14835201 | 15901698 | 15967895 | 16179568 |
| 1.2.2.1 Short-term Time Deposits | 6773925 | 6675840 | 7155764 | 7185553 | 7280805 |
| 1.2.2.1.1 Certificates of Deposit (CDs) | 176718 | 84894 | 252530 | 274311 | 291491 |
| 1.2.2.2 Long-term Time Deposits | 8279241 | 8159360 | 8745934 | 8782342 | 8898762 |
| 1.3 'Other' Deposits with RBI | 58444 | 51045 | 70709 | 64145 | 62932 |
| 1.4 Call/Term Funding from Financial Institutions | 274594 | 269971 | 474861 | 461797 | 440444 |
| 2 Sources | | | | | |
| 2.1 Domestic Credit | 20080599 | 19381230 | 21384192 | 21525125 | 21705225 |
| 2.1.1 Net Bank Credit to the Government | 6477629 | 6100716 | 6612762 | 6525131 | 6565472 |
| 2.1.1.1 Net RBI credit to the Government | 1450596 | 1194335 | 1226047 | 1097957 | 1170253 |
| 2.1.1.2 Credit to the Government by the Banking System | 5027033 | 4906381 | 5386715 | 5427174 | 5395219 |
| 2.1.2 Bank Credit to the Commercial Sector | 13602969 | 13280514 | 14771430 | 14999993 | 15139752 |
| 2.1.2.1 RBI Credit to the Commercial Sector | 39581 | 26864 | 14661 | 14282 | 19852 |
| 2.1.2.2 Credit to the Commercial Sector by the Banking System | 13563389 | 13253650 | 14756769 | 14985711 | 15119900 |
| 2.1.2.2.1 Other Investments (Non-SLR Securities) | 952181 | 958477 | 1069274 | 1086427 | 1073325 |
| 2.2 Government's Currency Liabilities to the Public | 28013 | 27664 | 29212 | 29384 | 29600 |
| 2.3 Net Foreign Exchange Assets of the Banking Sector | 4705191 | 4753021 | 4471445 | 4580773 | 4595397 |
| 2.3.1 Net Foreign Exchange Assets of the RBI | 4442479 | 4550652 | 4316211 | 4505968 | 4490835 |
| 2.3.2 Net Foreign Currency Assets of the Banking System | 262711 | 202369 | 155234 | 74805 | 104562 |
| 2.4 Capital Account | 3021858 | 2976677 | 3404225 | 3501354 | 3507288 |
| 2.5 Other items (net) | 1157060 | 941854 | 747678 | 839112 | 675819 |

No. 9: Liquidity Aggregates

(₹ Crore)

| Aggregates | 2021-22 | 2021 | 2022 | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | Dec. | Oct. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| | | | | | |
| 1 NM₃ | 20630753 | 20243385 | 21712620 | 21732947 | 22147115 |
| 2 Postal Deposits | 596588 | 572353 | 594633 | 594633 | 594633 |
| 3 L₁ (1 + 2) | 21227341 | 20815738 | 22307253 | 22327580 | 22741748 |
| 4 Liabilities of Financial Institutions | 49578 | 24644 | 58446 | 58400 | 65601 |
| 4.1 Term Money Borrowings | 1824 | 1984 | 1518 | 1423 | 963 |
| 4.2 Certificates of Deposit | 39170 | 15360 | 49270 | 49270 | 56570 |
| 4.3 Term Deposits | 8584 | 7299 | 7657 | 7706 | 8069 |
| 5 L₂ (3 + 4) | 21276919 | 20840382 | 22365698 | 22385979 | 22807349 |
| 6 Public Deposits with Non-Banking Financial Companies | 70564 | 66542 | .. | .. | 78061 |
| 7 L₃ (5 + 6) | 21347483 | 20906924 | .. | .. | 22885411 |

Note : 1. Figures in the columns might not add up to the total due to rounding off of numbers.

No. 10: Reserve Bank of India Survey

(₹ Crore)

| Item | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|--|--|---------|---------|---------|---------|
| | 2021-22 | 2021 | 2022 | | |
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Components | | | | | |
| 1.1 Currency in Circulation | 3133716 | 2986901 | 3218425 | 3241429 | 3232652 |
| 1.2 Bankers' Deposits with the RBI | 876726 | 764828 | 869931 | 867014 | 899777 |
| 1.2.1 Scheduled Commercial Banks | 823632 | 716432 | 814570 | 810927 | 841612 |
| 1.3 'Other' Deposits with the RBI | 58444 | 51045 | 70709 | 64145 | 62932 |
| Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5) | 4068887 | 3802775 | 4159065 | 4172588 | 4195361 |
| 2 Sources | | | | | |
| 2.1 RBI's Domestic Credit | 906895 | 531501 | 1195188 | 1148509 | 1169715 |
| 2.1.1 Net RBI credit to the Government | 1450596 | 1194335 | 1226047 | 1097957 | 1170253 |
| 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) | 1448972 | 1187700 | 1220407 | 1085948 | 1165846 |
| 2.1.1.1.1 Loans and Advances to the Central Government | – | – | – | – | – |
| 2.1.1.1.2 Investments in Treasury Bills | – | – | – | – | – |
| 2.1.1.1.3 Investments in dated Government Securities | 1488816 | 1519509 | 1417416 | 1409918 | 1407281 |
| 2.1.1.1.3.1 Central Government Securities | 1488816 | 1519509 | 1417416 | 1409918 | 1407281 |
| 2.1.1.1.4 Rupee Coins | 508 | 567 | 357 | 235 | 367 |
| 2.1.1.1.5 Deposits of the Central Government | 40352 | 332375 | 197366 | 324205 | 241802 |
| 2.1.1.2 Net RBI credit to State Governments | 1624 | 6634 | 5641 | 12009 | 4408 |
| 2.1.2 RBI's Claims on Banks | -583282 | -689698 | -45520 | 36270 | -20391 |
| 2.1.2.1 Loans and Advances to Scheduled Commercial Banks | -560272 | -664928 | -45520 | 36270 | -20391 |
| 2.1.3 RBI's Credit to Commercial Sector | 39581 | 26864 | 14661 | 14282 | 19852 |
| 2.1.3.1 Loans and Advances to Primary Dealers | – | – | 1801 | 1741 | 2376 |
| 2.1.3.2 Loans and Advances to NABARD | 23010 | 24770 | – | – | – |
| 2.2 Government's Currency Liabilities to the Public | 28013 | 27664 | 29212 | 29384 | 29600 |
| 2.3 Net Foreign Exchange Assets of the RBI | 4442479 | 4550652 | 4316211 | 4505968 | 4490835 |
| 2.3.1 Gold | 322213 | 292779 | 326887 | 336282 | 341827 |
| 2.3.2 Foreign Currency Assets | 4120283 | 4257890 | 3989341 | 4169703 | 4149026 |
| 2.4 Capital Account | 1254092 | 1221533 | 1480042 | 1574332 | 1580164 |
| 2.5 Other Items (net) | 54408 | 85509 | -98496 | -63060 | -85375 |

No. 11: Reserve Money - Components and Sources

(₹ Crore)

| Item | 2021-22 | Outstanding as on March 31/ last Fridays of the month/ Fridays | | | | | |
|--|---------|--|---------|---------|---------|---------|---------|
| | | 2021 | 2022 | | | | |
| | | Dec. 24 | Dec. 2 | Dec. 9 | Dec. 16 | Dec. 23 | Dec. 30 |
| | 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) | 4068887 | 3744266 | 4150211 | 4144023 | 4172588 | 4174957 | 4195361 |
| 1 Components | | | | | | | |
| 1.1 Currency in Circulation | 3133716 | 2996038 | 3221993 | 3244575 | 3241429 | 3242470 | 3232652 |
| 1.2 Bankers' Deposits with RBI | 876726 | 697251 | 862988 | 835124 | 867014 | 868177 | 899777 |
| 1.3 'Other' Deposits with RBI | 58444 | 50977 | 65231 | 64325 | 64145 | 64310 | 62932 |
| 2 Sources | | | | | | | |
| 2.1 Net Reserve Bank Credit to Government | 1450596 | 1091480 | 1318497 | 1264172 | 1097957 | 1106385 | 1170253 |
| 2.2 Reserve Bank Credit to Banks | -560272 | -622634 | -182157 | -155913 | 36270 | 21544 | -20391 |
| 2.3 Reserve Bank Credit to Commercial Sector | 16571 | 2130 | 19799 | 10694 | 14282 | 19849 | 19852 |
| 2.4 Net Foreign Exchange Assets of RBI | 4442479 | 4595536 | 4403884 | 4479156 | 4505968 | 4497489 | 4490835 |
| 2.5 Government's Currency Liabilities to the Public | 28013 | 27539 | 29384 | 29384 | 29384 | 29384 | 29600 |
| 2.6 Net Non- Monetary Liabilities of RBI | 1308500 | 1349785 | 1439196 | 1483470 | 1511272 | 1499694 | 1494789 |

No. 12: Commercial Bank Survey

(₹ Crore)

| Item | Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month | | | | |
|---|--|----------|----------|----------|----------|
| | 2021-22 | 2021 | 2022 | | |
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Components | | | | | |
| 1.1 Aggregate Deposits of Residents | 16331874 | 16101231 | 17155518 | 17202880 | 17581221 |
| 1.1.1 Demand Deposits | 2072747 | 2066651 | 2050865 | 2032432 | 2201751 |
| 1.1.2 Time Deposits of Residents | 14259128 | 14034581 | 15104653 | 15170448 | 15379470 |
| 1.1.2.1 Short-term Time Deposits | 6416607 | 6315561 | 6797094 | 6826702 | 6920761 |
| 1.1.2.1.1 Certificates of Deposits (CDs) | 176718 | 84894 | 252530 | 274311 | 291491 |
| 1.1.2.2 Long-term Time Deposits | 7842520 | 7719019 | 8307559 | 8343746 | 8458708 |
| 1.2 Call/Term Funding from Financial Institutions | 274594 | 269971 | 474861 | 461797 | 440444 |
| 2 Sources | | | | | |
| 2.1 Domestic Credit | 17575002 | 17146425 | 19117789 | 19384474 | 19487073 |
| 2.1.1 Credit to the Government | 4728179 | 4607365 | 5085790 | 5126768 | 5095190 |
| 2.1.2 Credit to the Commercial Sector | 12846823 | 12539060 | 14031999 | 14257705 | 14391883 |
| 2.1.2.1 Bank Credit | 11891314 | 11582087 | 12947813 | 13154442 | 13305854 |
| 2.1.2.1.1 Non-food Credit | 11836304 | 11493407 | 12895573 | 13099868 | 13251881 |
| 2.1.2.2 Net Credit to Primary Dealers | 11522 | 6589 | 23052 | 24960 | 20813 |
| 2.1.2.3 Investments in Other Approved Securities | 769 | 869 | 822 | 838 | 854 |
| 2.1.2.4 Other Investments (in non-SLR Securities) | 943218 | 949514 | 1060312 | 1077464 | 1064363 |
| 2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3) | 262711 | 202369 | 155234 | 74805 | 104562 |
| 2.2.1 Foreign Currency Assets | 465464 | 417913 | 367987 | 294204 | 332964 |
| 2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits | 133439 | 140623 | 141836 | 151499 | 152563 |
| 2.2.3 Overseas Foreign Currency Borrowings | 69314 | 74921 | 70916 | 67900 | 75839 |
| 2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3) | 1268887 | 1475543 | 972531 | 876263 | 960618 |
| 2.3.1 Balances with the RBI | 683437 | 716432 | 814570 | 810927 | 841612 |
| 2.3.2 Cash in Hand | 85926 | 94182 | 112441 | 101606 | 98615 |
| 2.3.3 Loans and Advances from the RBI | -499524 | -664928 | -45520 | 36270 | -20391 |
| 2.4 Capital Account | 1743595 | 1730974 | 1900013 | 1902851 | 1902953 |
| 2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2) | 756537 | 722161 | 715162 | 768015 | 627636 |
| 2.5.1 Other Demand and Time Liabilities (net of 2.2.3) | 571535 | 557811 | 638855 | 688438 | 676799 |
| 2.5.2 Net Inter-Bank Liabilities (other than to PDs) | 26533 | 29768 | 17359 | 28347 | 29580 |

No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

| Item | As on March 25, 2022 | 2021 | 2022 | | |
|---|----------------------------|---------|---------|---------|---------|
| | | Dec. 31 | Nov. 18 | Dec. 16 | Dec. 30 |
| | | 1 | 2 | 3 | 4 |
| 1 SLR Securities | 4728948 | 4608235 | 5086612 | 5127607 | 5096044 |
| 2 Other Government Securities (Non-SLR) | - | - | 172062 | 187971 | 170410 |
| 3 Commercial Paper | 55315 | 53140 | 58106 | 51418 | 54045 |
| 4 Shares issued by | | | | | |
| 4.1 PSUs | 7642 | 8397 | 9512 | 9420 | 9402 |
| 4.2 Private Corporate Sector | 73814 | 73060 | 70661 | 70695 | 70997 |
| 4.3 Others | 5152 | 5007 | 4910 | 4853 | 4881 |
| 5 Bonds/Debentures issued by | | | | | |
| 5.1 PSUs | 117860 | 115386 | 99952 | 100708 | 102017 |
| 5.2 Private Corporate Sector | 326188 | 341692 | 324422 | 328748 | 326724 |
| 5.3 Others | 148753 | 147470 | 94250 | 89445 | 98504 |
| 6 Instruments issued by | | | | | |
| 6.1 Mutual funds | 34404 | 38153 | 40974 | 46345 | 36748 |
| 6.2 Financial institutions | 174090 | 167086 | 185463 | 187863 | 190633 |

Note: Data against column Nos. (1), (2) & (3) are Final and for column Nos. (4) & (5) data are Provisional.

‘-’ Data are not available.

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 | | | |
| | 2021-22 | 2021 | 2022 | | 2021-22 | 2021 | 2022 | |
| | | Dec. | Nov. | Dec. | | Dec. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Number of Reporting Banks | 212 | 212 | 212 | 212 | 136 | 136 | 137 | 137 |
| 1 Liabilities to the Banking System | 262674 | 254662 | 322059 | 329579 | 258649 | 250071 | 318826 | 326294 |
| 1.1 Demand and Time Deposits from Banks | 194143 | 190557 | 200485 | 220832 | 190570 | 186315 | 197978 | 218463 |
| 1.2 Borrowings from Banks | 38369 | 37900 | 67257 | 51598 | 38317 | 37883 | 67114 | 51284 |
| 1.3 Other Demand and Time Liabilities | 30162 | 26204 | 54317 | 57150 | 29762 | 25873 | 53734 | 56548 |
| 2 Liabilities to Others | 17832517 | 17590424 | 18946352 | 19369144 | 17380755 | 17144557 | 18508511 | 18926865 |
| 2.1 Aggregate Deposits | 16899634 | 16670399 | 17749945 | 18157327 | 16465313 | 16241854 | 17329371 | 17733784 |
| 2.1.1 Demand | 2117513 | 2109712 | 2123876 | 2245951 | 2072747 | 2066651 | 2078973 | 2201751 |
| 2.1.2 Time | 14782121 | 14560688 | 15626069 | 15911376 | 14392567 | 14175203 | 15250398 | 15532033 |
| 2.2 Borrowings | 278985 | 274394 | 500784 | 445126 | 274594 | 269971 | 495442 | 440444 |
| 2.3 Other Demand and Time Liabilities | 653898 | 645630 | 695623 | 766691 | 640848 | 632732 | 683697 | 752638 |
| 3 Borrowings from Reserve Bank | 94299 | 102489 | 96704 | 127472 | 94299 | 102489 | 96669 | 127472 |
| 3.1 Against Usance Bills /Promissory Notes | — | — | — | — | — | — | — | — |
| 3.2 Others | 94299 | 102489 | 96704 | 127472 | 94299 | 102489 | 96669 | 127472 |
| 4 Cash in Hand and Balances with Reserve Bank | 788725 | 830772 | 936542 | 962644 | 769363 | 810615 | 915324 | 940227 |
| 4.1 Cash in Hand | 88732 | 96489 | 109526 | 101119 | 85926 | 94182 | 106483 | 98615 |
| 4.2 Balances with Reserve Bank | 699993 | 734284 | 827015 | 861524 | 683437 | 716432 | 808841 | 841612 |
| 5 Assets with the Banking System | 315282 | 288521 | 375572 | 382420 | 243637 | 226892 | 317123 | 317527 |
| 5.1 Balances with Other Banks | 199434 | 192939 | 240469 | 230710 | 164240 | 156132 | 199953 | 190298 |
| 5.1.1 In Current Account | 19733 | 19597 | 38399 | 23357 | 16691 | 16055 | 35353 | 19998 |
| 5.1.2 In Other Accounts | 179701 | 173342 | 202070 | 207353 | 147549 | 140077 | 164599 | 170301 |
| 5.2 Money at Call and Short Notice | 36905 | 32002 | 25749 | 38501 | 6982 | 12048 | 11935 | 18843 |
| 5.3 Advances to Banks | 39340 | 30206 | 46031 | 47615 | 35802 | 28572 | 45530 | 45874 |
| 5.4 Other Assets | 39603 | 33373 | 63324 | 65595 | 36613 | 30139 | 59706 | 62511 |
| 6 Investment | 4874070 | 4752766 | 5217161 | 5241312 | 4728948 | 4608235 | 5072239 | 5096044 |
| 6.1 Government Securities | 4867102 | 4745699 | 5210634 | 5234523 | 4728179 | 4607365 | 5071422 | 5095190 |
| 6.2 Other Approved Securities | 6968 | 7067 | 6527 | 6789 | 769 | 869 | 817 | 854 |
| 7 Bank Credit | 12259048 | 11938940 | 13386156 | 13695835 | 11891314 | 11582087 | 13002265 | 13305854 |
| 7a Food Credit | 90827 | 124496 | 100376 | 99690 | 55011 | 88680 | 54657 | 53972 |
| 7.1 Loans, Cash-credits and Overdrafts | 12016486 | 11716596 | 13152140 | 13454349 | 11651337 | 11361984 | 12771064 | 13067327 |
| 7.2 Inland Bills-Purchased | 36070 | 34172 | 33936 | 35326 | 36055 | 34159 | 33918 | 35310 |
| 7.3 Inland Bills-Discounted | 155796 | 136359 | 155857 | 159217 | 154212 | 135027 | 153738 | 156955 |
| 7.4 Foreign Bills-Purchased | 19537 | 20865 | 16315 | 18911 | 19157 | 20446 | 16148 | 18727 |
| 7.5 Foreign Bills-Discounted | 31160 | 30947 | 27908 | 28033 | 30554 | 30471 | 27397 | 27535 |

Note: Data in column Nos. (4) & (8) are Provisional.

No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Crore)

| Sector | Outstanding as on | | | | Growth (%) | |
|--|-------------------|-----------------|-----------------|-----------------|-----------------------------|--------------|
| | Mar.25, 2022 | 2021 | 2022 | | Financial year so far | Y-o-Y |
| | | | Dec.31 | Nov.18 | | |
| | 1 | 2 | 3 | 4 | % | % |
| I. Bank Credit (II+III) | 11891314 | 11582087 | 12947813 | 13304393 | 11.9 | 14.9 |
| II. Food Credit | 55011 | 88679 | 52239 | 53972 | -1.9 | -39.1 |
| III. Non-food Credit | 11836304 | 11493408 | 12895574 | 13250421 | 11.9 | 15.3 |
| 1. Agriculture & Allied Activities | 1461719 | 1462086 | 1595185 | 1630871 | 11.6 | 11.5 |
| 2. Industry (Micro and Small, Medium and Large) | 3156067 | 3027972 | 3294514 | 3291537 | 4.3 | 8.7 |
| 2.1 Micro and Small | 532792 | 509395 | 556127 | 579070 | 8.7 | 13.7 |
| 2.2 Medium | 213996 | 205853 | 224624 | 237564 | 11.0 | 15.4 |
| 2.3 Large | 2409279 | 2312723 | 2513763 | 2474903 | 2.7 | 7.0 |
| 3. Services | 3017258 | 2931207 | 3315747 | 3504664 | 16.2 | 19.6 |
| 3.1 Transport Operators | 155352 | 147467 | 161037 | 164451 | 5.9 | 11.5 |
| 3.2 Computer Software | 20899 | 21049 | 21210 | 22404 | 7.2 | 6.4 |
| 3.3 Tourism, Hotels & Restaurants | 64378 | 63457 | 65092 | 63588 | -1.2 | 0.2 |
| 3.4 Shipping | 8436 | 7475 | 7206 | 7307 | -13.4 | -2.2 |
| 3.5 Aviation | 23979 | 14420 | 24445 | 28930 | 20.6 | 100.6 |
| 3.6 Professional Services | 116742 | 112954 | 124321 | 126739 | 8.6 | 12.2 |
| 3.7 Trade | 696301 | 675374 | 733730 | 768167 | 10.3 | 13.7 |
| 3.7.1 Wholesale Trade | 351213 | 343121 | 353789 | 376414 | 7.2 | 9.7 |
| 3.7.2 Retail Trade | 345088 | 332253 | 379941 | 391753 | 13.5 | 17.9 |
| 3.8 Commercial Real Estate | 291168 | 294019 | 304276 | 309031 | 6.1 | 5.1 |
| 3.9 Non-Banking Financial Companies (NBFCs) ¹ of which, | 1022399 | 974300 | 1218791 | 1320299 | 29.1 | 35.5 |
| 3.9.1 Housing Finance Companies (HFCs) | 282048 | 267204 | 307661 | 311071 | 10.3 | 16.4 |
| 3.9.2 Public Financial Institutions (PFIs) | 137084 | 108726 | 178024 | 181330 | 32.3 | 66.8 |
| 3.10 Other Services ² | 617603 | 620693 | 655639 | 693750 | 12.3 | 11.8 |
| 4. Personal Loans | 3381699 | 3274532 | 3800330 | 3935144 | 16.4 | 20.2 |
| 4.1 Consumer Durables | 27628 | 25102 | 35658 | 36640 | 32.6 | 46.0 |
| 4.2 Housing | 1684424 | 1634687 | 1843862 | 1898411 | 12.7 | 16.1 |
| 4.3 Advances against Fixed Deposits | 78730 | 80026 | 96188 | 109937 | 39.6 | 37.4 |
| 4.4 Advances to Individuals against share & bonds | 6161 | 5968 | 6758 | 6806 | 10.5 | 14.0 |
| 4.5 Credit Card Outstanding | 147789 | 141751 | 173424 | 180090 | 21.9 | 27.0 |
| 4.6 Education | 82723 | 81933 | 91069 | 92754 | 12.1 | 13.2 |
| 4.7 Vehicle Loans | 402689 | 388737 | 468088 | 484747 | 20.4 | 24.7 |
| 4.8 Loan against gold jewellery | 73942 | 75761 | 83755 | 84256 | 13.9 | 11.2 |
| 4.9 Other Personal Loans | 877613 | 840568 | 1001529 | 1041502 | 18.7 | 23.9 |
| 5. Priority Sector (Memo) | | | | | | |
| (i) Agriculture & Allied Activities ³ | 1484923 | 1457894 | 1631458 | 1673097 | 12.7 | 14.8 |
| (ii) Micro & Small Enterprises ⁴ | 1377848 | 1372858 | 1457114 | 1526256 | 10.8 | 11.2 |
| (iii) Medium Enterprises ⁵ | 351900 | 340564 | 369403 | 386473 | 9.8 | 13.5 |
| (iv) Housing | 616814 | 587417 | 613395 | 617924 | 0.2 | 5.2 |
| (v) Education Loans | 58118 | 59599 | 58887 | 58998 | 1.5 | -1.0 |
| (vi) Renewable Energy | 3538 | 2112 | 4177 | 4782 | 35.2 | 126.5 |
| (vii) Social Infrastructure | 2483 | 2650 | 2394 | 2473 | -0.4 | -6.7 |
| (viii) Export Credit | 23621 | 25954 | 15506 | 15673 | -33.6 | -39.6 |
| (ix) Others | 37159 | 39615 | 50219 | 52093 | 40.2 | 31.5 |
| (x) Weaker Sections including net PSLC- SF/MF | 1180928 | 1141715 | 1361042 | 1381194 | 17.0 | 21.0 |

Note 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 93 per cent of total non-food credit extended by all SCBs.

Note 2: With effect from January 2019, sectoral credit data are based on revised format due to which values and growth rates of some of the existing components published earlier have undergone changes.

Note 3: Credit data are adjusted for past reporting errors by select SCBs from December 2021 onwards.

¹ NBFCs include HFCs, PFIs, Microfinance Institutions (MFIs), NBFCs engaged in gold loan and others.

² "Other Services" include Mutual Fund (MFs), Banking and Finance other than NBFCs and MFs and other services which are not indicated elsewhere under services.

³ "Agriculture and Allied Activities" under the priority sector also include priority sector lending certificates (PSLCs).

⁴ "Micro and Small Enterprises" under the priority sector include credit to micro and small enterprises in industry and services sectors and also include PSLCs.

⁵ "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. 25, 2022 | 2021 | 2022 | | Financial year so far | Y-o-Y |
| | | Dec. 31 | Nov.18 | Dec. 30 | 2022-23 | 2022 |
| | 1 | 2 | 3 | 4 | % | % |
| 2 Industries (2.1 to 2.19) | 3156067 | 3027972 | 3294514 | 3291537 | 4.3 | 8.7 |
| 2.1 Mining & Quarrying (incl. Coal) | 49135 | 48973 | 52338 | 53331 | 8.5 | 8.9 |
| 2.2 Food Processing | 173246 | 167771 | 159064 | 174703 | 0.8 | 4.1 |
| 2.2.1 Sugar | 26307 | 21374 | 16868 | 17882 | -32.0 | -16.3 |
| 2.2.2 Edible Oils & Vanaspati | 18246 | 17944 | 16710 | 18806 | 3.1 | 4.8 |
| 2.2.3 Tea | 5728 | 5993 | 5985 | 5419 | -5.4 | -9.6 |
| 2.2.4 Others | 122965 | 122459 | 119501 | 132596 | 7.8 | 8.3 |
| 2.3 Beverage & Tobacco | 18176 | 17351 | 20057 | 19974 | 9.9 | 15.1 |
| 2.4 Textiles | 224026 | 217149 | 211566 | 217966 | -2.7 | 0.4 |
| 2.4.1 Cotton Textiles | 90384 | 87516 | 81723 | 84820 | -6.2 | -3.1 |
| 2.4.2 Jute Textiles | 3509 | 2909 | 3731 | 3864 | 10.1 | 32.8 |
| 2.4.3 Man-Made Textiles | 38371 | 37961 | 38689 | 39737 | 3.6 | 4.7 |
| 2.4.4 Other Textiles | 91761 | 88762 | 87423 | 89544 | -2.4 | 0.9 |
| 2.5 Leather & Leather Products | 11573 | 11213 | 11311 | 11629 | 0.5 | 3.7 |
| 2.6 Wood & Wood Products | 16294 | 15852 | 17697 | 18418 | 13.0 | 16.2 |
| 2.7 Paper & Paper Products | 40565 | 40244 | 41565 | 42468 | 4.7 | 5.5 |
| 2.8 Petroleum, Coal Products & Nuclear Fuels | 107333 | 107041 | 148211 | 163677 | 52.5 | 52.9 |
| 2.9 Chemicals & Chemical Products | 196363 | 187453 | 215902 | 217102 | 10.6 | 15.8 |
| 2.9.1 Fertiliser | 33160 | 30462 | 33894 | 33761 | 1.8 | 10.8 |
| 2.9.2 Drugs & Pharmaceuticals | 61093 | 57744 | 65792 | 66499 | 8.8 | 15.2 |
| 2.9.3 Petro Chemicals | 19622 | 21888 | 23121 | 21087 | 7.5 | -3.7 |
| 2.9.4 Others | 82486 | 77360 | 93095 | 95755 | 16.1 | 23.8 |
| 2.10 Rubber, Plastic & their Products | 72013 | 67527 | 75954 | 77626 | 7.8 | 15.0 |
| 2.11 Glass & Glassware | 5952 | 5921 | 6607 | 7117 | 19.6 | 20.2 |
| 2.12 Cement & Cement Products | 47910 | 47949 | 51177 | 53224 | 11.1 | 11.0 |
| 2.13 Basic Metal & Metal Product | 288531 | 276737 | 311249 | 329646 | 14.2 | 19.1 |
| 2.13.1 Iron & Steel | 187584 | 179811 | 211112 | 223934 | 19.4 | 24.5 |
| 2.13.2 Other Metal & Metal Product | 100946 | 96926 | 100137 | 105712 | 4.7 | 9.1 |
| 2.14 All Engineering | 167966 | 158894 | 170101 | 172177 | 2.5 | 8.4 |
| 2.14.1 Electronics | 38179 | 38149 | 40027 | 39743 | 4.1 | 4.2 |
| 2.14.2 Others | 129787 | 120745 | 130074 | 132434 | 2.0 | 9.7 |
| 2.15 Vehicles, Vehicle Parts & Transport Equipment | 89896 | 85991 | 93061 | 96797 | 7.7 | 12.6 |
| 2.16 Gems & Jewellery | 80512 | 72065 | 73749 | 77604 | -3.6 | 7.7 |
| 2.17 Construction | 117724 | 115383 | 118548 | 117229 | -0.4 | 1.6 |
| 2.18 Infrastructure | 1195027 | 1137078 | 1234559 | 1197256 | 0.2 | 5.3 |
| 2.18.1 Power | 611410 | 595098 | 624479 | 609091 | -0.4 | 2.4 |
| 2.18.2 Telecommunications | 130318 | 109049 | 128906 | 114852 | -11.9 | 5.3 |
| 2.18.3 Roads | 270395 | 252608 | 283074 | 284203 | 5.1 | 12.5 |
| 2.18.4 Airports | 6646 | 7583 | 9072 | 8956 | 34.8 | 18.1 |
| 2.18.5 Ports | 8886 | 9441 | 8188 | 7834 | -11.8 | -17.0 |
| 2.18.6 Railways | 10512 | 10100 | 11290 | 11201 | 6.6 | 10.9 |
| 2.18.7 Other Infrastructure | 156860 | 153201 | 169550 | 161119 | 2.7 | 5.2 |
| 2.19 Other Industries | 253823 | 247379 | 281798 | 243592 | -4.0 | -1.5 |

Note : With effect from January 2019, sectoral credit data are based on revised format due to which values and growth rates of some of the existing components published earlier have undergone some changes.

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 | | | | | | | | |
|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2020-21 | 2021 | 2022 | | | | | | |
| | | Nov, 26 | Sep, 30 | Oct, 07 | Oct, 21 | Oct, 28 | Nov, 04 | Nov, 18 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Number of Reporting Banks | 32 | 33 | 32 | 33 | 33 | 33 | 33 | 33 | 33 |
| 1 Aggregate Deposits (2.1.1.2+2.2.1.2) | 125859.6 | 126631.3 | 124590.8 | 126562.6 | 126803.0 | 126637.1 | 126360.6 | 126894.1 | 127382.3 |
| 2 Demand and Time Liabilities | | | | | | | | | |
| 2.1 Demand Liabilities | 23736.9 | 23568.9 | 24874.3 | 26059.9 | 26251.7 | 25889.7 | 25512.5 | 25577.6 | 24931.7 |
| 2.1.1 Deposits | | | | | | | | | |
| 2.1.1.1 Inter-Bank | 4896.9 | 5294.8 | 6051.1 | 6093.9 | 6012.5 | 6211.1 | 5886.2 | 5568.0 | 5197.9 |
| 2.1.1.2 Others | 13,899.4 | 13473.5 | 12836.4 | 14253.5 | 14361.5 | 14276.2 | 14104.1 | 14228.8 | 14221.3 |
| 2.1.2 Borrowings from Banks | 0.0 | 150.0 | 699.7 | 799.6 | 749.5 | 399.7 | 399.9 | 404.9 | 624.7 |
| 2.1.3 Other Demand Liabilities | 4940.6 | 4650.6 | 5287.2 | 4912.9 | 5128.3 | 5002.6 | 5122.2 | 5376.0 | 4887.9 |
| 2.2 Time Liabilities | 179957.5 | 175629.1 | 172837.7 | 172577.1 | 171821.7 | 171886.4 | 171587.7 | 171549.2 | 172191.9 |
| 2.2.1 Deposits | | | | | | | | | |
| 2.2.1.1 Inter-Bank | 65333.7 | 59386.8 | 56993.6 | 55836.1 | 54914.6 | 55727.0 | 54916.2 | 54040.1 | 54088.1 |
| 2.2.1.2 Others | 111960.2 | 113157.7 | 111754.4 | 112309.1 | 112441.5 | 112360.9 | 112256.5 | 112665.3 | 113161.0 |
| 2.2.2 Borrowings from Banks | 630.0 | 910.1 | 1580.1 | 2080.1 | 2120.1 | 1441.3 | 2016.3 | 2433.3 | 2519.3 |
| 2.2.3 Other Time Liabilities | 2033.7 | 2174.4 | 2509.7 | 2351.8 | 2345.5 | 2357.3 | 2398.6 | 2410.4 | 2423.5 |
| 3 Borrowing from Reserve Bank | 0.0 | 0.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| 4 Borrowings from a notified bank / Government | 63559.8 | 62398.8 | 70718.0 | 70049.4 | 68792.2 | 76583.1 | 75852.3 | 73458.8 | 73686.9 |
| 4.1 Demand | 15691.8 | 12380.4 | 13633.4 | 13623.2 | 16862.7 | 15999.9 | 15799.9 | 15528.3 | 15498.3 |
| 4.2 Time | 47868.0 | 50018.4 | 57084.6 | 56426.3 | 51929.6 | 60583.2 | 60052.4 | 57930.5 | 58188.6 |
| 5 Cash in Hand and Balances with Reserve Bank | 8151.1 | 9075.7 | 10969.0 | 10137.6 | 10492.0 | 10490.1 | 10600.3 | 10229.6 | 10166.0 |
| 5.1 Cash in Hand | 570.3 | 691.6 | 821.6 | 809.9 | 758.5 | 814.7 | 802.1 | 867.6 | 777.6 |
| 5.2 Balance with Reserve Bank | 7580.8 | 8384.1 | 10147.4 | 9327.7 | 9733.5 | 9675.4 | 9798.1 | 9362.0 | 9388.3 |
| 6 Balances with Other Banks in Current Account | 1148.1 | 1215.4 | 1520.6 | 1396.1 | 1352.8 | 1407.8 | 1364.8 | 1560.4 | 1557.2 |
| 7 Investments in Government Securities | 64455.2 | 73814.2 | 72520.1 | 73255.5 | 73448.2 | 74182.9 | 73637.4 | 73166.1 | 72325.9 |
| 8 Money at Call and Short Notice | 28835.7 | 21853.7 | 18267.2 | 17881.7 | 15981.1 | 21439.7 | 21003.3 | 17899.7 | 18018.5 |
| 9 Bank Credit (10.1+11) | 114631.6 | 107879.4 | 121551.1 | 121730.1 | 120921.6 | 120927.0 | 120809.3 | 120186.2 | 120652.2 |
| 10 Advances | | | | | | | | | |
| 10.1 Loans, Cash-Credits and Overdrafts | 114612.1 | 107858.5 | 121528.1 | 121709.0 | 120901.6 | 120906.9 | 120769.5 | 120147.3 | 120612.7 |
| 10.2 Due from Banks | 89429.1 | 99264.9 | 115486.6 | 115443.1 | 115130.2 | 117333.9 | 117079.2 | 117456.0 | 117682.0 |
| 11 Bills Purchased and Discounted | 19.5 | 20.8 | 23.1 | 21.1 | 20.1 | 20.1 | 39.7 | 38.8 | 39.5 |

Prices and Production

No. 18: Consumer Price Index (Base: 2012=100)

| Group/Sub group | 2021-22 | | | Rural | | | Urban | | | Combined | | |
|---------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Rural | Urban | Combined | Dec.21 | Nov.22 | Dec.22(P) | Dec.21 | Nov.22 | Dec.22(P) | Dec.21 | Nov.22 | Dec.22(P) |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 Food and beverages | 162.8 | 168.7 | 165.0 | 165.8 | 176.6 | 174.4 | 172.2 | 181.3 | 178.6 | 168.2 | 178.3 | 175.9 |
| 1.1 Cereals and products | 146.4 | 150.4 | 147.6 | 147.4 | 166.9 | 168.8 | 151.6 | 168.4 | 170.2 | 148.7 | 167.4 | 169.2 |
| 1.2 Meat and fish | 200.4 | 206.5 | 202.6 | 197.0 | 207.2 | 206.9 | 202.2 | 213.4 | 212.8 | 198.8 | 209.4 | 209.0 |
| 1.3 Egg | 173.3 | 176.0 | 174.4 | 176.5 | 180.2 | 189.1 | 180.0 | 183.2 | 192.0 | 177.9 | 181.4 | 190.2 |
| 1.4 Milk and products | 158.3 | 159.0 | 158.6 | 159.8 | 172.3 | 173.4 | 160.0 | 172.3 | 173.8 | 159.9 | 172.3 | 173.5 |
| 1.5 Oils and fats | 192.2 | 172.4 | 184.9 | 195.8 | 194.0 | 194.0 | 173.5 | 180.0 | 179.2 | 187.6 | 188.9 | 188.6 |
| 1.6 Fruits | 155.3 | 163.5 | 159.2 | 152.0 | 159.1 | 156.7 | 158.3 | 162.6 | 159.5 | 154.9 | 160.7 | 158.0 |
| 1.7 Vegetables | 156.1 | 192.8 | 168.5 | 172.3 | 171.6 | 150.2 | 219.5 | 205.5 | 178.7 | 188.3 | 183.1 | 159.9 |
| 1.8 Pulses and products | 164.1 | 164.4 | 164.2 | 164.5 | 170.2 | 170.5 | 164.2 | 171.0 | 171.3 | 164.4 | 170.5 | 170.8 |
| 1.9 Sugar and confectionery | 117.4 | 119.1 | 118.0 | 120.6 | 121.5 | 121.2 | 121.9 | 123.4 | 123.1 | 121.0 | 122.1 | 121.8 |
| 1.10 Spices | 171.2 | 167.5 | 170.0 | 171.7 | 204.8 | 207.5 | 168.2 | 198.8 | 200.5 | 170.5 | 202.8 | 205.2 |
| 1.11 Non-alcoholic beverages | 167.8 | 154.7 | 162.3 | 169.7 | 176.4 | 176.8 | 156.5 | 162.1 | 162.8 | 164.2 | 170.4 | 171.0 |
| 1.12 Prepared meals, snacks, sweets | 173.0 | 175.8 | 174.3 | 175.1 | 186.9 | 187.6 | 178.2 | 192.4 | 193.3 | 176.5 | 189.5 | 190.2 |
| 2 Pan, tobacco and intoxicants | 190.3 | 196.5 | 191.9 | 190.8 | 195.5 | 195.9 | 196.8 | 200.6 | 201.0 | 192.4 | 196.9 | 197.3 |
| 3 Clothing and footwear | 168.2 | 158.4 | 164.3 | 171.2 | 186.9 | 187.8 | 160.7 | 174.7 | 175.7 | 167.0 | 182.1 | 183.0 |
| 3.1 Clothing | 168.8 | 160.9 | 165.7 | 171.8 | 187.2 | 188.1 | 163.3 | 176.7 | 177.7 | 168.5 | 183.1 | 184.0 |
| 3.2 Footwear | 164.5 | 144.7 | 156.3 | 167.3 | 185.2 | 185.9 | 146.7 | 163.5 | 164.3 | 158.7 | 176.2 | 176.9 |
| 4 Housing | -- | 163.0 | 163.0 | -- | -- | -- | 163.4 | 171.8 | 170.7 | 163.4 | 171.8 | 170.7 |
| 5 Fuel and light | 164.0 | 159.8 | 162.4 | 165.6 | 181.9 | 182.8 | 161.7 | 180.3 | 180.9 | 164.1 | 181.3 | 182.1 |
| 6 Miscellaneous | 164.1 | 156.1 | 160.2 | 166.0 | 174.6 | 175.5 | 157.8 | 167.4 | 168.2 | 162.0 | 171.1 | 172.0 |
| 6.1 Household goods and services | 161.8 | 153.5 | 157.9 | 163.9 | 175.5 | 176.4 | 156.0 | 166.9 | 167.2 | 160.2 | 171.4 | 172.1 |
| 6.2 Health | 172.0 | 163.3 | 168.6 | 174.0 | 182.3 | 183.5 | 165.1 | 175.8 | 177.2 | 170.6 | 179.8 | 181.1 |
| 6.3 Transport and communication | 157.9 | 150.0 | 153.7 | 160.1 | 167.5 | 167.8 | 151.8 | 158.9 | 159.3 | 155.7 | 163.0 | 163.3 |
| 6.4 Recreation and amusement | 162.7 | 154.8 | 158.2 | 164.5 | 170.8 | 171.2 | 157.6 | 166.7 | 167.1 | 160.6 | 168.5 | 168.9 |
| 6.5 Education | 168.4 | 160.1 | 163.5 | 169.7 | 176.9 | 177.3 | 160.6 | 171.5 | 171.8 | 164.4 | 173.7 | 174.1 |
| 6.6 Personal care and effects | 161.3 | 160.8 | 161.1 | 162.8 | 173.4 | 175.7 | 162.4 | 173.8 | 176.0 | 162.6 | 173.6 | 175.8 |
| General Index (All Groups) | 164.5 | 163.1 | 163.8 | 167.0 | 177.8 | 177.1 | 165.2 | 175.0 | 174.1 | 166.2 | 176.5 | 175.7 |

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 | 2021-22 | 2021 | 2022 | |
|---|-----------|----------------|---------|-------|-------|-------|
| | | | | Dec. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Consumer Price Index for Industrial Workers | 2016 | 2.88 | 123.6 | 125.4 | 132.5 | 132.3 |
| 2 Consumer Price Index for Agricultural Labourers | 1986-87 | 5.89 | 1075 | 1097 | 1167 | 1167 |
| 3 Consumer Price Index for Rural Labourers | 1986-87 | — | 1084 | 1106 | 1178 | 1179 |

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

| Item | 2021-22 | 2021 | 2022 | |
|----------------------------------|---------|-------|-------|-------|
| | | Dec. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 |
| 1 Standard Gold (₹ per 10 grams) | 47999 | 47890 | 51874 | 53941 |
| 2 Silver (₹ per kilogram) | 65426 | 61280 | 60968 | 66698 |

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 | 2021-22 | 2021 | 2022 | | |
|---|----------------|--------------|--------------|--------------|--------------|--------------|
| | | | Dec. | Oct. | Nov. (P) | Dec. (P) |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 ALL COMMODITIES | 100.000 | 139.4 | 143.3 | 152.9 | 152.1 | 150.4 |
| 1.1 PRIMARY ARTICLES | 22.618 | 160.7 | 168.4 | 181.2 | 177.7 | 172.4 |
| 1.1.1 FOOD ARTICLES | 15.256 | 167.3 | 176.7 | 186.1 | 180.2 | 174.5 |
| 1.1.1.1 Food Grains (Cereals+Pulses) | 3.462 | 163.5 | 165.1 | 179.6 | 181.9 | 184.2 |
| 1.1.1.2 Fruits & Vegetables | 3.475 | 187.6 | 226.9 | 230.8 | 202.0 | 173.4 |
| 1.1.1.3 Milk | 4.440 | 156.9 | 157.3 | 166.7 | 167.0 | 168.3 |
| 1.1.1.4 Eggs, Meat & Fish | 2.402 | 164.0 | 161.5 | 167.8 | 166.7 | 166.9 |
| 1.1.1.5 Condiments & Spices | 0.529 | 159.8 | 165.9 | 191.2 | 193.0 | 191.5 |
| 1.1.1.6 Other Food Articles | 0.948 | 168.3 | 170.3 | 180.0 | 182.8 | 181.3 |
| 1.1.2 NON-FOOD ARTICLES | 4.119 | 158.1 | 164.6 | 166.0 | 168.2 | 170.7 |
| 1.1.2.1 Fibres | 0.839 | 158.4 | 164.6 | 193.1 | 193.6 | 188.1 |
| 1.1.2.2 Oil Seeds | 1.115 | 214.4 | 210.1 | 189.0 | 199.7 | 200.0 |
| 1.1.2.3 Other non-food Articles | 1.960 | 119.9 | 123.8 | 127.5 | 131.3 | 134.4 |
| 1.1.2.4 Floriculture | 0.204 | 217.0 | 309.8 | 298.5 | 247.6 | 288.6 |
| 1.1.3 MINERALS | 0.833 | 197.2 | 204.7 | 196.8 | 196.7 | 198.7 |
| 1.1.3.1 Metallic Minerals | 0.648 | 193.3 | 200.9 | 182.6 | 182.6 | 183.5 |
| 1.1.3.2 Other Minerals | 0.185 | 211.0 | 218.2 | 246.6 | 246.2 | 252.0 |
| 1.1.4 CRUDE PETROLEUM & NATURAL GAS | 2.410 | 110.3 | 109.3 | 170.7 | 171.2 | 152.7 |
| 1.2 FUEL & POWER | 13.152 | 124.6 | 133.8 | 158.0 | 159.6 | 158.0 |
| 1.2.1 COAL | 2.138 | 129.0 | 130.9 | 134.3 | 134.3 | 134.3 |
| 1.2.1.1 Coking Coal | 0.647 | 143.0 | 143.4 | 143.4 | 143.4 | 143.4 |
| 1.2.1.2 Non-Coking Coal | 1.401 | 119.8 | 119.8 | 119.8 | 119.8 | 119.8 |
| 1.2.1.3 Lignite | 0.090 | 170.5 | 212.6 | 294.3 | 294.3 | 294.3 |
| 1.2.2 MINERAL OILS | 7.950 | 126.2 | 134.0 | 166.4 | 172.4 | 164.4 |
| 1.2.3 ELECTRICITY | 3.064 | 117.4 | 135.3 | 152.9 | 144.0 | 157.7 |
| 1.3 MANUFACTURED PRODUCTS | 64.231 | 135.0 | 136.5 | 141.9 | 141.5 | 141.1 |
| 1.3.1 MANUFACTURE OF FOOD PRODUCTS | 9.122 | 157.9 | 156.6 | 163.7 | 164.6 | 163.3 |
| 1.3.1.1 Processing and Preserving of meat | 0.134 | 142.8 | 143.7 | 140.9 | 139.4 | 142.5 |
| 1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof | 0.204 | 144.1 | 149.1 | 139.2 | 140.1 | 142.7 |
| 1.3.1.3 Processing and Preserving of fruit and Vegetables | 0.138 | 122.3 | 120.9 | 127.4 | 127.4 | 127.5 |
| 1.3.1.4 Vegetable and Animal oils and Fats | 2.643 | 187.2 | 180.1 | 173.3 | 174.8 | 169.2 |
| 1.3.1.5 Dairy products | 1.165 | 149.4 | 148.3 | 168.2 | 168.4 | 169.6 |
| 1.3.1.6 Grain mill products | 2.010 | 145.6 | 146.5 | 165.1 | 165.9 | 167.4 |
| 1.3.1.7 Starches and Starch products | 0.110 | 133.3 | 138.3 | 163.6 | 160.7 | 158.1 |
| 1.3.1.8 Bakery products | 0.215 | 146.2 | 150.0 | 163.4 | 163.5 | 166.1 |
| 1.3.1.9 Sugar, Molasses & honey | 1.163 | 122.9 | 125.1 | 127.3 | 128.1 | 127.7 |
| 1.3.1.10 Cocoa, Chocolate and Sugar confectionery | 0.175 | 130.5 | 132.0 | 135.4 | 136.4 | 138.3 |
| 1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products | 0.026 | 136.7 | 131.4 | 162.5 | 159.8 | 148.7 |
| 1.3.1.12 Tea & Coffee products | 0.371 | 171.1 | 175.4 | 178.5 | 177.0 | 172.7 |
| 1.3.1.13 Processed condiments & salt | 0.163 | 157.5 | 157.4 | 178.0 | 178.4 | 181.8 |
| 1.3.1.14 Processed ready to eat food | 0.024 | 137.0 | 136.3 | 142.9 | 142.0 | 140.4 |
| 1.3.1.15 Health supplements | 0.225 | 153.5 | 153.1 | 183.8 | 182.2 | 181.8 |
| 1.3.1.16 Prepared animal feeds | 0.356 | 200.9 | 199.5 | 206.5 | 212.4 | 208.8 |
| 1.3.2 MANUFACTURE OF BEVERAGES | 0.909 | 126.8 | 127.2 | 129.1 | 128.8 | 129.5 |
| 1.3.2.1 Wines & spirits | 0.408 | 123.6 | 124.1 | 129.7 | 130.0 | 131.4 |
| 1.3.2.2 Malt liquors and Malt | 0.225 | 130.5 | 131.1 | 135.1 | 133.8 | 134.3 |
| 1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters | 0.275 | 128.6 | 128.5 | 123.3 | 122.9 | 122.9 |
| 1.3.3 MANUFACTURE OF TOBACCO PRODUCTS | 0.514 | 160.2 | 161.9 | 164.2 | 165.4 | 164.3 |
| 1.3.3.1 Tobacco products | 0.514 | 160.2 | 161.9 | 164.2 | 165.4 | 164.3 |

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2021-22 | 2021 | 2022 | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | Dec. | Oct. | Nov. (P) | Dec. (P) |
| 1.3.4 MANUFACTURE OF TEXTILES | 4.881 | 135.2 | 139.2 | 142.5 | 140.3 | 138.4 |
| 1.3.4.1 Preparation and Spinning of textile fibres | 2.582 | 128.2 | 133.4 | 132.0 | 128.6 | 125.5 |
| 1.3.4.2 Weaving & Finishing of textiles | 1.509 | 146.8 | 149.7 | 160.1 | 159.5 | 158.9 |
| 1.3.4.3 Knitted and Crocheted fabrics | 0.193 | 125.5 | 127.5 | 132.5 | 130.6 | 127.6 |
| 1.3.4.4 Made-up textile articles, Except apparel | 0.299 | 138.7 | 141.1 | 155.2 | 154.1 | 153.2 |
| 1.3.4.5 Cordage, Rope, Twine and Netting | 0.098 | 168.5 | 167.1 | 156.2 | 151.9 | 151.7 |
| 1.3.4.6 Other textiles | 0.201 | 126.2 | 129.3 | 130.4 | 130.6 | 131.5 |
| 1.3.5 MANUFACTURE OF WEARING APPAREL | 0.814 | 143.1 | 144.7 | 149.3 | 149.4 | 149.9 |
| 1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel | 0.593 | 142.0 | 143.2 | 147.9 | 147.8 | 148.6 |
| 1.3.5.2 Knitted and Crocheted apparel | 0.221 | 145.8 | 148.7 | 153.3 | 153.5 | 153.6 |
| 1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS | 0.535 | 119.2 | 119.8 | 122.2 | 122.6 | 121.7 |
| 1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur | 0.142 | 103.4 | 104.3 | 103.9 | 105.2 | 104.0 |
| 1.3.6.2 Luggage, Handbags, Saddlery and Harness | 0.075 | 141.5 | 142.6 | 140.8 | 141.9 | 141.0 |
| 1.3.6.3 Footwear | 0.318 | 121.0 | 121.4 | 126.0 | 125.8 | 125.1 |
| 1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK | 0.772 | 141.0 | 142.5 | 142.9 | 143.3 | 143.7 |
| 1.3.7.1 Saw milling and Planing of wood | 0.124 | 128.8 | 131.2 | 138.7 | 138.5 | 139.3 |
| 1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards | 0.493 | 141.9 | 143.1 | 141.1 | 141.0 | 141.3 |
| 1.3.7.3 Builder's carpentry and Joinery | 0.036 | 193.9 | 194.5 | 205.7 | 206.6 | 206.6 |
| 1.3.7.4 Wooden containers | 0.119 | 134.1 | 135.9 | 136.0 | 139.2 | 139.2 |
| 1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS | 1.113 | 137.5 | 141.2 | 152.8 | 151.2 | 148.2 |
| 1.3.8.1 Pulp, Paper and Paperboard | 0.493 | 141.4 | 145.3 | 159.3 | 158.3 | 156.6 |
| 1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard | 0.314 | 137.8 | 139.3 | 150.1 | 148.3 | 145.3 |
| 1.3.8.3 Other articles of paper and Paperboard | 0.306 | 131.0 | 136.5 | 145.2 | 142.7 | 137.8 |
| 1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA | 0.676 | 157.8 | 162.6 | 172.4 | 171.8 | 176.8 |
| 1.3.9.1 Printing | 0.676 | 157.8 | 162.6 | 172.4 | 171.8 | 176.8 |
| 1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS | 6.465 | 133.5 | 136.8 | 146.3 | 145.3 | 144.2 |
| 1.3.10.1 Basic chemicals | 1.433 | 143.8 | 149.3 | 159.9 | 158.3 | 156.2 |
| 1.3.10.2 Fertilizers and Nitrogen compounds | 1.485 | 129.6 | 131.1 | 148.0 | 148.1 | 147.6 |
| 1.3.10.3 Plastic and Synthetic rubber in primary form | 1.001 | 140.3 | 142.6 | 140.6 | 137.5 | 136.0 |
| 1.3.10.4 Pesticides and Other agrochemical products | 0.454 | 132.1 | 133.2 | 144.5 | 144.9 | 143.5 |
| 1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics | 0.491 | 130.4 | 137.0 | 145.7 | 146.2 | 146.0 |
| 1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations | 0.612 | 128.1 | 130.9 | 142.8 | 142.8 | 142.3 |
| 1.3.10.7 Other chemical products | 0.692 | 130.3 | 134.1 | 143.3 | 142.1 | 141.1 |
| 1.3.10.8 Man-made fibres | 0.296 | 106.6 | 109.2 | 109.4 | 106.8 | 105.7 |
| 1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS | 1.993 | 135.9 | 136.6 | 141.2 | 141.6 | 141.7 |
| 1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products | 1.993 | 135.9 | 136.6 | 141.2 | 141.6 | 141.7 |
| 1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS | 2.299 | 124.8 | 127.1 | 129.2 | 128.5 | 128.5 |
| 1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres | 0.609 | 104.3 | 106.5 | 113.2 | 113.7 | 113.6 |
| 1.3.12.2 Other Rubber Products | 0.272 | 101.9 | 104.6 | 105.7 | 105.9 | 105.9 |
| 1.3.12.3 Plastics products | 1.418 | 138.0 | 140.3 | 140.6 | 139.3 | 139.2 |
| 1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS | 3.202 | 123.7 | 125.1 | 133.5 | 134.2 | 134.7 |
| 1.3.13.1 Glass and Glass products | 0.295 | 139.1 | 143.9 | 158.7 | 159.9 | 163.4 |
| 1.3.13.2 Refractory products | 0.223 | 115.6 | 119.0 | 119.1 | 119.1 | 118.9 |
| 1.3.13.3 Clay Building Materials | 0.121 | 119.3 | 120.9 | 136.5 | 139.3 | 137.5 |
| 1.3.13.4 Other Porcelain and Ceramic Products | 0.222 | 112.9 | 114.3 | 117.5 | 118.5 | 118.5 |
| 1.3.13.5 Cement, Lime and Plaster | 1.645 | 126.4 | 127.1 | 136.7 | 137.3 | 137.6 |

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2021-22 | 2021 | 2022 | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | Dec. | Oct. | Nov. (P) | Dec. (P) |
| 1.3.13.6 Articles of Concrete, Cement and Plaster | 0.292 | 129.2 | 129.8 | 134.3 | 134.8 | 134.9 |
| 1.3.13.7 Cutting, Shaping and Finishing of Stone | 0.234 | 122.2 | 120.2 | 125.9 | 126.1 | 127.1 |
| 1.3.13.8 Other Non-Metallic Mineral Products | 0.169 | 90.6 | 96.6 | 105.4 | 106.6 | 106.6 |
| 1.3.14 MANUFACTURE OF BASIC METALS | 9.646 | 140.1 | 141.9 | 145.6 | 143.5 | 143.0 |
| 1.3.14.1 Inputs into steel making | 1.411 | 150.8 | 153.6 | 155.8 | 152.6 | 150.4 |
| 1.3.14.2 Metallic Iron | 0.653 | 147.7 | 145.2 | 164.2 | 157.2 | 157.6 |
| 1.3.14.3 Mild Steel - Semi Finished Steel | 1.274 | 119.1 | 118.2 | 126.1 | 123.8 | 122.1 |
| 1.3.14.4 Mild Steel -Long Products | 1.081 | 137.4 | 139.0 | 147.9 | 145.0 | 145.7 |
| 1.3.14.5 Mild Steel - Flat products | 1.144 | 157.5 | 160.6 | 148.7 | 146.4 | 143.9 |
| 1.3.14.6 Alloy steel other than Stainless Steel- Shapes | 0.067 | 133.7 | 130.7 | 149.0 | 144.7 | 141.4 |
| 1.3.14.7 Stainless Steel - Semi Finished | 0.924 | 141.7 | 142.8 | 146.1 | 143.2 | 142.0 |
| 1.3.14.8 Pipes & tubes | 0.205 | 155.9 | 161.8 | 175.6 | 174.4 | 171.7 |
| 1.3.14.9 Non-ferrous metals incl. precious metals | 1.693 | 139.7 | 143.8 | 141.1 | 140.7 | 141.9 |
| 1.3.14.10 Castings | 0.925 | 118.9 | 120.7 | 130.6 | 131.7 | 132.6 |
| 1.3.14.11 Forgings of steel | 0.271 | 159.0 | 160.6 | 173.4 | 172.6 | 175.7 |
| 1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT | 3.155 | 130.5 | 133.1 | 137.7 | 138.3 | 137.9 |
| 1.3.15.1 Structural Metal Products | 1.031 | 123.9 | 124.8 | 131.3 | 133.2 | 132.7 |
| 1.3.15.2 Tanks, Reservoirs and Containers of Metal | 0.660 | 156.2 | 162.1 | 157.0 | 156.5 | 156.3 |
| 1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers | 0.145 | 96.1 | 94.8 | 103.1 | 102.7 | 98.7 |
| 1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy | 0.383 | 117.5 | 122.6 | 135.3 | 135.9 | 134.7 |
| 1.3.15.5 Cutlery, Hand Tools and General Hardware | 0.208 | 108.2 | 109.6 | 113.2 | 113.3 | 113.3 |
| 1.3.15.6 Other Fabricated Metal Products | 0.728 | 136.5 | 138.3 | 144.2 | 144.4 | 144.9 |
| 1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS | 2.009 | 113.7 | 113.5 | 117.1 | 116.9 | 117.1 |
| 1.3.16.1 Electronic Components | 0.402 | 106.0 | 107.5 | 115.6 | 115.6 | 115.1 |
| 1.3.16.2 Computers and Peripheral Equipment | 0.336 | 134.7 | 134.9 | 134.9 | 134.9 | 135.0 |
| 1.3.16.3 Communication Equipment | 0.310 | 121.7 | 120.5 | 129.6 | 129.6 | 130.7 |
| 1.3.16.4 Consumer Electronics | 0.641 | 102.1 | 100.8 | 100.4 | 99.5 | 100.2 |
| 1.3.16.5 Measuring, Testing, Navigating and Control equipment | 0.181 | 108.4 | 108.5 | 113.5 | 113.5 | 112.5 |
| 1.3.16.6 Watches and Clocks | 0.076 | 145.6 | 145.6 | 151.6 | 153.1 | 151.3 |
| 1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment | 0.055 | 106.1 | 109.2 | 111.6 | 111.6 | 112.2 |
| 1.3.16.8 Optical instruments and Photographic equipment | 0.008 | 98.3 | 98.4 | 101.6 | 101.6 | 101.7 |
| 1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT | 2.930 | 122.3 | 123.6 | 129.2 | 128.8 | 129.5 |
| 1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus | 1.298 | 119.7 | 120.8 | 128.1 | 126.6 | 127.7 |
| 1.3.17.2 Batteries and Accumulators | 0.236 | 121.8 | 123.8 | 133.1 | 133.2 | 133.5 |
| 1.3.17.3 Fibre optic cables for data transmission or live transmission of images | 0.133 | 103.1 | 100.4 | 119.9 | 120.4 | 118.5 |
| 1.3.17.4 Other electronic and Electric wires and Cables | 0.428 | 140.7 | 143.1 | 141.4 | 142.7 | 144.0 |
| 1.3.17.5 Wiring devices, Electric lighting & display equipment | 0.263 | 114.5 | 115.6 | 117.5 | 117.9 | 117.8 |
| 1.3.17.6 Domestic appliances | 0.366 | 128.4 | 130.8 | 134.7 | 134.6 | 133.9 |
| 1.3.17.7 Other electrical equipment | 0.206 | 113.2 | 113.9 | 117.5 | 117.8 | 119.7 |
| 1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT | 4.789 | 120.0 | 121.1 | 126.5 | 126.6 | 126.7 |
| 1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines | 0.638 | 119.2 | 121.4 | 126.9 | 126.6 | 125.7 |
| 1.3.18.2 Fluid power equipment | 0.162 | 122.1 | 123.1 | 127.4 | 128.3 | 129.2 |
| 1.3.18.3 Other pumps, Compressors, Taps and Valves | 0.552 | 115.1 | 116.4 | 117.1 | 117.1 | 117.5 |
| 1.3.18.4 Bearings, Gears, Gearing and Driving elements | 0.340 | 118.1 | 119.5 | 124.4 | 123.9 | 124.5 |
| 1.3.18.5 Ovens, Furnaces and Furnace burners | 0.008 | 74.2 | 73.0 | 79.9 | 80.9 | 81.2 |
| 1.3.18.6 Lifting and Handling equipment | 0.285 | 120.0 | 122.7 | 125.9 | 126.1 | 126.4 |

No. 21: Wholesale Price Index (Concl.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2021-22 | 2021 | 2022 | | |
|---|---------------|--------------|--------------|--------------|--------------|--------------|
| | | | Dec. | Oct. | Nov. (P) | Dec. (P) |
| 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 | 133.4 | 130.6 | 141.7 | 142.6 | 142.5 |
| 1.3.18.9 Agricultural and Forestry machinery | 0.833 | 128.4 | 130.5 | 138.0 | 138.8 | 138.6 |
| 1.3.18.10 Metal-forming machinery and Machine tools | 0.224 | 114.2 | 114.6 | 121.2 | 121.1 | 121.1 |
| 1.3.18.11 Machinery for mining, Quarrying and Construction | 0.371 | 78.2 | 78.5 | 85.2 | 85.7 | 86.5 |
| 1.3.18.12 Machinery for food, Beverage and Tobacco processing | 0.228 | 130.1 | 131.0 | 129.8 | 127.8 | 125.3 |
| 1.3.18.13 Machinery for textile, Apparel and Leather production | 0.192 | 125.3 | 125.8 | 132.6 | 132.2 | 133.6 |
| 1.3.18.14 Other special-purpose machinery | 0.468 | 134.7 | 136.2 | 141.2 | 141.6 | 142.2 |
| 1.3.18.15 Renewable electricity generating equipment | 0.046 | 66.6 | 66.8 | 70.3 | 70.3 | 69.7 |
| 1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS | 4.969 | 122.7 | 124.1 | 128.1 | 128.0 | 127.5 |
| 1.3.19.1 Motor vehicles | 2.600 | 122.6 | 123.5 | 125.8 | 126.4 | 125.7 |
| 1.3.19.2 Parts and Accessories for motor vehicles | 2.368 | 122.7 | 124.7 | 130.6 | 129.8 | 129.4 |
| 1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT | 1.648 | 131.7 | 133.1 | 137.3 | 137.5 | 137.9 |
| 1.3.20.1 Building of ships and Floating structures | 0.117 | 158.9 | 158.9 | 163.6 | 163.6 | 163.6 |
| 1.3.20.2 Railway locomotives and Rolling stock | 0.110 | 104.4 | 103.8 | 104.3 | 106.1 | 104.4 |
| 1.3.20.3 Motor cycles | 1.302 | 131.0 | 132.8 | 137.4 | 137.6 | 138.3 |
| 1.3.20.4 Bicycles and Invalid carriages | 0.117 | 137.2 | 138.0 | 140.4 | 140.2 | 139.2 |
| 1.3.20.5 Other transport equipment | 0.002 | 135.9 | 137.4 | 153.4 | 154.3 | 157.7 |
| 1.3.21 MANUFACTURE OF FURNITURE | 0.727 | 150.1 | 154.3 | 156.2 | 156.1 | 157.2 |
| 1.3.21.1 Furniture | 0.727 | 150.1 | 154.3 | 156.2 | 156.1 | 157.2 |
| 1.3.22 OTHER MANUFACTURING | 1.064 | 137.9 | 136.7 | 144.9 | 146.9 | 152.5 |
| 1.3.22.1 Jewellery and Related articles | 0.996 | 136.0 | 134.8 | 143.4 | 145.7 | 151.7 |
| 1.3.22.2 Musical instruments | 0.001 | 192.3 | 195.7 | 194.5 | 193.9 | 182.7 |
| 1.3.22.3 Sports goods | 0.012 | 140.4 | 142.5 | 151.7 | 152.0 | 151.9 |
| 1.3.22.4 Games and Toys | 0.005 | 150.9 | 151.1 | 159.0 | 159.3 | 159.3 |
| 1.3.22.5 Medical and Dental instruments and Supplies | 0.049 | 171.8 | 171.1 | 170.5 | 168.0 | 168.0 |
| 2 FOOD INDEX | 24.378 | 163.8 | 169.2 | 177.7 | 174.3 | 170.3 |

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 | 2020-21 | 2021-22 | April-November | | November | |
|--|--------|---------|---------|----------------|---------|----------|-------|
| | | | | 2021-22 | 2022-23 | 2021 | 2022 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| General Index | 100.00 | 118.1 | 131.6 | 127.6 | 134.6 | 128.0 | 137.1 |
| 1 Sectoral Classification | | | | | | | |
| 1.1 Mining | 14.37 | 101.0 | 113.3 | 105.8 | 110.8 | 111.8 | 122.7 |
| 1.2 Manufacturing | 77.63 | 117.2 | 131.0 | 127.2 | 133.6 | 128.9 | 136.7 |
| 1.3 Electricity | 7.99 | 157.6 | 170.1 | 170.2 | 186.9 | 147.9 | 166.7 |
| 2 Use-Based Classification | | | | | | | |
| 2.1 Primary Goods | 34.05 | 118.1 | 129.5 | 125.0 | 134.6 | 126.5 | 132.5 |
| 2.2 Capital Goods | 8.22 | 75.9 | 88.7 | 83.9 | 96.4 | 82.1 | 99.1 |
| 2.3 Intermediate Goods | 17.22 | 124.7 | 143.9 | 140.2 | 147.2 | 141.3 | 145.6 |
| 2.4 Infrastructure/ Construction Goods | 12.34 | 124.7 | 148.2 | 143.0 | 153.6 | 141.5 | 159.6 |
| 2.5 Consumer Durables | 12.84 | 101.2 | 113.8 | 110.3 | 116.6 | 106.6 | 112.0 |
| 2.6 Consumer Non-Durables | 15.33 | 142.1 | 146.7 | 144.6 | 141.0 | 147.9 | 161.1 |

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

(₹ Crore)

| Item | Financial Year | April - December | | | |
|--|-----------------------------------|----------------------|----------------------|---------------------------------|-------------|
| | 2022-23 (Revised Estimates) | 2022-23 (Actuals) | 2021-22 (Actuals) | Percentage to Revised Estimates | |
| | | | | 2022-23 | 2021-22 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Revenue Receipts | 2348413 | 1769994 | 1733223 | 75.4 | 83.4 |
| 1.1 Tax Revenue (Net) | 2086662 | 1555692 | 1473809 | 74.6 | 83.5 |
| 1.2 Non-Tax Revenue | 261751 | 214302 | 259414 | 81.9 | 82.7 |
| 2 Non-Debt Capital Receipt | 83500 | 55106 | 28469 | 66.0 | 28.5 |
| 2.1 Recovery of Loans | 23500 | 16435 | 19105 | 69.9 | 86.9 |
| 2.2 Other Receipts | 60000 | 38671 | 9364 | 64.5 | 12.0 |
| 3 Total Receipts (excluding borrowings) (1+2) | 2431913 | 1825100 | 1761692 | 75.0 | 80.9 |
| 4 Revenue Expenditure | 3458959 | 2328132 | 2129414 | 67.3 | 67.2 |
| <i>of which:</i> | | | | | |
| 4.1 Interest Payments | 940651 | 680853 | 565864 | 72.4 | 69.5 |
| 5 Capital Expenditure | 728274 | 489944 | 391644 | 67.3 | 65.0 |
| 6 Total Expenditure (4+5) | 4187232 | 2818076 | 2521058 | 67.3 | 66.9 |
| 7 Revenue Deficit (4-1) | 1110546 | 558138 | 396191 | 50.3 | 36.4 |
| 8 Fiscal Deficit (6-3) | 1755319 | 992976 | 759366 | 56.6 | 47.7 |
| 9 Gross Primary Deficit (8-4.1) | 814668 | 312123 | 193502 | 38.3 | 24.9 |

Source: Controller General of Accounts (CGA), Ministry of Finance, Government of India and Union Budget 2023-24.

No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

| Item | 2021-22 | 2021 | 2022 | | | | | |
|---|---------|---------|---------|--------|--------|---------|---------|---------|
| | | Dec. 31 | Nov. 25 | Dec. 2 | Dec. 9 | Dec. 16 | Dec. 23 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 91-day | | | | | | | | |
| 1.1 Banks | 5310 | 9354 | 16804 | 14896 | 15637 | 14258 | 14138 | 14180 |
| 1.2 Primary Dealers | 16705 | 26882 | 23433 | 21138 | 22793 | 21908 | 19208 | 15538 |
| 1.3 State Governments | 31320 | 103016 | 45031 | 43031 | 42231 | 44231 | 45431 | 47131 |
| 1.4 Others | 72109 | 106541 | 105524 | 107985 | 106618 | 107950 | 112385 | 117108 |
| 2 182-day | | | | | | | | |
| 2.1 Banks | 70130 | 56154 | 68750 | 65891 | 67923 | 63346 | 63319 | 62858 |
| 2.2 Primary Dealers | 63669 | 32988 | 53570 | 51829 | 52290 | 52369 | 51974 | 45722 |
| 2.3 State Governments | 15763 | 6458 | 27598 | 26098 | 26098 | 24513 | 23513 | 22513 |
| 2.4 Others | 69259 | 19711 | 81725 | 79438 | 71875 | 69941 | 65133 | 68212 |
| 3 364-day | | | | | | | | |
| 3.1 Banks | 112386 | 115964 | 108145 | 109624 | 109049 | 104092 | 100142 | 108294 |
| 3.2 Primary Dealers | 160461 | 117965 | 183977 | 179436 | 178688 | 182441 | 187924 | 187403 |
| 3.3 State Governments | 22836 | 21643 | 45396 | 44390 | 46295 | 46400 | 46500 | 42776 |
| 3.4 Others | 118392 | 99125 | 136944 | 138787 | 137740 | 135924 | 135026 | 130815 |
| 4 14-day Intermediate | | | | | | | | |
| 4.1 Banks | | | | | | | | |
| 4.2 Primary Dealers | | | | | | | | |
| 4.3 State Governments | 289362 | 139739 | 194863 | 152813 | 123956 | 174753 | 185087 | 188391 |
| 4.4 Others | 659 | 761 | 1582 | 390 | 898 | 763 | 455 | 1019 |
| Total Treasury Bills (Excluding 14 day Intermediate T Bills) # | 758339 | 715802 | 896896 | 882543 | 877237 | 867372 | 864693 | 862547 |

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 | | | | | | | | | | |
| 2022-23 | | | | | | | | | | |
| Nov. 30 | 10000 | 146 | 45182 | 1045 | 29 | 9955 | 1045 | 11000 | 98.43 | 6.3977 |
| Dec. 7 | 10000 | 167 | 61321 | 6234 | 37 | 9966 | 6234 | 16200 | 98.42 | 6.4474 |
| Dec. 14 | 10000 | 170 | 64308 | 11239 | 22 | 9961 | 11239 | 21200 | 98.43 | 6.3977 |
| Dec. 21 | 10000 | 146 | 56943 | 3739 | 26 | 9961 | 3739 | 13700 | 98.43 | 6.3940 |
| Dec. 28 | 10000 | 129 | 47976 | 3245 | 15 | 9955 | 3245 | 13200 | 98.45 | 6.3099 |
| 182-day Treasury Bills | | | | | | | | | | |
| 2022-23 | | | | | | | | | | |
| Nov. 30 | 6000 | 146 | 21712 | 20 | 36 | 5980 | 20 | 6000 | 96.76 | 6.7254 |
| Dec. 7 | 6000 | 130 | 19356 | 19 | 51 | 5981 | 19 | 6000 | 96.73 | 6.7880 |
| Dec. 14 | 6000 | 148 | 22610 | 379 | 52 | 5972 | 379 | 6350 | 96.74 | 6.7529 |
| Dec. 21 | 6000 | 137 | 21032 | 18 | 34 | 5982 | 18 | 6000 | 96.74 | 6.7599 |
| Dec. 28 | 6000 | 119 | 19738 | 32 | 17 | 5968 | 32 | 6000 | 96.75 | 6.7400 |
| 364-day Treasury Bills | | | | | | | | | | |
| 2022-23 | | | | | | | | | | |
| Nov. 30 | 6000 | 156 | 18716 | 1104 | 54 | 5980 | 1104 | 7084 | 93.59 | 6.8678 |
| Dec. 7 | 6000 | 198 | 24777 | 1953 | 51 | 5952 | 1953 | 7905 | 93.55 | 6.9194 |
| Dec. 14 | 6000 | 187 | 31302 | 137 | 39 | 5967 | 137 | 6105 | 93.59 | 6.8678 |
| Dec. 21 | 6000 | 154 | 26179 | 124 | 36 | 5977 | 124 | 6100 | 93.56 | 6.9000 |
| Dec. 28 | 6000 | 161 | 23890 | 90 | 22 | 5986 | 90 | 6076 | 93.57 | 6.8907 |

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 | 1, 2022 | 4.30-5.85 | 5.76 |
| December | 2, 2022 | 4.30-5.85 | 5.79 |
| December | 3, 2022 | 5.15-5.55 | 5.39 |
| December | 5, 2022 | 4.50-5.80 | 5.76 |
| December | 6, 2022 | 4.15-5.80 | 5.76 |
| December | 7, 2022 | 4.30-6.15 | 6.07 |
| December | 8, 2022 | 4.30-6.15 | 6.09 |
| December | 9, 2022 | 4.30-6.18 | 6.10 |
| December | 12, 2022 | 4.30-6.15 | 6.08 |
| December | 13, 2022 | 4.30-6.20 | 6.08 |
| December | 14, 2022 | 4.40-6.15 | 6.09 |
| December | 15, 2022 | 4.30-6.40 | 6.19 |
| December | 16, 2022 | 4.30-6.60 | 6.39 |
| December | 17, 2022 | 5.10-6.10 | 5.81 |
| December | 19, 2022 | 4.30-6.60 | 6.50 |
| December | 20, 2022 | 4.30-6.60 | 6.49 |
| December | 21, 2022 | 4.30-6.60 | 6.44 |
| December | 22, 2022 | 4.30-6.60 | 6.49 |
| December | 23, 2022 | 4.30-6.55 | 6.46 |
| December | 26, 2022 | 4.30-6.55 | 6.46 |
| December | 27, 2022 | 4.30-6.75 | 6.31 |
| December | 28, 2022 | 4.30-6.50 | 6.29 |
| December | 29, 2022 | 4.30-6.60 | 6.36 |
| December | 30, 2022 | 4.30-6.65 | 6.49 |
| December | 31, 2022 | 5.15-6.20 | 5.97 |
| January | 2, 2023 | 4.30-6.25 | 6.16 |
| January | 3, 2023 | 4.30-6.15 | 6.08 |
| January | 4, 2023 | 4.30-6.25 | 6.06 |
| January | 5, 2023 | 4.30-6.10 | 6.06 |
| January | 6, 2023 | 4.30-6.10 | 6.05 |
| January | 7, 2023 | 5.15-6.05 | 5.74 |
| January | 9, 2023 | 4.40-6.12 | 6.06 |
| January | 10, 2023 | 4.55-6.12 | 6.06 |
| January | 11, 2023 | 4.55-6.12 | 6.06 |
| January | 12, 2023 | 4.55-6.15 | 6.06 |
| January | 13, 2023 | 4.55-6.30 | 6.21 |

Note: Includes Notice Money.

No. 27: Certificates of Deposit

| Item | 2021 | 2022 | | | |
|---|-----------|-----------|-----------|-----------|-----------|
| | Dec. 31 | Nov. 18 | Dec. 2 | Dec. 16 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Amount Outstanding (₹ Crore) | 84702.40 | 257555.16 | 274602.72 | 272570.90 | 293983.09 |
| 1.1 Issued during the fortnight (₹ Crore) | 17497.20 | 25534.76 | 32831.31 | 31706.05 | 35845.62 |
| 2 Rate of Interest (per cent) | 3.74-5.31 | 6.64-7.28 | 6.77-7.20 | 6.71-7.59 | 6.65-7.88 |

No. 28: Commercial Paper

| Item | 2021 | 2022 | | | |
|---|------------|------------|------------|------------|------------|
| | Dec. 31 | Nov. 15 | Nov. 30 | Dec. 15 | Dec. 31 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Amount Outstanding (₹ Crore) | 350068.65 | 381455.70 | 362307.65 | 363736.15 | 359673.30 |
| 1.1 Reported during the fortnight (₹ Crore) | 87182.55 | 55158.95 | 66918.15 | 65701.70 | 54575.60 |
| 2 Rate of Interest (per cent) | 3.50-12.31 | 6.21-13.78 | 6.50-12.01 | 6.34-13.75 | 6.58-13.75 |

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

| Item | 2021-22 | 2021 | 2022 | | | | | |
|------------------------------------|---------|---------|---------|--------|--------|---------|---------|---------|
| | | Dec. 31 | Nov. 25 | Dec. 2 | Dec. 9 | Dec. 16 | Dec. 23 | Dec. 30 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 Call Money | 14515 | 13822 | 19325 | 15885 | 16362 | 17828 | 18447 | 19107 |
| 2 Notice Money | 2122 | 3125 | 192 | 4526 | 492 | 5409 | 164 | 4418 |
| 3 Term Money | 515 | 640 | 332 | 944 | 282 | 853 | 717 | 867 |
| 4 Triparty Repo | 618526 | 834645 | 710250 | 760797 | 579566 | 719115 | 684319 | 790750 |
| 5 Market Repo | 383844 | 402671 | 489094 | 550005 | 438455 | 524436 | 502373 | 600368 |
| 6 Repo in Corporate Bond | 4373 | 0 | 473 | 312 | 1723 | 2879 | 2006 | 208 |
| 7 Forex (US \$ million) | 67793 | 75085 | 73613 | 95133 | 72719 | 84489 | 80619 | 75159 |
| 8 Govt. of India Dated Securities | 51300 | 37640 | 56440 | 66339 | 73928 | 57167 | 43412 | 33290 |
| 9 State Govt. Securities | 5570 | 6397 | 4989 | 3496 | 2972 | 2951 | 4207 | 3177 |
| 10 Treasury Bills | | | | | | | | |
| 10.1 91-Day | 4690 | 4503 | 5431 | 2839 | 3878 | 3307 | 3669 | 2219 |
| 10.2 182-Day | 3440 | 1706 | 2761 | 3823 | 1731 | 1530 | 3493 | 2854 |
| 10.3 364-Day | 3530 | 2120 | 2061 | 1553 | 1998 | 1451 | 2998 | 2836 |
| 10.4 Cash Management Bills | | | | | | | | |
| 11 Total Govt. Securities (8+9+10) | 68530 | 52366 | 71681 | 78050 | 84508 | 66406 | 57779 | 44376 |
| 11.1 RBI | — | 1662 | 1994 | 736 | 1131 | 1310 | 1036 | 34 |

No. 30: New Capital Issues by Non-Government Public Limited Companies

(Amount in ₹ Crore)

| Security & Type of Issue | 2021-22 | | 2021-22 (Apr.-Dec.) | | 2022-23 (Apr.-Dec.) * | | Dec. 2021 | | Dec. 2022 * | |
|---------------------------------|---------------|---------------|---------------------|---------------|-----------------------|--------------|---------------|--------------|---------------|-------------|
| | 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 | 164 | 138894 | 124 | 130082 | 162 | 40509 | 30 | 18258 | 21 | 5235 |
| 1A Premium | 154 | 136893 | 117 | 128289 | 150 | 38170 | 28 | 17906 | 20 | 5070 |
| 1.1 Public | 121 | 112567 | 96 | 104847 | 122 | 36957 | 20 | 15681 | 18 | 5119 |
| 1.1.1 Premium | 119 | 111314 | 95 | 103702 | 119 | 35737 | 20 | 15444 | 18 | 4989 |
| 1.2 Rights | 43 | 26327 | 28 | 25236 | 40 | 3552 | 10 | 2577 | 3 | 116 |
| 1.2.1 Premium | 35 | 25580 | 22 | 24587 | 31 | 2433 | 8 | 2462 | 2 | 80 |
| 2 Preference Shares | — | — | — | — | — | — | — | — | — | — |
| 2.1 Public | — | — | — | — | — | — | — | — | — | — |
| 2.2 Rights | — | — | — | — | — | — | — | — | — | — |
| 3 Bonds & Debentures | 28 | 11589 | 24 | 10717 | 24 | 6872 | 4 | 1584 | 2 | 249 |
| 3.1 Convertible | — | — | — | — | — | — | — | — | — | — |
| 3.1.1 Public | — | — | — | — | — | — | — | — | — | — |
| 3.1.2 Rights | — | — | — | — | — | — | — | — | — | — |
| 3.2 Non-Convertible | 28 | 11589 | 24 | 10717 | 24 | 6872 | 4 | 1584 | 2 | 249 |
| 3.2.1 Public | 28 | 11589 | 24 | 10717 | 24 | 6872 | 4 | 1584 | 2 | 249 |
| 3.2.2 Rights | — | — | — | — | — | — | — | — | — | — |
| 4 Total(1+2+3) | 192 | 150484 | 148 | 140799 | 186 | 47381 | 34 | 19843 | 23 | 5484 |
| 4.1 Public | 149 | 124157 | 120 | 115563 | 146 | 43829 | 24 | 17266 | 20 | 5368 |
| 4.2 Rights | 43 | 26327 | 28 | 25236 | 40 | 3552 | 10 | 2577 | 3 | 116 |

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 | 2021-22 | 2021 | 2022 | | | | |
|-----------------|---------------|----------|---------|---------|---------|---------|---------|---------|
| | | | Dec. | Aug. | Sep. | Oct. | Nov. | Dec. |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 Exports | ₹ Crore | 3147021 | 295989 | 294599 | 283946 | 260213 | 285453 | 313687 |
| | US \$ Million | 422004 | 39270 | 37031 | 35391 | 31602 | 34892 | 38039 |
| 1.1 Oil | ₹ Crore | 503850 | 50912 | 67589 | 58296 | 51863 | 66154 | 68885 |
| | US \$ Million | 67472 | 6755 | 8496 | 7266 | 6299 | 8086 | 8353 |
| 1.2 Non-oil | ₹ Crore | 2643171 | 245077 | 227010 | 225650 | 208350 | 219299 | 244803 |
| | US \$ Million | 354533 | 32515 | 28535 | 28125 | 25304 | 26806 | 29686 |
| 2 Imports | ₹ Crore | 4572775 | 454721 | 493688 | 518793 | 485856 | 476301 | 496308 |
| | US \$ Million | 613052 | 60330 | 62056 | 64662 | 59006 | 58220 | 60185 |
| 2.1 Oil | ₹ Crore | 1207803 | 124324 | 139209 | 150772 | 149621 | 147700 | 160344 |
| | US \$ Million | 161810 | 16495 | 17498 | 18792 | 18171 | 18054 | 19444 |
| 2.2 Non-oil | ₹ Crore | 3364972 | 330397 | 354479 | 368021 | 336235 | 328601 | 335964 |
| | US \$ Million | 451242 | 43835 | 44558 | 45870 | 40835 | 40166 | 40741 |
| 3 Trade Balance | ₹ Crore | -1425753 | -158731 | -199089 | -234847 | -225644 | -190848 | -182621 |
| | US \$ Million | -191048 | -21060 | -25025 | -29271 | -27404 | -23328 | -22145 |
| 3.1 Oil | ₹ Crore | -703953 | -73411 | -71619 | -92476 | -97758 | -81547 | -91459 |
| | US \$ Million | -94339 | -9740 | -9003 | -11526 | -11872 | -9968 | -11091 |
| 3.2 Non-oil | ₹ Crore | -721800 | -85320 | -127469 | -142371 | -127886 | -109301 | -91161 |
| | US \$ Million | -96709 | -11320 | -16023 | -17745 | -15531 | -13360 | -11055 |

Source: DGCI&S and Ministry of Commerce & Industry.

No. 32: Foreign Exchange Reserves

| Item | Unit | 2022 | | | 2023 | | | |
|-------------------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|
| | | Jan. 28 | Dec. 23 | Dec. 30 | Jan. 6 | Jan. 13 | Jan. 20 | Jan. 27 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 Total Reserves | ₹ Crore | 4727298 | 4663730 | 4656002 | 4645635 | 4652927 | 4654872 | 4702189 |
| | US \$ Million | 629755 | 562808 | 562851 | 561583 | 572000 | 573727 | 576761 |
| 1.1 Foreign Currency Assets | ₹ Crore | 4249350 | 4130758 | 4121067 | 4106795 | 4112093 | 4108235 | 4149889 |
| | US \$ Million | 566077 | 498490 | 498188 | 496441 | 505519 | 506358 | 509018 |
| 1.2 Gold | ₹ Crore | 296461 | 339492 | 341827 | 345658 | 348887 | 354646 | 358942 |
| | US \$ Million | 39493 | 40969 | 41323 | 41784 | 42890 | 43712 | 44027 |
| | Volume (Metric Tonnes) | 755.42 | 786.28 | 787.37 | 787.37 | 787.37 | 787.37 | 787.37 |
| 1.3 SDRs | SDRs Million | 13657 | 13662 | 13662 | 13662 | 13662 | 13662 | 13662 |
| | ₹ Crore | 142706 | 150729 | 150400 | 150698 | 149382 | 149543 | 150649 |
| | US \$ Million | 19011 | 18190 | 18182 | 18217 | 18364 | 18432 | 18478 |
| 1.4 Reserve Tranche Position in IMF | ₹ Crore | 38780 | 42751 | 42708 | 42485 | 42565 | 42447 | 42709 |
| | US \$ Million | 5174 | 5159 | 5159 | 5141 | 5227 | 5226 | 5238 |

* Difference, if any, is due to rounding off.

No. 33: Non-Resident Deposits

(US\$ Million)

| Scheme | Outstanding | | | | Flows | |
|----------------|-------------|--------|--------|--------|-----------|-----------|
| | 2021-22 | 2021 | 2022 | | 2021-22 | 2022-23 |
| | | Dec. | Nov. | Dec. | Apr.-Dec. | Apr.-Dec. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 NRI Deposits | 139022 | 141908 | 134500 | 134485 | 3075 | 5408 |
| 1.1 FCNR(B) | 16918 | 18154 | 16719 | 17558 | -2319 | 640 |
| 1.2 NR(E)RA | 100801 | 102916 | 95318 | 94469 | 2925 | 1813 |
| 1.3 NRO | 21303 | 20838 | 22463 | 22458 | 2469 | 2955 |

No. 34: Foreign Investment Inflows

(US\$ Million)

| Item | 2021-22 | 2021-22 | 2022-23 | 2021 | 2022 | |
|---|---------------|--------------|--------------|--------------|--------------|-------------|
| | | 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) | 38587 | 24810 | 22341 | 1351 | -2428 | 1954 |
| 1.1.1 Direct Investment to India (1.1.1.1–1.1.1.2) | 56231 | 38977 | 32492 | 2851 | -172 | 3637 |
| 1.1.1.1 Gross Inflows/Gross Investments | 84835 | 61554 | 55274 | 6249 | 4335 | 6514 |
| 1.1.1.1.1 Equity | 59684 | 43838 | 37717 | 3991 | 2491 | 4491 |
| 1.1.1.1.1.1 Government (SIA/FIPB) | 1698 | 1574 | 653 | 25 | 4 | 90 |
| 1.1.1.1.1.2 RBI | 42932 | 30646 | 29649 | 3044 | 2089 | 3988 |
| 1.1.1.1.1.3 Acquisition of shares | 14143 | 10953 | 6445 | 842 | 319 | 333 |
| 1.1.1.1.1.4 Equity capital of unincorporated bodies | 910 | 664 | 971 | 80 | 80 | 80 |
| 1.1.1.1.2 Reinvested earnings | 19347 | 14118 | 14115 | 1691 | 1691 | 1691 |
| 1.1.1.1.3 Other capital | 5805 | 3598 | 3442 | 567 | 153 | 332 |
| 1.1.1.2 Repatriation/Disinvestment | 28605 | 22577 | 22783 | 3397 | 4507 | 2877 |
| 1.1.1.2.1 Equity | 27189 | 22012 | 20814 | 3312 | 4210 | 2439 |
| 1.1.1.2.2 Other capital | 1416 | 565 | 1969 | 86 | 297 | 437 |
| 1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4) | 17644 | 14167 | 10151 | 1501 | 2255 | 1683 |
| 1.1.2.1 Equity capital | 10061 | 7929 | 6523 | 1022 | 1457 | 1272 |
| 1.1.2.2 Reinvested Earnings | 3379 | 2534 | 2574 | 282 | 282 | 282 |
| 1.1.2.3 Other Capital | 7604 | 5989 | 3701 | 389 | 1030 | 342 |
| 1.1.2.4 Repatriation/Disinvestment | 3400 | 2285 | 2647 | 192 | 513 | 214 |
| 1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4) | -16777 | -1562 | -3238 | -3736 | 4750 | -436 |
| 1.2.1 GDRs/ADRs | – | – | – | – | – | – |
| 1.2.2 FIIs | -14071 | 218 | -2978 | -3356 | 4727 | -554 |
| 1.2.3 Offshore funds and others | – | – | – | – | – | – |
| 1.2.4 Portfolio investment by India | 2706 | 1780 | 260 | 379 | -24 | -119 |
| 1 Foreign Investment Inflows | 21809 | 23248 | 19103 | -2385 | 2323 | 1519 |

No. 35: Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals

(US\$ Million)

| Item | 2021-22 | 2021 | 2022 | | |
|--|-----------------|----------------|----------------|----------------|----------------|
| | | Dec. | Oct. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Outward Remittances under the LRS | 19610.77 | 1773.56 | 1924.09 | 1992.70 | 2068.26 |
| 1.1 Deposit | 830.05 | 56.64 | 64.28 | 60.72 | 60.49 |
| 1.2 Purchase of immovable property | 112.90 | 10.77 | 15.28 | 17.17 | 13.26 |
| 1.3 Investment in equity/debt | 746.57 | 54.30 | 111.41 | 86.58 | 119.58 |
| 1.4 Gift | 2336.29 | 214.59 | 208.11 | 220.90 | 202.76 |
| 1.5 Donations | 16.55 | 2.69 | 1.68 | 0.98 | 0.87 |
| 1.6 Travel | 6909.04 | 884.10 | 973.50 | 1030.64 | 1137.93 |
| 1.7 Maintenance of close relatives | 3302.37 | 281.46 | 280.67 | 305.35 | 274.79 |
| 1.8 Medical Treatment | 37.79 | 3.33 | 4.02 | 4.76 | 4.36 |
| 1.9 Studies Abroad | 5165.33 | 253.69 | 217.87 | 211.65 | 237.65 |
| 1.10 Others | 153.88 | 11.99 | 47.27 | 53.95 | 16.59 |

**No. 36: Indices of Nominal Effective Exchange Rate (NEER) and
Real Effective Exchange Rate (REER) of the Indian Rupee**

| Item | 2020-21 | 2021-22 | 2022 | | 2023 |
|---|---------|---------|---------|----------|---------|
| | | | January | December | January |
| | 1 | 2 | 3 | 4 | 5 |
| 40-Currency Basket (Base: 2015-16=100) | | | | | |
| 1 Trade-weighted | | | | | |
| 1.1 NEER | 93.92 | 93.13 | 93.94 | 89.49 | 89.24 |
| 1.2 REER | 103.46 | 104.66 | 105.29 | 100.00 | 99.62 |
| 2 Export-weighted | | | | | |
| 2.1 NEER | 93.59 | 93.55 | 94.70 | 90.68 | 90.66 |
| 2.2 REER | 102.96 | 103.48 | 104.18 | 98.40 | 98.24 |
| 6-Currency Basket (Trade-weighted) | | | | | |
| 1 Base: 2015-16 = 100 | | | | | |
| 1.1 NEER | 88.45 | 87.03 | 87.60 | 83.71 | 83.17 |
| 1.2 REER | 101.84 | 102.27 | 102.96 | 99.40 | 99.20 |
| 2 Base: 2020-21 = 100 | | | | | |
| 2.1 NEER | 100.00 | 98.39 | 99.03 | 94.64 | 94.03 |
| 2.2 REER | 100.00 | 100.42 | 101.10 | 97.61 | 97.41 |

No. 37: External Commercial Borrowings (ECBs) – Registrations

(Amount in US\$ Million)

| Item | 2021-22 | 2021 | 2022 | |
|--|------------|------------|------------|------------|
| | | Dec | Nov | Dec |
| | 1 | 2 | 3 | 4 |
| 1 Automatic Route | | | | |
| 1.1 Number | 1086 | 139 | 92 | 99 |
| 1.2 Amount | 28851 | 4374 | 5203 | 2768 |
| 2 Approval Route | | | | |
| 2.1 Number | 18 | 1 | 0 | 0 |
| 2.2 Amount | 11035 | 1175 | 0 | 0 |
| 3 Total (1+2) | | | | |
| 3.1 Number | 1104 | 140 | 92 | 99 |
| 3.2 Amount | 39886 | 5549 | 5203 | 2768 |
| 4 Weighted Average Maturity (in years) | 8.00 | 5.30 | 4.70 | 7.20 |
| 5 Interest Rate (per cent) | | | | |
| 5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans | 1.71 | 1.01 | 1.62 | 1.68 |
| 5.2 Interest rate range for Fixed Rate Loans | 0.00-10.50 | 0.00-10.25 | 0.00-11.80 | 0.00-10.35 |
| Borrower Category | | | | |
| I. Corporate Manufacturing | 12244 | 442 | 2116 | 522 |
| II. Corporate-Infrastructure | 17023 | 2584 | 2971 | 28 |
| a.) Transport | 1597 | 109 | 0 | 0 |
| b.) Energy | 8215 | 959 | 1192 | 6 |
| c.) Water and Sanitation | 10 | 0 | 14 | 0 |
| d.) Communication | 1,258 | 5 | 1,515 | 22 |
| e.) Social and Commercial Infrastructure | 0 | 0 | 0 | 0 |
| f.) Exploration, Mining and Refinery | 4691 | 1100 | 250 | 0 |
| g.) Other Sub-Sectors | 1252 | 411 | 0 | 0 |
| III. Corporate Service-Sector | 1570 | 291 | 13 | 36 |
| IV. Other Entities | 609 | 500 | 0 | 0 |
| a.) units in SEZ | 9 | 0 | 0 | 0 |
| b.) SIDBI | | | 0 | 0 |
| c.) Exim Bank | 600 | 500 | 0 | 0 |
| V. Banks | 100 | 0 | 0 | 0 |
| VI. Financial Institution (Other than NBFC) | 4 | 0 | 0 | 0 |
| VII. NBFCs | 7995 | 1690 | 81 | 2148 |
| a). NBFC- IFC/AFC | 5621 | 1275 | 0 | 1418 |
| b). NBFC-MFI | 93 | 17 | 31 | 3 |
| c). NBFC-Others | 2282 | 398 | 50 | 727 |
| VIII. Non-Government Organization (NGO) | 0 | 0 | 0 | 0 |
| IX. Micro Finance Institution (MFI) | 0 | 0 | 0 | 0 |
| X. Others | 341 | 42 | 22 | 34 |

No. 38: India's Overall Balance of Payments

(US\$ Million)

| Item | Jul-Sep 2021 | | | Jul-Sep 2022(P) | | |
|---|---------------|---------------|---------------|-----------------|---------------|---------------|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Overall Balance of Payments(1+2+3) | 405412 | 374223 | 31189 | 378470 | 408849 | -30379 |
| 1 CURRENT ACCOUNT (1.1+ 1.2) | 194262 | 203996 | -9734 | 225210 | 261601 | -36391 |
| 1.1 MERCHANDISE | 104769 | 149280 | -44511 | 111973 | 195519 | -83546 |
| 1.2 INVISIBLES (1.2.1+1.2.2+1.2.3) | 89494 | 54717 | 34777 | 113237 | 66082 | 47155 |
| 1.2.1 Services | 61418 | 35839 | 25579 | 79986 | 45554 | 34432 |
| 1.2.1.1 Travel | 2147 | 3919 | -1772 | 5775 | 7539 | -1764 |
| 1.2.1.2 Transportation | 7581 | 8181 | -600 | 9533 | 11337 | -1804 |
| 1.2.1.3 Insurance | 795 | 575 | 220 | 756 | 586 | 170 |
| 1.2.1.4 G.n.i.e. | 217 | 198 | 19 | 183 | 219 | -36 |
| 1.2.1.5 Miscellaneous | 50678 | 22965 | 27713 | 63738 | 25872 | 37866 |
| 1.2.1.5.1 Software Services | 29965 | 3184 | 26781 | 36228 | 3546 | 32681 |
| 1.2.1.5.2 Business Services | 13858 | 12457 | 1401 | 19141 | 13964 | 5178 |
| 1.2.1.5.3 Financial Services | 1303 | 1463 | -160 | 2113 | 1600 | 514 |
| 1.2.1.5.4 Communication Services | 766 | 275 | 491 | 803 | 399 | 403 |
| 1.2.2 Transfers | 21154 | 2163 | 18991 | 27462 | 2711 | 24751 |
| 1.2.2.1 Official | 18 | 239 | -221 | 52 | 292 | -240 |
| 1.2.2.2 Private | 21135 | 1924 | 19212 | 27410 | 2419 | 24991 |
| 1.2.3 Income | 6922 | 16714 | -9792 | 5789 | 17817 | -12028 |
| 1.2.3.1 Investment Income | 5425 | 15960 | -10535 | 4159 | 16962 | -12803 |
| 1.2.3.2 Compensation of Employees | 1497 | 754 | 743 | 1630 | 854 | 775 |
| 2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5) | 209849 | 170227 | 39622 | 153260 | 146342 | 6918 |
| 2.1 Foreign Investment (2.1.1+2.1.2) | 132472 | 119898 | 12575 | 99726 | 86757 | 12969 |
| 2.1.1 Foreign Direct Investment | 20541 | 11844 | 8697 | 18048 | 11611 | 6437 |
| 2.1.1.1 In India | 19375 | 6475 | 12900 | 16844 | 7803 | 9041 |
| 2.1.1.1.1 Equity | 13806 | 6259 | 7548 | 10699 | 7111 | 3588 |
| 2.1.1.1.2 Reinvested Earnings | 4668 | | 4668 | 4667 | | 4667 |
| 2.1.1.1.3 Other Capital | 900 | 216 | 684 | 1478 | 692 | 786 |
| 2.1.1.2 Abroad | 1167 | 5369 | -4203 | 1204 | 3808 | -2603 |
| 2.1.1.2.1 Equity | 1167 | 2824 | -1658 | 1204 | 1782 | -577 |
| 2.1.1.2.2 Reinvested Earnings | 0 | 845 | -845 | 0 | 865 | -865 |
| 2.1.1.2.3 Other Capital | 0 | 1700 | -1700 | 0 | 1161 | -1161 |
| 2.1.2 Portfolio Investment | 111931 | 108054 | 3877 | 81678 | 75146 | 6532 |
| 2.1.2.1 In India | 110448 | 105904 | 4544 | 81375 | 74473 | 6901 |
| 2.1.2.1.1 FIIs | 110448 | 105904 | 4544 | 81375 | 74473 | 6901 |
| 2.1.2.1.1.1 Equity | 95335 | 94718 | 618 | 72212 | 66210 | 6003 |
| 2.1.2.1.1.2 Debt | 15112 | 11186 | 3926 | 9163 | 8264 | 899 |
| 2.1.2.1.2 ADR/GDRs | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.1.2.2 Abroad | 1483 | 2150 | -666 | 303 | 673 | -370 |
| 2.2 Loans (2.2.1+2.2.2+2.2.3) | 25723 | 17888 | 7834 | 27520 | 22027 | 5493 |
| 2.2.1 External Assistance | 2418 | 1290 | 1129 | 2020 | 1523 | 497 |
| 2.2.1.1 By India | 13 | 16 | -3 | 11 | 22 | -11 |
| 2.2.1.2 To India | 2406 | 1273 | 1132 | 2009 | 1501 | 508 |
| 2.2.2 Commercial Borrowings | 9283 | 4941 | 4342 | 5351 | 5463 | -112 |
| 2.2.2.1 By India | 282 | 249 | 33 | 359 | 100 | 258 |
| 2.2.2.2 To India | 9001 | 4692 | 4309 | 4993 | 5363 | -370 |
| 2.2.3 Short Term to India | 14021 | 11658 | 2364 | 20149 | 15041 | 5108 |
| 2.2.3.1 Buyers' credit & Suppliers' Credit >180 days | 9615 | 11658 | -2043 | 17152 | 15041 | 2111 |
| 2.2.3.2 Suppliers' Credit up to 180 days | 4407 | 0 | 4407 | 2997 | 0 | 2997 |
| 2.3 Banking Capital (2.3.1+2.3.2) | 20817 | 20457 | 360 | 15567 | 24013 | -8447 |
| 2.3.1 Commercial Banks | 20473 | 20457 | 17 | 15567 | 24012 | -8445 |
| 2.3.1.1 Assets | 10097 | 9858 | 239 | 134 | 10646 | -10512 |
| 2.3.1.2 Liabilities | 10376 | 10598 | -222 | 15433 | 13366 | 2067 |
| 2.3.1.2.1 Non-Resident Deposits | 8574 | 9357 | -783 | 13993 | 11504 | 2490 |
| 2.3.2 Others | 344 | 0 | 344 | 0 | 2 | -2 |
| 2.4 Rupee Debt Service | 0 | 2 | -2 | 0 | 1 | -1 |
| 2.5 Other Capital | 30837 | 11983 | 18855 | 10447 | 13543 | -3096 |
| 3 Errors & Omissions | 1301 | 0 | 1301 | 0 | 906 | -906 |
| 4 Monetary Movements (4.1+ 4.2) | 0 | 31189 | -31189 | 30379 | 0 | 30379 |
| 4.1 I.M.F. | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.2 Foreign Exchange Reserves (Increase - / Decrease +) | | 31189 | -31189 | 30379 | 0 | 30379 |

Note : P : Preliminary

No. 39: India's Overall Balance of Payments

(₹ Crore)

| Item | Jul-Sep 2021 | | | Jul-Sep 2022(P) | | |
|---|----------------|----------------|----------------|-----------------|----------------|----------------|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Overall Balance of Payments(1+2+3) | 3003766 | 2772683 | 231083 | 3020039 | 3262450 | -242411 |
| 1 CURRENT ACCOUNT (1.1+ 1.2) | 1439323 | 1511443 | -72120 | 1797085 | 2087469 | -290384 |
| 1.1 MERCHANDISE | 776248 | 1106039 | -329791 | 893502 | 1560163 | -666661 |
| 1.2 INVISIBLES (1.2.1+1.2.2+1.2.3) | 663075 | 405404 | 257671 | 903583 | 527306 | 376277 |
| 1.2.1 Services | 455057 | 265535 | 189522 | 638258 | 363505 | 274753 |
| 1.2.1.1 Travel | 15905 | 29037 | -13132 | 46081 | 60160 | -14079 |
| 1.2.1.2 Transportation | 56168 | 60613 | -4445 | 76071 | 90467 | -14396 |
| 1.2.1.3 Insurance | 5894 | 4263 | 1631 | 6035 | 4676 | 1360 |
| 1.2.1.4 G.n.i.e. | 1607 | 1467 | 141 | 1463 | 1751 | -288 |
| 1.2.1.5 Miscellaneous | 375483 | 170154 | 205328 | 508608 | 206451 | 302156 |
| 1.2.1.5.1 Software Services | 222016 | 23589 | 198426 | 289082 | 28298 | 260784 |
| 1.2.1.5.2 Business Services | 102675 | 92295 | 10380 | 152740 | 111423 | 41317 |
| 1.2.1.5.3 Financial Services | 9652 | 10836 | -1184 | 16862 | 12764 | 4098 |
| 1.2.1.5.4 Communication Services | 5676 | 2035 | 3641 | 6405 | 3185 | 3219 |
| 1.2.2 Transfers | 156732 | 16028 | 140704 | 219132 | 21632 | 197501 |
| 1.2.2.1 Official | 137 | 1774 | -1638 | 413 | 2327 | -1914 |
| 1.2.2.2 Private | 156596 | 14254 | 142342 | 218719 | 19305 | 199414 |
| 1.2.3 Income | 51286 | 123840 | -72554 | 46193 | 142170 | -95977 |
| 1.2.3.1 Investment Income | 40194 | 118251 | -78057 | 33190 | 135354 | -102164 |
| 1.2.3.2 Compensation of Employees | 11092 | 5589 | 5503 | 13003 | 6816 | 6187 |
| 2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5) | 1554807 | 1261241 | 293567 | 1222954 | 1167748 | 55206 |
| 2.1 Foreign Investment (2.1.1+2.1.2) | 981510 | 888342 | 93168 | 795775 | 692288 | 103487 |
| 2.1.1 Foreign Direct Investment | 152195 | 87755 | 64439 | 144014 | 92649 | 51365 |
| 2.1.1.1 In India | 143550 | 47973 | 95577 | 134406 | 62266 | 72140 |
| 2.1.1.1.1 Equity | 102293 | 46371 | 55922 | 85373 | 56743 | 28630 |
| 2.1.1.1.2 Reinvested Earnings | 34589 | 0 | 34589 | 37239 | 0 | 37239 |
| 2.1.1.1.3 Other Capital | 6668 | 1602 | 5066 | 11795 | 5523 | 6271 |
| 2.1.1.2 Abroad | 8645 | 39782 | -31137 | 9608 | 30382 | -20774 |
| 2.1.1.2.1 Equity | 8645 | 20927 | -12282 | 9608 | 14216 | -4608 |
| 2.1.1.2.2 Reinvested Earnings | 0 | 6259 | -6259 | 0 | 6900 | -6900 |
| 2.1.1.2.3 Other Capital | 0 | 12596 | -12596 | 0 | 9267 | -9267 |
| 2.1.2 Portfolio Investment | 829315 | 800587 | 28729 | 651761 | 599639 | 52122 |
| 2.1.2.1 In India | 818325 | 784660 | 33664 | 649339 | 594268 | 55071 |
| 2.1.2.1.1 FIIs | 818325 | 784660 | 33664 | 649339 | 594268 | 55071 |
| 2.1.2.1.1.1 Equity | 706356 | 701779 | 4577 | 576224 | 528326 | 47898 |
| 2.1.2.1.1.2 Debt | 111968 | 82881 | 29087 | 73116 | 65943 | 7173 |
| 2.1.2.1.2 ADR/GDRs | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.1.2.2 Abroad | 10991 | 15927 | -4936 | 2422 | 5371 | -2949 |
| 2.2 Loans (2.2.1+2.2.2+2.2.3) | 190583 | 132537 | 58046 | 219602 | 175768 | 43834 |
| 2.2.1 External Assistance | 17919 | 9554 | 8364 | 16119 | 12152 | 3968 |
| 2.2.1.1 By India | 95 | 120 | -26 | 87 | 177 | -89 |
| 2.2.1.2 To India | 17824 | 9434 | 8390 | 16032 | 11975 | 4057 |
| 2.2.2 Commercial Borrowings | 68777 | 36608 | 32169 | 42702 | 43593 | -891 |
| 2.2.2.1 By India | 2087 | 1844 | 242 | 2861 | 799 | 2062 |
| 2.2.2.2 To India | 66691 | 34764 | 31927 | 39841 | 42795 | -2953 |
| 2.2.3 Short Term to India | 103887 | 86375 | 17512 | 160781 | 120023 | 40757 |
| 2.2.3.1 Buyers' credit & Suppliers' Credit >180 days | 71239 | 86375 | -15136 | 136866 | 120023 | 16843 |
| 2.2.3.2 Suppliers' Credit up to 180 days | 32649 | 0 | 32649 | 23914 | 0 | 23914 |
| 2.3 Banking Capital (2.3.1+2.3.2) | 154236 | 151566 | 2670 | 124217 | 191617 | -67400 |
| 2.3.1 Commercial Banks | 151690 | 151566 | 124 | 124217 | 191604 | -67387 |
| 2.3.1.1 Assets | 74810 | 73041 | 1769 | 1070 | 84951 | -83881 |
| 2.3.1.2 Liabilities | 76881 | 78525 | -1645 | 123147 | 106652 | 16494 |
| 2.3.1.2.1 Non-Resident Deposits | 63530 | 69328 | -5798 | 111661 | 91794 | 19867 |
| 2.3.2 Others | 2545 | 0 | 2545 | 0 | 13 | -13 |
| 2.4 Rupee Debt Service | 0 | 15 | -15 | 0 | 10 | -10 |
| 2.5 Other Capital | 228478 | 88781 | 139697 | 83360 | 108064 | -24704 |
| 3 Errors & Omissions | 9636 | 0 | 9636 | 0 | 7233 | -7233 |
| 4 Monetary Movements (4.1+ 4.2) | 0 | 231083 | -231083 | 242411 | 0 | 242411 |
| 4.1 I.M.F. | 0 | 0 | 0 | 0 | 0 | 0 |
| 4.2 Foreign Exchange Reserves (Increase - / Decrease +) | 0 | 231083 | -231083 | 242411 | 0 | 242411 |

Note : P: Preliminary

No. 40: Standard Presentation of BoP in India as per BPM6

(US\$ Million)

| Item | Jul-Sep 2021 | | | Jul-Sep 2022(P) | | |
|---|---------------|---------------|---------------|-----------------|---------------|---------------|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Current Account (1.A+1.B+1.C) | 194262 | 203974 | -9712 | 225206 | 261577 | -36371 |
| 1.A Goods and Services (1.A.a+1.A.b) | 166187 | 185119 | -18932 | 191959 | 241073 | -49114 |
| 1.A.a Goods (1.A.a.1 to 1.A.a.3) | 104769 | 149280 | -44511 | 111973 | 195519 | -83546 |
| 1.A.a.1 General merchandise on a BOP basis | 104254 | 133258 | -29004 | 111660 | 185742 | -74082 |
| 1.A.a.2 Net exports of goods under merchanting | 515 | 0 | 515 | 313 | 0 | 313 |
| 1.A.a.3 Nonmonetary gold | | 16022 | -16022 | | 9777 | -9777 |
| 1.A.b Services (1.A.b.1 to 1.A.b.13) | 61418 | 35839 | 25579 | 79986 | 45554 | 34432 |
| 1.A.b.1 Manufacturing services on physical inputs owned by others | 75 | 16 | 59 | 311 | 28 | 283 |
| 1.A.b.2 Maintenance and repair services n.i.e. | 74 | 418 | -345 | 50 | 542 | -492 |
| 1.A.b.3 Transport | 7581 | 8181 | -600 | 9533 | 11337 | -1804 |
| 1.A.b.4 Travel | 2147 | 3919 | -1772 | 5775 | 7539 | -1764 |
| 1.A.b.5 Construction | 716 | 715 | 0 | 858 | 833 | 26 |
| 1.A.b.6 Insurance and pension services | 795 | 575 | 220 | 756 | 586 | 170 |
| 1.A.b.7 Financial services | 1303 | 1463 | -160 | 2113 | 1600 | 514 |
| 1.A.b.8 Charges for the use of intellectual property n.i.e. | 202 | 2189 | -1987 | 324 | 2224 | -1900 |
| 1.A.b.9 Telecommunications, computer, and information services | 30823 | 3651 | 27172 | 37111 | 4140 | 32971 |
| 1.A.b.10 Other business services | 13858 | 12457 | 1401 | 19141 | 13964 | 5178 |
| 1.A.b.11 Personal, cultural, and recreational services | 713 | 1243 | -530 | 917 | 1654 | -737 |
| 1.A.b.12 Government goods and services n.i.e. | 217 | 198 | 19 | 183 | 219 | -36 |
| 1.A.b.13 Others n.i.e. | 2915 | 813 | 2102 | 2913 | 889 | 2024 |
| 1.B Primary Income (1.B.1 to 1.B.3) | 6922 | 16714 | -9792 | 5789 | 17817 | -12028 |
| 1.B.1 Compensation of employees | 1497 | 754 | 743 | 1630 | 854 | 775 |
| 1.B.2 Investment income | 4413 | 15740 | -11328 | 3321 | 16856 | -13535 |
| 1.B.2.1 Direct investment | 2046 | 9816 | -7770 | 1907 | 9939 | -8032 |
| 1.B.2.2 Portfolio investment | 111 | 2859 | -2748 | 55 | 2917 | -2862 |
| 1.B.2.3 Other investment | 62 | 3064 | -3002 | 146 | 3954 | -3808 |
| 1.B.2.4 Reserve assets | 2193 | 1 | 2193 | 1213 | 46 | 1167 |
| 1.B.3 Other primary income | 1012 | 220 | 792 | 838 | 106 | 732 |
| 1.C Secondary Income (1.C.1+1.C.2) | 21153 | 2141 | 19012 | 27458 | 2688 | 24770 |
| 1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs | 21135 | 1924 | 19212 | 27410 | 2419 | 24991 |
| 1.C.1.1 Personal transfers (Current transfers between resident and non-resident households) | 20237 | 1356 | 18881 | 26686 | 1750 | 24935 |
| 1.C.1.2 Other current transfers | 899 | 568 | 331 | 724 | 669 | 55 |
| 1.C.2 General government | 18 | 217 | -199 | 48 | 268 | -220 |
| 2 Capital Account (2.1+2.2) | 189 | 202 | -13 | 136 | 122 | 15 |
| 2.1 Gross acquisitions (DR.) / disposals (CR.) of non-produced nonfinancial assets | 62 | 132 | -71 | 6 | 36 | -30 |
| 2.2 Capital transfers | 128 | 70 | 58 | 130 | 85 | 45 |
| 3 Financial Account (3.1 to 3.5) | 209660 | 201236 | 8424 | 183506 | 146243 | 37263 |
| 3.1 Direct Investment (3.1A+3.1B) | 20541 | 11844 | 8697 | 18048 | 11611 | 6437 |
| 3.1.A Direct Investment in India | 19375 | 6475 | 12900 | 16844 | 7803 | 9041 |
| 3.1.A.1 Equity and investment fund shares | 18475 | 6259 | 12216 | 15366 | 7111 | 8255 |
| 3.1.A.1.1 Equity other than reinvestment of earnings | 13806 | 6259 | 7548 | 10699 | 7111 | 3588 |
| 3.1.A.1.2 Reinvestment of earnings | 4668 | | 4668 | 4667 | | 4667 |
| 3.1.A.2 Debt instruments | 900 | 216 | 684 | 1478 | 692 | 786 |
| 3.1.A.2.1 Direct investor in direct investment enterprises | 900 | 216 | 684 | 1478 | 692 | 786 |
| 3.1.B Direct Investment by India | 1167 | 5369 | -4203 | 1204 | 3808 | -2603 |
| 3.1.B.1 Equity and investment fund shares | 1167 | 3669 | -2502 | 1204 | 2646 | -1442 |
| 3.1.B.1.1 Equity other than reinvestment of earnings | 1167 | 2824 | -1658 | 1204 | 1782 | -577 |
| 3.1.B.1.2 Reinvestment of earnings | | 845 | -845 | | 865 | -865 |
| 3.1.B.2 Debt instruments | 0 | 1700 | -1700 | 0 | 1161 | -1161 |
| 3.1.B.2.1 Direct investor in direct investment enterprises | | 1700 | -1700 | | 1161 | -1161 |
| 3.2 Portfolio Investment | 111931 | 108054 | 3877 | 81678 | 75146 | 6532 |
| 3.2.A Portfolio Investment in India | 110448 | 105904 | 4544 | 81375 | 74473 | 6901 |
| 3.2.1 Equity and investment fund shares | 95335 | 94718 | 618 | 72212 | 66210 | 6003 |
| 3.2.2 Debt securities | 15112 | 11186 | 3926 | 9163 | 8264 | 899 |
| 3.2.B Portfolio Investment by India | 1483 | 2150 | -666 | 303 | 673 | -370 |
| 3.3 Financial derivatives (other than reserves) and employee stock options | 5367 | 5806 | -439 | 7454 | 7308 | 145 |
| 3.4 Other investment | 71821 | 44344 | 27478 | 45948 | 52178 | -6230 |
| 3.4.1 Other equity (ADRs/GDRs) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.2 Currency and deposits | 8918 | 9357 | -439 | 13993 | 11505 | 2488 |
| 3.4.2.1 Central bank (Rupee Debt Movements; NRG) | 344 | 0 | 344 | 0 | 2 | -2 |
| 3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits) | 8574 | 9357 | -783 | 13993 | 11504 | 2490 |
| 3.4.2.3 General government | | | 0 | | | 0 |
| 3.4.2.4 Other sectors | | | 0 | | | 0 |
| 3.4.3 Loans (External Assistance, ECBs and Banking Capital) | 23600 | 17330 | 6270 | 8945 | 19494 | -10549 |
| 3.4.3.A Loans to India | 23306 | 17065 | 6241 | 8576 | 19372 | -10796 |
| 3.4.3.B Loans by India | 294 | 265 | 29 | 369 | 122 | 247 |
| 3.4.4 Insurance, pension, and standardized guarantee schemes | 55 | 13 | 42 | 59 | 1 | 59 |
| 3.4.5 Trade credit and advances | 14021 | 11658 | 2364 | 20149 | 15041 | 5108 |
| 3.4.6 Other accounts receivable/payable - other | 7365 | 5986 | 1379 | 2801 | 6137 | -3335 |
| 3.4.7 Special drawing rights | 17862 | | 17862 | 0 | | 0 |
| 3.5 Reserve assets | 0 | 31189 | -31189 | 30379 | 0 | 30379 |
| 3.5.1 Monetary gold | | | 0 | | | 0 |
| 3.5.2 Special drawing rights n.a. | | 17862 | -17862 | | 0 | 0 |
| 3.5.3 Reserve position in the IMF n.a. | | | 0 | | | 0 |
| 3.5.4 Other reserve assets (Foreign Currency Assets) | 0 | 13326 | -13326 | 30379 | 0 | 30379 |
| 4 Total assets/liabilities | 209660 | 201236 | 8424 | 183506 | 146243 | 37263 |
| 4.1 Equity and investment fund shares | 121882 | 112614 | 9267 | 96598 | 83949 | 12649 |
| 4.2 Debt instruments | 62552 | 51447 | 11104 | 53728 | 56158 | -2430 |
| 4.3 Other financial assets and liabilities | 25227 | 37175 | -11947 | 33180 | 6137 | 27043 |
| 5 Net errors and omissions | 1301 | | 1301 | | 906 | -906 |

Note : P : Preliminary

No. 41: Standard Presentation of BoP in India as per BPM6

(₹ Crore)

| Item | Jul-Sep 2021 | | | Jul-Sep 2022(P) | | |
|---|----------------|----------------|----------------|-----------------|----------------|----------------|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Current Account (1.A+1.B+1.C) | 1439319 | 1511278 | -71958 | 1797054 | 2087284 | -290229 |
| 1.A Goods and Services (1.A.a+1.A.b) | 1231305 | 1371574 | -140270 | 1531760 | 1923668 | -391908 |
| 1.A.a Goods (1.A.a.1 to 1.A.a.3) | 776248 | 1106039 | -329791 | 893502 | 1560163 | -666661 |
| 1.A.a.1 General merchandise on a BOP basis | 772435 | 987331 | -214896 | 891001 | 1482147 | -591146 |
| 1.A.a.2 Net exports of goods under merchanting | 3812 | 0 | 3812 | 2501 | 0 | 2501 |
| 1.A.a.3 Nonmonetary gold | 0 | 118708 | -118708 | 0 | 78016 | -78016 |
| 1.A.b Services (1.A.b.1 to 1.A.b.13) | 455057 | 265535 | 189522 | 638258 | 363505 | 274753 |
| 1.A.b.1 Manufacturing services on physical inputs owned by others | 558 | 118 | 440 | 2480 | 223 | 2256 |
| 1.A.b.2 Maintenance and repair services n.i.e. | 546 | 3100 | -2554 | 396 | 4323 | -3927 |
| 1.A.b.3 Transport | 56168 | 60613 | -4445 | 76071 | 90467 | -14396 |
| 1.A.b.4 Travel | 15905 | 29037 | -13132 | 46081 | 60160 | -14079 |
| 1.A.b.5 Construction | 5302 | 5299 | 3 | 6848 | 6643 | 205 |
| 1.A.b.6 Insurance and pension services | 5894 | 4263 | 1631 | 6035 | 4676 | 1360 |
| 1.A.b.7 Financial services | 9652 | 10836 | -1184 | 16862 | 12764 | 4098 |
| 1.A.b.8 Charges for the use of intellectual property n.i.e. | 1499 | 16220 | -14721 | 2589 | 17749 | -15161 |
| 1.A.b.9 Telecommunications, computer, and information services | 228370 | 27051 | 201318 | 296127 | 33035 | 263092 |
| 1.A.b.10 Other business services | 102675 | 92295 | 10380 | 152740 | 111423 | 41317 |
| 1.A.b.11 Personal, cultural, and recreational services | 5279 | 9207 | -3928 | 7319 | 13197 | -5878 |
| 1.A.b.12 Government goods and services n.i.e. | 1607 | 1467 | 141 | 1463 | 1751 | -288 |
| 1.A.b.13 Others n.i.e. | 21601 | 6027 | 15574 | 23247 | 7093 | 16154 |
| 1.B Primary Income (1.B.1 to 1.B.3) | 51286 | 123840 | -72554 | 46193 | 142170 | -95977 |
| 1.B.1 Compensation of employees | 11092 | 5589 | 5503 | 13003 | 6816 | 6187 |
| 1.B.2 Investment income | 32694 | 116622 | -83928 | 26500 | 134507 | -108007 |
| 1.B.2.1 Direct investment | 15161 | 72730 | -57569 | 15219 | 79312 | -64093 |
| 1.B.2.2 Portfolio investment | 820 | 21184 | -20364 | 442 | 23280 | -22838 |
| 1.B.2.3 Other investment | 461 | 22703 | -22242 | 1162 | 31551 | -30389 |
| 1.B.2.4 Reserve assets | 16251 | 5 | 16246 | 9677 | 364 | 9313 |
| 1.B.3 Other primary income | 7500 | 1629 | 5871 | 6690 | 846 | 5843 |
| 1.C Secondary Income (1.C.1+1.C.2) | 156729 | 15863 | 140865 | 219101 | 21446 | 197656 |
| 1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs | 156596 | 14254 | 142342 | 218719 | 19305 | 199414 |
| 1.C.1.1 Personal transfers (Current transfers between resident and non-resident households) | 149936 | 10045 | 139891 | 212941 | 13968 | 198973 |
| 1.C.1.2 Other current transfers | 6659 | 4209 | 2451 | 5779 | 5337 | 442 |
| 1.C.2 General government | 133 | 1609 | -1476 | 382 | 2141 | -1759 |
| 2 Capital Account (2.1+2.2) | 1402 | 1497 | -95 | 1089 | 971 | 118 |
| 2.1 Gross acquisitions (DR)/disposals (CR.) of non-produced nonfinancial assets | 457 | 981 | -524 | 50 | 289 | -239 |
| 2.2 Capital transfers | 946 | 516 | 430 | 1039 | 682 | 357 |
| 3 Financial Account (3.1 to 3.5) | 1553408 | 1490992 | 62417 | 1464307 | 1166962 | 297345 |
| 3.1 Direct Investment (3.1A+3.1B) | 152195 | 87755 | 64439 | 144014 | 51369 | 92825 |
| 3.1.A Direct Investment in India | 143550 | 47973 | 95577 | 134406 | 62266 | 72140 |
| 3.1.A.1 Equity and investment fund shares | 136882 | 46371 | 90511 | 122612 | 56743 | 65869 |
| 3.1.A.1.1 Equity other than reinvestment of earnings | 102293 | 46371 | 55922 | 85373 | 56743 | 28630 |
| 3.1.A.1.2 Reinvestment of earnings | 34589 | 0 | 34589 | 37239 | 0 | 37239 |
| 3.1.A.2 Debt instruments | 6668 | 1602 | 5066 | 11795 | 5523 | 6271 |
| 3.1.A.2.1 Direct investor in direct investment enterprises | 6668 | 1602 | 5066 | 11795 | 5523 | 6271 |
| 3.1.B Direct Investment by India | 8645 | 39782 | -31137 | 9608 | 30382 | -20774 |
| 3.1.B.1 Equity and investment fund shares | 8645 | 27186 | -18541 | 9608 | 21116 | -11508 |
| 3.1.B.1.1 Equity other than reinvestment of earnings | 8645 | 20927 | -12282 | 9608 | 14216 | -4608 |
| 3.1.B.1.2 Reinvestment of earnings | 0 | 6259 | -6259 | 0 | 6900 | -6900 |
| 3.1.B.2 Debt instruments | 0 | 12596 | -12596 | 0 | 9267 | -9267 |
| 3.1.B.2.1 Direct investor in direct investment enterprises | 0 | 12596 | -12596 | 0 | 9267 | -9267 |
| 3.2 Portfolio Investment | 829315 | 800587 | 28729 | 651761 | 599639 | 52122 |
| 3.2.A Portfolio Investment in India | 818325 | 784660 | 33664 | 649339 | 594268 | 55071 |
| 3.2.1 Equity and investment fund shares | 706356 | 701779 | 4577 | 576224 | 528326 | 47898 |
| 3.2.2 Debt securities | 111968 | 82881 | 29087 | 73116 | 65943 | 7173 |
| 3.2.B Portfolio Investment by India | 10991 | 15927 | -4936 | 2422 | 5371 | -2949 |
| 3.3 Financial derivatives (other than reserves) and employee stock options | 39762 | 43017 | -3256 | 59477 | 58316 | 1161 |
| 3.4 Other investment | 532137 | 328550 | 203587 | 366643 | 416358 | -49714 |
| 3.4.1 Other equity (ADRs/GDRs) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.2 Currency and deposits | 66075 | 69328 | -3253 | 111661 | 91807 | 19854 |
| 3.4.2.1 Central bank (Rupee Debt Movements; NRG) | 2545 | 0 | 2545 | 0 | 13 | -13 |
| 3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits) | 63530 | 69328 | -5798 | 111661 | 91794 | 19867 |
| 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) | 174857 | 128400 | 46456 | 71377 | 155555 | -84177 |
| 3.4.3.A Loans to India | 172675 | 126436 | 46239 | 68430 | 154579 | -86150 |
| 3.4.3.B Loans by India | 2181 | 1964 | 217 | 2948 | 975 | 1973 |
| 3.4.4 Insurance, pension, and standardized guarantee schemes | 405 | 97 | 308 | 471 | 4 | 467 |
| 3.4.5 Trade credit and advances | 103887 | 86375 | 17512 | 160781 | 120023 | 40757 |
| 3.4.6 Other accounts receivable/payable - other | 54566 | 44349 | 10217 | 22353 | 48968 | -26615 |
| 3.4.7 Special drawing rights | 132346 | 0 | 132346 | 0 | 0 | 0 |
| 3.5 Reserve assets | 0 | 231083 | -231083 | 242411 | 0 | 242411 |
| 3.5.1 Monetary gold | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.5.2 Special drawing rights n.a. | 0 | 132346 | -132346 | 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) | 0 | 98737 | -98737 | 242411 | 0 | 242411 |
| 4 Total assets/liabilities | 1553408 | 1490992 | 62417 | 1464307 | 1166962 | 297345 |
| 4.1 Equity and investment fund shares | 903041 | 834377 | 68664 | 770814 | 669876 | 100938 |
| 4.2 Debt instruments | 463455 | 381183 | 82272 | 428729 | 448118 | -19389 |
| 4.3 Other financial assets and liabilities | 186912 | 275432 | -88520 | 264764 | 48968 | 215796 |
| 5 Net errors and omissions | 9636 | 0 | 9636 | 0 | 7233 | -7233 |

Note : P: Preliminary

No. 42: India's International Investment Position

(US\$ Million)

| Item | As on Financial Year /Quarter End | | | | | | | |
|--------------------------------------|-----------------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|
| | 2021-22 | | 2021 | | 2022 | | | |
| | | | 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 | 211573 | 521647 | 203814 | 506710 | 214230 | 517254 | 216834 | 510106 |
| 1.1 Equity Capital * | 132765 | 493987 | 128062 | 480743 | 134357 | 489548 | 135799 | 481956 |
| 1.2 Other Capital | 78807 | 27660 | 75752 | 25967 | 79873 | 27706 | 81034 | 28150 |
| 2. Portfolio investment | 10642 | 270425 | 8578 | 291215 | 10614 | 246342 | 10983 | 245720 |
| 2.1 Equity | 1110 | 156381 | 4590 | 177034 | 8153 | 135476 | 6312 | 137013 |
| 2.2 Debt | 9533 | 114043 | 3988 | 114181 | 2461 | 110866 | 4671 | 108707 |
| 3. Other investment | 90974 | 486588 | 84498 | 469430 | 77434 | 483115 | 86995 | 481281 |
| 3.1 Trade credit | 18561 | 118145 | 11815 | 104418 | 21146 | 123184 | 24753 | 128323 |
| 3.2 Loan | 10474 | 195245 | 10816 | 192116 | 6543 | 191557 | 8084 | 188488 |
| 3.3 Currency and Deposits | 42081 | 140994 | 42302 | 142904 | 30242 | 137445 | 33528 | 135621 |
| 3.4 Other Assets/Liabilities | 19858 | 32203 | 19565 | 29991 | 19504 | 30929 | 20630 | 28850 |
| 4. Reserves | 607309 | | 635363 | | 589155 | | 532664 | |
| 5. Total Assets/Liabilities | 920498 | 1278660 | 932253 | 1267355 | 891433 | 1246712 | 847475 | 1237108 |
| 6. Net IIP (Assets - Liabilities) | -358162 | | -335102 | | -355279 | | -389633 | |

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 2021-22 | 2021 | 2022 | | FY 2021-22 | 2021 | 2022 | |
| | | 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) | 33.01 | 3.13 | 3.67 | 3.42 | 206873112 | 20703988 | 22488758 | 22326077 |
| 1.1 Govt. Securities Clearing (1.1.1 to 1.1.3) | 12.22 | 1.10 | 1.26 | 1.19 | 142072939 | 14801512 | 15457897 | 15144169 |
| 1.1.1 Outright | 6.22 | 0.48 | 0.66 | 0.60 | 8793301 | 651103 | 759097 | 711065 |
| 1.1.2 Repo | 3.08 | 0.30 | 0.36 | 0.36 | 51015712 | 5075401 | 6039868 | 6125370 |
| 1.1.3 Tri-party Repo | 2.92 | 0.31 | 0.23 | 0.23 | 82263926 | 9075009 | 8658933 | 8307734 |
| 1.2 Forex Clearing | 19.91 | 1.96 | 2.33 | 2.16 | 59775826 | 5516604 | 6577286 | 6670289 |
| 1.3 Rupee Derivatives @ | 0.88 | 0.07 | 0.08 | 0.07 | 5024347 | 385873 | 453575 | 511620 |
| B. Payment Systems | | | | | | | | |
| I Financial Market Infrastructures (FMIs) | — | — | — | — | — | — | — | — |
| 1 Credit Transfers - RTGS (1.1 to 1.2) | 2078.39 | 192.78 | 206.46 | 215.03 | 128657516 | 12966991 | 12291749 | 13736057 |
| 1.1 Customer Transactions | 2063.73 | 191.50 | 205.30 | 213.80 | 113319292 | 11418233 | 10691727 | 12180091 |
| 1.2 Interbank Transactions | 14.66 | 1.29 | 1.16 | 1.23 | 15338225 | 1548758 | 1600022 | 1555966 |
| II Retail | | | | | | | | |
| 2 Credit Transfers - Retail (2.1 to 2.6) | 577934.74 | 56422.79 | 84557.58 | 90675.95 | 42728006 | 4076395 | 4527540 | 4928331 |
| 2.1 AePS (Fund Transfers) @ | 9.76 | 0.65 | 0.51 | 0.32 | 575 | 36 | 29 | 21 |
| 2.2 APBS \$ | 12573.33 | 1082.20 | 1065.62 | 1157.66 | 133345 | 14987 | 9460 | 20670 |
| 2.3 IMPS | 46625.25 | 4429.86 | 4634.80 | 4858.37 | 4171037 | 396411 | 454679 | 486552 |
| 2.4 NACH Cr \$ | 18757.82 | 1483.71 | 1373.88 | 1515.84 | 1281685 | 113132 | 141901 | 157435 |
| 2.5 NEFT | 40407.29 | 3763.38 | 4388.30 | 4854.81 | 28725463 | 2724980 | 2730878 | 2981681 |
| 2.6 UPI @ | 459561.30 | 45662.99 | 73094.47 | 78288.95 | 8415900 | 826848 | 1190593 | 1281971 |
| 2.6.1 of which USSD @ | 11.99 | 1.12 | 1.79 | 1.92 | 177 | 16 | 19 | 21 |
| 3 Debit Transfers and Direct Debits (3.1 to 3.3) | 12189.49 | 1064.54 | 1316.60 | 1357.72 | 1034444 | 91163 | 110181 | 116425 |
| 3.1 BHIM Aadhaar Pay @ | 227.73 | 19.59 | 14.52 | 12.71 | 6113 | 611 | 475 | 446 |
| 3.2 NACH Dr \$ | 10754.74 | 937.92 | 1164.17 | 1198.55 | 1026641 | 90426 | 109479 | 115737 |
| 3.3 NETC (linked to bank account) @ | 1207.02 | 107.03 | 137.91 | 146.46 | 1689 | 126 | 227 | 242 |
| 4 Card Payments (4.1 to 4.2) | 61782.93 | 5611.80 | 4955.95 | 5223.54 | 1701851 | 160398 | 170386 | 185149 |
| 4.1 Credit Cards (4.1.1 to 4.1.2) | 22398.82 | 2112.59 | 2347.73 | 2556.47 | 971638 | 93907 | 114794 | 126524 |
| 4.1.1 PoS based \$ | 11124.59 | 1093.48 | 1319.99 | 1449.35 | 380643 | 36713 | 46296 | 51772 |
| 4.1.2 Others \$ | 11274.23 | 1019.10 | 1027.75 | 1107.12 | 590994 | 57195 | 68498 | 74752 |
| 4.2 Debit Cards (4.2.1 to 4.2.1) | 39384.11 | 3499.21 | 2608.22 | 2667.08 | 730213 | 66491 | 55592 | 58625 |
| 4.2.1 PoS based \$ | 22967.10 | 2202.51 | 1779.41 | 1859.31 | 451550 | 43062 | 37237 | 39573 |
| 4.2.2 Others \$ | 16417.00 | 1296.71 | 828.81 | 807.77 | 278663 | 23429 | 18355 | 19052 |
| 5 Prepaid Payment Instruments (5.1 to 5.2) | 65782.75 | 7008.04 | 6075.20 | 6354.65 | 279416 | 25878 | 22808 | 22648 |
| 5.1 Wallets | 53013.86 | 5659.18 | 4730.07 | 5012.71 | 220183 | 21195 | 17342 | 18400 |
| 5.2 Cards (5.2.1 to 5.2.2) | 12768.89 | 1348.86 | 1345.14 | 1341.94 | 59233 | 4683 | 5466 | 4248 |
| 5.2.1 PoS based \$ | 1116.16 | 99.63 | 77.72 | 61.58 | 19546 | 1893 | 1039 | 722 |
| 5.2.2 Others \$ | 11652.73 | 1249.23 | 1267.42 | 1280.37 | 39687 | 2790 | 4428 | 3527 |
| 6 Paper-based Instruments (6.1 to 6.2) | 6999.12 | 660.33 | 586.94 | 608.13 | 6650333 | 640955 | 581120 | 621387 |
| 6.1 CTS (NPCI Managed) | 6999.12 | 660.33 | 586.94 | 608.13 | 6650333 | 640955 | 581120 | 621387 |
| 6.2 Others | 0.00 | — | — | — | — | — | — | — |
| Total - Retail Payments (2+3+4+5+6) | 724689.03 | 70767.50 | 97492.27 | 104220.00 | 52394049 | 4994790 | 5412034 | 5873940 |
| Total Payments (1+2+3+4+5+6) | 726767.42 | 70960.28 | 97698.73 | 104435.03 | 181051565 | 17961781 | 17703784 | 19609997 |
| Total Digital Payments (1+2+3+4+5) | 719768.30 | 70299.95 | 97111.79 | 103826.90 | 174401233 | 17320825 | 17122664 | 18988610 |

PART II - Payment Modes and Channels

| System | Volume (Lakh) | | | | Value (₹ Crore) | | | |
|---|-------------------|----------|----------|----------|--------------------|---------|---------|---------|
| | FY 2021-22 | 2021 | 2022 | | FY 2021-22 | 2021 | 2022 | |
| | | 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) | 506842.31 | 49877.80 | 79124.20 | 84909.51 | 14961371 | 1433961 | 1993302 | 2125480 |
| 1.1 Intra-bank \$ | 40805.69 | 3927.19 | 5342.59 | 5557.30 | 2726363 | 254443 | 355045 | 373813 |
| 1.2 Inter-bank \$ | 466036.62 | 45950.61 | 73781.61 | 79352.22 | 12235007 | 1179518 | 1638256 | 1751667 |
| 2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2) | 40726.59 | 3593.75 | 3487.32 | 3664.00 | 83159996 | 8602920 | 7808859 | 8591147 |
| 2.1 Intra-bank @ | 9583.32 | 848.88 | 870.33 | 949.32 | 52142582 | 5691255 | 4606598 | 4923803 |
| 2.2 Inter-bank @ | 31143.27 | 2744.87 | 2616.98 | 2714.68 | 31017413 | 2911666 | 3202261 | 3667344 |
| B. ATMs | | | | | | | | |
| 3 Cash Withdrawal at ATMs \$ (3.1 to 3.3) | 65240.43 | 5923.80 | 5608.36 | 5891.49 | 3111946 | 280371 | 265635 | 280461 |
| 3.1 Using Credit Cards \$ | 62.37 | 5.90 | 7.59 | 8.13 | 3130 | 295 | 367 | 392 |
| 3.2 Using Debit Cards \$ | 64851.61 | 5889.14 | 5568.41 | 5850.03 | 3097739 | 279100 | 264180 | 278923 |
| 3.3 Using Pre-paid Cards \$ | 326.45 | 28.76 | 32.36 | 33.33 | 11076 | 977 | 1089 | 1146 |
| 4 Cash Withdrawal at PoS \$ (4.1 to 4.2) | 91.17 | 3.78 | 2.30 | 2.38 | 728 | 35 | 23 | 24 |
| 4.1 Using Debit Cards \$ | 79.42 | 3.71 | 2.28 | 2.37 | 557 | 35 | 23 | 24 |
| 4.2 Using Pre-paid Cards \$ | 11.75 | 0.07 | 0.02 | 0.02 | 171 | 0 | 0 | 0 |
| 5 Cash Withdrawal at Micro ATMs @ | 11126.04 | 940.20 | 944.92 | 934.53 | 299776 | 25208 | 25541 | 25484 |
| 5.1 AePS @ | 11126.04 | 940.20 | 944.92 | 934.53 | 299776 | 25208 | 25541 | 25484 |

PART III - Payment Infrastructures (Lakh)

| System | As on March 2022 | 2021 | 2022 | |
|--|---------------------|----------|----------|----------|
| | | Dec. | Nov. | Dec. |
| | 1 | 2 | 3 | 4 |
| Payment System Infrastructures | | | | |
| 1 Number of Cards (1.1 to 1.2) | 9912.93 | 10066.90 | 10283.34 | 10206.53 |
| 1.1 Credit Cards | 736.27 | 689.49 | 806.06 | 811.87 |
| 1.2 Debit Cards | 9176.66 | 9377.42 | 9477.28 | 9394.66 |
| 2 Number of PPIs @ (2.1 to 2.2) | 15553.69 | 15111.90 | 16098.32 | 16234.69 |
| 2.1 Wallets @ | 12787.93 | 12511.00 | 13269.83 | 13346.64 |
| 2.2 Cards @ | 2765.76 | 2600.90 | 2828.48 | 2888.05 |
| 3 Number of ATMs (3.1 to 3.2) | 2.52 | 2.45 | 2.55 | 2.57 |
| 3.1 Bank owned ATMs \$ | 2.20 | 2.15 | 2.20 | 2.20 |
| 3.2 White Label ATMs \$ | 0.31 | 0.30 | 0.36 | 0.37 |
| 4 Number of Micro ATMs @ | 9.16 | 7.27 | 13.34 | 14.19 |
| 5 Number of PoS Terminals | 60.70 | 54.98 | 73.52 | 75.50 |
| 6 Bharat QR @ | 49.72 | 46.47 | 48.25 | 49.59 |
| 7 UPI QR * | 1727.34 | 1440.10 | 2302.87 | 2379.44 |

@: 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.

Occasional Series

No. 44: Small Savings

(₹ Crore)

| Scheme | | 2020-21 | 2021 | | 2022 | |
|---|--------------------|----------------|----------------|----------------|----------------|----------------|
| | | | Feb. | Dec. | Jan. | Feb. |
| | | 1 | 2 | 3 | 4 | 5 |
| 1 Small Savings | Receipts | 181237 | 14405 | 18175 | 14893 | 13932 |
| | Outstanding | 1259585 | 1224772 | 1397878 | 1412766 | 1426737 |
| 1.1 Total Deposits | Receipts | 132687 | 10143 | 13855 | 10676 | 9753 |
| | Outstanding | 867494 | 847119 | 969847 | 980523 | 990274 |
| 1.1.1 Post Office Saving Bank Deposits | Receipts | 39748 | 2252 | 4475 | 3018 | 3568 |
| | Outstanding | 205888 | 194738 | 226701 | 229719 | 233287 |
| 1.1.2 MGNREG | Receipts | | | | | |
| | Outstanding | | | | | |
| 1.1.3 National Saving Scheme, 1987 | Receipts | 276 | -23 | -366 | -15 | -20 |
| | Outstanding | 3419 | 3037 | 3200 | 3185 | 3165 |
| 1.1.4 National Saving Scheme, 1992 | Receipts | 166 | 57 | 2 | -1 | -777 |
| | Outstanding | 175 | 40 | 150 | 149 | -628 |
| 1.1.5 Monthly Income Scheme | Receipts | 12211 | 1135 | 1228 | 1146 | 933 |
| | Outstanding | 221379 | 220277 | 232747 | 233892 | 234825 |
| 1.1.6 Senior Citizen Scheme 2004 | Receipts | 21009 | 1950 | 1929 | 1615 | 1490 |
| | Outstanding | 97051 | 94750 | 114134 | 115749 | 117239 |
| 1.1.7 Post Office Time Deposits | Receipts | 41470 | 3798 | 3926 | 3438 | 3217 |
| | Outstanding | 207557 | 203597 | 241034 | 244474 | 247690 |
| 1.1.7.1 1 year Time Deposits | Outstanding | 108205 | 107099 | 116043 | 116819 | 117578 |
| 1.1.7.2 2 year Time Deposits | Outstanding | 7473 | 7418 | 7931 | 7967 | 7996 |
| 1.1.7.3 3 year Time Deposits | Outstanding | 7227 | 7267 | 6983 | 6964 | 6944 |
| 1.1.7.4 5 year Time Deposits | Outstanding | 84652 | 81813 | 110077 | 112724 | 115172 |
| 1.1.8 Post Office Recurring Deposits | Receipts | 17807 | 974 | 2662 | 1475 | 1338 |
| | Outstanding | 132029 | 130683 | 151885 | 153359 | 154697 |
| 1.1.9 Post Office Cumulative Time Deposits | Receipts | 0 | 0 | -1 | 0 | 4 |
| | Outstanding | -25 | -24 | -25 | -25 | -22 |
| 1.1.10 Other Deposits | Receipts | 0 | 0 | 0 | 0 | 0 |
| | Outstanding | 21 | 21 | 21 | 21 | 21 |
| 1.2 Saving Certificates | Receipts | 34860 | 3647 | 3978 | 3691 | 3583 |
| | Outstanding | 286863 | 282483 | 321027 | 324713 | 328337 |
| 1.2.1 National Savings Certificate VIII issue | Receipts | 17361 | 1843 | 1860 | 1626 | 1585 |
| | Outstanding | 135348 | 133016 | 150513 | 152139 | 153724 |
| 1.2.2 Indira Vikas Patras | Receipts | -3 | 0 | 0 | 0 | 0 |
| | Outstanding | 159 | 157 | 158 | 158 | 158 |
| 1.2.3 Kisan Vikas Patras | Receipts | -7911 | -470 | -426 | -193 | 940 |
| | Outstanding | -6776 | -6194 | -8455 | -8648 | -7708 |
| 1.2.4 Kisan Vikas Patras - 2014 | Receipts | 25340 | 2274 | 2544 | 2258 | 1019 |
| | Outstanding | 147942 | 145422 | 168720 | 170978 | 171996 |
| 1.2.5 National Saving Certificate VI issue | Receipts | 41 | 0 | 0 | 0 | 23 |
| | Outstanding | -114 | -147 | -114 | -114 | -90 |
| 1.2.6 National Saving Certificate VII issue | Receipts | 32 | 0 | 0 | 0 | 16 |
| | Outstanding | -74 | -103 | -74 | -74 | -58 |
| 1.2.7 Other Certificates | Outstanding | 10378 | 10332 | 10279 | 10274 | 10315 |
| 1.3 Public Provident Fund | Receipts | 13690 | 615 | 342 | 526 | 596 |
| | Outstanding | 105228 | 95170 | 107004 | 107530 | 108126 |

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 | 2021 | | 2022 | | |
| | Sep. | Dec. | Mar. | Jun. | Sep. |
| | 1 | 2 | 3 | 4 | 5 |
| (A) Total (in ₹. Crore) | 8235318 | 8439811 | 8529036 | 8784931 | 9098788 |
| 1 Commercial Banks | 37.82 | 35.40 | 37.75 | 38.04 | 38.28 |
| 2 Non-Bank PDs | 0.35 | 0.27 | 0.29 | 0.33 | 0.38 |
| 3 Insurance Companies | 24.18 | 25.74 | 25.89 | 26.34 | 25.94 |
| 4 Mutual Funds | 2.91 | 3.08 | 2.91 | 2.32 | 2.58 |
| 5 Co-operative Banks | 1.50 | 1.82 | 1.81 | 1.84 | 1.80 |
| 6 Financial Institutions | 1.17 | 1.69 | 0.94 | 1.09 | 0.98 |
| 7 Corporates | 0.72 | 1.37 | 1.47 | 1.52 | 1.58 |
| 8 Foreign Portfolio Investors | 1.81 | 1.66 | 1.56 | 1.43 | 1.38 |
| 9 Provident Funds | 3.77 | 4.33 | 4.60 | 4.77 | 4.66 |
| 10 RBI | 16.98 | 16.92 | 16.62 | 16.06 | 15.28 |
| 11. Others | 8.79 | 7.73 | 6.15 | 6.30 | 7.15 |
| 11.1 State Governments | 1.67 | 1.69 | 1.82 | 1.84 | 1.83 |

| State Governments Securities | | | | | |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|
| Category | 2021 | | 2022 | | |
| | Sep. | Dec. | Mar. | Jun. | Sep. |
| | 1 | 2 | 3 | 4 | 5 |
| (B) Total (in ₹. Crore) | 4153508 | 4257578 | 4410250 | 4472011 | 4589128 |
| 1 Commercial Banks | 35.94 | 34.41 | 34.39 | 34.22 | 34.37 |
| 2 Non-Bank PDs | 0.44 | 0.40 | 0.38 | 0.41 | 0.36 |
| 3 Insurance Companies | 27.50 | 28.85 | 28.42 | 28.39 | 27.71 |
| 4 Mutual Funds | 1.97 | 1.91 | 1.82 | 1.89 | 2.08 |
| 5 Co-operative Banks | 3.60 | 4.07 | 4.04 | 4.06 | 3.89 |
| 6 Financial Institutions | 1.72 | 1.73 | 1.72 | 1.73 | 1.71 |
| 7 Corporates | 1.32 | 1.70 | 1.82 | 1.98 | 1.85 |
| 8 Foreign Portfolio Investors | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| 9 Provident Funds | 18.27 | 20.66 | 20.79 | 20.52 | 20.18 |
| 10 RBI | 0.85 | 0.83 | 0.80 | 0.79 | 0.79 |
| 11. Others | 8.38 | 5.40 | 5.81 | 5.99 | 7.05 |
| 11.1 State Governments | 0.18 | 0.19 | 0.20 | 0.21 | 0.21 |

| Treasury Bills | | | | | |
|--------------------------------|---------------|---------------|---------------|----------------|---------------|
| Category | 2021 | | 2022 | | |
| | Sep. | Dec. | Mar. | Jun. | Sep. |
| | 1 | 2 | 3 | 4 | 5 |
| (C) Total (in ₹. Crore) | 763582 | 692869 | 757198 | 1022053 | 920205 |
| 1 Commercial Banks | 50.22 | 47.01 | 51.14 | 53.14 | 52.85 |
| 2 Non-Bank PDs | 1.33 | 1.53 | 4.20 | 2.49 | 2.12 |
| 3 Insurance Companies | 4.12 | 6.29 | 6.58 | 5.34 | 5.46 |
| 4 Mutual Funds | 17.72 | 13.72 | 14.01 | 14.86 | 11.98 |
| 5 Co-operative Banks | 1.32 | 1.49 | 1.79 | 1.34 | 1.48 |
| 6 Financial Institutions | 2.12 | 2.36 | 3.53 | 3.73 | 4.17 |
| 7 Corporates | 2.40 | 3.13 | 3.47 | 4.27 | 3.86 |
| 8 Foreign Portfolio Investors | 0.15 | 0.72 | 0.49 | 0.40 | 0.53 |
| 9 Provident Funds | 0.37 | 0.85 | 0.21 | 1.70 | 3.21 |
| 10 RBI | 2.63 | 0.00 | 0.00 | 0.00 | 0.03 |
| 11. Others | 17.62 | 22.89 | 14.59 | 12.72 | 14.30 |
| 11.1 State Governments | 12.64 | 18.92 | 11.54 | 10.99 | 12.27 |

No. 46: Combined Receipts and Disbursements of the Central and State Governments

(₹ Crore)

| Item | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 RE | 2022-23 BE |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Total Disbursements | 4515946 | 5040747 | 5410887 | 6353359 | 7453320 | 8008684 |
| 1.1 Developmental | 2635110 | 2882758 | 3074492 | 3823423 | 4489442 | 4761567 |
| 1.1.1 Revenue | 2029044 | 2224367 | 2446605 | 3150221 | 3444624 | 3536719 |
| 1.1.2 Capital | 519356 | 596774 | 588233 | 550358 | 963856 | 1144725 |
| 1.1.3 Loans | 86710 | 61617 | 39654 | 122844 | 80962 | 80123 |
| 1.2 Non-Developmental | 1812455 | 2078276 | 2253027 | 2442941 | 2864084 | 3140466 |
| 1.2.1 Revenue | 1741432 | 1965907 | 2109629 | 2271637 | 2653832 | 2928102 |
| 1.2.1.1 Interest Payments | 814757 | 894520 | 955801 | 1060602 | 1244104 | 1408929 |
| 1.2.2 Capital | 69370 | 111029 | 141457 | 169155 | 178038 | 209892 |
| 1.2.3 Loans | 1654 | 1340 | 1941 | 2148 | 32214 | 2472 |
| 1.3 Others | 68381 | 79713 | 83368 | 86995 | 99794 | 106652 |
| 2 Total Receipts | 4528422 | 5023352 | 5734166 | 6397162 | 7193029 | 7944834 |
| 2.1 Revenue Receipts | 3376416 | 3797731 | 3851563 | 3688030 | 4894050 | 5497245 |
| 2.1.1 Tax Receipts | 2978134 | 3278947 | 3231582 | 3193390 | 4026487 | 4551271 |
| 2.1.1.1 Taxes on commodities and services | 1853859 | 2030050 | 2012578 | 2076013 | 2608666 | 2904479 |
| 2.1.1.2 Taxes on Income and Property | 1121189 | 1246083 | 1216203 | 1114805 | 1414088 | 1642678 |
| 2.1.1.3 Taxes of Union Territories (Without Legislature) | 3086 | 2814 | 2800 | 2572 | 3732 | 4115 |
| 2.1.2 Non-Tax Receipts | 398282 | 518783 | 619981 | 494640 | 867564 | 945974 |
| 2.1.2.1 Interest Receipts | 34224 | 36273 | 31137 | 33448 | 40481 | 46552 |
| 2.2 Non-debt Capital Receipts | 142433 | 140287 | 110094 | 64994 | 117937 | 90824 |
| 2.2.1 Recovery of Loans & Advances | 42213 | 44667 | 59515 | 16951 | 33188 | 19835 |
| 2.2.2 Disinvestment proceeds | 100219 | 95621 | 50578 | 48044 | 84748 | 70989 |
| 3 Gross Fiscal Deficit [1 - (2.1 + 2.2)] | 997097 | 1102729 | 1449230 | 2600335 | 2441333 | 2420614 |
| 3A Sources of Financing: Institution-wise | | | | | | |
| 3A.1 Domestic Financing | 989167 | 1097210 | 1440548 | 2530155 | 2421587 | 2401363 |
| 3A.1.1 Net Bank Credit to Government | 144792 | 387091 | 571872 | 890012 | 627255 | ----- |
| 3A.1.1.1 Net RBI Credit to Government | -144847 | 325987 | 190241 | 107493 | 350911 | ----- |
| 3A.1.2 Non-Bank Credit to Government | 844375 | 710119 | 868676 | 1640143 | 1794332 | 2401363 |
| 3A.2 External Financing | 7931 | 5519 | 8682 | 70180 | 19746 | 19251 |
| 3B Sources of Financing: Instrument-wise | | | | | | |
| 3B.1 Domestic Financing | 989167 | 1097210 | 1440548 | 2530155 | 2421587 | 2401363 |
| 3B.1.1 Market Borrowings (net) | 794856 | 795845 | 971378 | 1696012 | 1377060 | 1808401 |
| 3B.1.2 Small Savings (net) | 71222 | 88961 | 209232 | 458801 | 565522 | 398870 |
| 3B.1.3 State Provident Funds (net) | 42351 | 51004 | 38280 | 41273 | 45133 | 44731 |
| 3B.1.4 Reserve Funds | 18423 | -18298 | 10411 | 4545 | -1675 | 5824 |
| 3B.1.5 Deposits and Advances | 25138 | 66289 | -14227 | 25682 | 32945 | 34029 |
| 3B.1.6 Cash Balances | -12476 | 17395 | -323279 | -43802 | 260291 | 63850 |
| 3B.1.7 Others | 49653 | 96014 | 548753 | 347643 | 142310 | 45659 |
| 3B.2 External Financing | 7931 | 5519 | 8682 | 70180 | 19746 | 19251 |
| <i>4 Total Disbursements as per cent of GDP</i> | <i>26.4</i> | <i>26.7</i> | <i>27.0</i> | <i>32.1</i> | <i>31.5</i> | <i>31.0</i> |
| <i>5 Total Receipts as per cent of GDP</i> | <i>26.5</i> | <i>26.6</i> | <i>28.6</i> | <i>32.3</i> | <i>30.4</i> | <i>30.8</i> |
| <i>6 Revenue Receipts as per cent of GDP</i> | <i>19.8</i> | <i>20.1</i> | <i>19.2</i> | <i>18.6</i> | <i>20.7</i> | <i>21.3</i> |
| <i>7 Tax Receipts as per cent of GDP</i> | <i>17.4</i> | <i>17.3</i> | <i>16.1</i> | <i>16.1</i> | <i>17.0</i> | <i>17.6</i> |
| <i>8 Gross Fiscal Deficit as per cent of GDP</i> | <i>5.8</i> | <i>5.8</i> | <i>7.2</i> | <i>13.1</i> | <i>10.3</i> | <i>9.4</i> |

...: Not available. RE: Revised Estimates; BE: Budget Estimates

Source : Budget Documents of Central and State Governments.

No. 47: Financial Accommodation Availed by State Governments under various Facilities

(₹ Crore)

| Sr. No | State/Union Territory | During December-2022 | | | | | |
|--------|-----------------------|--------------------------------|------------------------|-------------------------------|------------------------|------------------------|------------------------|
| | | 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 | 299.72 | 31 | 1810.66 | 31 | 2129.80 | 20 |
| 2 | Arunachal Pradesh | - | - | - | - | - | - |
| 3 | Assam | - | - | - | - | - | - |
| 4 | Bihar | - | - | - | - | - | - |
| 5 | Chhattisgarh | - | - | - | - | - | - |
| 6 | Goa | - | - | - | - | - | - |
| 7 | Gujarat | - | - | - | - | - | - |
| 8 | Haryana | 332.38 | 12 | 780.54 | 7 | - | - |
| 9 | Himachal Pradesh | - | - | 201.66 | 4 | - | - |
| 10 | Jammu & Kashmir UT | - | - | 817.65 | 25 | 686.88 | 10 |
| 11 | Jharkhand | - | - | - | - | - | - |
| 12 | Karnataka | - | - | - | - | - | - |
| 13 | Kerala | 34.57 | 8 | 704.61 | 8 | - | - |
| 14 | Madhya Pradesh | - | - | - | - | - | - |
| 15 | Maharashtra | - | - | - | - | - | - |
| 16 | Manipur | - | - | 209.75 | 30 | 56.55 | 16 |
| 17 | Meghalaya | 68.70 | 12 | 17.45 | 7 | - | - |
| 18 | Mizoram | - | - | 85.27 | 13 | - | - |
| 19 | Nagaland | - | - | 152.58 | 28 | 59.40 | 10 |
| 20 | Odisha | - | - | - | - | - | - |
| 21 | Puducherry | - | - | - | - | - | - |
| 22 | Punjab | 929.68 | 9 | - | - | - | - |
| 23 | Rajasthan | 4951.31 | 31 | - | - | - | - |
| 24 | Tamil Nadu | - | - | - | - | - | - |
| 25 | Telangana | 524.27 | 25 | 1082.18 | 18 | 355.15 | 5 |
| 26 | Tripura | - | - | - | - | - | - |
| 27 | Uttar Pradesh | - | - | - | - | - | - |
| 28 | Uttarakhand | 35.08 | 1 | - | - | - | - |
| 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 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 2022 | | | |
|--------|-----------------------|---------------------------------|---------------------------------|-----------------------|-------------------------------|
| | | Consolidated Sinking Fund (CSF) | Guarantee Redemption Fund (GRF) | Government Securities | Auction Treasury Bills (ATBs) |
| | 1 | 2 | 3 | 4 | 5 |
| 1 | Andhra Pradesh | 9918 | 976 | 0 | 0 |
| 2 | Arunachal Pradesh | 2193 | 3 | 0 | 1700 |
| 3 | Assam | 4485 | 74 | 0 | 0 |
| 4 | Bihar | 7999 | - | 0 | 0 |
| 5 | Chhattisgarh | 6117 | - | 1 | 208 |
| 6 | Goa | 816 | 393 | 0 | 0 |
| 7 | Gujarat | 9649 | 573 | 0 | 0 |
| 8 | Haryana | 1451 | 1456 | 0 | 0 |
| 9 | Himachal Pradesh | - | - | 0 | 0 |
| 10 | Jammu & Kashmir UT | - | - | 0 | 0 |
| 11 | Jharkhand | 1031 | - | 0 | 0 |
| 12 | Karnataka | 12943 | 311 | 0 | 33907 |
| 13 | Kerala | 2565 | - | 0 | 0 |
| 14 | Madhya Pradesh | - | 1097 | 0 | 0 |
| 15 | Maharashtra | 57286 | 1208 | 0 | 22000 |
| 16 | Manipur | 60 | 120 | 0 | 0 |
| 17 | Meghalaya | 937 | 65 | 8 | 0 |
| 18 | Mizoram | 348 | 65 | 0 | 0 |
| 19 | Nagaland | 1526 | 40 | 0 | 0 |
| 20 | Odisha | 15621 | 1749 | 101 | 39930 |
| 21 | Puducherry | 453 | - | 0 | 1023 |
| 22 | Punjab | 6342 | 0 | 0 | 0 |
| 23 | Rajasthan | - | - | 129 | 9000 |
| 24 | Tamil Nadu | 7991 | - | 18 | 3252 |
| 25 | Telangana | 6775 | 1475 | 0 | 0 |
| 26 | Tripura | 830 | 16 | 0 | 1400 |
| 27 | Uttarakhand | 4222 | 173 | 0 | 0 |
| 28 | Uttar Pradesh | 4194 | - | 116 | 0 |
| 29 | West Bengal | 10880 | 796 | 239 | 0 |
| | Total | 176631 | 10588 | 611 | 112420 |

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 | 2020-21 | | 2021-22 | | 2022-23 | | | | | | Total amount raised, so far in 2022-23 | |
|---------|--------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|--|--------|
| | | | | | | 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 | 50896 | 40498 | 46443 | 36103 | 2500 | 1625 | 2913 | 2038 | - | -437 | 45303 | 37721 |
| 2 | Arunachal Pradesh | 767 | 767 | 563 | 530 | - | -50 | - | - | 559 | 559 | 559 | 489 |
| 3 | Assam | 15030 | 14230 | 12753 | 10753 | 1700 | 1700 | 2400 | 2400 | 800 | 800 | 12900 | 12600 |
| 4 | Bihar | 27285 | 24685 | 28489 | 24334 | 6000 | 6000 | 6000 | 3750 | 6000 | 5000 | 25000 | 20922 |
| 5 | Chhattisgarh | 13000 | 10500 | 4000 | 913 | - | - | - | - | - | - | - | - |
| 6 | Goa | 3354 | 3054 | 2000 | 1450 | 200 | 200 | 150 | - | 300 | 300 | 1050 | 550 |
| 7 | Gujarat | 44780 | 33280 | 31054 | 13554 | 7000 | 5000 | 3000 | 700 | 2000 | 1000 | 26000 | 13800 |
| 8 | Haryana | 30000 | 25550 | 30500 | 20683 | 2500 | 1400 | 3500 | 2950 | 1500 | 950 | 28000 | 18420 |
| 9 | Himachal Pradesh | 6000 | 3755 | 4000 | 1875 | - | -200 | 2000 | 2000 | 1000 | 1000 | 8000 | 6440 |
| 10 | Jammu & Kashmir UT | 9328 | 6020 | 8562 | 5373 | 800 | 660 | 500 | 500 | 1495 | 895 | 5545 | 4306 |
| 11 | Jharkhand | 9400 | 8900 | 5000 | 3191 | - | -500 | 1000 | 1000 | 2000 | 1500 | 3000 | 1500 |
| 12 | Karnataka | 69000 | 61900 | 59000 | 49000 | - | -3500 | 16000 | 14000 | 16000 | 13500 | 32000 | 24000 |
| 13 | Kerala | 28566 | 23066 | 27000 | 18120 | 2500 | 1500 | 4000 | 2364 | 1500 | 650 | 16936 | 7450 |
| 14 | Madhya Pradesh | 45573 | 38773 | 22000 | 13900 | 2000 | 1500 | 2000 | 2000 | - | - | 12000 | 9500 |
| 15 | Maharashtra | 69000 | 50022 | 68750 | 40790 | 11000 | 9000 | - | -1000 | - | -1563 | 45000 | 23753 |
| 16 | Manipur | 1302 | 1044 | 1476 | 1326 | - | - | - | - | 122 | 122 | 872 | 597 |
| 17 | Meghalaya | 1777 | 1587 | 1608 | 1298 | 300 | 300 | 413 | 263 | 440 | 440 | 1753 | 1503 |
| 18 | Mizoram | 944 | 677 | 747 | 447 | 100 | 100 | 100 | 100 | 150 | 150 | 990 | 875 |
| 19 | Nagaland | 1721 | 1366 | 1727 | 1222 | - | - | 146 | -54 | 300 | 300 | 1322 | 872 |
| 20 | Odisha | 3000 | 500 | 0 | -6473 | - | -1000 | - | -500 | - | - | - | -4500 |
| 21 | Puducherry | 1390 | 790 | 1374 | 841 | - | -100 | - | - | 300 | 200 | 700 | 500 |
| 22 | Punjab | 32995 | 23467 | 25814 | 12428 | 4650 | 3650 | 5300 | 4800 | 2245 | 1745 | 31900 | 22546 |
| 23 | Rajasthan | 57359 | 44273 | 51149 | 38243 | 4500 | 3230 | 1000 | -500 | 1251 | 751 | 29251 | 19169 |
| 24 | Sikkim | 1292 | 1292 | 1511 | 1471 | 200 | 165 | 277 | 277 | - | - | 877 | 807 |
| 25 | Tamil Nadu | 87977 | 76796 | 87000 | 72500 | 6000 | 1750 | 4000 | 3000 | 6000 | 4850 | 49000 | 34003 |
| 26 | Telangana | 43784 | 38782 | 45716 | 39256 | 3000 | 2375 | 2500 | 1875 | 2500 | 2187 | 28000 | 22582 |
| 27 | Tripura | 1916 | 1631 | 300 | 0 | - | - | - | -90 | - | -100 | - | -315 |
| 28 | Uttar Pradesh | 75500 | 59185 | 62500 | 42355 | 9000 | 6024 | - | - | - | -78 | 14000 | 2213 |
| 29 | Uttarakhand | 6200 | 5208 | 3200 | 1800 | 500 | 500 | - | - | - | -650 | 500 | -150 |
| 30 | West Bengal | 59680 | 50180 | 67390 | 45199 | 6000 | 4000 | - | -2500 | 7000 | 5000 | 37000 | 20500 |
| | Grand Total | 798816 | 651777 | 701626 | 492483 | 70450 | 45330 | 57199 | 39373 | 53462 | 39071 | 457458 | 302652 |

- : 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 | 2019-20 | | | | |
|--|-----------------|-----------------|-----------------|-----------------|------------------|
| | Q1 | Q2 | Q3 | Q4 | Annual |
| Net Financial Assets (I-II) | 238613.6 | 476724.8 | 386450.4 | 530769.8 | 1632558.5 |
| <i>Per cent of GDP</i> | 4.8 | 9.8 | 7.5 | 10.3 | 8.1 |
| I. Financial Assets | 398076.7 | 567753.2 | 517351.0 | 924069.3 | 2407250.2 |
| <i>Per cent of GDP</i> | 8.1 | 11.7 | 10.1 | 18.0 | 12.0 |
| of which: | | | | | |
| 1.Total Deposits (a+b) | 12239.0 | 296625.6 | 124015.7 | 451698.3 | 884578.5 |
| (a) Bank Deposits | -10550.9 | 278124.4 | 116211.9 | 444044.6 | 827830.0 |
| i. Commercial Banks | -13293.8 | 269475.4 | 66666.7 | 446006.7 | 768855.0 |
| ii. Co-operative Banks | 2742.9 | 8649.0 | 49545.2 | -1962.1 | 58975.0 |
| (b) Non-Bank Deposits | 22789.9 | 18501.2 | 7803.7 | 7653.7 | 56748.5 |
| 2. Life Insurance Funds | 117873.1 | 108209.1 | 110373.8 | 37714.2 | 374170.2 |
| 3. Provident and Pension Funds (including PPF) | 104681.1 | 98426.3 | 103356.1 | 193739.0 | 500202.5 |
| 4. Currency | 61244.1 | -26104.8 | 86832.6 | 160690.2 | 282662.1 |
| 5. Investments | 43936.8 | 43018.8 | 22655.1 | -11953.8 | 97656.9 |
| of which: | | | | | |
| (a) Mutual Funds | 23303.5 | 38382.2 | 19191.1 | -19191.1 | 61685.7 |
| (b) Equity | 18648.2 | 2172.4 | 936.2 | 4981.0 | 26737.8 |
| 6. Small Savings (excluding PPF) | 57038.5 | 46514.1 | 69053.6 | 91117.2 | 263723.4 |
| II. Financial Liabilities | 159463.1 | 91028.5 | 130900.6 | 393299.5 | 774691.7 |
| <i>Per cent of GDP</i> | 3.2 | 1.9 | 2.6 | 7.7 | 3.9 |
| Loans (Borrowings) from | | | | | |
| 1. Financial Corporations (a+b) | 159429.6 | 90994.9 | 130867.1 | 393266.0 | 774557.6 |
| (a) Banking Sector | 140261.4 | 58074.4 | 114905.9 | 196581.1 | 509822.8 |
| of which: | | | | | |
| Commercial Banks | 135754.1 | 57135.0 | 87377.4 | 202214.2 | 482480.6 |
| (b) Other Financial Institutions | 19168.2 | 32920.5 | 15961.2 | 196684.8 | 264734.8 |
| i. Non-Banking Financial Companies | -519.7 | 22976.7 | 29930.7 | 198264.3 | 250652.0 |
| ii. Housing Finance Companies | 17033.0 | 8093.1 | -15710.4 | -3093.1 | 6322.6 |
| iii. Insurance Companies | 2655.0 | 1850.8 | 1740.9 | 1513.6 | 7760.2 |
| 2. Non-Financial Corporations (Private Corporate Business) | 33.8 | 33.8 | 33.8 | 33.8 | 135.1 |
| 3. General Government | -0.3 | -0.3 | -0.3 | -0.3 | -1.0 |

No. 50 (a): Flow of Financial Assets and Liabilities of Households - Instrument-wise (Contd.)

(Amount in ₹ Crore)

| Item | 2020-21 | | | | |
|--|-----------------|-----------------|-----------------|------------------|------------------|
| | Q1 | Q2 | Q3 | Q4 | Annual |
| Net Financial Assets (I-II) | 600422.5 | 573643.2 | 481433.5 | 719844.5 | 2375343.7 |
| <i>Per cent of GDP</i> | 15.5 | 12.1 | 8.8 | 12.5 | 12.0 |
| I. Financial Assets | 805869.5 | 612224.3 | 651241.3 | 1092617.4 | 3161952.5 |
| <i>Per cent of GDP</i> | 20.8 | 13.0 | 12.0 | 19.0 | 16.0 |
| of which: | | | | | |
| 1. Total Deposits (a+b) | 297412.4 | 278631.7 | 158172.2 | 525550.7 | 1259767.1 |
| (a) Bank Deposits | 281191.3 | 264565.3 | 147096.0 | 527056.7 | 1219909.2 |
| i. Commercial Banks | 279010.5 | 262033.7 | 143558.6 | 471730.9 | 1156333.7 |
| ii. Co-operative Banks | 2180.8 | 2531.6 | 3537.3 | 55325.8 | 63575.6 |
| (b) Non-Bank Deposits | 16221.1 | 14066.4 | 11076.3 | -1506.0 | 39857.9 |
| 2. Life Insurance Funds | 123291.4 | 142365.7 | 156438.6 | 141120.0 | 563215.8 |
| 3. Provident and Pension Funds (including PPF) | 119666.9 | 110916.6 | 108512.2 | 207604.5 | 546700.1 |
| 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) | 55760.7 | 70924.2 | 67947.4 | 86862.2 | 281494.6 |
| II. Financial Liabilities | 205447.0 | 38581.1 | 169807.8 | 372772.9 | 786608.8 |
| <i>Per cent of GDP</i> | 5.3 | 0.8 | 3.1 | 6.5 | 4.0 |
| Loans (Borrowings) from | | | | | |
| 1. Financial Corporations (a+b) | 205490.3 | 38624.3 | 169851.0 | 372816.9 | 786782.5 |
| (a) Banking Sector | 211058.8 | 13213.0 | 139622.0 | 284732.6 | 648626.4 |
| of which: | | | | | |
| Commercial Banks | 211259.3 | 13213.8 | 140514.3 | 242476.0 | 607463.5 |
| (b) Other Financial Institutions | -5568.6 | 25411.3 | 30229.0 | 88084.4 | 138156.1 |
| i. Non-Banking Financial Companies | -15450.4 | 21627.1 | 15921.2 | 61326.1 | 83424.0 |
| ii. Housing Finance Companies | 10516.6 | 2875.1 | 13048.5 | 25336.1 | 51776.2 |
| iii. Insurance Companies | -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 | -77.0 | -77.0 | -77.0 | -77.0 | -308.0 |

No. 50 (a): Flow of Financial Assets and Liabilities of Households - Instrument-wise (Concl.)

(Amount in ₹ Crore)

| Item | 2021-22 | | | | |
|--|------------------|-----------------|-----------------|-----------------|------------------|
| | Q1 | Q2 | Q3 | Q4 | Annual |
| Net Financial Assets (I-II) | 519781.2 | 358325.2 | 453302.7 | 636259.8 | 1967668.9 |
| <i>Per cent of GDP</i> | 10.1 | 6.4 | 7.2 | 9.6 | 8.3 |
| I. Financial Assets | 382780.7 | 547346.2 | 834009.6 | 796341.7 | 2560478.2 |
| <i>Per cent of GDP</i> | 7.5 | 9.7 | 13.2 | 12.0 | 10.8 |
| of which: | | | | | |
| 1. Total Deposits (a+b) | -84377.1 | 202652.1 | 425821.4 | 151374.9 | 695471.4 |
| (a) Bank Deposits | -106507.3 | 197301.2 | 422819.5 | 140297.2 | 653910.7 |
| i. Commercial Banks | -108037.7 | 195617.4 | 418642.9 | 145510.5 | 651733.1 |
| ii. Co-operative Banks | 1530.4 | 1683.8 | 4176.7 | -5213.3 | 2177.6 |
| (b) Non-Bank Deposits | 22130.2 | 5350.9 | 3001.9 | 11077.7 | 41560.7 |
| 2. Life Insurance Funds | 114617.8 | 127356.0 | 103154.9 | 95681.7 | 440810.4 |
| 3. Provident and Pension Funds (including PPF) | 126469.7 | 108777.0 | 91543.9 | 254877.2 | 581667.9 |
| 4. Currency | 128660.2 | -68631.2 | 62793.3 | 146845.0 | 269667.4 |
| 5. Investments | 24929.6 | 82305.4 | 69760.9 | 50980.8 | 227976.7 |
| 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) | 71423.1 | 93829.6 | 79877.9 | 95524.7 | 340655.3 |
| II. Financial Liabilities | -137000.5 | 189021.0 | 380706.9 | 160081.8 | 592809.2 |
| <i>Per cent of GDP</i> | -2.7 | 3.4 | 6.0 | 2.4 | 2.5 |
| Loans (Borrowings) from | | | | | |
| 1. Financial Corporations (a+b) | -137021.8 | 188999.7 | 380685.6 | 160060.6 | 592724.1 |
| (a) Banking Sector | -113662.5 | 134166.1 | 320160.2 | 153323.3 | 493987.0 |
| of which: | | | | | |
| Commercial Banks | -108061.2 | 135728.8 | 317452.5 | 152364.2 | 497484.4 |
| (b) Other Financial Institutions | -23359.3 | 54833.7 | 60525.5 | 6737.3 | 98737.1 |
| i. Non-Banking Financial Companies | -31118.4 | 28880.1 | 29479.8 | -31016.3 | -3774.8 |
| ii. Housing Finance Companies | 7132.0 | 24403.8 | 29494.8 | 37436.2 | 98466.8 |
| iii. Insurance Companies | 627.1 | 1549.8 | 1550.9 | 317.4 | 4045.2 |
| 2. Non-Financial Corporations (Private Corporate Business) | 33.8 | 33.8 | 33.8 | 33.8 | 135.1 |
| 3. General Government | -12.5 | -12.5 | -12.5 | -12.5 | -50.0 |

Notes: 1. Net Financial Savings of households refer to the flow of net financial assets, which represents change in financial assets held by households minus change in their financial liabilities.
2. Revisions in small savings and PPF are mainly on account of quarterly figures being derived from monthly receipts data sourced from Controller General of Accounts, Government of India.
3. Revisions in bank deposits for 2021-22 are attributed to the lower share of households in total deposits as per BSR-2.
4. Data as ratios to GDP have been calculated based on the Provisional Estimates of National Income 2021-22 released on May 31, 2022.
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-2019 | Sep-2019 | Dec-2019 | Mar-2020 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Financial Assets (a+b+c+d) | 16315506.3 | 16632816.5 | 17010694.5 | 17180616.2 |
| <i>Per cent of GDP</i> | <i>84.7</i> | <i>85.4</i> | <i>86.2</i> | <i>85.6</i> |
| (a) Bank Deposits (i+ii) | 8858293.4 | 9136417.9 | 9252629.8 | 9696674.3 |
| i. Commercial Banks | 8131543.2 | 8401018.6 | 8467685.3 | 8913692.0 |
| ii. Co-operative Banks | 726750.2 | 735399.2 | 784944.4 | 782982.3 |
| (b) Life Insurance Funds | 3883609.7 | 3930727.6 | 4049902.5 | 3884771.5 |
| (c) Currency | 2010842.9 | 1984738.1 | 2071570.7 | 2232261.0 |
| (d) Mutual Funds | 1404631.5 | 1412654.1 | 1468727.6 | 1197092.9 |
| Financial Liabilities (a+b) | 6370092.6 | 6461087.5 | 6591954.6 | 6985220.6 |
| <i>Per cent of GDP</i> | <i>33.1</i> | <i>33.2</i> | <i>33.4</i> | <i>34.8</i> |
| Loans (Borrowings) from | | | | |
| (a) Banking Sector | 5148115.0 | 5206189.4 | 5321095.3 | 5517676.4 |
| of which: | | | | |
| i. Commercial Banks | 4668496.4 | 4725631.3 | 4813008.7 | 5015222.9 |
| ii. Co-operative Banks | 478956.2 | 479656.9 | 506946.6 | 501074.8 |
| (b) Other Financial Institutions | 1221977.5 | 1254898.1 | 1270859.3 | 1467544.1 |
| of which: | | | | |
| i. Non-Banking Financial Companies | 451922.3 | 474899.0 | 504829.7 | 703094.0 |
| ii. Housing Finance Companies | 673312.1 | 681405.2 | 665694.8 | 662601.7 |

No. 50 (b): Stocks of Financial Assets and Liabilities of Households- Select Indicators (Contd.)

(Amount in ₹ Crore)

| Item | Jun-2020 | Sep-2020 | Dec-2020 | Mar-2021 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Financial Assets (a+b+c+d) | 18039169.4 | 18606364.4 | 19333484.1 | 20168953.3 |
| <i>Per cent of GDP</i> | <i>94.9</i> | <i>98.6</i> | <i>100.8</i> | <i>101.9</i> |
| (a) Bank Deposits (i+ii) | 9977865.6 | 10242430.9 | 10389526.9 | 10916583.6 |
| i. Commercial Banks | 9192702.5 | 9454736.2 | 9598294.8 | 10070025.7 |
| ii. Co-operative Banks | 785163.1 | 787694.7 | 791232.1 | 846557.9 |
| (b) Life Insurance Funds | 4102000.7 | 4274424.9 | 4551882.0 | 4718718.2 |
| (c) Currency | 2434693.7 | 2455980.6 | 2547436.6 | 2614237.0 |
| (d) Mutual Funds | 1343752.0 | 1443784.4 | 1648999.0 | 1730461.0 |
| Financial Liabilities (a+b) | 7190710.8 | 7229335.1 | 7399186.1 | 7772003.0 |
| <i>Per cent of GDP</i> | <i>37.8</i> | <i>38.3</i> | <i>38.6</i> | <i>39.3</i> |
| Loans (Borrowings) from | | | | |
| (a) Banking Sector | 5728735.3 | 5741948.3 | 5881570.2 | 6166302.8 |
| of which: | | | | |
| i. Commercial Banks | 5226482.2 | 5239696.0 | 5380210.4 | 5622686.4 |
| ii. Co-operative Banks | 500870.2 | 500865.3 | 499968.8 | 542221.2 |
| (b) Other Financial Institutions | 1461975.5 | 1487386.9 | 1517615.9 | 1605700.3 |
| of which: | | | | |
| i. Non-Banking Financial Companies | 687643.6 | 709270.7 | 725191.9 | 786518.0 |
| ii. Housing Finance Companies | 673118.3 | 675993.4 | 689041.8 | 714377.9 |

No. 50 (b): Stocks of Financial Assets and Liabilities of Households- Select Indicators (Concl'd.)

(Amount in ₹ Crore)

| Item | Jun-2021 | Sep-2021 | Dec-2021 | Mar-2022 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Financial Assets (a+b+c+d) | 20508115.7 | 21057343.4 | 21673261.7 | 22104312.7 |
| <i>Per cent of GDP</i> | 97.4 | 95.9 | 95.0 | 93.4 |
| (a) Bank Deposits (i+ii) | 10810076.3 | 11007377.6 | 11430197.1 | 11570494.3 |
| i. Commercial Banks | 9961988.0 | 10157605.4 | 10576248.3 | 10721758.8 |
| ii. Co-operative Banks | 848088.3 | 849772.1 | 853948.8 | 848735.5 |
| (b) Life Insurance Funds | 4894238.5 | 5105262.1 | 5175997.5 | 5287980.3 |
| (c) Currency | 2742897.3 | 2674266.1 | 2737059.4 | 2883904.4 |
| (d) Mutual Funds | 1855000.1 | 2064363.5 | 2126112.0 | 2152140.5 |
| Financial Liabilities (a+b) | 7634981.2 | 7823980.9 | 8204666.6 | 8364727.1 |
| <i>Per cent of GDP</i> | 36.3 | 35.6 | 36.0 | 35.3 |
| Loans (Borrowings) from | | | | |
| (a) Banking Sector | 6052640.2 | 6186806.3 | 6506966.5 | 6660289.7 |
| of which: | | | | |
| i. Commercial Banks | 5514625.2 | 5650354.1 | 5967806.6 | 6120170.8 |
| ii. Co-operative Banks | 536604.9 | 535027.3 | 537720.1 | 538664.3 |
| (b) Other Financial Institutions | 1582341.0 | 1637174.6 | 1697700.1 | 1704437.4 |
| of which: | | | | |
| i. Non-Banking Financial Companies | 755399.6 | 784279.7 | 813759.5 | 782743.2 |
| ii. Housing Finance Companies | 721510.0 | 745913.7 | 775408.5 | 812844.7 |

Notes: 1. Data have been compiled for select financial instruments only (loans from Banking Sector, NBFCs and HFCs) for which data are available.
2. Data as ratios to GDP have been calculated based on the Provisional Estimates of National Income 2021-22 released on May 31, 2022.
3. 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

NM₂ and NM₃ 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.

L₁ and L₂ are compiled monthly and L₃ 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 SWAP arrangement. 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 & 1.1.1.1.4: 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 2020-21 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 revised table format since June 2016, incorporates the ownership pattern of State Governments Securities and Treasury Bills along with the Central Government Securities.

State Government Securities include special bonds issued under Ujwal DISCOM Assurance Yojana (UDAY) scheme. Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

The category 'Others' comprises State Governments, Pension Funds, PSUs, Trusts, HUF/Individuals etc.

Table No. 46

GDP data is based on 2011-12 base. GDP for 2022-23 is from Union Budget 2022-23.

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**.

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Notes

- Many of the above publications are available at the RBI website (www.rbi.org.in).
 - Time Series data are available at the Database on Indian Economy (<http://dbie.rbi.org.in>).
 - The Reserve Bank of India History 1935-1997 (4 Volumes). Challenges to Central Banking in the Context of Financial Crisis and the Regional Economy of India: Growth and Finance are available at leading book stores in India.
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