RESERVE BANK OF INDIA

BULLETIN

AUGUST 2022

VOLUME LXXVI NUMBER 8

The Reserve Bank of India Bulletin is issued monthly by the Department of Economic and Policy Research, Reserve Bank of India, under the direction of the Editorial Committee.
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Governor's Statement

*Governor's Statement**

Shaktikanta Das

We will celebrate 75 years of our Independence in another ten days. It is a great moment for all of us. I take this opportunity to convey my warm greetings to everyone on this historic occasion.

Successive shocks to the global economy are taking their toll in terms of globalised inflationary surges, tightening of financial conditions, sharp appreciation of the US dollar and lower growth across geographies. Multilateral institutions, including the International Monetary Fund (IMF), have revised global growth projections downwards and highlighted rising risks of recession. Disquietingly, globalisation of inflation is coinciding with deglobalisation of trade. The pandemic and the war have ignited tendencies towards greater fragmentation, reshoring of supply chains and retrenchment of capital flows, which will pose long-term challenges for both globalisation and the global economy.

For emerging market economies (EMEs), these risks are magnified as they have to contend with both domestic growth-inflation trade-offs and spillovers from the most synchronised tightening of monetary policy worldwide. EMEs are facing a rapid tightening of external financial conditions, capital outflows, currency depreciations and reserve losses simultaneously. Some of them are also facing mounting burdens of debt and default. Elevated food and energy prices and shortages are rendering their populations vulnerable to insecurity of livelihood.

The Indian economy has naturally been impacted by the global economic situation. We have been grappling with the problem of high inflation. Financial markets have remained uneasy despite intermittent corrections. We have witnessed large portfolio outflows to the tune of US$ 13.3 billion during the current financial year so far (up to August 3). Nevertheless, with strong and resilient fundamentals, India is expected to be amongst the fastest growing economies during 2022-23 according to the IMF, with signs of inflation moderating over the course of the year. Export of goods and services together with remittances are expected to keep the current account deficit within sustainable limits. The decline in external debt to GDP ratio, net international investment position to GDP ratio and debt service ratio during 2021-22 impart resilience against external shocks[1]. The financial sector is well capitalised and sound. India's foreign exchange reserves, supplemented by net forward assets, provide insurance against global spillovers. Our umbrella remains strong.

Decisions and Deliberations of the Monetary Policy Committee (MPC)

Against this background, the monetary policy committee (MPC) met on August 3 to 5 and reviewed the macroeconomic situation and its outlook. The MPC decided unanimously to increase the policy repo rate by 50 basis points to 5.4 per cent, with immediate effect. Consequently, the standing deposit facility (SDF) rate stands adjusted to 5.15 per cent; and the marginal standing facility (MSF) rate and the Bank Rate to 5.65 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.

Let me now dwell briefly on the MPC's rationale for its decisions on the policy rate and the stance. Against the prevailing adverse global environment, the MPC noted that domestic economic activity is

* Governor's Statement - August 5, 2022.

[1] External debt/GDP ratio fell from 21.2 per cent in March 2021 to 19.9 per cent in March 2022, while net international investment position/GDP ratio (*i.e.* net claims of non-residents) improved from (-) 13.2 per cent to (-) 11.6 per cent over the same period. Debt service ratio declined from 8.2 per cent in 2020-21 to 5.2 per cent in 2021-22.

resilient and progressing broadly along the lines of the June resolution of the MPC. Consumer price inflation has eased from its surge in April but remains uncomfortably high and above the upper threshold of the target. Inflationary pressures are broad-based and core inflation remains at elevated levels. The volatility in global financial markets is impinging upon domestic financial markets, including the currency market, thereby leading to imported inflation.

With inflation expected to remain above the upper threshold in Q2 and Q3, the MPC stressed that sustained high inflation could destabilise inflation expectations and harm growth in the medium term. The MPC, therefore, judged that further calibrated withdrawal of monetary accommodation is warranted to keep inflation expectations anchored and contain the second-round effects. Accordingly, the MPC decided to increase the policy repo rate by 50 basis points to 5.4 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.

Assessment of Growth and Inflation

Growth

Domestic economic activity is exhibiting signs of broadening. The south-west monsoon rainfall and reservoir levels are above normal; kharif sowing is progressing well, although it is marginally below last year's level due to uneven rainfall distribution[2]. On the demand side, indicators such as production of consumer durables, domestic air passenger traffic and sale of passenger vehicles suggest improvement in urban demand. Rural demand indicators, however, exhibited mixed signals – while two-wheeler sales increased, tractor sales contracted in June over a high base though. High frequency indicators of the services sector like railway freight traffic, port freight traffic, e-way bills, toll collections and commercial vehicle sales remained robust in June and July. Investment activity is also picking up – the production of capital goods recorded double-digit growth for the second month in a row in May and import of capital goods also witnessed robust growth in June. PMI manufacturing rose to an 8-month high in July. PMI services indicated continued expansion in July, although it fell from an over 11-year high of June. Capacity utilisation in the manufacturing sector is now above its long-run average[3], signalling the need for fresh investment activity in additional capacity creation. Bank credit growth has accelerated to 14.0 per cent (y-o-y) as on July 15, 2022 from 5.4 per cent a year ago. Incoming data of corporates for Q1 indicate that sales and demand conditions and profitability of manufacturing sector remained buoyant.

Looking ahead, a good progress of the southwest monsoon and kharif sowing would support rural consumption. Urban consumption is expected to benefit from the demand for contact-intensive services, better performance of corporates and improving consumer optimism. The increase in capacity utilisation, government's capex push and large expansion in bank credit should support investment activity. According to our survey, manufacturing firms expect sustained improvement in production volumes and new orders in Q2:2022-23, which is likely to sustain through Q4. At the same time, the domestic economy faces headwinds from global forces - protracted geopolitical tensions; rising global financial market volatility; tightening global financial conditions; and global recession risks.

[2] The cumulative seasonal rainfall was 6 per cent above the long period average (LPA) as on August 4, 2022, with 30 out of the 36 sub-divisions receiving normal or above normal rainfall as against 28 sub-divisions last year. As of July 29, 2022, the total area sown under kharif crops was 2.2 per cent lower than a year ago. The storage in major reservoirs as on July 28 was 119 per cent of that in the corresponding period of last year and 139 per cent of the average during the last ten years.

[3] According to RBI survey, capacity utilisation in the manufacturing sector in Q4:2021-22 was 75.3 per cent relative to its long-term average of 73.7 per cent.

Taking all these factors into consideration, the real GDP growth projection for 2022-23 is retained at 7.2 per cent, with Q1 at 16.2 per cent; Q2 at 6.2 per cent; Q3 at 4.1 per cent; and Q4 at 4.0 per cent, with risks broadly balanced. Real GDP growth for Q1:2023-24 is projected at 6.7 per cent.

Inflation

June 2022 was the sixth consecutive month when headline CPI inflation remained at or above the upper tolerance level of 6 per cent. Looking ahead, the inflation trajectory continues to be heavily contingent upon the evolving geopolitical developments, international commodity market dynamics, global financial market developments and the spatial and temporal distribution of the south-west monsoon. Since the last MPC meeting, however, there has been some let-up in global commodity prices – particularly in prices of industrial metals – and some softening in global food prices. Domestic edible oil prices are expected to soften further on the back of improving supplies from key producing countries and Government's supply-side interventions. The resumption of wheat supply from the Black Sea region, if it sustains, could help to temper international prices. Supply chain pressures, though elevated, are on an easing trajectory. Further, the advance of the south west monsoon is by and large on track and kharif sowing has picked up in recent weeks. The shortfall in kharif sowing of paddy, however, needs to be watched closely, although buffer stocks are quite large. Household inflation expectations have eased, but they still remain elevated.

Incidence of unseasonal and excessive rainfall, if any, can impact food prices, especially vegetable prices. Greater transmission of input cost pressures to selling prices across manufacturing and services sectors may also create fresh price pressures. Moreover, persistently elevated cost of living conditions could translate to higher wages and further price increases, especially if pricing power of firms strengthen. Taking into account these factors, and on the assumption of a normal monsoon in 2022 and average crude oil price (Indian basket) of US$ 105 per barrel, inflation is projected at 6.7 per cent in 2022-23, with Q2 at 7.1 per cent; Q3 at 6.4 per cent; and Q4 at 5.8 per cent, with risks evenly balanced. CPI inflation for Q1:2023-24 is projected at 5.0 per cent.

The inflation trajectory is now poised at a decisive point. While there are incipient signs of a confluence of factors that could lead to further softening of domestic inflationary pressures, there remain significant uncertainties. In such a milieu, with growth momentum expected to be resilient despite headwinds from the external sector, monetary policy should persevere further in its stance of withdrawal of accommodation to ensure that inflation moves close to the target of 4.0 per cent over the medium term, while supporting growth. A calibrated approach would provide sufficient flexibility to monetary policy in the current uncertain environment.

Liquidity and Financial Market Conditions

The introduction of the standing deposit facility (SDF) in April 2022, which raised the floor of the liquidity adjustment facility (LAF) corridor by 40 basis points (bps), along with the policy repo rate hikes of May and June, have effectively resulted in withdrawal of accommodation by 130 bps. Consequently, the weighted average call rate (WACR) – the operating target of monetary policy – has commensurately firmed up. At the longer end of the money market, interest rates on 91-day treasury bills, commercial paper (CPs) and certificates of deposit (CDs) have also moved higher since April. The rate hikes also triggered an upward adjustment in the benchmark lending rates by the banks. Term deposit rates are also increasing which should bode well for availability of funds with the banks in the context of sustained buoyancy in credit demand.

Surplus liquidity in the banking system, as reflected in average daily absorptions under the LAF (both SDF and variable rate reverse repo auctions), moderated to ₹3.8 lakh crore during June-July 2022 from ₹6.7 lakh crore during April-May. The sharp moderation in surplus liquidity from July 20, mainly on account of tax and capital outflows, resulted in money market rates firming up above the repo rate. To alleviate the liquidity stress, the RBI conducted a variable rate repo auction of ₹50,000 crore of 3 days maturity on July 26, 2022. Going forward, and as indicated in my February 2022 statement, the RBI will remain vigilant on the liquidity front and conduct two-way fine-tuning operations as and when warranted – both variable rate repo (VRR) and variable rate reverse repo (VRRR) operations of different tenors, depending on the evolving liquidity and financial conditions.

During the current financial year (up to August 4), the US dollar index (DXY) has appreciated by 8.0 per cent against a basket of major currencies. In this milieu, the Indian Rupee has moved in a relatively orderly fashion depreciating by 4.7 per cent against the US dollar during the same period – faring much better than several reserve currencies as well as many of its EME and Asian peers. The depreciation of the Indian rupee is more on account of the appreciation of US dollar rather than weakness in macroeconomic fundamentals of the Indian economy. Market interventions by the RBI have helped in containing volatility and ensuring orderly movement of the rupee. We remain watchful and focused on maintaining stability of the Indian rupee.

The Indian financial system remains resilient. This will help the economy in emerging out of the shadows of the pandemic and the impact of the war in Europe. While the banking system remains well capitalised and profitable, a deleveraged corporate sector augurs well for sustaining the recovery.

External Sector

India's external sector has weathered the storm while navigating through the recent global spillovers. Merchandise exports grew in April-July 2022 while merchandise imports surged to record high on the back of elevated global commodity prices. Consequently, the merchandise trade deficit expanded to US$ 100.0 billion in April-July 2022. Provisional data indicate that demand for services exports, especially IT services, remained buoyant in Q1 despite global uncertainty. Exports of travel and transport services also improved in Q1:2022-23 on a year-on-year basis.

From the external financing perspective, net foreign direct investment (FDI) at US$ 13.6 billion in Q1:2022-23 was robust as compared to US$ 11.6 billion in Q1:2021-22. Foreign portfolio investment, after remaining in exit mode during Q1:2022-23, turned positive in July 2022. Along with several other measures undertaken in July, the Reserve Bank has also used its foreign exchange reserves accumulated over the years to curb volatility in the exchange rate. Despite the resultant drawdown, India's foreign exchange reserves remain the fourth largest globally.

Additional Measures

I shall now announce certain additional measures, the details of which are set out in the statement on developmental and regulatory policies (Part B) of the Monetary Policy Statement. The additional measures are as follows.

Regulatory Measures - Standalone Primary Dealers (SPDs)

Standalone Primary Dealers (SPDs) have played an important role in the development of financial markets in India. Considering their potential in further facilitating financial market development, the following two measures are being announced for the SPDs.

i. It is proposed to enable Standalone Primary Dealers (SPDs) to offer all foreign exchange market-making facilities as currently permitted to Category-I Authorised Dealers, subject to prudential guidelines. This measure will provide customers with a wider set of market makers to manage their foreign currency risk. This will also increase the breadth of the forex market in India.

ii. Standalone Primary Dealers (SPDs) will be permitted to undertake transactions in the offshore Rupee Overnight Indexed Swap (OIS) market with non-residents and other market makers. This measure will supplement a similar measure announced in February this year for the banks. These measures are expected to remove the segmentation between onshore and offshore OIS markets and improve price discovery.

Managing Risks and Code of Conduct in Outsourcing of Financial Services

The RBI has, from time to time, issued guidelines on managing risks in outsourcing of certain activities by the Regulated Entities (REs). In view of the increasing trend of outsourcing, the framework for REs to manage the associated risks needs to be suitably strengthened. Therefore, to harmonise and consolidate the extant guidelines, a draft Master Direction on Managing Risks and Code of Conduct in Outsourcing of Financial Services will be issued shortly for comments from stakeholders.

Enabling Bharat Bill Payment System (BBPS) to Process Cross-Border Inbound Bill Payments

The Bharat Bill Payment System (BBPS) is an interoperable platform for standardised bill payments. This has transformed the bill payment experience for users in India. Over 20,000 billers are part of the system, and more than 8 crore transactions are processed on a monthly basis. It is now proposed to enable BBPS to accept cross-border inward bill payments. This will enable Non-Resident Indians (NRIs) to undertake bill payments for utility, education and other such payments on behalf of their families in India. This will greatly benefit the senior citizens in particular.

Inclusion of Credit Information Companies (CICs) under the Reserve Bank-Integrated Ombudsman Scheme (RB-IOS) 2021 and Introduction of the Internal Ombudsman (IO) Mechanism

The Reserve Bank - Integrated Ombudsman Scheme (RB-IOS) has improved the customer grievance redress mechanism. The turnaround time of grievance redress under RB-IOS has declined considerably. In order to make the RB-IOS more broad based, it has been decided to include Credit Information Companies (CICs) under the RB-IOS framework. This will provide a cost-free alternative redress mechanism for grievances against CICs. Further, with a view to strengthen the internal grievance redress by CICs themselves, it has been decided to mandate the CICs to have their own internal Ombudsman (IO) framework.

Committee on MIBOR Benchmark

The Reserve Bank has been taking measures, from time to time, to develop the interest rate derivatives (IRD) market in India. Such measures have led to diversification of the participant base and increased use of IRD instruments, such as the Mumbai Interbank Outright Rate (MIBOR) overnight indexed swap (OIS) contracts. In view of the recent international efforts to develop alternative benchmark rates, it is proposed to set up a committee to undertake an in-depth examination of the issues, including the need for transition to an alternative benchmark for MIBOR, and suggest the way forward.

Concluding Observations

The Indian economy is holding steady and progressing in an ocean of turbulence and uncertainty. As we celebrate Azadi ka Amrit Mahotsav, this is a

moment of reckoning, reflection and renewed resolve to work for the betterment of our economy. We, in the RBI, reiterate our commitment to maintain price and financial stability to place our economy on a sustainable path of growth. Our actions have helped the economy to tide over a series of shocks in the last two and half years. We are seized of our role at this critical juncture and will persevere in our efforts to ensure a safe and soft landing. This is a moment to recall a quote from Mahatma Gandhi: "For me the road to salvation lies through incessant toil in the service of my country and there through of humanity"[4].

Thank you. Namaskar.

[4] Source: Young India, 3-4-1924, p.114

MONETARY POLICY STATEMENT FOR 2022-23

Resolution of the Monetary Policy Committee (MPC) August 3-5, 2022

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 (August 5, 2022) decided to:

- Increase the policy repo rate under the liquidity adjustment facility (LAF) by 50 basis points to 5.40 per cent with immediate effect.

Consequently, the standing deposit facility (SDF) rate stands adjusted to 5.15 per cent and the marginal standing facility (MSF) rate and the Bank Rate to 5.65 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. Since the MPC's meeting in June 2022, the global economic and financial environment has deteriorated with the combined impact of monetary policy tightening across the world and the persisting war in Europe heightening risks of recession. Gripped by risk aversion, global financial markets have experienced surges of volatility and large sell-offs. The US dollar index soared to a two-decade high in July. Both advanced economies (AEs) and emerging market economies (EMEs) witnessed weakening of their currencies against the US dollar. EMEs are experiencing capital outflows and reserve losses which are exacerbating risks to their growth and financial stability.

Domestic Economy

3. Domestic economic activity remains resilient. As on August 4, 2022, the south-west monsoon rainfall was 6 per cent above the long period average (LPA). Kharif sowing is picking up. High frequency indicators of activity in the industrial and services sectors are holding up. Urban demand is strengthening while rural demand is gradually catching up. Merchandise exports recorded a growth of 24.5 per cent during April-June 2022, with some moderation in July. Non-oil non-gold imports were robust, indicating strengthening domestic demand.

4. CPI inflation eased to 7.0 per cent (year-on-year, y-o-y) during May-June 2022 from 7.8 per cent in April, although it persists above the upper tolerance band. Food inflation has registered some moderation, especially with the softening of edible oil prices, and deepening deflation in pulses and eggs. Fuel inflation moved back to double digits in June primarily due to the rise in LPG and kerosene prices. While core inflation (*i.e.*, CPI excluding food and fuel) moderated in May-June due to the full direct impact of the cut in excise duties on petrol and diesel pump prices, effected on May 22, 2022, it remains at elevated levels.

5. Overall system liquidity continues in surplus, with average daily absorption under the LAF at ₹3.8 lakh crore during June-July. Money supply (M3) and bank credit from commercial banks rose (y-o-y) by 7.9 per cent and 14.0 per cent, respectively, as on July 15, 2022. India's foreign exchange reserves were placed at US$ 573.9 billion as on July 29, 2022.

* Released on August 5, 2022.

Outlook

6. Spillovers from geopolitical shocks are imparting considerable uncertainty to the inflation trajectory. More recently, food and metal prices have come off their peaks. International crude oil prices have eased in recent weeks but remain elevated and volatile on supply concerns even as the global demand outlook is weakening. The appreciation of the US dollar can feed into imported inflation pressures. Rising kharif sowing augurs well for the domestic food price outlook. The shortfall in paddy sowing, however, needs to be watched closely, although stocks of rice are well above the buffer norms. Firms polled in the Reserve Bank's enterprise surveys expect input cost pressures to soften across sectors in H2. Cost pressures are, however, expected to get increasingly transmitted to output prices across manufacturing and services sectors. Taking into account these factors and on the assumption of a normal monsoon in 2022 and average crude oil price (Indian basket) of US$ 105 per barrel, the inflation projection is retained at 6.7 per cent in 2022-23, with Q2 at 7.1 per cent; Q3 at 6.4 per cent; and Q4 at 5.8 per cent, and risks evenly balanced. CPI inflation for Q1:2023-24 is projected at 5.0 per cent (Chart 1).

7. On the outlook for growth, rural consumption is expected to benefit from the brightening agricultural prospects. The demand for contact-intensive services and the improvement in business and consumer sentiment should bolster discretionary spending and urban consumption. Investment activity is expected to get support from the government's capex push, improving bank credit and rising capacity utilisation. Firms polled in the Reserve Bank's industrial outlook survey expect sequential expansion in production volumes and new orders in Q2:2022-23, which is likely to sustain through Q4. On the other hand, elevated risks emanating from protracted geopolitical tensions, the upsurge in global financial market volatility and tightening global financial conditions continue to weigh heavily on the outlook. Taking all these factors into consideration, the real GDP growth projection for 2022-23 is retained at 7.2 per cent, with Q1 at 16.2 per cent; Q2 at 6.2 per cent; Q3 at 4.1 per cent; and Q4 at 4.0 per cent, and risks broadly balanced. Real GDP growth for Q1:2023-24 is projected at 6.7 per cent (Chart 2).

Chart 1: Quarterly Projection of CPI Inflation (y-o-y)

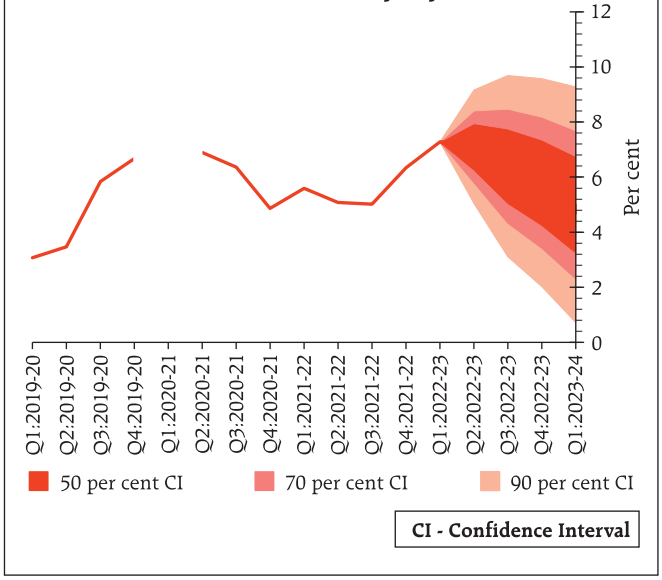
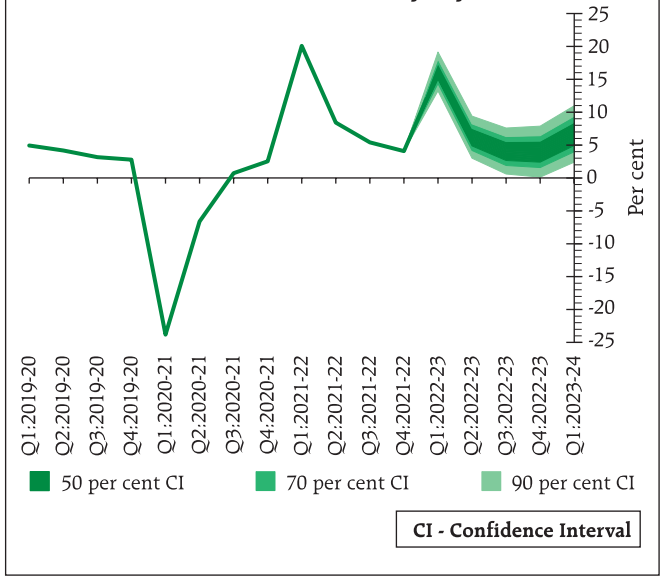


Chart 2: Quarterly Projection of Real GDP Growth (y-o-y)



8. Headline inflation has recently flattened and the supply outlook is improving, helped by some easing of global supply constraints. The MPC, however, noted that inflation is projected to remain above the upper tolerance level of 6 per cent through the first three quarters of 2022-23, entailing the risk of destabilising inflation expectations and triggering second round effects. Given the elevated level of inflation and resilience in domestic economic activity, the MPC took the view that further calibrated monetary policy action is needed to contain inflationary pressures, pull back headline inflation within the tolerance band closer to the target, and keep inflation expectations anchored so as to ensure that growth is sustained. Accordingly, the MPC decided to increase the policy repo rate by 50 basis points to 5.40 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.

9. All members of the MPC – Dr. Shashanka Bhide, Dr. Ashima Goyal, Prof. Jayanth R. Varma, Dr. Rajiv Ranjan, Dr. Michael Debabrata Patra and Shri Shaktikanta Das – unanimously voted to increase the policy repo rate by 50 basis points to 5.40 per cent.

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

11. The minutes of the MPC's meeting will be published on August 19, 2022.

12. The next meeting of the MPC is scheduled during September 28-30, 2022.

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) Regulation and Supervision; (ii) Financial Markets; and (iii) Payment and Settlement systems.

I. Regulation and Supervision

1. Master Direction on Managing Risks and Code of Conduct in Outsourcing of Financial Services

Regulated Entities (REs) are increasingly using outsourcing as a means for reducing costs as well as for availing expertise not available internally. Although outsourcing of a permissible activity is an operational decision of REs, it exposes REs to various risks. The Reserve Bank of India has, from time to time, issued several guidelines/ directions on managing risks in outsourcing of financial services to Scheduled Commercial Banks (excluding Regional Rural Banks (RRBs)), Non-Banking Finance Companies (NBFCs), Housing Finance Companies (HFCs) and co-operative banks. With a view to update and harmonize the extant guidelines, adopt and incorporate global best practices as also enable REs to have all current instructions on outsourcing of financial services at one place for reference, the Reserve Bank proposes to issue draft Reserve Bank of India (Managing Risks and Code of Conduct in Outsourcing of Financial Services) Directions, 2022, for public comments shortly. The scope of these Directions is being expanded to also include RRBs, Local Area Banks (LABs), All India Financial Institutions, Credit Information Companies, and non-scheduled Payments Banks.

2. Inclusion of Credit Information Companies (CICs) under the Reserve Bank - Integrated Ombudsman Scheme (RB-IOS) 2021 and Extending the Internal Ombudsman (IO) Mechanism

The Reserve Bank-Integrated Ombudsman Scheme (RB-IOS) 2021, covers Regulated Entities (REs) such as scheduled commercial banks including urban cooperative banks, non-banking financial companies (NBFCs) and non-scheduled primary co-operative banks with a deposit size of ₹50 crore and above. In order to make the RB-IOS more broad based, it has been decided to bring Credit Information Companies (CICs) also under the ambit of RB-IOS 2021. This will provide a cost free alternate redress mechanism to customers of REs for grievances against CICs. Further, with a view to strengthen the internal grievance redress of the CICs and to make it more efficient, it has also been decided to bring the CICs under the Internal Ombudsman (IO) framework.

II. Financial Markets

3. Standalone Primary Dealers (SPDs) – expansion in scope of permitted activities

At present, Standalone Primary Dealers (SPDs) are permitted to undertake foreign currency business for limited purposes. With a view to strengthen the role of SPDs as market makers, on a par with banks operating primary dealer business, it is proposed to enable SPDs to offer all foreign exchange market-making facilities as currently permitted to Category-I Authorised Dealers, subject to prudential guidelines. This measure would give forex customers a broader spectrum of market-makers in managing their currency risk, thereby adding breadth to the forex market in India. Wider market presence would improve the ability of SPDs to provide support to the primary issuance and secondary market activities in government securities, which would continue to be the major focus of primary dealer activities. Regulations in this regard would be issued separately.

4. Permitting Standalone Primary Dealers to Deal in offshore Foreign Currency Settled Overnight Indexed Swap Market

Banks in India were permitted, in February 2022, to undertake transactions in the offshore Foreign Currency Settled Overnight Indexed Swap (FCS-OIS)

market with non-residents and other market makers with a view to removing the segmentation between onshore and offshore OIS markets and improving the efficiency of price discovery. Standalone Primary Dealers (SPDs) are also market-makers, like banks, in the onshore OIS market. It has now been decided that SPDs authorised under section 10(1) of FEMA,1999 will also be permitted to undertake FCS-OIS transactions directly with non-residents and other market-makers. Necessary directions will be issued shortly.

5. Committee on MIBOR Benchmark

The Mumbai Interbank Outright Rate (MIBOR) based overnight indexed swap (OIS) contracts are the most widely used interest rate derivatives (IRDs) in the onshore market. The usage of MIBOR based derivative contracts has increased with steps taken by the Reserve Bank to diversify the participant base and facilitate the introduction of new IRD instruments. At the same time, the MIBOR benchmark rate, calculated based on call money deals executed on the NDS-call platform in the first hour after market opening, is based on a narrow window of transactions. Internationally, there has been a shift to alternate benchmark rates with wider participant bases (beyond banks) and higher liquidity. Amidst these developments, it is proposed to set up a committee to undertake an in-depth examination of the issues, including the need for transition to an alternate benchmark, and suggest the most appropriate way forward.

III. Payment and Settlement Systems

6. Enabling Bharat Bill Payment System (BBPS) to Process Cross-Border Inbound Bill Payments

Bharat Bill Payment System (BBPS), owned and operated by NPCI Bharat BillPay Ltd. (NBBL), has transformed the bill payment experience in the country. BBPS offers an interoperable platform for standardised bill payment experience, centralised customer grievance redress mechanism, uniform customer convenience fee, *etc.* Over 20,000 billers have been onboarded on the system and more than eight crore transactions are processed on a monthly basis. BBPS is currently accessible only for residents in India. To facilitate Non-Resident Indians (NRIs) undertake utility, education and other bill payments on behalf of their families in India, it is proposed to enable BBPS to accept cross-border inward payments. This will also benefit payment of bills of any biller onboarded on the BBPS platform in an interoperable manner. Necessary instructions will be issued shortly.

SPEECHES

Banking Beyond Tomorrow
Shaktikanta Das

India@75
Michael Debabrata Patra

*Banking Beyond Tomorrow**

Shaktikanta Das

I am delighted to be here among such a distinguished gathering at the Bank of Baroda Banking Conference. I wish to compliment the Bank of Baroda for organising this event and for having chosen 'Banking Beyond Tomorrow' as the theme of the Conference. Given that the banking landscape is witnessing far-reaching changes in the backdrop of rapid innovation, disruption and evolution of new business models, I believe this theme merits active discussion.

In my address today, I propose to touch upon the current macroeconomic situation, followed by highlighting the special role played by the banks and the new trends in the banking sector. I shall also attempt to highlight what banking beyond tomorrow may look like and the opportunities and challenges it may bring along.

Macroeconomic Situation - where we stand today

We are living in turbulent times. The continuing war in Europe and the pandemic have rendered the global macroeconomic outlook highly uncertain. Countries are facing unexpectedly high inflation including food inflation, supply chain disruptions and demand-supply imbalances in product and labour markets. Central banks are tightening monetary policy at a rapid pace, raising fears of imminent recession. Commodity prices have eased somewhat from their June high, but remain elevated. Higher interest rates in the US along with increased risk aversion among global investors have fuelled safe haven demand and strengthening of the US Dollar. Currencies of Emerging Market Economies (EMEs) and even of some Advanced Economies (AEs) are depreciating *vis-à-vis* the US dollar. Consequently, inflationary pressures are building up and external funding conditions are becoming tighter, posing financial stability challenges in EMEs. Overall, the global situation remains grim amidst fluid geopolitical situation while the war and the pandemic add to the forces of disintegration and fragmentation of the global economy.

In such an environment, the Indian economy remains relatively better placed, drawing strength from its macroeconomic fundamentals. The financial system is well-capitalised, asset quality indicators have improved, balance sheets are stronger, and banks have returned to profitability. We are also seeing healthy pickup in credit demand. The external sector is well-buffered to withstand the ongoing terms of trade shocks and the portfolio outflows. The recently released Financial Stability Report of the RBI highlights that the Indian financial system remains resilient and supportive of the ongoing economic revival. Banks are well-positioned to withstand even severe stress scenarios without falling below the minimum capital requirement. The Reserve Bank continues to remain watchful of the headwinds and shall be proactive in taking measures as necessary to ensure financial stability.

Recent developments in the forex market have generated intense debate, including predictions of the rupee dropping to record lows as foreign portfolio funds exit India. I would like to address the issue in a balanced and factual manner.

First, it is important to recognise that spillovers from the global monetary policy tightening, the geopolitical situation, the still elevated commodity prices – especially crude – and the lingering effects of the pandemic, all coming together, have become overwhelming for all countries the world over. Even reserve currencies such as the Japanese yen, the Euro

* Speech by Shri Shaktikanta Das, Governor, Reserve Bank of India - July 22, 2022 - Delivered at the Bank of Baroda's Annual Banking Conference in Mumbai.

and the British pound sterling have not been spared. Portfolio funds are selling off assets and fleeing to safe haven. Emerging market economies (EMEs) are particularly affected by capital outflows, currency depreciations and reserve drawdowns, complicating macroeconomic management in these countries.

Second, the impact of these overwhelming spillovers on India has been relatively modest. In fact, the Indian rupee is holding up well relative to both Advanced and EME peers. This is because our underlying fundamentals are strong, resilient and intact. The recovery is gradually strengthening. The current account deficit is modest. Inflation is stabilising. The financial sector is well-capitalised and sound. The external debt to GDP ratio is declining. The foreign exchange reserves are adequate.

Third, in recognition of the fact that there is a genuine shortfall of supply of forex in the market relative to demand because of import and debt servicing requirements and portfolio outflows, the RBI has been supplying US dollars to the market to ensure that there is adequate forex liquidity. After all, this is the very purpose for which we had accumulated reserves when the capital inflows were strong. And, may I add, you buy an umbrella to use it when it rains!

Fourth, a predominant part of the outstanding ECBs is effectively hedged. Let me elaborate. According to the June 2022 Financial Stability Report (FSR) of the RBI, of the outstanding ECBs of US $ 180 billion, 44 per cent or US $ 79 billion is unhedged. This includes about US $ 40 billion liabilities of public sector companies – mainly in the petroleum, railways and power sectors - which have assets with a natural hedge character. Besides, being public sector entities, their foreign exchange risk – if any – can be absorbed by the government. Such a contingency is unlikely to arise. The remaining US $ 39 billion ECB represents 22% of the total ECBs outstanding. Even this includes borrowings of those companies which have a natural hedge, *i.e.* earnings in foreign currencies. This would leave a very small portion of the total outstanding ECBs that are truly unhedged. Corporate entities eventually face a trade-off: if they hedge their forex exposure completely, the cost of borrowing goes up and the advantage of cheaper borrowing in foreign currency is lost. On the other hand, to the extent they do not hedge, debt servicing can go up when the exchange rate is under pressure. This has led to the concept of the optimal hedge ratio which calculates the proportion of hedging that minimises the variance of the portfolio. For India, our internal research estimates the optimal hedging ratio at 63 per cent. Taking into account natural hedges and the exposure of public sector companies, the optimal hedge ratio condition is comfortably satisfied in the case of the stock of ECBs in India's external debt.

Due to the RBI actions, including measures to encourage inflows, the movements of the rupee have been relatively smooth and orderly. By eschewing sudden and volatile shifts, we have ensured that expectations remain anchored and the forex market functions in a stable and liquid manner. We will continue to engage with the forex market and ensure that the rupee finds its level in line with its fundamentals. I would like to reiterate that we have no particular level of the rupee in mind, but we would like to ensure its orderly evolution and we have zero tolerance for volatile and bumpy movements.

Banks are Special – Expected to be Permanent Entities

Banks are special and not like any other commercial entity. They are not just the custodians of shareholders' interest but more fundamentally the trust of the depositors. Depositors are at the very core of the banking system. Protection of depositors' interest is paramount to a robust, reliable and stable financial system in the country. It is important for banks to always remember that the funds they deploy belong to depositors and this should reflect in proper risk management, governance and internal control systems.

Banks are also expected to be permanent institutions after they obtain the regulatory licence. They are governed by sound regulatory and supervisory practices. The bigger responsibility lies with the banks themselves to ensure robust governance and risk management which are integral to the functioning of a bank. Going beyond regulatory prescriptions in terms of capital, liquidity and provisioning norms, and even exceeding them, would be a sign of good governance and robust risk management. This will future proof the banks and enable them to fall back on their own balance sheet during situations of stress.

It needs to be emphasised that while shareholders' interest is important in the business of banking, even more important is the interest of depositors. Shareholders of banks should focus on long term profitability and market valuation. This would lead investors to look at a banking entity for the value it would generate over the medium to long-run. This approach will usher in a new paradigm of banking and will stand in good stead for our economy.

Preparing Banks for Tomorrow

The Changing Landscape of Banking

The banking sector is going through a period of churning. The future of banking would witness a major shift in customers' choices and preferences with enhanced expectations from the banking industry. Each of the developments would present unique opportunities and challenges to the existing and newer players. It has to be borne in mind that sometimes the disruptions can be so sudden that it is impossible to anticipate them. To me, however, it seems reasonable that 'Banking Beyond Tomorrow' would revolve around (i) the adoption of emerging technologies, customisation of products and services, enhanced business and process automation; and (ii) development of suitable business models with strong governance frameworks, better information management, changes in the mode of working, building of enhanced resilience capabilities and a more responsible societal and environmental role for banks. Let me dwell upon the above in some more detail.

Increased Digitalisation, offering personalised services and Collaboration with Fintechs

The Indian banking system has undergone significant changes in terms of market structure and competition. The increased adoption of technology by traditional banks through self-upgradation or collaboration with Fintechs is resonating with the idea of new-age banking. This is leading to innovative products and services and newer business models. In this context, it is often cited that the banks will face competition from Fintechs which are already making their presence felt within the financial services space. Today's customers, especially the retail customers, expect banks to provide them quick, reliable and personalised services. Therefore, to stay relevant, banks would need to embrace newer and tested technologies for effective and timely business decision making, understanding the needs of their customers and delivering personalised services to them. Banking beyond tomorrow would necessitate significant investment in technology and organisational capability.

Open Banking

Globally, banking is becoming more 'Open' facilitated by the availability of newer technologies and application programming interfaces (APIs) that allow interoperability among banks as also Fintechs. This development presents unique opportunities for collaboration among various participants for faster and improved delivery of products and services suited to the customer. Unlike other developed countries, India has embraced a hybrid model where both the regulator and the market have collaborated for the development of Open Banking. UPI marked a watershed in the commencement of Open Banking in India. With

the success of UPI, implementation of the account aggregator (AA) framework and the mass adoption of digital banking services, India is witnessing an emergence of new business models. More and more banks are opening up for collaboration with new age service providers for facilitating customers to make better use of their data and avail a wider and richer set of services.

User Friendly Apps, Website Navigation and Enhanced Customer Service

Given the digitisation wave in the banking world and with the new tech-savvy customers, banks must also strike a fine balance between digital and paper-based forms of communication. While the apps and websites of banks have grown in leaps and bounds over the years, there is still substantial scope for facilitating easy navigation for customers. Simplifying disclosures and access to information and innovative deployment of tools such as chatbots to help customers navigate through the websites and mobile applications will greatly enhance the banking experience.

Financial Inclusion

Financial inclusion has been pursued vigorously with steady improvements as reflected in the Financial Inclusion Index introduced by the Reserve Bank. Receiving digital payments such as wage payments, government cash transfers and domestic remittances are catalysing the financial inclusion drive. The push provided by the JAM trinity has resulted in increased access to banking services to the unserved and the underserved. While digital technologies are also offering a powerful way to overcome barriers to access banking and financial services, we also need to be sensitive to the requirements of our people to avoid digital divide. The presence of human touch in traditional branch banking would still be relevant for customers in many respects. There is also a need for providing timely and seamless credit to agriculture and MSME sectors. While the RBI is engaged in encouraging initiatives in areas such as MSME lending through its Regulatory Sandbox, other stakeholders such as banks and fintech companies are also collaborating to provide digital credit delivery mechanism in cost-effective and hassle-free manner.

Increased Use of Social Media and Information Mediums

Social media is an alternative platform for reaching millions of customers. Indians, on average, spend about 2.4 hours daily on social media[1]. Further, the number of social media users has been growing steadily. The analysis of social media use has the potential to help banks in reviewing their strategies in terms of customer segmentation, customer acquisition and furthering financial inclusion plans. Social media can also be used in customer grievance redress management.

Cybersecurity

With advancement in digital banking, cybersecurity will remain an important challenge for all stakeholders. The increasing use of IT systems by banks, remote working arrangements, accelerated adoption of digital banking services by customers, along with increasing dependence on third parties for various services would warrant enhanced resilience capabilities to ensure business continuity. This would include building strong defences against cyber-attacks and malicious attempts at disrupting, disabling or destroying a computing infrastructure or stealing confidential information and data. Banks would need to undertake constant upskilling of personnel. Continuous knowledge acquisition and staying ahead of the curve would become even more crucial.

Comprehensive and Strategic Approach to Climate-Related Risks

Climate-related risks will be a focus area in times to come. Such risks will impact the business models

[1] Global Web Index's Social Media Trends 2019 report.

of banks. The increased requirements of funding businesses and industry for tackling climate change would be greatly influenced by the global move on climate-related risk management. Various stakeholders already consider environmental, social and governance (ESG) as an important aspect while making investment decisions. Banks are also increasingly aligning their businesses, including assessment of financing assets, with the global climate sustainability agenda. The need for banks would be to develop appropriate business strategies and strengthen the governance framework to gauge the associated risks. In line with international best practices, a forward-looking, comprehensive and strategic approach would be required to address climate risks.

Concluding Observations

Going ahead, the world of banking is expected to be more collaborative as well as competitive, with newer players offering innovative financial products. Banks need to prepare themselves for facing the dynamic environment, while keeping their focus on appropriate business models, sustainability, stability, and consumer centrality. More importantly, good governance remains fundamental to success and should not be compromised. Due care needs to be taken to protect the stakeholders from digital frauds, data breaches and cybercrimes. At the end of the day, banking is a service, and enhanced customer protection and experience should be given the primacy it deserves. From the regulator's perspective, the Reserve Bank is fully committed to build an enabling environment for accommodating the new disruptive innovations in a sustainable manner, while preserving financial stability. History suggests that when technology, market participants and regulators join hands, revolutionary innovation and growth would follow. I hope our banks of tomorrow make it come true.

Thank You.

*India@75**

Michael Debabrata Patra

Dr. Hrudananda Panda, Regional Director, Reserve Bank of India (RBI), Bhubaneswar, distinguished guests of the RBI from the Government of Odisha, academia, banks, financial institutions, industry associations, the media, scholars and students, my colleagues from the RBI, Ladies and Gentlemen,

I am deeply honoured to be invited to deliver this address as part of the celebration of the 75th year of our Independence. I thank Dr. Panda for inviting me and more than that, for the innovative drive and gracious hospitality – he and his team – which has made this event possible. At this defining moment, the elixir of energy, inspiration, new ideas and pledges awakens us to a bright and self-reliant future, marked by the fulfilment of our dreams. In many ways, Bhubaneshwar is the embodiment of this Mahotsav – a rich and glorious heritage; a happening present; and a smart city of the future – in every respect, Tribhuvan.

While my talk will attempt to kaleidoscope India's journey through the last 75 years, the focus is on the future – India in the next 10-50 years.

It is said that there is nothing more powerful than an idea whose time has come[1]. I do believe with the all the strength of my conviction that India's time has come. As the famous song marking the UN's International Day of Peace goes[2], you may say I am a dreamer, but I hope that after my talk, I will not be the only one. You too will dream with me, and the world will be as one. So, I invite you to join me in this journey of dreams as India takes off to make a tryst with destiny.

India at Take-off

It is said that if the history of the universe can be compared to a journey of a 100 km, it will not be until the 71st km or a little later that one will encounter life, and the entire period of human existence comprises the last 1-2 metres. Seen against this humbling perspective, independent India's journey of 75 years has been quite astonishing. Between 2006 and just before the COVID-19 pandemic struck, more than 300 million people in India have been lifted out of poverty, the highest rate of poverty reduction anywhere in the world. The Indian economy is a world leader in the production of various agricultural commodities. In 2021, India has emerged as the world's Number 1 rice exporter, with more than the combined exports of world Numbers 2 and 3. India has one of the widest manufacturing bases among emerging economies, ranging from the largest producer and exporter of tractors and two wheelers to among the top 10 exporters of smartphones, cars and spacecraft. In several services, including shipping personnel and information technology (IT), India is a world leader. In the case of IT, India has come to be known as the back office of the world.

A widely used indicator of economic progress of a country is the growth of gross domestic product, which is the value of all the final goods and services produced in an economy during say a quarter or a year. If one looks back over the last 75 years, statistical tests (Bai-Perron structural break tests) reveal that India's growth trajectory has gone through three phases. Up to the 1970s, India averaged GDP growth of 3.6 per cent – the so called Hindu rate of growth – which has been associated with inward-looking policies adopted over that period. Growth picked up to 5.5 per cent during 1980 - 2002 as liberalisation, opening up and

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* Speech delivered by Dr. Michael Debabrata Patra, Deputy Governor, Reserve Bank of India in an event to celebrate **Azadi Ka Amrit Mahostsav** organised by Reserve Bank of India, Bhubaneswar on August 13, 2022. Valuable inputs and comments from Rajeev Jain, Atri Mukharjee, V Dhanya, Dhirendra Gajbhiye, Ashish Thomas George, Harendra Behera, Sonna Thangzason and Kunal Priyadarshi, and editorial help from Vineet Kumar Srivastava and Samir Ranjan Behera are gratefully acknowledged.

1 Victor Hugo in Histore d'un Crime, 1877.

2 Imagine by John Lennon.

an outward orientation commenced. Thereafter, GDP growth rose to an average of about 7 per cent till the pandemic arrived. In 2020-21, GDP declined by 6.6 per cent due to the pandemic. In 2021-22, it recovered to 8.7 per cent, taking GDP 1.5 per cent above its pre-pandemic level. For the current financial year, *i.e.*, 2022-23, the RBI has projected GDP to grow by 7.2 per cent, which places India among the fastest growing economies of the world.

What are the drivers of India's growth? It turns out that the Indian economy is powered by "We", the people – private final consumption expenditure (PFCE) comprising households' spending on goods, services, rents, insurance, pension contributions and such other expenses that correspond with daily livelihood. Private consumption constitutes 55 per cent of GDP, although this share has come down from above 75 per cent in the 1960s. There have been phases of export-led and investment-led growth, which could not be sustained, but they did provide turning points in the growth path. In particular, investment, which is the production of goods that, in turn, produce other goods is seen as India's game changer, as for most developing countries that are capital scarce. The investment rate (total investment/GDP) is widely regarded as the most important lever of growth in India.

A striking feature in India is that our growth is home financed – investment is financed primarily by domestic savings, with foreign savings playing only a supplemental role. Another noteworthy feature is that the saving rate has started slowing down since 2007-08 after the global financial crisis. Eventually, this pulled down the investment rate which has exhibited deceleration since 2012-13. Reversing this trend is critical to achieve higher growth.

The current account deficit (CAD) in the country's balance of payments (BoP) determines how much of foreign savings or net capital inflows into the country can be absorbed or used for growth. Exports earn foreign exchange while imports have to be paid for in foreign exchange. A country like India relies on the rest of the world for imports of items we don't produce such as crude oil and items such as machinery, equipment and technology in which other nations either have a comparative advantage or they closely hold. For India, imports typically exceed exports and hence earnings from foreign exchange are not sufficient for covering import payments. The gap has to be filled by borrowing from abroad which, however, has to be serviced through principal and interest payments. If debt servicing exceeds our earnings, we have to either reduce imports and stifle our growth prospects or default on debt payments and face international isolation. Our experience has been that India can sustain a current account deficit of 2.5-3.0 per cent without getting into an external sector crisis. In fact, in a telling reminder of this fact, a record increase in oil prices and high gold imports took the current account deficit above this Plimsoll line and to historically high levels during 2011-13. When the US Federal Reserve contemplated the end of easy monetary policy in the summer of 2013, India faced the taper tantrum and was labelled as among the fragile five[3].

A Cross-Country Perspective

Stepping back a little, it is useful to observe India's progress in a cross-country setting. Let me turn to the rise and fall of the top ten economies of the world since the early 1960s when developing countries in Asia started to put in place strategies for take-off after two centuries of western dominance. Noteworthy is the age of Japan which started in the 1960s and lasted through 1970s and 1980s. The age of China began in the early 1990s, taking it to the position of the second largest economy of the world. It is from 2015 that India's time seems to be arriving. Today, India is the world's sixth largest economy in terms of market exchange rates.

[3] The fragile five were Brazil, India, Indonesia, South Africa, and Turkey.

For the year 2022, the International Monetary Fund (IMF) projects global growth at 3.2 per cent in 2022, lower than 6.1 per cent in 2021. India is projected to grow by 7.4 per cent in 2022. In spite of the pandemic and the war in Europe, India is going to contribute about 14 per cent of global growth. In fact, India is likely to be the **second** most important driver of global growth in 2022 after China.

The use of market exchange rates for cross-comparisons of economic performance measured by GDP has been questioned. After all, exchange rates are subjected to bouts of volatility and idiosyncratic behaviour that makes them diverge from reality. An alternative measure is purchasing power parity. It is the price of an average basket of goods and services that a household needs for livelihood in each country. An often used example is the McDonald's burger which is supposed to have the same wheat, potatoes and other ingredients in every outlet in every country. To show you how this works, with the money paid in the US for a big Mac, one can buy 2.5 Macs in India.

So, what does this tell us about the exchange rate and GDP? Currently, India is the third largest economy in the world in terms of purchasing power parity (PPP) terms, with a share of 7 per cent of global GDP [after China (18 per cent) and the US (16 per cent)]. India's GDP in market exchange rates is expected to reach US$ 5 trillion by 2027. By that year, India's GDP in purchasing power parity terms will exceed US$ 16 trillion (up from US $ 10 trillion in 2021). The OECD's 2021 calculations indicate that the Indian economy will be overtake the US by 2048. This would make India the largest economy in the world after China.

In terms of PPP, the exchange rate appreciates with the prosperity of a nation and a rise in its productivity. The Indonesian Rupiah is set to become the strongest currency in the world, with the Indian Rupee emerging as the second strongest currency.

The Window of Opportunity

With this bird's eye image of where India is today, I will turn to the four engines that can power India to achieve escape velocity from the emerging economy orbit and take off towards becoming an economic superpower.

(i) Demographics

I will start with the underlying realities of the widely cited demographic dividend. The world's population growth fell below 1 per cent for the first time in 2021. It will slow down through the rest of this century. India's population at 1.38 billion is the world's youngest at 28.4 years. By 2023 (that is next year), India will be the most populous country in the world (1.43 billion)[4].

Aging will close India's youth dividend by 2045, as it did for Japan in 2004 and Italy in 2002. This is evident from the changing structure of the population. A key indicator is the total fertility rate – the average number of children born to a woman over her lifetime. As per the findings of India's latest National Family Health Survey (2019-21), the total fertility rate (TFR) of 2.0 (down from 2.2 in 2015-16 and 2.7 in 2005-06) has fallen below the replacement level for the first time. According to the United Nations (UN), a generation with a total fertility rate[5] lower than 2.1 is not producing enough children to replace itself. Such a situation results in an outright reduction in the population of that country. On the other hand, the life expectancy of Indians has been rising and is likely to increase from the current level of about 70 years to about 82 years by 2099.

A comparison of the ratio India's working-age[6] population (WAP) to the total population with that of other countries, *viz.*, China, Brazil, USA, and Japan,

4 World Population Prospects 2022; United Nations, July 2022.

5 Number of children per woman.

6 Defined as 15 - 64 years.

shows that India stands at an advantageous position. The working-age populations of these countries have started declining already while India's WAP ratio will increase till 2045, even exceeding that of China by 2030. Making the most of this demographic dividend is India's opportunity as well as a challenge.

(ii) Manufacturing

Another engine for take-off is manufacturing. India's development experience has been widely regarded as remarkable because it broke away from the usual path of a country moving from primary activities to secondary and then to tertiary activities[7]. India leapfrogged the secondary phase and progressed from primary activities to the tertiary sector. Services account for two-thirds of India's economy today.

In hindsight, the Indian experience may not have been the miracle it is credited to be – India failed to absorb into gainful employment large masses of its less-skilled labour force that migrated from agriculture. Apart from this labour absorptive capacity, the manufacturing sector has backward and forward linkages with other sectors of the economy. A robust growth of manufacturing is essential for boosting India's exports. Hence it is necessary to overturn the conventional wisdom and catch up with other leading manufacturers of the world.

According to the World Bank, India's manufacturing sector as a proportion to GDP (in constant 2015 US dollar terms) remains much below the world average as well as most peers. The growth of Indian manufacturing has been quite volatile, ranging between a peak of 17.8 per cent (2006-07) and a trough of -3.2 per cent (1979-80). Since the 1990s, the average growth of manufacturing has been 7.0-7.5 per cent. If 7.5 per cent growth is attained in the next decade, manufacturing would reach a share of 20.4 per cent of overall gross value added (GVA) by 2030-31. If manufacturing were to grow at 10 per cent – the target set by the 'Make in India' campaign – its share would reach 25 per cent in 2030-31. India would become the manufacturing shop floor of the world with positive effects for employment and other sectors of the economy.

To achieve this, three things are essential. First, the manufacturing sector must adapt to the fourth industrial revolution (automation; data exchange; cyber-physical systems; the internet of things; cloud computing; cognitive computing; the smart factory; and advanced robotics)[8]. Second, India must develop a skilled labour force by stepping up investment in human capital. Third, efforts must be directed to boost international competitiveness that allows manufacturing to find expression in global markets. India must raise the share of manufacturing to at least 25 per cent of GDP to become a global manufacturing hub.

(iii) Exports

Exports provide an avenue for the widening of markets and production capabilities beyond national borders. Currently, India's exports of goods and services at close to US $ 800 billion constitute 2.7 per cent of the world total. The Government of India has set a target of US $ 1 trillion to be achieved by 2030. This would take India's share to 5 per cent of the global total and India would become an export powerhouse. Several initiatives are in place to actualise this goal:

- One District One Product (ODOP) initiative integrates the concept of 'Districts as Export Hubs';
- The Remission of Duties and Taxes on Exported products (RODTEP) scheme

[7] Primary sector activity relates to agriculture and allied activities, mining and quarrying; secondary sector activity relates to manufacture, electricity generation and construction; tertiary activity relates to services.

[8] The first industrial revolution occurred during 1760-1900, marked by coal, steam engines and trains. The second revolution occurred between 1870-1940 driven by oil, electricity, the internal combustion engine and the car. The third revolution occurred between 1930-2000 and was based on nuclear energy, natural gas, computers, robots and planes.

provides incentives in the form of refund of taxes on exported items in the range of 0.5 – 4.3 per cent of the value of exports covering around 8555 product lines;

- Ubharte Sitaare scheme supports micro, small and medium enterprises (MSMEs) in realising their export potential;
- Rebate of State and Central Taxes and Levies (RoSCTL) scheme aims to make exports of apparel/garments globally competitive. Under this scheme, the exporters of apparel, garments and made-ups are refunded embedded taxes and levies which are currently not being rebated under any other mechanism;
- Export potential in sectors such as IT and digital services, high value agricultural products, high-value tourism, financial services, retail and e-commerce has to be tapped and exploited.

Raising India's share in world exports to at least 5 per cent is within reach.

(iv) Internationalisation

Indians are among the most internationalised people in the world. The Indian diaspora is the biggest in the world and India is the top recipient of remittances. The Indian rupee trades three times more offshore than onshore. Yet we still talk of internationalisation as if it is a last frontier. The economist Niall Ferguson writes that in human history, there have been 70 empires. The 69th and 70th empires are the People's Republic of China and the European Union, respectively. The 68th empire has all the attributes of an empire, including waging wars beyond its borders. Yet it is different in one fundamental way – it does not annex foreign lands. Ferguson calls it the reluctant empire – it is the USA. Drawing an analogy, India can be regarded as a reluctant internationaliser. If the INR turnover rises to equal the share of non-US non-Euro currencies in global forex turnover (4 per cent), the INR will have arrived as an international currency, reflecting India's position in the global economy.

Challenges

Let me now address the challenges that confront us on the runway to take-off. In my view, the focus should be on four major challenges. The first one is the **loss of output and livelihood due to the pandemic**. The agglutination of supply disruptions, the health crisis, an unparalleled mass migration and a hostile global environment took a heavy toll on the Indian economy. The combination of demand compression and supply disruption that took hold in the pandemic and in its wake caused severe debilitating effects. As stated earlier, the Indian economy contracted by 6.6 per cent in 2020-21. In the first quarter of that year when the first wave of the pandemic raged, GDP contracted by 24 per cent, among the steepest in the world. If a trend line is fitted to the level of India's GDP and extended up to 2021-22 at the compound annual growth rate (CAGR) of 6.6 per cent that prevailed over 2013-20, a comparison for this trend GDP with the actual GDP in 2020-21 and 2021-22 will give a rough measure of the output lost to the pandemic.

Recovering this lost output may take several years – this I will regard as the first and foremost important challenge.

The second challenge is India's **infrastructure gap**. India's per capita investment in infrastructure is one of the lowest in the world (US $ 88.6 in constant 2015 dollars). Infrastructure investment by India is currently around 4.6 per cent of GDP. If India were to invest in infrastructure to the tune of 6 per cent of GDP, it will achieve a GDP level of US $ 7.5 trillion by 2030, as estimated by the Global Infrastructure Hub[9], and the infrastructure gap will close. This is also

[9] A non-profit organisation supported by G20.

consistent with our target of becoming a US$ 5 trillion economy by 2027.

The main requirements for the infrastructure drive are transparent and faster regulatory processes; clear, transparent and efficient land acquisition and climate clearance policies; and viable infrastructure finance that takes into long gestation in infrastructure projects. Building world class infrastructure is the next big challenge for India's take-off.

The third challenge is developing **a high quality labour force**. The contribution of labour, in terms of both quality and quantity, to GDP growth in India remains much lower than developed as well as many emerging market economies. 83 per cent of the workforce is employed in the unorganised sector. As India transforms into a manufacturing hub and powerhouse exporter, the workforce has to expand and become more skilled over time. The emphasis should be on increasing the contribution of the quality of growth to GDP rather than quantity. Of India's total labour force, employability (appropriate skills for a particular job) is less than 50 per cent. One important lever to break this constraint is to increase the participation of women in the workforce. According to the World Bank, (World Development Indicators), India ranks 178 among 187 countries in terms of the female labour force participation rate in 2020.

We must create workplaces that do not stigmatise women at work and instead, encourage them to earn their livelihoods with dignity and satisfaction. This requires spreading awareness to influence social norms in favour of working women; incentivising institutes to maintain diversity of students and employees; flexible working hours; women friendly policies and facilities at workplaces, including taxation systems that are favourable for working parents and mandatory maternity/paternity leave across workspaces; availability of work closer to the household; and increased formalisation of jobs. Women participation is key to developing a high quality labour force.

The fourth challenge is a **greener, cleaner India**. At the Conference of the Parties 26 (COP26) in Glasgow in November 2021, India took five pledges, *viz.*, the Panchamrit, reflecting its commitment towards the environment. They include (i) attaining 500 gigawatts (GW) non-fossil energy capacity by 2030; (ii) energy mix comprising 50 per cent renewable energy by 2030; (iii) reducing total projected carbon emissions by one billion tonnes from now onwards till 2030; (iv) reducing the carbon intensity of our economy by less than 45 per cent by 2030; and (v) achieving net zero emissions by 2070 by cutting greenhouse gas emissions to as close to zero as possible.The scale of finance needed to meet the above commitments is significant. The Council on Energy, Environment and Water[10] has estimated that a cumulative investment of US$ 10.1 trillion is needed to meet net-zero commitments by 2070. Of this, US$ 8.4 trillion investment is needed to meet power sector transformation – shift to renewable energy – alone. Industry (reduction in coal and ramping up hydrogen usage) will require US$ 1.5 trillion, and the mobility sector is estimated to need US$ 198 billion.

There is a silver lining, however, in respect of renewables. In order to reach 500 GW by 2030, renewables should grow at a compound annual growth rate of 14.2 per cent per annum. At the current average rate of growth at 18.7 per cent (2014-15 to 2020-21), we may achieve the 500 GW target by 2027.

India will require adequate energy storage facilities to wedge the gap between the timing of renewable power generation and actual power consumption. We have to minimise transmission and distribution losses. We have to address the regional concentration of renewable energy as it is location specific – mostly the southern states – and not evenly distributed. The tariff structure must reflect actual costs while eschewing cross-subsidies that hurt industries and commercial establishments. And we have to find a solution to the problem of legacy debts of DISCOMs.

[10] Asia's leading not-for-profit policy research institution.

Conclusion

If India capitalises on its opportunities and overcomes the challenges that I have addressed in the time available for this talk, it is widely believed that India will bend time. So, revisiting the purchasing power parity projections I alluded to earlier, it is possible to imagine India striking out into the next decade with a growth rate of 11 per cent. If this is achieved, India will become the second largest economy in the world not by 2048 as shown earlier, but by 2031. Even if it does not sustain this pace and slows to 4-5 per cent in 2040-50, it will become the largest economy of the world by 2060.

As I said in my opening remarks, you may think that I am a dreamer, but let me remind you that while history does not repeat itself, it often rhymes. The distinguished British economist, Angus Maddison, who specialised in the measurement and analysis of economic growth and development, has documented economic performance over long periods of time and across major countries in every continent of the world. According to his work, India was the largest economy of the world with the highest share in world GDP during 1 to 1000 AD. Over the next 600 years, India intermittently fell to the second position, but reclaimed the position of the world's largest economy by 1700 AD with a share of 24.4 per cent of world GDP. Since then, there has been an inexorable loss of share. Ladies and gentlemen, the time has come to halt the decline, reverse it and repossess our rightful place on the world's stage.

Thank you.

Annex

Chart 1: Evolution of India's GDP Growth

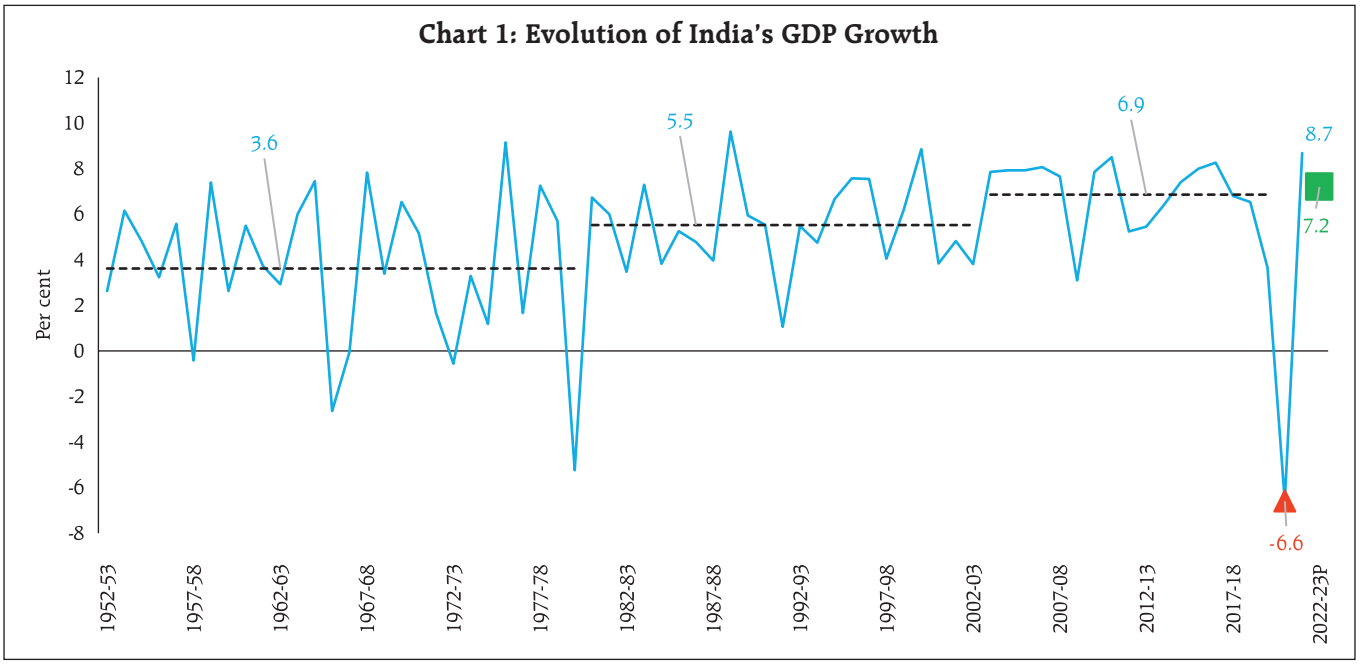


Chart 2: Consumption-led with Investment/ Export-led Phases

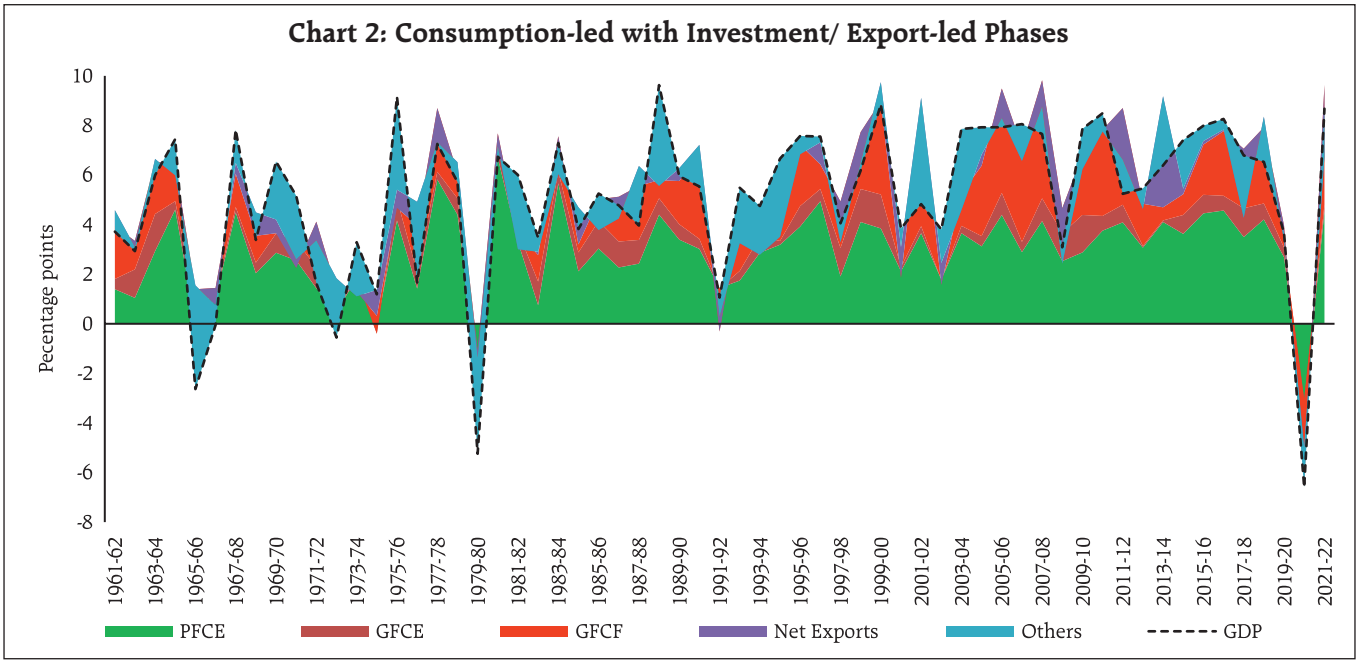


Chart 3: Saving-Investment Rate (Per cent of GDP)

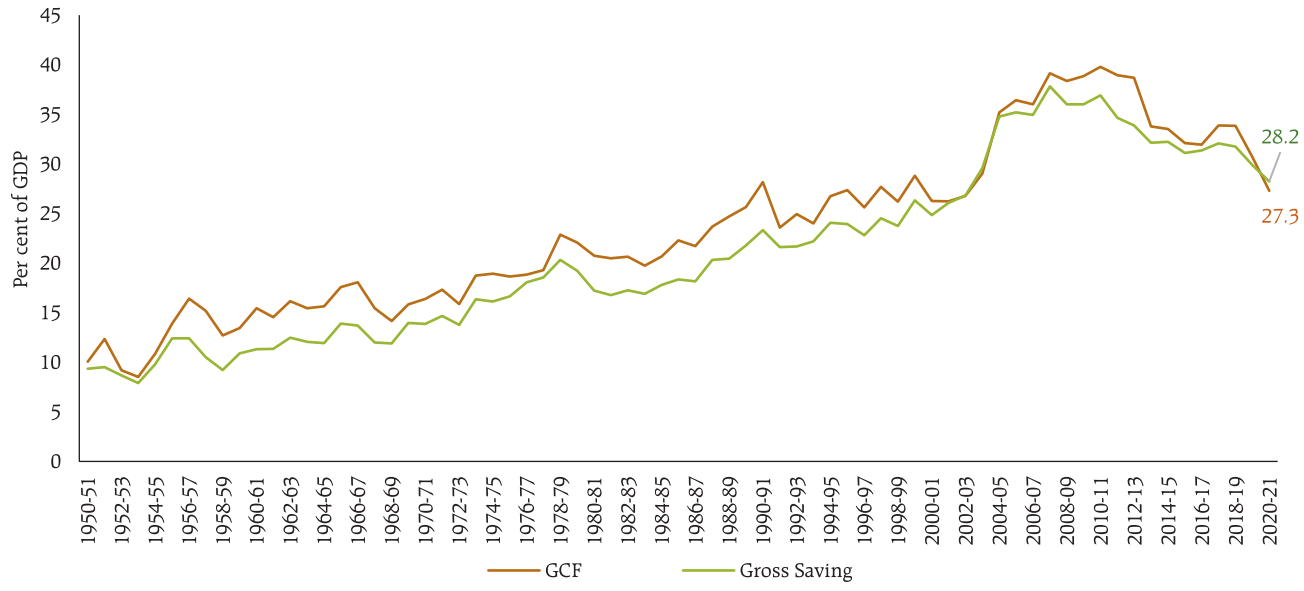


Chart 4: Current Account Deficit (Per cent of GDP)

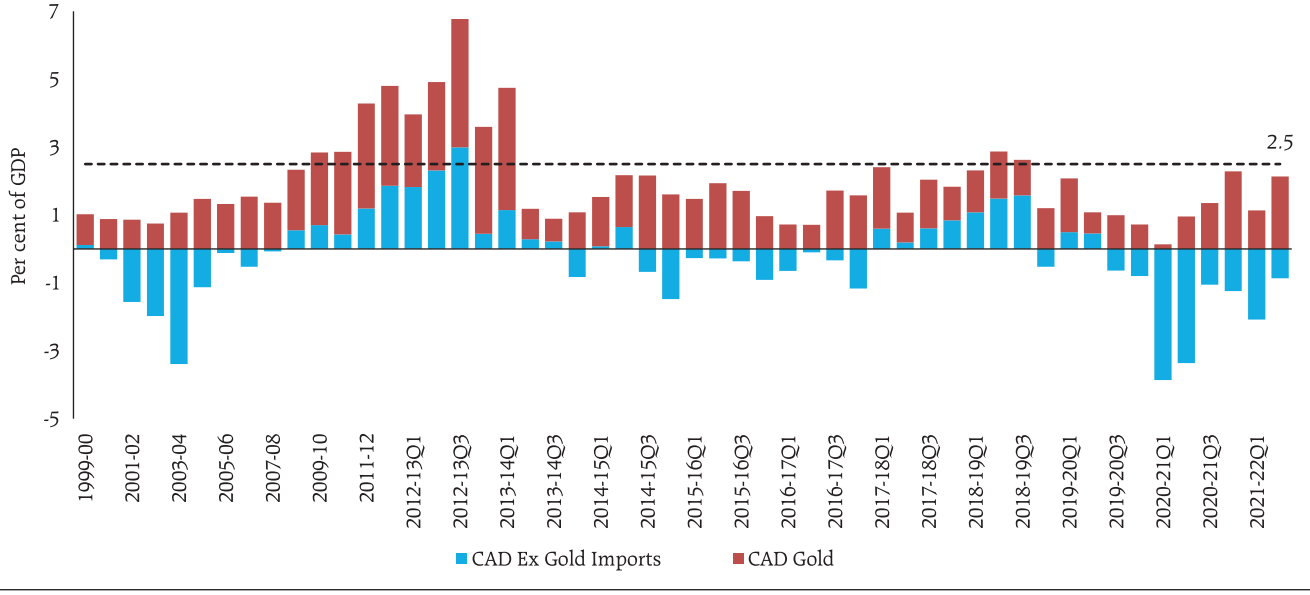


Chart 5: World GDP: Contribution to Growth

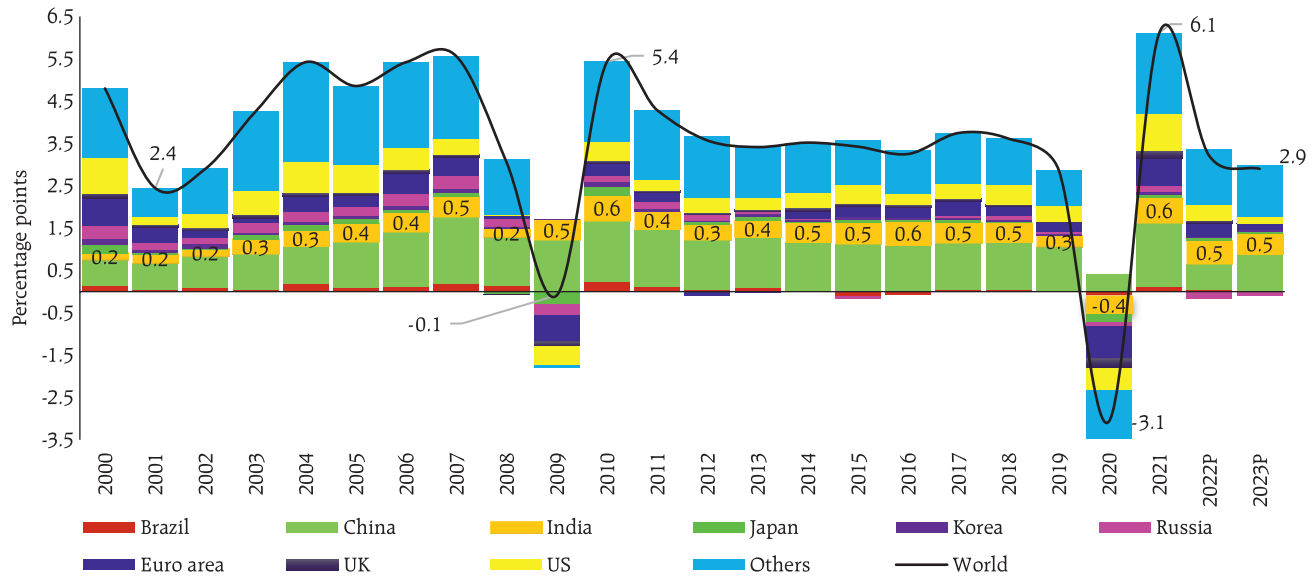
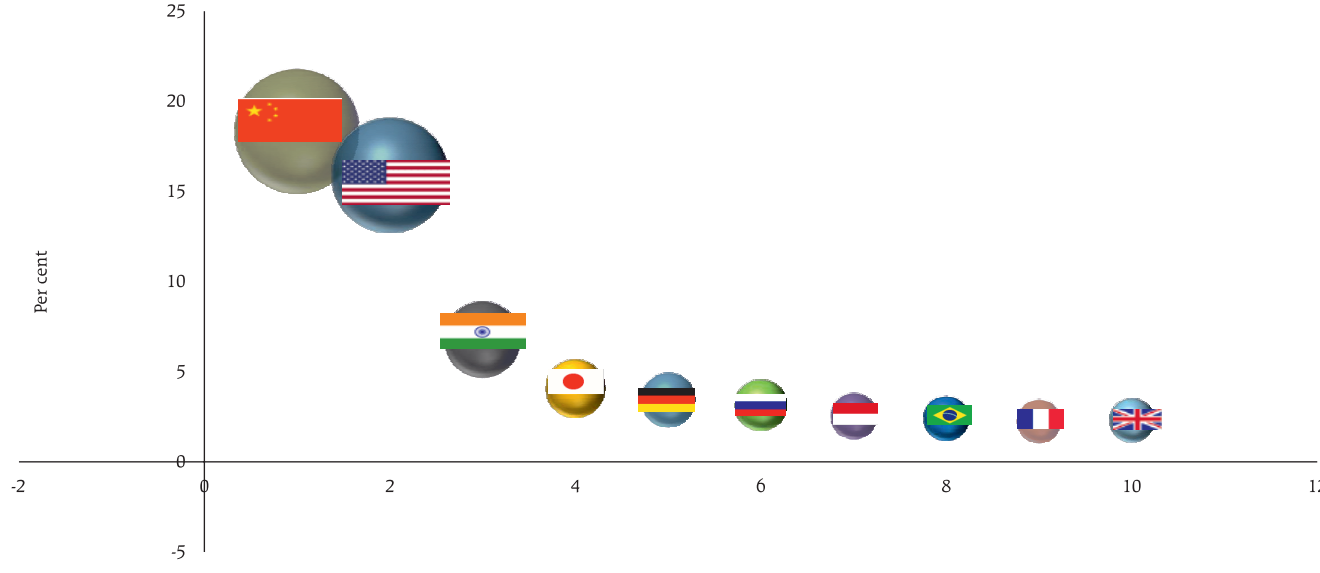


Chart 6: Share in World GDP (in PPP term) in 2020



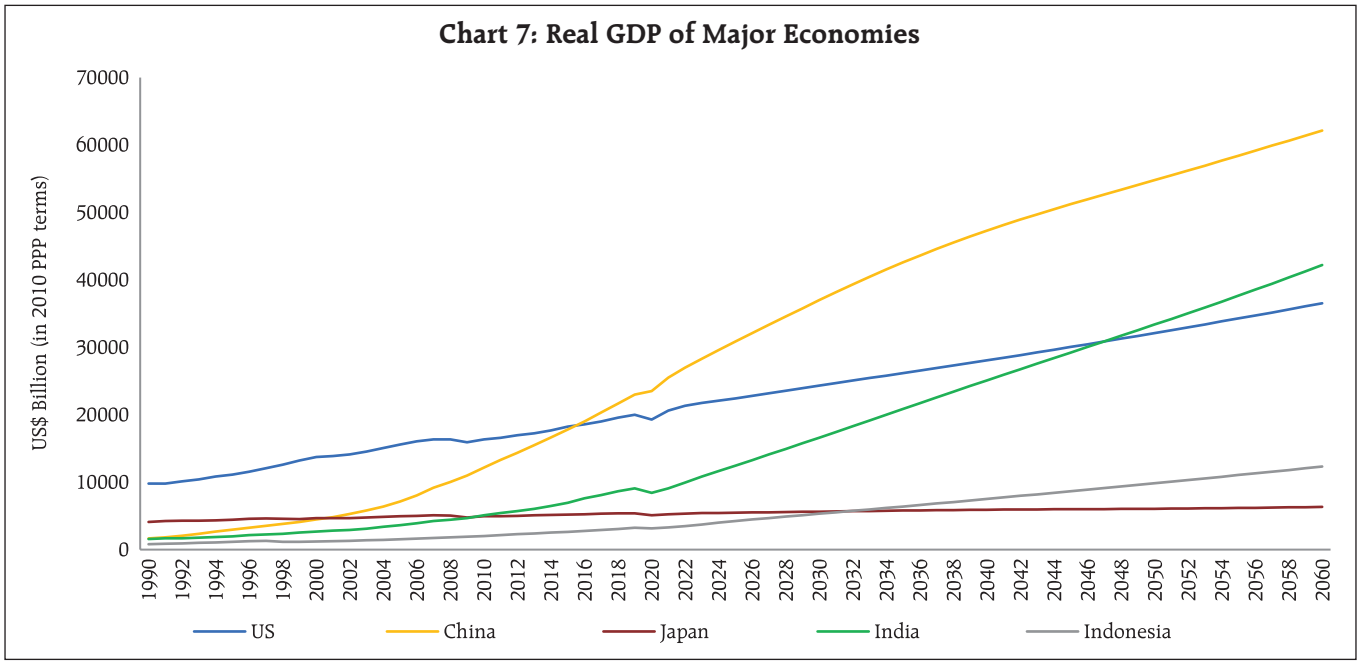


Chart 7: Real GDP of Major Economies
US$ Billion (in 2010 PPP terms)
70000
60000
50000
40000
30000
20000
10000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024 2026 2028 2030 2032 2034 2036 2038 2040 2042 2044 2046 2048 2050 2052 2054 2056 2058 2060
US
China
Japan
India
Indonesia

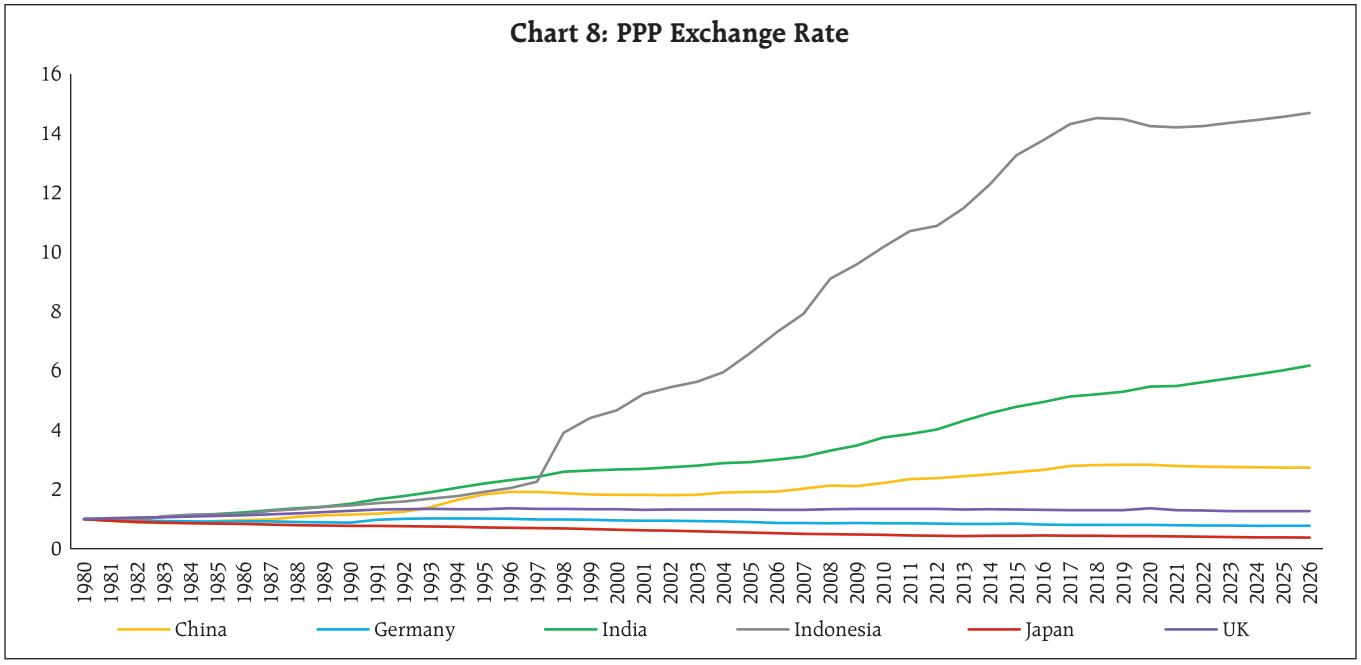


Chart 8: PPP Exchange Rate
16
14
12
10
8
6
4
2
0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026
China
Germany
India
Indonesia
Japan
UK

Chart 9: Demographic Dividend

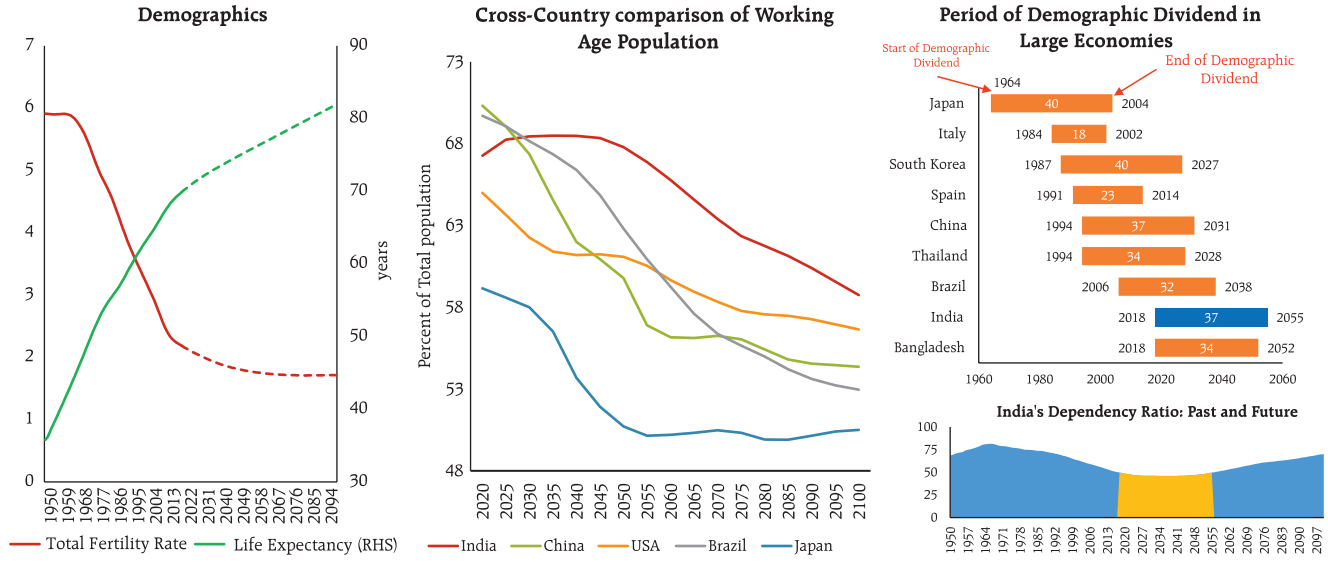


Chart 10: World's Manufacturing Hub

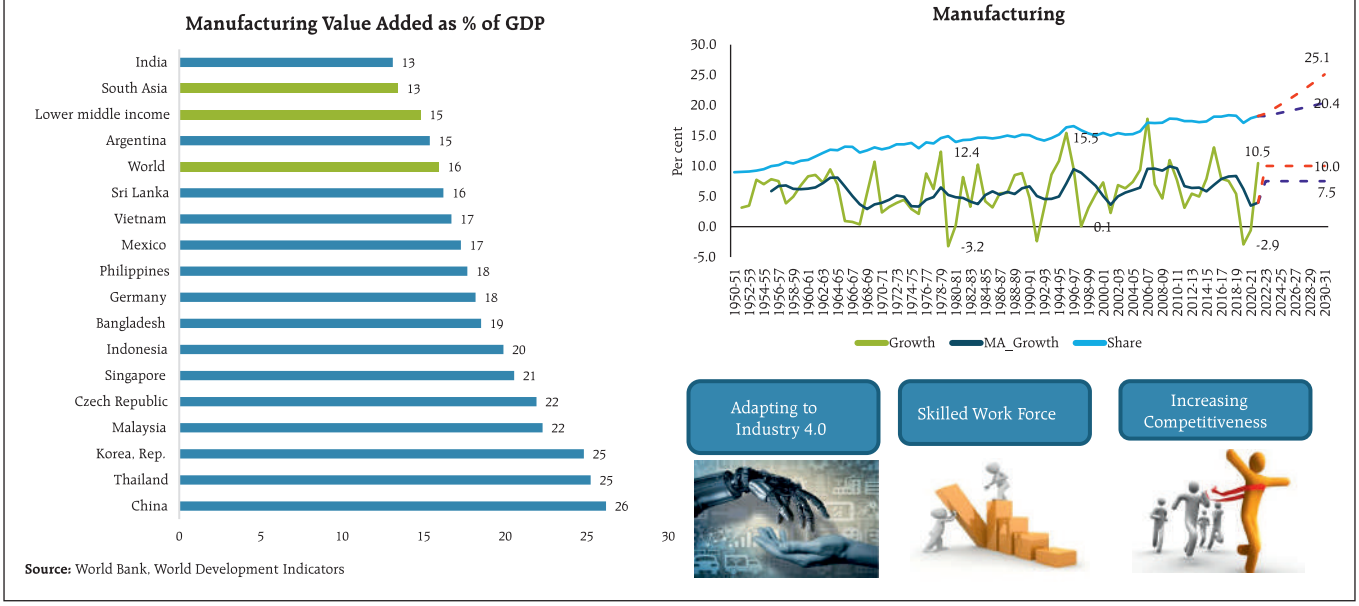
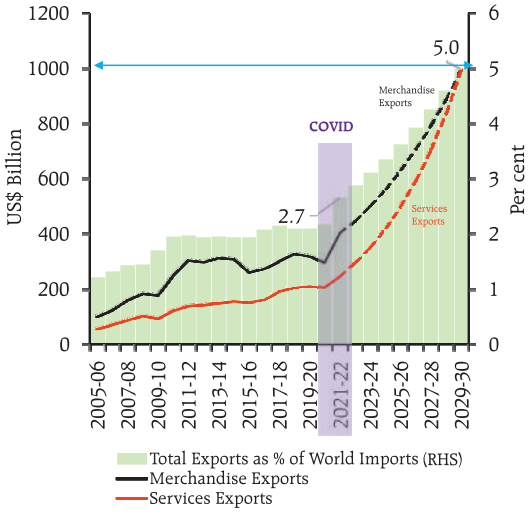


Chart 11: Export Powerhouse

India's Exports by 2029-30



Exports Promotion Schemes

- One District One Product (ODOP) Scheme
- RoDTEPScheme
- Ubharte Sitare Scheme
- RoSCTL

Global IT and Digital Services Hub $285 bn

High Value Agriculture ecosystem- $145 bn

High Value Tourism $50 bn

Next Gen Financial Services- $335 bn

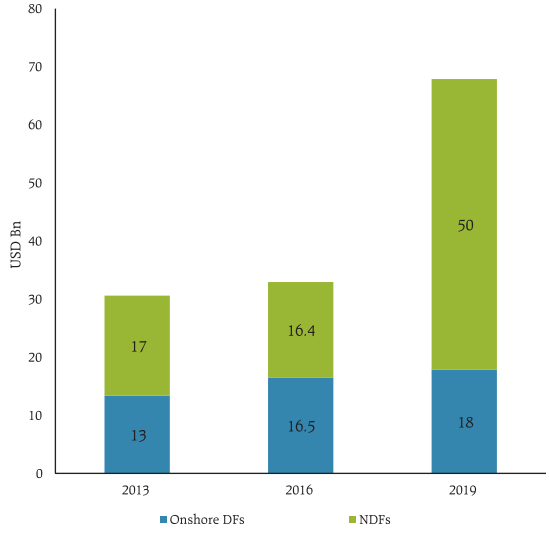
E-Governance- $65 bn

Modern Retail and E Commerce- $125 bn

Chart 12: Internationalisation

Global Diaspora

Indian Rupee: Average Daily Turnover in Onshore Deliverable Forwards *vs* NDFs



Indicative Benchmark for INR FX turnover by 2030

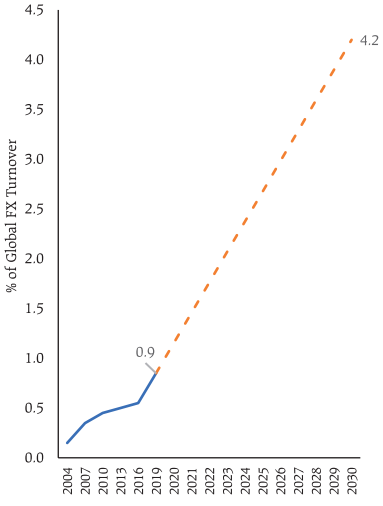


Chart 13: Scars of COVID

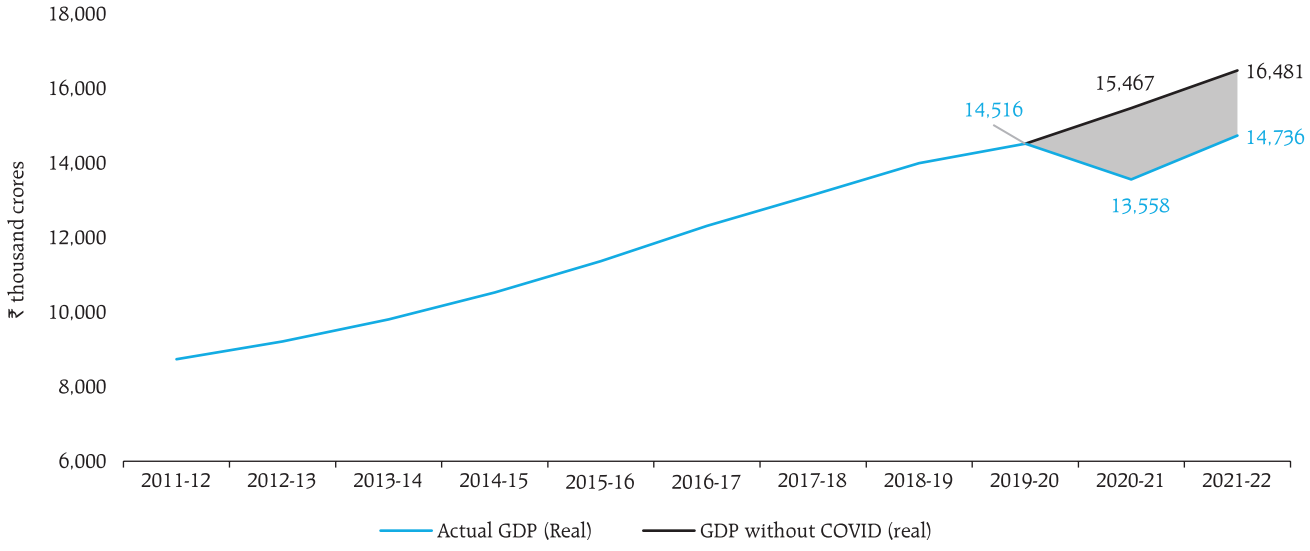
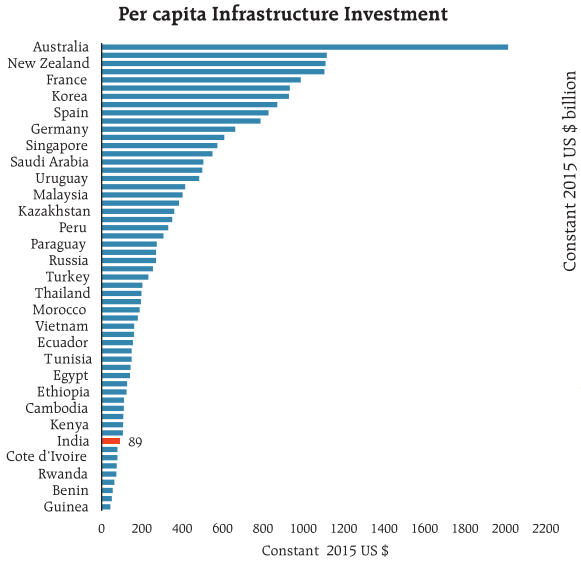
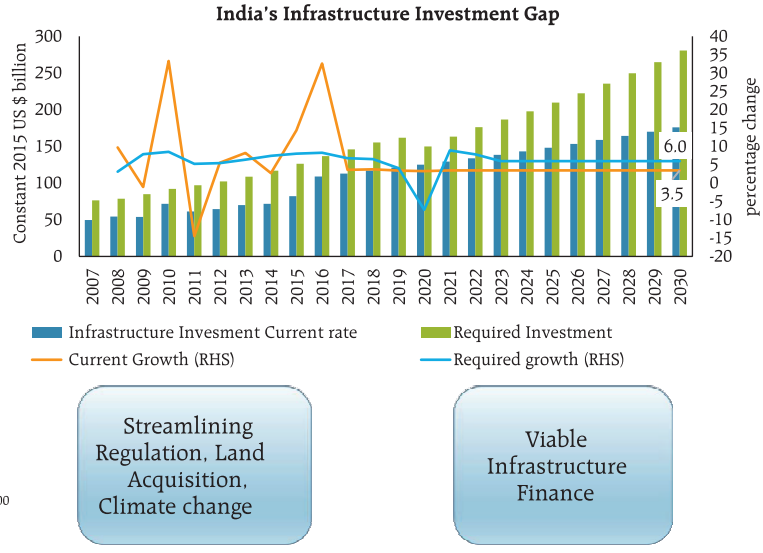


Chart 14: World-Class Infrastructure

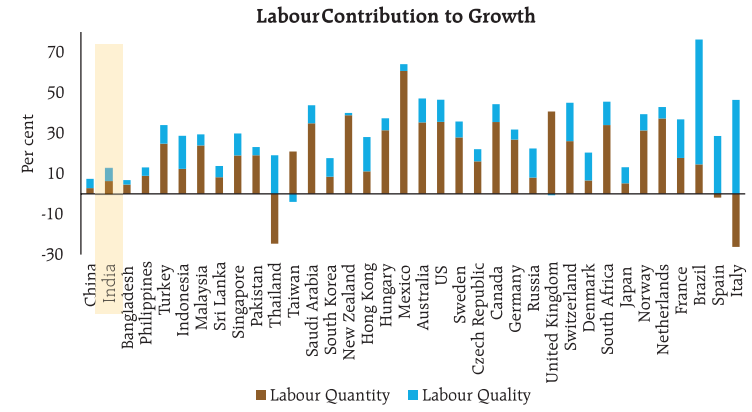


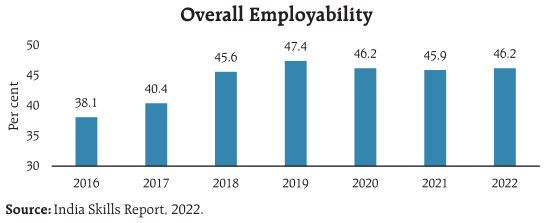


Streamlining Regulation, Land Acquisition, Climate change

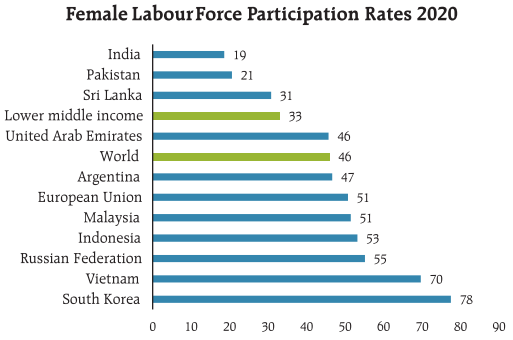
Viable Infrastructure Finance

Chart 15: High Quality Labour Force





Source: India Skills Report, 2022.

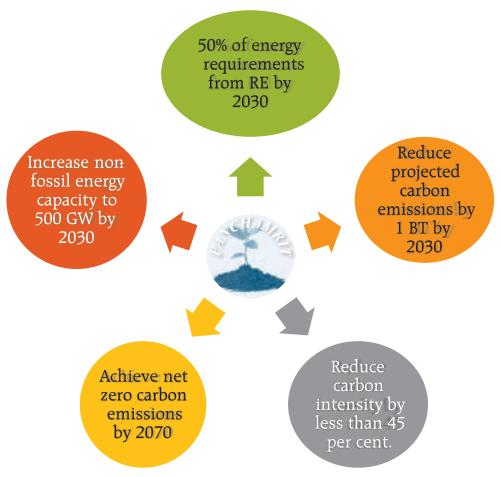


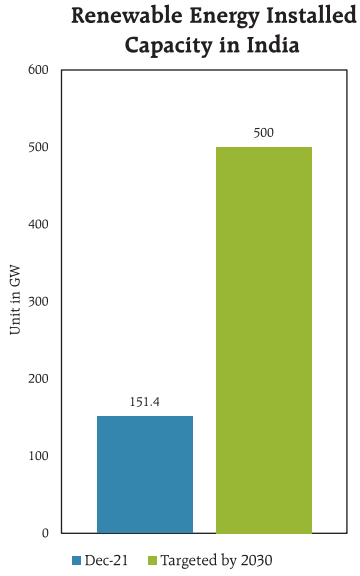
Social norms favouring working women

Mandating gender diversity in work places

Flexi-time → WFH → Metaverse

Chart 16: Green India





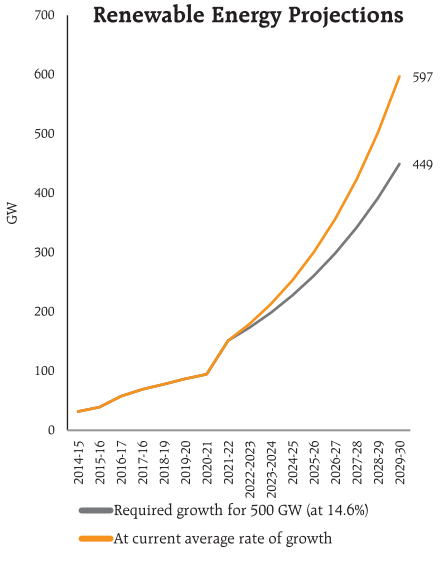
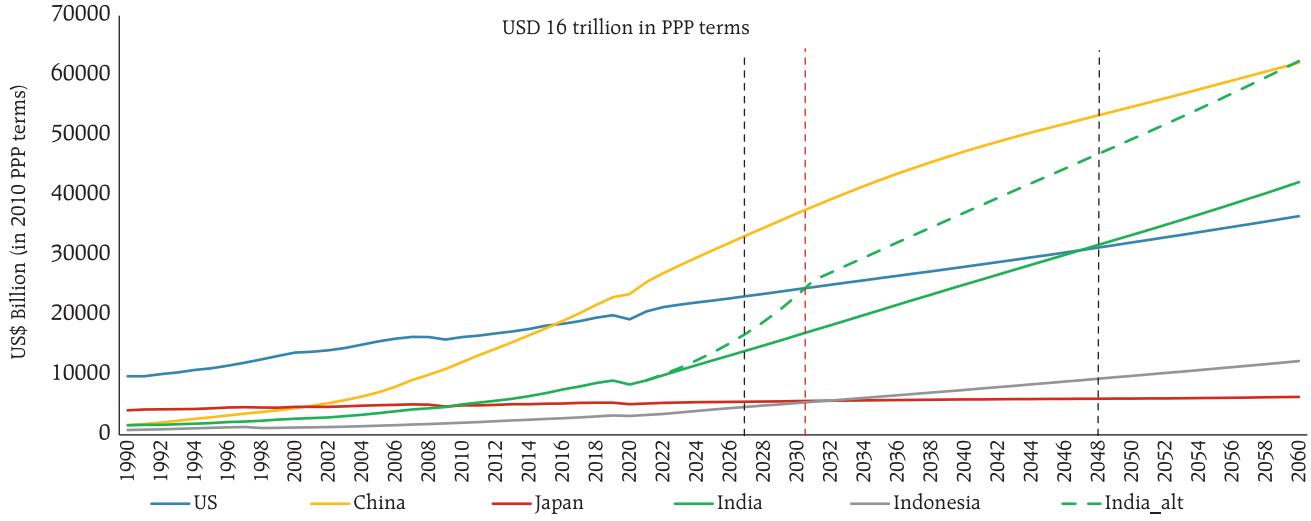


Chart 17: Crossing Over

Real GDP of Major Economies



Source: OECD (2021).

ARTICLES

*State of the Economy**

Global growth prospects have turned gloomier over the month. Easing of supply chain pressures and the recent ebbing of commodity prices are providing some breather from record high inflation. In India, supply conditions are improving, with the recent monsoon pick-up, strong momentum in manufacturing and a rebound in services. The onset of festival season should boost consumer demand, including rural, also as sowing activity picks up. Robust central government capital outlays are supporting investment activity. Inflation has edged down, but its persistence at elevated levels warrants appropriate policy responses to anchor expectations going forward.

Introduction

It has been said that history doesn't repeat itself, but it often rhymes[1]. Exactly 25 years ago, as contagion from the south east Asian crisis spread to Russia, Long-Term Capital Management (LTCM) and eventually to Latin America, it also licked at Indian shores. Already battling the after effects of international sanctions imposed on India in response to nuclear testing, the Reserve Bank of India (RBI) announced a package of measures in August 1998 to squelch speculative sentiments from destabilising the foreign exchange market. The cash reserve ratio (CRR) was increased by 100 basis points and the repo rate was raised by 300 basis points. A rare data point formed – monetary policy defence of the exchange rate of the rupee. Alongside, forward cover facilities for foreign institutional investors were enhanced, flexibility was allowed in the use of Exchange Earners Foreign Currency (EEFC) accounts, rebooking cancelled contracts for imports and splitting forward and spot legs were disallowed, and provisions for the repatriation of export proceeds were tightened. These measures coincided with the launching of the scheme of Resurgent India Bonds (RIBs).[2] In 1998-99, India also faced the challenge of high inflation – 6.9 per cent in terms of the wholesale price index (WPI), the Reserve Bank's preferred metric, and 13.1 per cent in terms of the consumer price index for industrial workers. The Reserve Bank's Annual Report for that year acknowledged it: "On strict analytical grounds, this situation warranted monetary tightening measures in order to control liquidity and to maintain price stability. However, in the presence of persisting industrial slowdown, monetary tightening… would have dampened emerging signs of incipient recovery in the real sector. This, in turn, could have resulted in lower revenue for the Government and the need for higher borrowing requirement of the Government".

In 2022, India is again confronted with high volatility in the foreign exchange market as well as elevated and persistent inflation brought on by external spillovers. Now, however, India deals with these challenges from a position of strength imparted by the resilience of its macro-fundamentals and buffers, and a structural change in the policy environment.

First, we have a monetary policy framework today that explicitly accords primacy to the goal of price stability with a numerical target and a tolerance band around it, while keeping in mind the objective of growth. Accordingly, the Reserve Bank is undertaking the required monetary policy action to quell inflation, stabilise expectations and ensure overall macroeconomic stability. In its August 2022 meeting, the Monetary Policy Committee (MPC) decided to

* This article has been prepared by G. V. Nadhanael, Shahbaaz Khan, Kunal Priyadarshi, Rajeev Jain, Harshita Keshan, Gautam Kumar, Abhinandan Borad, Rishabh Kumar, Asish Thomas George, Rohan Bansal, Priyanka Sachdeva, Yuvraj Kashyap, Vijaya Agarwal, Akshara Awasthi, Jitendra Sokal, Ashish Santosh Khobragade, Thangzason Sonna, Ipsita Padhi, Aayushi Khandelwal, Ramesh Baliram Golait, Saptarshi Ghosal, Manish Tripathi, Harendra Behera, Pankaj Kumar, Kaustubh, 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 necessarily represent the views of the Reserve Bank of India.

1 Attributed to Samuel Clemens a.k.a Mark Twain.

2 For details, see Annual Report, RBI (1998-99).

raise the repo rate by 50 basis points – mark the much reduced size of the rate increase relative to August 1998 – and focus on the withdrawal of accommodation. A quiet confidence is exuded by Governor Shri Shaktikanta Das's statement: "*The Indian economy is holding steady and progressing in an ocean of turbulence and uncertainty… We in the RBI reiterate our commitment to maintain price and financial stability to place our economy on a sustainable path of growth. Our actions have helped the economy to tide over a series of shocks…We are seized of our role at this critical juncture and will persevere in our efforts to ensure a safe and soft landing.*"

Second, today the Reserve Bank follows an assignment rule attributed to Jan Tinbergen, the first Nobel laureate in Economics in 1969. The rule says that there should be as many instruments in place as there are targets and each instrument should be assigned to the target that it is most likely to achieve. The conduct of monetary policy in India is now oriented completely to bringing down inflation from unconscionably high levels as its priority. Alongside, the Reserve Bank has remained unswerving and resolute in its efforts to impart stability to the foreign exchange market, not by monetary policy but through interventions and liberalisation of capital inflows.

Both sets of actions have earned the Reserve Bank credibility and this is already being reflected in the sentiments of households and businesses. Inflation has flattened and soon it is expected to fall, first into the tolerance band of 2-6 per cent and then to the target of 4 per cent. The Indian rupee is among the best performing currencies in the world, its depreciation among the least in the face of the unrelenting strength of the US dollar. And as Governor Shri Das points out "*…with strong and resilient fundamentals, India is expected to be amongst the fastest growing economies during 2022-23.*"

Turning to the global economy, our nowcast and model-based forecast of quarterly global GDP that we set out for the first time in the June 2022 issue of the Bulletin[3] have been confirmed by the International Monetary Fund (IMF) in its July 2022 update of its World Economic Outlook – global GDP contracted in the second quarter of 2022, after slowing in the first quarter. The July 2022 global composite purchasing managers' index (PMI) eased to its weakest level in the current 25-month sequence of expansion, with contraction among advanced economies (AEs) but some resilience among emerging market economies (EMEs). Has the recession arrived, ahead of monetary policy's bite and Europe's bleak winter? The main fault line is global inflation, notwithstanding recent easing of supply chain pressures and commodity prices.

The paths of AEs and EMEs are diverging again. Across the AE world – from Washington to Wellington - growth is slowing or turning negative and yet, incoming data point to labour markets remaining historically tight. A full employment or jobful recession sounds like an oxymoron, but it may well be approaching. Okun's Law[4], which posits that a decline in output goes hand in hand with a rise in unemployment, is about to be overturned. The answer lies in aging, slowing immigration, and fewer workers and jobseekers. Jobs lost to the pandemic may have been regained, but labour participation remains weak, shrinking labour forces in AEs and making unemployment rates look like at all time lows.

Developments in our besieged neighbourhood raise fears of an archetypal EME crisis that seems to follow every time the US Fed raises interest rates. The risks to the global economy may have diminished but the humanitarian challenge bearing down on people living in EMEs is daunting. The Economist estimates that 53 low- and middle-income countries are already

[3] Gupta, R.K., Pratap, B., Anthony, J.M., and Sonna, T (2022). 'Nowcasting Global Growth', RBI Bulletin, July.

[4] Okun, Arthur M. (1962), Potential GDP, *Its Measurement and Significance*, Proceedings of the Business and Economic Statistics Section of the American Statistical Association.

experiencing debt difficulties or their bonds are trading at stressed levels or they have defaulted – the fragile fifty three. Knock on effects on the global economy may be smaller than in the past, but this group could get bigger.

Transiting from the world back to India, a development of far-reaching portent is noteworthy. Friend shoring has begun, and India is seizing the opportunity. India partnered with 17 countries on July 20, 2022 on the occasion of the 2022 Supply Chain Ministerial Forum to alleviate near-term transportation, logistics and supply chain disruptions and bottlenecks as well as long-term resilience challenges. The joint statement emphasised (a) transparency consistent with domestic laws and international obligations; (b) diversification of sources and logistics infrastructure capacities; (c) supply chain security addressing risks arising from supply dependencies and potential vulnerabilities in critical infrastructure; and (d) sustainability and responsible business conduct across supply chains. The key to resolving the next global supply chain crisis is to prevent it from happening in the first place.

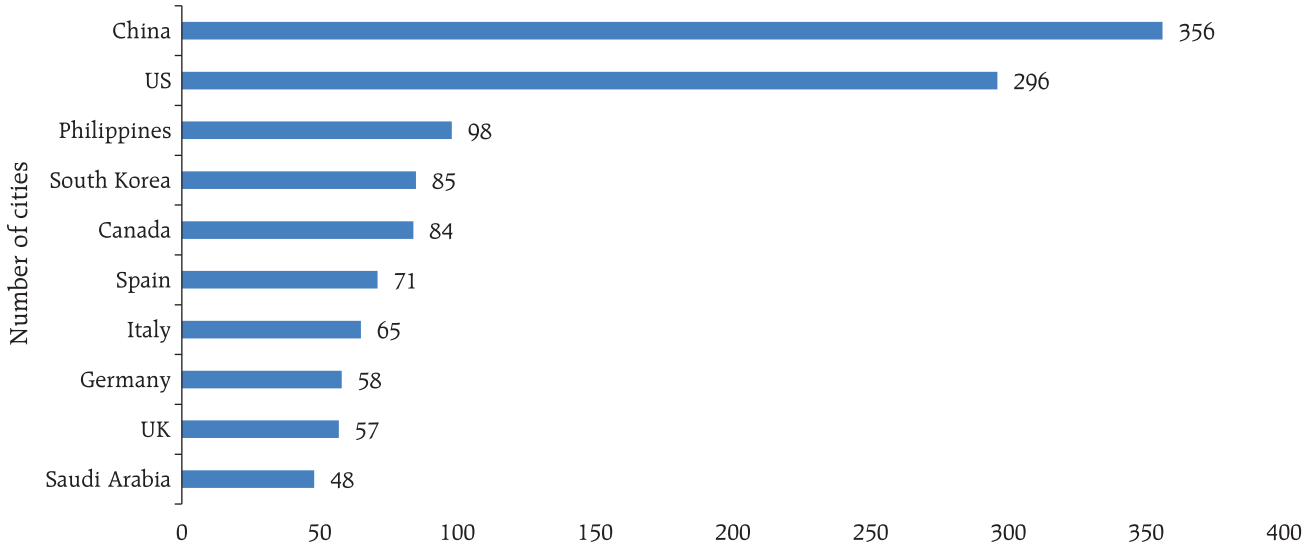
Amidst somewhat mixed signals being emitted by high frequency indicators, perhaps the best word to describe the state of domestic economic activity relative to the rest of the world is *resilience*. Private final consumption expenditure, the mainstay of the economy, is poised to surge in the upcoming festival season which should also buoy subdued rural demand, as shortfalls in *kharif* rice sowing close with the recent revival of the south-west monsoon. Investment demand is benefitting from the massive increase of 54 per cent in the central government's capital outlay, but business investment remains tepid in spite of strong sales growth and increase in profits. Although exports have moderated in July, this may be a one-off because world trade volume has accelerated. With the windfall levy on fuel exports having been reduced/scrapped, exports of petroleum products that account for 16 per cent of total merchandise exports are set to rise again. The recent easing of international crude prices should also reduce the import bill, allowing net exports to improve their contribution to aggregate demand.

Three developments inspire confidence. First, India is getting set to experience faster and wider data services across the country. With spectrums auctions coming to a close on August 1, 2022, 5G will deliver network speeds 100 times quicker than 4G networks. The thrust to internet penetration has the potential to generate employment arising from innovative technologies, create new age business and increase the reach of online education and telemedicine to remote regions (Chart 1). An amount of ₹1.5 lakh crore has accrued to the public exchequer, the highest spectrum collections since 2010[5]. This provides fiscal comfort.

Second, early corporate earnings results for the first quarter of 2022-23 have beaten expectations, allaying concerns on corporate profitability in an operating environment marked by inflationary pressures. Sales growth of non-financial sector companies remained in high double digits even after adjusting for inflation (Chart 2). Input cost escalation was experienced across the board. The consequent pressure on operating margins was sought to be mitigated by adopting a range of strategies including improvement in operational efficiency, changing the mix of products and the like. Rising input costs benefitted some, as for instance, upstream oil and gas companies. The banking and financial sector also fared well amidst a pickup in credit growth, lower provisioning costs and improvement in asset quality. The better-than-expected corporate earnings have buoyed domestic equity markets and attracted foreign portfolio investment (FPI) back to India - FPIs turned net buyers in Indian equities in July 2022 and August so far after a gap of nine months.

[5] https://www.business-standard.com/article/companies/govt-earns-rs-1-5-trn-as-spectrum-auction-ends-on-day-7-jio-biggest-bidder-122080100774_1.html

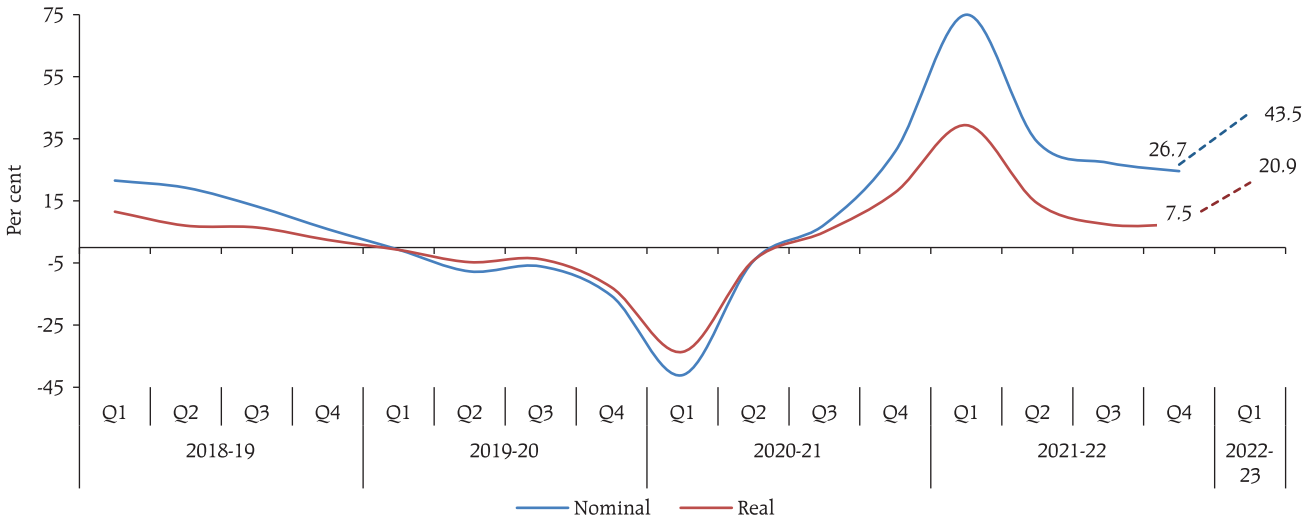
Chart 1: 5G Availability Country-wise



Source: Statista.

Third, a development that may lack flash but has far-reaching significance is the active recognition of climate change as a risk to the stability of the financial system by the Reserve Bank in its July 27, 2022 discussion paper[6]. The paper underscores the need for an appropriate framework to identify, assess

Chart 2: Sales growth (Y-o-Y) - Manufacturing



Note: Result is based on 835 common listed private manufacturing companies for Q4:2021-22 and Q1:2022-23.
Sources: Capitaline; and RBI staff estimates.

6 Discussion Paper on Climate Risk and Sustainable Finance, RBI, July 2022. https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=21071

and manage climate related risk, and move the financial system towards green financing, keeping in mind the social and developmental objectives of the country. The Reserve Bank intends to prepare a strategy, based on global best practices, including by participation in standard-setting bodies and other international fora, on mitigating the adverse impacts of climate change. The challenge is to move from qualitative assessments to quantification of climate change risks, initially through appropriate disclosures.

Set against this backdrop, the remainder of the article is structured into four sections. Section II captures the rapidly evolving developments in the global economy. An assessment of domestic macroeconomic conditions is presented in Section III. Section IV reviews financial conditions in India, while the last Section concludes the article.

II. Global Setting

The pace of global growth has tapered off in recent months amidst volatile financial conditions and persisting uncertainty surrounding the geo-political situation. Heightened recession risks are shadowing aggressive and synchronised monetary tightening across jurisdictions. In its July 2022 update of the World Economic Outlook (WEO), the International Monetary Fund (IMF) revised down its global growth projection by 40 basis points (bps) for 2022 and by 70 bps for 2023 to 3.2 per cent and 2.9 per cent, respectively. In a downside scenario characterised by a drastic fall in energy imports from Russia, elevated and persistent inflation expectations and tighter financial markets conditions, global growth may fall further to about 2.6 per cent and 2.0 per cent in 2022 and 2023 respectively[7] (Table 1).

Table 1: GDP Growth Projections – Select AEs and Emerging Market Economies (EMEs)

(Per cent)

Country	2022		2023	
	April 2022*	July 2022*	April 2022*	July 2022*
World	3.6	3.2	3.6	2.9
Advanced Economies				
US	3.7	2.3	2.3	1.0
UK	3.7	3.2	1.2	0.5
Euro area	2.8	2.6	2.3	1.2
Japan	2.4	1.7	2.3	1.7
Emerging Market Economies				
Brazil	0.8	1.7	1.4	1.1
Russia	-8.5	-6.0	-2.3	-3.5
India	8.2	7.4	6.9	6.1
China	4.4	3.3	5.1	4.6
South Africa	1.9	2.3	1.4	1.4

*: Month of projection.
Source: IMF.

Our updated nowcasts of global GDP for Q2:2022[8] point to global growth momentum entering the contractionary zone[9] (Chart 3).

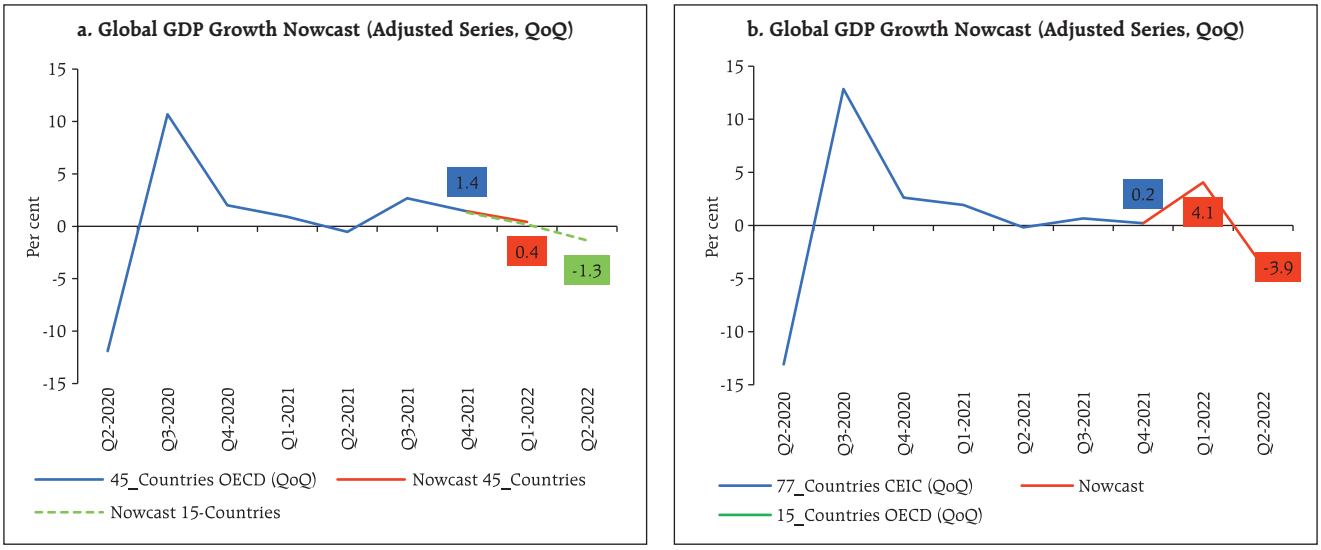
This is also reflected in the movement of high frequency indicators. The global composite purchasing

[7] International Monetary Fund (2022), World Economic Outlook, July 2022 update.

[8] Q2:2022 GDP series compiled by OECD is available for 15 countries so far as against 45 countries till Q1:2022.

[9] Gupta R.K. *et, al.*, "Nowcasting Global Growth", RBI Bulletin, June 2022. Two approaches have been adopted. In the first, quarterly GDP compiled by OECD for 48 countries up to Q4:2021 was extended to Q1:2022 based on available official releases of GDP growth rates for 45 countries. The second approach used quarterly GDP of 77 countries compiled by Census and Economic Information Center (CEIC) for forecasting global GDP for Q1:2022 and Q2:2022 with exogeneous regressors.

Chart 3: Global GDP Nowcasts

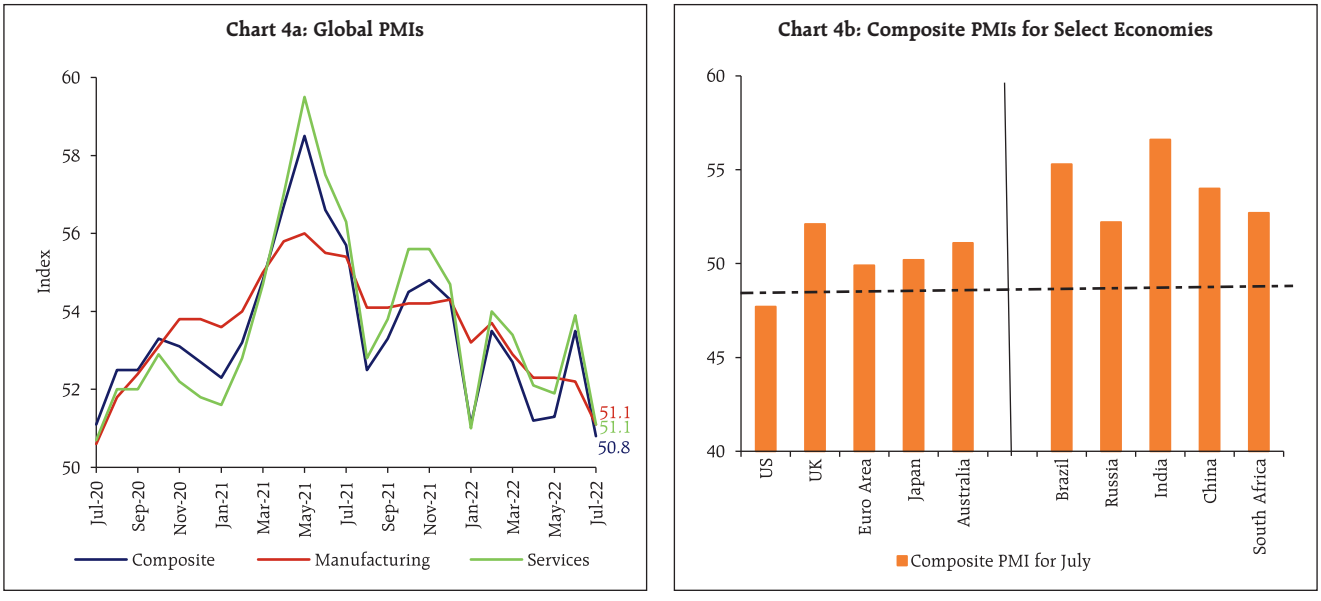


Source: RBI staff estimates.

managers' index (PMI) decreased to 50.8 in July 2022, the lowest in 2 years, even as the services sector business activity index fell to 51.1 in July from 53.9 in June. The global manufacturing purchasing managers' index (PMI) declined to a 24-month low of 51.1 in July from 52.2 in June as new orders contracted and employment slipped further (Chart 4a). Manufacturing output declined in most AEs; EMEs' performance was mixed as some of them maintained expansion (Chart 4b).

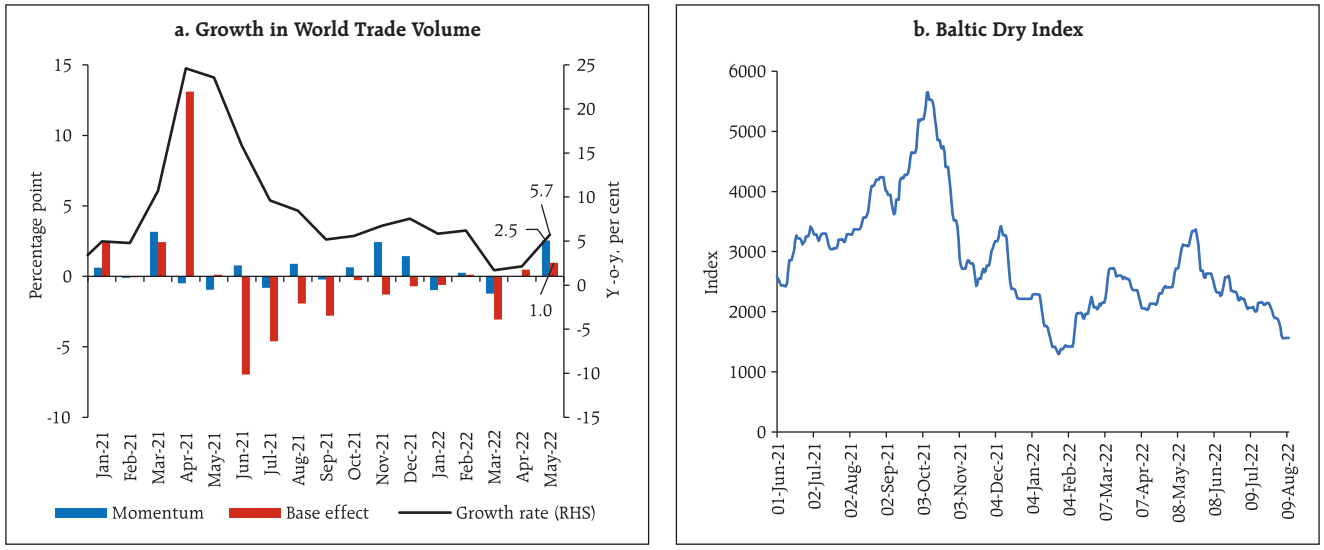
The IMF has also reduced its world trade growth forecast for 2022 and 2023 by 90 bps and 120 bps to 4.1 per cent and 3.2 per cent, respectively. In terms of live indicators, world merchandise trade volume

Chart 4: Trends in Purchasing Managers' Index



Source: IHS Markit.

Chart 5: World Trade and Shipping Costs



Sources: CPB Netherlands; and Bloomberg.

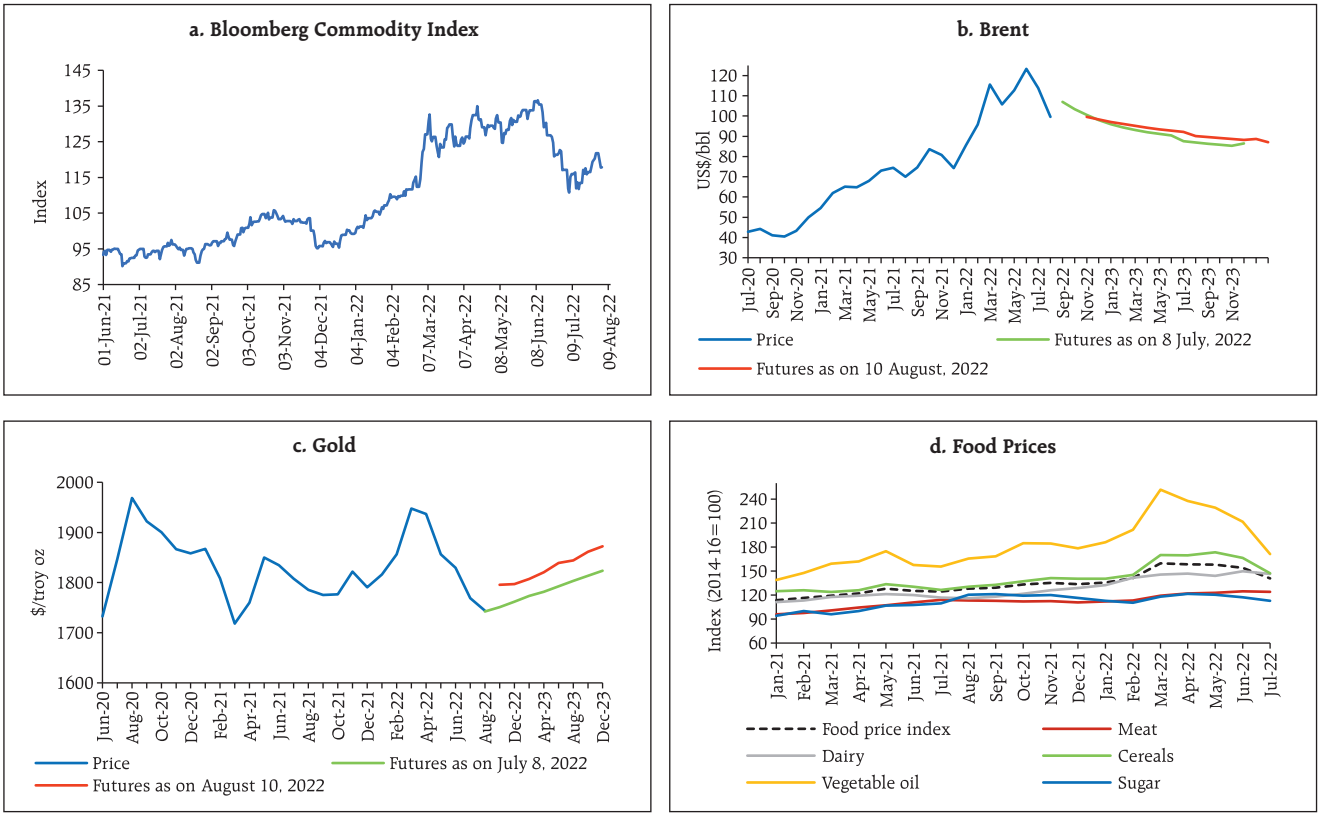
growth had accelerated to 5.7 per cent (y-o-y) in May 2022 from 2.1 per cent in April. A favourable base effect was supported by a pickup in momentum as the Baltic Dry Index, a measure of shipping charges for dry bulk commodities, declined for the second consecutive month, shedding 15.4 per cent in July (Chart 5). PMI subindices for July also indicated receding supply chain bottlenecks and fading price pressures, and delivery time reduced to a 20-month low.

International commodity prices remained volatile after a precipitous fall in June on fears of impending global recession. The Bloomberg commodity price index witnessed a partial rebound in the second half of July, averaging 3 per cent higher than the average of the first half (Chart 6a). In particular, crude oil prices exhibited heightened volatility, owing to exceptionally stringent supply conditions. Notwithstanding the moderation starting from July 19, 2022, crude oil prices have recorded a 21.0 per cent gain year to date (up to August 17, 2022) (Chart 6b). On August 3, the Organization of the Petroleum Exporting Countries (OPEC) and its allies agreed to increase production by 1,00,000 barrels a day. At 0.1 per cent of global demand, this is one of the smallest oil production increases in the group's history. As on August 17, 2022 Brent futures has averaged around US$ 93 per barrel for 2022 and US$ 88 per barrel for 2023.

After tumbling for three consecutive months, gold prices increased in July and continued its uptrend in August so far (up to 11) as bond yields softened and safe haven demand was rejuvenated by recession expectations (Chart 6c). Marking the fourth consecutive monthly decline, the FAO food price index fell by 8.6 per cent m-o-m in July 2022, the fall spread across constituents. Despite this decline, it registered an annual increase of 13.1 per cent, pointing to still sustained price pressures (Chart 6d).

A number of countries had put in trade policy measures to insulate domestic economies from rising global food prices. With the significant easing of price

Chart 6: Commodity and Food Prices



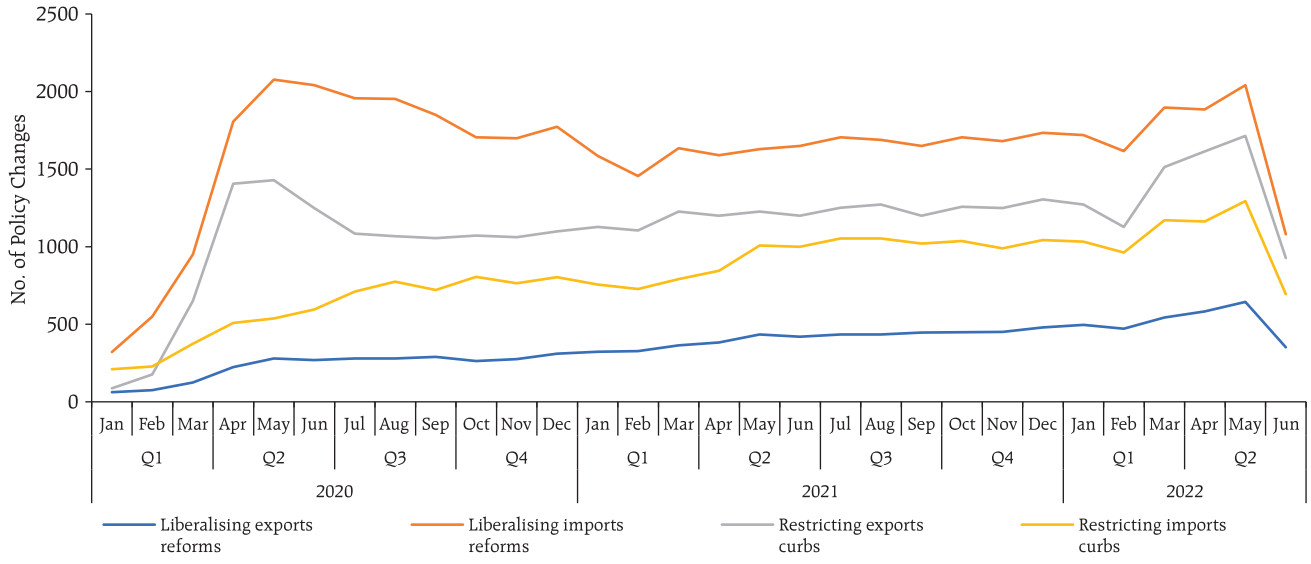
Sources: Bloomberg; World Bank Pink Sheet; and FAO.

pressures over the last two months, there has been a corresponding decline in trade policy restrictions, beginning June 2022 (Chart 7).

In spite of the moderation in commodity prices and supply chain pressures, the globalisation of inflation and its persistence remains the major faultline in the evolving global outlook. In July 2022, the IMF revised up its inflation projection by 0.9 percentage points for AEs to 6.6 per cent and by 0.8 percentage points for emerging market and developing economies (EMDEs) to 9.5 per cent (relative to projections in the April 2022 WEO), driven by food and energy prices as well as supply-demand imbalances.

The US headline CPI inflation eased to 8.5 per cent in July 2022 from a 40-year high of 9.1 per cent in June. The monthly momentum steadied at 0 per cent in July (1.3 per cent in June) as the fall in gasoline prices offset the increases in those of food and shelter. On the other hand, inflation in the US measured by the y-o-y change in the personal consumption expenditure (PCE) price index accelerated to 6.8 per cent in June 2022 from 6.3 per cent in May, with a monthly momentum of 1.0 per cent as energy prices increased 7.5 per cent (m-o-m) while food prices increased 1.0 per cent. Core PCE inflation also edged up to 4.8 per cent in June 2022 from 4.7 per cent a month ago as the monthly momentum of 0.6 per cent was only partly offset by a favourable base effect. Euro area annual inflation soared to a new record of 8.9 per cent in July, primarily driven by energy and followed by food, alcohol and tobacco. CPI inflation in the UK accelerated to a 40-year high of 9.4 per cent (y-o-y) in June 2022, with transport followed by food

Chart 7: Monthly Global Food Trade Policy Changes

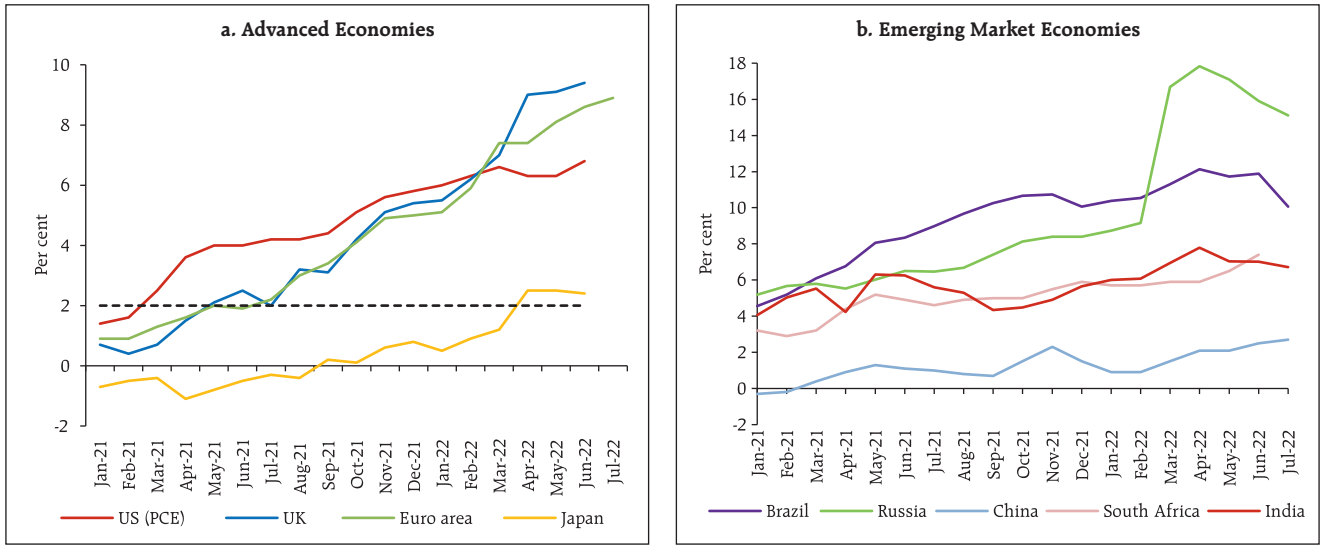


Source: World Bank.

and non-alcoholic beverages contributing the highest to the monthly momentum (Chart 8a). Among the BRICS economies, inflation in Brazil at 10.1 per cent in July remained in double digits for the eleventh consecutive month. In China, it rose to a twenty-four month high of 2.7 per cent (Chart 8b). In Russia, the annual inflation rate fell to 15.1 per cent in June 2022 from 15.9 percent in the previous month - the lowest inflation rate since March.

Global financial markets recovered towards the end of July, paring losses suffered in June. The MSCI world equity index rebounded, ending the month

Chart 8: Inflation

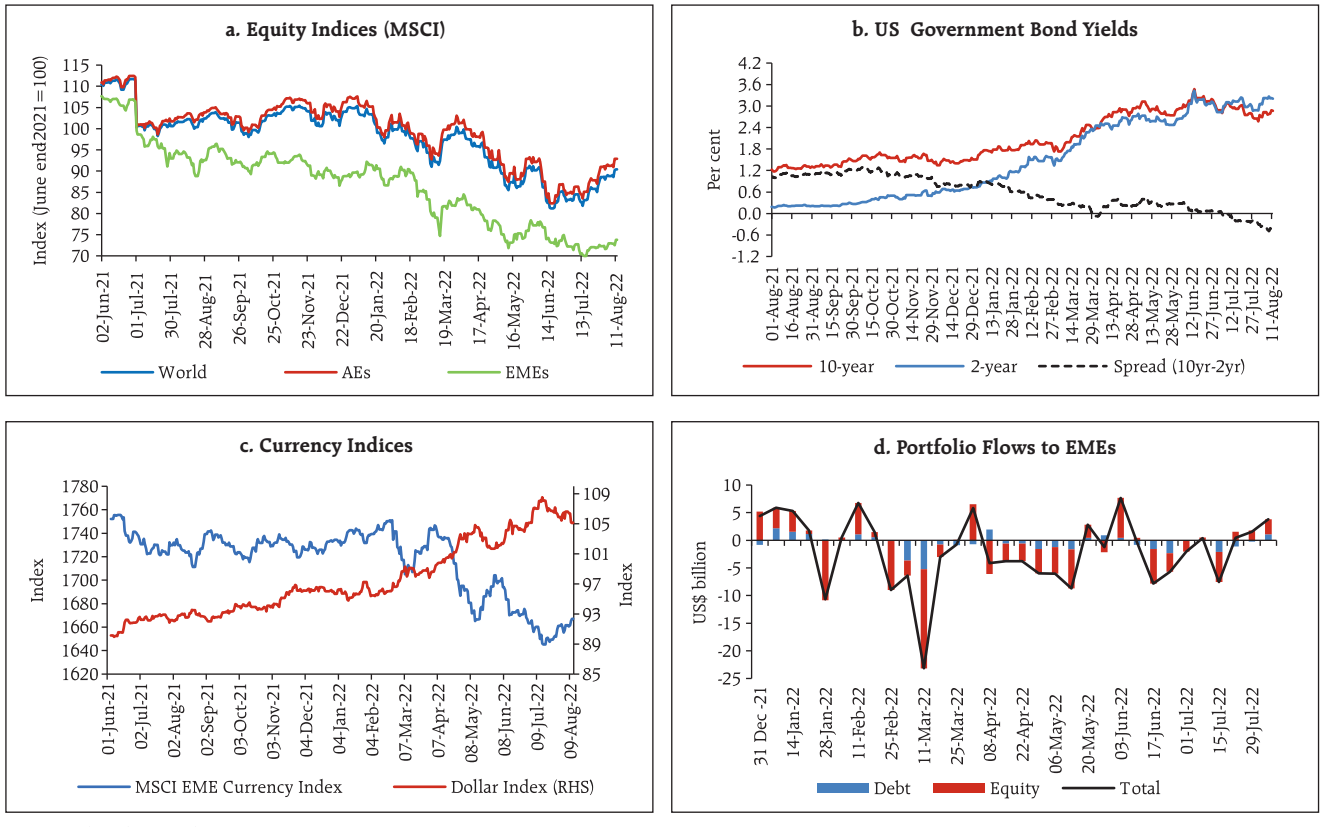


Source: Bloomberg.

6.9 per cent higher than a month ago. Advanced economies' equities fared better than their emerging market peers, increasing by 7.9 per cent as against a decline of 0.1 per cent in the latter (Chart 9a). In the bond market, 10-year G-sec yields softened across major AEs as the growth outlook darkened. The US 10-year G-sec yield fell by 37 basis points in the last 10 days of July, largely in response to a priced-in market response to the 75 bps increase in the policy rate in July (Chart 9b). In fact, the US treasury yield curve has inverted since July 05, 2022 - signs of an impending recession. The US dollar index rose sharply up to mid-July on Federal Reserve's hawkish action and safe haven demand but lost steam on expectations of a slower future pace of rate hikes by the US Fed (Chart 9c). Concomitantly, the MSCI currency index for EMEs declined till mid-June before recovering marginally on support from equity inflows (Chart 9d).

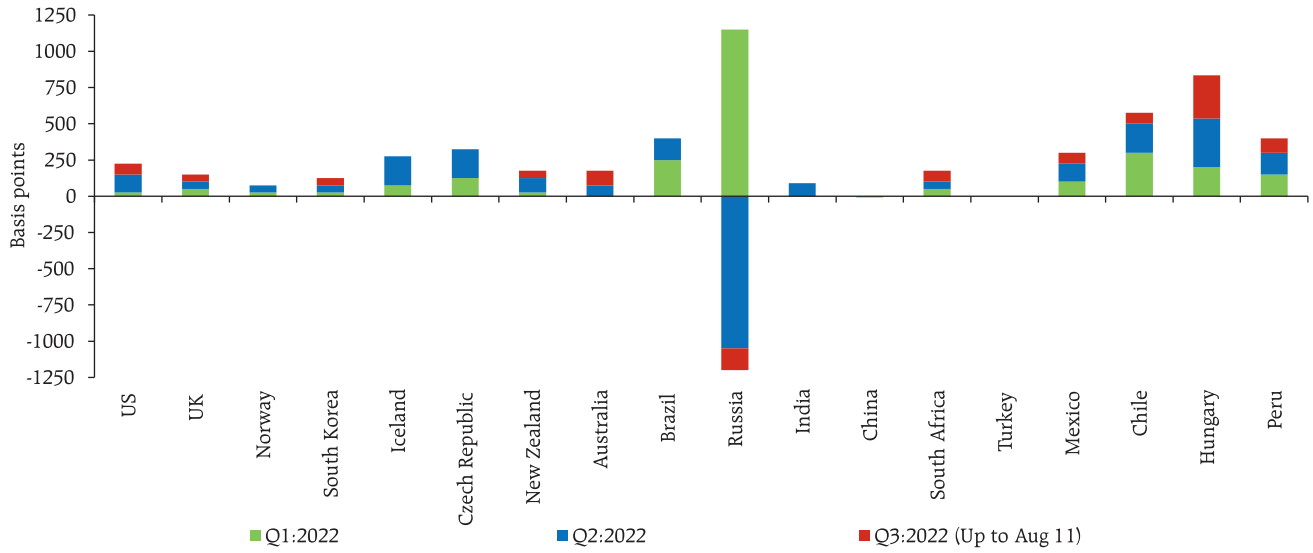
Monetary tightening continued synchronously across the globe with the growing conviction that aggressive monetary policy actions are warranted to rein in historically high inflation. As stated earlier, the US Federal Reserve raised the target range of the federal funds rate for the fourth consecutive meeting but on expected lines by 75 bps to 2.25-2.50 per cent. It also reiterated the announced path of taper – the Fed's balance sheet would decline by US$ 95 billion from September, *i.e.*, at double the pace of the previous three months' contraction. On August 4, the Bank of England (BoE) raised its policy rate by 50 bps, expecting inflation to rise above 13 per cent in Q4:2022. The UK economy is projected to enter recession from Q4:2022. The ECB raised rates by 50 bps – the first in over a decade – and exited negative interest rates to rein in record high inflation. Israel, New Zealand and South Korea also raised their policy rates by 50 bps in

Chart 9: Financial Markets



Sources: Bloomberg; and IIF.

Chart 10: Rate Actions of Central Banks of Select Countries since 2022



Source: Central bank websites.

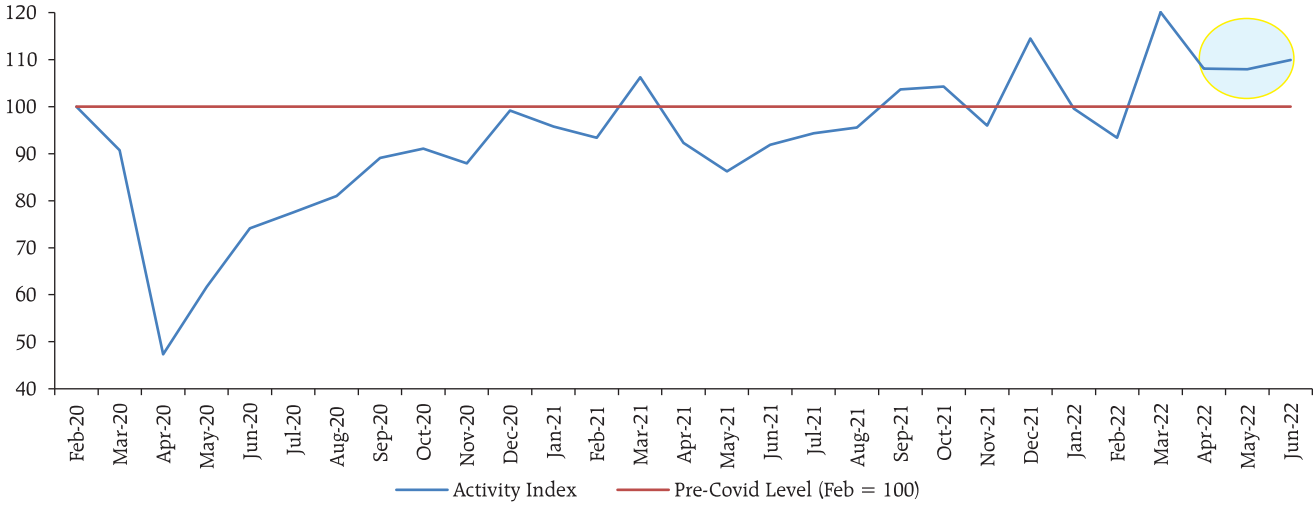
July, while Canada and Australia raised rates by 100 bps in Q3 so far. Japan, however, continued to diverge by maintaining an accommodative stance.

Most EME central banks also continued with policy tightening (Chart 10). Most countries raised policy rates in their regular policy cycles while Hungary and Philippines took actions in off-cycle meetings. In contrast, Russia cut its policy rate by 150 bps in the latest policy meeting while China cut its One-Year Medium-Term Lending Facility Rate, a key lending rate by an unexpected 10 bps and continued its accommodative stance.

III. Domestic Developments

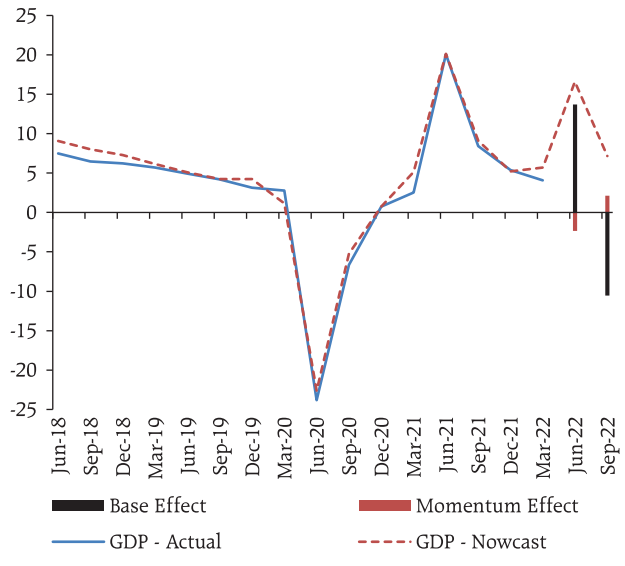
Our economic activity index that employs a dynamic factor model (DFM) with 15 high frequency

Chart 11: Activity Index (DF-15)



Note: The Activity Index is constructed by extracting the common trend underlying the set of carefully selected high frequency indicators of the economic activity using a Dynamic Factor Model (DFM).
Source: RBI staff estimates.

Chart 12: GDP - Actual and Nowcast



Source: RBI staff estimates.

indicators is showing a moderate but steady improvement in May and June (Chart 11). Under alternative model specifications, GDP growth for Q2:2022-23 is nowcast at 7.2 per cent, supported by a favourable base (Chart 12).

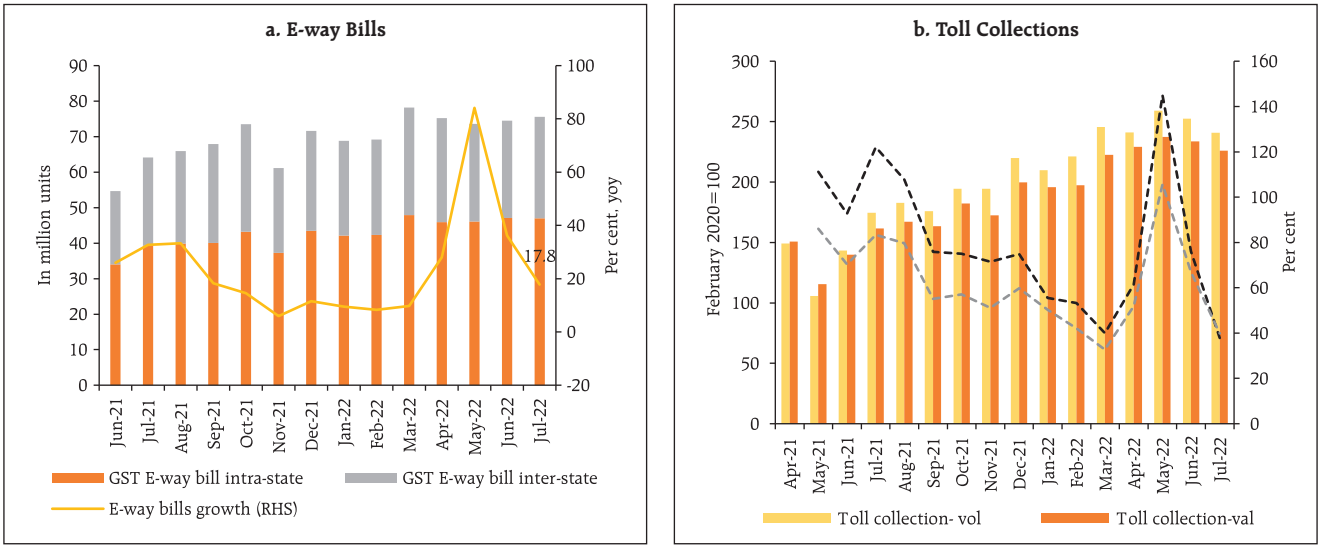
Aggregate Demand

The movement of goods as a proximate indicator of aggregate demand remained resilient. Both inter state and intra-state E-way bills generation picked up sequentially in July 2022 (Chart 13a). Toll collections remained robust in July 2022, but for some exhibited moderated sequential moderation due to unfavourable weather conditions (Chart 13b).

Fuel consumption too declined in July on account of seasonal factors, showing up in a dip in the consumption of diesel, petrol and aviation turbine fuel (Chart 14a). The automobile sector recovered in July on the back of sustained passenger vehicle dispatched to dealers. Entry level passenger vehicles are yet to recover to pre-pandemic levels, even as they recorded sequential improvement (Chart 14b). Retail sales of automobiles moderated due to seasonal rains, led by a fall in registration of non-transport vehicles, primarily two-wheelers, which constitute 80 per cent of the total (Chart 14c). Uneven spread of the monsoon also impacted tractor sales in July, even as two wheelers and motorcycle sales picked up and three-wheeler sales continued to lag below pre-pandemic levels (Chart 14d).

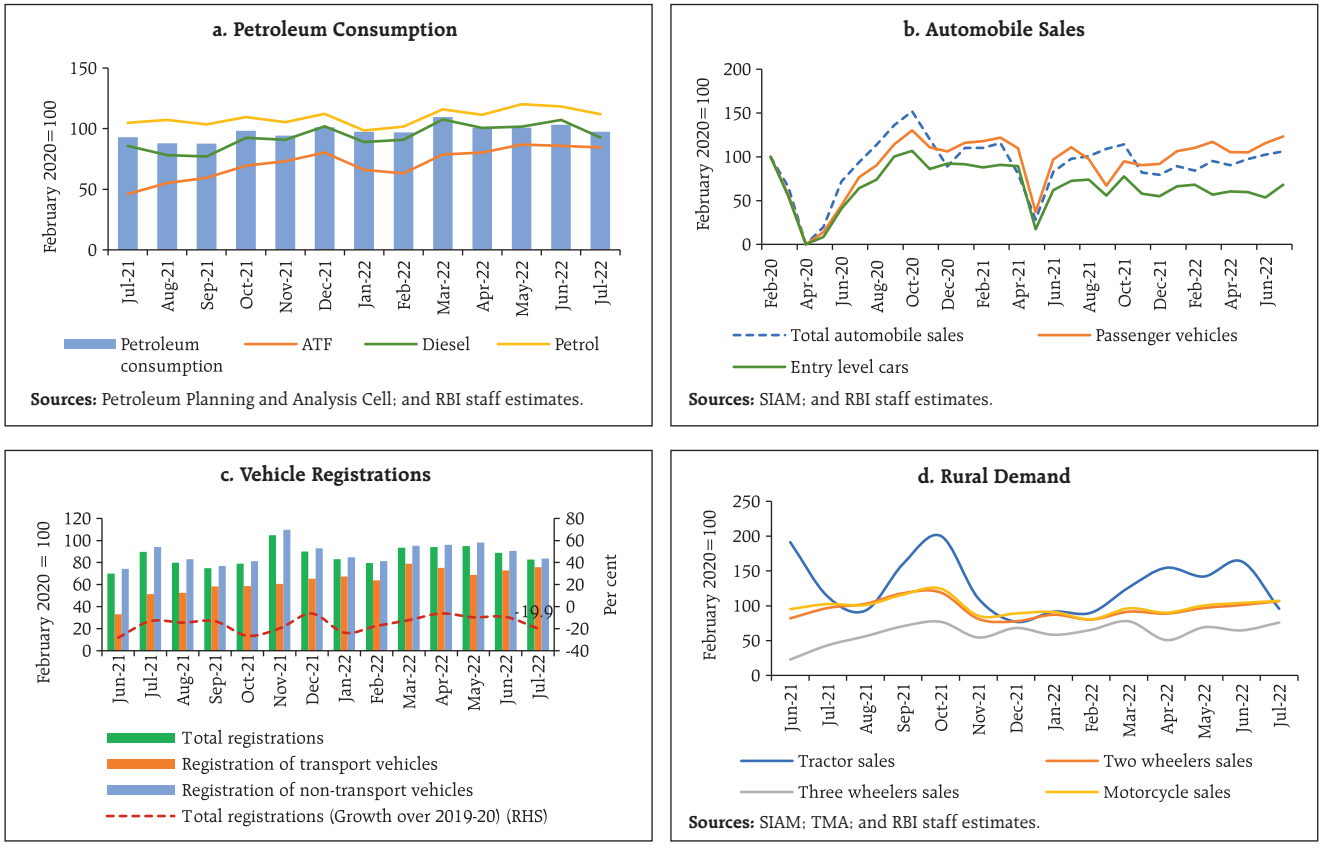
Sales of fast-moving consumer goods (FMCG) recorded a sequential decline in July, reflecting a seasonal drag in the beverages segment. Sales

Chart 13: E-way Bills and Toll Collections



Sources: GSTN; Reserve Bank of India; and RBI staff estimates.

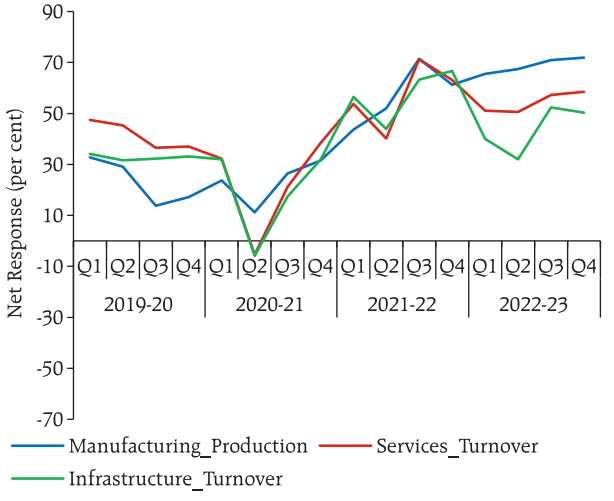
Chart 14: Automobile Sector Indicators



are expected to be strengthen going ahead, with the cooling of edible oil prices on a global price correction. The expected demand pickup in the upcoming festive season, good monsoons and higher earnings[10] are all aiding rural consumption and increase in out-of-home activities is propelling urban consumption.

Despite bleak global growth prospects, elevated energy prices, supply-side disruptions and the prevailing geopolitical tensions, the Indian private corporate sector is increasingly optimistic on demand conditions in the manufacturing, services and infrastructure sectors, as reflected in the quarterly enterprise surveys conducted by the Reserve Bank. Domestic manufacturers expect higher production, and enterprises in services and infrastructure sectors expect higher turnover in the second half of 2022-23 (Chart 15).

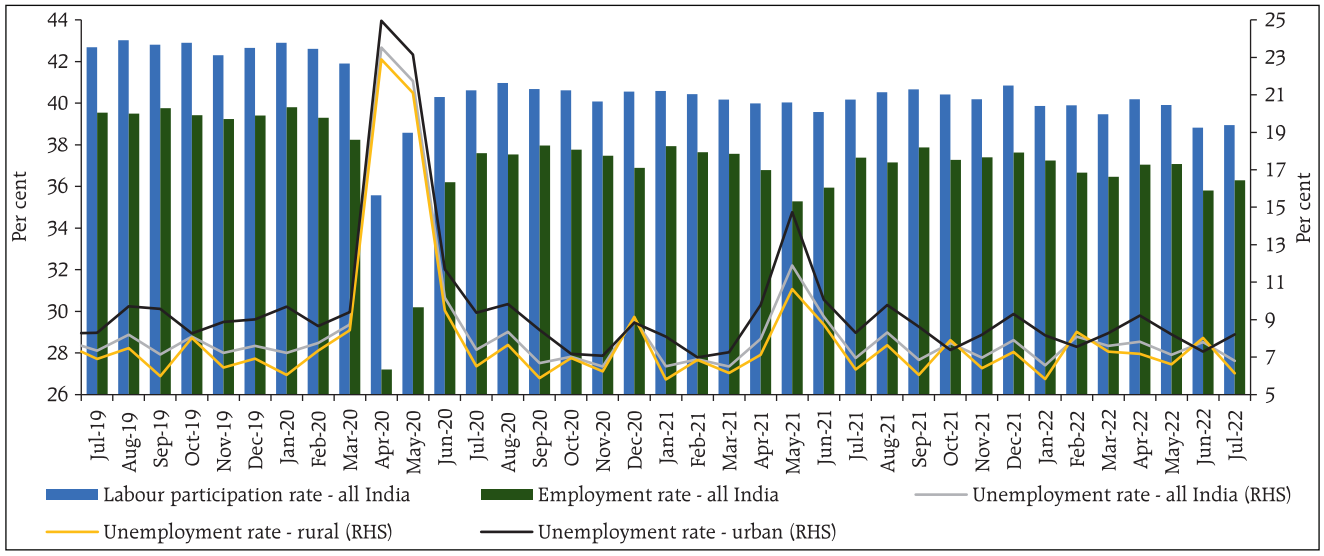
Chart 15: Expectations on Production / Turnover



Note: Net response (NR) is the difference between the percentage of respondents reporting optimism and those reporting pessimism.
Source: RBI.

[10] Economic Times, July 20, 2022.

Chart 16: Employment, Unemployment and Labour Participation Rates

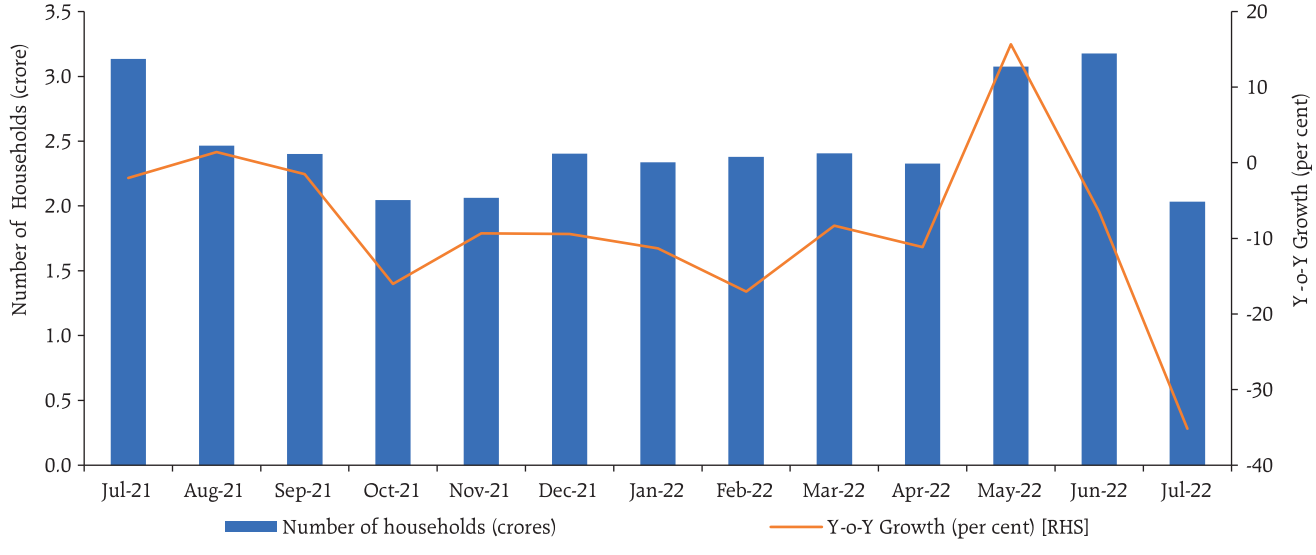


Source: CMIE.

As per the household survey of the Centre for Monitoring Indian Economy (CMIE), the employment rate improved in July. The unemployment rate declined by a percentage point to 6.8 per cent in July 2022, despite a rise in the labour force participation rate (LFPR) (Chart 16). This fall was driven by a 2 percentage points decline in rural unemployment rate on account of improvement in farm activity.

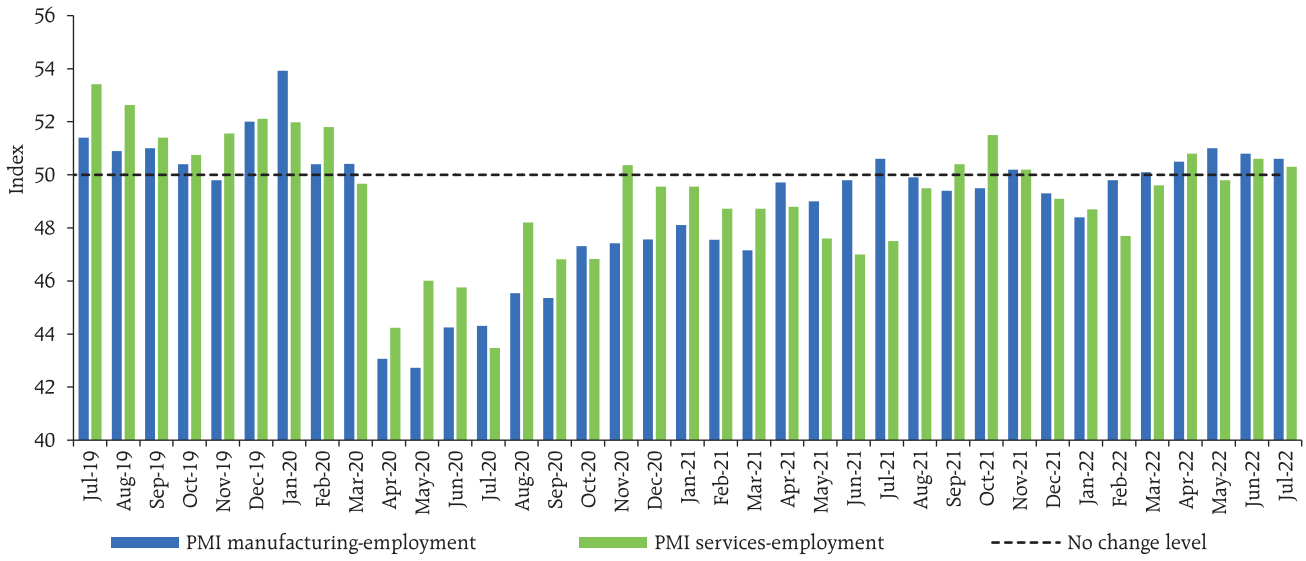
Demand for work under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) declined significantly in July, indicating the increased availability of farm work as well as in other sectors in the rural area (Chart 17). In terms

Chart 17: Work Demand under MGNREGS



Source: Ministry of Rural Development, GoI.

Chart 18: PMI Employment Indices



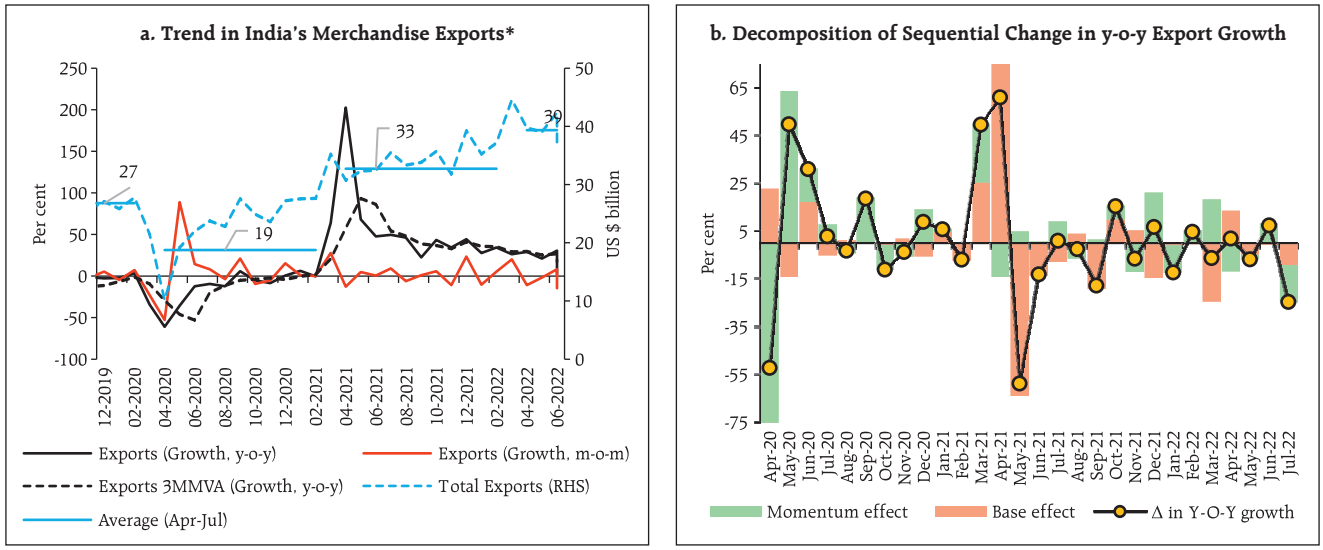
Source: S&P Global.

of the organised sector employment outlook, the employment sub-index for both manufacturing and services moderated marginally over the previous month though it remains expansionary (Chart 18).

India's merchandise exports at US$ 36.3 billion on a y-o-y basis witnessed muted growth of 2.1 per cent (Charts 19). On a sequential basis, exports fell 14.4 per cent (m-o-m), partly reflecting the imposition of excise duty/cess on petroleum products. Non-oil exports grew marginally by 0.8 per cent (y-o-y).

An analysis of the performance of exports of top 10 commodities reveals that engineering goods, gems and jewellery, textile and cotton, which together account for 40 per cent of the total export basket,

Chart 19: India's Merchandise Exports – July 2022



*3MMVA is three month moving value average.
Sources: PIB; DGCI&S; and RBI staff estimates.

Table 2: Top 10 Export and Import Commodities

Exports					Imports				
Top 10 Commodity Group	**Jul'22 (Share)**	**Jul'22 (US$ Bn)**	**Y-o-Y Growth**	**M-o-M Growth**	**Top 10 Commodity Group**	**Jul'22 (Share)**	**Jul'22 (US$ Bn)**	**Y-o-Y Growth**	**M-o-M Growth**
Engineering Goods	26%	9.3	-2.1	-2.4	Petroleum, Crude & products	32%	21.1	70.4	-2.0
Petroleum Products	18%	6.4	9.2	-40.2	Electronic goods	10%	6.8	27.8	11.3
Gems And Jewellery	9%	3.3	-5.2	-7.3	Coal, Coke & Briquettes, etc.	8%	5.2	164.4	-23.4
Organic And Inorganic Chemicals	7%	2.6	8.0	-12.1	Machinery, electrical & non-electrical	6%	3.8	35.1	0.8
Drugs And Pharmaceuticals	6%	2.1	-1.0	0.0	Pearls, pre & Semi-prec. Stones	5%	3.2	22.3	8.6
Electronic Goods	5%	1.8	46.1	8.4	Organic & Inorganic Chemicals	5%	3.1	28.7	-10.4
RMG Of All Textiles	4%	1.4	-0.6	-8.0	Gold	4%	2.4	-43.6	-13.5
Cotton Yarn/Fabrics/Made-ups,	3%	0.9	-28.2	-1.8	Artificial resins, plastic materials,	3%	2.2	66.9	-2.9
Rice	3%	0.9	30.9	-12.3	Vegetable Oil	3%	2.0	47.2	11.0
Plastic And Linoleum	2%	0.8	-3.5	2.1	Non-ferrous metals	3%	1.8	40.0	10.8
Total of 10 Major Commodity Groups	82%	29.6	2.5	-15.1	Total of 10 Major Commodity Groups	78%	51.7	44.5	-2.7
Total Exports	**100.0**	**36.3**	2.1	-14.4	**Total Imports**	**100.0**	**66.3**	43.6	-0.1

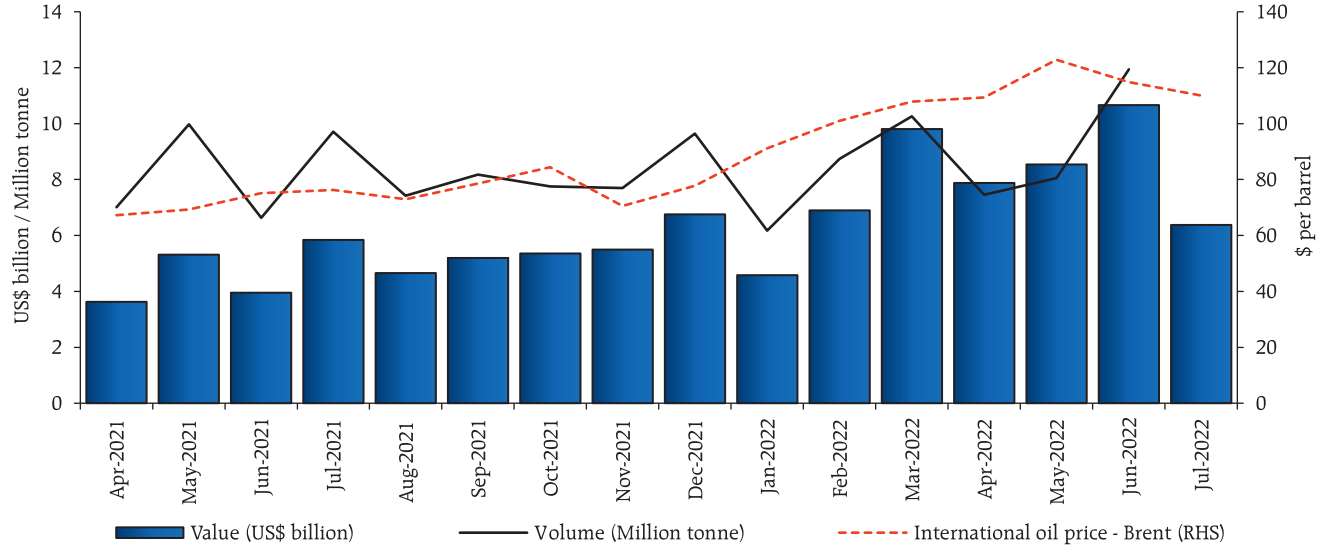
Source: MoCI.

contracted sequentially as well as on a y-o-y basis (Table 2).

Petroleum products grew by 9.2 per cent on a y-o-y basis while contracted by 40.2 per cent on a m-o-m basis to US$ 6.4 billion in July 2022 (Chart 20). With the cuts/abolition in cesses on petroleum products and the reduction in the windfall tax rates, exports of petroleum, oil and lubricants (POL) are expected to regain momentum and support overall merchandise export performance.[11]

Electronic goods, accounting for 5.2 per cent of total exports of India, were the leading positive

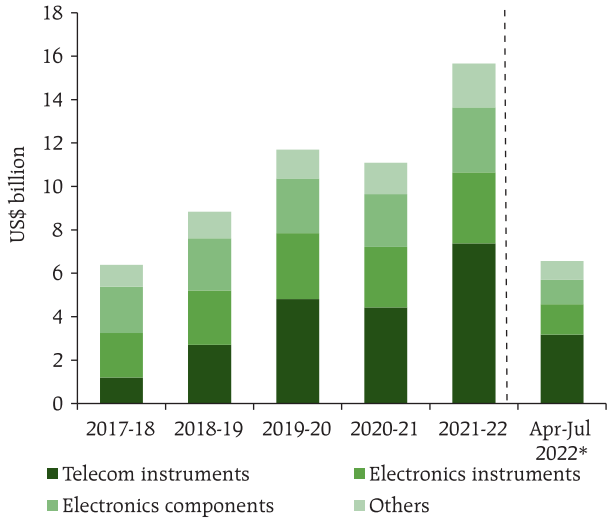
Chart 20: Petroleum Products Exports



Sources: PIB; DGCI&S; and Refinitiv Eikon.

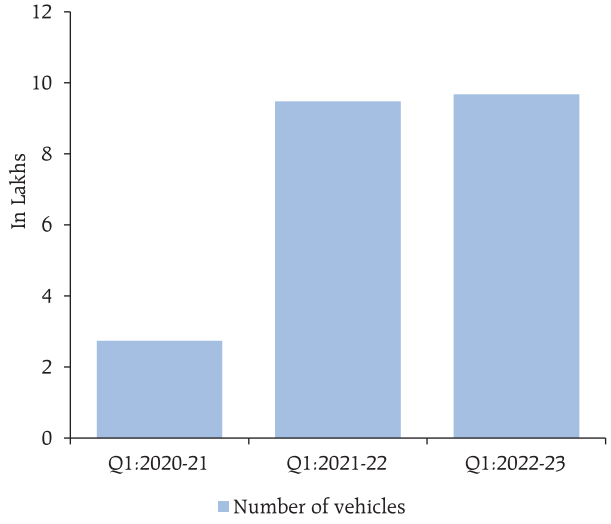
[11] Centre has also revised the cess on export of diesel downwards to ₹5 per litre from ₹11 per litre, while the cess on export of aviation turbine fuel (ATF) has been scrapped (https://www.livemint.com/news/india/centre-raises-windfall-tax-on-domestic-crude-cuts-duty-on-diesel-exports-11659486847962.html).

Chart 21: Electronic Goods Exports



*: Composition for July is estimated based on the previous three-month average.
Sources: DGCI&S; and RBI staff estimates.

Chart 22: Automotive Exports of India - Exports of Two wheelers and Three Wheelers



Source: DGCI&S.

contributor to export growth in July. Since 2017-18, exports of electronic goods have more than doubled. Telecom instruments have been the major driver, rising more than sixfold (Chart 21). The USA and the UAE account for 33 per cent of India's electronics exports. By 2025-26, the domestic market size is estimated to reach US$ 180 billion and production is expected to touch US$ 300 billion[12]. Hence, integration in global value chains through the Production Linked Incentive (PLI) schemes and greater market expansion with free trade agreements (FTAs) would be crucial going forward.

India's engineering exports declined by 2.5 per cent in July 2022 on a y-o-y basis. Within the segment, shipments of two and three-wheeler vehicles recorded an increase of 2 per cent during Q1:2022-23 as compared with the corresponding period last year (Chart 22). The gradual easing of the semiconductor supply crunch and supply chain pressures should support the export performance of the automotive manufacturers in coming months.

India's merchandise imports at US$ 66.3 billion grew significantly on a y-o-y basis (43.6 per cent); however, they declined sequentially (Chart 23a). Non-oil non-gold imports at US$ 42.8 billion continue to grow in double digits for 17 consecutive months (Chart 23b).

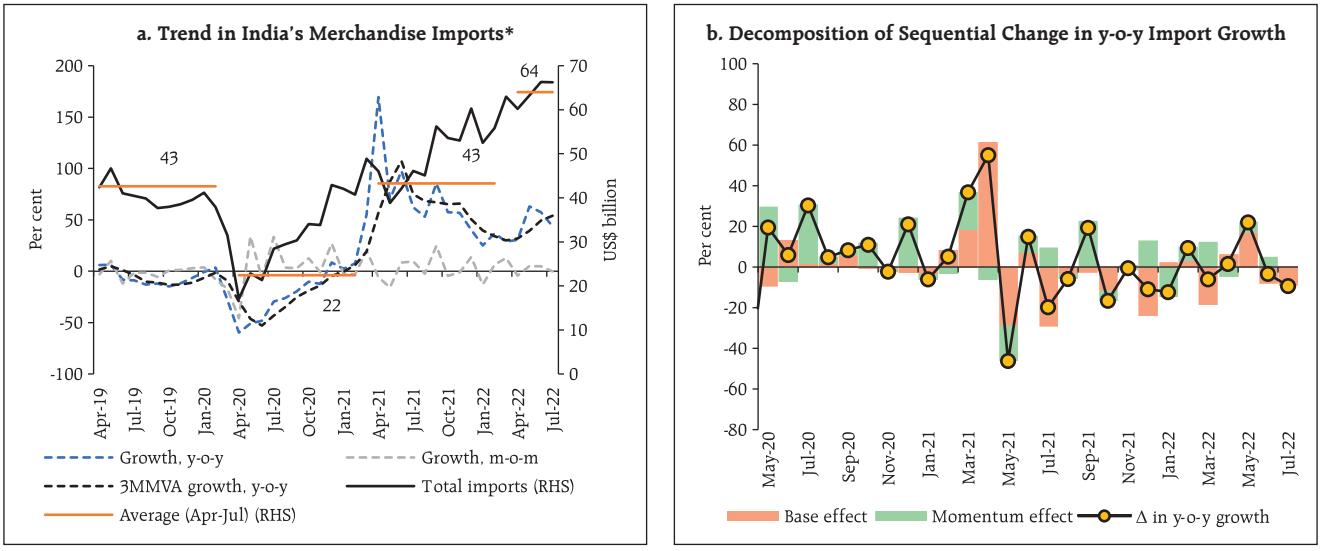
India's oil imports at 106.5 million tonnes (MT) were 13.7 per cent higher than the previous high of 93.7 MT during April-July 2018. Oil import dependency has been increasing in recent years (Chart 24). Meanwhile, ethanol blending has translated to foreign exchange savings of ₹41,500 crores.[13]

The major imported commodities such as gold, electronic goods, coal and fertiliser that account for

[12] Indian Cellular and Electronics Association, $300 BN Sustainable Electronics Manufacturing & Exports By 2026, Vision Document Volume 2. https://static.pib.gov.in/WriteReadData/specificdocs/documents/2022/jan/doc20221247801.pdf

[13] https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1831289

Chart 23: India's Merchandise Imports – July 2022

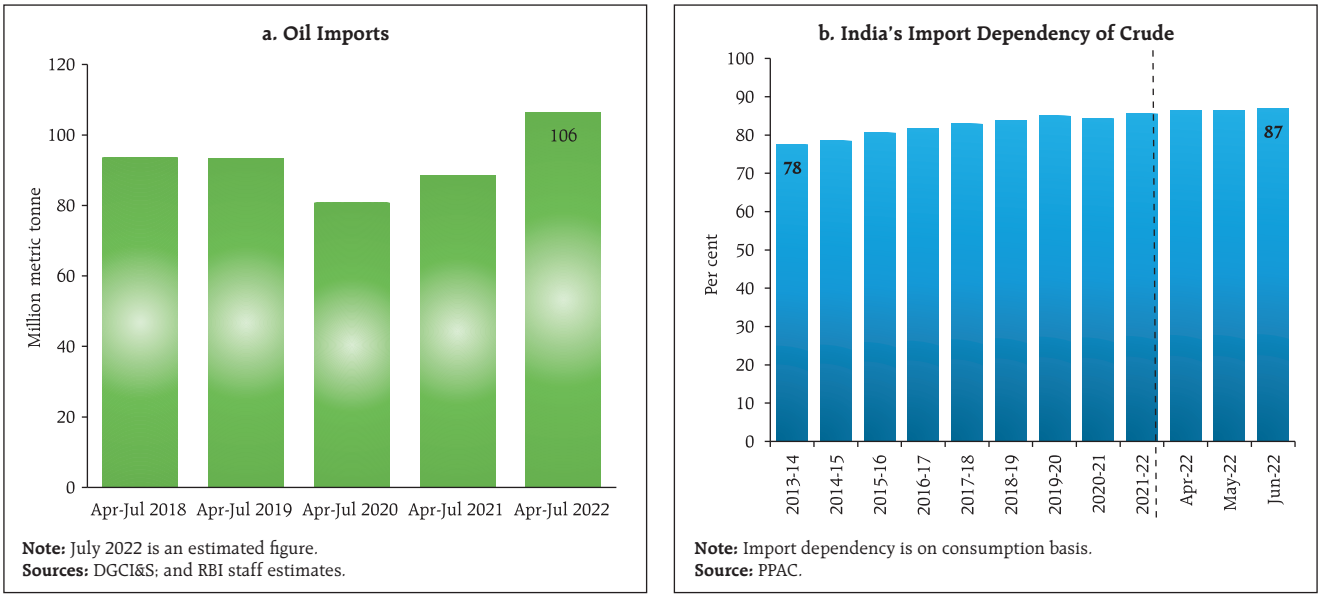


*3MMVA: Three month moving value average.
Sources: PIB; DGCI&S; and RBI staff estimates.

around one-third of total merchandise imports are trending above their five-year average growth rates, reflecting price effects (Chart 25).

The deceleration in exports, coupled with the sharp rise in merchandise imports, led to a record level of the trade deficit in July at US$ 30.0 billion, almost

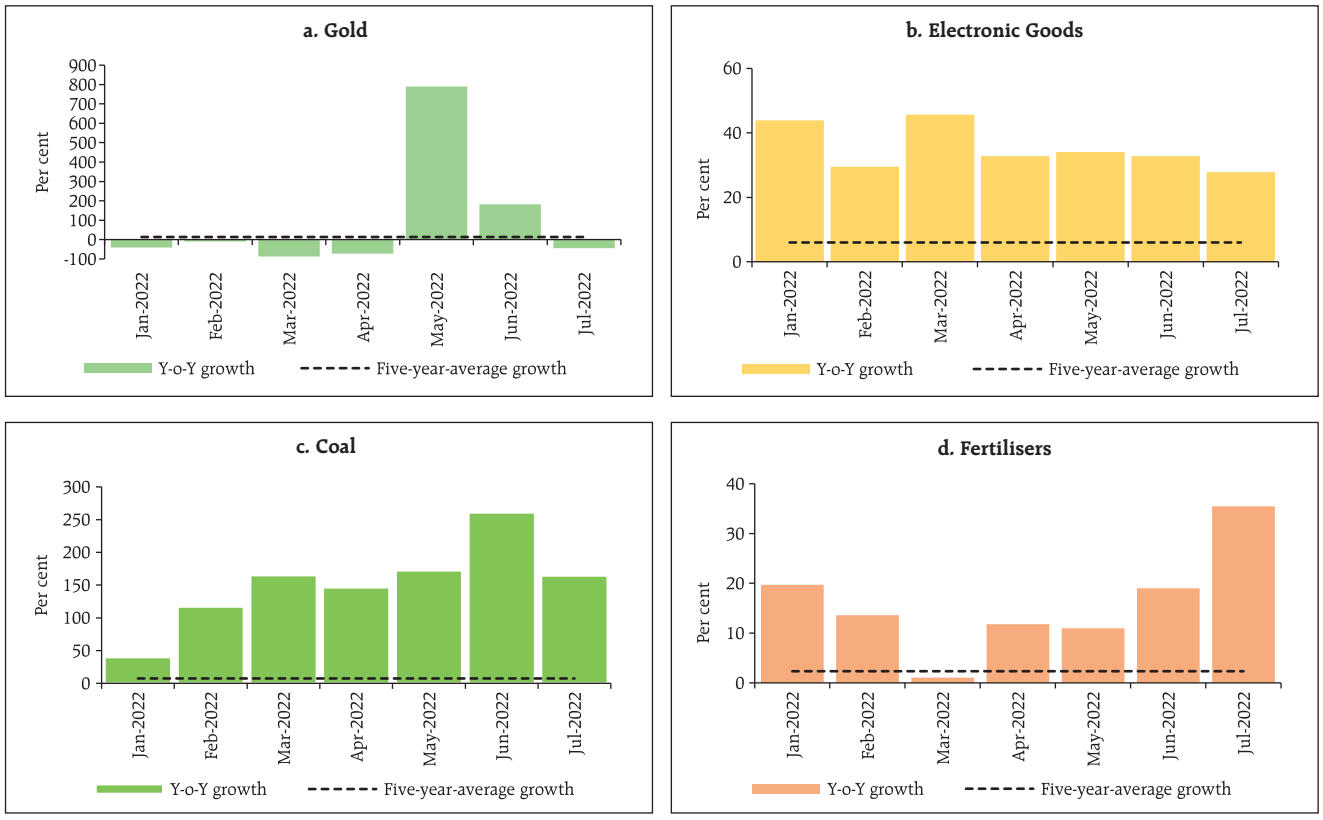
Chart 24: India's Oil Imports



Note: July 2022 is an estimated figure.
Sources: DGCI&S; and RBI staff estimates.

Note: Import dependency is on consumption basis.
Source: PPAC.

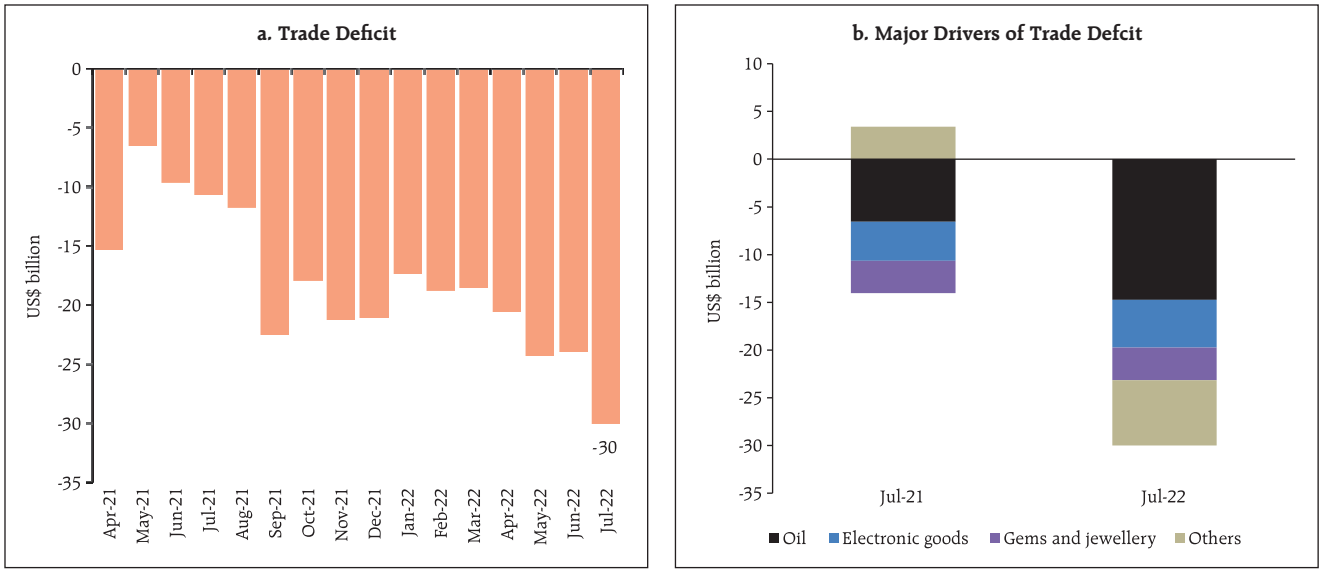
Chart 25: Import Growth in Key Commodities



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

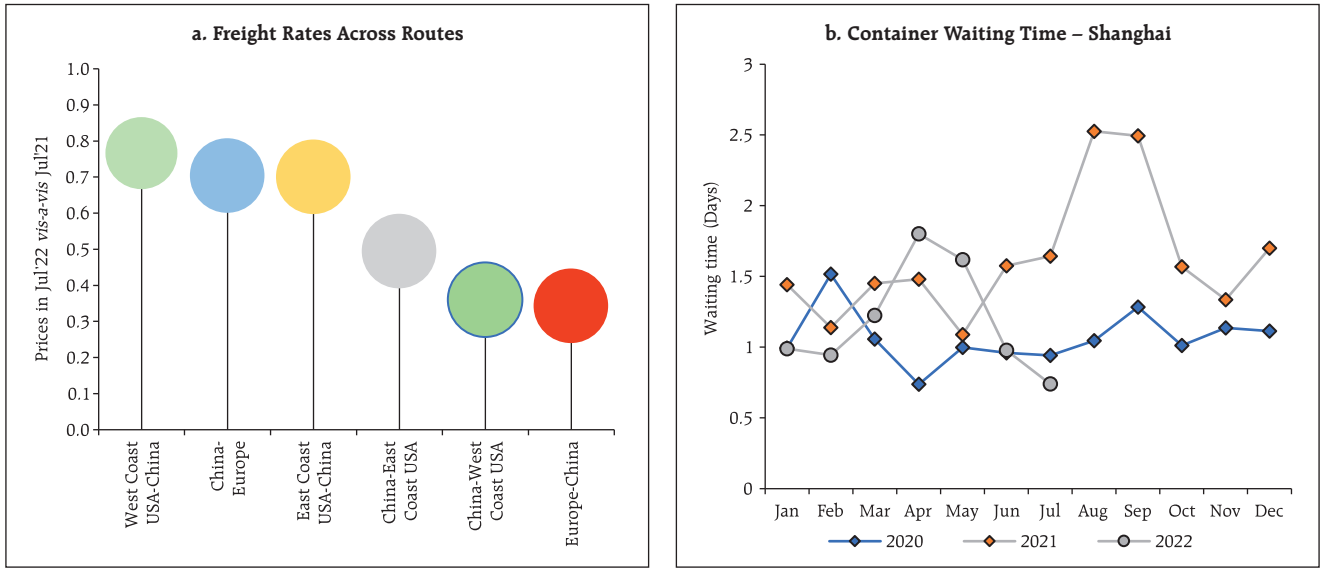
tripling from a year ago. A country-wise analysis of the trade deficit reveals that India runs the highest gap with China, followed by Iraq and Saudi Arabia (Chart 26).

Chart 26: India's Merchandise Trade Deficit



Sources: DGCI&S; and PIB.

Chart 27: Global Supply Chain Disruptions



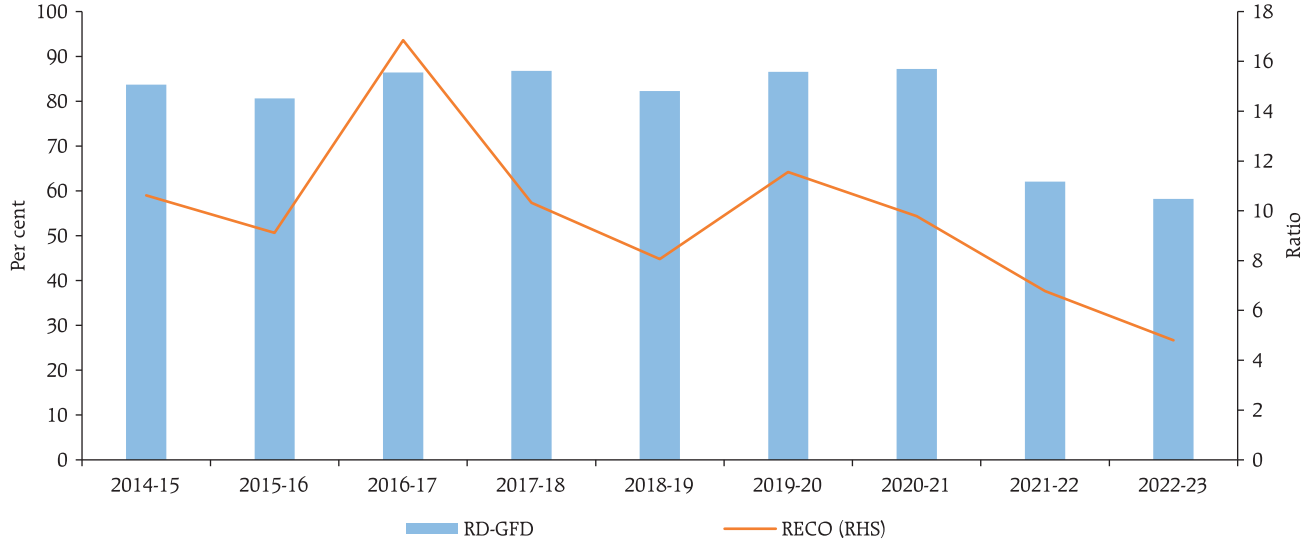
Source: Refinitiv Eikon.

Freight prices moderated in July 2022 across all major routes (Chart 27a). Container waiting time in China's major ports also showed signs of improvement (Chart 27b).

The central government's capital outlay grew by 53.5 per cent during April-June 2022-23 while revenue expenditure increased by 8.8 per cent, leading to a marked improvement in the quality of spending – the revenue expenditure to capital outlay (RECO) ratio decreased to 4.8 in Q1:2022-23 from 6.8 in the corresponding period of the previous year (Chart 28).

On the receipts front, growth in gross tax revenue picked up during April-June, despite unfavourable base effects, driven by positive momentum in direct

Chart 28: Quality of Expenditure during Q1

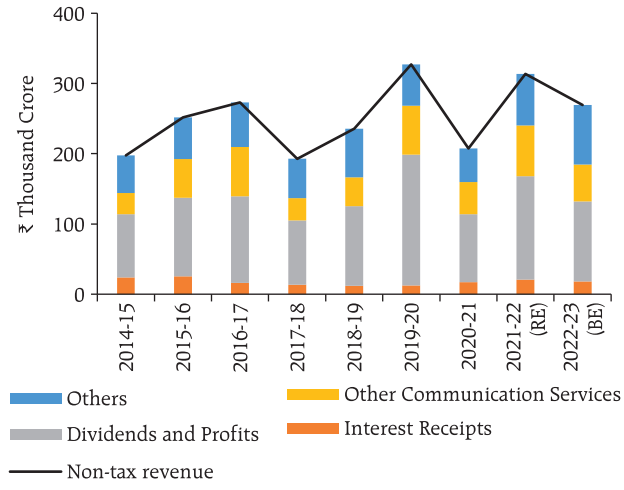


Source: Controller General of Accounts (CGA).

Chart 29: Decomposition of Tax Growth in Q1:2022-23 into Momentum and Base Effect

Sources: Controller General of Accounts (CGA); and Union budget documents.

Chart 30: Non-Tax Revenues



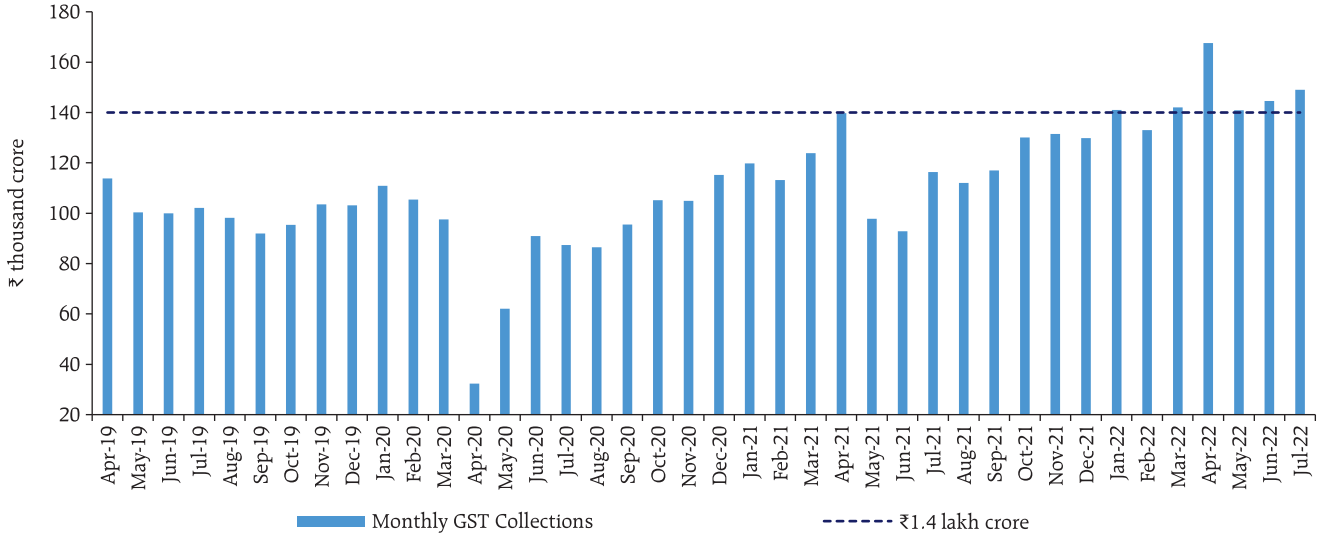
Note: Receipts under 'Other Communication Services' mainly relate to the license fees from telecom operators and receipts on account of spectrum usage charges.

Sources: Controller General of Accounts (CGA); and Union budget documents.

taxes (Chart 29). Moreover, the government earned ₹1.5 lakh crore from 5G spectrum auctions, of which at least ₹13,365 crore[14] will be paid as the first annual instalment, providing comfort on receipts from non-tax sources (Chart 30).

GST collections (Centre *plus* states) stood at ₹1.49 lakh crore in July 2022, the second highest since its inception and the fifth consecutive month for which GST collections have surpassed ₹1.4 lakh crore (Chart 31).

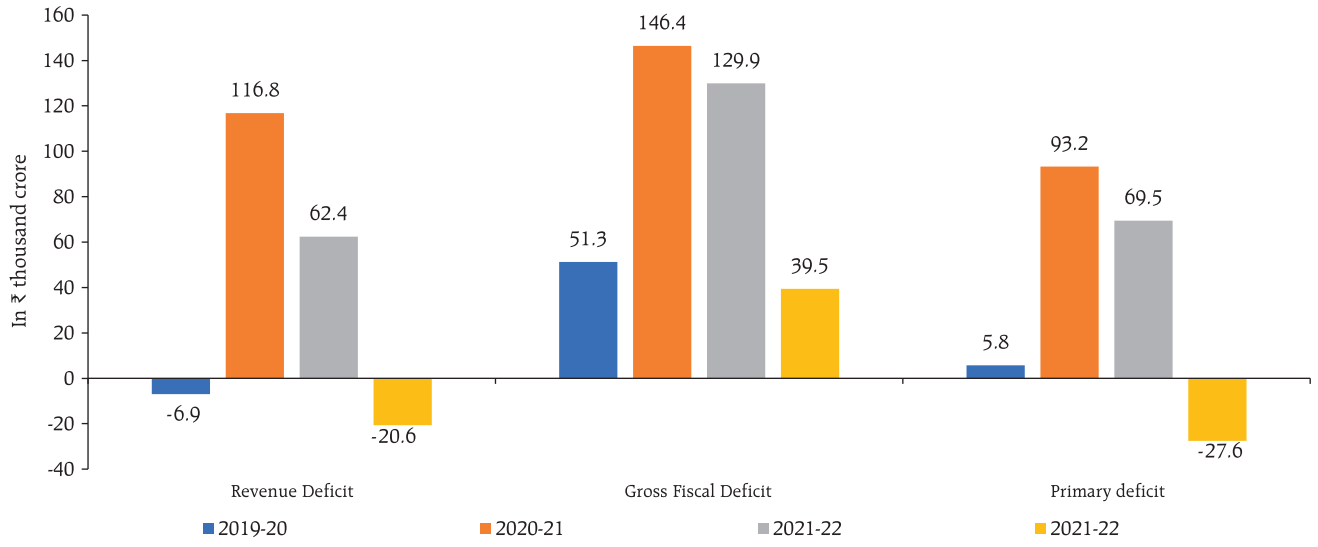
Chart 31: Monthly GST Revenue



Source: Press Information Bureau (PIB).

[14] https://pib.gov.in/PressReleasePage.aspx?PRID=1847279

Chart 32: Trend in Budgetary Deficits of the States (April-June)



Source: Comptroller and Auditor General (CAG) of India.

As per the information available for 21 States, the key budgetary deficit indicators of the States improved in Q1:2022-23 from a year ago, largely driven by a steady improvement in revenue receipts and decline in capital outlay (Chart 32). Revenue receipts posted a y-o-y growth of 33.1 per cent, with sharp increases across all sub-components - tax revenue, non-tax revenue and grants from the Centre. Revenue expenditure incurred by States recorded a growth of 13.1 per cent.

In March 2022, the Centre had stipulated that States should equate their off-budget borrowings with own debts, and any such borrowings raised by them in 2020-21 and 2021-22 shall be adjusted out of the borrowing limit of the current fiscal year. Recently, the norms for off-budget borrowings have been relaxed by the Centre, allowing the States to set off their off-budget borrowings during 2021-22 against the borrowing limit of the next four years till March 2026. This relaxation will ease the pressure on the finances of the State governments and improve the resource availability with them for undertaking capital expenditure. Additionally, the Centre has sanctioned ₹20,000 crores transfer to eight States under the Scheme for Special Assistance to States for Capital Investment to support the capex growth.

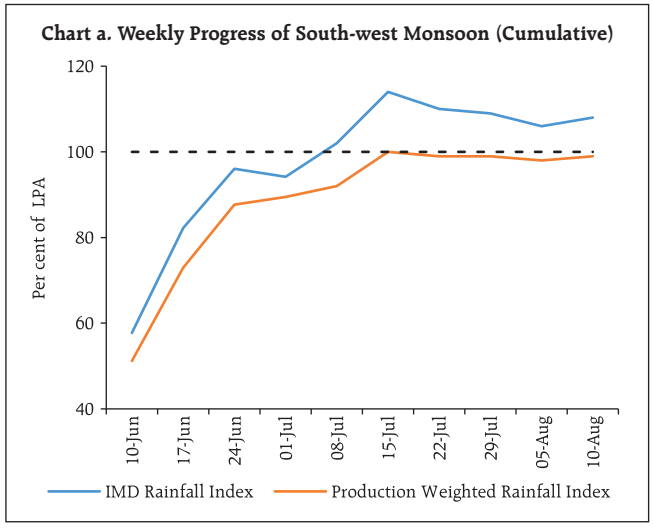
Aggregate Supply

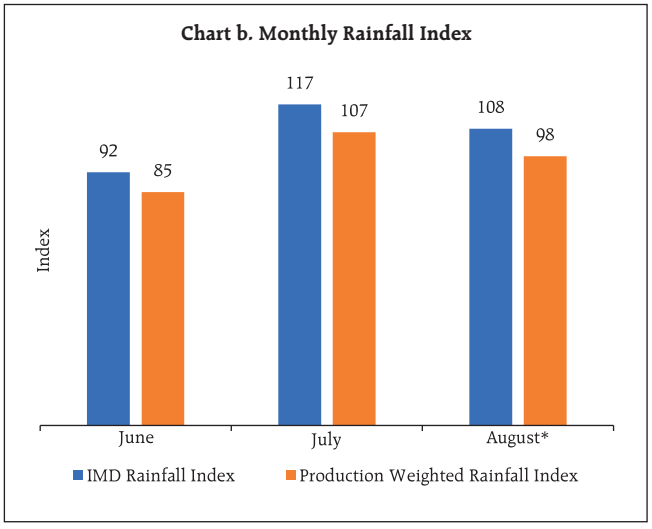
The onset of the south-west monsoon was slow this year as the aggregate level rainfall trailed the long period average (LPA)[15] rainfall by 8 per cent through June, but it picked up subsequently and the season's rainfall so far (up to August 10) is 8 per cent above normal, as per the India Meteorological Department (IMD). The uneven spatial distribution of rainfall was reflected in the weekly progress of the production weighted rainfall index (PRN)[16] while it has persistently remained below the IMD's aggregate rainfall index, underwent some catching up in second half of July (Chart 33). East and North-East regions have received rains 22 per cent above the LPA in June, followed by 45 per cent below the LPA in July (Chart 34). *Kharif* sowing has been delayed due to significantly deficient rainfall

[15] Long Period Average Rainfall is calculated as 50 years' average (1971-2020) rainfall.

[16] PRN is calculated using contribution of foodgrains production by each state.

Chart 33: Progress of South-West Monsoon Rainfall



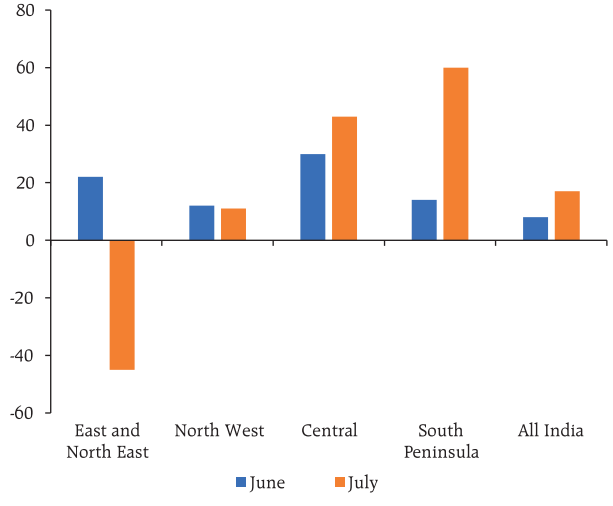


* Till 10th August.
Sources: IMD and RBI staff estimates.

(24–48 per cent below normal) in Uttar Pradesh, Bihar, Jharkhand and West Bengal, which together produce a third of the country's total foodgrains.

Rice is the major *Kharif* crop and highly dependent on SWM rains. Acreage under paddy lags substantially behind the sown area a year ago as well as the normal area (5-year average) (Chart 35a). While the pan-India sowing of rice (-12.7 per cent) and pulses (-2.5 per cent) is below the previous year's levels (as on August 05, 2022), the acreage under oilseeds (0.6 per cent), coarse cereals (3.9 per cent), cotton (6.7 per cent) and sugarcane (0.5 per cent) recorded y-o-y growth. The overall *Kharif* crop acreage remains 3.0 per cent below the levels recorded on the corresponding date of the previous year.

Chart 34: Spatial Distribution of South-West Monsoon Rainfall

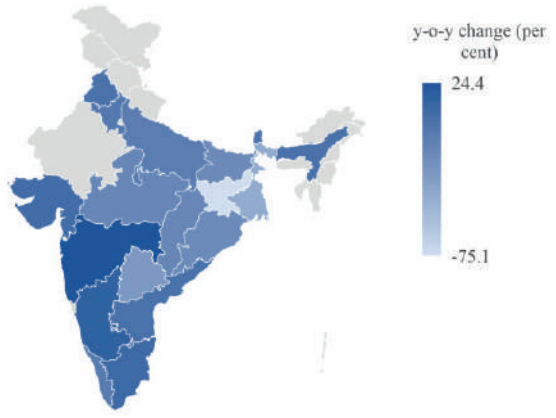


*: Long period average.
Source: IMD.

In Uttar Pradesh and West Bengal, the sowing deficit of paddy is likely to recover on normal rains forecast in August whereas in Bihar and Jharkhand, rainfall during the month is likely to remain below normal (Chart 35b). These four states contribute 33 per cent of the national production of *kharif* rice. In case, the south-west monsoon rain fails to catch up with the LPA within the sowing time frame, irrigation support would be critical to rice output (Chart 36a). Although irrigation is accessible in more than 50 per cent of the rice sown area in these states [except for Jharkhand (4.6 per cent)], the actual water availability

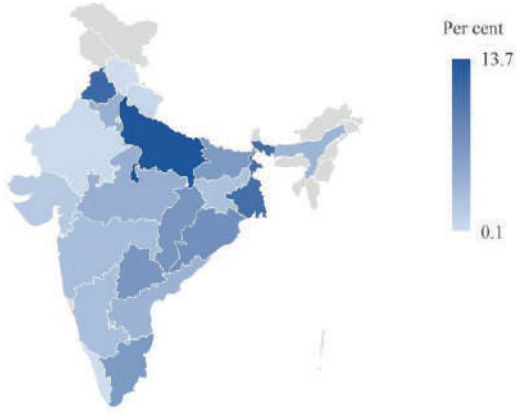
Chart 35: Rice Production Scenario in India

Chart a. Rice Sowing Status*



Grey colour denotes the States with insignificant acreage under rice.
*as on August 05, 2022
Source: Ministry of Agriculture and Farmers Welfare.

Chart b. Share in All India *Kharif* Rice Production



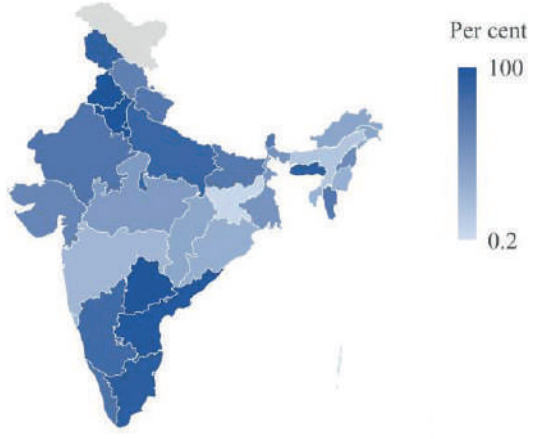
Grey colour denotes the States with data with insignificant share or data unavailability.
Source: Ministry of Agriculture and Farmers Welfare.

in many of the irrigation structures depends on the rainfall volume. This is reflected in low reservoir levels in the eastern regions of the country (Chart 36b).[17]

As per the 2nd Advance Estimates (AE)[18], the production of horticultural crops during 2021-22 is placed at a record 341.6 million tonnes, 2.1 per cent higher than the final estimate for 2020-21,

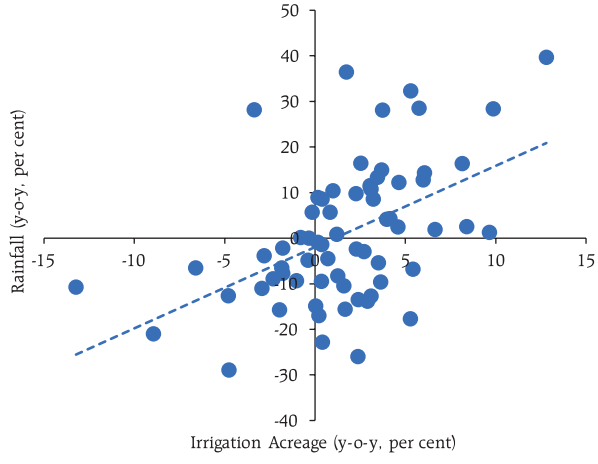
Chart 36: Status of Irrigated Rice in India

a. Irrigation coverage in Rice Acreage



Grey colour denotes data unavailability.
Source: Ministry of Agriculture and Farmers Welfare.

b. Association of Rainfall *vis-à-vis* Irrigation Acreage*

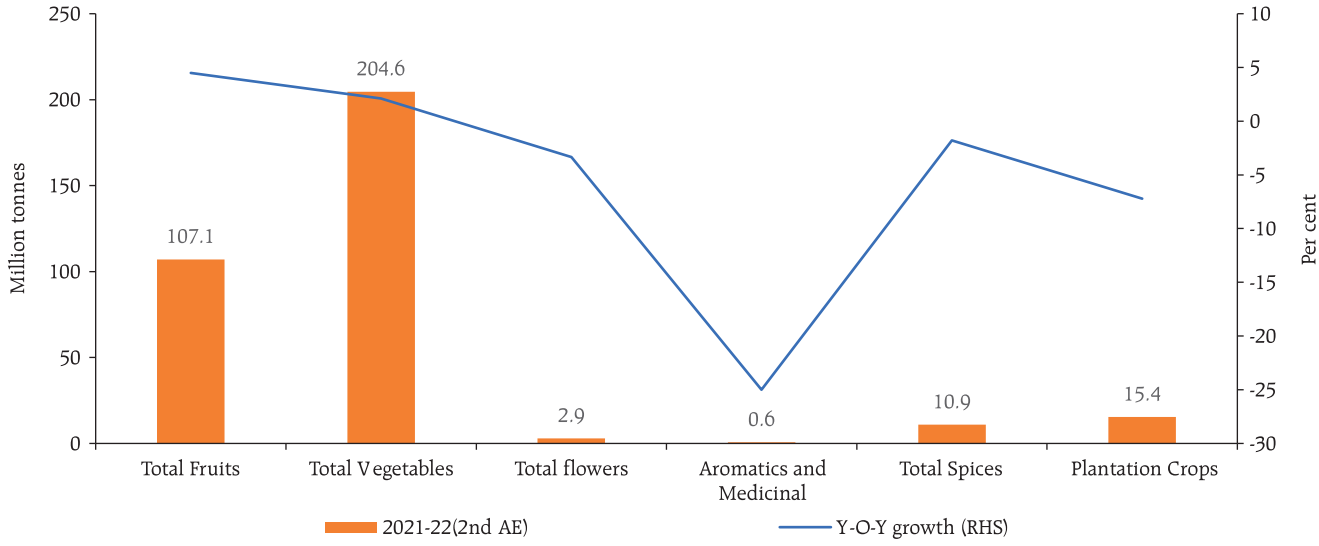


*1951-52 to 2017-18.
Sources: Ministry of Agriculture and Farmers Welfare; and CMIE.

[17] As per the Reservoir Storage Bulletin dated August 11, 2022, the total live storage available in the reservoirs of eastern region is 29 per cent of total live storage capacity against 43 per cent during the corresponding period of last year and decadal average of 45 per cent.

[18] Released on July 14, 2022.

Chart 37: Production of Horticulture Crops (2021-22)



Source: Ministry of Agriculture and Farmers Welfare.

driven mainly by higher production of total fruits and vegetables (Chart 37). The overall productivity (production/area) of the horticulture sector has increased by 1.1 per cent in 2021-22. While the growth in production of fruits is expected to increase in terms of area (1.3 per cent on y-o-y basis) and productivity (3.2 per cent), the growth in vegetable production is likely to be led by a 3.9 per cent increase in area (productivity has declined by 1.7 per cent).

Wheat procurement for the current *Rabi* marketing season (2022-23) ended at 18.8 million tonnes, which is 57.7 per cent of the initial target (44.4 million tonnes) and 5.1 per cent lower than the revised target (19.5 million tonnes). As on August 11, 2022, the cumulative procurement of rice at 59.1 million tonnes was marginally higher than in the previous year (58.6 million tonnes). The stocks-to-norm ratio of rice is 3.0 times higher than the quarterly (July-September) buffer norms, while in the case of wheat it has dipped marginally below the norm. Restrictions on wheat exports in May 2022 have been buttressed by restrictions on export of *maida*, semolina and all variants of wheat flour (atta), effective from August 14, 2022[19]. The export of these items would now be allowed only after the issuance of Quality Certificate by the Export Inspection Council of the Directorate General of Foreign Trade.

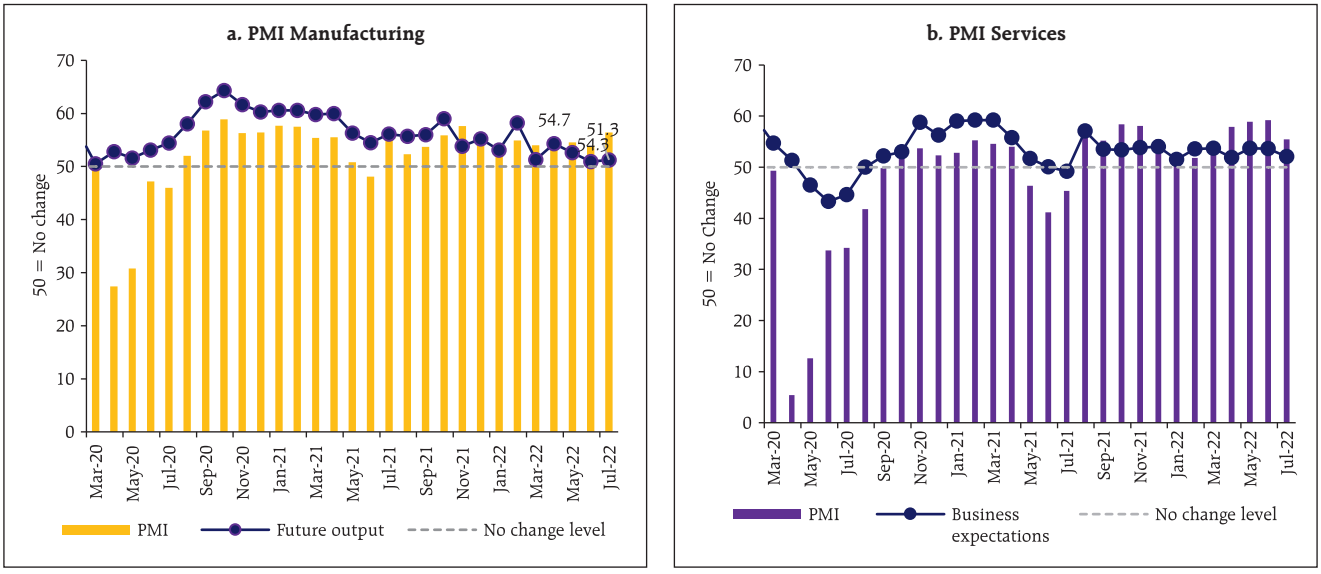
In the industrial sector, the headline manufacturing PMI expanded strongly to 56.4 in July, the highest expansion in the past eight months. This was led by an increase in output, new orders and input stocks, highlighting the strengthening of demand conditions (Chart 38a).

PMI Services, on the other hand, decelerated from an 11-year high of 59.2 in June 2022 but remained expansionary at 55.5 in July. The growth in the services sector was led by new businesses although inflationary pressures on inputs remained high, undermining future business expectations (Chart 38b).

In the services sector, transport indicators continued to show an upturn as railway freight traffic earnings rose by 8.3 per cent (y-o-y) in July 2022,

[19] https://content.dgft.gov.in/Website/dgftprod/5f976de3-d1bc-40e4-88c5-743c9a2dec39/Notification%20in%20English.pdf

Chart 38: Purchasing Managers' Index

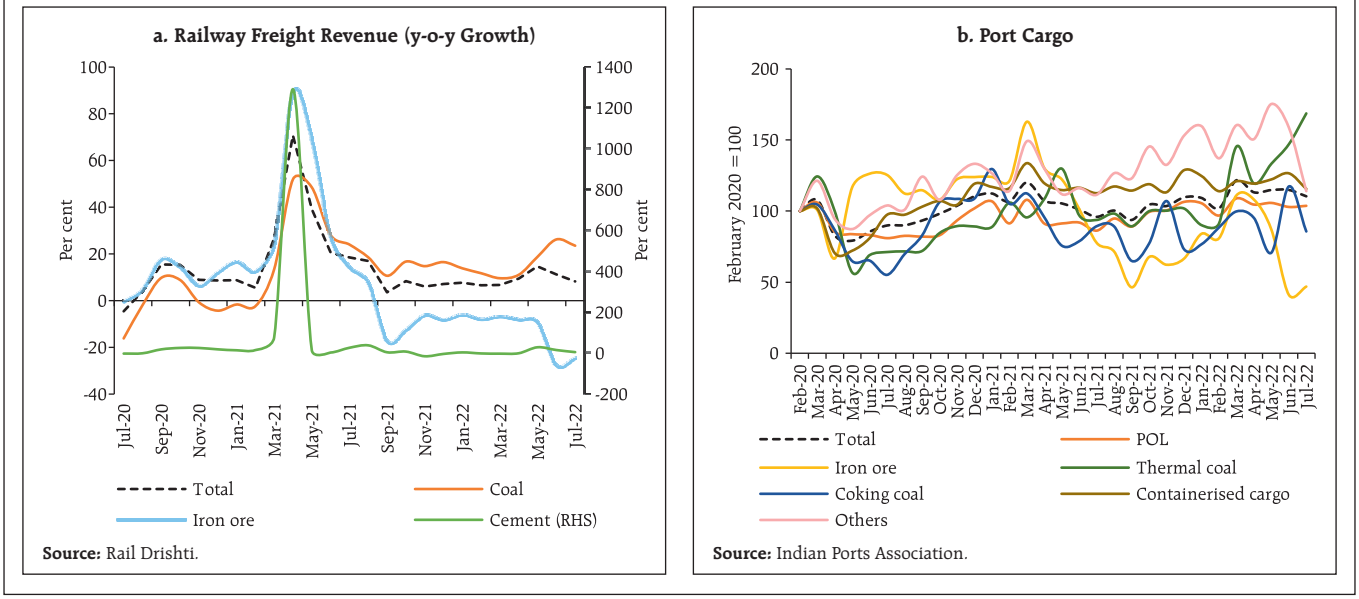


Source: S&P Global.

(Chart 39a). While coal and POL freight recorded sharp growth, iron ore and food grains went into contraction. Cargo traffic at major ports accelerated in July, owing to an increase in POL, raw fertilizers, thermal coal and other liquids, which together account for 58 per cent of total cargo (Chart 39b).

In the construction sector, activity continued on an uptrend in June-July 2022, with cement production and steel consumption recording growth over pre-pandemic levels for seven straight months (Chart 40). Cement production moderated in June with the onset of the monsoon. The outlook for the sector, remains

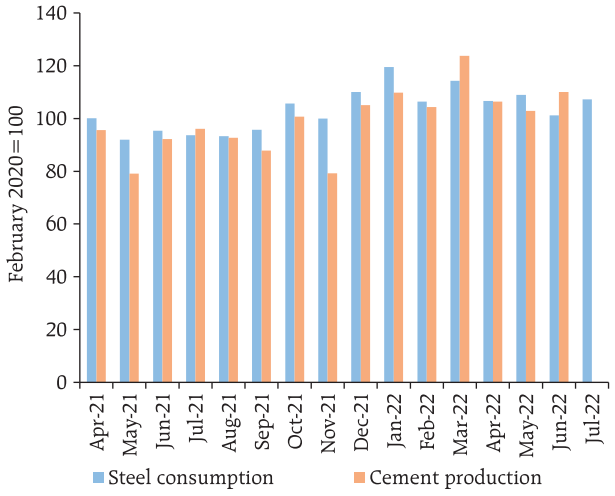
Chart 39: Railway and Cargo Traffic



Source: Rail Drishti.

Source: Indian Ports Association.

Chart 40: Steel Consumption and Cement Production



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

positive, however, with a focus on infrastructure spending.

The dip in domestic passenger footfalls in June continued in July, with passenger movement contracting by 8.9 per cent sequentially in the monsoon season. Other segments of international passenger traffic and domestic and international cargo recorded growth over June. In the first ten days of August, activity in the domestic passenger segment contracted sequentially, but the international passenger freight segment remained stable. The cargo segment declined for both domestic and international categories as monsoons impeded trade and travel activity. With the removal of the cap on air fares, introduced to curb sudden price movements during the pandemic, post August 31, air travel may pick up in sectors where market pricing may incentivise bookings.

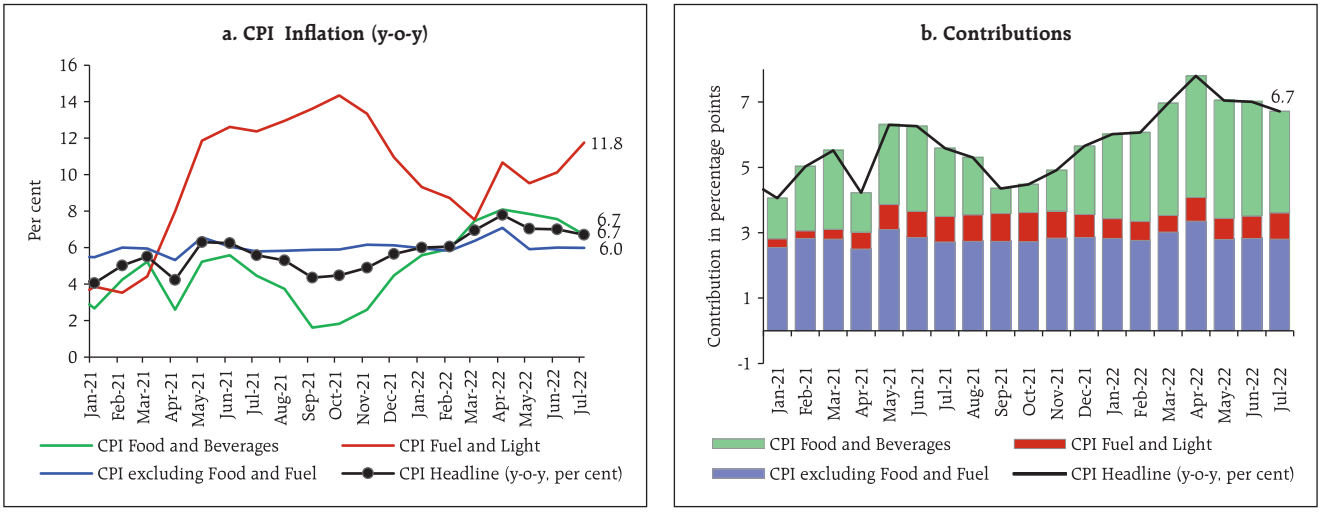
Overall, the services sector remained resilient in June with seasonal factors dampening activity. With contact intensive aviation and tourism sectors gaining traction, the fall in demand due to rising prices may have been cushioned (Table 3).

Table 3: High Frequency Indicators - Services

Sector	Indicator	High Frequency Indicators- Services Growth (y-o-y, per cent)				Growth over 2019			
		Apr-22	May-22	Jun-22	Jul-22	Apr-22/ Apr-19	May-22/ May-19	Jun-22/ Jun-19	July-22/ July-19
Urban Demand	Passenger Vehicles Sales	-3.8	185.1	19.1	11.1	1.6	10.6	31.6	54.6
Rural Demand	Two Wheelers Sales	15.4	253.2	23.4	9.6	-29.9	-27.4	-20.7	-8.6
	Three Wheelers Sales	51.1	2161.6	183.9	72.8	-54.7	-44.7	-48.5	-43.8
	Tractor Sales	40.6	47.4	-14.4	-15.3	55.5	41.1	24.5	21.2
Trade, hotels, transport, communication	Commercial Vehicles Sales	100.3				11			
	Railway Freight Traffic	9.4	14.6	11.3	8.3	20.9	25.5	23.7	22.5
	Port Cargo Traffic	5.6	10.2	12.2	15.1	8.1	11.4	14.6	6.8
	Domestic Air Cargo Traffic	7.9	54.7	40.4		2.7	1.9	4.4	
	International Air Cargo Traffic	-0.9	-4.6	0.5		-5.2	-13.6	-5.1	
	Domestic Air Passenger Traffic	87.8	474.7	247.9		-1.5	-2.0	-10.5	
	International Air Passenger Traffic	155.6	722.8	753.6		-36.6	-28.0	-21.5	
	GST E-way Bills (Total)	28.0	84.1	36.2	17.8	43.3	35.6	49.7	44.9
	GST E-way Bills (Intra State)	28.4	83.3	38.6	19.8	50.8	45.5	58.7	51.5
	GST E-way Bills (Inter State)	27.4	85.5	32.2	14.7	32.9	21.8	36.4	35.2
	Tourist Arrivals	399.2	2043.7	1349.2		-49.3	-31.1	-28	
Construction	Steel Consumption	1.8	21.3	5.9	14.5	18.6	7.7	0.7	7
	Cement Production	7.4	26.2	19.4		8.3	10.8	19.6	
PMI Index	Manufacturing	54.7	54.6	53.9	56.4				
	Services	57.9	58.9	59.2	55.5				

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

Chart 41: 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.

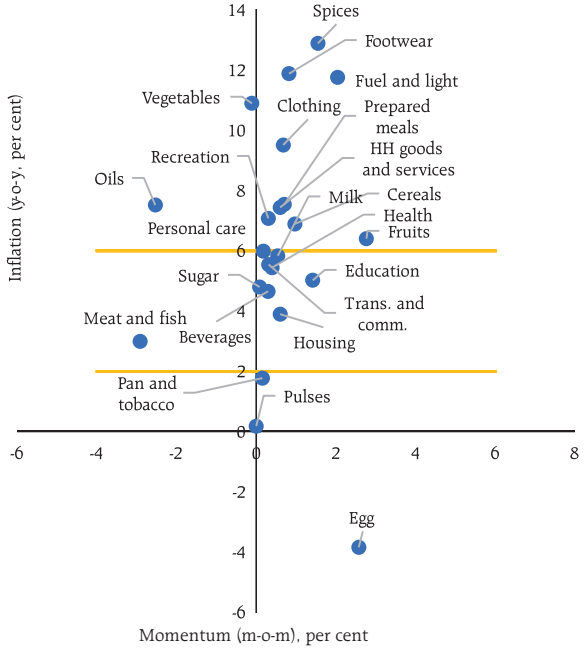
Inflation

The provisional data released by the National Statistical Office (NSO) on August 12, 2022 showed that inflation, measured by y-o-y changes in the all-India consumer price index (CPI), eased to 6.7 per cent in July from 7.0 per cent in the previous month (Chart 41a). A month-on-month (m-o-m) increase in momentum by 46 bps was more than offset by a favourable base effect (m-o-m change in prices a year ago) of 74 bps, leading to the decline in headline inflation by 30 bps between June and July. This fall stemmed from a reduction in the contribution of the food and beverages group (Chart 41b).

The m-o-m increase in prices was of the order of 0.1 per cent within the food and beverages group, 2.0 per cent for the fuel group and 0.6 per cent for the core CPI (excluding food and fuel) category. At the sub-group level, price increases in July were significant in the case of fruits, eggs and spices and education whereas prices declined in the case of oils and fats, and meat and fish (Chart 42).

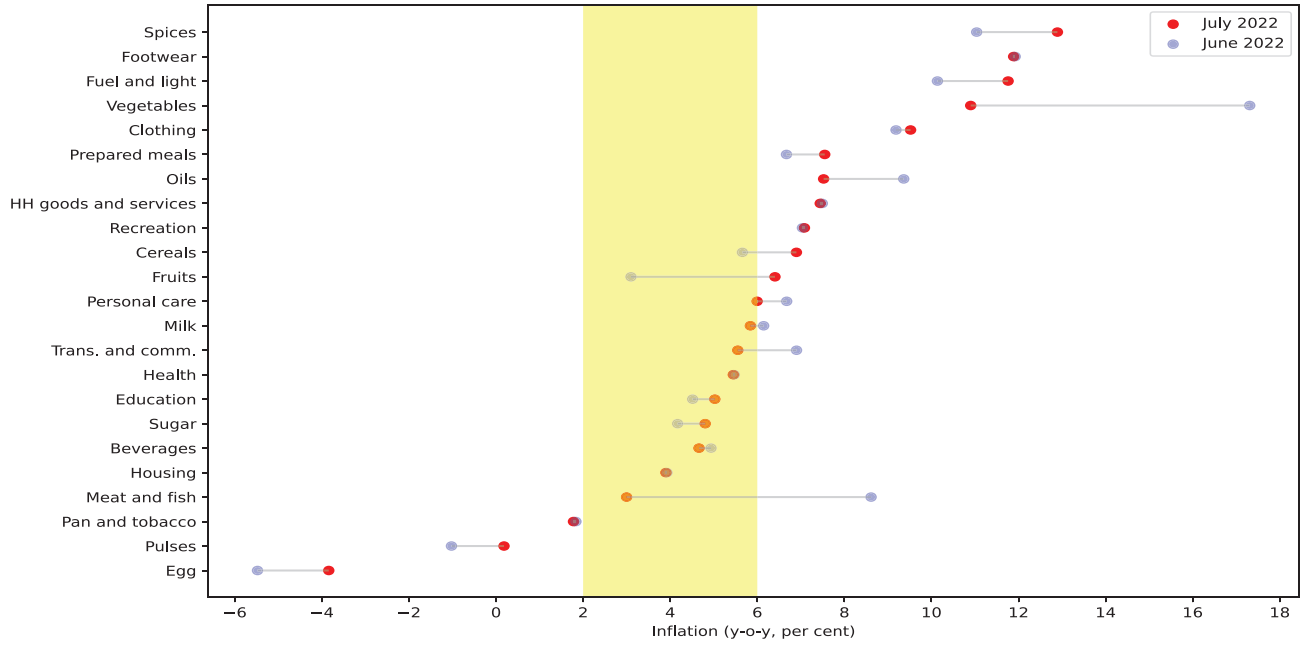
The sharp moderation in CPI food inflation to 6.7 per cent in July from 7.6 per cent a month ago came from a strong favourable base effect of 86 bps which was partially offset by an increase in price momentum of 6 bps. In terms of sub-groups, inflation softened in the case of meat and fish, milk, edible oils, vegetables

Chart 42: Annual Inflation (y-o-y) and Momentum (m-o-m) Across Sub-groups



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

Chart 43: Annual Inflation Across Sub-groups: July *versus* June 2022



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

and non-alcoholic beverages (Chart 43). On the other hand, inflation edged up in cereals, fruits, pulses, sugar, spices and prepared meals. Deflation in eggs moderated in July *vis-à-vis* June.

Inflation in the fuel and light category edged up from 10.1 per cent in June to 11.8 per cent in July. This was led by a sharp pick-up in kerosene inflation while electricity prices remained in deflation. The fuel group with a weight of 6.8 per cent in the CPI basket contributed 11.9 per cent of headline inflation in July.

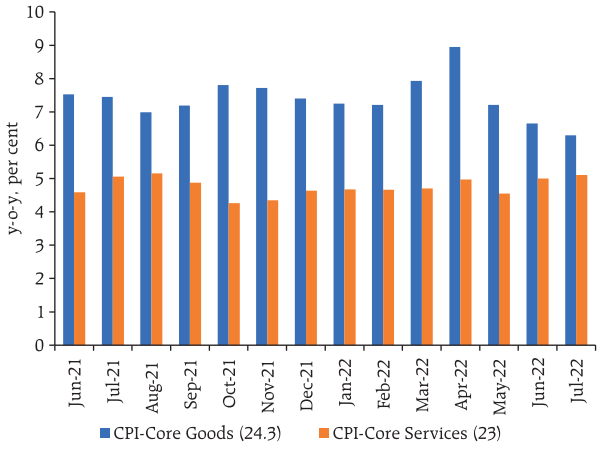
Core CPI inflation plateaued at 6.0 per cent in July. While sub-groups such as clothing and footwear and education registered an increase in inflation, transport and communication and personal care and effects sub-groups witnessed moderation (Chart 43). Inflation in pan, tobacco and intoxicants, housing, recreation and amusement, household goods and services and health sub-groups remained more or less steady. Within the core category, goods inflation moderated in recent months with the easing of supply chain pressures as reflected in fall of index of supply chain pressures for India (ISPI)[20]. On the other hand, services inflation edged up (Chart 44).

In terms of geographical distribution, rural inflation at 6.8 per cent was higher than urban inflation (6.5 per cent) in July. Among the states, Telangana, Mizoram and Sikkim experienced inflation in excess of 8 per cent whereas Goa and Manipur recorded inflation below 4 per cent (Chart 45).

High frequency food price data for August so far (August 1-12) from the Department of Consumer Affairs (DCA) point to an increase in prices of cereals, primarily on account of a surge in wheat prices. Pulses prices have registered a broad-based increase while edible oils prices are on a decline. Among key

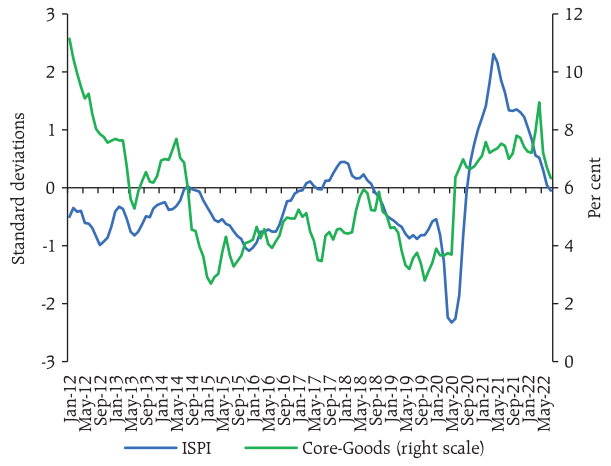
[20] ISPI is constructed by extracting common factors latent in 19 domestic and global variables. For methodology, see Patra M. D., H. Behera and D. Gajbhiye (2022). "Measuring Supply Chain Pressures on India", RBI Bulletin, April 2022.

Chart 44a: CPI Core Inflation: Goods *Versus* Services



Note: Figures in parentheses indicate weights in overall CPI.
Sources: National Statistical Office (NSO); and RBI staff estimates.

Chart 44b: Supply Chain Pressure and CPI Core Goods Inflation



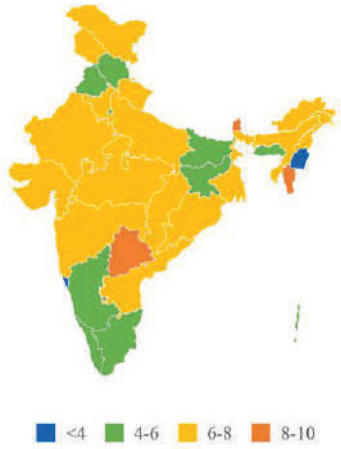
Source: National Statistical Office (NSO); and RBI staff estimates.

vegetables, potato and onion prices have edged up, while tomato prices continued to exhibit a sharp downward correction (Chart 46).

Retail selling prices of petrol and diesel in the four major metros have remained steady in August so far. In Maharashtra, petrol and diesel prices were lower by ₹5/litre and ₹3/litre, respectively, with effect from July 15 as the state government reduced the value added tax (VAT). Kerosene prices have moderated sharply in August *vis-à-vis* July while LPG prices edged up marginally during the same period, both reflecting changes in administered prices (Table 4).

Input cost pressures increased at a slower pace in July 2022 across manufacturing and services, as reflected in the PMIs. Selling prices also firmed up at a slower pace across manufacturing and services.

Chart 45: State-wise Monthly Inflation: CPI-Combined July 2022



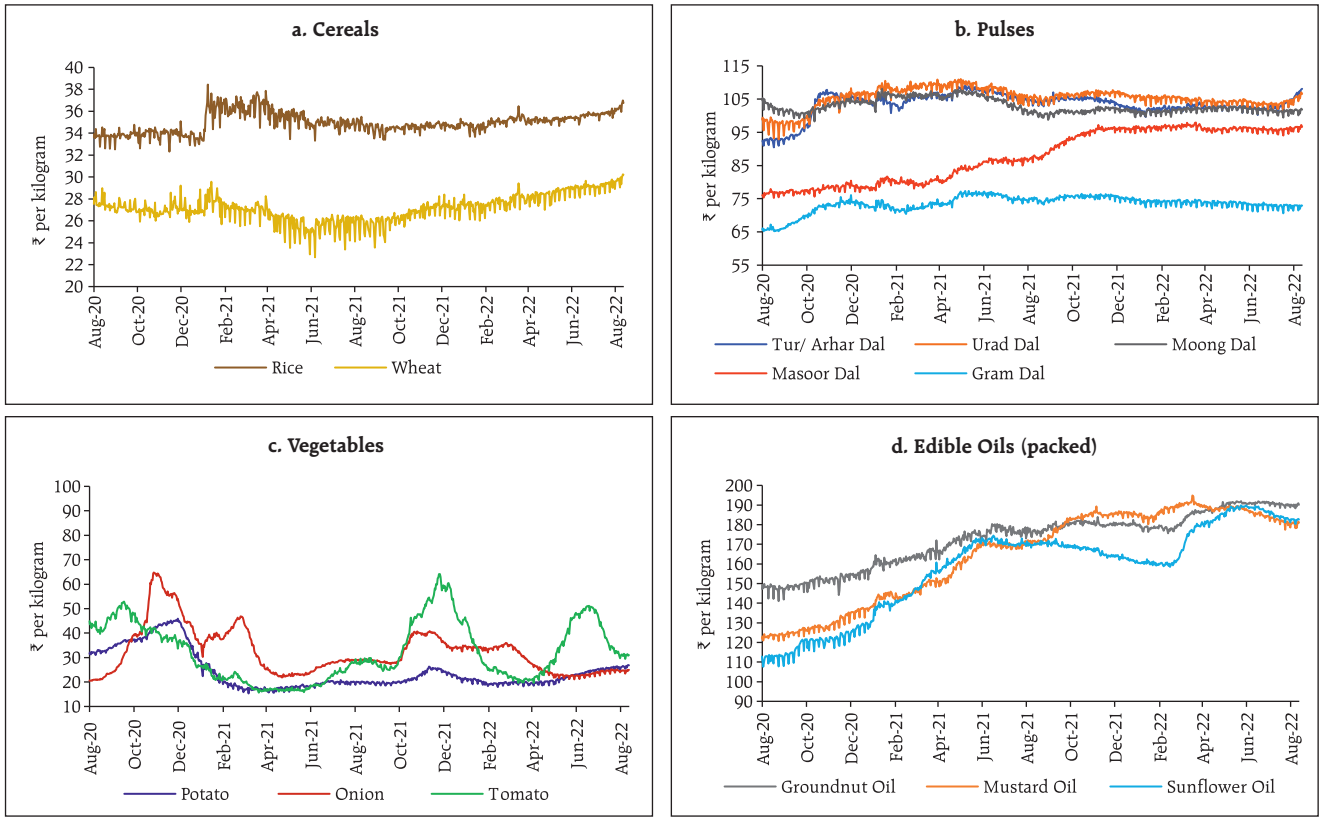
Note: Maps are for representational purpose only.
Sources: National Statistical Office (NSO); and RBI staff estimates.

Table 4: Petroleum Product Prices

Item	Unit	Domestic Prices			Month-over-month (per cent)	
		Aug-21	Jul-22	Aug-22 ^	Jul-22	Aug-22
Petrol	₹/litre	103.03	103.49	102.92	-0.7	-0.5
Diesel	₹/litre	93.32	93.06	92.72	-0.4	-0.4
Kerosene (subsidised)	₹/litre	34.29	71.44	62.73	15.2	-12.2
LPG (non-subsidised)	₹/cylinder	857.22	1055.19	1063.25	4.1	0.8

^: For the period August 1-12, 2022.
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.

Chart 46: DCA Essential Commodity Prices

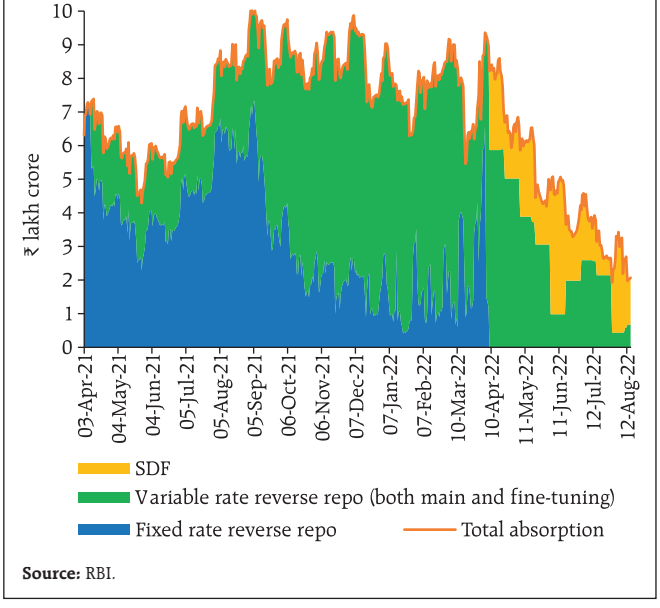


Sources: Department of Consumer Affairs, GoI; and RBI staff estimates.

IV. Financial Conditions

Daily average absorption under the liquidity adjustment facility (LAF) moderated to ₹2.7 lakh crore during July 16 to August 15, 2022 from ₹4.0 lakh crore during June 8 to July 15 (Chart 47). In recent weeks, ₹1.5 lakh crore has been absorbed through the overnight standing deposit facility (SDF) window on a daily average basis, while the remaining has been mopped up through variable rate reverse repo (VRRR) auctions (both main and fine-tuning) of longer tenor at an average effective absorption rate[21] of 4.92 per cent. Muted government spending in the face of buoyant GST and direct tax collections contributed to the decline in overall surplus liquidity in the banking system. The Reserve Bank's forex operations, which mopped up rupee liquidity, also contributed

Chart 47: Liquidity Conditions



Source: RBI.

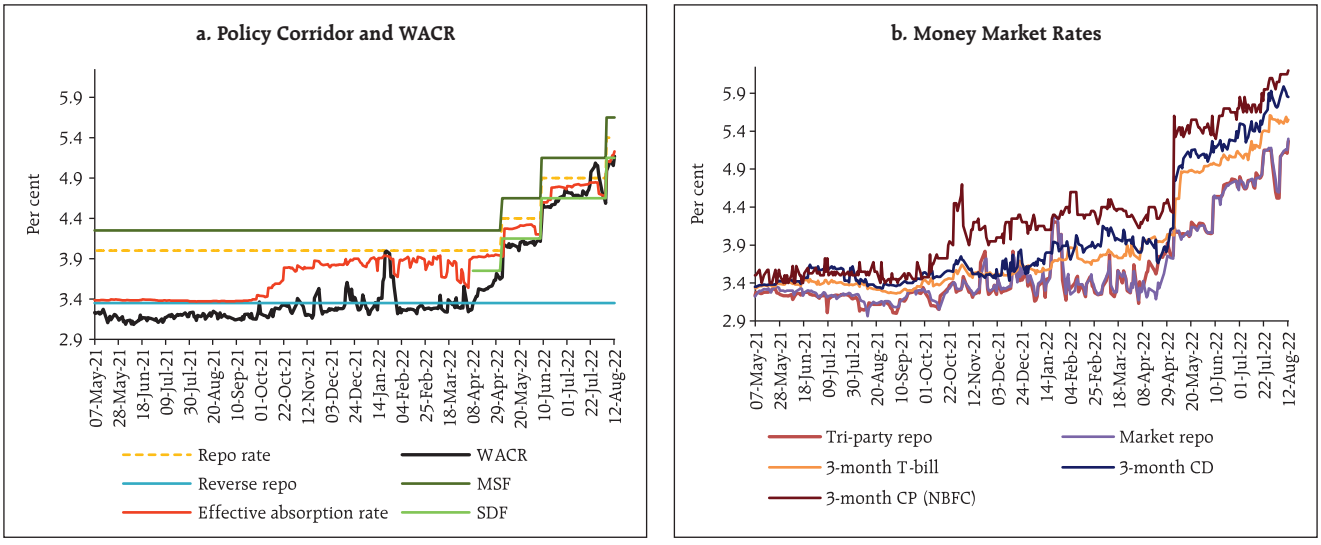
[21] The effective absorption rate is the weighted average of the SDF rate and the VRRR auctions of varying maturity with weights being amounts absorbed under the SDF and variable rate reverse repo windows, respectively.

to tightening of liquidity conditions. Accordingly, as GST collections exited the banking system, borrowing from the Reserve Bank's marginal standing facility (MSF) window rose to ₹59,312 crore (outstanding amount) on July 25 – the highest since April 1, 2019 (₹94,263 crore). To alleviate pressures, the Reserve Bank conducted a three-day variable rate repo (VRR) auction on July 26, 2022 for a notified amount of ₹50,000 crore which received bids of about ₹1.52 lakh crore (bid-cover ratio of more than 3). The subsequent 14-day VRRR auction (main operation) on July 29 elicited a lukewarm response – only ₹12,712 crore of bids were received against the notified amount of ₹2.0 lakh crore.

In tandem with the increase in the policy rate on August 5, overnight money market rates firmed up, with rates in the collateralised segment breaching the upper band of the LAF corridor intermittently. On an average basis, the weighted average call rate (WACR) and the market repo rate traded closer to the repo rate while the tri-party repo rate traded 8 bps below the policy repo rate during the second half of July through August 12, 2022 (Chart 48a). In the term money market segment, the yield on 3-month T-bills surged to a 3-year high, trading above the MSF rate for a brief period. Similarly, yields on 3-month certificates of deposit (CDs) and 3-month commercial paper (CPs) hardened further, with average spreads of 46 bps and 70 bps, respectively, above the MSF rate during the second half of July through August 12, 2022 (Chart 48b). In view of bank deposit growth lagging credit offtake, banks increasingly resorted to CDs for additional resource mobilisation, with outstanding CD issuances amounting to ₹2.5 lakh crore in the fortnight ending July 29, 2022. Primary market activity in CPs remained tepid as a sharp rise in interest rates weighed on investors' appetite. Consequently, outstanding CP issuances declined to ₹3.7 lakh crore as on July 31, 2022 as compared with ₹4.7 lakh crore a year ago.

During 2022-23 so far (up to August 12, 2022), the effective policy rate has increased by 180 bps,[22] and the WACR has mirrored it, firming up from 3.27 per

Chart 48: Evolution of Policy Rates and Money Market Rates



Sources: RBI; Bloomberg; and RBI staff estimates.

[22] Including the institution of the SDF at 40 bps above the erstwhile floor of the LAF corridor – the fixed rate reverse repo – besides the cumulative 140 bps increase in the policy repo rate.

Table 5: Variations in Money Market Rates (As on August 12, 2022 over the Respective Period) (in bps)

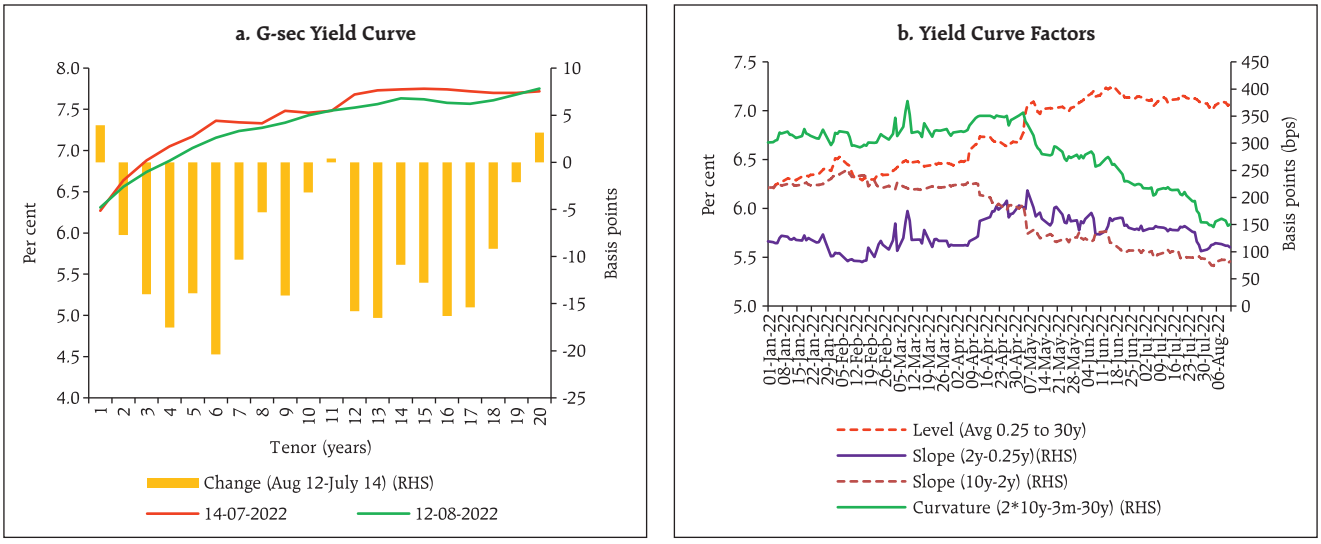
Period	Repo	WACR	3 Months T-bill Rate	3 Months CD Rate	3 Months CP Rate
04-Aug-22	50	58	0	6	15
07-Jun-22	100	106	54	58	60
03-May-22	140	152	146	174	185
07-Apr-22	140	190	166	202	202
31-Mar-22	140	161	173	196	185

Sources: RBI; and Bloomberg.

cent on April 7, 2022[23] to 5.17 per cent on August 12, 2022. Similarly, the rates in the outer money market segments increased in the range of 173 to 196 bps (Table 5).

In the fixed income market, bond yields extended a softening bias during the second half of July but hardened briefly, with the repo rate hike on August 5. The 10-year G-sec yield closed at 7.29 per cent on August 12, easing from 7.44 per cent on July 15, 2022. While the rise in crude oil prices and the sharp depreciation of the Indian rupee (INR) propelled the initial surge in yields, it softened thereafter with the sharp decline in US treasury yields. Across the yield curve, yields generally declined for securities up to 15 year maturity (Chart 49a). The spread between the 2-year G-sec and 3-month T-bill yields moderated further, reflecting the impact of monetary tightening and resulting in a decline in curvature[24] (the yield curve became less hump-shaped) (Chart 49b). While are upward shift in the level of the yield curve coexists with a declining slope (as measured by the 10-year and 2-year spread) since April, a perceptible decline in curvature that is evident since the May policy meeting is indicating the diffusion of the impact of monetary tightening across various maturity segments.

Chart 49: Developments in G-sec Market



Sources: Bloomberg; CCIL; and RBI staff estimates.

[23] Given the usual liquidity tightness during end-March, comparison over April 7, 2022 is more pertinent for assessing policy effectiveness. Refer to Table 5 for corresponding numbers over end-March.

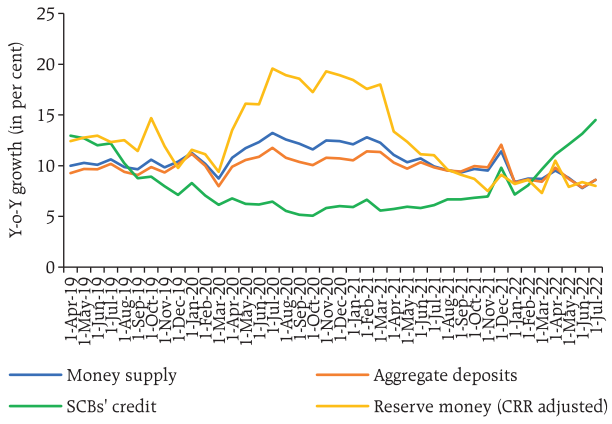
[24] The curvature of the yield curve describes the relationship between yields at short, medium and long maturities. Higher curvature means higher concavity of the curve, *i.e.*, the yield curve is steeper in the short to medium tenure compared to medium to long-end yields, and therefore, shows a hump in the yield curve. The curvature is calculated as two times the 10-year yield minus the sum of 30-year and 3-month yields.

Table 6: Financial Markets - Rates and Spread

Instrument	Interest Rates (per cent)			Spread (bps) (Over Corresponding Risk-free Rate)		
	June 8-Jul 15 2022	Jul 16 - Aug 11 2022	Variation (in bps)	June 8-Jul 15 2022	Jul 16 - Aug 11 2022	Variation (in bps)
1	2	3	(4 = 3-2)	5	6	(7 = 6-5)
Corporate Bonds						
(i) AAA (1-yr)	6.61	6.63	2	31	27	-4
(ii) AAA (3-yr)	7.47	7.33	-14	40	41	1
(iii) AAA (5-yr)	7.56	7.51	-5	19	30	11
(iv) AA (3-yr)	8.18	8.05	-13	112	113	1
(v) BBB-minus (3-yr)	11.86	11.73	-13	480	481	1
10-yr G-sec	7.45	7.27	-18			

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

Chart 50: Monetary and Credit Aggregates



Note: 1. Data pertain to last reporting Friday of every month for money supply, aggregate deposits and bank credit; and last Friday of every month for reserve money.
2. For July, however, reserve money data are as on August 5, 2022; and money supply data are as on July 29, 2022.
Source: RBI.

Corporate bond yields generally softened across tenors and the rating spectrum, in tandem with G-sec yields (Table 6). The credit risk premium – as reflected in the spread of yields on corporate bonds over G-sec yields of comparable maturities – increased marginally as risk aversion rose on fears of mark-to-market losses. This prompted large borrowers to approach the banking system for meeting their funding requirements.

Reserve money (RM) excluding the first-round impact of the cash reserve ratio (CRR)[25] grew by 8.0 per cent on a y-o-y basis as on August 5, 2022 (10.9 per cent a year ago). Currency in circulation (CiC) – the largest component in RM – registered a growth of 8.2 per cent (10.0 per cent a year ago) [Chart 50]. Money supply (M_3) grew by 8.6 per cent as on July 29, 2022 (9.9 per cent a year ago), with its largest component – aggregate deposits with banks – also growing at the same pace as a year ago (9.8 per cent). Scheduled commercial banks' (SCBs') credit growth, which has been consistently rising since February 2022, grew at 14.5 per cent y-o-y as on July 29, 2022 (6.1 per cent a year ago). Among various sectors, credit flow to the micro, small and medium enterprises (MSMEs) sector remained buoyant. According to the latest SIDBI-TransUnion CIBIL MSME Pulse Report, total credit disbursements to MSMEs increased by about 43 per cent in Q4:2021-22.[26] Bank credit to medium industries grew by 47.6 per cent in June 2022 on top of a growth of 59.0 per cent a year ago. Bank credit growth to micro and small industries accelerated to 29.6 per cent in June 2022 from 11.6 per cent in June 2021.

Banks have adjusted their repo linked benchmark lending rates upward during April to July 2022, in line with the cumulative hike of 90 bps in the policy repo rate up to June. Furthermore, the 50 bps repo rate hike in the August policy meet has been transmitted to the repo linked lending rates of the majority of the domestic banks, while others are considering adjustments soon. During April-July 2022, SCBs have increased their 1-year median marginal cost of funds-

[25] CRR was increased by 50 bps to 4.5 per cent effective May 21, 2022.

[26] https://sidbi.in/files/article/articlefiles/MSME%20Report_August%202022.pdf

based lending rates (MCLRs) by 40 bps. The weighted average lending rate (WALR) on fresh and outstanding rupee loans increased by 8 bps and 14 bps, respectively. The weighted average domestic term deposit rate (WADTDR) on outstanding deposits increased by 6 bps (Table 7). The extent of pass-through is higher for lending rates *vis-à-vis* retail term deposit rates as the latter are dependent on demand for credit as well as liquidity conditions in the banking system.[27] As liquidity in the system has started normalising, banks have started raising their bulk deposit rates aggressively.

While the median term deposit rate on retail deposits increased by 14 bps, banks have increased their bulk deposit rates significantly in the current tightening period. If overall transmission to term deposit (including retail and bulk deposits) is considered, it is comparable to transmission to lending rates.

The interest rates on various small savings instruments (SSIs) have been left unchanged for the last nine quarters (up to Q2:2022-23). With the upward movement in G-Sec yields, the spread between the existing interest rates on various SSIs and the formula-based rates is now negative for most small saving schemes.

In the equity market, the benchmark index (BSE Sensex) increased by 8.6 per cent in July, registering its highest monthly gain since August 2021. Most of the uptick was recorded during the second half of the month amidst robust corporate earnings, resurgence in foreign portfolio flows, positive global cues and moderation in crude oil prices. The market was also supported by the announcement of a reduction in the windfall tax on exports of domestically produced crude oil, diesel and aviation fuel. The equity market continued its upward trajectory in August, with the BSE Sensex increasing by 3.9 per cent (up to August 16, 2022) amidst upbeat domestic manufacturing data and decline in crude oil prices. In July 2022 and August so far, foreign portfolio investors (FPIs) turned net buyers again in Indian equities (Chart 51).

The corporate sector delivered firm earnings in Q1:2022-23; with profit growth riding out headwinds from rising input costs. Non-financial companies recorded y-o-y growth in excess of 40 per cent in revenues/sales as well as expenditures (Chart 52).[28] The growth in expenditure outpaced that of revenue, which was reflected in raw material costs registering an uptick during the quarter.[29] Wages and salaries also

Table 7: Transmission from the Repo Rate to Banks' Deposit and Lending Rates

(Variation in Basis Points)

Period	Repo Rate	Deposit Rates		Lending Rates		
		Median TDR (Fresh Deposits)	WADTDR (Outstanding Deposits)	1–Year MCLR (Median)	WALR (Fresh Rupee Loans)	WALR (Outstanding Rupee Loans)
April-July 2022*	**90**	**14**	**10**	**40**	**31**	**19**
Memo						
April 2022	0	0	0	0	-12	-2
May 2022	40	0	4	3	35	7
June 2022	50	3	6	20	8	14
July 2022	-	0 (-2 to 27)	-	12 (-20 to 20)	-	-

Note: Fiigures in parentheses indicate a range of bank-wise variations for domestic banks.

* Data on WALRs and WADTDR pertains to June 2022.

WALR: Weighted average lending rate; WADTDR: Weighted average domestic term deposit rate.

MCLR: Marginal cost of funds-based lending rate; TDR: Term deposit rate.

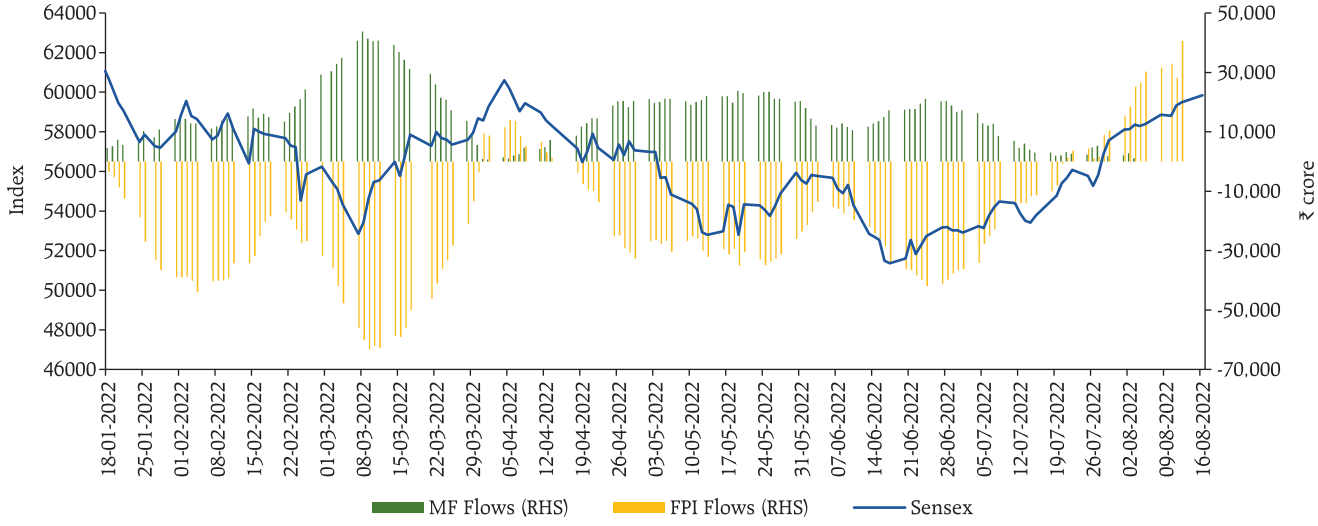
Source: RBI staff estimates.

[27] Kumar, A., Prakash, A. and Latey, S., (2022), 'Monetary Transmission to Banks' Interest Rates: Implications of External Benchmark Regime' RBI Bulletin, April.

[28] Based on an analysis of 2,040 listed non-financial companies, constituting around 91.6 per cent of market capitalisation of all listed non-financial companies.

[29] Even after excluding oil and gas, power, metals and mining and service sector related companies, raw material costs as a proportion of sales recorded an uptick during the quarter.

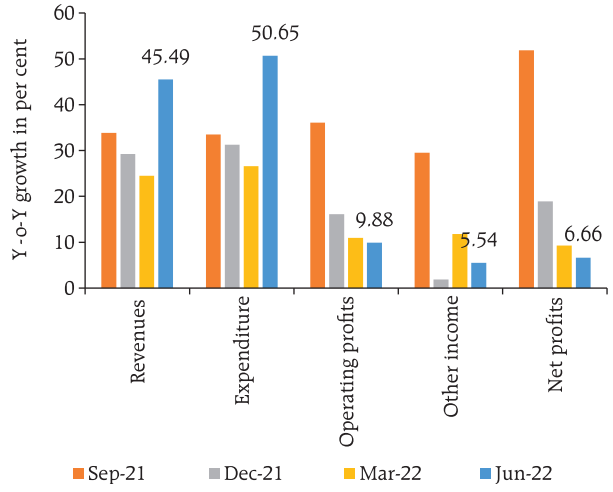
Chart 51: BSE Sensex and Institutional Flows



Note: Foreign portfolio investors (FPIs) and mutual fund (MF) flows are represented on 15-days rolling sum basis.
Sources: Bloomberg; NSDL; and SEBI.

registered double digit growth. Growth in operating profits (y-o-y) remained a tad below the double digit mark. Other income, which includes earnings from treasury operations, recorded a modest increase. Furthermore, interest expenses of companies increased during the quarter. Overall, net profit growth (y-o-y) remained in single digit, registering some moderation from the previous quarter.

Chart 52: Performance of Listed Non-Financial Companies



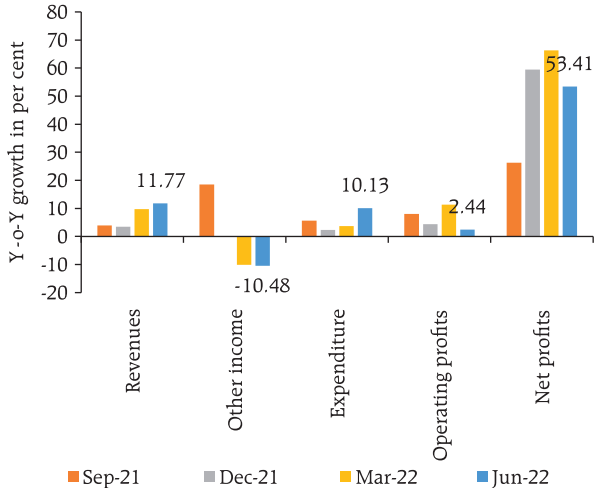
Note: Excludes extraordinary items.
Sources: Prowess; and RBI staff estimates.

Banking and financial sector companies recorded double digit growth in revenues – which primarily include interest income – aided by a pickup in credit growth (Chart 53).[30] Other income, which *inter alia* includes profit/loss from security transactions, fees and commissions, registered a decline following mark-to-market losses on investments. Expenditure grew at a lower rate than revenues; however, a fall in other income led to a moderation in y-o-y growth in operating profits. There was, however, a decline in provisioning costs as a result of which net profits for banking and financial sector companies grew in excess of 50 per cent during Q1:2022-23.

Gross inward foreign direct investment (FDI) at US$ 22.3 billion in Q1:2022-23 was broadly comparable

[30] Based on an analysis of 588 listed financial companies, constituting around 82.9 per cent of market capitalisation of all listed banking and financial companies

Chart 53: Performance of Listed Financial Companies



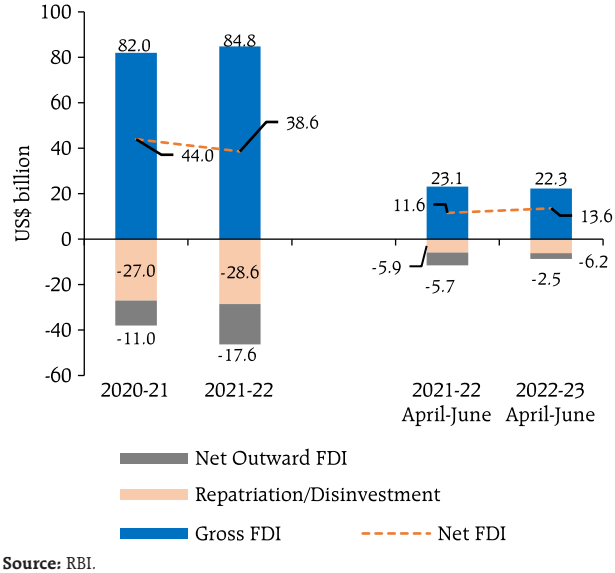
Note: Excludes extraordinary items.
Sources: Prowess; and RBI staff estimates.

with its level a year ago. Net FDI, however, increased to US$ 13.6 billion during this period from US$ 11.6 billion a year ago on account of an increase in fresh equity inflows and a decline in outward FDI from India (Chart 54). Manufacturing, services, and retail and wholesale trade sectors received the major share of FDI equity inflows during April-June 2022.

Investment by FPIs in equities led to net inflows of US$ 0.5 billion in July 2022 and US$ 4.7 billion in August 2022 (up to 12th) even as equity markets in major emerging market economies (EMEs) such as Indonesia, Philippines, South Africa, Taiwan, and Turkey recorded net outflows (Chart 55). Financial services, fast moving consumer goods (FMCGs) and power sector attracted FPI inflows.

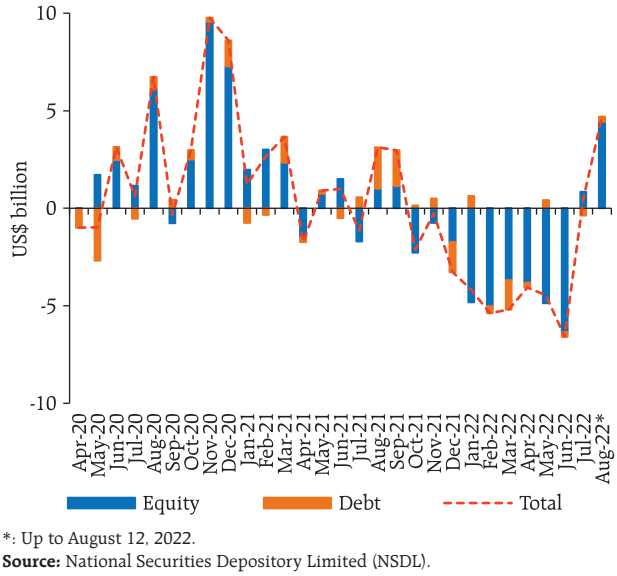
At US$ 3.6 billion, gross disbursements of external commercial borrowings (ECBs) to India remained at the same level in Q1:2022-23 as a year ago. Excluding inter-company borrowings however, ECBs recorded net repayments of US$ 3.3 billion during this period as against net disbursements of US$ 0.2 billion in the first quarter last year. In June 2022, a major share of ECBs has been raised for the purpose of on-lending/sub-lending, infrastructure development and working capital. More than two-thirds of the outstanding ECBs remain effectively hedged in terms of explicit hedging, rupee denominated loans and loans from foreign parents (Chart 56). The remaining amount also included loans with natural hedges (*i.e.*, borrowers' earnings are in foreign currency), limiting the exposure to currency volatility.

Chart 54: Foreign Direct Investment (FDI)



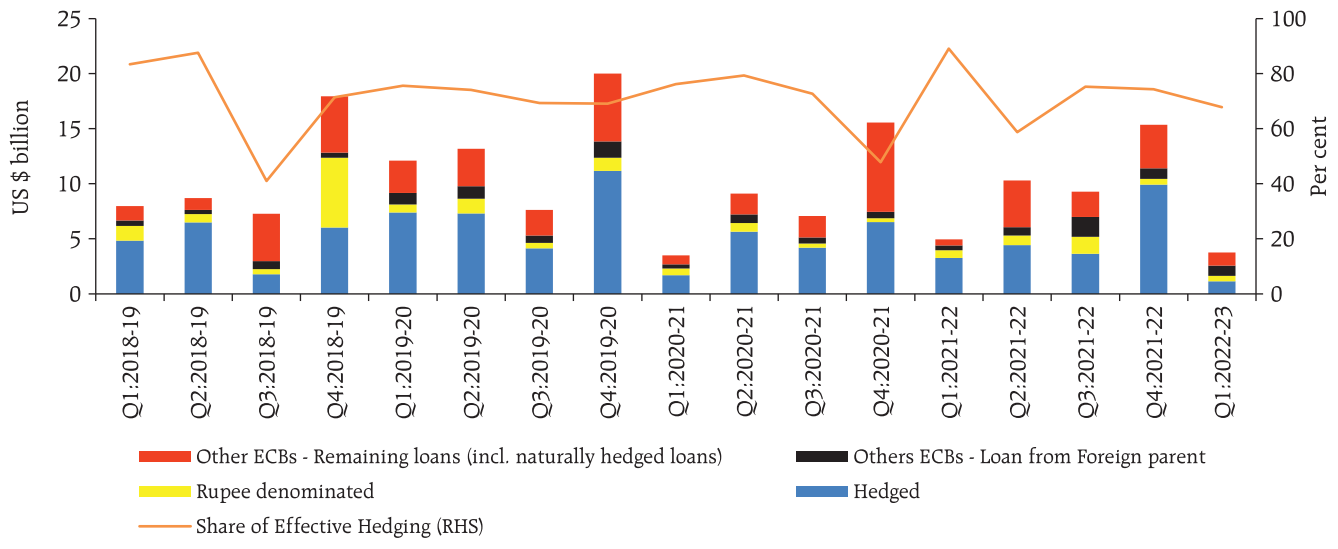
Source: RBI.

Chart 55: Net Foreign Portfolio Investment (FPI)



*: Up to August 12, 2022.
Source: National Securities Depository Limited (NSDL).

Chart 56: ECB Agreements - Hedging Position



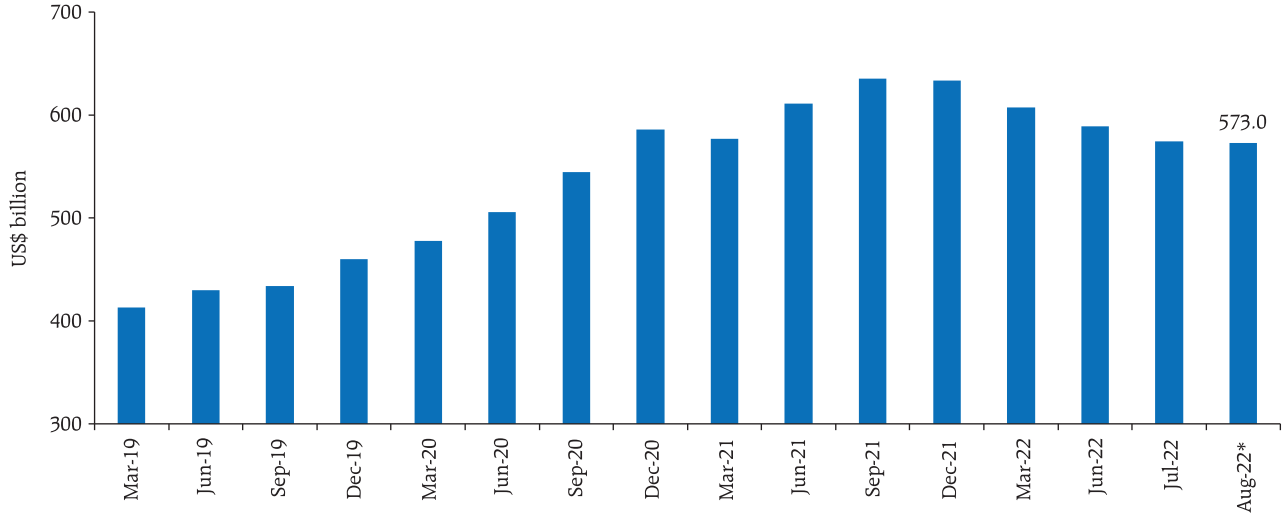
Source: RBI.

At US$ 573.0 billion, foreign exchange reserves on August 5, 2022 were equivalent to 9.4 months of imports projected for 2022-23 (Chart 57).

In the foreign exchange market, the strengthening US dollar continued to put pressure on EME currencies. On average, the Indian rupee (INR) depreciated by 1.9 per cent *vis-à-vis* the US dollar (m-o-m) in July 2022, even as the US dollar index appreciated by 2.9 per cent. Nevertheless, the Indian rupee performed better than most major EME currencies (Chart 58).

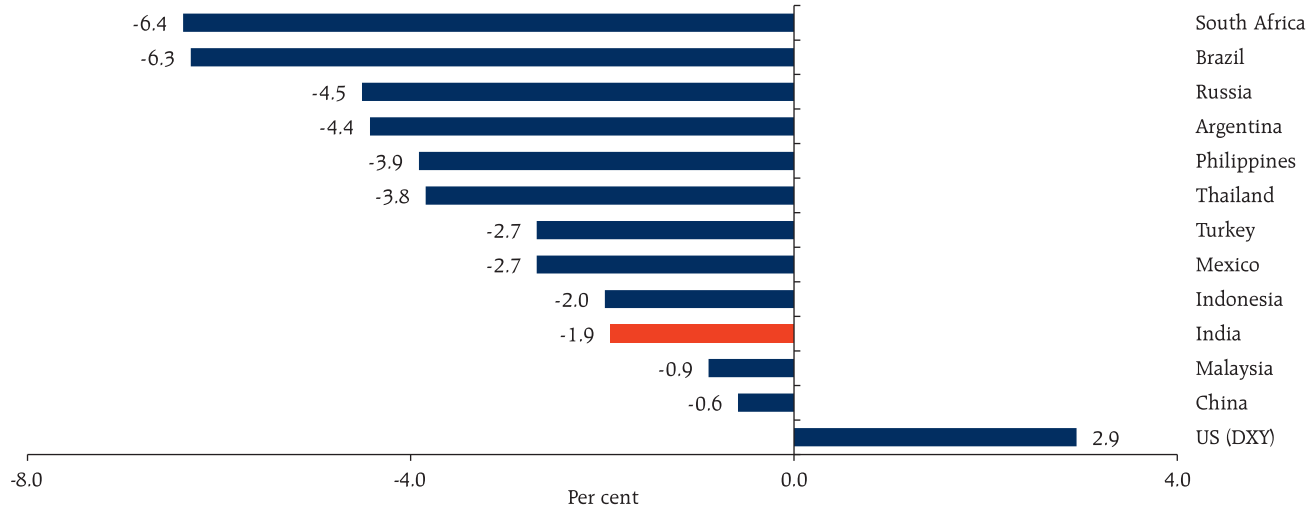
The INR depreciated by 0.4 per cent in terms of the 40-currency real effective exchange rate

Chart 57: Foreign Exchange Reserves



*: As on August 5, 2022.
Source: RBI.

Chart 58: Movements of Indian Rupee and EME Currencies against the US Dollar (July 2022, m-o-m)



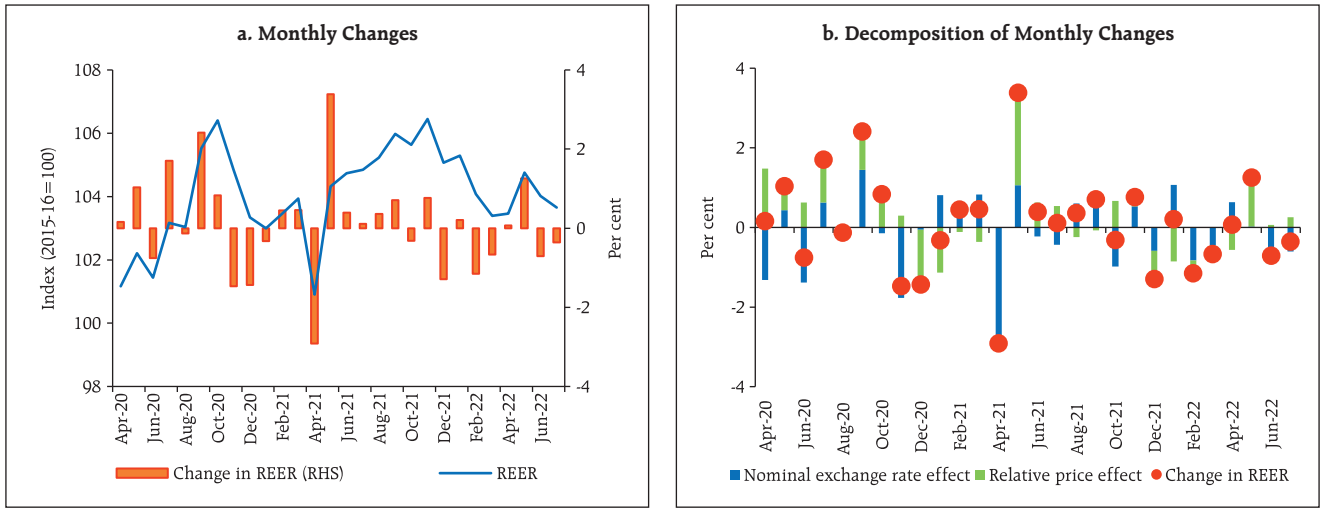
Sources: FBIL; Thomson Reuters; IMF; and RBI staff estimates.

(REER) in July 2022, showing a relatively higher depreciation in currencies of India's major trading partners *vis-à-vis* the US dollar (Chart 59).

Payment Systems

The Reserve Bank's Digital Payments Index rose to 349.30 in March 2022, a growth of 14.8 per cent over September 2021. In terms of both volume and value growth, digital payments across various modes sustained a rising trajectory in July 2022 (Table 8). The Unified Payments Interface (UPI) dominated retail payments, with a share of 70 per cent in overall retail transactions volume in June 2022 (59.4 per cent a year ago) (Chart 60). This uptick was also evident in the share of UPI transaction by value, which increased by 4.8 percentage points to reach 19.5 per cent. There

Chart 59: Monthly Movements in 40-Currency Real Effective Exchange Rate



Note: Figures for July 2022 are provisional.
Source: RBI.

Table 8: Growth Rates in Select Payment Systems

(per cent)

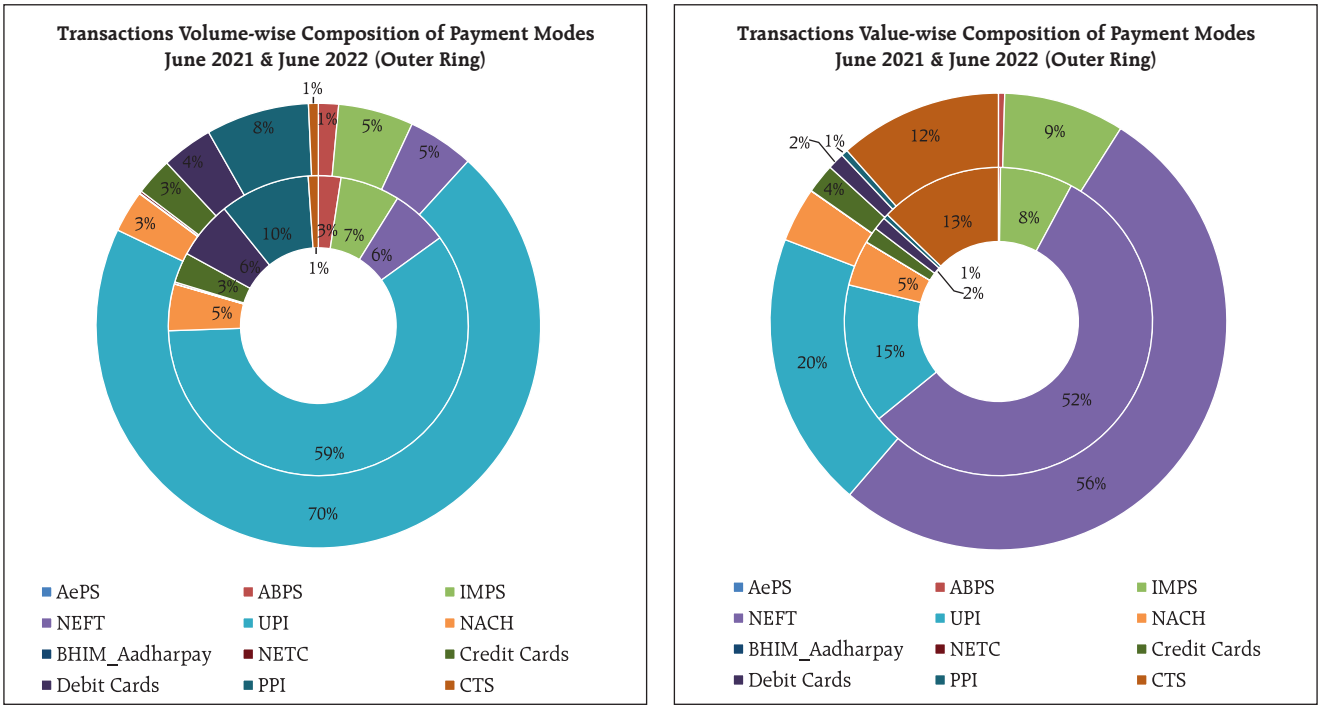
Payment System Indicators	Transaction Volume Growth (y-o-y)				Transaction Value Growth (y-o-y)			
	June-2021	June-2022	July-2021	July-2022	June-2021	June-2022	July-2021	July-2022
RTGS	28.8	26.1	34.4	12.9	17.9	21.2	28.9	7.5
NEFT	28.6	37.6	32.0	26.8	10.0	29.5	12.3	19.2
UPI	110.0	108.8	116.7	93.8	109.1	85.3	108.5	75.5
IMPS	52.8	50.0	58.7	30.7	37.3	56.2	37.9	42.8
NACH	0.8	6.7	1.9	36.4	-4.1	19.5	1.8	29.4
NETC	92.7	76.1	122.0	37.9	70.4	67.0	83.4	39.8
BBPS	157.7	80.6	153.7	67.9	167.2	91.0	159.3	68.7

Source: RBI.

was a discernible escalation in the growth rate of transactions through the National Automated Clearing House (NACH) in July 2022 owing to government transfers.

The Reserve Bank has proposed to link UPI and *Rupay* Credit cards to widen the choice of payment avenues and enhance convenience for more than 26 crore unique UPI users[31]. This initiative should give a fillip to UPI Person-to-Merchant (P2M) transactions, which stood at ₹769 per transaction in July 2022. It will also contribute to the rising share of P2M transactions in total UPI transactions[32] while enabling

Chart 60: Composition of Payment Modes



Source: RBI.

[31] Business Standard, 'Will UPI on credit cards take off?', July 27, 2022.

[32] Total UPI transactions consist of Person-to-Person and Person-to-Merchant transactions. The share of P2M transactions stood at around 18 per cent in June 2021, which rose to 21 per cent in June 2022.

adoption of UPI across businesses with multiple use cases for merchants like overdraft facilities, capture and hold facility, and invoicing support. Reflecting the significant achievements in tokenisation, around 20 crore cards – about a fifth of outstanding cards – across card networks have been tokenised since December 2021.[33] Furthermore, the Reserve Bank relaxed card-on-file data storage norms related to guest accounts on e-commerce platforms. In the Monetary Policy Statement of August 5, 2022 it has been proposed to enable Bharat Bill Payment System (BBPS) to accept cross-border inward payments to facilitate non-resident Indians' (NRIs) utility, education, and other bill payments on behalf of their families in India. Efforts towards fostering sound and reliable innovations while encouraging efficiency in financial services are bearing fruit, with four out of eight entities successfully exiting the second cohort of the Reserve Bank's Regulatory Sandbox on cross-border payments. In addition, the Reserve Bank announced arrangements for invoicing, payment, and settlement of exports/imports in INR to encourage exports from India and reinforce the interest of traders across the globe in the INR as an international currency.[34]

V. Conclusion

To conclude on a positive note, perhaps the most heartening development in recent times has been the easing of inflation in July 2022 by 30 basis points from June 2022 and an appreciable 60 basis points from the average of 7.3 percent for Q1:2022-23. This has validated our hypothesis that inflation peaked in April 2022. For the rest of the year, the RBI's projections scent a steady easing of the momentum of price changes. With the trajectory of outcomes largely in line with projections, we expect momentum to ease from 3.0 per cent in Q1 to 1.7 per cent in Q2 and further to 1.3 per cent in Q3 and turn mildly negative in Q4 before picking up modestly and on seasonal food price effects to 2.2 per cent in Q1: 2023-24. Fortuitously, base effects are favourable all through. If these expectations hold, inflation will fall from 7 to 5 per cent in Q1 next financial year - within the tolerance band, hovering closer to the target, but not yet positioned for landing. This is a decisive point in its trajectory. Imported inflation pressure points remain the overarching risk, followed by pending pass-through of input costs if producers regain pricing power, and wages. Yet, some risks have turned down - commodity prices, especially of crude; supply chain pressures; revving up of monsoon activity due to the depression in the Bay of Bengal.

After Q1: 2023-24, the task before the MPC would be to guide inflation to its target of 4 percent. This may prove to be more arduous than the loss of height into the tolerance band.

The next heartening development is the return of capital flows to India after a hiatus when the appetite of portfolio flows to EMEs deteriorated as the US dollar appreciated breathlessly with the US Fed accelerating its hiking cycle. Since March 2022, the Institute of International Finance estimates that portfolio investors withdrew US$ 39.3 billion from EMEs, partly offset by inflow of US$ 4.6 billion in the debt segment.[35] Yet, investors appear to have differentiated. While commodity exporting EMEs, *viz.*, Brazil, Saudi Arabia, Indonesia, Malaysia, Colombia and Chile benefitted from portfolio inflows into equities, exposures were cut down for China, India and Turkey. In the debt segment, China recorded the largest outflow among EMEs while other EMEs together recorded net inflows. India is becoming a preferred destination for portfolio flows - in August so far (until 12th), equity and debt segments recorded net inflow of US$ 4.4 billion and 0.3 billion, respectively.

What is the outlook for these fickle flows? EMEs face the passive investor syndrome - exchange traded

[33] Business Standard, 'Card data storage: RBI relaxes rules for checkout on guest transactions', July 29, 2022.

[34] The Reserve Bank of India Notifications, "International Trade Settlement in Indian Rupees (INR)", July 11, 2022; https://rbi.org.in/Scripts/NotificationUser.aspx?Id=12358&Mode=0

[35] IIF Capital Flows Tracker database, August 2022.

funds, index driven funds and such vehicles into which investors repose confidence in savvy fund managers out of the best business schools who are also the most sensitive to global spillovers. The IMF estimates that the response of passive portfolio flows to a one standard deviation shock to the interest rate has gone up six times now from that at the time of the taper tantrum.[36] Tightening of global funding conditions as monetary policy is front loaded is hence expected to worsen the outlook for portfolio flows.

India is cautiously returning to be the flavour of this season's portfolio flows, with inflows of US$ 5 billion upto August 12, 2022. The market value of portfolio investments in India stood at US$ 623.8 billion on August 12, 2022[37]. In this context, the capital flows at risk assessment presented in the June 2022 issue of this Bulletin provides vital insights. By assigning specific probabilities to capital flow events of various magnitudes- inflows and outflows - it can contribute to contingency planning. To illustrate, the model indicates that there is a 5 per cent chance of outflows of the order of US$100.6 billion of portfolio investment from India due to the interplay of what are called push and pull factors. This is the actual experience of the current phase of outflows during October 2021 to June 2022. "This is indicative of the level of liquid reserves that need to be maintained at all times – in addition to standard metrics of import and debt servicing cover – to quell bouts of instability that volatile capital flows can impose in a dynamic and highly uncertain global setting in which pandemics, supply chain disruptions, and elevated commodity prices and geopolitical tensions keep interacting and intertwining" (Patra *et al.*, 2022)[38].

Deepening domestic financial markets can help countries mobilise savings, promote information sharing and diversify risk while dampening the volatility of asset prices. According to the IMF, interventions can lean against market illiquidity, and thus, play a role in muting excessive volatility. Capital outflow management measures should be a part of a broad policy package without avoiding macroeconomic adjustment wherever warranted. Debt management strategies are important for EMEs in view of their limited access to global financial markets. Hence, active strategies are called for in minimising market and rollover risks. Macro prudential policies can reduce the impact of shocks on market conditions and the economy.

In the final analysis, India is poised to sustain a growth differential *vis-a-vis* the rest of the world on the basis of several fundamental factors: a demographic dividend alluded to in the July edition of this article; expansion in the availability of capital with increasing formalization of the economy and digital financial inclusion - adaptation into the digital payment space has already accounted for India logging the largest number of real time transactions in the world; the financialisation of savings as retail participation in capital markets grows; a sounder and fitter banking system with stronger balance sheets and a return to profitability.

All these factors coming together could unleash a jump in productivity going forward. The challenges before us are to regain the momentum lost to the pandemic and the shocks that followed in its train, close the infrastructure gap, build a high quality labour force and gain an outward orientation that expands the markets for our products, our professionals and business presence beyond national boundaries and on to the world stage.

India's time has arrived. We must seize the initiative with both hands.

[36] International Monetary Fund (2019). Global Financial Stability Report, April.

[37] The market value of portfolio investment is worked out by adding the FPI flows (up to August 12, 2022) with the market value position as at end July 2022.

[38] Patra, M.D., Behera, H. and Muduli, S. (2022). Capital Flows at Risk: India's Experience, RBI Bulletin, June.

*Privatisation of Public Sector Banks: An Alternate Perspective**

Privatization of public sector banks (PSBs) has been widely viewed as a key area of pending reforms in India. This article empirically examines the performance of PSBs relative to private sector banks (PVBs). Using data envelopment analysis (DEA), it finds that while PVBs are more efficient in profit maximization, their public sector counterparts have done better in promoting financial inclusion. The labour cost efficiency of PSBs is higher than PVBs. Empirical evidence also suggests that lending of PSBs is less procyclical than PVBs and thus PSBs help the countercyclical monetary policy action to gain traction.

Introduction

Privatization has become a buzzword world-wide since the 1990s and governments all over the world have either reduced participation or withdrawn completely from a range of activities in the last four decades. Prior to the global finance crisis (GFC), banking was no exception to this trend. In developing countries, the average share of assets held by government owned banks declined from 40 per cent in 1995 to 17 per cent in 2008 while in high-income countries, the same fell from 36 per cent in 1995 to 10 per cent in 2008. Post GFC however, there has been a renewed interest in the public ownership of banks as many high income and developing countries capitalized or nationalized stressed banks. In countries such as Iceland, Kazakhstan, the United Kingdom, and the República Bolivariana de Venezuela, the share of assets held by the government in the banking sector increased by more than 10 percentage points between 2008 and 2010 (Cull, Peria and Verrier, 2018). Since then, the pros and cons of public ownership of banks has remained a hotly debated topic all over the world.

Privatization has had its significant influence over economic thinking in India as well, although banking had remained largely untouched by its winds till recently. In the Union Budget 2021-22, the government announced its intent to take up the privatisation of two PSBs. A recent policy prescription emphasizes that '…PSBs have underserved the economy and their stakeholders', to make a case for privatization of all PSBs excluding the State Bank of India (Gupta and Panagariya, 2022).

This article offers an alternate perspective by taking inspiration from the strands of literature that justify the role of PSBs on several grounds. The 'social view' propagated by Atkinson and Stiglitz (1980) suggests that state-owned enterprises (SOEs) are created to address market failures, and often their social benefits exceed the social costs. According to this view, government-owned banks contribute to economic development and improve general economic welfare (Stiglitz, 1993). Another strand of literature suggests that lending by state-owned banks is either countercyclical or less pro-cyclical than lending by private banks, especially in emerging and developing economies and thus the public sector banks contribute to macroeconomic stability (Panizza, 2022; Micco and Panizza 2006). Various studies have shown that public sector banks have played a key role in catalyzing financial investments in low-carbon industries thereby promoting green transition in countries such as Brazil, China, Germany, Japan, and in the European Union (Mazzucato & Penna, 2016 and Schapiro, 2012).

An important aspect that is often ignored by researchers proposing privatization is the role played by PSBs in financial inclusion. Incorporating this dimension in the objective function, this article

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provides empirical evidence on how PSBs have been more welfare enhancing than their private sector counterparts in India. Furthermore, the article empirically establishes that PVBs' lending is more pro-cyclical as compared with PSBs and thus PSBs help the countercyclical monetary policy to gain traction. In line with recent research, which suggests that 'private ownership alone does not automatically generate economic gains in developing economies' and 'a more cautious and nuanced evaluation of privatization is required' (Estrin and Pelletier, 2018), this article also recommends gradual approach to privatization.

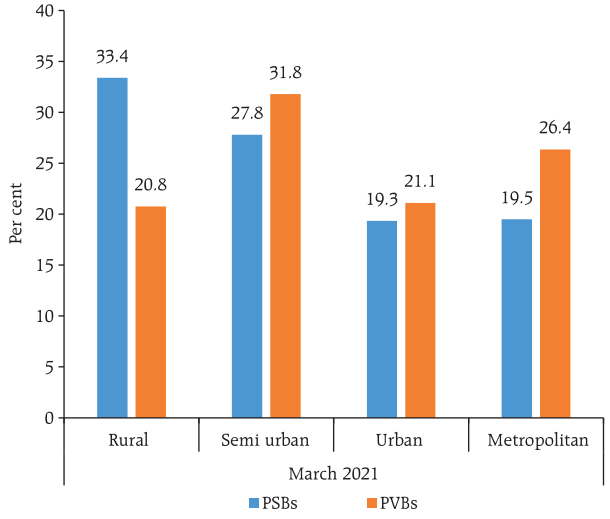
Against the above context, the article is organized as follows: Section II is devoted to exploring the role of PSBs in financial inclusion. Section III presents a performance assessment of PSBs and PVBs for alternative objective functions by using DEA. Section IV examines the credit pattern of PSBs and PVBs relative to the state of business cycles. Section V presents latest data trends to assess overall market response to performance of PSBs. Section VI concludes and provides a way forward.

II. Role of PSBs in Financial Inclusion

PSBs account for the highest share of bank branches in rural areas, followed by semi-urban areas, in adherence to their commitment to the financial inclusion objective (Chart 1a). The PSBs dominate in meeting the credit demand of rural areas (Chart 1b). Although PVBs have been making some inroads in the rural areas, their progress remains slow.

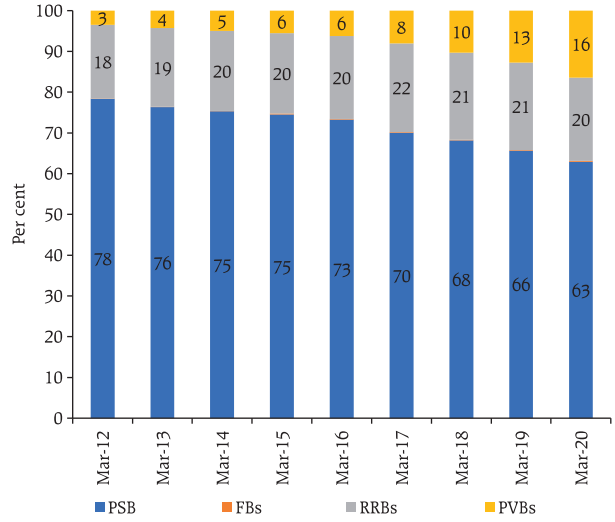
Opening and maintaining brick and mortar branches is costly and may also turn out to be economically unviable, especially in rural areas. To address this, the PSBs have been adopting innovative ways of providing financial services in rural areas. For example, their share in ATMs in rural areas is more than twice that of PVBs (Chart 2a). Another channel that has been used most effectively by PSBs to make financial services available in rural and financially excluded areas is the use of Business Correspondent (BC) Model. The share of PSBs in BC outlets in rural areas has remained consistently above 60 per cent over the years, the highest among the bank groups (Chart 2b). PVBs on the other hand, have adopted the urban BC model.

Chart 1a: Geographical Distribution of Branches (at end March 2021)



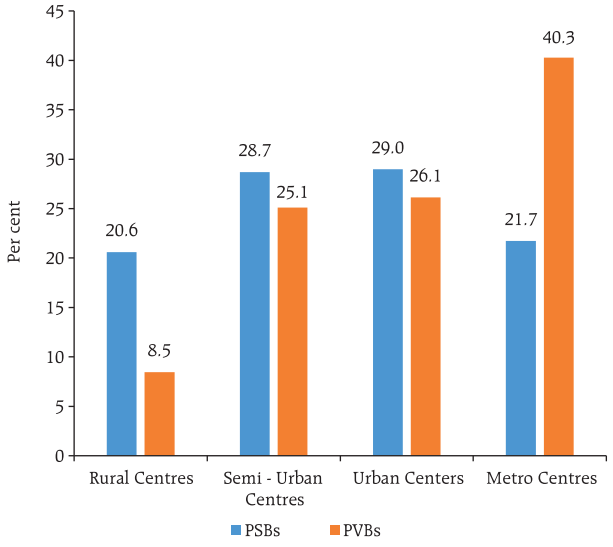
Source: RBI.

Chart 1b: Share of Bank Groups in Rural Lending



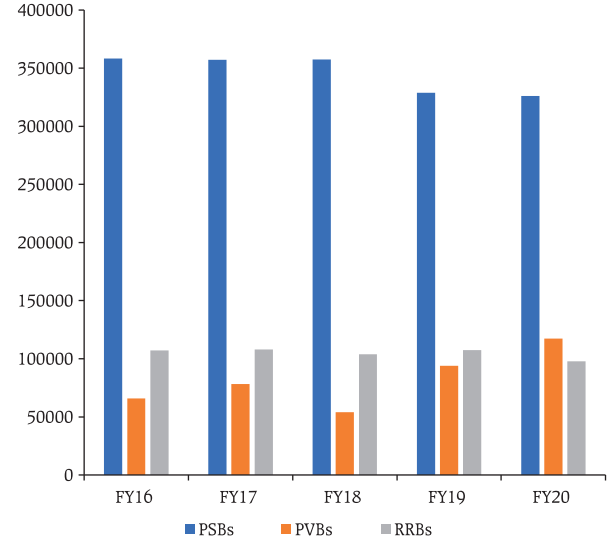
Source: Quarterly statistics on Deposit and Credit of scheduled Commercial Banks, RBI.

Chart 2a: Geographical Distribution of ATMs at end-March 2021



Source: Report on Trend and Progress of Banking in India 2020-21, RBI.

Chart 2b: BC Outlets in Villages - Bank Group Wise



Source: Phukan *et. al* (2021).

Pradhan Mantri Jan Dhan Yojana (PMJDY), envisages universal access to banking facilities with at least one basic banking account for every household. As of July 2022, more than 45 crore beneficiaries have been banked and 78 per cent of these accounts were in PSBs (Table 1). Moreover, more than 60 per cent of PMJDY accounts opened in PSBs were in rural and semi-urban areas.

Table 1: Distribution of PMJDY beneficiaries at bank-group level

(Number of beneficiaries in crores)

Bank Type	Number of Beneficiaries at rural/ semi-urban centre bank branches	Number of Beneficiaries at urban metro centre bank branches	Number of Rural-Urban Female Beneficiaries	Number of Total Beneficiaries
Public Sector Banks	22.66	13.54	19.96	36.2
Regional Rural Banks	7.31	1.14	4.88	8.45
Private Sector Banks	0.7	0.6	0.71	1.3
Grand Total	**30.67**	**15.28**	**25.55**	**45.95**

Note: Data as on July 6, 2022

Source: Pradhan Mantri Jan Dhan Yojana, Government of India

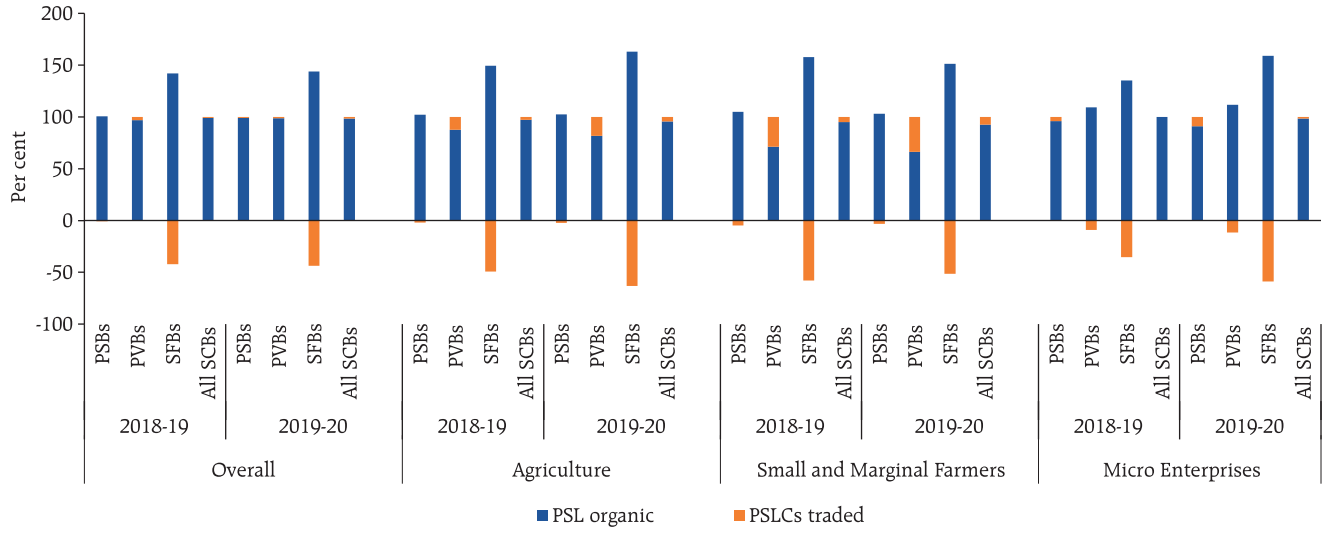
It is often argued that PVBs meet their priority sector lending target of 40 per cent fully and thus contribute towards financial inclusion. Granular data however show that the PVBs have met their priority sector targets not through organic lending but through investment in priority sector lending certificates (PSLCs), especially in agriculture and small and marginal farmers categories[1]. These categories of priority sector lending are especially challenging and attract higher premium. The PVBs have shown willingness to pay higher premiums to meet their PSL targets rather than develop skills and expertise in such lending.

III. Efficiency of PSBs

We use various combinations of inputs and outputs in the DEA framework to investigate the efficiency levels of banks in India over 2010-2022. DEA is a linear-programming-based method which constructs the frontier of the observed input-output

[1] Although the PVBs have a surplus lending in micro enterprises category, which they trade through PSLCs, it is rather small in comparison with the close to 30 per cent target deficit in the case of small and marginal farmers and close to 20 per cent target deficit in agriculture.

Chart 3: PSL organic and PSLCs traded



Note: Negative PSLC trade indicates net selling by the banks
Source: Report on Trend and Progress of Banking in India 2020-21, RBI

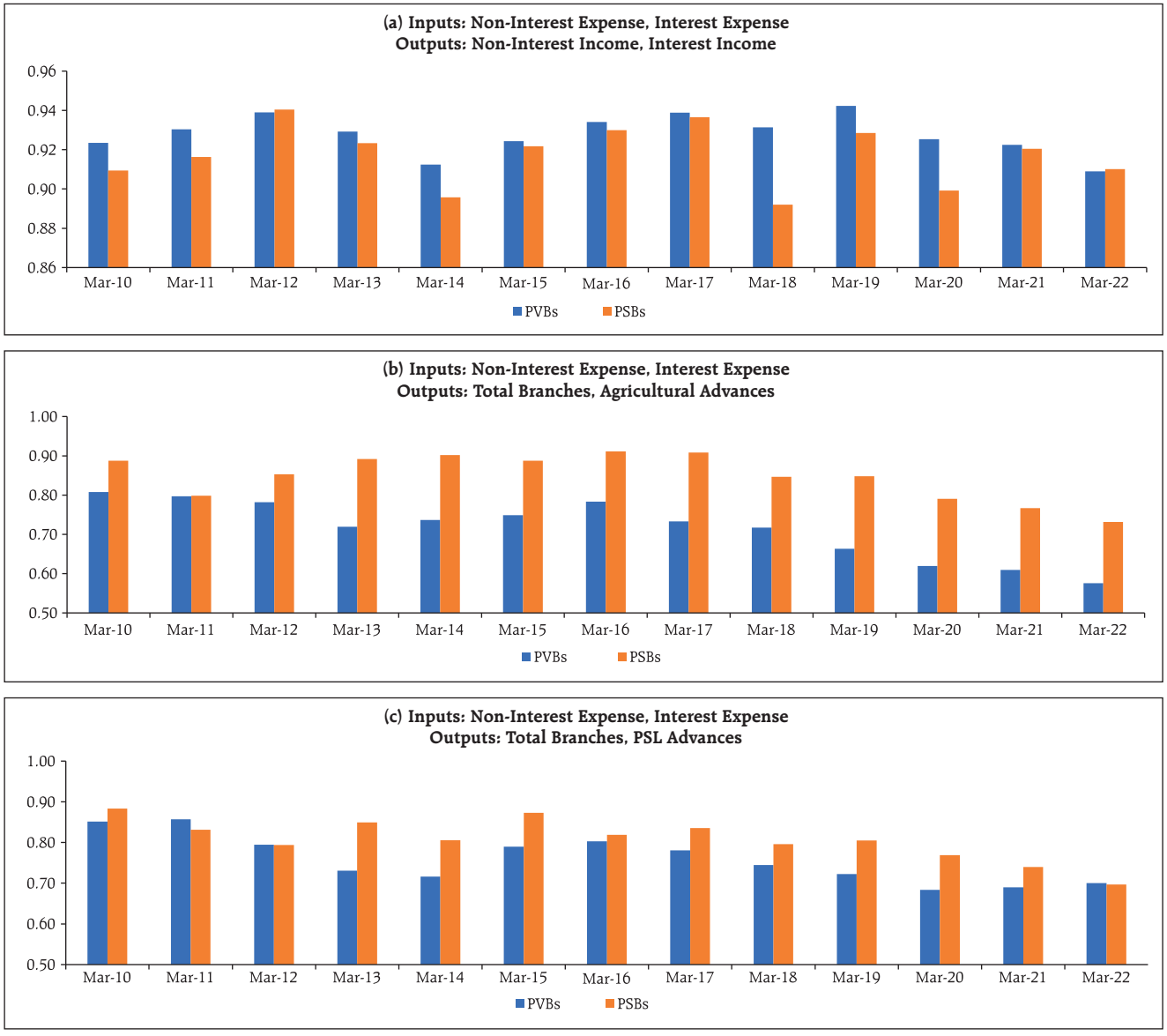
ratios for assessing the performance of homogeneous organizations and is increasingly being used in banking (Fare, Grosskopf, and Lovell, 1985). A summary measure of efficiency of the best performing unit is derived and the performance of each decision-making unit (DMU) is measured against this benchmark to give an indication of how efficient or inefficient each DMU is.

The results suggest that when profit maximisation is the sole motive, efficiency of the PVBs has always surpassed that of their public sector counterparts (Chart 4a). However, when the objective function is changed to include financial inclusion—like total branches, agricultural advances and PSL advances—PSBs prove to be more efficient than PVBs (Chart 4 b and c).

It is often argued that the staff in PSBs is inefficient (Gupta and Panagariya, 2022). The cost minimization DEA framework is employed to empirically evaluate this claim. In particular, the average labour cost efficiency of PSBs is compared with that of PVBs. In this specialized form of DEA, for given levels of inputs, its prices and outputs of each unit, the model estimates the efficiency score of each unit in comparison to the most labour cost-efficient entity. Cost efficiency is defined as, "efficiency that gives a measure of how close a bank´s cost is to what a best-practice bank´s cost would be for producing the same bundle of output under the same conditions (Kocisova, 2014).

Data on total deposits, gross loans and advances, total investments (SLR+ non SLR) and non-interest income were taken as outputs whereas total staff and fixed assets (net) were taken as inputs. Average staff cost (total staff cost/ total staff) and expenses on rent, taxes, lighting, insurance and other administrative costs per unit of fixed assets (other operating expenses/ net fixed asset) were taken as input prices for the analysis. The number of banks in our study varied between 49 in 2010 and 33 in 2022. Data was obtained from various issues of Statistical Tables Related to Banks in India published by the Reserve Bank.

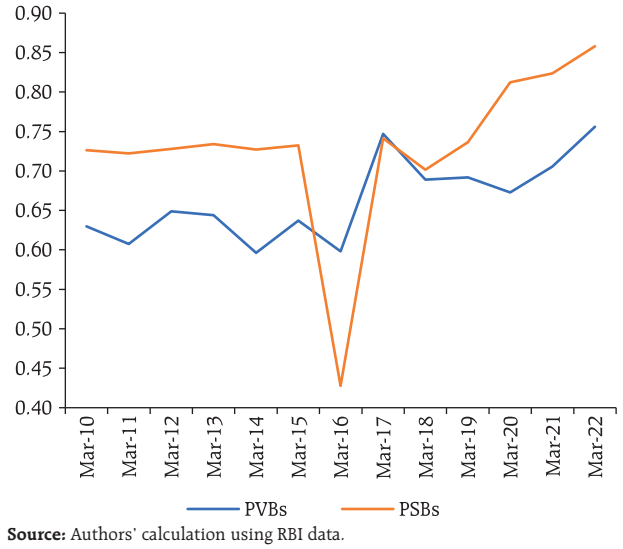
Chart 4: Efficiency Scores of PSBs and PVBs: DEA Analysis



Source: Authors' calculations based on supervisory data

Analysis showed that PSBs' labor cost efficiency remained higher than PVBs for most of the years except 2016 (Chart 5). This implies that incurring lower cost on labour, the PSBs can generate higher level of output. This finding is in line with the earlier research (Herwadkar *et.al.* 2019). Effective use of banking BC model, coupled with implementation of other cost-efficient techniques may be the reasons behind the higher cost efficiency of PSBs.

Chart 5: Average Labour Cost Efficiency of Banks: PSBs vis-à-vis PVBs (At-end March)



Source: Authors' calculation using RBI data.

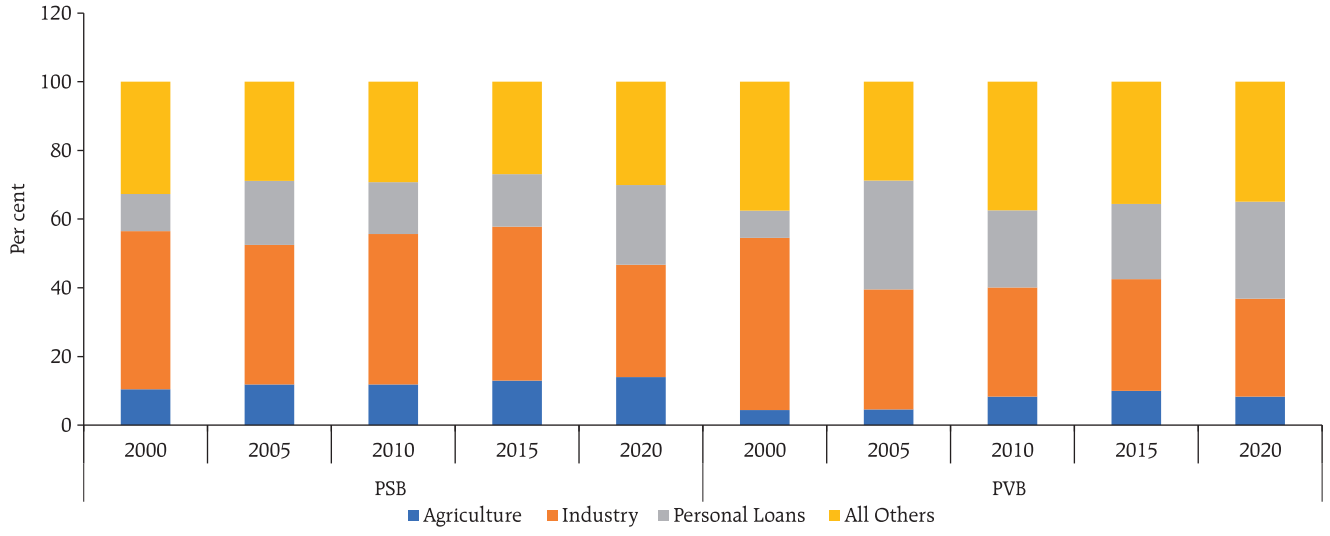
IV: Countercyclical Role of PSBs

PSBs have consistently allocated a larger proportion of their total credit to agriculture and industry than PVBs (Chart 6). Agriculture lending is a priority, as well as challenging area. Over time, the share of co-operative banks and RRBs in agriculture lending has reduced while that of PSBs has increased[2], suggesting that the latter have played an important role in providing credit to the needy sector.

Since the corporate bond markets in India are not deep and vibrant, industries had fewer other avenues to raise resources than banks. Earlier research has also shown that larger and stronger industries can access the equity market easily but that option is scarcely available to smaller entities (Ganguly, 2019). This was especially true during the cyclical downturn that started in the Indian economy since 2017-18. By providing credit to industrial sector, the PSBs have played countercyclical role.

Infrastructure finance has been a bottleneck in the country's development and growth. PSBs have a lion's share in these lendings and their role has been especially crucial against the backdrop of withering away of erstwhile development financial institutions (Chart 7).

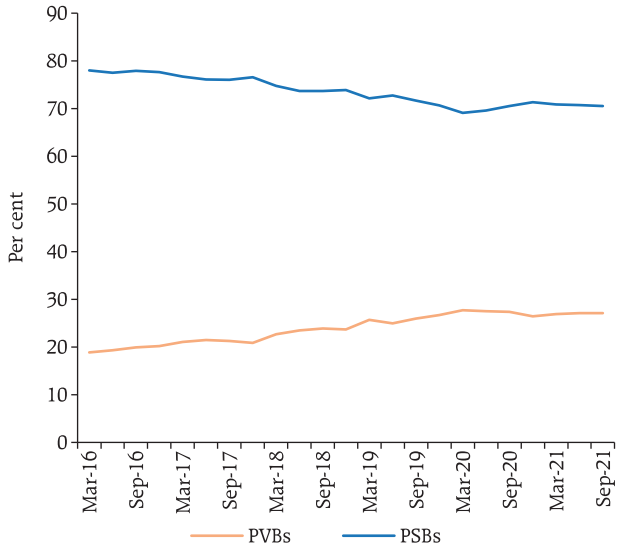
Chart 6:Sectoral Share of Credit



Note: All others includes Transport Operators, Professional and Other Services, Trade, Finance and others.
Source: Basic Statistical Return (BSR)-1 (Annual) - Credit by SCBs, RBI.

[2] PVBs share of agriculture lending has also increased somewhat but the progress is not consistent.

Chart 7: Share in Infrastructure Lending

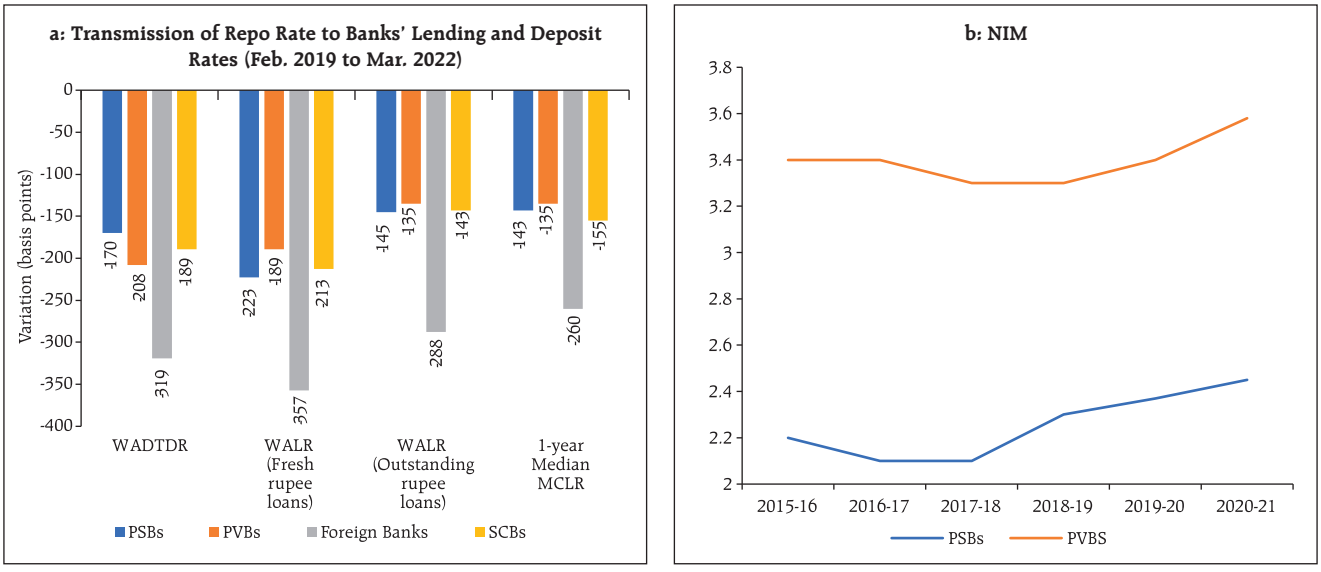


Source: RBI.

PSBs are also more effective in monetary policy transmission, aiding the countercyclical monetary policy actions to gain traction. During the last easing cycle for example, their reduction in lending rates was substantially higher than that of PVBs (Chart 8a). At the same time, their deposit rates were relatively stickier as compared with PVBs. The resultant higher NIMs of PVBs is an indication of their profit maximization objective (Chart 8b). On the other hand, by playing a crucial role in monetary transmission, the PSBs have contributed to larger social goals.

Literature is replete with evidence that private banks are more procyclical in lending as compared with public sector banks (Marshall and Rochon 2019). Procyclical lending by private banks may reduce the effectiveness of countercyclical macroeconomic policies, while countercyclical lending by state-owned banks could be useful in smoothing the business cycle, especially in EMEs (Micco and Panizza, 2006, World Bank 2012; Brei and Schclarek 2013). To test whether the PSBs' lending in India is more countercyclical (or, inversely, less procyclical), we evaluated quarterly data for 30 banks for the period March 2005 to March 2022 in a fixed effect panel regression model (Table 2). The dependent variable *viz.* credit growth is explained by its own lag and size of bank in terms of assets. The PVBs dummy (PVB=1) is interacted with GDP growth/ lag of GDP growth to gauge the differential between procyclical lending of PVBs *vis-à-vis* PSBs. Positive

Chart 8: Lending Rate, Deposit Rate and NIM



Source: Monetary Policy Report, April 2022 and Report on Trend and Progress of Banking in India 2020-21

and significant coefficients of PVB*GDP growth and PVB*GDP growth t-1 are indicative that PVB lending is more procyclical as compared with their public sector counterparts. Moreover, the findings remain robust even after controlling for prompt corrective action (PCA).

Table 2: Fixed effect panel regression of credit growth

	(1)	(2)	(3)	(4)
Variables	**Credit Growth**	**Credit Growth**	**Credit Growth**	**Credit Growth**
$(\text{Credit Growth})_{t-1}$	0.858*** (0.0189)	0.857*** (0.0193)	0.853*** (0.0206)	0.854*** (0.0203)
Log(Total Assets)	-1.358*** (0.246)	-1.366*** (0.243)	-1.365*** (0.250)	-1.358*** (0.253)
PVB*(GDP Growth)$_t$	**0.130*** (0.0347)**			**0.131*** (0.0351)**
PVB*(GDP Growth)$_{t-1}$		**0.133*** (0.0402)**	**0.134*** (0.0405)**	
PCA Dummy			-1.109** (0.520)	-1.077** (0.517)
Constant	17.12*** (3.114)	17.21*** (3.061)	17.33*** (3.174)	17.24*** (3.226)
Bank Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,036	2,036	2,036	2,036
R-squared	0.819	0.819	0.819	0.819
Number of Banks	30	30	30	30

V: Market Confidence

At the onset of global financial crisis, deposits flew out of PVBs to PSBs. A viewpoint suggested that this reallocation was not indicative of the better financial health of the bank to which the deposits flew, but rather indicated implicit government guarantees in them. Researchers have argued that this had an adverse and destabilising impact on private sector banks from which the deposits were withdrawn, despite their better health (Eichengreen and Gupta, 2013)

An analysis of supervisory data available with the Reserve Bank for the episode of deposit withdrawals in early 2020—in the wake of depositor concerns over the health of Yes Bank and Lakshmi Vilas Bank—however suggests otherwise. Deposit outflows during the episode were not restricted to small private banks alone but some PSBs with weaker financial health also faced the same. The outflows happened despite these banks offering relatively higher interest rates than others. Deposits typically flew to stronger banks, both in the public and private sector. This shows that investors and depositors value the health of banks much more as compared to implicit government guarantees, while placing their trust. It can also be argued that during such stress periods, if stronger PSBs had not existed, the destabilising impact on the banking sector and the economy would have been much greater. Such episodes could have easily led to a run on banks resulting in financial dis-intermediation. In that sense, the public sector banks have played a major role in boosting public confidence.

Higher resources raised by PSBs as compared to PVBs in the recent years also provides a testimony of growing market confidence in them (Table 3).

Table 3: Resources Raised by Banks through Private Placements

(Amount in ₹ crore)

	2019-20		2020-21		2021-22	
	No. of issues	**Amount raised**	**No. of issues**	**Amount raised**	**No. of issues**	**Amount raised**
PSBs	20	29,573	36	58,697	29	50,719
PVBs	8	23,121	4	33,878	12	35,682

Note: Includes private placement of debt and Qualified institutional placement.
Source: BSE, NSE and Merchant Bankers.

VI: Conclusions

Privatization is not a new concept, and its pros and cons are well known. From the conventional perspective that privatization is a panacea for all ills, the economic thinking has come a long way to acknowledge that a more nuanced approach is required while pursuing it. This article provides an alternative view with evidence that public sector banks are not entirely guided by the profit maximization goal alone

and have integrated the desirable financial inclusion goals in their objective function unlike PVBs. Our results also point out the countercyclical role of PSB lending. In the recent years, these banks have also gained greater market confidence. Despite the criticism of weak balance sheets, data suggests that they weathered the Covid-19 pandemic shock remarkably well. Recent mega merger of PSBs has resulted in consolidation of the sector, creating stronger and more robust and competitive banks. Establishment of National Asset Reconstruction Company Limited (NARCL) will help in cleaning up the legacy burden of bad loans from their balance sheets. The recently constituted National Bank for financing infrastructure and development (NABFiD) will provide an alternate channel of infrastructure funding, thus reducing the asset liability mismatch concerns of PSBs. Overall, these reforms are likely to help strengthen the PSBs further. Against the backdrop of these findings, a big bang approach of privatization of these banks may do more harm than good. The government has already announced its intention to privatize two banks. Such a gradual approach would ensure that large scale privatization does not create a void in fulfilling important social objectives of financial inclusion and monetary transmission.

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*A Steady Ship in Choppy Waters: An Analysis of the NBFC Sector in Recent Times**

The consolidated balance sheet of the NBFC sector exhibited double digit growth in quarter-ending December 2021, buoyed by an uptick in the economy. Credit disbursement grew at a robust rate in the same period. NBFCs focused more on investments as indicated by their growth rates, which exceeded credit growth in all quarters during 2021-22 so far. An improvement in profitability indicators of NBFCs at end-December 2021 reflects the waning impact of the pandemic. Asset quality, however, deteriorated when compared to the corresponding quarter in 2020-21. Going forward, the recent regulatory initiatives are expected to strengthen the NBFC sector .

I. Introduction

There has been a rapid expansion of the global financial system, spurred by differential regulation, technological and financial progress, and innovative business models. In this milieu, the footprint of non-bank financial intermediaries (NBFIs)[1] has expanded considerably, accounting for almost half the global financial assets in 2020 (FSB, 2021). In emerging market economies (EMEs) like India, non-banks have established themselves as an integral and indispensable part of the financial landscape. They further the financial inclusion agenda by complementing the mainstream banking system. They are adept at gauging the differential needs of their customers and offer tailored financial products and solutions (RBI, 2021). Non-banks have also hopped on the 'digital bandwagon', which is transforming India's financial sector, particularly since the COVID-19 pandemic. Having benefitted from lighter and differential regulation *vis-à-vis* banks, non-banks foster innovation and spur competitiveness in the financial sector, ultimately benefitting the consumers.

Non-banking financial companies (NBFCs), which existed in India from the pre-independence period, got a fillip after the bank nationalisations in 1969 and 1980 following which banks accorded higher priority to developmental objectives. It was left to the private sector to cater to retail financial and investment activities and NBFCs filled this vacuum (IMF, 1998). The rapid growth of the NBFC[2] sector in India in recent times has important implications for financial stability. As the largest borrowers from the financial system, NBFCs are meshed into a web of inter-linkages with banks, capital markets and other financial entities (FSR, 2021). Considering this increasing interconnectedness, the existing regulations governing NBFCs were overhauled. The Reserve Bank is set to implement Scale Based Regulation (SBR) and Prompt Corrective Action (PCA) Framework for NBFCs from October 2022. These regulations aim at creating a strong and resilient financial system while ensuring that the diversity and flexibility of NBFCs are preserved.

In view of the growing importance of the NBFC sector in India's financial ecosystem, this article looks at the performance of select NBFCs in 2021-22 up to December 2021 following the second wave of the pandemic using the supervisory data filed by NBFCs on the eXtensible Business Reporting Language (XBRL) platform[3].

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1 Financial Stability Board (FSB) defines NBFI sector as comprising all financial institutions that are not central banks, banks or public financial institutions. Therefore, it includes a wide range of institutions, covering, *inter alia*, insurance companies, pension funds, money market funds (MMFs), hedge funds and finance companies.

2 In this article NBFCs refer to non-banks regulated by RBI, as defined under Section 45-IA of the RBI Act, 1934.

3 For a detailed discussion on the impact of the first wave of the pandemic on NBFCs, please refer Chapter 6-Non-Banking Financial Institutions, *Report on Trend and Progress of India* (2019-20) and *Performance of NBFCs during the Pandemic: A Snapshot*, RBI Bulletin, May 2021.

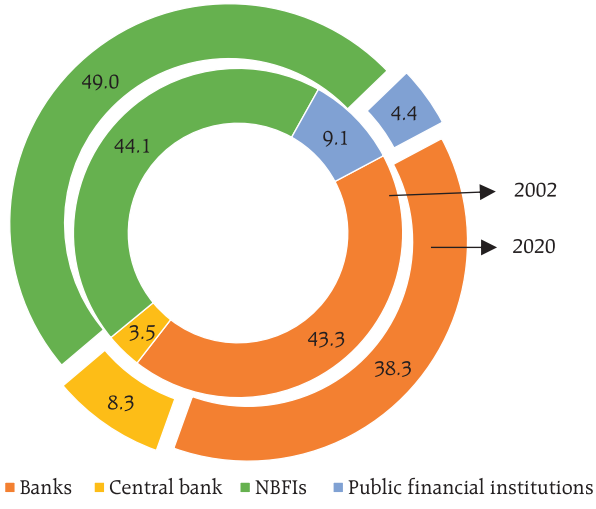
The rest of the article is divided into the following sections. Section II provides an international perspective on NBFIs and discusses India's place in the global NBFI space. Section III provides a detailed overview of the NBFC sector in India. Sections IV and V provide an assessment of the NBFC sector's balance sheet and off-balance sheet items, respectively. Section VI evaluates the financial performance, asset quality and capital adequacy of the sector. Section VII digs a little deeper to examine the sectoral deployment of credit and delinquencies therein. Section VIII concludes and highlights issues relating to future developments in the sector.

II. International Experience in Non-banking Financial Intermediation

The Great Financial Crisis (GFC) exposed the pitfalls in the international financial architecture, particularly in regulation and supervision of systemically important entities and in assessment of their risks and vulnerabilities (Claessens, Dell'Ariccia, Igan, & Laeven, 2010). Therefore, G-20 group mandated the Financial Stability Board (FSB) to develop a comprehensive framework for regulation and oversight of the global financial system. One of the priority reform areas is enhancing the resilience of NBFIs, under which the FSB conducts an annual monitoring exercise to identify the build-up of systemic risks in NBFIs and undertake corrective action when required.

In the aftermath of the GFC, as banks started deleveraging and cleaning up their balance sheets especially in the United States (US) and Europe, NBFIs took up the space vacated by banks (CGFS, 2018). As a result, globally, the sector witnessed an expansion, growing from USD 58 trillion in 2002 to 226 trillion in 2020[4], providing an alternative to bank financing. Their share in global financial assets increased from 44 per cent in 2002 to 49 per cent in 2020 (Chart 1).

Chart 1: Share in Global Financial Assets



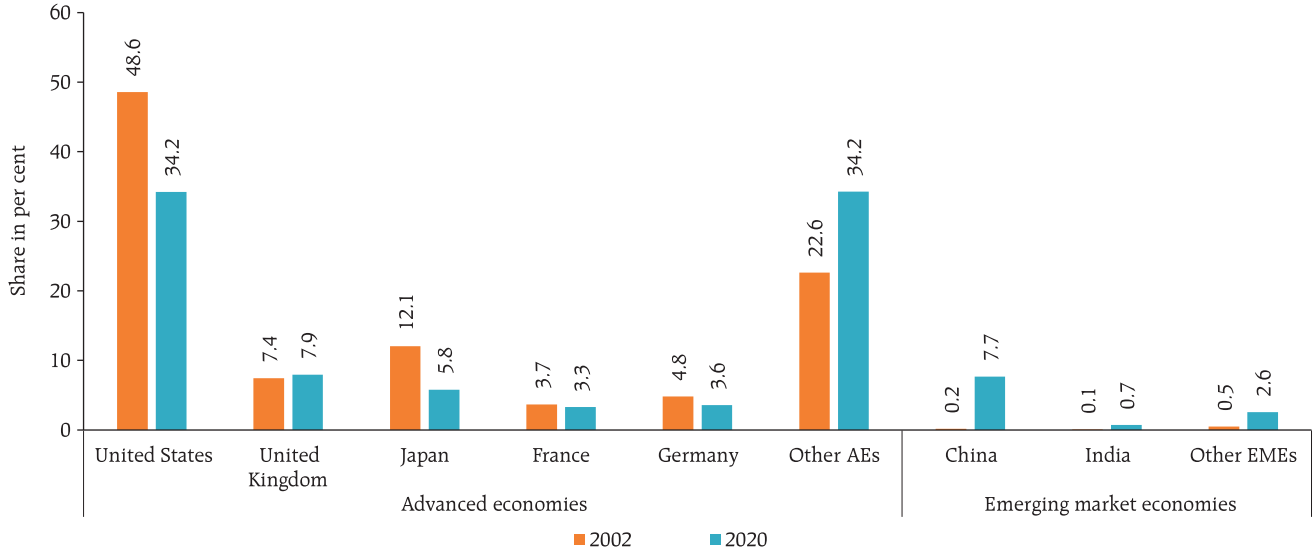
Source: Calculated from Global Monitoring Report on Non-Bank Financial Intermediation, FSB, 2021.

Advanced economies (AEs) account for the bulk of the global NBFI assets. The US had the largest NBFI sector in the run up to the GFC (Kodres, 2012), after which its share in global NBFIs moderated and that of other AEs increased. Nevertheless, it continues to account for over one-third of the total NBFI assets in 2020. On the other hand, the share of EMEs increased from 0.8 per cent to almost 11 per cent between 2002 and 2020. This was primarily driven by China, where shadow banking activities mushroomed after regulatory constraints were imposed on traditional banking as a response to the GFC (Bowman *et al.*, 2018).

India is a small player at the global level, accounting for 0.7 per cent of the global NBFI assets in 2020 (Chart 2). However, the size of the NBFI sector as a share of India's GDP has increased from 18 per cent in 2002 to over 60 per cent in 2020, which highlights

[4] Includes 29 individual jurisdictions, which account for around 80 per cent of global GDP.

Chart 2: Share in Global NBFI Assets



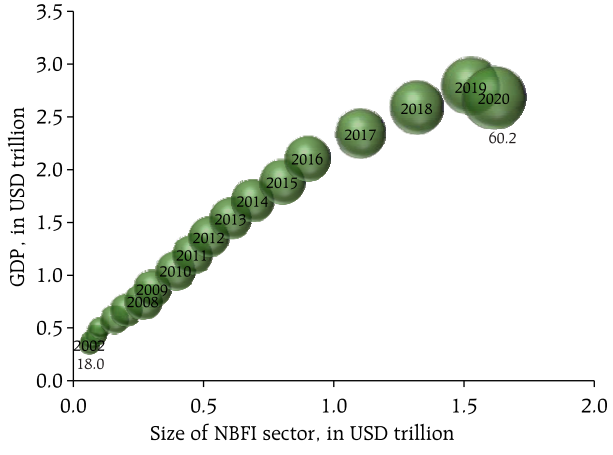
Source: Calculated from Global Monitoring Report on Non-Bank Financial Intermediation, FSB, 2021.

the increasing importance of the sector in India's financial landscape (Chart 3).

To capture the extent to which NBFIs pose bank-like financial stability risks, the FSB has developed a "narrow measure", which classifies NBFIs into five economic functions (EFs) or activities[5]. While globally, the narrow measure represents around 28 per cent of NBFI assets, in India it is around 45 per cent as per the data for 2020 (Table 1).

Globally, the share of EF1 in the narrow measure increased from 42 per cent in 2006 to over 75 per cent in 2020 and that of other activities except the unallocated category declined commensurately during the same period (Chart 4a). With an annualised growth of 10 per cent between 2006 and 2020, EF1 drove the growth of the narrow measure, particularly in the aftermath of the GFC. On the contrary, EF2 continued to be the largest entity type in India, followed by EF1, with the former growing at an annualised rate of 17.4 per cent during 2006-20. The shares of EF1 and EF2 in India's narrow measure have largely remained stable (Chart 4b). EF2 entities largely comprise finance companies, which perform the credit intermediation function and rely on short-term funding for loan

Chart 3: Size of India's NBFI Sector (As a Share of GDP), 2002-20



Note: The size of the bubble denotes the size of the NBFI sector as a share of India's GDP in per cent.
Source: Calculated from Global Monitoring Report on Non-Bank Financial Intermediation, FSB, 2021.

[5] These entities are involved in activities that involves maturity/liquidity transformation, leverage or imperfect credit risk transfer and/or regulatory arbitrage.

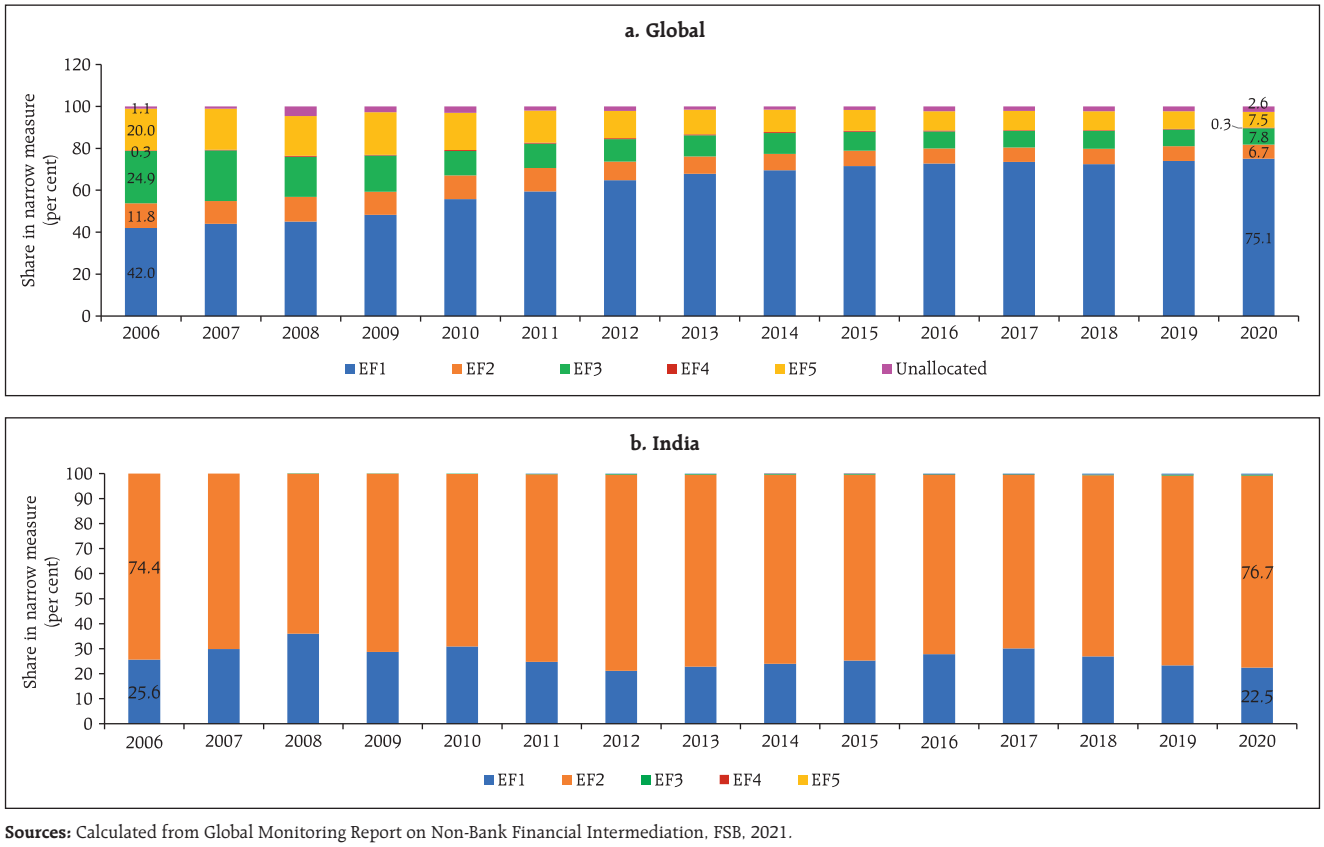
Table 1: Classification of Narrow Measure, Entity and Activity-wise, 2020

Economic function/ Activity	Entity type	Economic function wise share in Narrow Measure: Global	Economic function wise share in Narrow Measure: India
EF1	MMFs, fixed income funds, mixed funds, credit hedge funds, real estate funds	75.1	22.5
EF2	Finance companies, leasing/factoring companies, consumer credit companies	6.7	76.7
EF3	Broker-dealers, custodial accounts, securities finance companies	7.8	0.4
EF4	Credit insurance companies, financial guarantors, monoline insurers	0.3	0.0
EF5	Securitisation vehicles, structured finance vehicles, asset-backed securities	7.5	0.4
Unallocated	NBFIs that the relevant authorities assessed to be involved in bank-like financial stability risks but could not be assigned to a specific economic function.	2.6	0.0
Narrow Measure *i.e.*, EF1+EF2+EF3+EF4+EF5 +Unallocated, as a share of total NBFI sector		**27.9**	**44.5**

Source: Calculated from Global Monitoring Report on Non-Bank Financial Intermediation, FSB, 2021.

provision. They complement bank credit and provide financing to niche segments where banks are not active participants (FSB, 2021). NBFCs in India largely form a part of EF2 and are regulated under Section 45 IA of the RBI Act, 1934 and form the subject matter of this article.

Chart 4: Composition of Narrow Measure, 2006-20



Sources: Calculated from Global Monitoring Report on Non-Bank Financial Intermediation, FSB, 2021.

Table 2: Classification of NBFC Sector by Activity

Type of NBFC	Nature of activity / Principal business
Investment and Credit Company (ICC)	Lending and investments.
Infrastructure Finance Company (IFC)	Providing loans for infrastructure development.
Infrastructure Debt Fund (IDF)	Facilitate flow of long-term debt to infrastructure projects.
Core Investment Company (CIC)	Investment in equity shares, preference shares, debt, or loans of group companies.
NBFC- Micro Finance Institution (NBFC-MFI)	Collateral free loans and advances to small borrowers.
NBFC – Factor	Factoring business i.e., financing of receivables.
Non-Operative Financial Holding Company (NOFHC)	For setting up new banks in private sector through its promoter/promoter groups.
Mortgage Guarantee Company (MGC)	Providing mortgage guarantees for loans.
Asset Reconstruction Company (ARC)	Acquiring and dealing in financial assets sold by banks and financial institutions.
Peer-to-Peer Lending platform (P2P)	Providing an online platform to bring lenders and borrowers together to help mobilise funds.
Account Aggregator (AA)	Collecting and providing information about a customer's financial assets in a consolidated, organised and retrievable manner to the customer or others as specified by the customer.
Housing Finance Company (HFC)	Financing for housing.

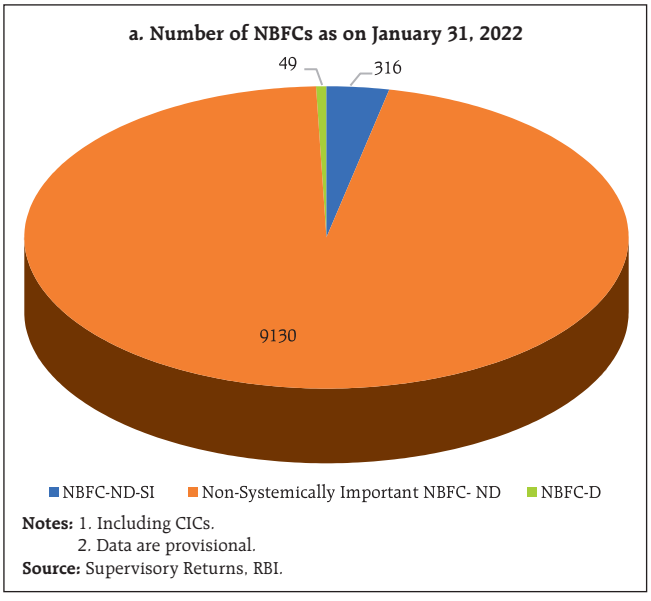
Source: RBI.

III. A General Overview of the NBFC sector

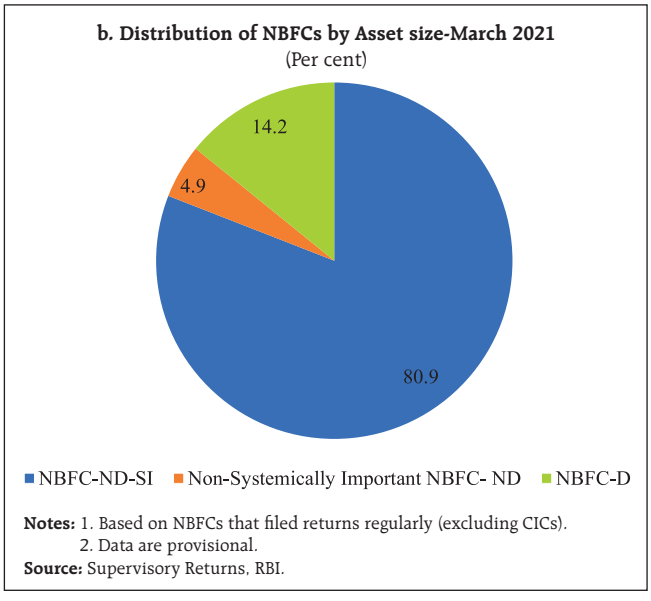
As on January 31, 2022, there were 9,495[6] NBFCs registered with the Reserve Bank. Based on liability structure, NBFCs are categorised into deposit-taking NBFCs (NBFCs-D), which are allowed to raise term deposits and non-deposit taking NBFCs (NBFCs-ND). NBFCs-ND are further categorised as systemically important NBFCs (NBFCs-ND-SI) if their asset size exceeds ₹500 crore. Based on the kind of activity they undertake, NBFCs are classified into 12 categories (Table 2).

In terms of number of companies, NBFCs-ND, with an asset size of less than ₹500 crore, have the largest share (Chart 5a). The number of NBFCs-D has

Chart 5: Distribution of NBFCs



Notes: 1. Including CICs.
2. Data are provisional.
Source: Supervisory Returns, RBI.



Notes: 1. Based on NBFCs that filed returns regularly (excluding CICs).
2. Data are provisional.
Source: Supervisory Returns, RBI.

6 Excluding HFCs and ARCs.

reduced from 64 in January 2021 to 49 in January 2022. NBFCs-ND-SI are second in terms of number of companies, but they have the largest share of around 81 per cent of the total assets of the sector (Chart 5b). As of March 2021, NBFCs-D accounted for nearly 14 per cent and non-systemically important NBFCs-ND, around 5 per cent of the total assets of the sector.

To maintain consistency, our sample consists of 278 NBFCs which have regularly filed returns in all quarters from December 2019 to December 2021. Our sample represents around 85 per cent of the assets of the NBFC universe in December 2021[7]. In this sample, NBFCs- ICC are the largest (52.8 per cent), followed by IFCs (43.7 per cent) which consists mainly of large government-owned NBFCs. NBFCs-MFI, NBFCs-IDF and NBFCs-Factors together constituted remaining 3.5 per cent of our sample.

Table 3: Consolidated Balance Sheet of NBFCs

(₹ crore)

	Amount outstanding at the end of			Y-o-Y growth (Per cent)	
	Dec-20	Mar-21	Dec-21	Dec 20 over Dec 19	Dec 21 over Dec 20
1. Share Capital	87,877	91,392	92,902	14.1	5.7
2. Reserves and Surplus	4,36,427	4,63,942	5,18,518	13.5	18.8
3. Public Deposits	52,524	56,426	63,510	27.4	20.9
4. Total Borrowings	19,63,017	21,01,027	22,08,431	10.9	12.5
5. Current Liabilities and Provisions	1,71,847	1,72,047	1,73,283	12.4	0.8
6. Other Liabilities	26,100	33,903	52,619	3.9	101.6
Total Liabilities / Assets	**27,37,792**	**29,18,738**	**31,09,263**	**11.7**	**13.6**
1. Loans and Advances	22,52,413	23,93,871	25,02,575	17.7	11.1
2. Investments	2,32,851	2,41,748	2,80,547	18.1	20.5
3. Cash and Bank Balances	1,16,197	1,31,857	1,40,814	47.7	21.2
4. Other Current Assets	78,129	74,707	80,916	2.5	3.6
5. Other Assets	58,203	76,555	1,04,411	-68.4	79.4

Notes: 1. Data are provisional.
2. Numbers may not add up as all components are not reported here.

Source: Supervisory Returns, RBI.

IV. A Balance Sheet-based Analysis of NBFCs

The consolidated balance sheet of NBFCs recorded a higher Y-o-Y growth in quarter-ending December 2021 as compared to December 2020 (Table 3). The growth was driven by an uptick in the economy after passing of the second wave of the pandemic, release of pent-up demand, availability of adequate provisions, and improved capital positions. An analysis of NBFCs-ND-SI and NBFCs-D during the corresponding period also shows an expansion in their balance sheets.

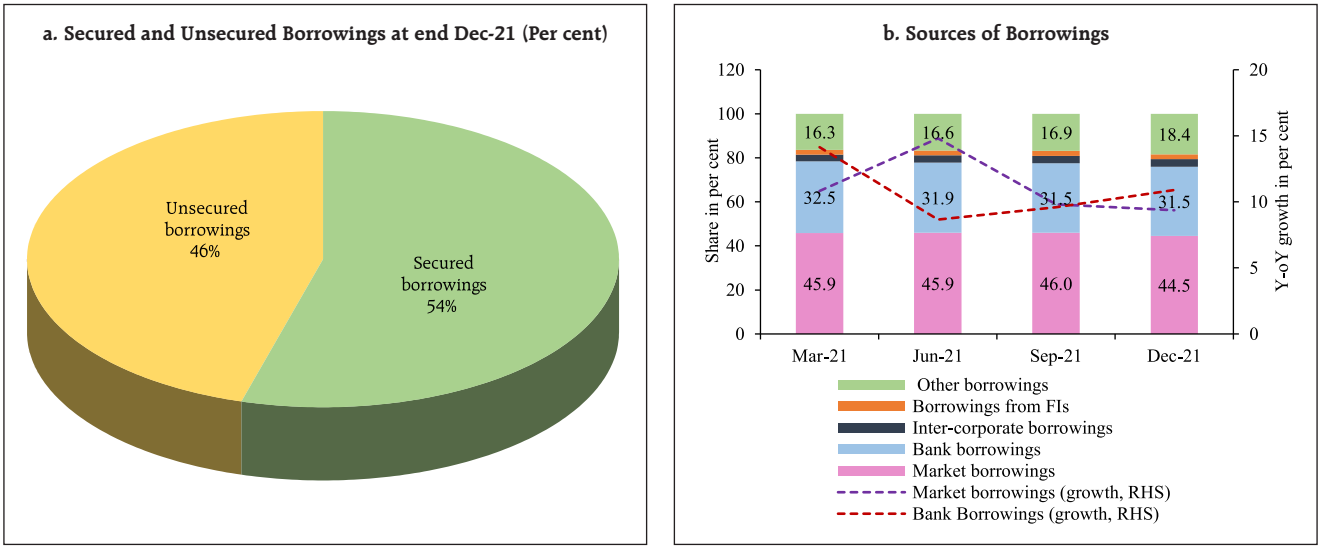
IV.1. Liabilities Structure of NBFCs

Borrowings and reserves and surplus together constitute almost 88 per cent of the liability side of balance sheet. At end-December 2021, the reserves and surplus grew at a robust pace owing to ploughing back of profits by NBFCs, which were aimed at bolstering their balance sheets. NBFCs rely heavily on bank and market borrowings to meet their funding requirements, except NBFCs-D, which have access to public deposits as well. NBFCs have both secured and unsecured borrowings. The share of secured borrowings constituted more than half of total borrowings at end-December 2021 (Chart 6a). Bank borrowings grew at a higher pace than market borrowings in quarter-ending December 2021 (Chart 6b).

Debentures and commercial paper (CP) together comprise market borrowings. Subscription of NBFCs' debentures by banks has shown an upward trend, increasing marginally between March 2021 and December 2021(Chart 7a). Subscription of NBFCs' CPs is dominated by mutual funds followed by banks, together accounting for 86.8 per cent of total CP subscriptions of NBFCs at end December 2021 (Chart 7b).

[7] NBFC universe includes NBFCs-D and NBFCs-ND-SI (without CICs and PDs).

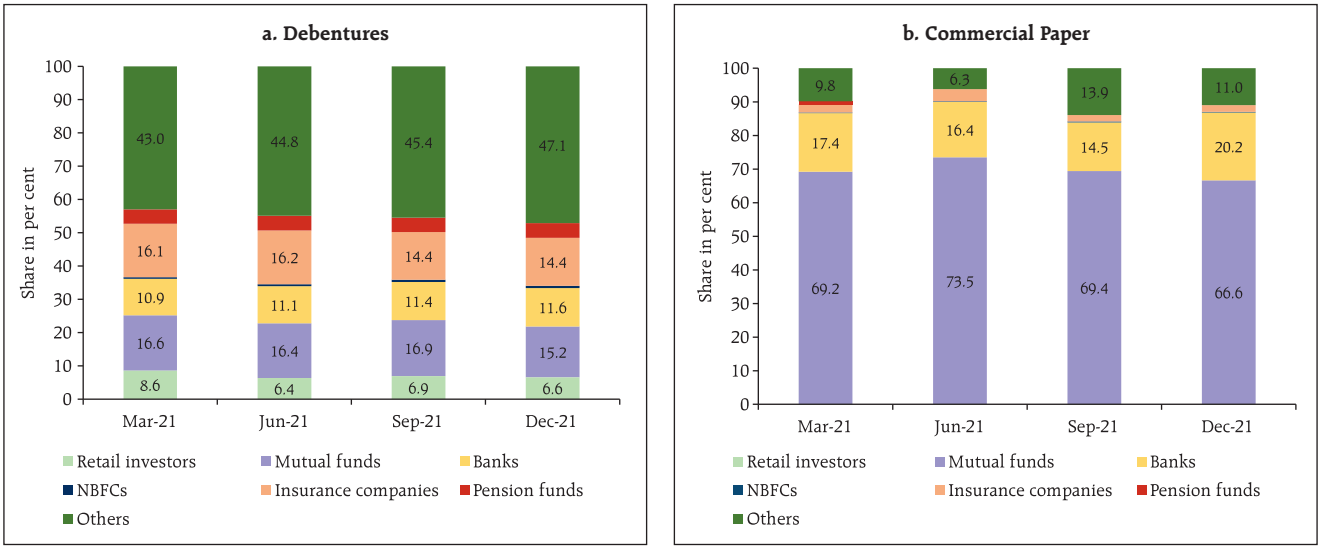
Chart 6: Borrowing Profile of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

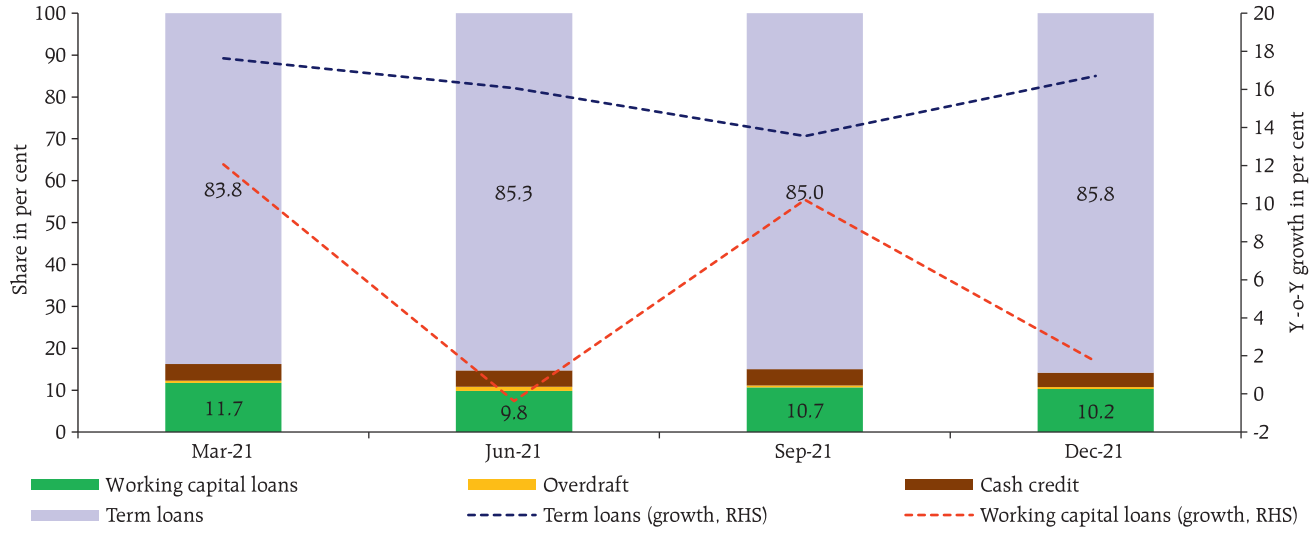
Bank borrowings consists of term loans, working capital loans, cash credit and overdraft. Post the IL&FS episode, there has been a gradual realignment of NBFCs' borrowings with increasing reliance on long-term borrowings. Hence, term loans form preponderant share in the borrowings from banks by NBFCs. Sustained growth in term loans is indicative of economic recovery gaining momentum. On the other hand, growth rate of working capital loans remained subdued (Chart 8).

Chart 7: Institutional Break-up of Subscribers of NBFCs' Debt Instruments



Note: Data are provisional.
Source: Supervisory Returns, RBI.

Chart 8: Composition of Bank Borrowings of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

In the quarter following the national lockdown in 2020 (Q1:2020-21), due to a combination of factors including risk aversion, sell-offs in financial markets and abrupt winding up of some schemes by mutual funds, yields on bonds of NBFCs spiked. The spreads narrowed in the following quarters, but the differentiation continued between AAA and AA-rated NBFCs. However, from January 2021 onwards, the gap started to decline. The gap between spread of three-year bonds of AA rated NBFCs and bonds of AAA rated NBFCs of the same maturity fell from a peak of 145 basis points (bps) in January 2021 to 74 bps in December 2021, thus, reaching pre-COVID-19 levels. This was reflective of a gradual reduction in the risk aversion in the market (Chart 9a). The spread of CPs over treasury bills peaked in the aftermath of the first wave of COVID-19 in April 2020 and spiked again March 2021 during the second wave. It gradually softened afterwards but inched up in December 2021 as compared to the preceding quarters on account of buoyant primary market activity (RBI, 2022) (Chart 9b).

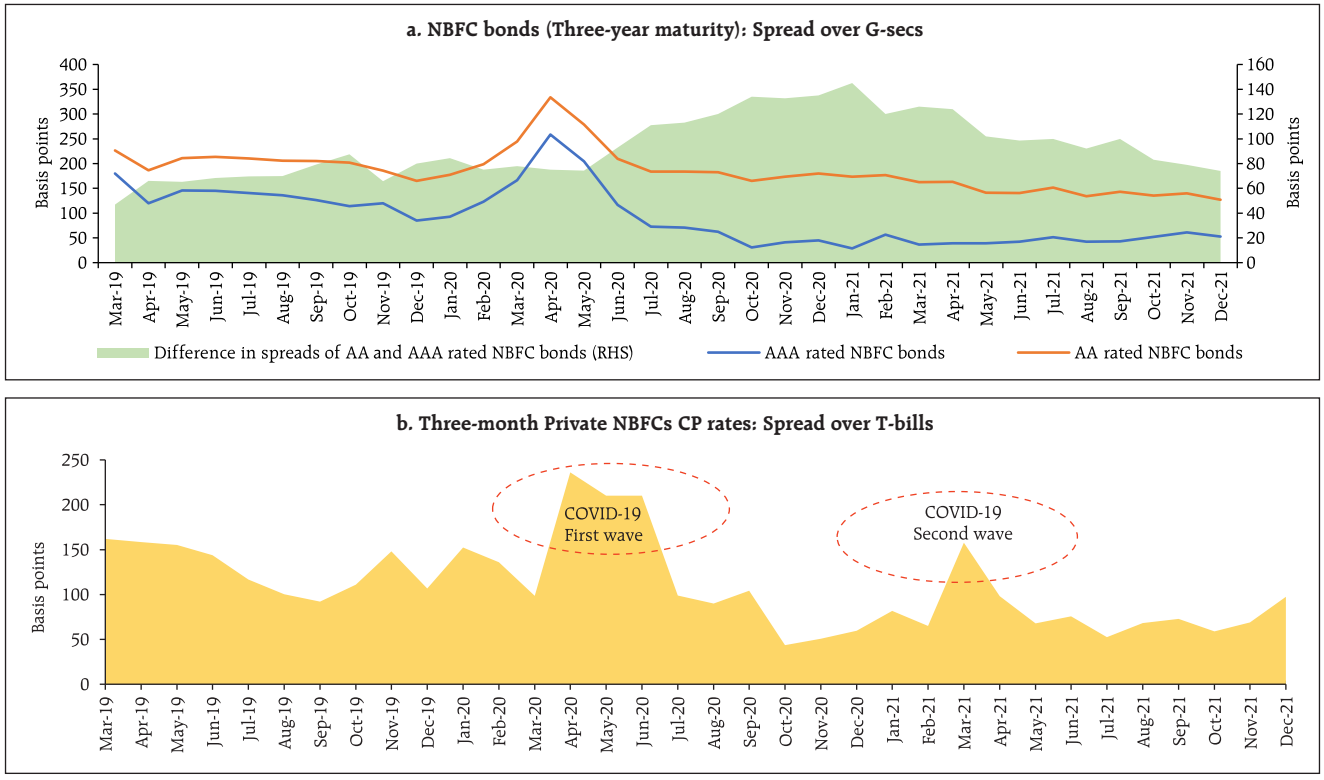
NBFCs and corporates are the largest participants in the CP market . Overall CP issuances grew by 41 per cent in Q3:2021-22 after declining in Q3:2020-21. This growth was propelled by NBFCs which raised ₹3,12,530 crore *via* CPs in Q3:2021-22, which was 48.2 per cent of the overall issuances. The low interest rate environment might have driven NBFCs to raise short-term resources through this channel (Chart 10).

IV.2 Asset Structure of NBFCs

Loans and advances followed by investments form the largest components on the assets side of the balance sheet of NBFCs. NBFCs extend more of secured loans than unsecured loans. NBFCs invest in, *inter alia*, government securities, equities, debentures, bonds, and mutual funds.

NBFC credit showed an incremental growth of 11.1 per cent at the end of December 2021 as compared to 17.7 per cent in December 2020, which was on account of a favourable base effect. NBFCs continued to focus more on investments as indicated by their growth rates exceeding growth in credit in all quarters

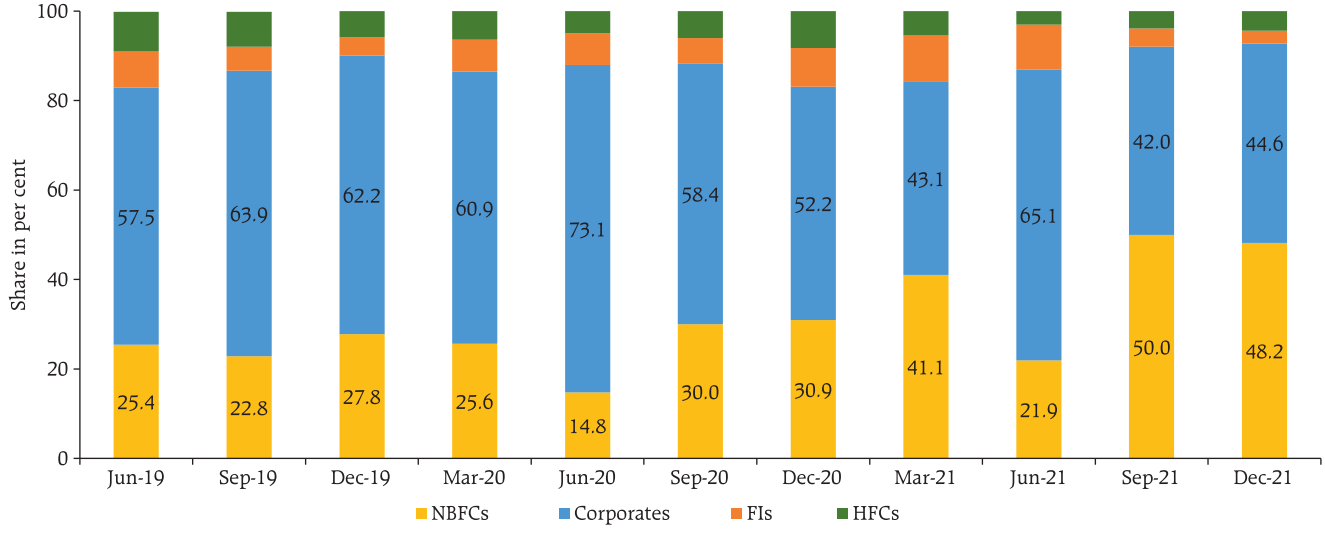
Chart 9: Spread of Market Instruments of NBFCs



Sources: 1. Bloomberg.
2. RBI

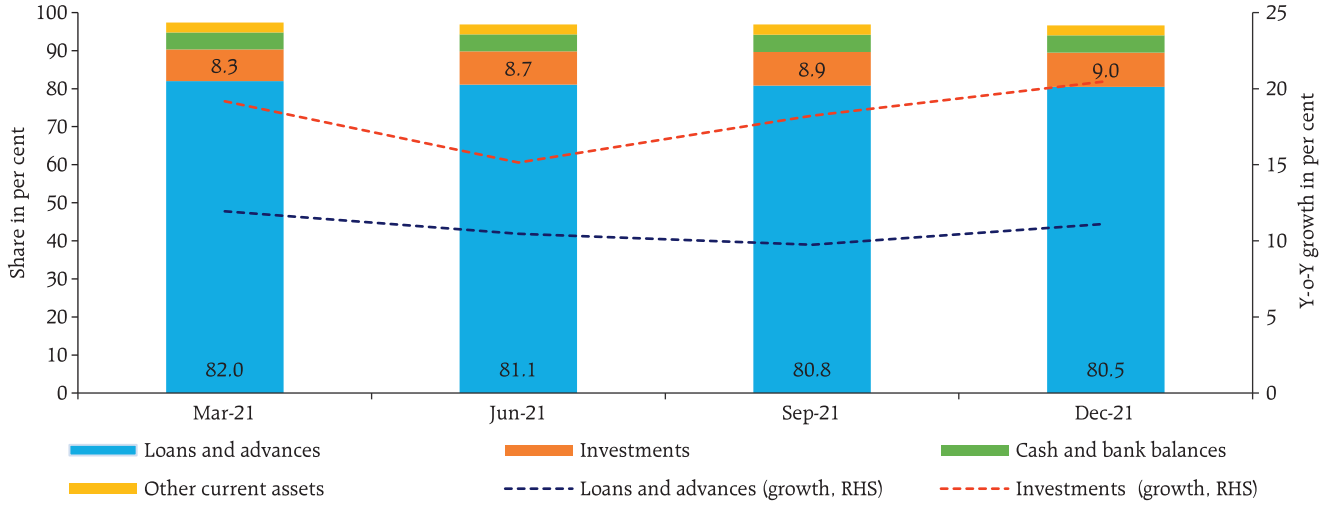
during 2021-22, so far. As NBFCs preserved cash in the preceding periods, incremental growth of cash and bank balances fell in quarter ending December 2021. This is indicative of comfortable liquidity position of

Chart 10: Composition of CP Issuances



Note: Data are provisional.
Source: RBI.

Chart 11: Components of NBFC Assets

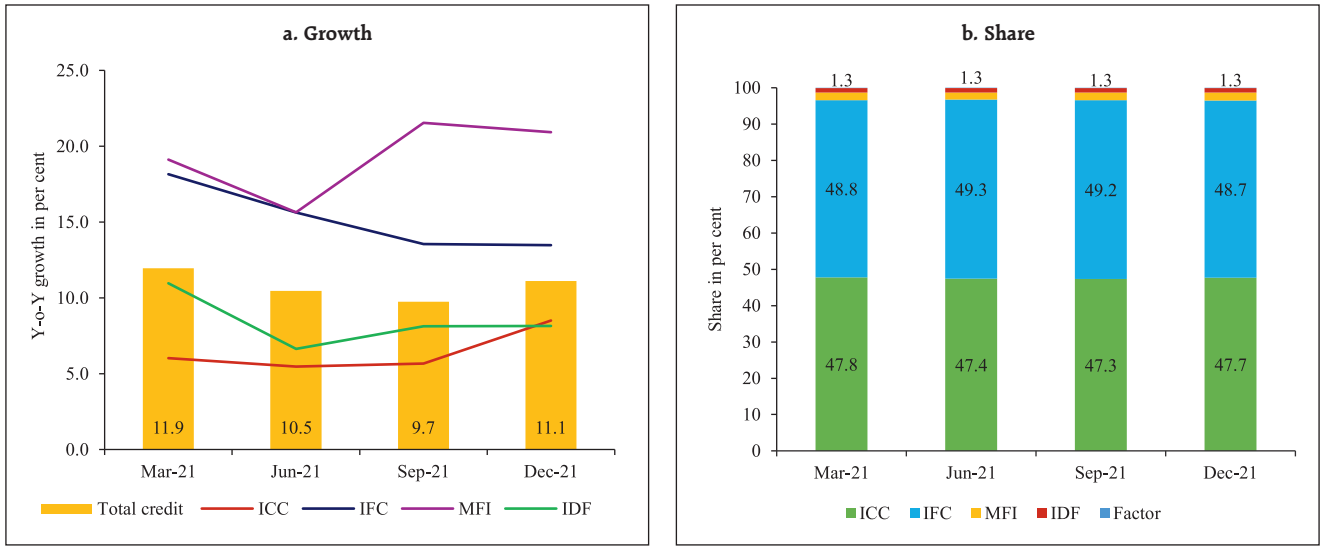


Note: Data are provisional.
Source: Supervisory Returns, RBI.

NBFCs on their balance sheets aided further by the systemic surplus liquidity (Chart 11).

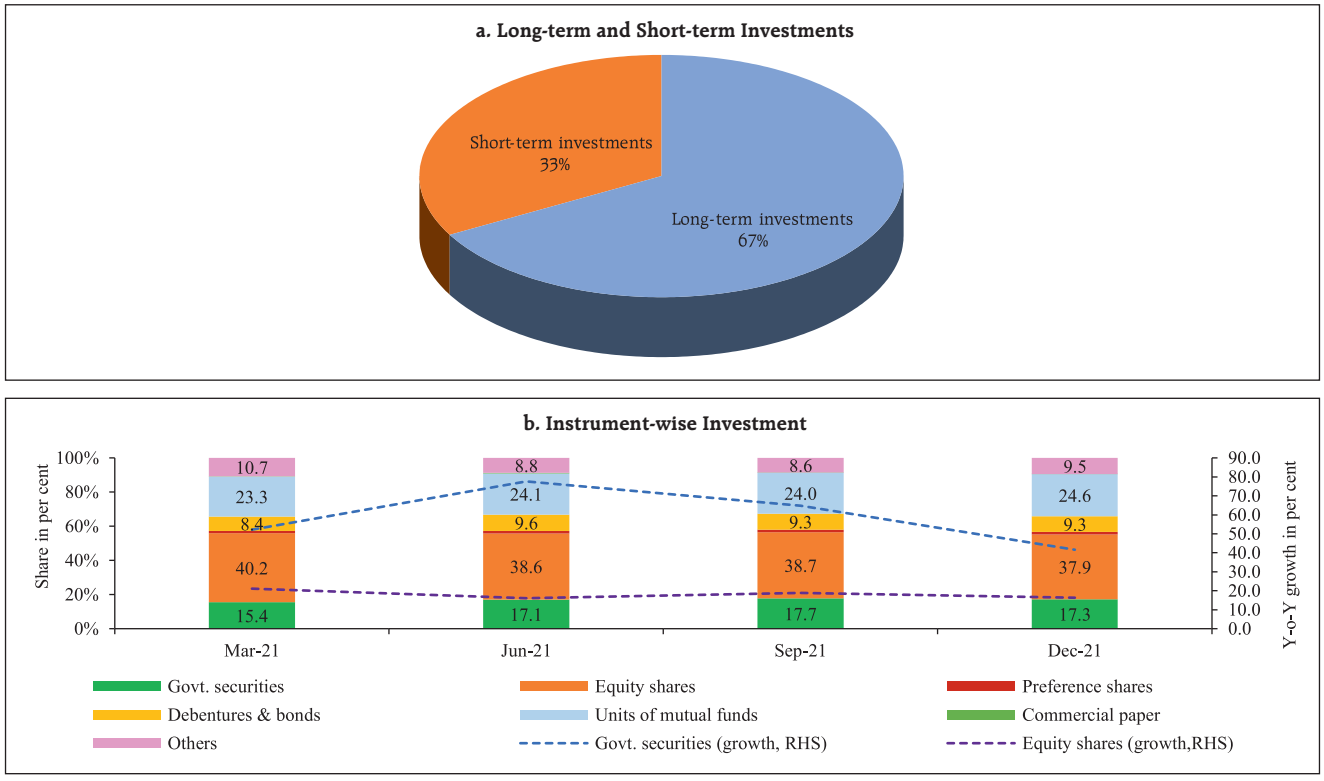
A modest increase in credit growth of NBFCs was witnessed as of end-December 2021 on account of reduced threat of COVID-19 along with progress in vaccinations which led to higher mobility. The advent of the festive season also helped in this regard. ICCs, which provide bulk of consumer loans, showed an increase in credit growth in quarter ending-December 2021. IFCs' credit growth decelerated slightly due to disruptions caused by second wave of the pandemic but following the government's focus on the infrastructure sector, the demand for infrastructure credit is likely to improve in the near future. NBFCs-MFI grew at a healthy pace shaking off the blow inflicted by the pandemic (Chart 12a). ICCs and IFCs

Chart 12: Classification-wise Credit of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

Chart 13: Investment Profile of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

together made up nearly 96 per cent of total credit extended by NBFCs during this period (Chart 12b).

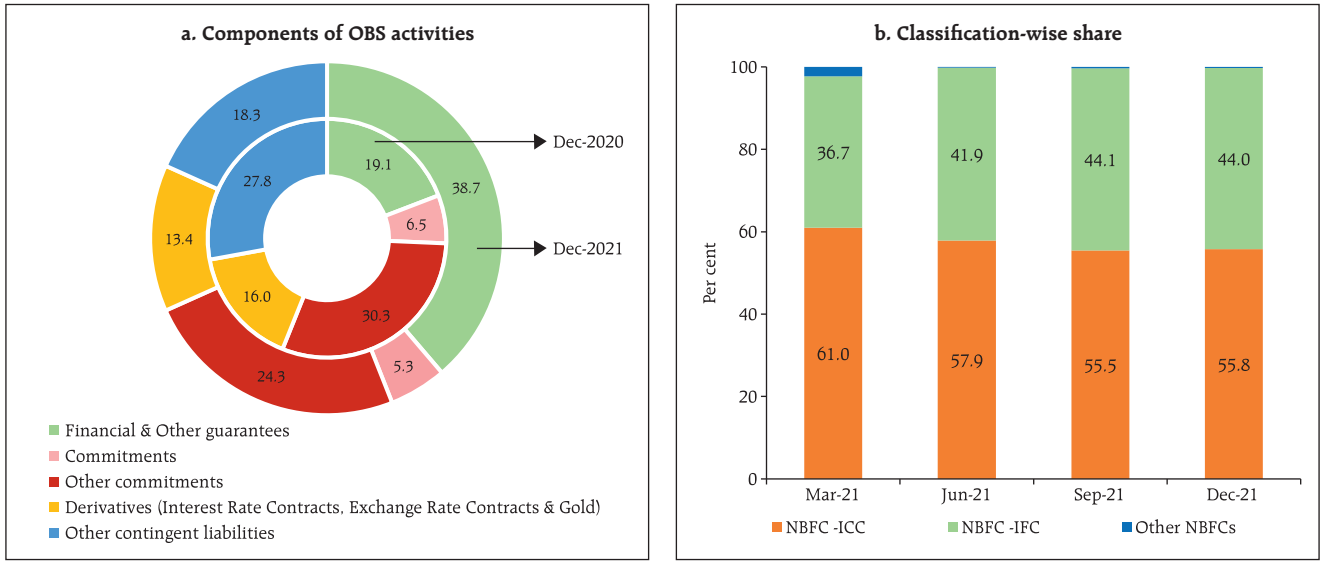
Long-term investments continued to dominate total investments in quarter ending December 2021 (Chart 13a). In this period, NBFCs continued their investment in equity shares and government securities, driven by a bullish stock market and given the lower interest income from their lending business. Investment in government securities grew by 41.6 per cent in quarter-ending December 2021. Government securities along with equity shares comprise more than half of NBFC investments (Chart 13b).

V. Off- Balance Sheet exposure of NBFCs

Off-balance sheet (OBS) exposures refer to activities that involve contingent commitments or contracts, which generate fee-based income for the company, but do not appear in the company's balance sheet as assets or liabilities under conventional accounting procedure (Ghosh & Nachane, 2002). These include, *inter alia*, guarantees, commitments, interest rate and exchange rate contracts, standby facilities, and credit lines. OBS activities offer an attractive source to NBFCs to boost their non-interest incomes. However, they also pose liquidity risk, credit risk and market risk, akin to on-balance sheet activities (BCBS, 1986). The Ind-AS framework, which has been made applicable to NBFCs since 2018 in a phased manner, considers these risks and requires NBFCs to make appropriate provisions.

In the NBFC sector, the share of financial and other guarantees in the total risk-adjusted non-funded exposure increased from 19.1 per cent in December 2020 to 38.7 per cent in December 2021 on account of

Chart 14: Non-Funded Exposures/Off-Balance Sheet Items of the NBFC Sector



Source: Supervisory Returns, RBI.

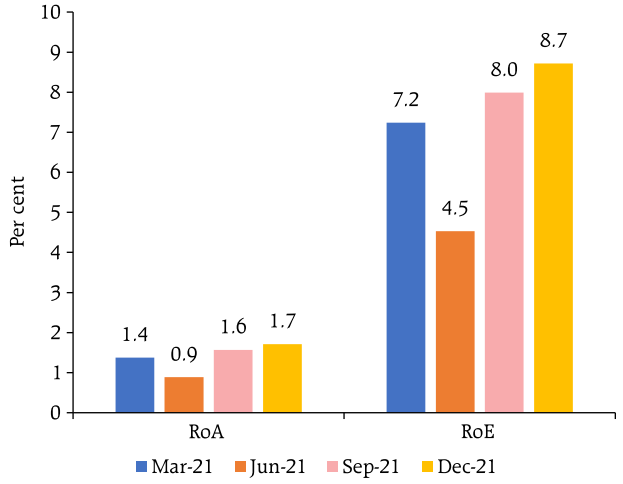
the financial uncertainties relating to the pandemic. The ICCs and IFCs together formed about 99 per cent of the total risk-adjusted non-funded exposure of all NBFCs as of end-December 2021 (Chart 14).

VI. Financial Performance, Asset Quality and Capital Adequacy

The profitability of the NBFC sector improved in Q3:2021-22 compared to the corresponding quarter in 2020-21 as economy shook off the impact of the second wave with relatively fewer operational disruptions (Chart 15). NBFCs-ND-SI, the largest segment in NBFCs, experienced robust growth in fund and fee-based income, which gave fillip to their profitability. On the other hand, while the income of NBFCs-D grew only marginally, profits grew on the back of declining interest expenses.

The asset quality of NBFCs, which had worsened due to the second wave of the pandemic, stabilised during Q2:2021-22. However, an uptick in GNPA and NNPA ratios was witnessed in Q3:2021-22 as NBFCs absorbed the impact of revised income recognition, asset classification and provisioning (IRACP) norms[8]. The deterioration in asset quality was possibly also attributable to rolling back of regulatory forbearance

Chart 15: Profitability Indicators of NBFCs



Notes: 1. Data are provisional.
2. RoA: Return on Assets.
3. RoE: Return on Equity.

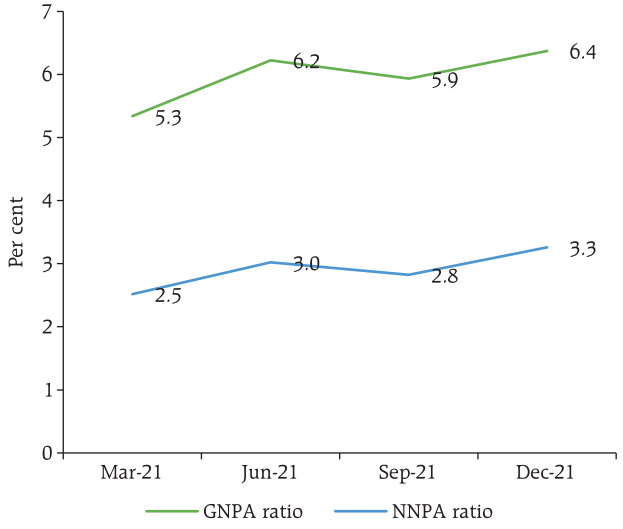
Source: Supervisory Returns, RBI.

[8] https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12194&Mode=0
https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=12230&Mode=0

provided to individuals and small businesses under the Resolution Framework 2.0 by directing NBFCs to invoke it only for borrowers having stress on account of COVID-19 (effective September 2021)[9] (Chart 16). It is expected that these measures will be beneficial in the long run as NBFCs will focus on developing better collection processes and encourage credit discipline among their borrowers while bridging the regulatory gap between banks and NBFCs.

As per the extant regulations, every NBFC is required to maintain a minimum capital ratio of 15 per cent of its aggregate risk-weighted assets (including both on and off- balance sheet items). To further strengthen their capital position, the PCA framework for NBFCs will be made effective from October 1, 2022. Any NBFC breaching the risk threshold, (defined by three parameters, namely CRAR, Tier-1 ratio and NNPAs) will be placed under PCA. At present, the NBFC sector looks comfortably poised to comply with these new regulations with an overall CRAR of 27.5 per cent at end-December 2021 (Chart 17).

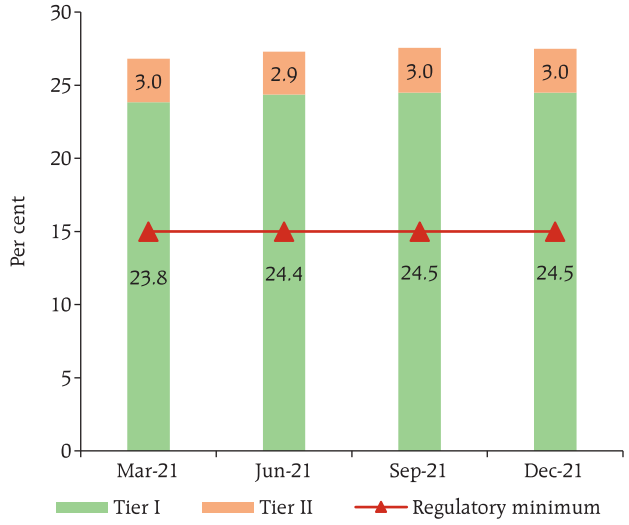
Chart 16: Asset Quality of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

[9] On May 5, 2021, the Reserve Bank issued guidelines which directed NBFCs to form board-approved policies to finalise the resolution process for borrowers under the Resolution Framework 2.0.

Chart 17: Capital position of NBFCs

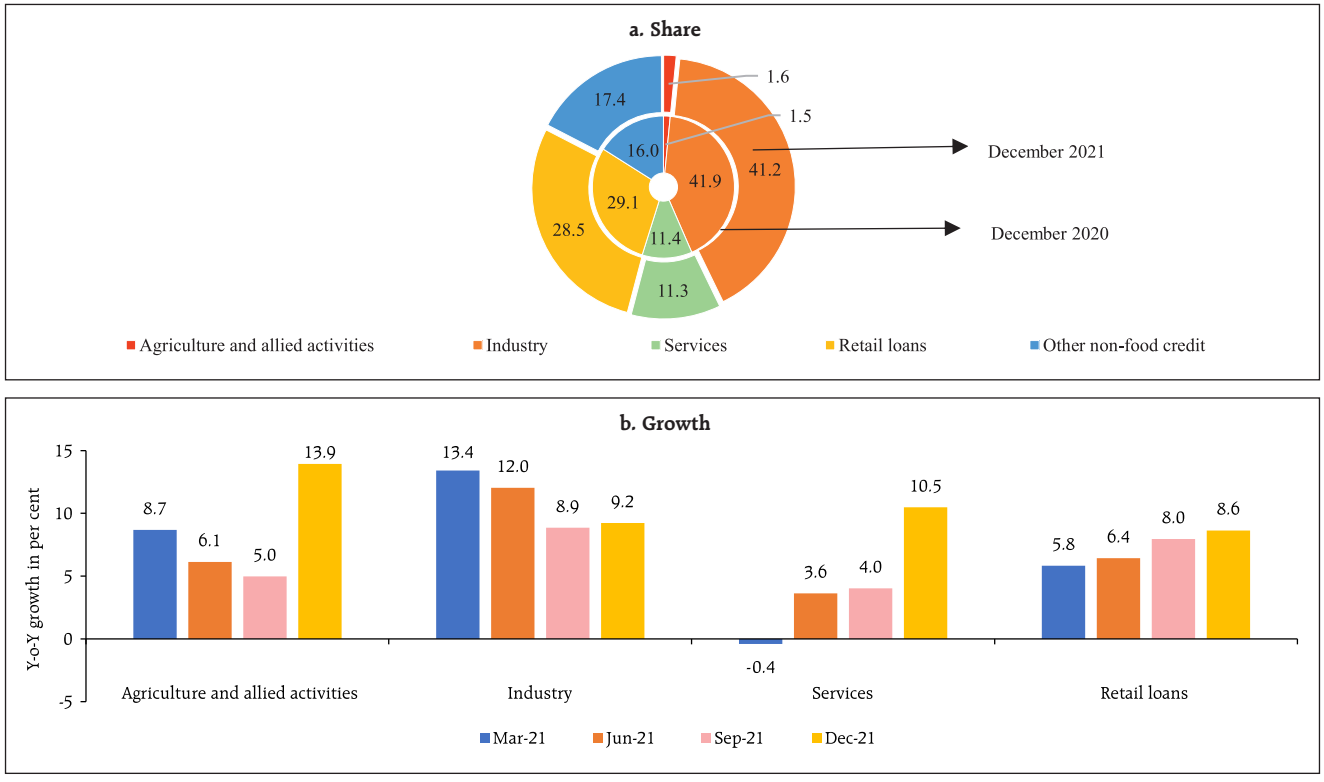


Note: Data are provisional.
Source: Supervisory Returns, RBI.

VII. Sectoral Distribution of Credit and NPAs of NBFCs

NBFCs continued to deploy the largest quantum of credit from their balance sheets to industrial sector followed by retail, services, and agriculture. The sectoral credit distribution remained largely unchanged in 2021-22 (up to end-December 2021) as compared to end-December 2020 (Chart 18a). All sectors witnessed high growth rates on account of base effect and resumption of economic activities after the ebbing of the second wave of the pandemic. Industrial sector, particularly the micro and small and large industries, which were among the worst hit by the pandemic, showed signs of revival. Services sector showed consistent improvement in credit growth for last three quarters. Within services sector, transport operators, trade and commercial real estate (CRE) grew at a robust pace. Credit to agriculture and allied activities continued to perform well, registering a robust growth of 13.9 per cent in December 2021 over December 2020 (Chart 18b).

Chart 18: Sectoral Credit of NBFCs



Note: Data are provisional.
Source: Supervisory Returns, RBI.

VII.1 Sub-sectoral Credit and Asset Quality

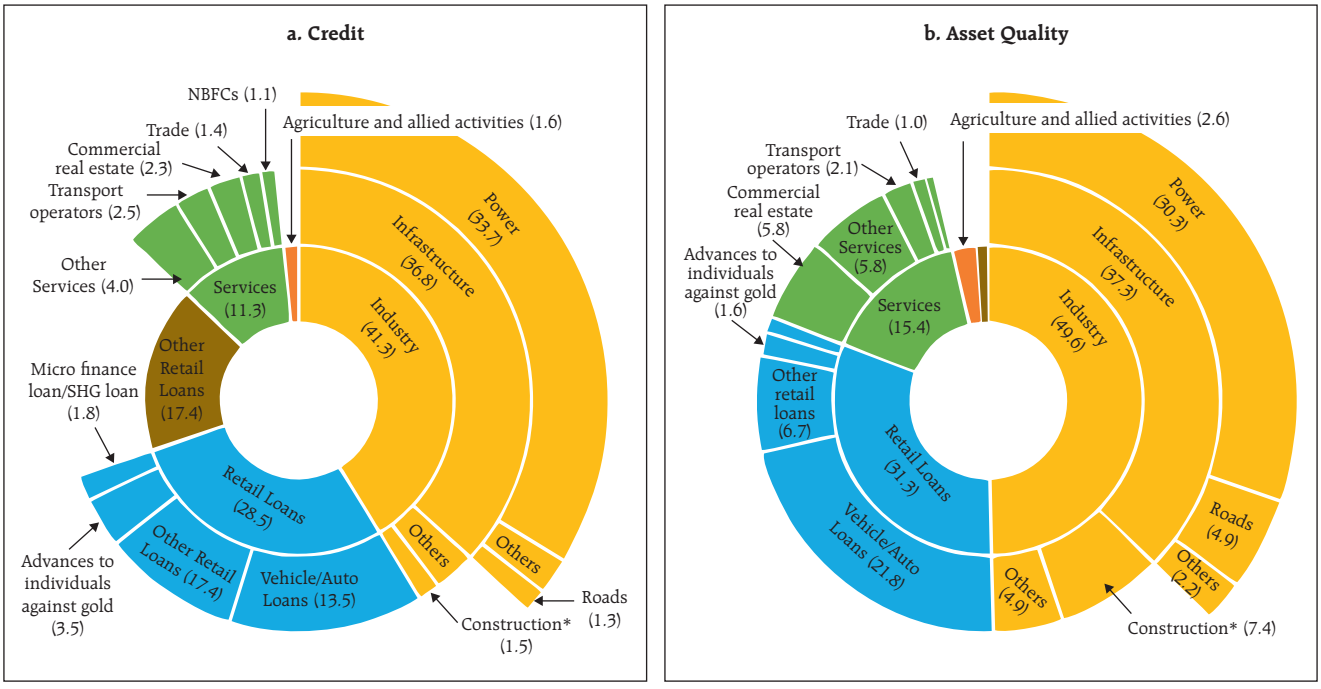
Within industry, power[10] was the largest recipient of credit from NBFCs on account of the presence of many large government-owned NBFCs which operate in this segment. Its share was 33.7 per cent in overall credit extended by NBFCs as on end-December 2021. In retail sector, NBFCs largely operate in vehicle loans segment, followed by the gold loans segment. Transport operators and CRE are dominant segments under services sector. Economic downturn during the pandemic severely impacted CRE business. The continued reliance on the work-from-home policy by corporates also dampened the prospects of the CRE segment (Chart 19a).

Industrial sector accounted for the largest share in NPAs followed by retail loans, services, and agriculture respectively, at quarter ending December 2021. Within industry, power sector contributed significantly to the total impaired assets of NBFCs accounting for 30 per cent of overall NBFC NPAs at end-December 2021. As per the report of the Standing Committee on Energy[11], NPAs in the power sector are attributable to, *inter alia*, high interest cost, cost escalation due to extraneous reasons like court cases, delayed decision by lending consortium and lack of working capital. Retail sector accounted for 31.3 per cent of NPAs of NBFC sector at the end of Q3:2021-22. In the retail sector, vehicle loans added more impaired assets to the sector relative

[10] Power includes electricity generation, transmission, distribution, and solar renewable energy, as per the supervisory returns for NBFCs.

[11] Standing Committee on Energy (2020-2021).

Chart 19: Distribution of Sectoral Credit and NPAs of NBFCs (At end-December 2021)



Notes: 1. The sunburst chart represents sectors and sub-sectors to which NBFCs lend. Size of each chart segment is proportional to its share (mentioned in parentheses) in total credit/NPA of the sector.
*Construction includes mining & quarrying, basic metal & metal products, all engineering, vehicles and vehicle parts & transport equipment.
2. Data are provisional.
Source: Supervisory Returns, RBI.

to their share in credit, as the ability to service vehicle loans was adversely affected by low freight rates and rising fuel costs (Moody's, 2021).

In the services sector, CRE accounted for the largest share in NPAs. In April 2020, the Reserve Bank issued guidelines which allowed NBFCs to restructure CRE projects which faced delays due to reasons beyond the control of promoters for one year. Subsequently, NPAs of CRE segment increased significantly in Q1:2021-22 after the regulatory forbearance ended and have continued to remain elevated till Q3:2021-22 (Chart 19b). Unwinding of policy measures to mitigate the effects of COVID-19, along with the new asset classification norms for NBFCs issued by the Reserve Bank in November 2021 led to better recognition of NPAs across sectors in December 2021.

VIII. Conclusion

Though India accounts for less than 1 per cent of the global NBFI assets, the share of NBFI sector in India's GDP has steadily increased over time. Around 45 per cent of the NBFI sector (in terms of asset size) in India comprise entities which engage in credit intermediation involving maturity and liquidity transformation and are, therefore, important from a financial stability standpoint. Based on supervisory data, in quarter-ending December 2021, the consolidated balance sheet of NBFCs grew at a faster pace than the corresponding period in the previous year. The bottom lines of the NBFC sector also improved in Q2 and Q3: 2021-22 with the waning of the second wave of COVID-19. On the other hand, asset quality of the sector deteriorated in Q3:2021-22,

which could be partly attributed to NBFCs adapting to the changes in IRACP norms as well as rolling back of regulatory dispensation under Resolution Framework – 2.0 for individuals and small businesses.

With strong capital buffers, adequate provisions, and sufficient liquidity on their books, NBFCs are poised for expansion. Nevertheless, going forward, as the economy recovers, NBFCs need to be wary of rising borrowing costs on account of normalisation of monetary policy. Further, while NBFCs have largely realigned their business models by leveraging digital channels to improve their accessibility and acquisition of new customers, this might prove to be a challenge for smaller NBFCs which may have to ramp up their technological capabilities. NBFCs also need to remain more vigilant about cybercrimes. Another challenge is to build upon strong governance and risk management standards to gain stakeholder confidence.

On the regulatory front, recognising the increasing scale and complexity of NBFCs' operations along with their rising interconnectedness with other entities in the financial system, the Reserve Bank has envisioned SBR. Under these regulations, the focus has been shifted from an activity-based regulation to one based on riskiness and scale of operations, following the principle of proportionality. Bank-like regulatory initiatives such as PCA and IRACP norms would further bridge the gap in regulation of NBFCs *vis-à-vis* banks. These regulations are expected to strengthen the NBFC sector in the times to come.

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*Real-Time Monitoring of the Indian Economy**

The article presents weekly activity indices to track the latest developments in the Indian economy with the least possible lag. Two different weekly indices have been developed using daily/weekly indicators – (i) a 7-indicator weekly activity index (WAI) using the dynamic factor model reflecting changes in economic activity on a year-on-year basis; (ii) a 15-indicator weekly diffusion index (WDI) reflecting directional movement on a sequential basis which compliments the model-based WAI. The WAI tracked the ebbs and flows in economic activity during the pandemic years followed by the more recent disruptions caused by the Russia-Ukraine war since February 2022.

I. Introduction

Outbreak of the COVID-19 pandemic called for prompt policy actions to safeguard livelihoods and make timely assessment of the economy to help in speedy recovery. With faster innovation and realignment of production processes due to the pandemic, the extant economic indicators fell short of keeping pace with rapid changes in the economy. This called for supplementing them with additional data, preferably with lower time lag.

For the central banks, timely information on economic activity is crucial, particularly for exercising precise judgement in the monetary policy decisions. During each round of the monetary policy of the Reserve Bank of India (RBI), available information set for decision-making is found to be highly asynchronous. In terms of the data for the bimonthly policy, gross domestic product (GDP) is available quarterly and the conventional high frequency indicators (HFIs) at best on monthly basis with a lag of one or two-months (Table 1). During the August and February rounds of the policy, the information gap is especially large as the latest available official GDP data would lag by two quarters[1]. Moreover, the HFI set for the preceding quarter is not fully complete with no information available for the reference quarter.

Leveraging the advancements in digitisation and automation, ministries, regulatory bodies and other private agencies are publishing additional economic data at a higher frequency. Such daily/weekly indicators available almost near real time, have the potential to bridge the information gap during the

Table 1: Information Availability for Monetary Policy

Round	Reference Quarter	Indicators Availability				Weekly Index (complete up to)
		GDP	Monthly HFIs			
			Complete	Partial	Scant	
April (t)	Q1 (t)	Q3 (t-1)	January	February	March	March
June (t)	Q1 (t)	Q4 (t-1)	-	April	May	May
August (t)	Q2 (t)	Q4 (t-1)	April, May	June	July	July
October (t)	Q3 (t)	Q1 (t)	July	August	September	September
December (t)	Q3 (t)	Q2 (t)	-	October	November	November
February (t)	Q4 (t)	Q2 (t)	October, November	December	January	January

Note: 1. t indicates the current fiscal year.
2. Authors' compilation.

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[1] During the April MPC round, the latest GDP estimates are available with a lag of two quarters *i.e.* till Q3 (t-1). However, the availability of the implicit data for Q4 (t-1) estimated using the second advance estimates of national income for the preceding full year reduces the lag to one quarter.

monetary policy rounds by supplying information till the week preceding the policy.

In view of the above, this article presents weekly activity indices to track the latest developments in the Indian economy with least possible lag. Two different weekly indices have been developed using daily/weekly indicators – (i) a 7-indicator weekly activity index (WAI) using the dynamic factor model reflecting changes in economic activity on a year-on-year basis; (ii) a 15-indicator weekly diffusion index (WDI) reflecting directional movement on a sequential basis which compliments the model-based WAI. WDI presents sequential movement in activity to present an aggregate picture on the direction of trend movement. These indices apart from providing the weekly trajectory for the selected set of economic variables, also act as a robust indicator of the quarterly GDP.

The rest of the article is structured as follows – section II provides an overview of the existing weekly indices developed by other central banks and private organisations, followed by a description of the constituent indicators in section III. Section IV discusses the methodology used in the construction of weekly indices. Section V presents the trajectory of the indices and their relationship with crucial macroeconomic indicators, *viz.*, GDP and the index of industrial production (IIP). Section VI concludes highlighting the utility, existing limitations and future scope.

II. Weekly Tracking in Central Banks

Central banks, think tanks and other independent researchers engaged themselves in the practice of creating indices to nowcast/forecast economic activity with the available HFIs even before the pandemic. However, the search for an appropriate index intensified in the wake of abrupt economic developments during the outbreak of the pandemic. In the US, the Federal Reserve Bank of New York developed a weekly economic index (WEI) comprising a set of 10 HFIs (Lewis *et al.*, 2020). The WEI is updated every Thursday with data till the preceding week, while also incorporating revisions, if any, for the earlier weeks. NY Fed's WEI primarily gives a weekly picture of the real economic activity based on the latest available dataset at a fixed vintage, which is also tested to nowcast quarterly GDP growth.

An unconventional weekly economic activity index for Germany created by the Deutsche Bundesbank used high frequency variables to track the quarterly GDP (Eraslan and Gotz, 2020). It used mixed frequency dataset comprising of the readily available high frequency variables along with the monthly industrial output and latest GDP estimate. The 13-week growth rates of the high frequency indicators are computed and a common factor within the mixed-frequency dataset is calculated by using principal component analysis (PCA). The index is viewed as rolling 13-week growth rate and at the end of a given quarter, the values of the index can be interpreted (in approximate terms) as quarter-on-quarter rate of change.

Based on the data from five largest economies of the eurozone *viz.* France, Germany, Italy, the Netherlands, and Spain (comprising of 83 per cent of the eurozone output), the ING weekly economic activity index (ING-WAI) has been constructed by the ING to track the economic activity of the eurozone. Using the open access data on google search, google mobility, emission, energy consumption and trucking mileage, and a methodology similar to that of NY Fed and Bundesbank, the index shows the economic activity in the past week in comparison to the average over the entire data series.

OECD also engages in real time tracking of economic activity of 46 countries (including India) through a series of three weekly trackers, one of which

was discontinued at the end of 2021[2] while the other two continue to be updated. One of the two active trackers, provides estimates of weekly GDP relative to the same week in the previous year. The second one provides an estimate of weekly GDP relative to the same week two years before *i.e.*, a 104-week difference. The trackers are computed by applying machine learning technique to a panel of google trends data and by aggregating together the information on search behaviour. The algorithm extracts and compiles information for various variables based on google search categories and collection of related keywords and groups them under separate heads such as consumption (*e.g.*, "food and drink", "autos & vehicles", "households appliances"), labour markets (*e.g.* "unemployment", "unemployment benefits", "jobs"), housing ("real estate agency", "mortgage"), business services (*e.g.*, "venture capital"), bankruptcy (*e.g.*, "bankruptcy"), industrial activity (*e.g.*, "maritime transport", "agricultural equipment"), trade (*e.g.*, "exports", "freight") as well as economic sentiment (*e.g.*, "recession") and poverty (*e.g.*, "food bank").

In India, both public and private stakeholders monitored the HFIs during the pandemic to track the course of economic activity under the emergency policy actions to contain the spread of infections. To name a few, the *Narrow Recovery Index* by Citi Bank, *Business Activity Index* by State Bank of India and *Nomura India Business Redemption Index (NIBRI)*, became popularly discussed during the pandemic. As compared to February 2020 level (considered as 100), the NIBRI showed the activity status using Google's daily community data on mobility around the workplace and retail and recreation spots, Apple Map's index for driving mobility, weekly surveys on labour participation rate, and seasonally adjusted trends in weekly electricity demand. Owing to the country-wide lockdown induced restrictions, it was found that the activity dropped around 56 percentage points to a low of 44.4 by the end-April 2020.

III. Data Description

A total of 17 indicators dealing with different segments of the economy, have been considered which are broadly categorised into five buckets *viz.*, soft, labour market, demand/sales, mobility, and payments (Table 2).

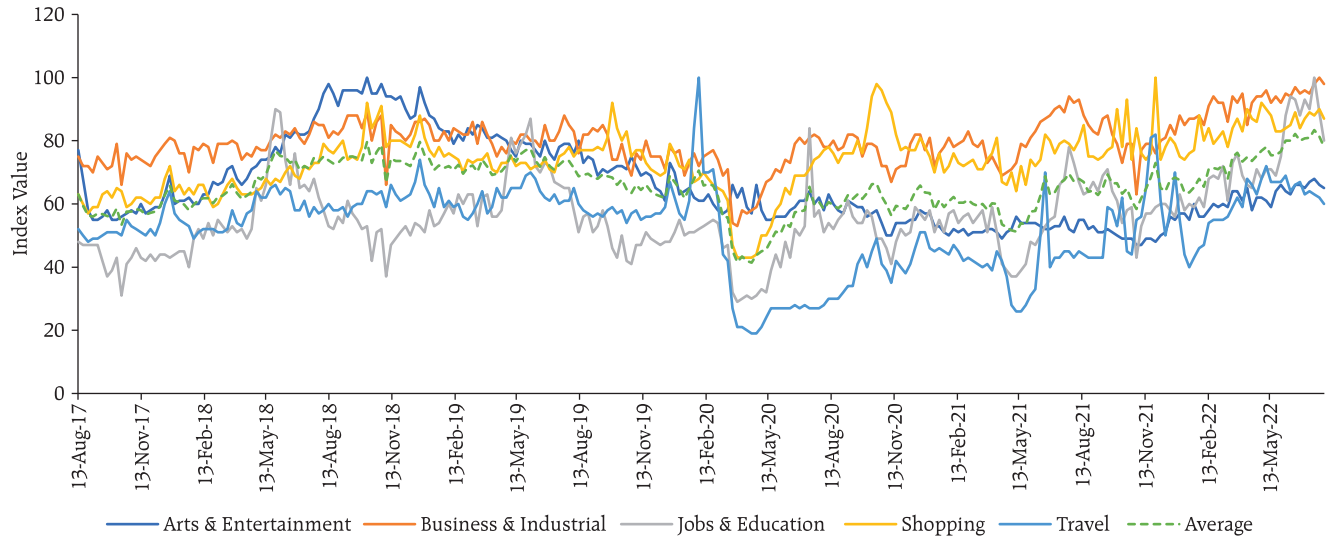
Table 2: High Frequency Indicators

S. No.	Category	Indicators	Frequency	Source
1	Soft	Google Trends	Daily	Google
2		Consumer Sentiment Index	Weekly	CMIE
3		Consumer Expectation Index	Weekly	
4		Current Economic Conditions Index	Weekly	
5	Labour	Unemployment Rate (%)	Weekly	
6		Labour Participation Rate (%)	Weekly	
7	Demand/ Sales	Electricity Generation	Daily	Power System Operation Corporation Limited (POSOCO)
8		Motor Vehicle Registration	Weekly	Vahan, Ministry of Road Transport and highways
9		Railway Freight Loading	Daily	Ministry of Railways
10		Air Cargo Traffic	Daily	Airport Authority of India (AAI)
11	Mobility	Railway Passengers	Daily	Ministry of Railways
12		Mobility (Retail, Grocery, Park, Transit & Workplace)	Daily	Google
13		Aircraft Traffic	Daily	AAI
14		Airport Footfall	Daily	AAI
15	Payments	RTGS	Daily	RBI
16		Retail Payments	Daily	
17		ATM and AePS Withdrawal	Daily	

Note: Retail Payments include National Electronic Funds Transfer (NEFT), Unified Payments Interface (UPI), Immediate Payment Service (IMPS), Bharat Bill Payment System (BBPS), Cheque Truncation System (CTS), Aadhaar Enabled Payment System (AePS) and National Automated Clearing House (NACH) payments.

[2] OECD created a counterfactual tracker, which presents the percent difference between weekly GDP and the pre-crisis GDP trend. The pre-crisis GDP trajectory is proxied by OECD forecasts made in November 2019 and is available till the end of 2021.

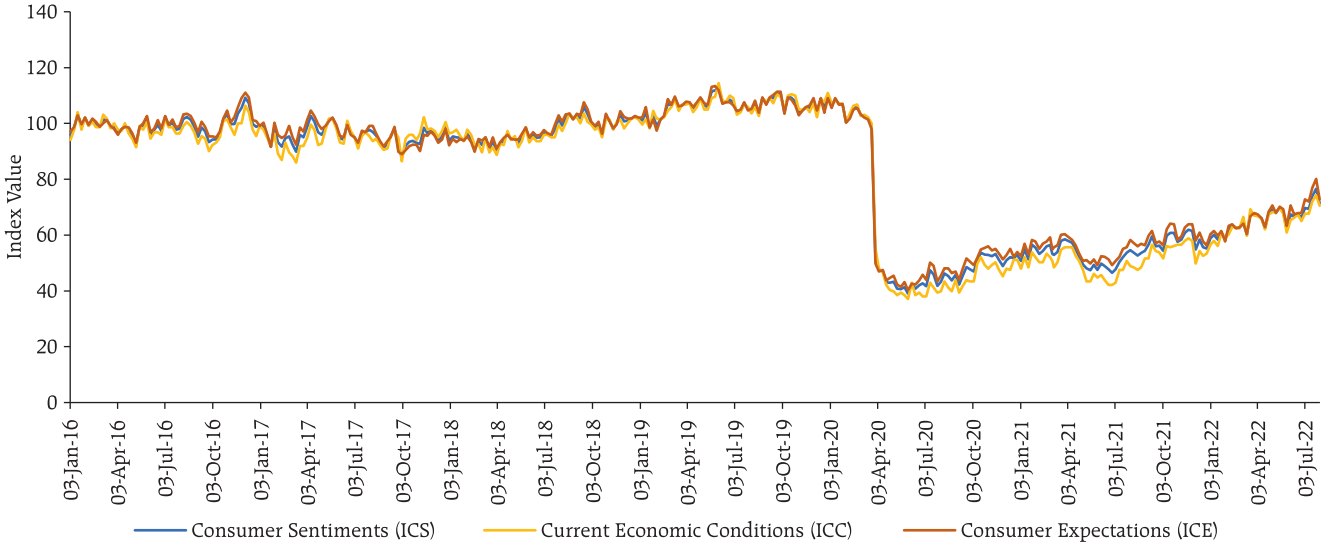
Chart 1: Google Trends



Source: Google.

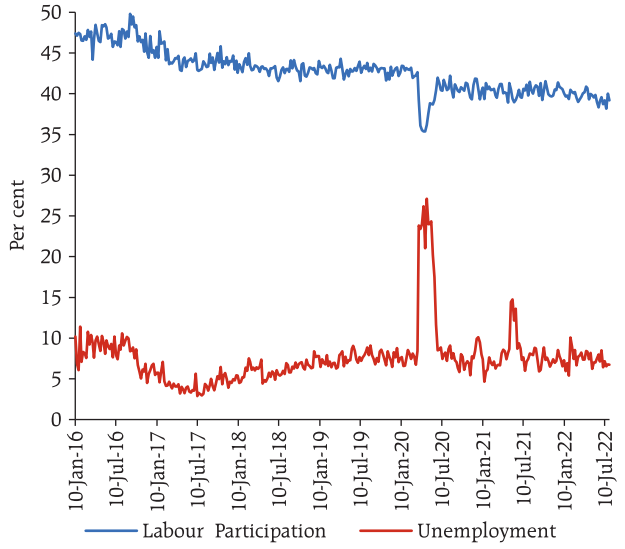
In the initial list of 17 indicators, long-time series were not available for a y-o-y comparison among a number of indicators as many were released for the first time during or after the pandemic outbreak. Accordingly, the indicators considered for the indices are a subset of the list presented in Table 2. The soft indicators *viz.*, google trends data and the CMIE sentiment indices (consumer sentiments, current economic conditions, and consumer expectations) both of which are available since 2017 (Chart 1 and 2), showed a sharp dip during the first lockdown (March-April 2020). Sentiment indices particularly took a huge hit by around 60 index points. Recovery in the sentiments, which although on an upward trajectory, is still far below the pre-pandemic level.

Chart 2: CMIE Sentiment Indices



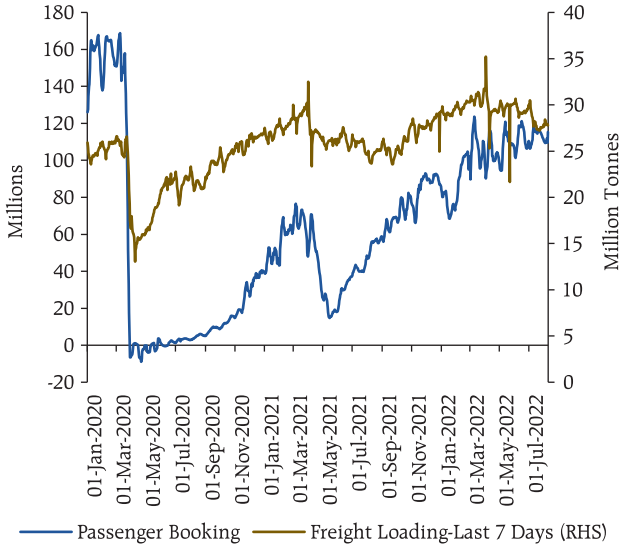
Sources: CMIE.

Chart 3: CMIE Labour Market



Source: CMIE.

Chart 4: Rail Passenger & Freight



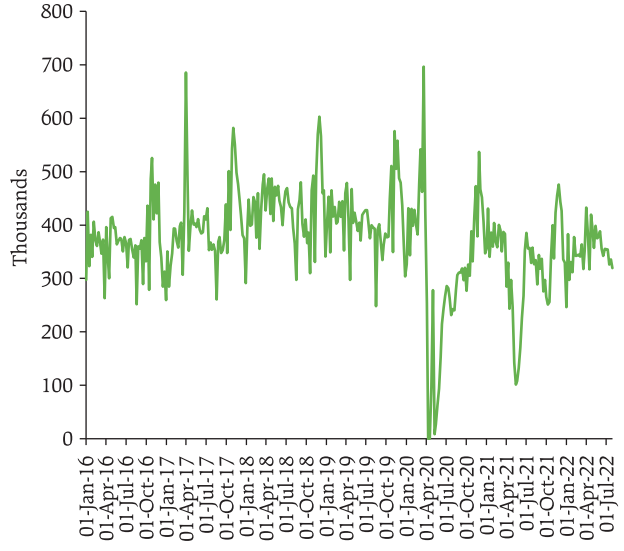
Source: Ministry of Railways; and CEIC.

Labour market conditions are gauged through two indicators – unemployment rate and labour participation rate. Though no long-term trend is visible in the unemployment rate apart from the short-lived spikes during the first and the second waves, the labour participatipn has gradually declined in the recent past (Chart 3). For the model, the reciprocal of unemployment rate has been considered to control for the inverse relationship between unemployment and output. In the transport sector, passenger bookings and freight movement of the Indian railways also suffered sharp decline on account of the pandemic and the related uncertainty. Freight movement however registered a swift recovery (Chart 4).

Vehicle registration and electricity generation are two important indicators of consumption demand. While the former tends to peak near the festive season (particularly during October-November) each year, electricity generation in addition to the upward trend over the past years, rises during every summer to meet the higher demand (Chart 5 and 6).

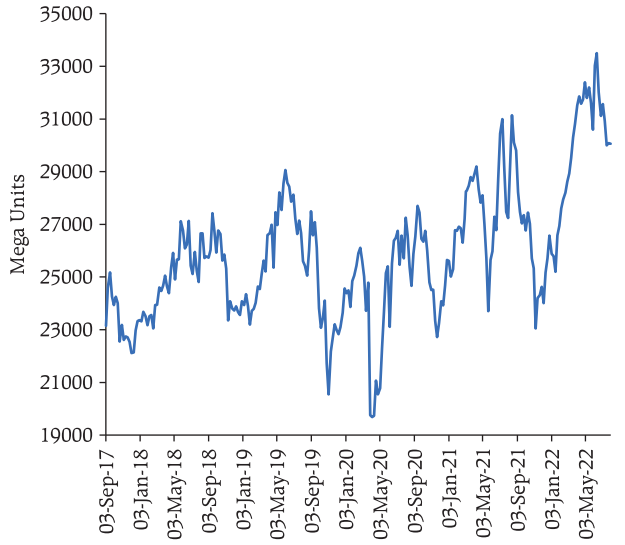
Payments data represent an unconventional source of tracing the underlying economic activity, given their crucial role in undertaking and settling transactions in a market economy (RBI, 2021). RTGS transaction (customer and interbank), which has been

Chart 5: Registered Motor Vehicles



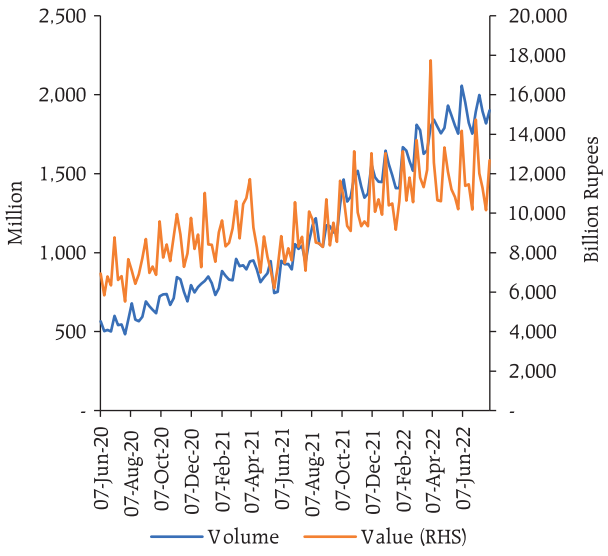
Source: Vahan, Ministry of Road Transport and Highways.

Chart 6: Electricity Generation



Sources: POSOCO; and CEIC.

Chart 8: Retail Payments

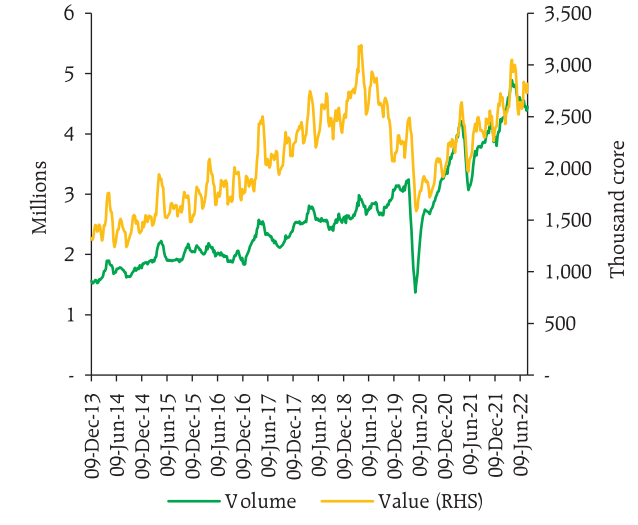


Source: RBI.

exhibiting an upward trend fecilitated by increasing digitisation, shows a seasonal peak at the end of every fiscal year (Chart 7). Retail payments (value and volume) data which RBI began publishing since June 2020 also exhibit similar upward trend. With majority of payments being made around the end of the month, a jump is visible in both value and volume of retail payments every month-end (Chart 8). Despite suffering a blow during the pandemic, both the data series have recovered well. Cash withdrawals from the ATMs recovered well after having suffered a dent in Q1:2021-22 (Chart 9).

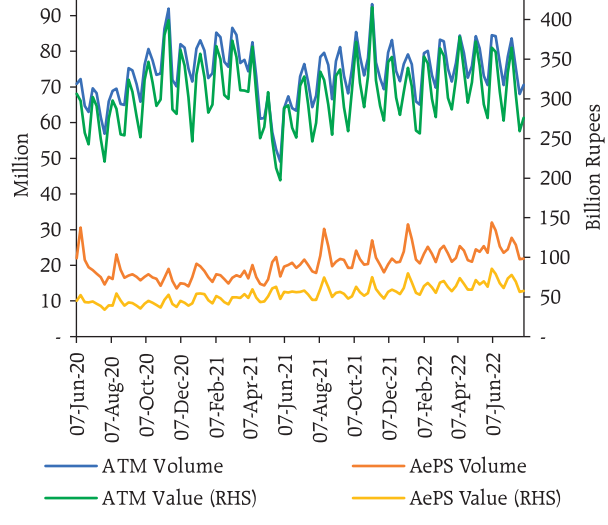
Data on air cargo, aircraft movement and airport footfall are available on a daily basis only since June

Chart 7: RTGS (Customer and Interbank)



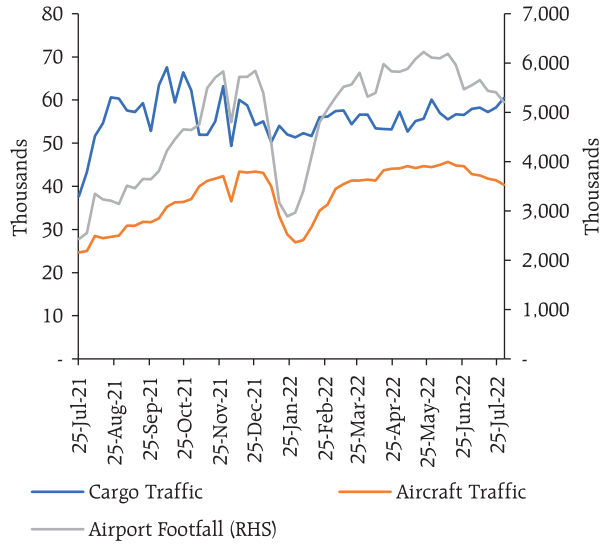
Source: RBI.

Chart 9: Cash Withdrawals



Sources: RBI.

Chart 10: Air Traffic



Sources: AAI; and CEIC.

2021 (Chart 10). Since the period is too short to be considered for the dynamic factor model (DFM), these data series have been used only in the diffusion index. With more data points collected in due course, air traffic data can be utilised in DFM for WAI as well.

An examination of the stationarity properties of the indicators shows that majority of them are stationary at first difference (Table 3).

Table 3: Stationarity of the Selected Indicators

S. No.	Indicators	Diffusion Index	DFM-7	Variable Transformation
1	Google Trends		√	1st Difference
2	Consumer Sentiment Index (CSENT)	√	√	Level
3	Unemployment Rate (Un Rate)	√	√	Level
4	Labour Force Participation Rate (LFPR)	√	√	Level
5	Electricity Generation (ElecGen)	√	√	1st Difference
6	Motor Vehicle Registration (MVReg)	√	√	1st Difference
7	Railway Freight Loading	√		1st Difference
8	Air Cargo Traffic	√		1st Difference
9	Railway Passengers	√		1st Difference
10	Mobility (Retail, Grocery, Park, Transit & Workplace)			Level
11	Aircraft Traffic	√		1st Difference
12	Airport Footfall	√		1st Difference
13	RTGS	√	√	1st Difference
14	Retail Payments	√		1st Difference
15	ATM and AePS Withdrawal	√		1st Difference

Note: 1. Google Mobility indicators are included only in the weekly activity index presented in level terms to exhibit the impact of different COVID-19 waves and subsequent resumptions in activities presented in Chart 12 in section 5.
2. First difference transformation for the variables is performed on year-over-year (y-o-y) basis for DFM and week-over-week (w-o-w) basis for Diffusion Index.

The correlation coefficient between the growth rates of the indicators aggregated at monthly and quarterly frequency with y-o-y real GDP and IIP growth have been examined prior to their inclusion in the model. Almost all the indicators exhibited strong correlation with target variables with expected signs. The magnitude of correlation is particularly strong in case of RTGS payments, electricity generation, google trends and vehicle registration (Table 4a and 4b).

Table 4a: Correlation Matrix with Quarterly GDP growth

	CSENT	LFPR	Un Rate	ElecGen	MVReg	RTGS	Google Trend
CSENT	1.00						
LFPR	0.82***	1.00					
Un Rate	0.33	0.37	1.00				
ElecGen	0.46*	0.61**	0.49*	1.00			
MVReg	0.21	0.55**	-0.29	0.46*	1.00		
RTGS	0.55**	0.75*	0.30	0.83***	0.64**	1.00	
Google Trend	0.70***	0.56**	0.54**	0.80***	0.24	0.60**	1.00
GDP	**0.78*** **	**0.90*** **	**0.55****	**0.86*****	**0.48***	**0.86*****	**0.81*****

Note: ***p < 0.01; **p<0.05; *p < 0.1.

Table 4b: Correlation Matrix with IIP Growth

	CSENT	LFPR	Un Rate	ElecGen	MVReg	RTGS	Google Trend
CSENT	1.00						
LFPR	0.74***	1.00					
Un Rate	0.33**	0.40***	1.00				
ElecGen	0.40***	0.66***	0.51***	1.00			
MVReg	0.13	0.53***	-0.01	0.56***	1.00		
RTGS	0.51***	0.68***	0.28*	0.72***	0.36**	1.00	
Google Trend	0.67***	0.57***	0.54***	0.76***	0.25*	0.53***	1.00
IIP	**0.40*** **	**0.79*** **	**0.34** **	**0.87*** **	**0.83*** **	**0.69*** **	**0.59*** **

Note: ***p < 0.01; **p<0.05; *p < 0.1.

IV. Methodology

The indices are expected to serve the two distinct purposes of (i) tracking developments in the real economy on year over year basis (WAI), and (ii) reflecting the sequential dynamics (WDI). For the above purpose, both model-based and simple aggregation approaches have been used, supported by a few sensitivity and robustness analysis. To monitor the economic recovery in level terms, relative to the pre-pandemic time, another version of WAI has also been developed. This is relevant during a period when there is heavy base effect and momentum serve as an appropriate yardstick to understand the pace of recovery, as it was the case during the pandemic. Activity as compared to the previous year may be improving, but it is equally crucial to know whether it is picking up with respect to immediately preceding period, or it has rebounded to the level existed before the shock, or is it able to sustain the recovery.

DFM developed by Geweke (1977) and Sargent and Sims (1977), are the leading frameworks for the construction of a composite index from multiple time series. Factor model allows to use a rich dataset including large set of variables while dealing with the curse of dimensionality. The essence of DFM is to produce a small number of unobserved or latent series encapsulating the co-movements of the observed constituent indicators. Mathematically, the DFM posits the observed series as the sum of a vector of the common factors and that of idiosyncratic disturbances. In this study, DFM is used to forecast real GDP growth published at quarterly frequency based on the estimate of economic cycle represented by the monthly input variables, based on the approach specified in Giannone *et al.* (2008) and Banbura *et al.* (2011).

Since many indictors have a short time series, the indices have been constructed using two sets of indicators. Smaller set of indicators available for a longer period are useful for presenting changes at year-on-year basis, and also provide an opportunity to examine its conformity with quarterly GDP. The vector of stationary monthly input variables, after the appropriate transformations, is denoted as $x^M_t = (x_1{}^M_t, x_2{}^M_t, \ldots\ldots, x_n{}^M_t)$ which also contains missing observations. Input variables x^M_t are assumed to have the following factor structure representation:

$$x^M_t = \mu + \Lambda^M F_t + \epsilon^M_t \quad \ldots(1)$$

where F_t is an $r \times 1$ vector of unobserved factors of monthly frequency, Λ^M denotes the factor loadings for the monthly variables and ϵ_t is the vector of idiosyncratic error components following the AR(1) process $\epsilon^M_{i,t} = \alpha_i \epsilon^M_{i,t-1} + e_{i,t}$ where $e_{i,t} \sim$ i.i.d. $N(0, \sigma^2_i)$ and $E[e_{i,t}, e_{j,s}] = 0$ for $i \neq j$. The factors are allowed to follow a VAR process of order p:

$$F_t = A_1 F_{t-1} + \ldots. + A_p F_{t-p} + v_t, \; v_t \sim \text{i.i.d } N(0,Q) \quad \ldots(2)$$

where the v_t are common shocks and $A_1, \ldots\ldots, A_p$ are $r \times r$ matrices of VAR coefficients.

In the presence of a jagged edged data set, the dynamic relationship among the factors provides an edge over a static factor model by adding to the cross-sectional information and increasing the precision of the estimate of recent period with scarce information. The method used for estimating the unobserved factor F_t is the expectation-maximising (EM) algorithm under the state space framework, where the factor is estimated using the Kalman filter. DFM is useful for this purpose as a single model adopts to new data automatically as it becomes available to estimate the variable of interest[3]. An alternative approach to using HFIs for real time monitoring can be to forecast the specific economic variables and provide a model-based updates of the forecasts as and when new data comes.

After estimating the WAI based on the constituent series, it is rescaled to track the quarterly real GDP growth. Apart from being the widely used macro-indicator, y-o-y GDP growth also aligns with the 52-weeks percentage change used for weekly seasonal adjustment. The scale and shift parameters are estimated using the following regression.

$$GDP^q\ growth = \alpha + \beta WAI^q\ growth + \varepsilon^q \quad \ldots(3)$$

Where, $GDP^q\ growth$ is y-o-y growth in real GDP

$WAI^q\ growth$ is quarterly average of the 52-weeks growth rate in WAI and,

$\varepsilon^q \sim$ i.i.d. $N(0, \sigma^2)$

Thus, the predicted y-variable from equation (3) based on the estimated coefficients $\hat{\alpha}$ and $\hat{\beta}$ provides us the rescaled WAI which is comparable to the quarterly GDP growth. The 13-week moving average (MA) of the scaled WAI is then used as an indicator for tracking quarterly GDP and the 13-week MA of WAI at the last week of a quarter precisely represents the average of that quarter.

Weekly Diffusion Index

The weekly sequential movement in activity has been presented in terms of a consolidated diffusion index using information from various indicators. The WDI, by construction, only present the direction of movement in activity and does not reflect magnitude. WDI has been constructed using a set of 15 indicators at weekly frequency starting from October 2020. The index is constructed following the methodology of the Conference Board[4] showing the co-movement of multiple time series. It ranges between 0 and 100 and measures the proportion of the selected variables that contribute positively to the index. For example, an index value of 65 is interpreted as 65 per cent of the indicators registering week over week (w-o-w) acceleration, while index value of 50 implies w-o-w acceleration in 50 per cent of the total indicators. Construction starts with computing the w-o-w growth rates for each indicator. Indicators that grow by more than 0.5 per cent are given a value of 1, components that contract by more than 0.5 per cent are given a value of 0, and components with growth rates falling in between the range of 0.5 to (-) 0.5 per cent are given a value of 0.5. The values of the constituent series are aggregated, to obtain an index value between 0 to 100.

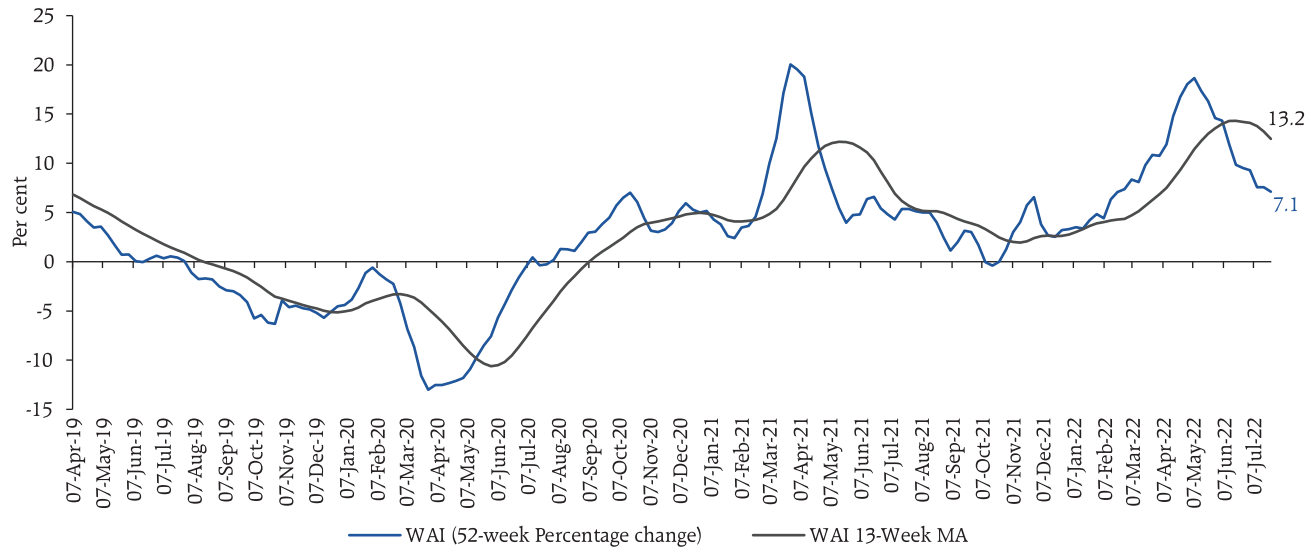
V. Trajectory of the WAI

Impact of the first COVID wave induced lockdown is evident from the deep downturn in the trajectory of the WAI (Chart 11). The milder impact of the second wave which is estimated to be around one-third in terms of loss of GDP was also corroborated by a decline in WAI levels (RBI, 2022). The third wave of COVID had no visible impact, except delaying the recovery, as exhibited by the WAI in the Month of February, March and April 2022. The value of 13-week MA of the WAI scaled to GDP (13-week MA) on the last week of a reference quarter encompasses the activity

[3] For application of dynamic factor models to nowcasting, see Giannone, Reichlin and Small (2008) and Auroba, Diebold and Scotti (2009).

[4] https://conference-board.org/data/bci/index.cfm?id=2180

Chart 11: Weekly Activity Index



Source: RBI staff estimates.

during that quarter and hence, is a rough nowcast of GDP growth for that quarter.

Narrative of Indices Performance during Pandemic

Unfolding of WAI trajectory can be seen in conjunction with the key events that took place during the two years since the outbreak of the pandemic. On March 11, 2020, the WHO declared COVID-19 as a global pandemic and on January 30, 2020 the first case of COVID-19 was reported in Kerala. Since then, India has experienced three waves of the pandemic, taking its total caseload to the second highest in the world. India imposed one of the most stringent restrictions in the world to curb the spread of infections during the first wave with the first phase of a nation-wide lockdown announced on March 24 continuing till the end of May 2020. Accordingly, the WAI for the week ending March 29, 2020 slipped to its lowest, contracting by 9.6 per cent on y-o-y basis, followed by contraction of 9.1 per cent and 8.9 per cent, respectively in April and May. The contraction in WAI was underpinned by broad-based decline in almost all the constituent indicators such as consumer sentiments, electricity generation, vehicle registration, various search categories of google trend, RTGS payment and skyrocketing unemployment rate.

With gradual relaxations in restrictions, unlocking started since June 2020 over 6 phases - unlock 1.0 to unlock 6.0. Direct benefit transfers such as free ration per family members under the *Pradhan Mantri Garib Kalyan Yojana* followed by the *Aatmanirbhar Bharat Abhiyan* aimed at protecting jobs, providing financial support as well as regulatory relaxations, extensions, and guarantee schemes. As a result, V-shaped recovery was visible in some indicators such as RTGS transaction, electricity generation, unemployment, and labour force participation rates. Consumer sentiments, railway, air travel, vehicle registration, however improved at a slower pace. With the improvement in indicators, contraction in WAI also reduced steadily for 12 successive weeks since April last week till the second week of July 2020. With easing of contraction in each subsequent month in tandem with gradual unlocking, WAI turned positive in the second week of October 2020, after pandemic began to recede from its peak in September 2020. WAI aggregated over a quarter, which is available within a week after the end of a reference quarter and nearly

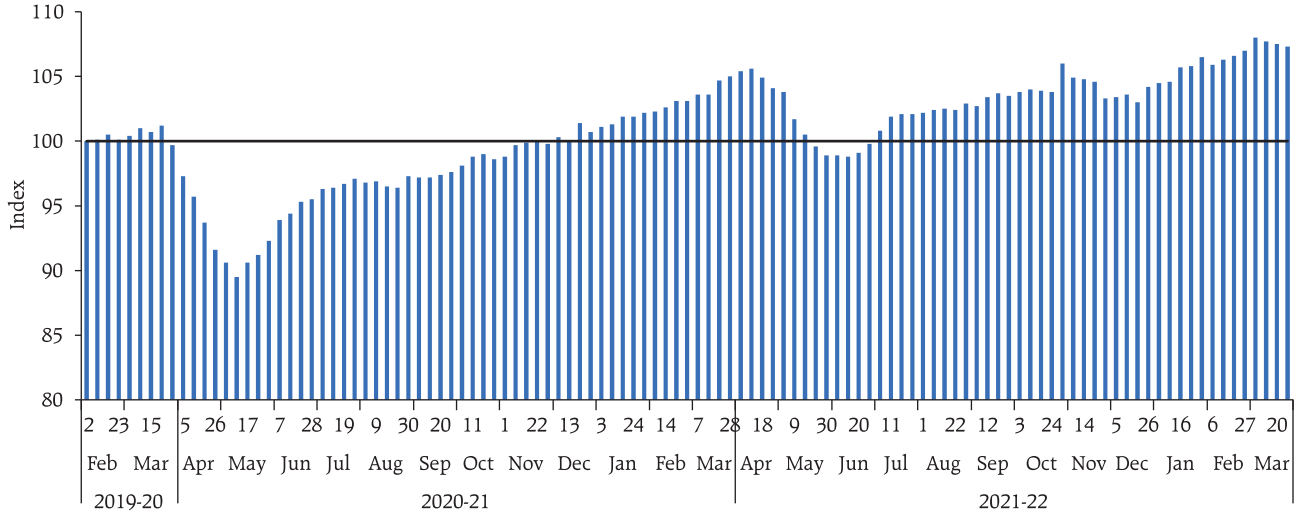
two months before the official release of GDP data, tracked the quarterly GDP growth reasonably well in 2020-21. Hence, following the trend of quarterly GDP growth, WAI after two quarters of contraction, rebounded to positive territory in the third quarter and further strengthened in the fourth quarter of 2020-21.

WAI's approximate y-o-y changes were heavily influenced by base effects in 2021-22 emanating from the sharp contraction in 2020-21 and, therefore, obscured the subsequent impact of the COVID-19 waves in 2021-22. To address this issue, a weekly recovery index (WRI) is developed which is simply the WAI at levels, curated specifically for economic impact of different waves of the pandemic *vis-à-vis.*, the pre-pandemic level (Chart 12). WRI surpassed its pre-pandemic level since the first week of December 2020. The launch of vaccination drive January 16, 2021 onwards, further bolstered momentum in economic activity which is reflected in sustained positive momentum in the index for fifteen successive weeks, till the second week of April 2021 when the second wave intensified. The economic impact of the second wave was moderate compared to the first wave. However, reinforcement of lockdowns by the central and the state governments thwarted economic recovery as the the WRI fell below the pre-pandemic level in May and June, 2021. The WRI rebounded in the first week of July with the plateauing of the second wave, removal of restrictive measures and government's boost to accelerate vaccination drive and maintained steady momentum till September. Disruption caused by coal crisis, semi-conductor chip shortage across the globe started impinging on activity as was reflected in the downward trajectory in the recovery curve since late October and November 2021. Unlike the first two waves of COVID-19, the Omicron wave did not have any significant adverse economic impact as reflected by the WRI which remained above the pre-pandemic level in December and January 2022 and rebounded swiftly thereafter.

Recent Trajectory: Since Russia-Ukraine War

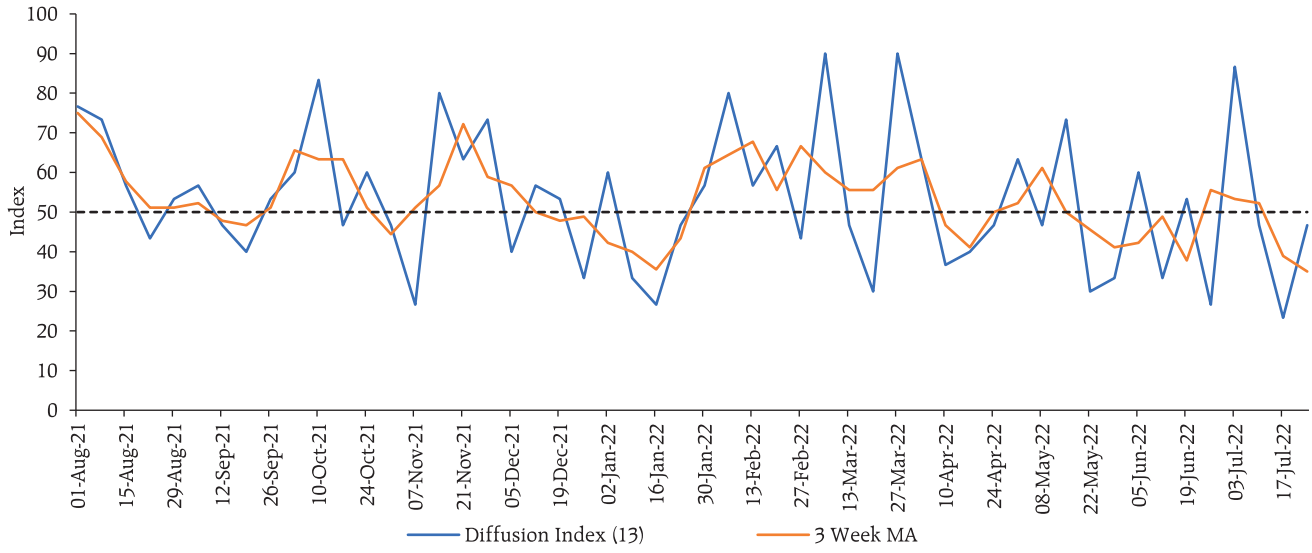
WAI recovered following a downturn during January caused by the Omicron wave. The WAI registered double-digit growth on average in the

Chart 12: Weekly Recovery Index
(February 2, 2020=100)



Source: RBI staff estimates.

Chart 13: Weekly Diffusion Index (WDI)



Source: RBI staff estimates.

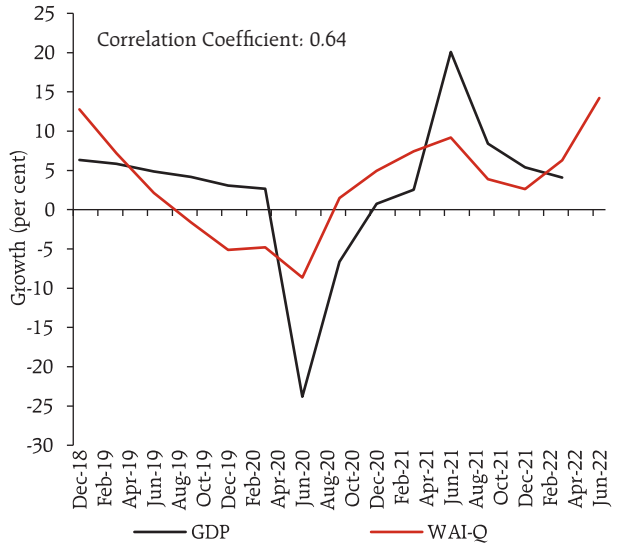
month of April and May 2022. However, the sharp uptick seen in these two months were partly due to the base effect emanating from the second wave. WAI moderated sharply in June and continued further on a downward trajectory in July 2022. The sequential movement evident from the weekly diffusion index (WDI) suggests continued sluggishness in momentum since March 2022. The 3-month MA of the WDI averaged at 61.1 for the months of February and March 2020, but moderated substantially thereafter, amidst the multiple headwinds arising from the ongoing Russia-Ukraine war (Chart 13). Out of 17 weeks from the first week of April to the week ending on July 24, the WDI remained below 50 on nine occasions. After touching 50 in May, 3-month MA of WDI deteriorated to 46.1 in June and further declined to 44.9 in July 2022.

WDI presented since October 2020 displayed a sharp fall in momentum during the weeks of April 2021 when the second wave of COVID intensified. The index rebounded quickly in the subsequent months with more than half of the constituent indicators showing positive momentum. The index moved downwards in December 2021 and January 2022 primarily due to decline in employment rate and the third wave of pandemic. The Index rebounded sharply in February and remained resilient in March and April despite the headwinds in terms of spike in global commodity prices and supply disruptions as a fall out of the ongoing Russia-Ukraine war.

Relationship with Macro-Aggregates

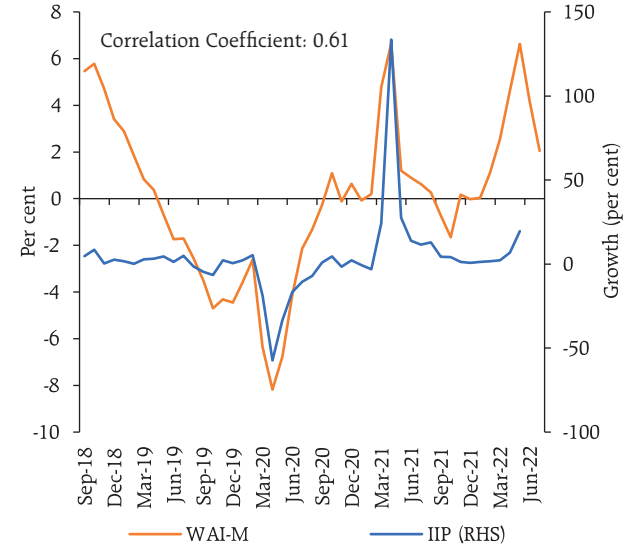
The predictive relationship between the WAI and two primary macro indicators of output measures – real GDP and industrial production are also explored (Chart 14 and Chart 15). The quarterly average of WAI together with the y-o-y growth rate of real GDP exhibit strong co-movement over time. The correlation coefficient between two series also stood high at 0.79. The two months lag in the release of official GDP data makes it even crucial to look at the timely developments in the WAI. The quarterly aggregate of WAI scaled to GDP can provide a nowcast of GDP within a week since the end of the quarter. The monthly average of WAI tracks the y-o-y growth in IIP reasonably well with a correlation coefficient between the two series as 0.66. IIP for a particular month releases

Chart 14: Relationship with GDP



Source: RBI staff estimates.

Chart 15: Relationship with IIP



Source: RBI staff estimates.

with a lag of forty-five days. Four-week average of the WAI which represents a month, on the other hand, become available within five days since the end of the month. Strong relationship with the lower frequency measures indicates that, despite the noise inherent in the raw high-frequency data, combining the indicators into a weekly index produces an informative and timely signal of real economic activity.

Forecasts being the natural application of the WAI, we further explore the predictive relationships between the WAI and lower-frequency real activity measures. We attempt to nowcast[5] the target variable GDP by regressing the flow of information from the WAI, starting with the WAI for just the first month of the quarter and so on (Table 5a).

$$GDP^{q}\ growth = c + \sum_{i=1}^{mi} \beta_i\, WAI_{q}^{mi}\text{growth} + e_q;\ \text{mi} = 1,2,3; \quad \ldots(4)$$

$$IIP^{m}\ growth = c + \sum_{i=1}^{wi} \beta_i\, WAI_{m}^{wi}\ \text{growth} + e_m;\ \text{wi} = 1,2,3,4; \quad \ldots(5)$$

[5] The standard nowcasts (including those of the Federal Reserve Banks of New York, Atlanta and St. Louis) focus on lower frequency targets like GDP growth, which are very informative about the economy. But, since GDP is a quarterly variable, such models are not equipped to highlight variation from one week to the next.

Analogously, IIP is regressed starting with the WAI for the first week of the month and proceeded with additional information emanating from each subsequent week (Table 5b). The goal of these

Table 5a: Monthly Information flow

	WAI Month 1	WAI Month 2	WAI Month 3
Coefficient	0.952***	1.034***	0.990***
Standard Error	0.164	0.195	0.235
Adjusted R-square	0.685964	0.64311	0.52790
F Statistics	33.7652***	28.0304***	17.7730***
No. of Observations	16	16	16
Theil's U	**0.74136**		

Note: ***p < 0.01; **p<0.05; *p < 0.1.

Table 5b: Weekly Information flow

	WAI Week 1	WAI Week 2	WAI Week 3	WAI Week 4
Coefficient	2.2845***	2.3015***	2.2548***	2.1884***
Standard Error	0.3448	0.3425	0.3485	0.3576
Adjusted R-square	0.4772	0.4844	0.4651	0.4368
F Statistics	43.9043	45.1635	41.8636	37.4588
No. of Observations	48	48	48	48
Theil's U	**0.91980**			

Note: ***p < 0.01; **p<0.05; *p < 0.1.

nowcasts is only to predict average variation in the target series over the frequency of the target variables which it performs well. For quarterly GDP, the WAI for all the three months is highly significant. However, the first month presents the strongest relationship with the highest value of adjusted R-square which decreases slightly over the next two months. In case of IIP, information from the first two weeks produced strongest relationship while the information from third and fourth weeks, despite remaining highly significant, did not improve the prediction further. Moreover, the Theil's U statistic which is a relative accuracy measure that compares the forecasted results with the results of forecasting with minimal historical data, in case of both IIP and GDP stood less than one indicating that the WAI holds better predictive power over naïve forecast.

VI. Conclusion

In a rapidly evolving economic situation, new sources of data to provide information about the current state of the economy have become a necessity for policymaking and economic analysis. In this respect, the WAI and WDI could serve as composite indicators of overall economic activity. This study finds that WAI tracks the ebbs and flows in economic activity during the pandemic years followed by the more recent disruptions caused by the Ukraine war since February 2022. Due to its timely availability, WAI holds the potential to bridge the information gap in the monthly high frequency indicators – a crucial input for monetary policy deliberations. The WAI tracks macroeconomic variables like monthly IIP and quarterly GDP reasonably well. In particular, the 4-week MA and the 13-week MA of the WAI provide nowcasts of IIP and GDP growth immediately after the end of the reference month or the quarter.

To monitor the recovery relative to pre-pandemic time, WRI has also been developed showing the recovery in level terms. Unlike the first two waves of COVID-19, the Omicron wave did not have any significant adverse economic impact as the WRI moderated but remained above the pre-pandemic level in December and January 2022 and rebounded swiftly to an upward trajectory thereafter. WDI for a week presents momentum in economic activity by showcasing the overall direction where the economy is heading (upwards or downwards) in terms of a single index value. WDI is found to be useful in tracking the momentum in economic activity and suitably complements the model-based WAI.

The weekly indices can supplement the more sophisticated nowcasting models of GDP. Presently, the set of daily and weekly high frequency indicators is limited but growing at a fast pace since the outbreak of the pandemic. Going forward, with the availability of sufficient data points, robust statistical and machine learning techniques can be used for enabling and strengthening real time tracking of real economic activity.

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*Private Corporate Investment: Growth in 2021-22 and Outlook for 2022-23**

The near-term outlook for private investment activity in India is gauged from project investment proposals of the private corporate sector. With the resumption of business activities and improving demand conditions after the ebbing of the Covid-19 pandemic, announcement of new projects increased significantly during 2021-22, especially infrastructure projects. Of the total capex investment envisaged during 2021-22, more than one third is expected to be spent in 2022-23.

Introduction

Capital expenditure (capex) of the private corporate sector plays a significant role in driving the overall investment climate in the economy. An assessment of the private investment outlook, therefore, is vital to gauge the prospects of growth. Given the lag in publication of annual accounts of corporate sector, balance sheet-based investment rate may not be useful in assessing the short-term investment outlook. As an alternative, survey-based methods are popularly used by major economies to gather information on envisaged corporate investment plans and investment sentiment. The results of such surveys pave the way for assessment of both current investment climate and investment intentions that are likely to materialise in the short to medium term.

In India too, such surveys are being conducted since the late 1980s for the assessment and forecasting/nowcasting of private investment. The capex plans of the private corporate sector through the projects that are funded by banks and financial institutions has been used for providing an outlook on investment based on the methodology adopted by Rangarajan (1970)[1] on time phasing of capex. Such articles were published initially in the Economic and Political Weekly and subsequently in the RBI Bulletin since 1989.

The article is organised under five sections. Section II sets out the methodology and its limitations. Characteristics of projects sanctioned or contracted during the period of review, funding thereof, and distributional aspects in terms of regions and industries are presented in Section III. Section IV deals with the phasing profile of the sanctioned/ contracted loans/financing and estimates growth of corporate investment. Section V concludes the study.

II. Methodology and Limitations

This article follows Rangarajan (1970) for assessing near-term outlook of investment activity of private corporate. For this purpose, data on investment intentions were gathered through three different sources, *viz.*, (i) banks and financial institutions (FIs)[2] which are involved in the business of project finance to private corporate, (ii) finances raised for capex purpose through the external commercial borrowings (ECBs), including issuance of foreign currency convertible bonds (FCCBs), rupee denominated bonds (RDBs), and (iii) initial public offerings (IPOs), follow-on public offerings (FPOs) and rights issues during a year.

* This article is prepared by Rajendra N Chavhan and Rajesh B Kavediya in the Corporate Studies Division of the Department of Statistics and Information Management. The views expressed in the article are those of the authors and are not necessarily shared by the Reserve Bank of India. The previous article in the series "Private Corporate Investment: Growth in 2020-21 and Outlook for 2021-22" was published in the September 2021 issue of the Reserve Bank of India Bulletin.

1 The methodology was published on 19th December, 1970 in the article "Forecasting Capital Expenditure in the Corporate Sector" authored by Dr. C. Rangarajan in the Economic and Political Weekly (EPW), Volume No. 5, Issue No. 51, Page 2049-2051.

2 Includes all public sector banks, major private sector and foreign banks, and financial institutions which are actively involved in project financing namely, Industrial Financial Corporation of India (IFCI), Life Insurance Corporation (LIC), Power Finance Corporation (PFC), Rural Electrification Corporation of India (REC) and Export-Import Bank of India (EXIM).

In order to avoid double counting and consequent overestimation of capital investment, due care has been taken to ensure that each capex project enters the information set only once, even if it is financed through multiple sources, by using databases internal to the RBI as well as information provided by the Securities and Exchange Board of India (SEBI). This study covers only those projects that are financed through any of the sources mentioned above, with project cost above ₹10 crore and private ownership above 51 per cent. Projects undertaken by Central and State governments, trusts and educational institutions are not covered in this study.

The estimates are obtained based on the assumption that companies adhere to their *ex-ante* capital expenditure plans. These estimates may, however, digress from the *ex-post* estimates of corporate fixed investment available in the National Accounts Statistics (NAS). This is in view of the possibility that some *ex-ante* intentions may not fructify into realised investment in terms of their amount and timing of investment and some projects may be self-financed.

III. Characteristics of Projects Sanctioned/Contracted

The investment climate in terms of number of new project announcements remained weak during 2019-20 and deteriorated further in 2020-21 due to COVID-19 pandemic. Subsequently, with resumption of business activities and improved demand sentiments, the new capex project announcements showed some signs of revival. During 2021-22, 28 banks and FIs which were actively involved in project finance, reported 403 projects, significantly higher than 220 projects reported during 2020-21 as well as 320 projects reported during 2019-20, mainly due to increase in small ticket projects. Though envisaged total project cost of ₹1,43,314 crore almost doubled as compared to the record low of ₹75,558 crore in 2020-21 on the back of Covid-19 induced lockdown and related restrictions, it remained lower than the pre-Covid levels (Annex: Table A1).

A total of 361 companies, which did not avail of any financing from the banks/FIs for capex projects, raised an amount of ₹47,824 crore through ECBs/FCCBs/RDBs and 27 other companies raised ₹3,410 crore for their capex needs through domestic equity issues under the IPO route. Overall, investment plans of 791 projects were made during 2021-22 aggregating to ₹1,94,548 crore as against 576 projects in 2020-21 with investment intentions of ₹1,16,603 crore, which remained comparatively lower than the levels seen since 2016-17 (Annex: Table A1-A4).

(i) Size-wise

The number and share of mega projects (₹5,000 crore & above) in the total project cost recorded a noticeable decrease during 2020-21 and 2021-22. The large projects (project cost: ₹1,000 crore - ₹5,000 crore) contributed a significantly higher share (47 per cent) in project cost sanctioned during 2021-22. Though the number of large projects increased to 36 during 2021-22 from 24 projects during previous year, their share in total cost of projects moderated during 2021-22 (Annex: Table A5).

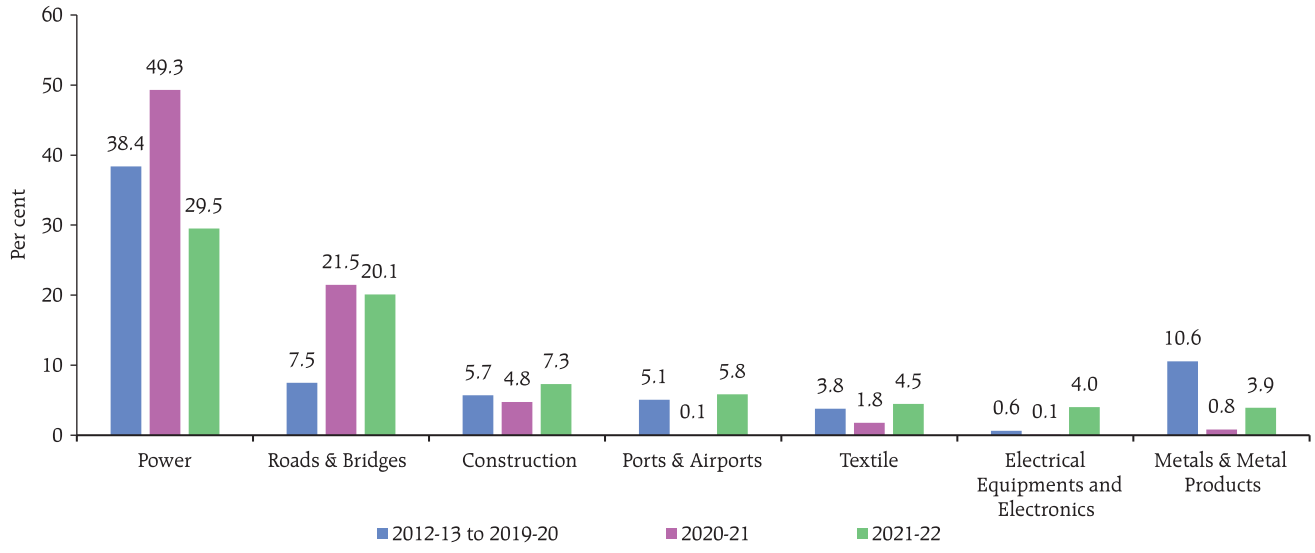
(ii) Purpose-wise

Investments in greenfield (new) projects accounted for a predominant share (89 per cent) in the total project cost sanctioned by banks and FIs during 2021-22, comparable with the trend seen in the past. In terms of number of projects, greenfield projects increased significantly during 2021-22 as compared to previous year, even higher than the green field projects announced during 2019-20. 11 per cent of total project cost was directed towards expansion and modernisation of existing projects (Annex: Table A6).

(iii) Industry-wise

The total project cost increased in 2021-22 from 2020-21 across the board with many industries

Chart 1: Share of Major Industries in Aggregate Cost of Projects Sanctioned by Banks/FIs



Source: Data on project finance gathered from banks/FIs and Author's calculation.

registering significant rise. For instance, the total cost of infrastructure projects increased from ₹56,103 crore to ₹81,221 crore during this period. In non-infrastructure sector, industries like construction, textile, electrical equipments & electronics and metal & metal products, recorded significant rise in the total cost of projects envisaged in 2021-22 (Annex: Table A7).

The infrastructure sector, comprising (i) power, (ii) telecom, (iii) ports and airports, (iv) storage and water management, (v) SEZ, industrial, biotech and IT park, and (vi) roads and bridges, remained the major sector accounting for more than half of the total project cost during 2021-22. However, its share in total project cost has declined from 74.3 per cent in 2020-21 to 56.7 per cent in 2021-22, despite increase in number of projects during the same period. The decline in share of infrastructure projects was mainly driven by declining share of power sector, even though it retained its top position in the project sanctioned by banks/FIs. Also, share of investment in 'Road & Bridges' improved significantly in the recent years as compared to 2012-13 to 2019-20. In contrast, the share of investment in 'Metal & metal products' remained significantly lower than its share during 2012-13 to 2019-20 though it improved in 2021-22 as compared to previous year (Chart 1).

Within the power sector, project announcements in solar and wind power projects remained dominant during 2021-22, reflecting various policy initiatives by the government to promote the use of renewable energy resources (Box 1).

Box 1: Emphasis on Renewable Energy

Recognising the impact of climate change on environment and overall economy, majority of the countries across the world are putting their efforts to shift from conventional energy sources to non-conventional or renewable energy sources. Many countries, both developed and developing, have started taking steps to rapidly increase the share of renewable energy in the overall energy mix. During annual Conference of Parties (COP)-21 in Paris, India too committed that it will achieve 40 per cent of its installed

(Contd.)

power generation capacity from non-fossil fuel sources by 2030. Further, in COP-26 at Glasgow, UK, Hon'ble Prime Minister of India announced five ambitions which include (i) India's non-fossil energy capacity to reach 500 GW by 2030 and, (ii) India will meet 50 per cent of its energy requirements with renewable energy by 2030.

To meet these objectives, Government of India took various policy initiatives to promote the renewable energy sector and to reduce carbon emission. These include, *inter alia*, provision of renewable repurchase obligation (RPO) under the National Tariff Policy, development of solar parks and ultra-mega solar power projects, production link incentive (PLI) schemes for advance chemistry cell battery storage and solar panels, development of power transmission network through green energy corridor project, making solar roof tops mandatory as a part of housing loan provided by banks, waiver of inter-state transmission charges and losses, supporting research and development on various aspects of renewable energy, permitting 100 percent foreign direct investment in the sector through the automatic route[3].

As per the Annual Report 2021-22 of the Ministry of Power, Government of India, India has achieved the target of generating 40% of installed power generation capacity from non-fossil fuel sources in November 2021 - the first country to have achieved its NDC, nine years in advance of committed time line. As per the Central Electricity Authority (CEA), as on March 2022, installed capacity of renewable energy (including nuclear-based) is around 163 GW, constituting 41 percent of the total installed capacity.

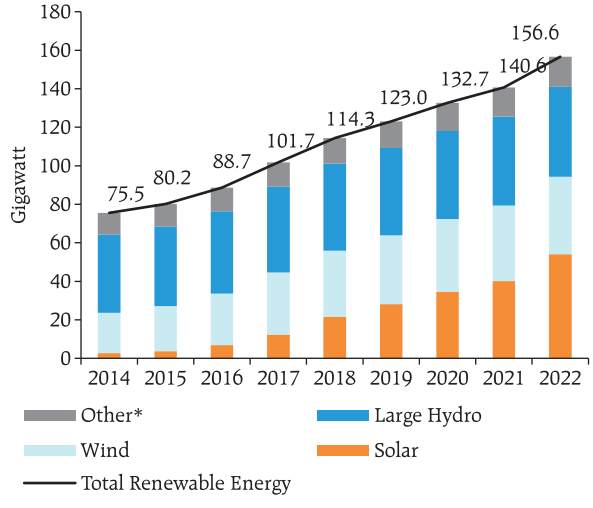
Progress in Renewable Energy Sector

Total installed capacity increased significantly over the period since 2014, from 75.5 GW as on March 2014 to 156.6 GW as on March 2022. Despite pandemic led supply disruption, which was further aggravated by Russia-Ukraine war and increase in prices of wind and solar energy components, India was able to add about 15 GW capacity during 2021-22, leading to 11.4 per cent increase in total install capacity as on end-March 2022 over March 2021. As per the 'Renewables 2022 Global Status Report' of REN21[4], in cumulative renewable energy capacity at end-December 2021, India ranked fourth after China, United State and Brazil. Also, India ranked third in the world in terms of new capacity addition.

The share of installed solar capacity in total installed capacity increased substantially from 3.5 per cent in March 2014 to 28.5 per cent in March 2021 and further to 34.5 per cent in March 2022. On an average, large hydro power plants and wind power accounted for about 41 per cent and 29 per cent share in total installed capacity of renewable energy during 2014-2022 (Chart 2).

Among the states, as on April 2022, Rajasthan secured top position with a share of 15.7 per cent in total installed capacity. Of the total installed capacity, the top 5 states, *viz.*, Rajasthan, Gujarat, Tamil Nadu, Karnataka and Maharashtra together accounted for around 70 per cent share.

Chart 2: Renewable Energy: Installed Capacity (end-March)



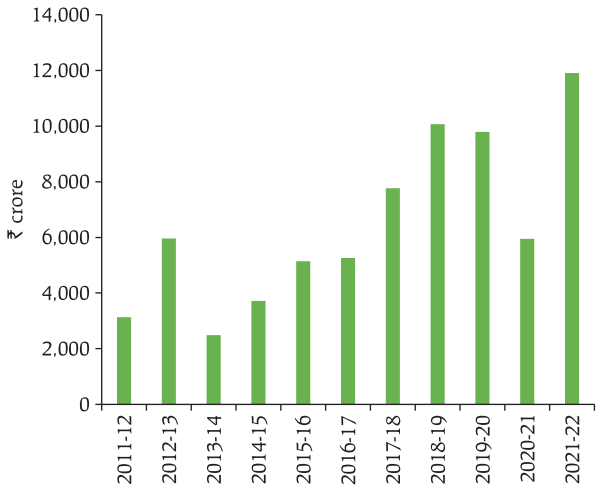
* Other include small hydro power, Bio power
Source: Central Electricity Authority.

(Contd.)

[3] https://pib.gov.in/newsite/PrintRelease.aspx?relid=177515

[4] REN21 is the global renewable energy community, created in 2004 as an outcome of the Bonn2004 International Conference on Renewable Energy. Its mandate has been to collect, consolidate and synthesise a vast body of renewable energy data to provide clear and reliable information on real-time basis.

Chart 3: FDI Inflows in Non-Conventional Energy



Source: Department for Promotion of Industry and Internal Trade, Government of India.

Investment in Renewable Energy Sector

During April 2000 to March 2022, non-conventional energy sector received FDI equity inflows to the tune of ₹75,000 crore, which accounts for around 2 per cent of total FDI inflows in India. FDI equity inflows in non-conventional energy sector increased substantially in recent years. In 2021-22, the sector grabbed an all-time high FDI equity inflows of ₹11,905 crore (Chart 3).

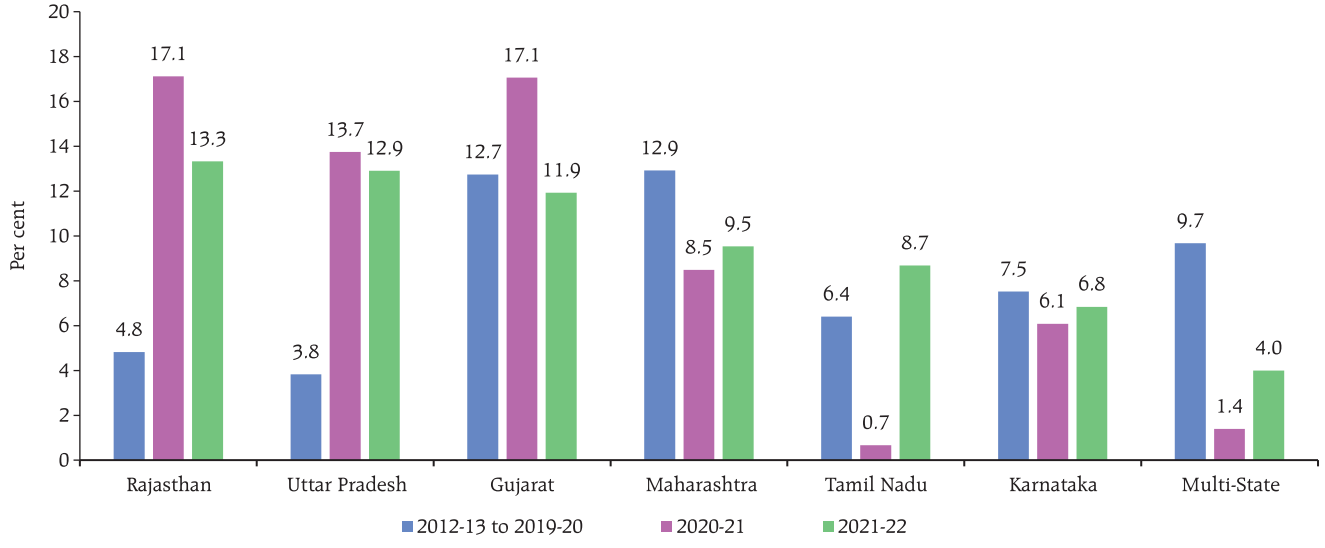
Despite notable progress in renewable energy sector, majority of the energy demand is still fulfilled through fossil-fuel sources. Materialisation of investment intentions in this sector, as announced by top companies in their latest annual investors meet, along with various policy initiatives taken by the government could possibly translate into substantial investment in renewable sector going forward.

(iv) State-wise

State-wise data reveals that during 2021-22, more than half (56.4 per cent) of the projects were taken up in five states, *viz.*, Rajasthan, Uttar Pradesh, Gujarat, Maharashtra and Tamil Nadu. The share of these five states increased significantly from an average share of 40.7 per cent during 2012-13 to 2019-20 to more than 50.0 per cent during the last two years. (Chart 4 and Annex: Table A8).

In 2021-22, Rajasthan accounted for the highest share in the total cost of projects sanctioned by banks/FIs, retaining the top place for two consecutive years.

Chart 4: Share of Major States in Aggregate Cost of Projects Sanctioned by Banks/FIs



Multi-State: Projects distributed in more than one state.
Source: Data on project finance gathered from banks/FI and Author's calculation.

While the share of Rajasthan, Uttar Pradesh and Gujarat declined during 2021-22, Maharashtra, Tamil Nadu and Karnataka improved their share in the total cost of projects (Chart 4 and Annex: Table A8).

IV. Phasing Profile of Investment Intentions

The information on the phasing profile of envisaged capex from the cohort of projects sanctioned during different years helps in generating short-term (one year ahead) forecasts of capex. The phasing from the cohort of projects sanctioned by the banks/FIs in 2021-22 indicates that about 41.8 per cent (₹59,897 crore) of the total proposed expenditure was expected to be spent in the same year, while 30.9 per cent (₹44,282 crore) is likely to be spent in 2022-23 and another 17.6 per cent (₹25,267 crore) in the subsequent period. Of the total cost of projects sanctioned in 2021-22, 9.7 per cent was already spent prior to 2021-22. From the planned expenditure, the capex envisaged in 2021-22 through banks/FIs showed a decline of 3.8 per cent, from ₹1,33,498 crore during 2020-21 to ₹1,28,366 crore during 2021-22 (Annex: Table A1).

In 2021-22, capex planned to be incurred from resources raised through ECB route increased sharply by 73.4 per cent to ₹64,178 crore from its level a year ago. The capital market (equity route) enabled the financing of envisaged capex of ₹1,178 crore in 2021-22, significantly higher than in the previous year (Annex: Table A2, A3). To sum up, a total capex investment of ₹1,93,722 crore was expected to be made by the private corporate sector in 2021-22, recording an increase of 13.5 per cent from the planned phasing of the previous year. This rise is attributed to resources raised through ECB route (Annex: Table A4).

The phasing profile of the envisaged capex, based on the pipeline projects[5] sanctioned by the banks/FIs in the previous years prior to the reference year, increased from ₹68,469 crore in 2021-22 to ₹71,012 crore in 2022-23; but based on all channels of financing together, it remained lower at ₹97,644 crore in 2022-23 as against ₹1,07,535 crore in 2021-22 (Annex: Table A1 and A4).

V. Conclusion

This article uses data on investment intentions by the private corporate sector based on the phasing plans (*ex-ante*) of their project proposals to arrive at the aggregate investment intentions and assess the outlook for investment activity in the near term. After set back in pandemic period, announcements of new investment projects increased significantly during 2021-22, with total cost of project recording an increase of about 90 per cent over 2020-21, but still remaining below the pre-pandemic level. Infrastructure sector continued to attract maximum capex projects, led by 'Power' and 'Road & Bridges' sectors. Reflecting various policy initiatives undertaken by the government, investment in renewable energy is gaining traction over the years. This would help in achieving the targets set under COP-26.

Going forward, improved private corporate balance sheet, rising capacity utilisation level, robust demand sentiments, higher capital spending and various policy initiatives by the government are expected to revive the capex cycle.

[5] Pipeline projects are those projects which are already undertaken for implementation. Capex from a pipeline project are envisaged amounts for a given year, which got sanctioned prior to that given year.

Annex

Table A1: Phasing of Capex of Projects Sanctioned by Banks/FIs

Year of sanction ↓	No of Projects	Project Cost in the Year of Sanction (in ₹ crore)	Project Cost due to Revision/ Cancellation^ (in ₹ crore)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Beyond 2022-23
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
up to 2012-13				2,35,368	1,35,834	48,733	14,263	7,316	2,045						
2013-14	472	1,34,019	1,27,328 (5.0)	15,139	34,769	44,925	19,909	7,105	2,677	1,472					
2014-15	326	87,601	87,253 (0.4)	98	14,822	34,589	25,765	9,535	1,246	162	1,036				
2015-16	346	95,371	91,781 (3.8)		3,787	7,434	37,517	28,628	8,079	4,964	1,152	220			
2016-17	541	1,82,807	1,79,249 (2.0)		1,352	3,952	25,388	71,186	41,075	21,643	8,566	4,001	2,086		
2017-18	485	1,72,831	1,68,239 (2.6)			620	15,184	12,445	63,001	41,436	22,767	10,202	2,342	242	
2018-19	409	1,76,581	1,59,189 (9.8)				569	6,862	11,000	59,973	47,080	21,248	9,759	2,663	35
2019-20	320	2,00,038	1,75,830 (12.1)						4,049	14,524	53,978	58,556	28,116	14,114	2,493
2020-21	220	75,558	75,558 (0.0)							2,491	3,709	29,013	26,166	9,711	4,468
2021-22	403	1,43,314									3,610	10,258	59,897	44,282	25,267
Total&				**2,50,605**	**1,90,564**	**1,40,253**	**1,38,595**	**1,43,077**	**1,33,172**	**1,46,665**	**1,41,898**	**1,33,498**	**1,28,366**	**71,012**	**32,263**
Percentage change					**-24.0**	**-26.4**	**-1.2**	**3.2**	**-6.9**	**10.1**	**-3.3**	**-5.9**	**-3.8**	**#**	

&: Column totals indicate envisaged capex in a particular year covering the projects which received financial assistance in various years. The estimate is *ex-ante* incorporating only envisaged investments. They are different from those actually realised/utilised.
#: Per cent change for 2022-23 is not worked out as capex from proposal that are likely to be sanctioned in 2022-23 is not fully available.
^: Figures in bracket are percentage of revision/cancellation.

Table A2: Phasing of Capex Projects* Funded Through ECBs/ FCCBs/RDBs**

Loans contracted in ↓	No of LRNs issued	Total loan contracted (₹ crore)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Beyond 2022-23
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
up to 2012-13			53,465	22,667	6,400	1,333								
2013-14	563	80,736		56,197	20,976	3,563								
2014-15	478	57,327			36,791	16,806	3,151	575	2	2				
2015-16	314	38,885				28,998	7,311	2,572	4					
2016-17	346	22,154					14,953	6,005	1,192	2	2			
2017-18	419	37,896						17,822	13,054	6,484	529	7		
2018-19	515	72,490							46,221	17,725	1,236	5,398	1,844	66
2019-20	495	95,491								65,367	17,157	11,717	965	285
2020-21	344	40,382									18,084	21,523	642	133
2021-22	361	47,824										25,533	21,793	498
Total&			**53,465**	**78,864**	**64,167**	**50,700**	**25,415**	**26,974**	**60,473**	**89,580**	**37,008**	**64,178**	**25,244**	**982**
Percentage change				**47.5**	**-18.6**	**-21.0**	**-49.9**	**6.1**	**124.2**	**48.1**	**-58.7**	**73.4**	**#**	

*: Projects which did not receive assistance from banks/FIs.
**: Rupee Denominated Bonds (RDBs) have been included since 2016-17.
#: Per cent change for 2022-23 is not worked out as capex from proposals that are likely to be drawn in 2022-23 is not fully available.
&: The estimate is *ex-ante* incorporating only envisaged investment. They are different from those actually realised/utilised.
LRN: Loan registration number

Table A3: Phasing of Capex of Projects Funded Through Equity Issues*

Equity issued during ↓	No. of Companies	Capex Envisaged (₹ crore)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Beyond 2022-23
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Up to 2012-13			988	494	108									
2013-14	21	454			384	70								
2014-15	24	1,078			189	557	332							
2015-16	40	4,511			11	644	2,753	849	183	71				
2016-17	29	1,159				14	471	368	163	143				
2017-18	51	1,538						419	327	787	5			
2018-19	39	609							506	90	13			
2019-20	12	53							2	49	2			
2020-21	12	663									139	421	84	19
2021-22	27	3,410									10	757	1,304	1,339
Total&			**988**	**494**	**692**	**1,285**	**3,556**	**1,636**	**1,181**	**1,140**	**169**	**1,178**	**1,388**	**1,358**
Percentage change				**-50.0**	**40.1**	**85.7**	**176.7**	**-54.0**	**-27.8**	**-3.5**	**-85.2**	**597.0**	**#**	

*: Projects which did not receive assistance from banks/FIs/ECBs/FCCBs/RDBs.
#: Per cent change for 2022-23 is not worked out as capex from proposals that are likely to be implemented in 2022-23 is not fully available.
&: The estimate is *ex-ante* incorporating only envisaged investment, they are different from those actually realised/utilised.

Table A4: Phasing of Capex of Projects Funded Through Banks/FIs/IPOs/ECBs/FCCBs/RDBs*

Year of sanction ↓	No of Companies	Project Cost (₹ crore)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Beyond 2022-23
	Banks/ FIs/ ECBs/ FCCBs/ RDBs/IPOs													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
up to 2012-13			2,89,821	1,58,995	55,241	15,596	7,316	2,045						
2013-14	1056	2,08,518	15,139	90,966	66,285	23,542	7,105	2,677	1,472					
2014-15	828	1,45,658	98	14,822	71,569	43,128	13,018	1,821	164	1,038				
2015-16	700	1,35,177		3,787	7,445	67,159	38,692	11,500	5,151	1,223	220			
2016-17	916	2,02,562		1,352	3,952	25,402	86,610	47,448	22,998	8,711	4,003	2,086		
2017-18	955	2,07,673			620	15,184	12,445	81,242	54,817	30,038	10,736	2,349	242	
2018-19	963	2,32,288				569	6,862	11,000	1,06,700	64,895	22,497	15,157	4,507	101
2019-20	827	2,71,374						4,049	14,526	1,19,394	75,715	39,833	15,079	2,778
2020-21	576	1,16,603							2,491	3,709	47,236	48,110	10,437	4,620
2021-22	791	1,94,548								3,610	10,268	86,187	67,379	27,104
Total&			**3,05,058**	**2,69,922**	**2,05,112**	**1,90,580**	**1,72,048**	**1,61,782**	**2,08,319**	**2,32,618**	**1,70,675**	**1,93,722**	**97,644**	**34,603**
Percentage Change				**-11.5**	**-24.0**	**-7.1**	**-9.7**	**-6.0**	**28.8**	**11.7**	**-26.6**	**13.5**	**#**	

*: Rupee Denominated Bonds (RDBs) have been included since 2016-17.
#: Per cent change for 2022-23 is not worked out as capex from proposals that are likely to be sanctioned in 2022-23 is not fully available.
&: The estimate is *ex-ante* incorporating only envisaged investment, they are different from those actually realised/utilised.

Table A5: Size-wise Distribution of Projects Sanctioned by Banks/FIs: 2012-13 to 2021-22

Period	Number and Share of Projects	Less than ₹100 crore	₹100 crore to ₹500 crore	₹500 crore to ₹1000 crore	₹1000 crore to ₹5000 crore	₹5000 crore & above	Total
2012-13	No. of Projects	245	119	20	23	7	**414**
	Per cent Share	4.8	14.6	7.3	26.8	46.4	**100 (1,89,483)**
2013-14	No. of Projects	306	115	25	21	5	**472**
	Per cent Share	8.3	20.0	13.9	29.1	28.7	**100 (1,27,328)**
2014-15	No. of Projects	223	65	18	19	1	**326**
	Per cent Share	9.0	16.6	14.6	47.8	12.0	**100 (87,253)**
2015-16	No. of Projects	214	76	34	21	1	**346**
	Per cent Share	8.6	20.9	26.0	38.5	5.9	**100 (91,781)**
2016-17	No. of Projects	287	180	29	40	5	**541**
	Per cent Share	5.8	23.3	11.9	41.7	17.4	**100 (1,79,239)**
2017-18	No. of Projects	263	149	28	42	3	**485**
	Per cent Share	5.2	21.0	10.8	43.8	19.1	**100 (1,68,239)**
2018-19	No. of Projects	220	110	39	36	4	**409**
	Per cent Share	4.8	17.0	17.0	39.6	21.6	**100 (1,59,189)**
2019-20	No. of Projects	150	84	45	36	5	**320**
	Per cent Share	3.3	11.9	18.6	37.4	28.8	**100 (1,75,830)**
2020-21	No. of Projects	128	52	15	24	1	**220**
	Per cent Share	5.5	16.8	14.2	53.5	10.0	**100 (75,558)**
2021-22	No. of Projects	202	126	37	36	2	**403**
	Per cent Share	5.6	19.9	19.8	46.8	7.8	**100 (1,43,314)**

Note: i. Figures in brackets are total cost of projects in ₹ crore.
ii. Per cent share is the share in total cost of projects. Percentages may not total 100 due to rounding.

Table A6: Purpose-wise Distribution of Projects Sanctioned by Banks/FIs during 2012-13 to 2021-22

Period	Number and Share of Projects	New	Expansion & Modernisation	Diversification	Others	Total
2012-13	No. of Projects	303	107	–	4	**414**
	Per cent Share	84.2	14.7	–	1.1	**100 (1,89,483)**
2013-14	No. of Projects	361	95	2	14	**472**
	Per cent Share	65.2	20.1	–	14.7	**100 (1,27,328)**
2014-15	No. of Projects	203	92	2	29	**326**
	Per cent Share	39.4	14.7	0.2	45.7	**100 (87,253)**
2015-16	No. of Projects	260	64	3	19	**346**
	Per cent Share	73.6	14.3	0.1	12	**100 (91,781)**
2016-17	No. of Projects	429	97	4	11	**541**
	Per cent Share	78.6	9.9	0.1	11.3	**100 (1,79,249)**
2017-18	No. of Projects	396	80	2	7	**485**
	Per cent Share	89.0	9.5	0.1	1.5	**100 (1,68,239)**
2018-19	No. of Projects	309	80	–	20	**409**
	Per cent Share	76.8	19.3	–	3.9	**100 (1,59,189)**
2019-20	No. of Projects	262	37	1	20	**320**
	Per cent Share	79.8	13.7	–	6.4	**100 (1,75,830)**
2020-21	No. of Projects	181	38	1	–	**220**
	Per cent Share	94.1	5.9	–	–	**100 (75,558)**
2021-22	No. of Projects	313	89	1	–	**403**
	Per cent Share	89.1	10.8	0.1	–	**100 (1,43,314)**

Note: i. Figures in brackets are total cost of projects in ₹ crore.
ii. Per cent share is the share in total cost of projects. Percentages may not total 100 due to rounding.
iii. -: Nil/ Negligible.

Table A7: Industry-wise Distribution of Projects Sanctioned by Banks/FIs: 2012-13 to 2021-22

Industry	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22	
	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share
Infrastructure	82	47.9	87	39.8	74	48.8	108	72.0	204	62.6	150	51.8	122	60.4	99	61.5	63	74.3	96	56.7
i) Power	71	39.4	70	35.1	65	42.2	92	57.1	170	45.4	117	36.5	78	26.8	47	32.9	35	49.3	59	29.5
ii) Telecom	2	5.6	1	–	1	4.9	1	0.3	1	–	–	–	–	–	–	–	–	–	–	–
iii) Ports & Airports	1	1.9	1	0.8	–	–	3	2.4	8	5.7	6	3.1	4	14.2	4	8.4	1	0.1	2	5.8
iv) Storage & Water Management	–	–	5	1.1	2	0.6	4	4.2	6	3.7	2	0.4	13	5.7	4	0.4	5	1.2	2	0.2
v) SEZ, Industrial, Biotech and IT Park	8	0.9	8	1.5	3	0.9	1	0.4	2	0.4	9	1.6	11	3.2	8	1.3	5	2.2	3	1.1
vi) Roads & Bridges	–	–	2	1.2	3	0.3	7	7.6	17	7.3	16	10.1	16	10.4	36	18.5	17	21.5	30	20.1
Construction	20	2.8	27	2.1	29	4.0	26	1.8	60	12.0	39	5.3	26	2.3	44	11.4	27	4.8	23	7.3
Textiles	31	1.9	58	10.3	50	4.1	49	4.8	57	4.1	54	3.7	27	3.4	11	0.5	15	1.8	56	4.5
Electrical Equipments & Electronics	10	1.9	9	2.0	7	0.2	2	0.2	9	0.2	6	0.2	1	0.1	4	–	1	0.1	5	4.0
Metal & Metal Products	51	28.9	44	17.0	17	17.4	14	1.5	23	4.9	21	9.7	16	3.0	14	0.8	6	0.8	27	3.9
Chemicals & Fertilisers	19	1.1	15	1.0	7	2.6	11	1.6	10	2.1	23	11.4	19	2.9	12	1.3	9	1.6	20	3.4
Cement	11	3.9	12	7.1	7	3.8	5	1.9	5	2.3	3	0.6	10	5.1	2	0.1	5	1.3	3	3.2
Transport Services	16	1.7	15	0.5	5	0.6	10	1.2	12	0.4	16	4.1	5	0.2	14	1.4	1	0.1	19	2.5
Hospitals & Health Services	17	1.4	10	0.7	2	0.1	1	–	22	1.1	18	1.8	15	2.6	12	0.7	7	0.3	19	2.3
Food Products	36	0.9	43	1.8	34	2.9	26	1.8	38	0.9	47	2.8	28	1.4	32	1.9	20	1.5	25	1.7
Pharmaceuticals	10	0.4	19	1.3	9	1.5	11	0.3	12	1.1	15	0.6	23	1.6	9	0.6	7	0.5	20	1.3
Manufacturing of Non-electric Machinary	9	0.7	6	1.2	–	–	–	–	4	0.2	2	–	20	3.7	3	0.1	3	0.3	7	1.3
Printing & Publishing	1	–	2	4.2	1	–	1	–	3	0.1	1	0.1	–	–	1	0.6	–	–	1	1.1
Glass & Pottery	3	–	11	0.3	19	0.7	8	0.5	19	0.6	20	0.8	2	–	–	–	12	0.6	9	1.1
Coke and Petroleum Products	–	–	1	0.5	1	3.4	2	2.0	2	0.5	1	0.4	–	–	3	8.0	–	–	7	1.0
Others*	98	6.2	113	10.2	64	9.8	72	10.3	61	7.0	69	6.9	95	13.2	60	10.9	44	12.2	66	4.7
Total	**414**	**100**	**472**	**100**	**326**	**100**	**346**	**100**	**541**	**100**	**485**	**100**	**409**	**100**	**320**	**100**	**220**	**100**	**403**	**100**
Total Cost of Projects (in ₹ crore)	**1,89,483**		**1,27,328**		**87,253**		**91,781**		**1,79,249**		**1,68,239**		**1,59,189**		**1,75,830**		**75,558**		**1,43,314**	

*: Comprise industries like Hotel & Restaurants, Rubber & Plastic Products, IT Software, Sugar and allied products, Transport Equipment, Paper & Paper Products, Agricultural & Related Activities, Mining & Quarrying, Entertainment, Trading of services, other manufacturing, other services.

Note: i. Per cent share is the share in total cost of project. Percentages may not total 100 due to rounding.

ii. -: Nil/Negligible.

Table A8: State-wise Distribution of Projects Sanctioned by Banks/FIs: 2012-13 to 2021-22

Industry	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22	
	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share	No. of Projects	Per cent Share
Rajasthan	41	5.3	24	1.4	29	11.1	10	0.9	23	2.8	33	6.3	21	7.7	23	3.8	21	17.1	33	13.3
Uttar Pradesh	26	4.4	21	1.1	20	5.4	15	2.5	22	3.7	30	2.4	28	4.8	24	5.6	30	13.7	33	12.9
Gujarat	58	5.6	66	14.5	71	9.5	61	15.1	102	23.0	71	8.0	56	11.1	47	15.1	54	17.1	83	11.9
Maharashtra	67	10.7	76	19.7	38	14.8	36	9.4	57	8.8	65	23.3	34	11.5	41	6.9	13	8.5	44	9.5
Tamil Nadu	22	1.8	33	5.4	27	2.9	26	9.3	23	4.4	28	6.6	32	12.8	28	8.3	7	0.7	40	8.7
Karnataka	20	1.6	39	6.2	27	5.4	21	6.2	52	6.8	64	9.6	34	5.7	33	17.2	11	6.1	24	6.8
Kerala	3	0.3	3	–	4	0.2	4	0.1	6	2.7	3	0.1	6	0.9	3	1.0	-	-	5	4.2
Madhya Pradesh	13	3.9	30	6.1	14	3.9	21	7.0	18	7.5	10	0.7	12	1.6	10	1.2	19	2.8	18	4.1
Bihar	7	0.1	6	0.2	4	0.1	6	0.2	4	0.2	3	0.1	6	0.4	6	3.4	1	–	5	3.3
Telangana	-	-	-	-	-	-	10	3.8	51	5.5	17	1.9	26	9.1	12	4.0	9	1.9	15	3.0
Goa	2	0.2	-	-	-	-	1	–	3	0.6	2	1.9	3	1.8	2	0.1	-	-	3	2.9
West Bengal	13	1.0	12	1.2	9	1.3	14	3.1	18	1.7	14	1.8	13	1.1	7	0.9	3	0.4	11	2.6
Andhra Pradesh	35	5.7	37	4.0	24	8.1	33	12.3	47	8.0	22	9.9	29	11.1	12	4.0	7	15.0	12	2.3
Odisha	10	26.8	10	11.7	5	15.9	6	3.1	6	3.1	5	3.0	9	1.4	6	1.9	2	0.1	9	2.1
Punjab	12	10.9	28	1.5	6	0.3	11	1.7	29	2.1	31	2.2	15	1.9	9	0.8	4	0.7	15	2.1
Haryana	18	1.2	15	1.1	11	1.9	16	3.6	13	1.6	21	0.5	18	1.7	20	3.4	15	7.8	14	2.0
Himachal Pradesh	5	0.3	3	1.8	3	0.1	8	1.4	1	–	8	2.3	7	0.3	6	0.1	4	0.2	7	1.2
Jharkhand	8	1.2	4	0.3	2	0.7	5	0.3	1	–	3	0.3	2	0.5	4	9.4	1	0.2	6	0.8
Delhi	4	0.6	5	0.4	2	0.1	1	0.1	5	0.3	6	1.2	8	1.3	3	0.6	2	0.1	3	0.6
Chhatisgarh	9	4.1	16	10.7	8	7.4	8	4.6	15	4.0	7	4.8	6	0.9	6	0.2	3	1.2	4	0.6
Multi-State #	15	7.7	21	6.9	10	9.5	13	13.5	17	11.8	16	7.5	15	9.8	8	11.7	2	1.4	7	4.0
Others*	26	6.8	23	5.7	12	1.3	20	1.6	28	1.3	26	5.6	29	3.0	10	0.5	12	5.2	12	0.9
Total	**414**	**100**	**472**	**100**	**326**	**100**	**346**	**100**	**541**	**100**	**485**	**100**	**409**	**100**	**320**	**100**	**220**	**100**	**403**	**100**
Total Cost of Projects (in ₹ crore)	**1,89,483**		**1,27,328**		**87,253**		**91,781**		**1,79,249**		**1,68,239**		**1,59,189**		**1,75,830**		**75,558**		**1,43,314**	

#: Comprise projects over several states.
*: Comprise remaining states/union territories.
Note: i. Per cent share is the share in total cost of project. Percentages may not total 100 due to rounding.
ii. -: Nil/Negligible.

*Exchange Rate Volatility in Emerging Market Economies**

The article analyses volatility trend of currencies of select EMEs vis-à-vis US Dollar since 2007 covering major episodes of high-volatility such as the Global Financial Crisis, Eurozone Sovereign Debt Crisis, Taper Tantrum, Covid-19 outbreak, recent Russia-Ukraine conflict and Fed tightening of monetary policy. It also examines Indian Rupee's volatility during these episodes and assesses the effectiveness of intervention by the Reserve Bank of India in curbing excessive volatility. The study finds that volatility expectations of the INR have come down over the study period. Further, the Reserve Bank has been able to achieve its intervention objectives over successive high-volatility episodes of global spillovers induced exchange market pressure.

Introduction

Currency volatility is a measure of the frequency and extent of changes in one country's currency's value *vis-à-vis* another country's currency. It is measured by calculating the changes around the mean, expressed in terms of daily, weekly, monthly, or annual standard deviations. The larger the number, greater is the volatility over a period. In a world where sizable trades happen in currencies with market-determined exchange rates[1], spikes in currency volatility are very common. While volatility of major currency (USD, Euro, Pound, Yen, Canadian Dollar, Australian Dollar, and Swiss Franc) pairs is usually low, that of Emerging Market Economy (EME) currencies (sometimes referred to as exotic currencies by traders) is relatively higher.

Some of the important factors affecting volatility of a specific currency are interest rates, inflation, government debt, current account deficit, political stability, dependence on commodities as well as geo-political events. Further, overall liquidity of currency also matters, which is consistent with the fact that major currencies have lower volatility *vis-à-vis* so-called exotic currencies, with major currencies accounting for around 85 per cent of the turnover.[2]

Capital flows and associated exchange rate fluctuations affect macroeconomic and financial stability in EMEs through three main channels: (i) exchange rate pass-through to inflation; (ii) export competitiveness; and (iii) domestic financial conditions. The impact is more significant in EMEs than in advanced economies owing to their economic and financial structures (BIS, 2019). Thus, study of exchange rate volatility across EMEs is of paramount importance. With this backdrop, the article attempts to analyse volatility trend of currencies of select *EMEs vis-à-vis the* US Dollar since 2007. Section II covers volatility trends of the Indian Rupee, Indonesian Rupiah, Turkish Lira, Brazilian Real, South African Rand, South Korean Won, Philippines Peso and Thai Baht (first five were termed 'Fragile Five' currencies during the Taper Tantrum). The section also discusses realised volatility trends of select currencies. Section III further digs into volatility trend of the Indian Rupee, whereas Section IV discusses reasons for decline in volatility of EMEs in general and INR in particular. Section V concludes.

II. Volatility trend of select EME currencies

Trend of Implied Volatility

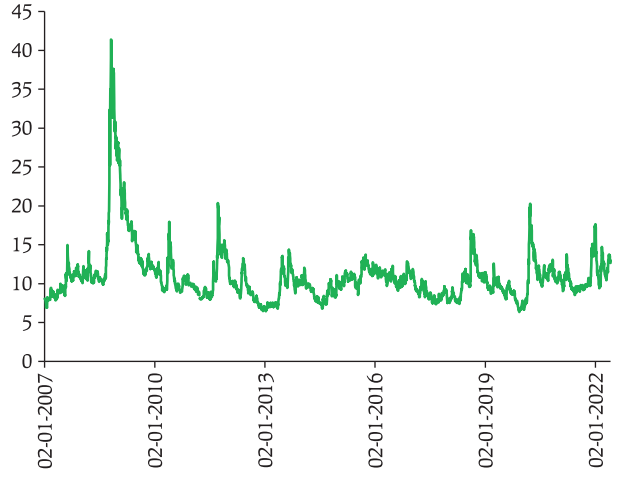
To analyse the trend of volatility of select EME currencies, an equal-weighted implied volatility index of select EME currencies (one-month tenor) *vis-à-vis* US Dollar has been computed. As can be seen in the Chart 1, volatility has spiked quite a few times since

* This article is prepared by Saurabh Nath, Vikram Rajput and Gopalakrishnan S. from the Financial Markets Operations Department. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

[1] As per IMF's Annual Report on Exchange Arrangements and Exchange Restrictions 2020, a total of 63 currencies fell in 'floating/ free-floating' bracket.

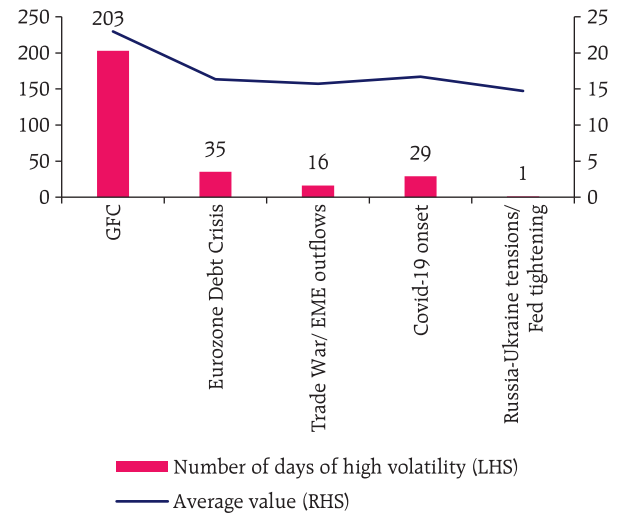
[2] BIS Triennial Central Bank survey, 2019

Chart 1: Average 1-Month Implied Volatility Trend of select EME Currencies *vis-a-vis* US Dollar



Sources: Bloomberg; and Authors' calculations.

Chart 2: Greater than 1-Sigma Moves during High-Volatility Episodes- Select EME currencies



Sources: Bloomberg; and Authors' calculations.

2007, most notably during the Global Financial Crisis (GFC) (2008-09), Eurozone Sovereign Debt Crisis (2010-11), Trade war (2018), onset of Covid-19 pandemic (2020), Russia-Ukraine conflict and Fed tightening (2022). Volatility measure for EME currencies was highest during the GFC with a peak value of around 40, whereas peak volatility levels are observed to trend lower in subsequent high volatility episodes mentioned above.

Another observation pertains to the tenor in each episode during which volatility has remained high *i.e.*, above one standard deviation of computed index values . As can be seen in the Chart 2, it has also come down over the period from 203 trading days in GFC wherein values were more than one-sigma level of 14.71, to just one[3] during the ongoing volatility phase (Russia-Ukraine conflict/ Fed tightening) (till end of May 2022). Moreover, average implied volatility during each of the episodes has also declined from around 23 during GFC to less than 15 during ongoing volatility phase.

Generally, currency volatility is almost always associated with EME currencies or those of less-developed nations, though spikes in volatility are not totally uncommon[4] in Advanced Economies' (AE).

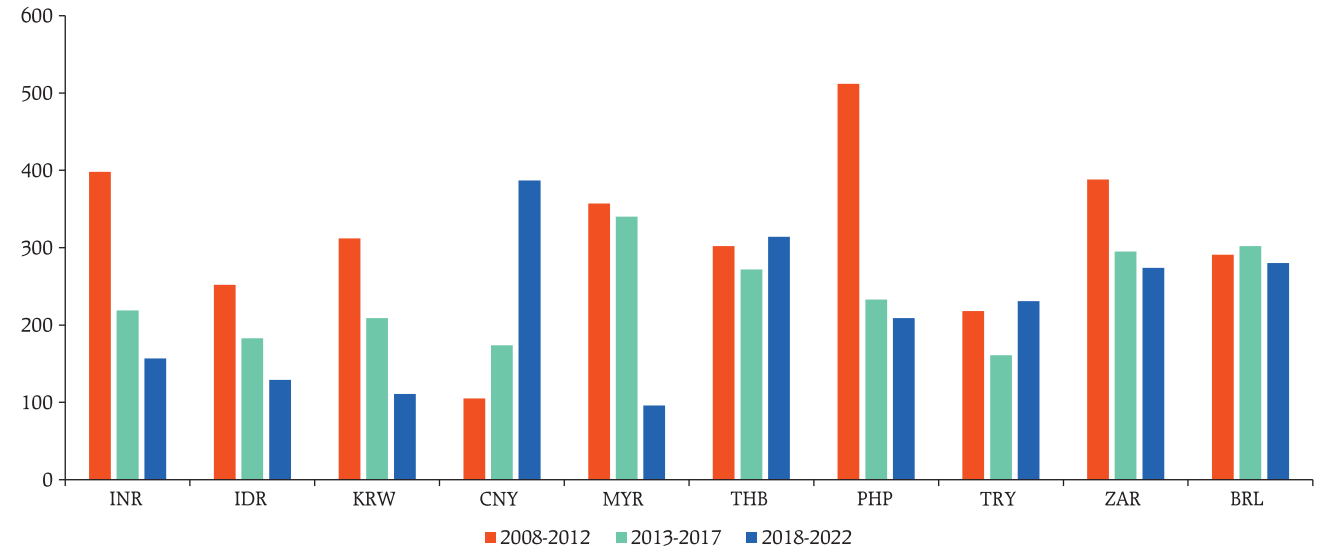
Trend of Historical Volatility of select EM currencies

Looking at the volatility of daily returns of select EM currencies on an individual basis *vis-à-vis* the US Dollar, it is observed that volatility of most currencies

[3] While there was only one day when computed value was greater than one-sigma in the ongoing crisis, number of such days was 12 just before the crisis began, primarily due to extremely high volatility in Turkish Lira, averaging 76% between December 22, 2021 and January 6, 2022. The surge in volatility was on account of local factors and was not observed in other currencies.

[4] Japanese Yen faced extreme depreciation pressure amidst Asian Financial Crisis (1997), Russian Financial Crisis (1998) and near collapse of Long-Term Capital Management fund (Cai *et al.*). However, on October 7, 1998, the Yen suddenly rose from 133.90/US Dollar (USD) to 120.55/USD—registering the largest per cent change in one day since 1974 (Federal Reserve Bulletin, 1999). The rapid appreciation of the yen was associated with investors suddenly unwinding positions in the 'yen-carry' trade where funds had borrowed yen at interest rates near zero and then invested in higher-yielding securities outside Japan. The positions were unwound as Bank of Japan announced a significant reduction in its purchase of government securities which led to an increase in Japanese yields. The yen finished the quarter ending December 1998 at 112.80/USD. Another event of heightened volatility in an AE currency pertains to Brexit. On June 23, 2016, the UK voted to leave the EU which took the markets by surprise. Sterling which had initially reached highs of USD 1.50, experienced its largest intra-day depreciation in decades slipping to around 1.32 levels.

Chart 3: Greater than One-Sigma Moves in select EM Currencies

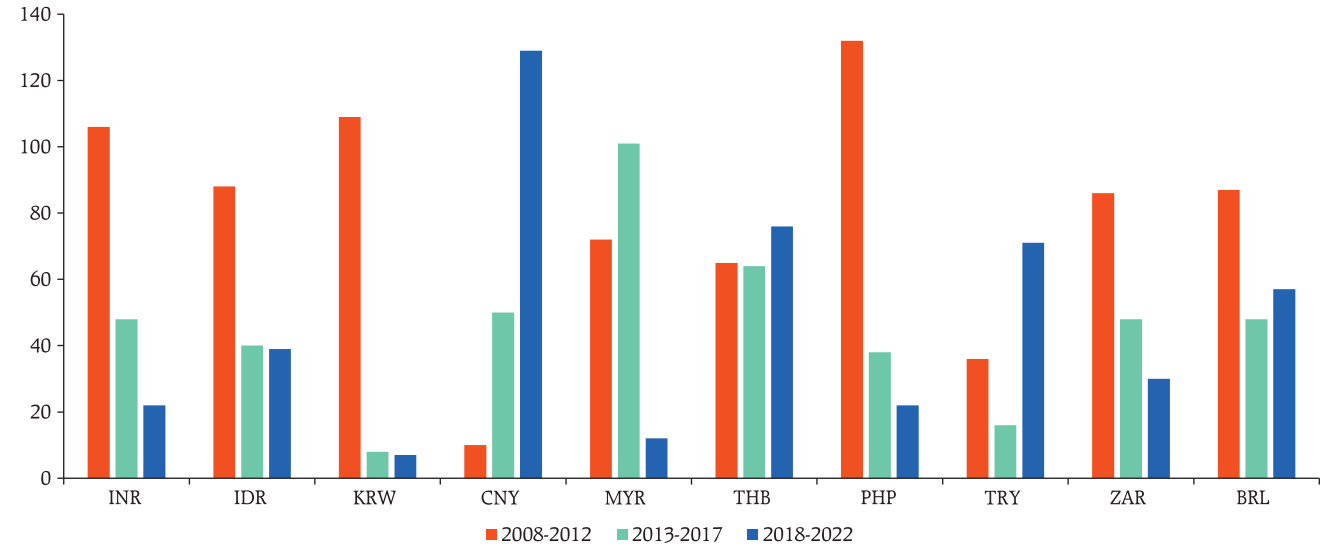


Sources: Bloomberg; and Authors' calculations

has fallen 2018 onwards relative to 2008-12 period (and in most cases relative to 2013-17 as well). Charts 3 and 4 plot the number of days the daily returns have exceeded one and two standard deviations.

INR's breach of 1-sigma level reduced from 398 days during 2008-12 to 157 days in the ongoing period. A similar trend is visible for the INR when we consider two-sigma moves. As regards the rise in CNY's volatility, the same can be attributed to the depreciation of the currency during the trade-war era of 2018 and 2019 as well as around Covid outbreak in the first half of 2020. Further, introduction of a "countercyclical" component by China's central bank in its model to calculate Yuan's daily fix (central parity rate) in 2017 gave the central bank more control over the currency, making it harder for investors to predict the yuan's value. The

Chart 4: Greater than Two-Sigma Moves in select EM currencies



Sources: Bloomberg; and Authors' calculations

introduction of the counter-cyclical factor was seen to be increasing the weight of the discretionary part of the fixing by the bank and a step back from making the Yuan exchange rate more market driven (Chi Lo, 2017). Another study highlighted that the volatility of renminbi notably increased since the 2015 Yuan devaluation (Hong Kong Monetary Authority, 2021). Further, volatility has increased in case of Turkish Lira (TRY) and Thai Baht (THB) also, though to a lesser degree vis-à-vis CNY.

While currency volatility generally depends on economic fundamentals or country specific risks, factors such as delta hedging may also exacerbate it (Box 1)

Box 1: Volatility in currencies due to Delta Hedging

Traders provide liquidity by being willing to buy or sell options in return for compensation, but they get exposed to the potential large downside associated with short option positions. In this context, delta hedging allows traders to hedge the downside risk of short option positions (delta, one of the option greeks, measures change in the option position *vis-à-vis* change in the underlying asset's price, while gamma is the rate of change in delta *vis-à-vis* change in the underlying's price). However, delta-hedging is imperfect as delta changes with change in underlying asset's price, thus requiring continuous rebalancing of the hedge. For options which are deep in-the-money or out-of-the-money or far from expiry, delta is generally stable (gamma is low), and there is lesser need to rebalance the hedge. However, for at-the-money options and/ or options approaching expiry, delta may fluctuate quickly, resulting in high gamma, making hedge rebalancing very difficult. (Iqbal, 2018).

Traders monitor trend of the implied volatility of the currencies *vis-à-vis* historical volatility, while taking position in options. If the implied volatility for a currency pair (say USD-INR with USD being the base currency) is above historical standards, which results in the ratio of implied to historical volatility to be above 1, it may result in a view that volatility is over-priced.

Thus, traders look to build short vega (vega is the rate of change in an option position *vis-à-vis* change in volatility of the underlying) position by selling options (for instance short straddle) which also results in short gamma position. If the traders' expectations of low volatility are correct and market is confined within a specific range during the duration of the options contract, the strategy of selling options is profitable as the premium can simply be earned. However, if the currency breaks outside the expected range, the strategy exposes traders to unlimited risks. The more the currency moves, the more is the loss. For instance, if USD-INR level moves sharply upwards (*i.e.*, INR depreciates), traders with a short call position will be forced to buy greater amounts of USD to hedge the exposure, whereas if the level moves sharply downwards (i.e., INR appreciates), traders with short put position have to short greater amounts of USD to limit losses. The ripple effect of such actions is that options players are the ones that assist the directional profile of a market (Evan, 2019). This is also the reason why a currency's volatility increases during the expiry of options that have a large open interest.

The spot market volatility increases if the hedge ratio of the trader, who has net short options (and therefore has a negative gamma exposure) is larger than the hedge ratio of the trader who has net long options. Further, typical option market makers (OMMs), *e.g.*, large banks, dynamically hedge their positions, while option market takers (OMTs), *e.g.*, investors, do not hedge their positions dynamically. This results in an asymmetric net delta hedge demand, which leads to an increase in the spot market volatility (if the OMM is short options or negative gamma) and *vice-versa* (Anderegg *et. al.*, 2022). Some of the recent observations corroborate the findings of the above study. JPY's depreciation *vis-à-vis* USD in April 2022 (it touched a 20-year low) intensified due to negative gamma positions (short call), while its 1-month implied volatility rose to highest level since 2017 (barring Covid-19 outbreak). Similarly, Yuan faced increased depreciation pressure due to covering of losses by traders holding short gamma position along with other factors, and its 1-month risk reversals rose to highest levels since March. 2020 on April 20, 2022.

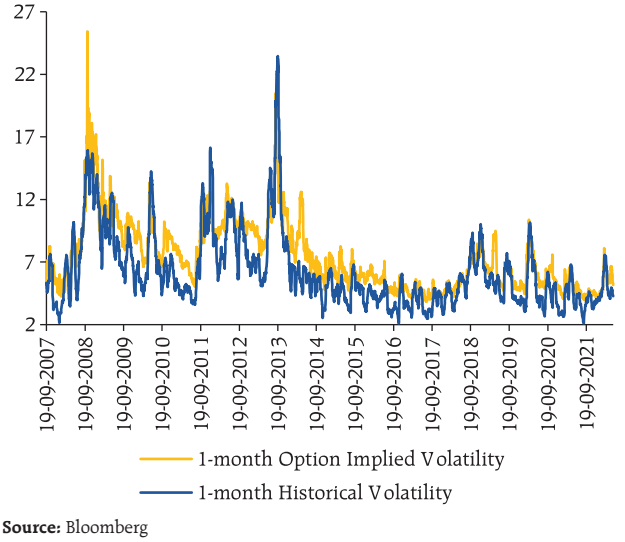
III. Volatility Trend of the Indian Rupee

The section analyses the general trend of INR volatility using various volatility measures and finds that the Reserve Bank has been able to achieve its objective of keeping INR's exchange rate volatility low, which is reflected in trends of realised volatility, volatility cone and intraday range. Further, the currency's volatility expectations have also come down over the study period as corroborated by trends in implied volatility, risk reversal and butterflies, *etc.*

i. Implied volatility *vis-à-vis* historical volatility

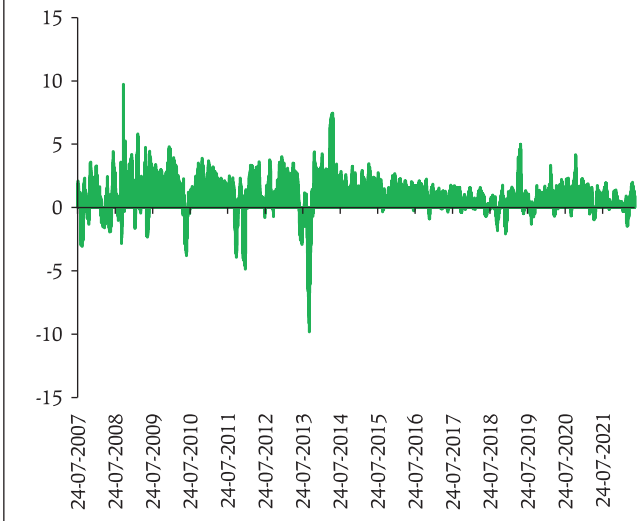
The historical volatility of the USDINR has remained below implied volatility most of the time (Chart 5). Further, if we look at the trend of implied volatility, we can see that it has reduced over the years. Therefore, notwithstanding occasional spikes, the hedging costs-as reflected by USDINR option premiums-has shown a downward trend which also points towards improvement in macro-economic and external sector fundamentals of India over the period as well as the confidence exhibited by the investors.

Chart 5: 1-month Historical *vis-a-vis* Implied Volatility of INR



Source: Bloomberg

Chart 6: Implied Vol-Historical Volatility Spread of INR



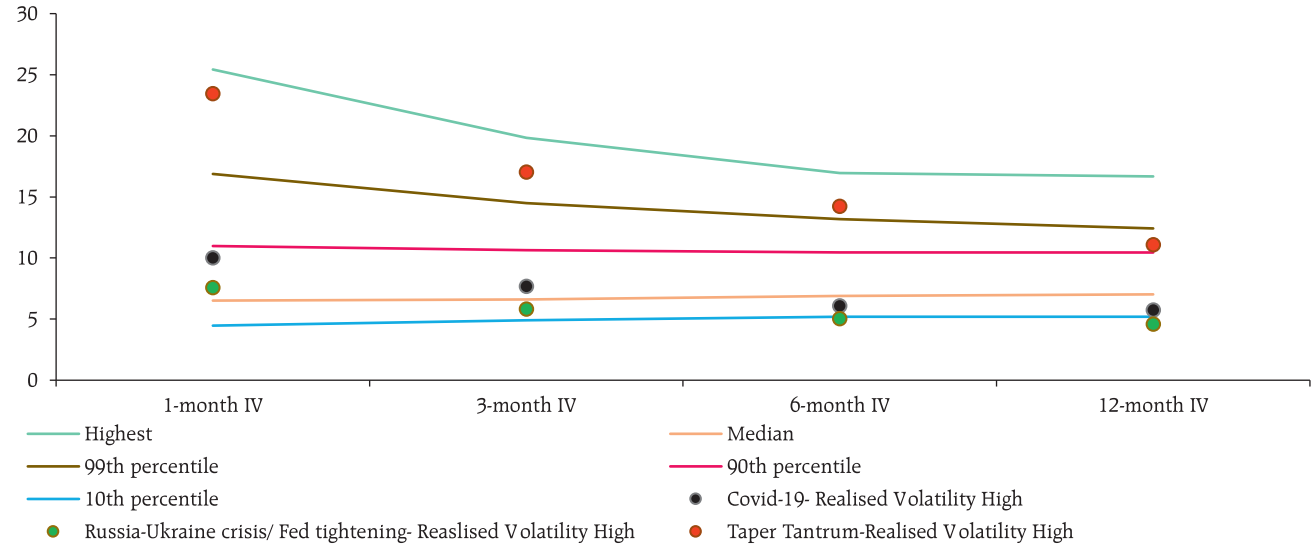
Sources: Bloomberg; and Authors' calculations

Not only has the spread remained in positive territory most of the time, it has also compressed over the last 15 years implying that the volatility predicted using option prices became more accurate over the years. Importantly, it also highlights that domestic forex market has deepened and has become more liquid over the period, allowing for proper pricing of instruments (Chart 6).

ii. Volatility Cone

Another way to view and compare spikes in volatility is volatility cone, which can be plotted using daily implied volatility values observed since 2007 across tenors. Highest realised volatility of INR during specific episodes can be compared *vis-à-vis* implied volatility's historical highs, lows, median, *etc.*, to gauge the extremity of movement in INR. Though the INR's realised volatility was the highest during the Taper Tantrum, it is still below the highest implied volatility values observed during the study period across tenors. Importantly, during the ongoing crisis, highest one-month realised value is near the median implied volatility value (Chart 7).

Chart 7: Realised Volatility Highs during various episodes *vis-a-vis* Implied Volatility cone



Sources: Bloomberg; and Authors' calculations.

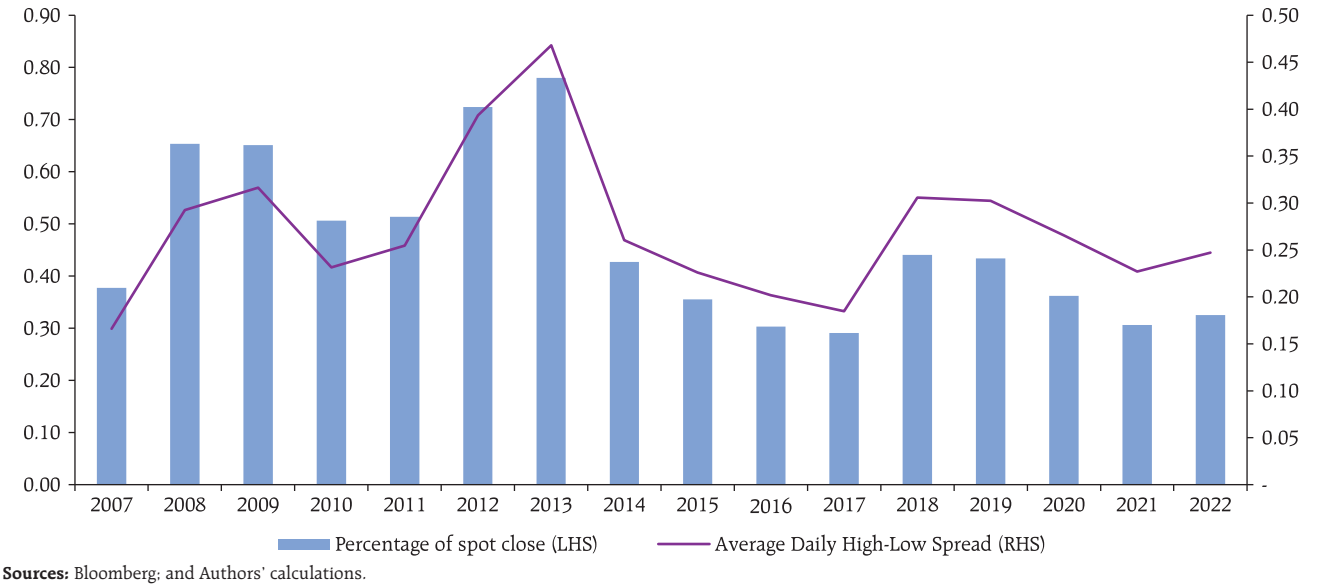
iii. High-Low spread

Average high-low spread (in Rupee) has moved lower *vis-a-vis* the turbulent period of the taper tantrum, whereas the average of spreads as per cent of daily spot closing prices has also come down from about 0.80 in 2013 to around 0.40 levels in 2014 and is currently around 0.30 (Chart 8)

iv. Risk Reversal

The movement of the 25-delta risk reversal[4] of the USDINR pair highlights that out-of-the-money call

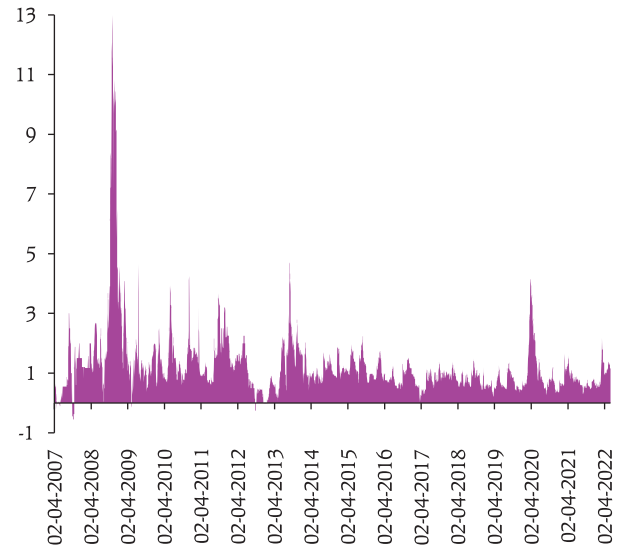
Chart 8: High-Low spread of INR



Sources: Bloomberg; and Authors' calculations.

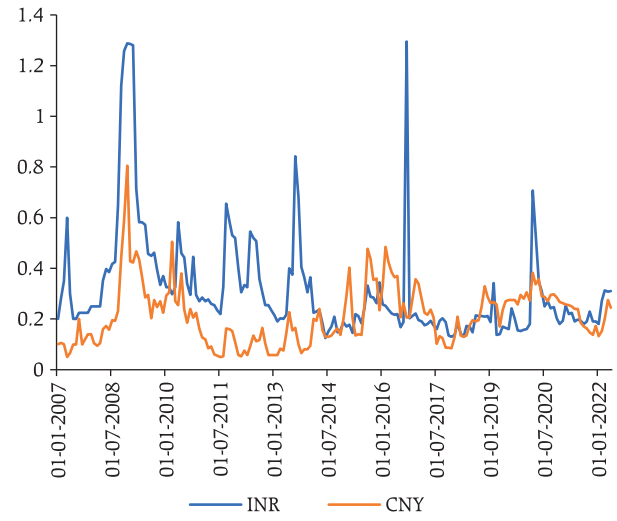
[5] Difference between out-of-the-money call and put option implied volatility.

Chart 9: 25-delta Risk Reversal of INR



Source: Bloomberg.

Chart 10: Trend of 25-delta 1-month Butterfly of INR *vis-a-vis* CNY



Source: Bloomberg.

options have almost always been more expensive than the corresponding put options, implying expectations of depreciation of INR[5] dominating expectations of appreciation (Chart 9). The market has always tilted towards depreciation of the Rupee, which, given the positive interest rate differential between India and the US, is expected. Although spikes have been observed during crisis events, similar to downward trend in implied volatility and IV-HV spread, the height of the spikes in RR, over the study period has declined, reflecting stronger economic fundamentals of India as well as effectiveness of RBI's steps in controlling INR volatility.

v. Butterflies

The trend of one-month butterfly[6] for USDINR shows a distinct change in movement after 2015. Earlier, there were greater expectations of outsized movements with breaches above 0.6 not uncommon; however, post-2015, the measure has compressed, trending below 0.6 level most of the time (Chart 10). Further, the INR's butterfly measure used to be much above CNY earlier, but it has now been trading near CNY's levels, implying market expectations of outsized movements for INR have reduced considerably and are almost equal to that of CNY. This observation highlights the importance of India's improved external metrics over years.

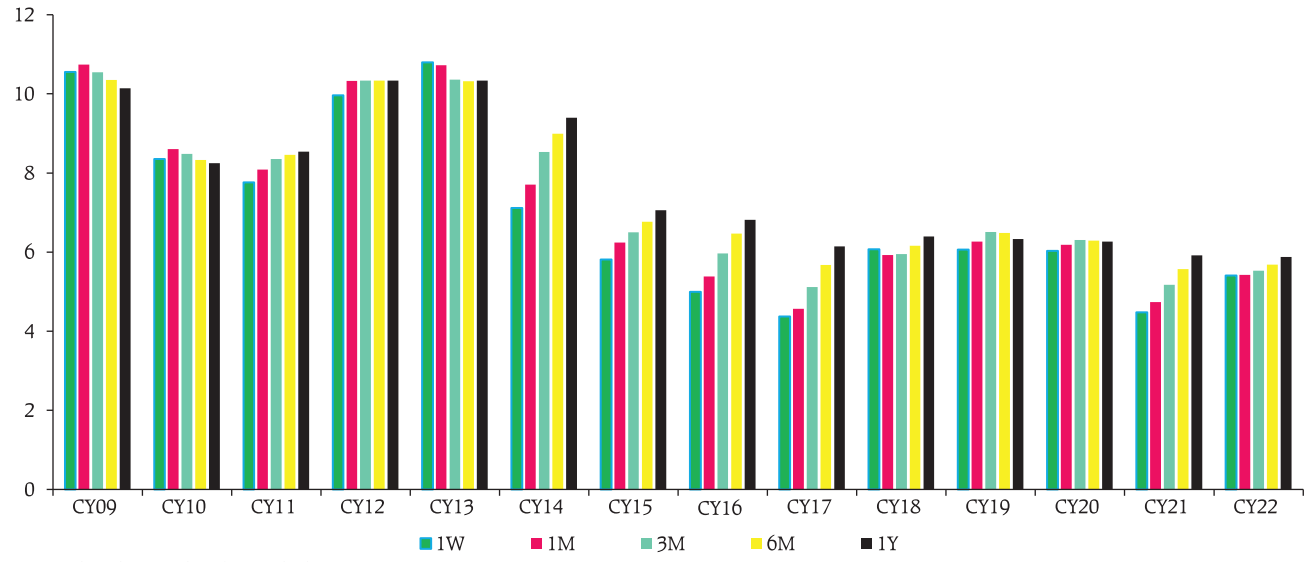
vi. Term Structure of Volatility

The trend of term structure of volatility (based on daily average) from 2009 to 2022 (till end-May 2022) shows that while daily average implied volatility was elevated with value exceeding 8 per cent for almost all tenors between 2009 to 2013, the curve fully submerged below the 8 per cent level in 2015 (Chart 11). Further, the curve never breached the 7 per cent level afterwards, implying that volatility expectations of INR have reduced in all tenors on a durable basis.

6 US Dollar being the base currency

7 Measure of the demand for out-of-the-money options (low delta call and put) as compared to at-the-money options-Interpreted as expectations of outsized movements in a currency in either direction (large appreciation or depreciation) over maturity period of the options, -the higher the value, higher the expectations.

Chart 11: Volatility Term Structure 2009-22



Sources: Bloomberg; and Authors' calculations.

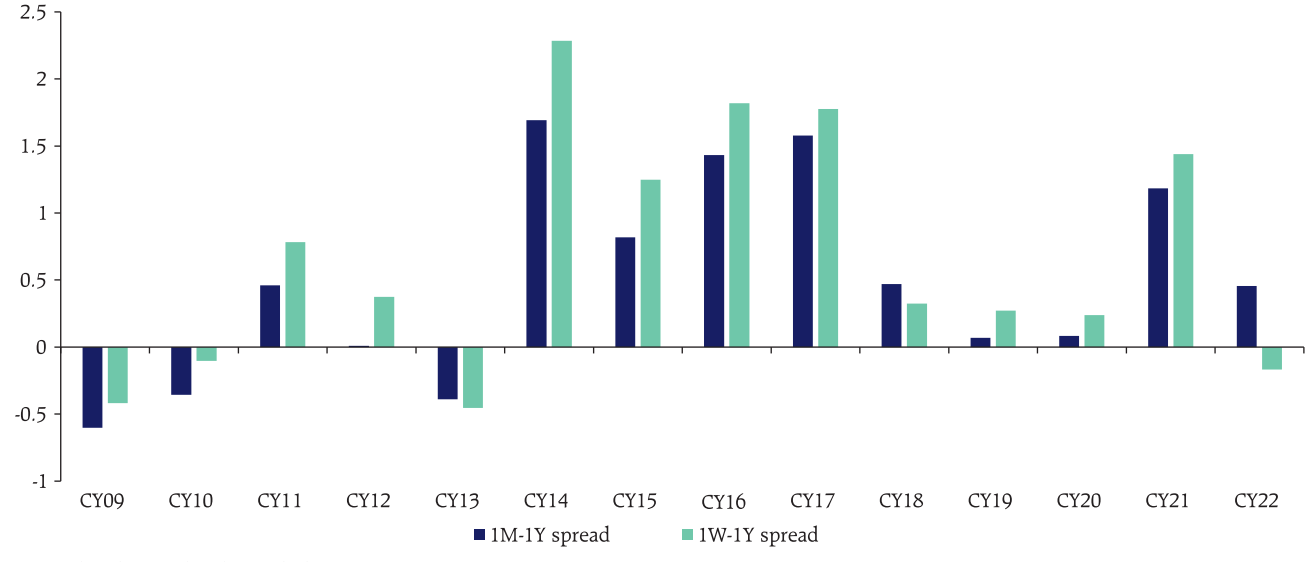
vii. Volatility term spread

The steepness of the term structure measured as the spread between implied volatility of 1-week /1-month tenors *vis-à-vis* 1-year tenor, has fallen over the years (except 2021), after having peaked in 2014, implying benign expectations of volatility across tenors (Chart 12).

IV. EME Currency Volatility

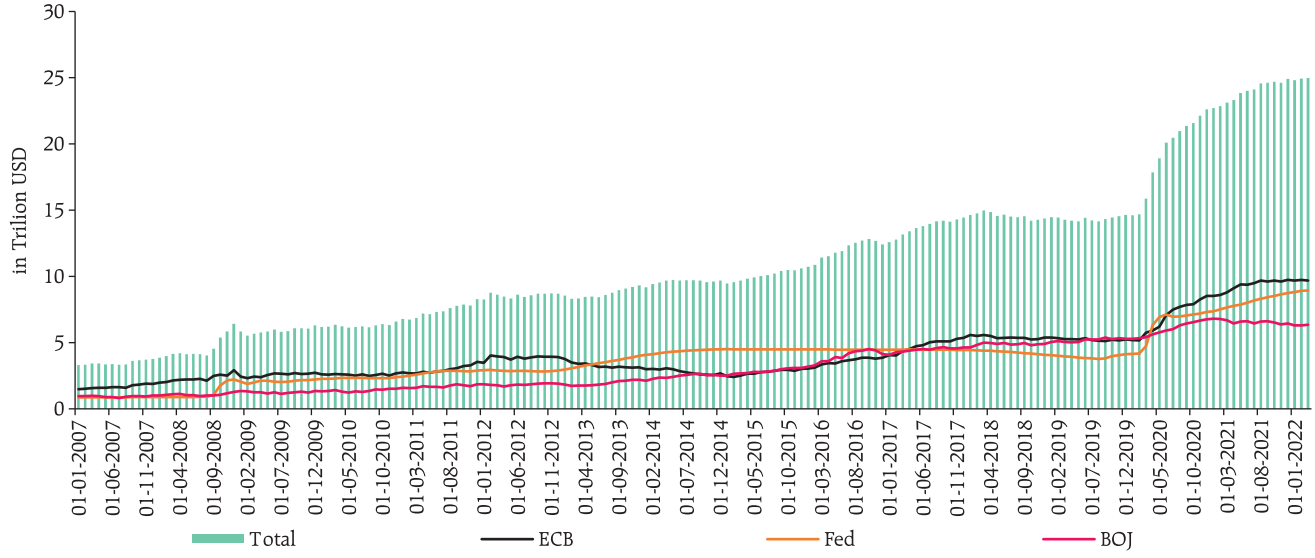
Post GFC, AE central banks flooded markets with liquidity whenever economic conditions became tough, dampening swings in asset prices generally, which involved large expansion of their balance-sheets (Chart 13). Further, as AE central banks largely moved in lockstep, the gaps between yields — key

Chart 12: Volatility Term Spreads of INR



Sources: Bloomberg; and Authors' calculations.

Chart 13: Trend of ECB, Federal Reserve and Bank of Japan Assets



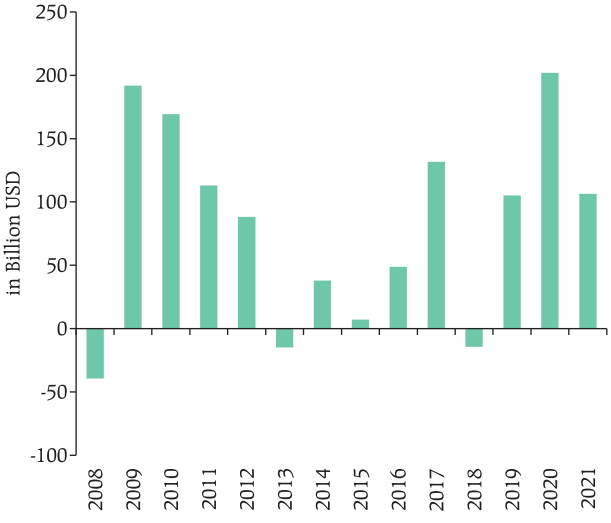
Sources: Refinitiv; and Authors' calculations.

drivers of moves in exchange rates — also remained compressed.

One of the important reasons of lower EME currency volatility over time is the accumulation of foreign exchange reserves by EME central banks. The trend has been evident post GFC, when liquidity infusion by AE central banks led to near/ sub-zero rates and yield hungry investors poured money into EMEs (Charts 14 and 15).

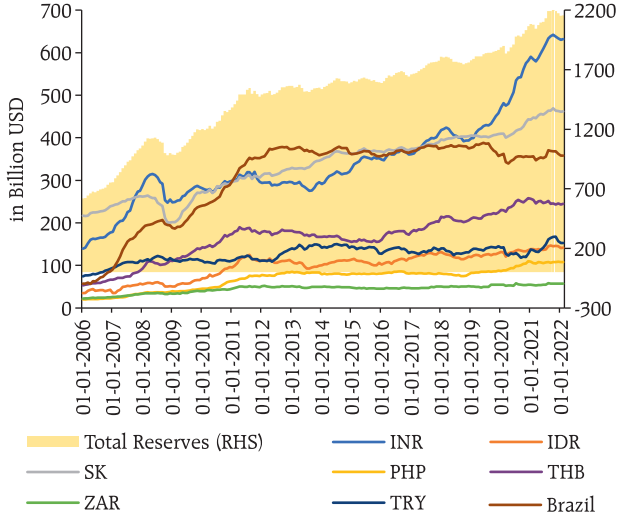
EME central banks accumulated reserves for a wide variety of reasons. A typical explanation highlights the precautionary role of holding reserves, though reserves were also accumulated as a by-product of other factors, including the pursuit of price and

Chart 14: Growth in Aggregate Reserves- select EMEs



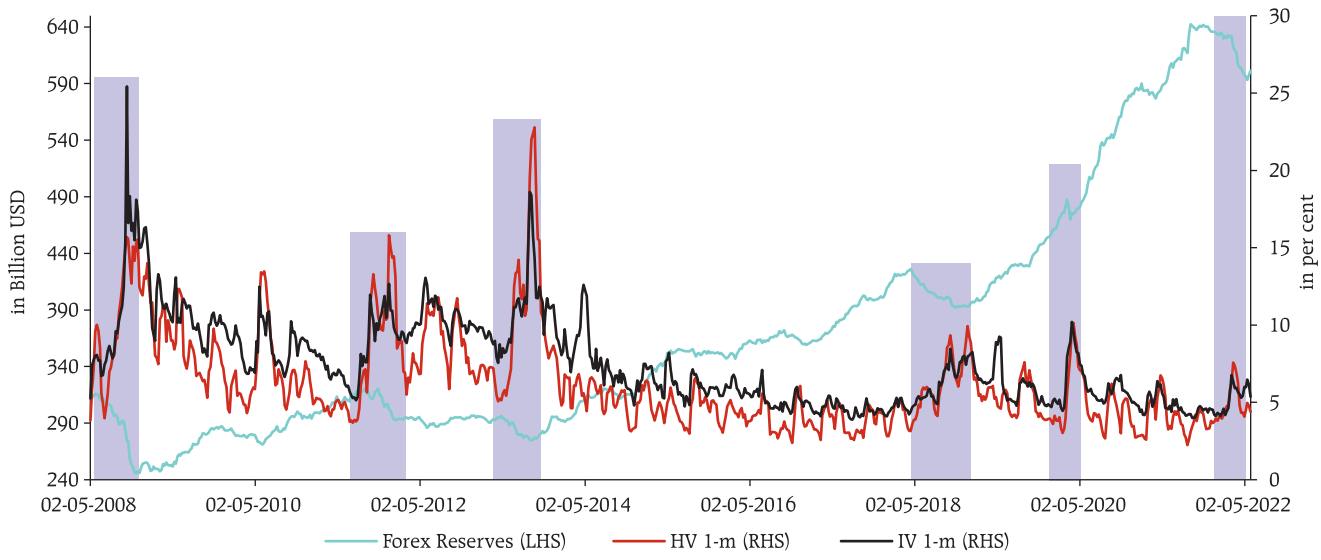
Sources: Bloomberg; and Authors' calculations.

Chart 15: Aggregate Forex Reserves of select EMEs



Sources: Bloomberg; and Authors' calculations.

Chart 16: Foreign Exchange Reserves, Implied and Historical Volatility



Sources: DBIE; Bloomberg; and Authors' calculations.

financial stability, and even export competitiveness (BIS, 2019). EMEs have experienced frequent crises since the 1980s: Latin America in the 1980s, Mexico in 1995, East Asia in 1997, Russia in 1998, Turkey in 1994 and 2001, Brazil in 1999, and Argentina in 2002 and 2018. One salient characteristic of these crises has been sudden stops in capital flows, which disrupted the financial system. Also given the absence of a fully adequate global safety net, EMEs have accumulated reserves in part as a form of self-insurance. Further, given the underlying uncertainty, judging reserve adequacy has remained very challenging, in turn, encouraging further prudence. The experience during and since the GFC indicates that reserves help EMEs navigate stormy waters. For example, during the GFC, the EMEs that held relatively more reserves experienced smaller currency depreciations, which was also the case during the taper tantrum in 2013.

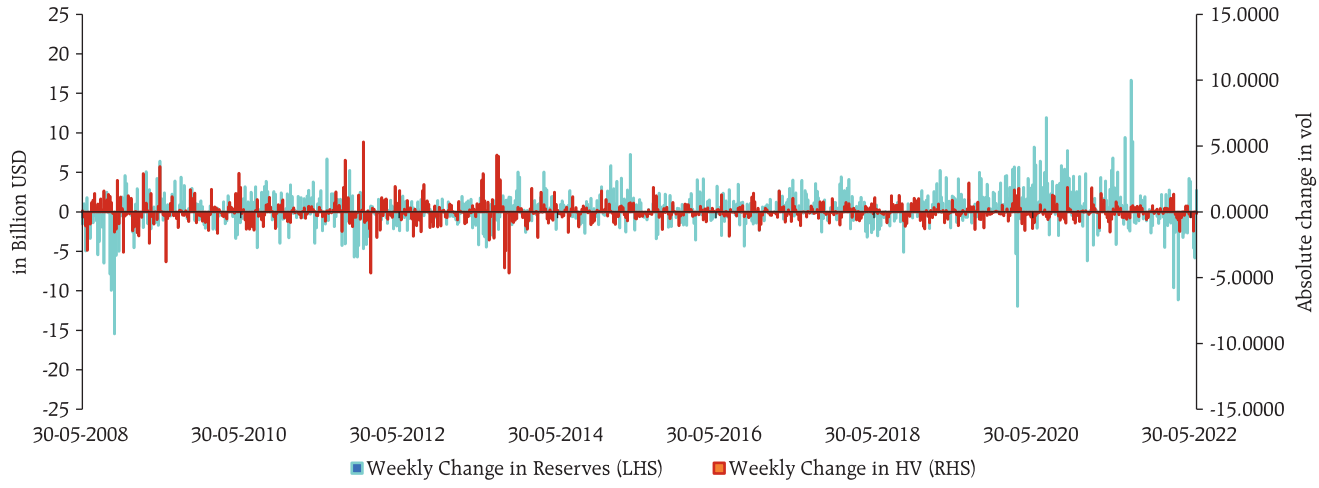
Decline in INR volatility

Chart 16 depicts trend of domestic foreign exchange reserves along with the trends of 1-month implied and realised volatility of INR, with blue boxes highlighting trend of forex reserves and volatility during major crisis episodes. The declines in forex reserves are mainly on account of steps taken by the Reserve Bank during these episodes to contain excessive volatility.

There has generally been a positive change in realised volatility (red portion above horizontal axis) along with a negative change in forex reserves (blue portion below horizontal axis) during each of the high volatility episodes, which has been followed by a negative change in realised volatility on a relatively durable basis (red portion below horizontal axis) (Chart 17). Moreover, the length and width of the blue portion below the horizontal axis has reduced generally over the study period, implying progressively lesser drawdown in forex reserves for containing volatility.

For the period 2020 onwards (till the beginning of current high volatility phase), there has been a large accumulation of forex reserves by the Reserve Bank (the blue portion above the horizontal line). During large parts of the period between 2017-2021, the INR faced significant appreciation pressure on account of large-scale Foreign Portfolio Investors (FPI) and Foreign Direct Investments (FDI) inflows (barring downward

Chart 17: Weekly change in Forex reserves *vis-a-vis* change in HV

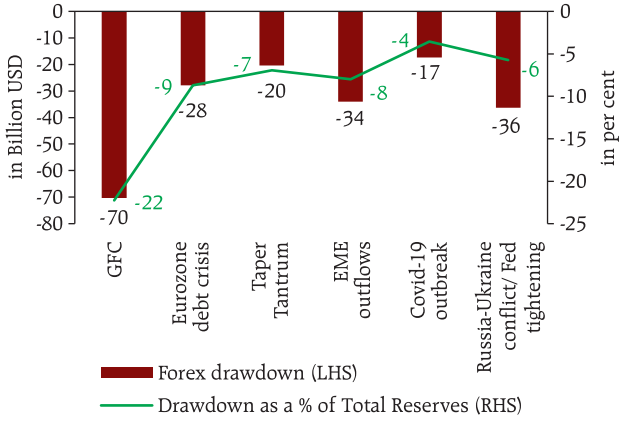


Note: Dip in forex reserves in current phase of volatility (Russia-Ukraine conflict/ Fed tightening) consists of $10 billion of sell leg of Buy-Sell swaps conducted in 2019 (matured in March and April 2022) and $10 billion of sell leg of Sell-Buy swaps conducted in March and April 2022. Thus, reserves reduced by a total of $20 billion due to swap auctions.
Sources: DBIE; Bloomberg; and Authors' calculations.

pressure during 2018 and around Covid outbreak in 2020). Despite this, the realised volatility during this period has been low, as RBI absorbed a significant quantity of inflows in line with its objective of keeping the INR's volatility low.

The drawdown in forex reserves was around $70 billion during the GFC which came down to $17 billion during Covid-19 outbreak (Chart 18). In the current Russia-Ukraine crisis and Fed tightening episode, while the drawdown in reserves stands at $56 billion (as on July 29, 2022), the net drawdown is much less when the depletion in reserves due to sell legs of swap auctions ($20 billion) and valuation losses is considered. Further, the size of the dip in forex reserves as a per cent to total forex reserves has come down from around 22 per cent during the GFC to six per cent during the Russia-Ukraine conflict and Fed tightening episode.

Chart 18: Drawdown in Forex Reserves during major crises



Note: Drawdown in forex reserves in the current crisis (Russia-Ukraine conflict/ Fed tightening) excludes sell legs of swap auctions ($20 billion). (To calculate change as per cent of total forex reserves, reserves outstanding at the beginning of each of the episodes have been taken).
Sources: DBIE; and Authors' calculations.

This implies that due to a general reduction in volatility expectations of the INR over the study period and also because of accumulation and timely usage of foreign exchange reserves, the Reserve Bank has been able to achieve its intervention objectives with progressively lesser percentage drawdown in reserves.

V. Conclusion

The article analyses volatility trends of select EME currencies *vis-à-vis* the US Dollar since 2007. It also examines spikes in INR's volatility during various episodes of global spillovers induced exchange market

pressures and the effectiveness of the intervention by the Reserve Bank. The study finds that volatility expectations of the INR have come down over the time period. Further, the Reserve Bank has been able to achieve its intervention objectives with progressively lesser percentage drawdown in foreign exchange reserves.

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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

Contents

Notes: .. = Not available.
– = Nil/Negligible.
P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2021-22	2020-21		2021-22	
		Q3	Q4	Q3	Q4
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	8.1	2.1	5.7	4.7	3.9
1.1.1 Agriculture	3.0	4.1	2.8	2.5	4.1
1.1.2 Industry	9.8	6.2	11.6	1.5	1.0
1.1.3 Services	8.8	0.04	4.3	6.6	5.0
1.1a Final Consumption Expenditure	7.0	0.4	9.6	6.8	2.3
1.1b Gross Fixed Capital Formation	15.8	-0.6	10.1	2.1	5.1
	2021-22	**2021**		**2022**	
		May	**Jun.**	**May**	**Jun.**
	1	2	3	4	5
1.2 Index of Industrial Production	11.4	27.6	13.8	19.6	-
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	8.9	9.5	9.8	8.8	8.6
2.1.2 Credit #	9.6	5.9	6.1	12.5	13.3
2.1.2.1 Non-food Credit #	9.7	5.8	6.1	13.0	13.9
2.1.3 Investment in Govt. Securities	6.0	11.7	10.4	6.0	6.2
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	13.0	18.3	16.9	10.4	10.9
2.2.2 Broad Money (M3)	8.8	10.3	10.7	8.8	7.8
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	4.7	5.2	5.3
3.4 Credit-Deposit Ratio	72.2	70.9	71.1	72.7	73.5
3.5 Incremental Credit-Deposit Ratio #	77.2	-84.4	-56.5	129.9	235.8
3.6 Investment-Deposit Ratio	28.7	29.9	30.1	29.1	29.5
3.7 Incremental Investment-Deposit Ratio	19.7	65.0	87.1	76.9	124.8
4 Interest Rates (%)					
4.1 Policy Repo Rate	4.00	4.00	4.00	4.40	4.90
4.2 Fixed Reverse Repo Rate	3.35	3.35	3.35	3.35	3.35
4.3 Standing Deposit Facility (SDF) Rate *	-	-	-	4.15	4.65
4.4 Marginal Standing Facility (MSF) Rate	4.25	4.25	4.25	4.65	5.15
4.5 Bank Rate	4.25	4.25	4.25	4.65	5.15
4.6 Base Rate	7.25/8.80	7.40/8.80	7.40/8.80	7.25/8.80	7.25/8.80
4.7 MCLR (Overnight)	6.45/7.00	6.55/7.05	6.55/7.05	6.60/7.00	6.70/7.30
4.8 Term Deposit Rate >1 Year	5.00/5.60	4.90/5.50	4.90/5.50	5.00/5.75	5.00/5.75
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	3.18	3.15	4.09	4.61
4.11 91-Day Treasury Bill (Primary) Yield	3.84	3.40	3.44	4.89	5.16
4.12 182-Day Treasury Bill (Primary) Yield	4.27	3.60	3.72	5.43	5.79
4.13 364-Day Treasury Bill (Primary) Yield	4.58	3.73	3.89	5.91	6.29
4.14 10-Year G-Sec Par Yield (FBIL)	6.86	6.28	6.36	7.43	7.50
5 Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (Rs. Per Foreign Currency)	76.18	72.48	74.18	77.66	78.33
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	84.01	88.23	88.57	83.49	82.56
5.3 Forward Premia of US$ 1-month (%)	5.67	5.46	3.80	3.55	2.76
3-month (%)	4.46	5.63	3.99	3.63	2.86
6-month (%)	4.10	5.49	4.13	3.66	2.89
6 Inflation (%)					
6.1 All India Consumer Price Index	5.51	6.3	6.3	7.0	7.0
6.2 Consumer Price Index for Industrial Workers	5.13	5.3	5.6	7.0	6.2
6.3 Wholesale Price Index	12.97	13.1	12.1	15.9	15.2
6.3.1 Primary Articles	10.25	9.4	8.6	19.7	19.2
6.3.2 Fuel and Power	32.50	36.7	29.3	40.6	40.4
6.3.3 Manufactured Products	11.10	11.3	11.0	10.1	9.2
7 Foreign Trade (% Change)					
7.1 Imports	55.31	69.9	97.4	62.9	57.5
7.2 Exports	44.58	68.3	47.9	20.9	23.5

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 since December 3, 2021 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	2021	2022				
		Jul.	Jul. 1	Jul. 8	Jul. 15	Jul. 22	Jul. 29
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	3107637	2919525	3173670	3196521	3187360	3175269	3156104
1.1.2 Notes Held in Banking Department	15	15	11	10	10	10	10
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**3107652**	**2919541**	**3173681**	**3196531**	**3187371**	**3175279**	**3156114**
1.2 Assets							
1.2.1 Gold	128208	115119	122763	118767	116429	116802	119129
1.2.2 Foreign Securities	2978927	2803636	3050543	3077216	3070418	3057985	3036520
1.2.3 Rupee Coin	518	786	374	548	524	492	465
1.2.4 Government of India Rupee Securities	–	–	–	–	–	–	–
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	1794574	1959069	1677967	1632175	1591629	1568546	1543010
2.1.1.1 Central Government	101	100	101	100	101	100	101
2.1.1.2 Market Stabilisation Scheme							
2.1.1.3 State Governments	42	42	42	43	42	42	42
2.1.1.4 Scheduled Commercial Banks	683437	674997	793717	757839	795474	754119	834457
2.1.1.5 Scheduled State Co-operative Banks	7123	7455	8759	7812	8102	7791	8140
2.1.1.6 Non-Scheduled State Co-operative Banks	4121	3582	4627	4560	4616	4361	4384
2.1.1.7 Other Banks	37589	37177	43587	42971	43317	43071	45065
2.1.1.8 Others	988819	1209139	777358	763674	698159	719843	600009
2.1.1.9 Financial Institutions Outside India	73343	26576	49776	55177	41817	39218	50814
2.1.2 Other Liabilities	1359254	1383256	1283483	1275026	1285485	1320659	1336039
2.1/2.2 Total Liabilities or Assets	**3153828**	**3342325**	**2961451**	**2907202**	**2877114**	**2889205**	**2879049**
2.2 Assets							
2.2.1 Notes and Coins	15	15	11	10	10	10	10
2.2.2 Balances Held Abroad	1243853	1511979	1118348	1056765	1042506	1046147	1042764
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	–	–	–	–	–
2.2.3.2 State Governments	670	836	12424	17624	17760	12688	6083
2.2.3.3 Scheduled Commercial Banks	94299	91796	94828	94618	95337	109704	94387
2.2.3.4 Scheduled State Co-op.Banks	–	–	–	–	–	–	–
2.2.3.5 Industrial Dev. Bank of India	–	–	–	–	–	–	–
2.2.3.6 NABARD	24927	16731	14857	14857	14857	14857	9668
2.2.3.7 EXIM Bank	–	–	–	–	–	–	–
2.2.3.8 Others	8077	6609	31028	31028	31028	31821	32683
2.2.3.9 Financial Institutions Outside India	72741	26670	49884	55237	41872	39351	50932
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	–	–	–	–	–	–	–
2.2.4.2 Government Treasury Bills	–	–	–	–	–	–	–
2.2.5 Investments	1491042	1518026	1436900	1438165	1436690	1436458	1439687
2.2.6 Other Assets	218203	169662	203171	198898	197052	198169	202834
2.2.6.1 Gold	201354	164967	196292	191932	189987	190964	195144

* Data are provisional.

No. 3: Liquidity Operations by RBI

(₹ Crore)

Date	Liquidity Adjustment Facility						Standing Liquidity Facilities	OMO (Outright)		Net Injection (+)/ Absorption (-) (1+3+5+7+9-2-4-6-8)
	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo	MSF	SDF		Sale	Purchase	
	1	2	3	4	5	6	7	8	9	10
Jun. 1, 2022	-	-	-	-	304	194418	–	-	-	-194114
Jun. 2, 2022	-	-	-	-	100	181860	1300	-	-	-180460
Jun. 3, 2022	-	-	-	64965	547	369177	4000	-	-	-429595
Jun. 4, 2022	-	-	-	-	11	36922	–	-	-	-36911
Jun. 5, 2022	-	-	-	-	6	3279	–	-	-	-3273
Jun. 6, 2022	-	-	-	-	313	357750	8545	-	-	-348892
Jun. 7, 2022	-	-	-	-	302	354623	–	-	-	-354321
Jun. 8, 2022	-	-	-	-	6	366780	–	-	-	-366774
Jun. 9, 2022	-	-	-	-	0	359114	–	-	-	-359114
Jun. 10, 2022	-	-	-	-	0	392400	–	-	-	-392400
Jun. 11, 2022	-	-	-	-	163	8240	–	-	-	-8077
Jun. 12, 2022	-	-	-	-	115	7042	–	-	-	-6927
Jun. 13, 2022	-	-	-	-	305	395240	–	-	-	-394935
Jun. 14, 2022	-	-	-	33456	310	398525	-2	-	-	-431673
Jun. 15, 2022	-	-	-	-	102	384055	–	-	-	-383953
Jun. 16, 2022	-	-	-	-	100	324432	–	-	-	-324332
Jun. 17, 2022	-	-	-	165184	7	166192	–	-	-	-331369
Jun. 18, 2022	-	-	-	-	107	24184	–	-	-	-24077
Jun. 19, 2022	-	-	-	-	44	2182	–	-	-	-2138
Jun. 20, 2022	-	-	-	-	572	152479	–	-	-	-151907
Jun. 21, 2022	-	-	-	-	85	146287	-5500	-	-	-151702
Jun. 22, 2022	-	-	-	-	3054	145947	–	-	-	-142893
Jun. 23, 2022	-	-	-	-	56	130406	–	115	-	-130465
Jun. 24, 2022	-	-	-	-	219	133218	1000	185	-	-132184
Jun. 25, 2022	-	-	-	-	226	5525	–	-	-	-5299
Jun. 26, 2022	-	-	-	-	27	5000	–	-	-	-4973
Jun. 27, 2022	-	-	-	-	175	149138	–	-	-	-148963
Jun. 28, 2022	-	-	-	-	181	168722	–	-	-	-168541
Jun. 29, 2022	-	-	-	-	3411	186977	450	-	-	-183116
Jun. 30, 2022	-	-	-	-	640	223562	–	-	-	-222922

SDF: Standing Deposit Facility; MSF: Marginal Standing Facility.

No. 4: Sale/ Purchase of U.S. Dollar by the RBI

i) Operations in onshore / offshore OTC segment

Item	2021-22	2021	2022	
		Jun.	May	Jun.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	17312	18633	2001	-3719
1.1 Purchase (+)	113991	21923	10143	18960
1.2 Sale (–)	96679	3290	8142	22679
2 ₹ equivalent at contract rate (₹ Crores)	134629	138217	14789	-29401
3 Cumulative (over end-March) (US $ Million)	17312	28687	3966	247
(₹ Crores)	134629	213952	28850	-551
4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US $ Million)	65791	49573	49191	30856

ii) Operations in currency futures segment

Item	2021-22	2021	2022	
		Jun.	May	Jun.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	0	0	0	0
1.1 Purchase (+)	2370	550	2085	3570
1.2 Sale (–)	2370	550	2085	3570
2 Outstanding Net Currency Futures Sales (–)/ Purchase (+) at the end of month (US $ Million)	0	0	-1200	-2406

No. 4 A : Maturity Breakdown (by Residual Maturity) of Outstanding Forwards of RBI (US $ Million)

Item	As on June 30, 2022		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	5596	15386	-9790
2. More than 1 month and upto 3 months	12713	1389	11324
3. More than 3 months and upto 1 year	21037	1850	19187
4. More than 1 year	10135	0	10135
Total (1+2+3+4)	**49481**	**18625**	**30856**

No. 5: RBI's Standing Facilities

(₹ Crore)

Item	As on the Last Reporting Friday							
	2021-22	2021	2022					
		Jul. 30	Feb. 25	Mar. 25	Apr. 22	May 20	Jun. 17	Jul. 29
	1	2	3	4	5	6	7	8
1 MSF	11	254	1858	11	140	1009	7	139
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	–	0	0	0	0	0	0	1655
4 Others								
4.1 Limit	76000	76000	76000	76000	76000	76000	76000	76000
4.2 Outstanding	32401	23296	24401	32401	31021	35521	49364	40314
5 Total Outstanding (1+2.2+3.2+4.2)	32412	23550	26259	32412	31161	36530	49371	42108

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

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2021-22	2021	2022		
		Jun. 18	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	3035689	2887260	3117960	3095774	3102251
1.1 Notes in Circulation	3105703	2961524	3197840	3195019	3198495
1.2 Circulation of Rupee Coin	27270	26252	27417	27550	27550
1.3 Circulation of Small Coins	743	743	743	743	743
1.4 Cash on Hand with Banks	98028	101259	108039	127538	124537
2 Deposit Money of the Public	2271436	1937646	2180138	2179351	2141695
2.1 Demand Deposits with Banks	2212992	1887452	2126310	2124931	2087340
2.2 'Other' Deposits with Reserve Bank	58444	50194	53828	54419	54355
3 M_1 (1 + 2)	**5307125**	**4824907**	**5298098**	**5275125**	**5243946**
4 Post Office Saving Bank Deposits	187061	172973	187061	187061	187061
5 M_2 (3 + 4)	**5494186**	**4997880**	**5485159**	**5462186**	**5431007**
6 Time Deposits with Banks	15186605	14344659	15384209	15544774	15417971
7 M_3 (3 + 6)	**20493729**	**19169565**	**20682307**	**20819899**	**20661917**
8 Total Post Office Deposits	1008539	897007	1008539	1008539	1008539
9 M_4 (7 + 8)	**21502268**	**20066572**	**21690846**	**21828438**	**21670456**

No. 7: Sources of Money Stock (M_3)

(₹ Crore)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2021-22	2021	2022		
		Jun. 18	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 Net Bank Credit to Government	**6477629**	**5921492**	**6264552**	**6337282**	**6261159**
1.1 RBI's net credit to Government (1.1.1–1.1.2)	1450596	1049521	1196325	1192830	1081805
1.1.1 Claims on Government	1490991	1487439	1449291	1442983	1434456
1.1.1.1 Central Government	1489324	1475641	1440787	1431610	1426587
1.1.1.2 State Governments	1667	11799	8504	11372	7869
1.1.2 Government deposits with RBI	40394	437918	252966	250153	352651
1.1.2.1 Central Government	40352	437875	252924	250110	352608
1.1.2.2 State Governments	42	42	42	42	42
1.2 Other Banks' Credit to Government	5027033	4871971	5068228	5144452	5179354
2 Bank Credit to Commercial Sector	**12616520**	**11552794**	**12769728**	**12876990**	**12901572**
2.1 RBI's credit to commercial sector	16571	5749	15275	20613	29081
2.2 Other banks' credit to commercial sector	12599950	11547046	12754453	12856377	12872491
2.2.1 Bank credit by commercial banks	11891314	10841852	12038120	12141035	12150353
2.2.2 Bank credit by co-operative banks	690201	687562	699492	698653	695940
2.2.3 Investments by commercial and co-operative banks in other securities	18435	17631	16841	16689	26198
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**4854063**	**4777903**	**4895017**	**4920752**	**4869550**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	4442479	4434553	4483433	4509169	4457966
3.1.1 Gross foreign assets	4442720	4434789	4483667	4509403	4458204
3.1.2 Foreign liabilities	241	237	234	234	238
3.2 Other banks' net foreign exchange assets	411583	343350	411583	411583	411583
4 Government's Currency Liabilities to the Public	**28013**	**26995**	**28160**	**28293**	**28293**
5 Banking Sector's Net Non-monetary Liabilities	**3482496**	**3109620**	**3275150**	**3343418**	**3398657**
5.1 Net non-monetary liabilities of RBI	1308500	1349809	1253040	1268376	1212556
5.2 Net non-monetary liabilities of other banks (residual)	2173996	1759811	2022109	2075042	2186101
M_3 (1+2+3+4–5)	**20493729**	**19169565**	**20682307**	**20819899**	**20661917**

No. 8: Monetary Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2021-22	2021	2022		
		Jun. 18	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1 + 1.2.1+1.3)	5307125	4824907	5298098	5275125	5243946
NM_2 (NM_1 + 1.2.2.1)	12081049	11211401	12162730	12212473	12124564
NM_3 (NM_2 + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	20634885	19266197	20946605	21069433	20905548
1 Components					
1.1 Currency with the Public	3035689	2887260	3117960	3095774	3102251
1.2 Aggregate Deposits of Residents	17266157	16079663	17381047	17541261	17377601
1.2.1 Demand Deposits	2212992	1887452	2126310	2124931	2087340
1.2.2 Time Deposits of Residents	15053166	14192211	15254737	15416330	15290260
1.2.2.1 Short-term Time Deposits	6773925	6386495	6864632	6937348	6880617
1.2.2.1.1 Certificates of Deposit (CDs)	176718	68603	187763	190825	178170
1.2.2.2 Long-term Time Deposits	8279241	7805716	8390105	8478981	8409643
1.3 'Other' Deposits with RBI	58444	50194	53828	54419	54355
1.4 Call/Term Funding from Financial Institutions	274594	249080	393770	377979	371341
2 Sources					
2.1 Domestic Credit	20080599	18443526	20122082	20300935	20253679
2.1.1 Net Bank Credit to the Government	6477629	5921492	6264552	6337282	6261159
2.1.1.1 Net RBI credit to the Government	1450596	1049521	1196325	1192830	1081805
2.1.1.2 Credit to the Government by the Banking System	5027033	4871971	5068228	5144452	5179354
2.1.2 Bank Credit to the Commercial Sector	13602969	12522034	13857529	13963654	13992520
2.1.2.1 RBI Credit to the Commercial Sector	39581	7433	38358	43779	52248
2.1.2.2 Credit to the Commercial Sector by the Banking System	13563389	12514601	13819171	13919874	13940272
2.1.2.2.1 Other Investments (Non-SLR Securities)	952181	954872	1050868	1051168	1051364
2.2 Government's Currency Liabilities to the Public	28013	26995	28160	28293	28293
2.3 Net Foreign Exchange Assets of the Banking Sector	4705191	4691971	4708895	4715929	4599366
2.3.1 Net Foreign Exchange Assets of the RBI	4442479	4434553	4483433	4509169	4457966
2.3.2 Net Foreign Currency Assets of the Banking System	262711	257419	225461	206760	141399
2.4 Capital Account	3021858	2976399	3256699	3275018	3256980
2.5 Other items (net)	1157060	919896	655832	700705	718810

No. 9: Liquidity Aggregates

(₹ Crore)

Aggregates	2021-22	2021	2022		
		Jun.	Apr.	May	Jun.
	1	2	3	4	5
1 NM_3	**20630753**	**19266197**	**20859403**	**20946605**	**20905548**
2 Postal Deposits	594633	528490	594633	594633	594633
3 L_1 (1 + 2)	**21225386**	**19794687**	**21454036**	**21541238**	**21500181**
4 Liabilities of Financial Institutions	49578	25961	41050	30285	51696
4.1 Term Money Borrowings	1824	3420	1758	2044	2136
4.2 Certificates of Deposit	39170	17525	39170	28070	41045
4.3 Term Deposits	8584	5016	122	171	8514
5 L_2 (3 + 4)	**21274964**	**19820648**	**21495085**	**21571524**	**21551877**
6 Public Deposits with Non-Banking Financial Companies	66542	67234	..	..	66542
7 L_3 (5 + 6)	**21341506**	**19887882**	..	..	**21618419**

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		
		Jun. 18	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	3133716	2988519	3226000	3223312	3226788
1.2 Bankers' Deposits with the RBI	876726	715442	863500	854952	856083
1.2.1 Scheduled Commercial Banks	823632	669032	810295	799046	800142
1.3 'Other' Deposits with the RBI	58444	50194	53828	54419	54355
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	4068887	3754155	4143328	4132684	4137226
2 Sources					
2.1 RBI's Domestic Credit	906895	642416	884775	863598	863522
2.1.1 Net RBI credit to the Government	1450596	1049521	1196325	1192830	1081805
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	1037765	1187863	1181500	1073979
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	1474980	1440459	1431127	1426161
2.1.1.1.3.1 Central Government Securities	1488816	1474980	1440459	1431127	1426161
2.1.1.1.4 Rupee Coins	508	661	329	483	426
2.1.1.1.5 Deposits of the Central Government	40352	437875	252924	250110	352608
2.1.1.2 Net RBI credit to State Governments	1624	11756	8461	11330	7826
2.1.2 RBI's Claims on Banks	-583282	-414538	-349908	-373011	-270530
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	-560272	-412854	-326824	-349845	-247364
2.1.3 RBI's Credit to Commercial Sector	39581	7433	38358	43779	52248
2.1.3.1 Loans and Advances to Primary Dealers	–	–	–	–	–
2.1.3.2 Loans and Advances to NABARD	23010	1684	23084	23167	23167
2.2 Government's Currency Liabilities to the Public	28013	26995	28160	28293	28293
2.3 Net Foreign Exchange Assets of the RBI	4442479	4434553	4483433	4509169	4457966
2.3.1 Gold	322213	265576	316885	316976	316922
2.3.2 Foreign Currency Assets	4120283	4168994	4166566	4192210	4141062
2.4 Capital Account	1254092	1250419	1365613	1381305	1359593
2.5 Other Items (net)	54408	99390	-112573	-112929	-147037

No. 11: Reserve Money - Components and Sources

(₹ Crore)

Item	2021-22	Outstanding as on March 31/ last Fridays of the month/ Fridays					
		2021	2022				
		Jun. 25	May 27	Jun. 3	Jun. 10	Jun. 17	Jun. 24
	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	3698987	4092142	4132684	4105588	4137226	4104025
1 Components							
1.1 Currency in Circulation	3133716	2980029	3219429	3223312	3238417	3226788	3217603
1.2 Bankers' Deposits with RBI	876726	668838	817317	854952	812875	856083	831996
1.3 'Other' Deposits with RBI	58444	50120	55395	54419	54296	54355	54425
2 Sources							
2.1 Net Reserve Bank Credit to Government	1450596	1017177	1128141	1192830	1176680	1081805	1028590
2.2 Reserve Bank Credit to Banks	-560272	-452721	-309121	-349845	-373615	-247364	-222543
2.3 Reserve Bank Credit to Commercial Sector	16571	6048	15275	20613	29158	29081	32581
2.4 Net Foreign Exchange Assets of RBI	4442479	4467940	4510138	4509169	4489218	4457966	4493097
2.5 Government's Currency Liabilities to the Public	28013	27053	28293	28293	28293	28293	28451
2.6 Net Non- Monetary Liabilities of RBI	1308500	1366509	1280583	1268376	1244146	1212556	1256151

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		
		Jun. 18	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	16331874	15146092	16444802	16605194	16441606
1.1.1 Demand Deposits	2072747	1751739	1985767	1984242	1946297
1.1.2 Time Deposits of Residents	14259128	13394353	14459035	14620952	14495309
1.1.2.1 Short-term Time Deposits	6416607	6027459	6506566	6579428	6522889
1.1.2.1.1 Certificates of Deposits (CDs)	176718	68603	187763	190825	178170
1.1.2.2 Long-term Time Deposits	7842520	7366894	7952469	8041524	7972420
1.2 Call/Term Funding from Financial Institutions	274594	249080	393770	377979	371341
2 Sources					
2.1 Domestic Credit	17575002	16382691	17864954	18040452	18098650
2.1.1 Credit to the Government	4728179	4580580	4770031	4843895	4878940
2.1.2 Credit to the Commercial Sector	12846823	11802110	13094923	13196557	13219710
2.1.2.1 Bank Credit	11891314	10841852	12038120	12141035	12150353
2.1.2.1.1 Non-food Credit	11836304	10754940	11984866	12092407	12106795
2.1.2.2 Net Credit to Primary Dealers	11522	12947	14113	12592	16680
2.1.2.3 Investments in Other Approved Securities	769	1402	784	724	10274
2.1.2.4 Other Investments (in non-SLR Securities)	943218	945909	1041906	1042206	1042402
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	262711	257419	225461	206760	141399
2.2.1 Foreign Currency Assets	465464	470862	426756	407909	337352
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	133439	152448	129472	128444	127711
2.2.3 Overseas Foreign Currency Borrowings	69314	60996	71822	72705	68242
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	1268887	1171851	1232851	1263991	1159593
2.3.1 Balances with the RBI	683437	669032	810295	799046	800142
2.3.2 Cash in Hand	85926	89965	95732	115100	112088
2.3.3 Loans and Advances from the RBI	-499524	-412854	-326824	-349845	-247364
2.4 Capital Account	1743595	1701809	1866915	1869543	1873217
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	756537	714979	617779	658487	713478
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	571535	514429	565536	591451	598531
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	26533	62888	7741	3913	14199

No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

Item	As on March 25, 2022	2021	2022		
		Jun. 18	May. 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 SLR Securities	4728948	4581982	4770815	4844619	4889215
2 Other Government Securities (Non-SLR)	-	-	160644	160365	159993
3 Commercial Paper	55315	81474	58764	62124	61279
4 Shares issued by					
4.1 PSUs	7642	10554	9784	10579	10497
4.2 Private Corporate Sector	73814	68931	72112	70186	69508
4.3 Others	5152	5125	5133	5073	5057
5 Bonds/Debentures issued by					
5.1 PSUs	117860	113821	98683	93899	95727
5.2 Private Corporate Sector	326188	321962	315849	306441	304928
5.3 Others	148753	153305	91104	92775	94188
6 Instruments issued by					
6.1 Mutual funds	34404	39269	59599	50492	53431
6.2 Financial institutions	174090	151480	172452	190273	187793

Note: Data against column Nos. (1), (2) & (3) are Final and for column Nos. (4) & (5) data are Provisional.
'-' Data 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	
		Jun.	May	Jun.		Jun.	May	Jun.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	212	210	212	212	136	134	136	136
1 Liabilities to the Banking System	**262674**	**240051**	**281473**	**285296**	**258649**	**235512**	**277568**	**281448**
1.1 Demand and Time Deposits from Banks	194143	181695	196517	192746	190570	177399	193068	189411
1.2 Borrowings from Banks	38369	39462	50013	52754	38317	39456	50009	52745
1.3 Other Demand and Time Liabilities	30162	18893	34943	39795	29762	18656	34491	39292
2 Liabilities to Others	**17832517**	**16517473**	**18094184**	**18047680**	**17380755**	**16078860**	**17645370**	**17603773**
2.1 Aggregate Deposits	16899634	15692029	17028142	17018222	16465313	15272352	16597227	16592091
2.1.1 Demand	2117513	1788412	2030246	2000070	2072747	1748636	1985304	1953699
2.1.2 Time	14782121	13903617	14997895	15018151	14392567	13523716	14611923	14638392
2.2 Borrowings	278985	257970	399209	376888	274594	252064	393281	371389
2.3 Other Demand and Time Liabilities	653898	567473	666833	652571	640848	554444	654863	640293
3 Borrowings from Reserve Bank	**94299**	**90829**	**94368**	**94514**	**94299**	**90829**	**94368**	**94514**
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	94299	90829	94368	94514	94299	90829	94368	94514
4 Cash in Hand and Balances with Reserve Bank	788725	732251	881424	900289	769363	713780	859658	878021
4.1 Cash in Hand	88732	93470	100874	105043	85926	91424	97922	101501
4.2 Balances with Reserve Bank	699993	638780	780550	795246	683437	622356	761736	776521
5 Assets with the Banking System	**315282**	**245133**	**342124**	**351424**	**243637**	**188930**	**278517**	**290779**
5.1 Balances with Other Banks	199434	169444	228875	226853	164240	134552	193977	192752
5.1.1 In Current Account	19733	16908	16545	16123	16691	14204	13681	13390
5.1.2 In Other Accounts	179701	152536	212330	210730	147549	120347	180296	179362
5.2 Money at Call and Short Notice	36905	26459	33081	39864	6982	9180	9843	18581
5.3 Advances to Banks	39340	21525	31176	28852	35802	19910	29323	27414
5.4 Other Assets	39603	27706	48992	55855	36613	25288	45374	52032
6 Investment	**4874070**	**4739506**	**4973070**	**5031395**	**4728948**	**4601130**	**4830428**	**4887253**
6.1 Government Securities	4867102	4732584	4966935	5025387	4728179	4599956	4829622	4886445
6.2 Other Approved Securities	6968	6922	6135	6008	769	1175	806	807
7 Bank Credit	**12259048**	**11197090**	**12431471**	**12558512**	**11891314**	**10859820**	**12062731**	**12190256**
7a Food Credit	90827	121177	96386	86635	55011	85358	50666	40915
7.1 Loans, Cash-credits and Overdrafts	12016486	10996327	12193291	12324542	11651337	10661149	11827177	11958930
7.2 Inland Bills-Purchased	36070	29559	34607	32204	36055	29544	34590	32188
7.3 Inland Bills-Discounted	155796	116154	155143	151301	154212	114793	153369	149482
7.4 Foreign Bills-Purchased	19537	20268	20987	19739	19157	20057	20703	19518
7.5 Foreign Bills-Discounted	31160	34783	27444	30727	30554	34277	26892	30138

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
		Jun.18	May.20	Jun.17	2022-23	2022
	1	2	3	4	%	%
I. Gross Bank Credit (II+III)	**11891314**	**10736583**	**12027305**	**12149034**	**2.2**	**13.2**
II. Food Credit	**55011**	**86912**	**53254**	**43559**	**-20.8**	**-49.9**
III. Non-food Credit	**11836304**	**10649671**	**11974051**	**12105475**	**2.3**	**13.7**
1. Agriculture & Allied Activities	**1461350**	**1328731**	**1482029**	**1500875**	**2.7**	**13.0**
2. Industry (Micro and Small, Medium and Large)	**3152449**	**2894061**	**3165450**	**3168168**	**0.5**	**9.5**
2.1 Micro and Small [1]	532081	427870	551488	554398	4.2	29.6
2.2 Medium	213996	149554	218501	220669	3.1	47.6
2.3 Large	2406372	2316637	2395460	2393101	-0.6	3.3
3. Services	**3017116**	**2721667**	**3037964**	**3070538**	**1.8**	**12.8**
3.1 Transport Operators	155353	139360	151538	152045	-2.1	9.1
3.2 Computer Software	20899	19965	19235	19687	-5.8	-1.4
3.3 Tourism, Hotels & Restaurants	64369	59574	64100	63973	-0.6	7.4
3.4 Shipping	8437	7239	7617	7205	-14.6	-0.5
3.5 Aviation	23979	28190	22381	21733	-9.4	-22.9
3.6 Professional Services	116743	109121	119495	120107	2.9	10.1
3.7 Trade	696349	628496	713178	733416	5.3	16.7
3.7.1 Wholesale Trade	351228	324592	369485	384026	9.3	18.3
3.7.2 Retail Trade	345121	303904	343693	349390	1.2	15.0
3.8 Commercial Real Estate	291168	289057	301170	298732	2.6	3.3
3.9 Non-Banking Financial Companies (NBFCs)[2] *of which,*	1078447	909042	1093282	1101044	2.1	21.1
3.9.1 Housing Finance Companies (HFCs)	278979	253069	287920	283992	1.8	12.2
3.9.2 Public Financial Institutions (PFIs)	144121	85384	142580	140173	-2.7	64.2
3.10 Other Services [3]	561373	531624	545968	552596	-1.6	3.9
4. Personal Loans	**3385827**	**2980902**	**3466512**	**3520062**	**4.0**	**18.1**
4.1 Consumer Durables	27613	17178	29588	30461	10.3	77.3
4.2 Housing	1684424	1511985	1707462	1740921	3.4	15.1
4.3 Advances against Fixed Deposits	78734	70048	78331	78429	-0.4	12.0
4.4 Advances to Individuals against share & bonds	6161	5385	6184	6547	6.3	21.6
4.5 Credit Card Outstanding	147789	116994	154212	152931	3.5	30.7
4.6 Education	82723	77789	82662	84375	2.0	8.5
4.7 Vehicle Loans	402667	363427	418330	427654	6.2	17.7
4.8 Loan against gold jewellery	75311	74447	74303	75024	-0.4	0.8
4.9 Other Personal Loans	880406	743648	915440	923719	4.9	24.2
5. Priority Sector *(Memo)*						
5.1 Agriculture & Allied Activities [4]	1485438	1339890	1456432	1450586	-2.3	8.3
5.2 Micro & Small Enterprises [5]	1377138	1155564	1418321	1429973	3.8	23.7
5.3 Medium Enterprises [6]	351900	226623	361334	363489	3.3	60.4
5.4 Housing	614487	586328	615355	616839	0.4	5.2
5.5 Education Loans	58118	58740	57912	57931	-0.3	-1.4
5.6 Renewable Energy	3538	2030	4024	3868	9.3	90.5
5.7 Social Infrastructure	2483	3058	2578	2586	4.2	-15.4
5.8 Export Credit	23330	25293	20769	18582	-20.3	-26.5
5.9 Others	37159	25363	46082	46243	24.4	82.3
5.10 Weaker Sections including net PSLC- SF/MF	1180928	954371	1186035	1190612	0.8	24.8

Note 1: Data are provisional. Gross bank 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 2021, 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.
Note 3: Bank credit growth are adjusted for past reporting errors by select SCBs.

1 Micro & Small includes credit to micro & small industries in the manufacturing sector.

2 NBFCs include HFCs, PFIs, Microfinance Institutions (MFIs), NBFCs engaged in gold loan and others.

3 Other Services include Mutual Fund (MFs), Banking and Finance other than NBFCs and MFs and other services which are not indicated elsewhere under services.

4 Agriculture and Allied Activities also include priority sector lending certificates (PSLCs).

5 Micro and Small Enterprises include credit to micro and small enterprises in manufacturing and services sector and also include PSLCs.

6 Medium Enterprises include credit to medium enterprises in the manufacturing and services sector.

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
		Jun. 18	May.20	Jun. 17	2022-23	2022
	1	2	3	4	%	%
2 Industries (2.1 to 2.19)	3152449	2894061	3165450	3168168	0.5	9.5
2.1 Mining & Quarrying (incl. Coal)	49038	44817	46986	48459	–1.2	8.1
2.2 Food Processing	173243	154050	174697	175631	1.4	14.0
2.2.1 Sugar	26307	23948	25399	24107	–8.4	0.7
2.2.2 Edible Oils & Vanaspati	18246	17287	17739	18322	0.4	6.0
2.2.3 Tea	5728	5318	6094	6382	11.4	20.0
2.2.4 Others	122962	107497	125465	126820	3.1	18.0
2.3 Beverage & Tobacco	18176	17064	17777	17471	–3.9	2.4
2.4 Textiles	223508	207377	219503	218393	–2.3	5.3
2.4.1 Cotton Textiles	90189	83889	87674	86492	–4.1	3.1
2.4.2 Jute Textiles	3509	2458	3567	3582	2.1	45.8
2.4.3 Man-Made Textiles	38354	35633	38396	38363	0.0	7.7
2.4.4 Other Textiles	91456	85397	89866	89955	–1.6	5.3
2.5 Leather & Leather Products	11481	10782	11427	11349	–1.1	5.3
2.6 Wood & Wood Products	16248	15281	16510	16658	2.5	9.0
2.7 Paper & Paper Products	40073	38240	40356	40885	2.0	6.9
2.8 Petroleum, Coal Products & Nuclear Fuels	107242	81630	104717	102685	–4.2	25.8
2.9 Chemicals & Chemical Products	196179	179974	208697	207155	5.6	15.1
2.9.1 Fertiliser	33160	32507	37820	34780	4.9	7.0
2.9.2 Drugs & Pharmaceuticals	61093	52520	62557	63009	3.1	20.0
2.9.3 Petro Chemicals	19622	24607	21555	20896	6.5	–15.1
2.9.4 Others	82303	70340	86765	88470	7.5	25.8
2.10 Rubber, Plastic & their Products	71915	57615	71290	72228	0.4	25.4
2.11 Glass & Glassware	5948	6175	5768	5916	–0.5	–4.2
2.12 Cement & Cement Products	47912	53777	47880	48310	0.8	–10.2
2.13 Basic Metal & Metal Product	288395	290866	291957	292613	1.5	0.6
2.13.1 Iron & Steel	187443	199413	187713	187121	–0.2	–6.2
2.13.2 Other Metal & Metal Product	100952	91453	104244	105492	4.5	15.4
2.14 All Engineering	167680	150236	168674	166937	–0.4	11.1
2.14.1 Electronics	38180	34179	38445	39191	2.7	14.7
2.14.2 Others	129500	116057	130229	127746	–1.4	10.1
2.15 Vehicles, Vehicle Parts & Transport Equipment	89688	85050	91247	91996	2.6	8.2
2.16 Gems & Jewellery	80411	71087	72009	73082	–9.1	2.8
2.17 Construction	117625	119946	114427	117986	0.3	–1.6
2.18 Infrastructure	1193965	1105817	1201605	1211341	1.5	9.5
2.18.1 Power	610815	570921	615508	620478	1.6	8.7
2.18.2 Telecommunications	130349	116653	129261	131922	1.2	13.1
2.18.3 Roads	269896	236232	275426	278364	3.1	17.8
2.18.4 Airports	6646	9689	6767	6794	2.2	–29.9
2.18.5 Ports	8886	10373	7938	7954	–10.5	–23.3
2.18.6 Railways	10512	12532	11382	11494	9.3	–8.3
2.18.7 Other Infrastructure	156861	149416	155323	154335	–1.6	3.3
2.19 Other Industries	253724	204277	259922	249073	–1.8	21.9

Note : With effect from January 2021, 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						
		May, 28	Mar, 25	Apr, 08	Apr, 22	Apr, 29	May, 06	May, 20	May, 27
	1	2	3	4	5	6	7	8	9
Number of Reporting Banks	32	33	33	33	33	33	31	31	32
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	**125859.6**	**124193.8**	**129858.2**	**131377.4**	**130646.5**	**130356.1**	**126088.5**	**125524.8**	**126958.1**
2 Demand and Time Liabilities									
2.1 Demand Liabilities	**23736.9**	**27145.3**	**26116.3**	**26854.4**	**26800.8**	**26799.3**	**24951.1**	**23918.5**	**24062.9**
2.1.1 Deposits									
2.1.1.1 Inter-Bank	4896.9	5137.8	5902.5	5475.6	5677.3	5097.7	5178.3	5609.3	5845.9
2.1.1.2 Others	13,899.4	15774.7	14459.2	15139.9	14945.7	14888.6	12730.8	12344.8	12752.4
2.1.2 Borrowings from Banks	0.0	829.8	0.0	60.0	90.0	579.8	664.8	444.9	619.8
2.1.3 Other Demand Liabilities	4940.6	5403.1	5754.5	6179.0	6087.8	6233.2	6377.3	5519.6	4844.8
2.2 Time Liabilities	**179957.5**	**169907.2**	**189731.8**	**193780.5**	**189892.4**	**188046.3**	**185154.8**	**183304.2**	**183687.5**
2.2.1 Deposits									
2.2.1.1 Inter-Bank	65333.7	59567.6	71236.3	74235.3	70896.1	69276.0	68469.7	66818.1	66131.9
2.2.1.2 Others	111960.2	108419.1	115399.0	116237.5	115700.8	115467.5	113357.8	113180.0	114205.7
2.2.2 Borrowings from Banks	630.0	1118.9	853.7	1000.5	1000.0	1000.0	999.7	998.7	1024.3
2.2.3 Other Time Liabilities	2033.7	801.6	2242.7	2307.1	2295.6	2302.9	2327.5	2307.4	2325.6
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	63559.8	49932.4	66978.0	66398.8	63840.5	63081.2	62142.7	61405.1	61247.8
4.1 Demand	15691.8	11059.3	15765.8	13904.1	13317.7	13292.8	13229.4	13178.1	13228.8
4.2 Time	47868.0	38873.1	51212.3	52494.8	50522.8	49788.3	48913.3	48227.0	48019.0
5 Cash in Hand and Balances with Reserve Bank	**8151.1**	**9274.1**	**9725.6**	**11612.6**	**10679.3**	**10297.1**	**10261.9**	**11345.9**	**10695.3**
5.1 Cash in Hand	570.3	682.3	1014.8	1302.6	993.5	886.4	802.6	973.4	798.5
5.2 Balance with Reserve Bank	7580.8	8591.8	8710.8	10310.0	9685.7	9410.7	9459.3	10372.5	9896.9
6 Balances with Other Banks in Current Account	**1148.1**	**1251.8**	**1651.7**	**1565.8**	**1413.3**	**1398.7**	**1098.2**	**1162.1**	**1227.5**
7 Investments in Government Securities	**64455.2**	**67366.8**	**75927.5**	**72724.3**	**72956.1**	**72964.6**	**71668.6**	**70980.1**	**71631.0**
8 Money at Call and Short Notice	**28835.7**	**21768.4**	**32935.8**	**29095.0**	**29100.2**	**28772.6**	**27555.1**	**25709.0**	**26130.0**
9 Bank Credit (10.1+11)	**114631.6**	**108118.7**	**111549.1**	**121123.8**	**120219.0**	**120025.5**	**118961.7**	**118897.7**	**119819.7**
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	**114612.1**	**108099.8**	**111529.1**	**121103.2**	**120198.3**	**120004.5**	**118940.8**	**118876.8**	**119798.9**
10.2 Due from Banks	89429.1	84144.9	112645.5	112402.9	110021.7	108476.3	106788.7	106283.7	105636.7
11 Bills Purchased and Discounted	19.5	18.9	20.0	20.7	20.7	21.0	20.9	20.9	20.9

Prices and Production

No. 18: Consumer Price Index (Base: 2012=100)

Group/Sub group	2021-22			Rural			Urban			Combined		
	Rural	Urban	Combined	Jun. 21	May. 22	Jun 22(P)	Jun. 21	May. 22	Jun 22(P)	Jun. 21	May. 22	Jun 22(P)
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	**162.8**	**168.7**	**165.0**	**160.5**	**170.8**	**172.4**	**166.2**	**177.5**	**179.3**	**162.6**	**173.3**	**174.9**
1.1 Cereals and products	146.4	150.4	147.6	145.6	152.9	153.8	149.2	156.7	157.5	146.7	154.1	155.0
1.2 Meat and fish	200.4	206.5	202.6	200.1	214.7	217.2	205.5	221.2	223.4	202.0	217.0	219.4
1.3 Egg	173.3	176.0	174.4	179.3	161.4	169.5	182.8	164.1	172.8	180.7	162.4	170.8
1.4 Milk and products	158.3	159.0	158.6	156.1	164.6	165.4	156.5	165.4	166.3	156.2	164.9	165.7
1.5 Oils and fats	192.2	172.4	184.9	190.4	209.9	208.1	172.2	189.5	188.6	183.7	202.4	200.9
1.6 Fruits	155.3	163.5	159.2	158.6	168.0	165.8	171.5	174.5	174.1	164.6	171.0	169.7
1.7 Vegetables	156.1	192.8	168.5	144.7	160.4	167.4	176.2	203.2	211.6	155.4	174.9	182.4
1.8 Pulses and products	164.1	164.4	164.2	165.5	165.0	164.7	166.9	164.1	163.6	166.0	164.7	164.3
1.9 Sugar and confectionery	117.4	119.1	118.0	114.6	118.9	119.1	116.1	121.2	121.5	115.1	119.7	119.9
1.10 Spices	171.2	167.5	170.0	170.0	186.6	188.9	165.5	181.4	183.5	168.5	184.9	187.1
1.11 Non-alcoholic beverages	167.8	154.7	162.3	165.5	173.2	174.1	152.3	158.5	159.1	160.0	167.1	167.8
1.12 Prepared meals, snacks, sweets	173.0	175.8	174.3	171.7	180.4	181.9	173.3	184.9	186.3	172.4	182.5	183.9
2 Pan, tobacco and intoxicants	**190.3**	**196.5**	**191.9**	**189.1**	**192.9**	**192.9**	**195.6**	**197.5**	**198.3**	**190.8**	**194.1**	**194.3**
3 Clothing and footwear	**168.2**	**158.4**	**164.3**	**164.6**	**179.0**	**180.4**	**154.8**	**167.8**	**169.4**	**160.7**	**174.6**	**176.0**
3.1 Clothing	168.8	160.9	165.7	165.3	179.3	180.7	157.3	170.0	171.5	162.2	175.6	177.1
3.2 Footwear	164.5	144.7	156.3	159.9	177.2	178.7	140.5	155.9	157.4	151.8	168.4	169.9
4 Housing	**--**	**163.0**	**163.0**	**--**	**--**	**--**	**160.5**	**167.5**	**166.8**	**160.5**	**167.5**	**166.8**
5 Fuel and light	**164.0**	**159.8**	**162.4**	**162.1**	**175.3**	**177.1**	**156.1**	**173.5**	**175.2**	**159.8**	**174.6**	**176.4**
6 Miscellaneous	**164.1**	**156.1**	**160.2**	**161.5**	**170.9**	**171.0**	**153.4**	**163.8**	**163.7**	**157.6**	**167.5**	**167.5**
6.1 Household goods and services	161.8	153.5	157.9	159.2	168.9	170.3	149.8	161.1	162.1	154.8	165.2	166.4
6.2 Health	172.0	163.3	168.6	169.7	177.7	178.2	160.8	170.1	170.9	166.3	174.8	175.4
6.3 Transport and communication	157.9	150.0	153.7	154.2	167.1	165.5	147.5	159.4	157.1	150.7	163.0	161.1
6.4 Recreation and amusement	162.7	154.8	158.2	160.4	167.6	168.0	150.7	163.2	164.0	154.9	165.1	165.7
6.5 Education	168.4	160.1	163.5	166.8	171.8	172.5	158.1	165.2	166.5	161.7	167.9	169.0
6.6 Personal care and effects	161.3	160.8	161.1	159.4	168.5	169.5	158.0	168.2	169.2	158.8	168.4	169.4
General Index (All Groups)	**164.5**	**163.1**	**163.8**	**162.1**	**172.5**	**173.6**	**160.4**	**170.8**	**171.5**	**161.3**	**171.7**	**172.6**

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	
				Jun.	May	Jun.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2016	2.88	-	121.7	129	129.2
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	1075	1057	1119	1125
3 Consumer Price Index for Rural Labourers	1986-87	–	1084	1065	1131	1137

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	
		Jun.	May	Jun.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	47999	47891	50879	50804
2 Silver (₹ per kilogram)	65426	69960	61572	60936

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		
			Jun.	Apr.	May (P)	Jun. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**139.4**	**133.7**	**152.3**	**154.0**	**154.0**
1.1 PRIMARY ARTICLES	**22.618**	**160.7**	**153.0**	**174.5**	**179.8**	**182.4**
1.1.1 FOOD ARTICLES	**15.256**	**167.3**	**160.5**	**175.3**	**179.3**	**183.6**
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	163.5	161.3	171.2	171.5	170.7
1.1.1.2 Fruits & Vegetables	3.475	187.6	163.5	198.0	210.9	229.1
1.1.1.3 Milk	4.440	156.9	154.4	163.3	163.9	164.2
1.1.1.4 Eggs,Meat & Fish	2.402	164.0	165.8	169.6	175.9	177.8
1.1.1.5 Condiments & Spices	0.529	159.8	151.1	173.8	177.9	177.9
1.1.1.6 Other Food Articles	0.948	168.3	167.2	178.4	173.3	172.1
1.1.2 NON-FOOD ARTICLES	**4.119**	**158.1**	**148.4**	**177.5**	**180.0**	**176.3**
1.1.2.1 Fibres	0.839	158.4	142.5	216.1	235.1	228.1
1.1.2.2 Oil Seeds	1.115	214.4	211.7	227.2	223.7	217.5
1.1.2.3 Other non-food Articles	1.960	119.9	115.9	127.3	127.7	128.6
1.1.2.4 Floriculture	0.204	217.0	138.7	230.8	217.1	196.3
1.1.3 MINERALS	**0.833**	**197.2**	**191.8**	**208.2**	**228.9**	**208.2**
1.1.3.1 Metallic Minerals	0.648	193.3	188.6	204.0	229.9	204.0
1.1.3.2 Other Minerals	0.185	211.0	203.0	222.9	225.6	223.2
1.1.4 CRUDE PETROLEUM & NATURAL GAS	**2.410**	**110.3**	**99.5**	**152.5**	**165.5**	**176.4**
1.2 FUEL & POWER	**13.152**	**124.6**	**110.7**	**151.2**	**154.4**	**155.4**
1.2.1 COAL	**2.138**	**129.0**	**127.3**	**130.9**	**130.9**	**130.9**
1.2.1.1 Coking Coal	0.647	143.0	141.9	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	138.1	212.6	212.6	212.6
1.2.2 MINERAL OILS	**7.950**	**126.2**	**111.0**	**167.9**	**173.1**	**174.8**
1.2.3 ELECTRICITY	**3.064**	**117.4**	**98.2**	**122.2**	**122.2**	**122.2**
1.3 MANUFACTURED PRODUCTS	**64.231**	**135.0**	**131.6**	**144.7**	**144.8**	**143.7**
1.3.1 MANUFACTURE OF FOOD PRODUCTS	**9.122**	**157.9**	**155.8**	**169.9**	**170.9**	**169.6**
1.3.1.1 Processing and Preserving of meat	0.134	142.8	144.3	143.3	145.3	147.1
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	144.1	139.7	147.4	146.2	144.0
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	122.3	121.9	123.6	125.3	123.9
1.3.1.4 Vegetable and Animal oils and Fats	2.643	187.2	184.5	210.7	212.8	207.3
1.3.1.5 Dairy products	1.165	149.4	147.9	159.4	160.8	160.5
1.3.1.6 Grain mill products	2.010	145.6	144.0	151.4	151.5	152.2
1.3.1.7 Starches and Starch products	0.110	133.3	124.7	156.6	157.7	155.1
1.3.1.8 Bakery products	0.215	146.2	142.9	155.0	155.5	159.4
1.3.1.9 Sugar, Molasses & honey	1.163	122.9	118.8	125.4	126.2	125.9
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	130.5	128.9	134.5	135.2	134.6
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	136.7	133.5	160.6	163.1	156.5
1.3.1.12 Tea & Coffee products	0.371	171.1	178.5	178.7	183.1	187.4
1.3.1.13 Processed condiments & salt	0.163	157.5	153.8	168.8	170.6	169.6
1.3.1.14 Processed ready to eat food	0.024	137.0	140.2	142.6	140.8	140.9
1.3.1.15 Health supplements	0.225	153.5	147.5	173.8	170.4	177.1
1.3.1.16 Prepared animal feeds	0.356	200.9	197.7	213.7	210.9	209.2
1.3.2 MANUFACTURE OF BEVERAGES	**0.909**	**126.8**	**125.6**	**127.7**	**128.1**	**128.5**
1.3.2.1 Wines & spirits	0.408	123.6	122.4	126.2	127.4	127.6
1.3.2.2 Malt liquors and Malt	0.225	130.5	127.4	133.6	134.3	135.5
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	128.6	128.8	125.0	124.1	124.0
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	**0.514**	**160.2**	**157.6**	**164.6**	**165.0**	**164.0**
1.3.3.1 Tobacco products	0.514	160.2	157.6	164.6	165.0	164.0

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2021-22	2021	2022		
			Jun.	Apr.	May (P)	Jun. (P)
1.3.4 MANUFACTURE OF TEXTILES	**4.881**	**135.2**	**129.7**	**145.8**	**147.6**	**148.6**
1.3.4.1 Preparation and Spinning of textile fibres	2.582	128.2	121.2	140.6	142.1	143.3
1.3.4.2 Weaving & Finishing of textiles	1.509	146.8	142.4	155.8	158.5	159.6
1.3.4.3 Knitted and Crocheted fabrics	0.193	125.5	122.1	133.1	132.8	133.3
1.3.4.4 Made-up textile articles, Except apparel	0.299	138.7	134.6	149.2	151.2	154.4
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	168.5	171.0	166.3	167.6	163.0
1.3.4.6 Other textiles	0.201	126.2	122.2	133.9	135.0	135.1
1.3.5 MANUFACTURE OF WEARING APPAREL	**0.814**	**143.1**	**141.2**	**146.5**	**146.6**	**146.7**
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	142.0	140.4	145.3	145.2	145.2
1.3.5.2 Knitted and Crocheted apparel	0.221	145.8	143.2	149.7	150.3	150.5
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	**0.535**	**119.2**	**117.7**	**121.0**	**121.7**	**122.5**
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	103.4	102.5	106.7	106.4	107.5
1.3.6.2 Luggage, HandbAgs, Saddlery and Harness	0.075	141.5	140.5	142.5	142.1	141.7
1.3.6.3 Footwear	0.318	121.0	119.1	122.3	123.7	124.7
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	**0.772**	**141.0**	**138.7**	**146.0**	**147.2**	**148.3**
1.3.7.1 Saw milling and Planing of wood	0.124	128.8	124.3	134.9	135.6	136.9
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	141.9	140.4	147.7	149.3	150.0
1.3.7.3 Builder's carpentry and Joinery	0.036	193.9	194.5	201.5	201.5	203.0
1.3.7.4 Wooden containers	0.119	134.1	129.9	134.1	134.2	136.8
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	**1.113**	**137.5**	**133.0**	**153.7**	**153.8**	**155.8**
1.3.8.1 Pulp, Paper and Paperboard	0.493	141.4	136.5	156.9	156.5	158.4
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	137.8	134.9	150.0	149.0	152.6
1.3.8.3 Other articles of paper and Paperboard	0.306	131.0	125.3	152.5	154.5	154.9
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	**0.676**	**157.8**	**153.6**	**167.6**	**167.7**	**167.3**
1.3.9.1 Printing	0.676	157.8	153.6	167.6	167.7	167.3
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	**6.465**	**133.5**	**128.3**	**145.7**	**146.3**	**147.5**
1.3.10.1 Basic chemicals	1.433	143.8	135.8	162.7	165.1	166.3
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	129.6	126.4	137.6	137.1	141.3
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	140.3	133.5	153.5	152.4	150.5
1.3.10.4 Pesticides and Other agrochemical products	0.454	132.1	128.4	142.3	142.8	143.7
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	130.4	124.3	141.6	143.4	142.3
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	128.1	126.2	136.0	138.1	139.0
1.3.10.7 Other chemical products	0.692	130.3	124.7	142.9	143.5	144.7
1.3.10.8 Man-made fibres	0.296	106.6	102.5	115.8	114.9	116.0
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	**1.993**	**135.9**	**134.7**	**139.6**	**139.4**	**139.9**
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	135.9	134.7	139.6	139.4	139.9
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	**2.299**	**124.8**	**120.6**	**131.7**	**131.9**	**131.6**
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	104.3	102.3	107.2	108.2	109.2
1.3.12.2 Other Rubber Products	0.272	101.9	99.9	105.7	106.0	106.3
1.3.12.3 Plastics products	1.418	138.0	132.4	147.3	147.0	146.0
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	**3.202**	**123.7**	**121.4**	**130.5**	**130.6**	**132.6**
1.3.13.1 Glass and Glass products	0.295	139.1	136.3	150.9	151.5	155.9
1.3.13.2 Refractory products	0.223	115.6	113.0	118.9	118.8	118.9
1.3.13.3 Clay Building Materials	0.121	119.3	110.9	135.5	136.0	140.1
1.3.13.4 Other Porcelain and Ceramic Products	0.222	112.9	110.4	116.2	117.4	117.2
1.3.13.5 Cement, Lime and Plaster	1.645	126.4	124.5	133.4	133.0	135.9

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2021-22	2021	2022		
			Jun.	Apr.	May (P)	Jun. (P)
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	129.2	129.0	132.7	133.2	133.2
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	122.2	123.3	122.6	124.4	123.8
1.3.13.8 Other Non-Metallic Mineral Products	0.169	90.6	81.5	104.9	104.3	103.9
1.3.14 MANUFACTURE OF BASIC METALS	**9.646**	**140.1**	**134.0**	**161.2**	**158.7**	**150.2**
1.3.14.1 Inputs into steel making	1.411	150.8	138.2	181.9	174.7	159.3
1.3.14.2 Metallic Iron	0.653	147.7	143.4	178.4	174.3	161.2
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	119.1	116.5	134.5	134.1	129.0
1.3.14.4 Mild Steel -Long Products	1.081	137.4	131.7	159.1	158.0	152.7
1.3.14.5 Mild Steel - Flat products	1.144	157.5	154.9	179.1	174.5	162.6
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	133.7	129.4	156.8	154.8	147.0
1.3.14.7 Stainless Steel - Semi Finished	0.924	141.7	133.3	173.1	168.1	148.1
1.3.14.8 Pipes & tubes	0.205	155.9	145.4	183.1	179.1	169.2
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	139.7	132.5	156.2	155.7	152.0
1.3.14.10 Castings	0.925	118.9	116.5	125.7	126.3	128.0
1.3.14.11 Forgings of steel	0.271	159.0	155.6	166.9	171.4	169.9
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	**3.155**	**130.5**	**127.5**	**138.8**	**139.7**	**139.3**
1.3.15.1 Structural Metal Products	1.031	123.9	122.3	131.1	131.5	133.1
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	156.2	152.3	168.5	170.3	165.7
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	96.1	96.8	97.0	97.0	97.5
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	117.5	109.6	129.4	132.1	133.6
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	108.2	106.4	112.2	112.2	112.5
1.3.15.6 Other Fabricated Metal Products	0.728	136.5	134.1	143.7	143.9	143.2
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	**2.009**	**113.7**	**112.7**	**116.4**	**116.0**	**116.1**
1.3.16.1 Electronic Components	0.402	106.0	103.4	113.2	114.8	115.0
1.3.16.2 Computers and Peripheral Equipment	0.336	134.7	134.8	134.8	135.0	134.9
1.3.16.3 Communication Equipment	0.310	121.7	120.7	128.2	128.2	128.0
1.3.16.4 Consumer Electronics	0.641	102.1	101.6	101.0	98.6	98.6
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	108.4	108.5	112.3	112.7	112.7
1.3.16.6 Watches and Clocks	0.076	145.6	142.4	149.3	149.6	152.6
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	106.1	106.6	109.9	109.6	108.3
1.3.16.8 Optical instruments and Photographic equipment	0.008	98.3	98.5	99.6	99.6	98.3
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	**2.930**	**122.3**	**120.2**	**127.4**	**126.4**	**128.3**
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	119.7	118.0	123.3	121.3	124.2
1.3.17.2 Batteries and Accumulators	0.236	121.8	117.5	129.4	129.6	131.7
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	103.1	101.1	105.3	108.0	112.4
1.3.17.4 Other electronic and Electric wires and Cables	0.428	140.7	137.1	153.3	151.9	151.6
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	114.5	113.8	116.2	117.0	116.8
1.3.17.6 Domestic appliances	0.366	128.4	125.2	133.3	132.1	134.1
1.3.17.7 Other electrical equipment	0.206	113.2	113.6	114.3	114.9	116.4
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	**4.789**	**120.0**	**118.1**	**124.3**	**124.4**	**124.7**
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	119.2	116.6	125.4	125.8	125.7
1.3.18.2 Fluid power equipment	0.162	122.1	120.3	125.5	125.2	127.1
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	115.1	113.9	117.4	117.2	117.5
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	118.1	117.5	121.1	120.0	120.9
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	74.2	74.2	78.5	78.1	78.5
1.3.18.6 Lifting and Handling equipment	0.285	120.0	116.8	125.4	125.4	124.6

No. 21: Wholesale Price Index (Concld.)

(Base: 2011-12 = 100)

Commodities	Weight	2021-22	2021	2022		
			Jun.	Apr.	May (P)	Jun. (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	132.9	143.6	145.3	142.6
1.3.18.9 Agricultural and Forestry machinery	0.833	128.4	124.8	133.5	133.9	134.3
1.3.18.10 Metal-forming machinery and Machine tools	0.224	114.2	110.3	118.1	118.0	118.3
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	78.2	76.8	80.3	80.4	84.2
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	130.1	128.5	131.0	129.7	129.4
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	125.3	123.8	127.9	128.3	126.9
1.3.18.14 Other special-purpose machinery	0.468	134.7	134.1	136.6	136.8	137.9
1.3.18.15 Renewable electricity generating equipment	0.046	66.6	66.4	67.8	68.3	68.3
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	**4.969**	**122.7**	**120.5**	**126.1**	**126.8**	**127.7**
1.3.19.1 Motor vehicles	2.600	122.6	120.7	124.6	125.1	126.2
1.3.19.2 Parts and Accessories for motor vehicles	2.368	122.7	120.2	127.8	128.8	129.4
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	**1.648**	**131.7**	**128.6**	**134.5**	**134.8**	**135.5**
1.3.20.1 Building of ships and Floating structures	0.117	158.9	158.8	159.1	159.1	159.1
1.3.20.2 Railway locomotives and Rolling stock	0.110	104.4	103.8	103.7	103.7	104.0
1.3.20.3 Motor cycles	1.302	131.0	127.3	134.4	134.8	135.6
1.3.20.4 Bicycles and Invalid carriages	0.117	137.2	136.3	139.4	139.9	139.9
1.3.20.5 Other transport equipment	0.002	135.9	132.4	145.5	146.5	147.7
1.3.21 MANUFACTURE OF FURNITURE	**0.727**	**150.1**	**144.8**	**155.2**	**159.4**	**155.8**
1.3.21.1 Furniture	0.727	150.1	144.8	155.2	159.4	155.8
1.3.22 OTHER MANUFACTURING	**1.064**	**137.9**	**138.4**	**147.5**	**144.3**	**139.6**
1.3.22.1 Jewellery and Related articles	0.996	136.0	136.7	146.0	142.5	137.7
1.3.22.2 Musical instruments	0.001	192.3	195.3	184.4	186.8	192.1
1.3.22.3 Sports goods	0.012	140.4	137.5	146.6	147.9	148.2
1.3.22.4 Games and Toys	0.005	150.9	150.4	158.6	156.1	160.6
1.3.22.5 Medical and Dental instruments and Supplies	0.049	171.8	170.7	176.4	175.7	173.5
2 FOOD INDEX	**24.378**	**163.8**	**158.7**	**173.3**	**176.1**	**178.4**

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-May		May	
				2021-22	2022-23	2021	2022
	1	2	3	4	5	6	7
General Index	100.00	118.1	131.6	120.6	136.2	115.1	137.7
1 Sectoral Classification							
1.1 Mining	14.37	101.0	113.3	108.0	118.2	108.3	120.1
1.2 Manufacturing	77.63	117.2	131.0	118.1	133.2	111.5	134.5
1.3 Electricity	7.99	157.6	170.1	168.0	197.2	161.9	199.9
2 Use-Based Classification							
2.1 Primary Goods	34.05	118.1	129.5	124.7	141.9	122.8	144.5
2.2 Capital Goods	8.22	75.9	88.7	70.5	92.4	61.9	95.3
2.3 Intermediate Goods	17.22	124.7	143.9	134.4	150.8	129.1	152.2
2.4 Infrastructure/ Construction Goods	12.34	124.7	148.2	136.8	151.5	129.5	153.1
2.5 Consumer Durables	12.84	101.2	113.8	87.5	112.2	71.6	113.5
2.6 Consumer Non-Durables	15.33	142.1	146.7	137.8	138.0	135.6	136.8

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 - June			
	2022-23 (Budget Estimates)	2022-23 (Actuals)	2021-22 (Actuals)	Percentage to Budget Estimates	
				2022-23	2021-22
	1	2	3	4	5
1 Revenue Receipts	**2204422**	**568058**	**539997**	**25.8**	**30.2**
1.1 Tax Revenue (Net)	1934771	505898	412680	26.1	26.7
1.2 Non-Tax Revenue	269651	62160	127317	23.1	52.4
2 Non-Debt Capital Receipt	**79291**	**27982**	**7402**	**35.3**	**3.9**
2.1 Recovery of Loans	14291	3423	3406	24.0	26.2
2.2 Other Receipts	65000	24559	3996	37.8	2.3
3 Total Receipts (excluding borrowings) (1+2)	**2283713**	**596040**	**547399**	**26.1**	**27.7**
4 Revenue Expenditure	3194663	772847	710148	24.2	24.2
of which:					
4.1 Interest Payments	940651	228595	184295	24.3	22.8
5 Capital Expenditure	750246	175064	111496	23.3	20.1
6 Total Expenditure (4+5)	**3944909**	**947911**	**821644**	**24.0**	**23.6**
7 Revenue Deficit (4-1)	**990241**	**204789**	**170151**	**20.7**	**14.9**
8 Fiscal Deficit (6-3)	**1661196**	**351871**	**274245**	**21.2**	**18.2**
9 Gross Primary Deficit (8-4.1)	**720545**	**123276**	**89950**	**17.1**	**12.9**

Source: Controller General of Accounts (CGA), Ministry of Finance, Government of India and Union Budget 2022-23.

No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

Item	2021-22	2021	2022					
		Jun. 25	May 20	May 27	Jun. 3	Jun. 10	Jun. 17	Jun. 24
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	5310	10543	9773	9431	8622	8628	8945	9455
1.2 Primary Dealers	16705	34544	38528	36013	33408	32845	30712	34041
1.3 State Governments	31320	41982	48200	53400	53900	62400	72000	70800
1.4 Others	72109	160981	91923	102756	111858	118498	126433	128325
2 182-day								
2.1 Banks	70130	127372	91859	92683	95822	101204	103936	102032
2.2 Primary Dealers	63669	58473	97841	101768	100629	104040	110256	111392
2.3 State Governments	15763	11839	22311	23811	25311	25311	27246	28246
2.4 Others	69259	99532	91222	95293	102229	102268	102314	110496
3 364-day								
3.1 Banks	112386	134123	113652	112051	114852	119511	116331	113968
3.2 Primary Dealers	160461	135126	174768	179691	172875	174020	183022	181683
3.3 State Governments	22836	17983	26369	26369	26296	26296	26296	26686
3.4 Others	118392	97843	125139	123857	129309	123631	119573	125126
4 14-day Intermediate								
4.1 Banks								
4.2 Primary Dealers								
4.3 State Governments	289362	124998	147252	141999	165019	167030	159057	155906
4.4 Others	659	685	1025	862	1647	1320	341	934
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	758339	930341	931585	957123	975111	998652	1027066	1042250

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

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										
Jun. 1	13000	141	37448	5204	73	12796	5204	18000	98.78	4.9538
Jun. 8	13000	118	48808	12530	46	12970	12530	25500	98.77	4.9991
Jun. 15	13000	125	44471	12108	56	12992	12108	25100	98.76	5.0566
Jun. 22	13000	131	42080	2309	55	12991	2309	15300	98.75	5.0875
Jun. 29	13000	87	33195	7011	47	12989	7011	20000	98.73	5.1595
182-day Treasury Bills										
2022-23										
Jun. 1	12000	129	24577	1504	80	11996	1504	13500	97.32	5.5227
Jun. 8	12000	97	24767	3	65	11997	3	12000	97.27	5.6278
Jun. 15	12000	156	25770	1953	87	11983	1953	13935	97.22	5.7347
Jun. 22	12000	161	32412	1023	82	11977	1023	13000	97.21	5.7559
Jun. 29	12000	185	33092	1015	75	11985	1015	13000	97.19	5.7899
364-day Treasury Bills										
2022-23										
Jun. 1	8000	116	14127	3	98	7997	3	8000	94.28	6.0801
Jun. 8	8000	154	22606	7	78	7993	7	8000	94.25	6.1200
Jun. 15	8000	163	20760	10	91	7990	10	8000	94.11	6.2800
Jun. 22	8000	222	21356	404	135	7986	404	8390	94.11	6.2800
Jun. 29	8000	206	24833	1167	50	7973	1167	9139	94.10	6.2870

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
June 1, 2022	2.35-4.50	4.13
June 2, 2022	2.35-4.45	4.07
June 3, 2022	2.35-4.55	4.10
June 4, 2022	3.25-4.25	3.87
June 6, 2022	2.35-4.50	4.15
June 7, 2022	2.35-4.45	4.11
June 8, 2022	2.35-4.95	4.36
June 9, 2022	2.35-4.80	4.60
June 10, 2022	2.35-4.80	4.54
June 13, 2022	3.30-4.80	4.54
June 14, 2022	2.30-4.80	4.55
June 15, 2022	3.30-4.80	4.53
June 16, 2022	2.35-4.80	4.54
June 17, 2022	3.30-5.10	4.56
June 18, 2022	3.80-4.51	4.28
June 20, 2022	2.30-4.80	4.58
June 21, 2022	2.35-5.15	4.62
June 22, 2022	2.50-4.90	4.61
June 23, 2022	2.50-4.85	4.62
June 24, 2022	3.30-4.90	4.66
June 27, 2022	2.50-5.00	4.67
June 28, 2022	2.50-4.95	4.68
June 29, 2022	3.30-4.95	4.75
June 30, 2022	3.25-5.10	4.75
July 1, 2022	3.30-5.20	4.72
July 2, 2022	3.70-4.90	4.28
July 4, 2022	3.00-4.95	4.72
July 5, 2022	3.30-4.90	4.71
July 6, 2022	3.00-4.85	4.68
July 7, 2022	3.30-5.00	4.67
July 8, 2022	3.30-4.95	4.69
July 11, 2022	3.30-4.95	4.69
July 12, 2022	3.30-4.90	4.66
July 13, 2022	3.30-4.85	4.66
July 14, 2022	3.30-4.85	4.67
July 15, 2022	3.25-5.25	4.74

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2021	2022			
	Jun. 18	May 6	May 20	Jun. 3	Jun. 17
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	68209.42	185308.10	193034.11	189977.09	194418.87
1.1 Issued during the fortnight (₹ Crore)	6209.13	5508.80	26309.36	19242.58	25090.17
2 Rate of Interest (per cent)	3.44-4.11	4.04-5.83	4.88-5.76	4.89-5.89	4.86-6.58

No. 28: Commercial Paper

Item	2021	2022			
	Jun. 30	May 15	May 31	Jun. 15	Jun. 30
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	376117.85	384417.40	384544.00	389282.00	372542.35
1.1 Reported during the fortnight (₹ Crore)	97928.00	44342.95	72437.60	55172.75	67595.30
2 Rate of Interest (per cent)	3.43-13.03	3.91-10.59	4.48-12.31	4.69-13.52	4.88-12.38

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

Item	2021-22	2021	2022					
		Jun. 25	May 20	May 27	Jun. 3	Jun. 10	Jun. 17	Jun. 24
	1	2	3	4	5	6	7	8
1 Call Money	14515	13148	15625	17938	19112	22986	18972	21624
2 Notice Money	2122	1009	6143	591	4808	520	5498	689
3 Term Money	515	568	382	338	238	814	1166	238
4 Triparty Repo	618526	476714	809662	664721	768346	660389	852668	710395
5 Market Repo	383844	329177	447105	367359	501203	386824	466048	482415
6 Repo in Corporate Bond	4373	8737	1364	384	209	71	225	116
7 Forex (US $ million)	67793	73797	80148	76519	83833	77157	89970	84579
8 Govt. of India Dated Securities	51300	43103	57396	66154	57301	64408	51098	70092
9 State Govt. Securities	5570	6446	3119	4540	4649	3940	2601	5016
10 Treasury Bills								
10.1 91-Day	4690	8852	5268	7611	8130	6746	5633	6131
10.2 182-Day	3440	3881	3696	2874	4230	5276	3368	4424
10.3 364-Day	3530	2396	5394	2914	3616	2958	2603	2916
10.4 Cash Management Bills								
11 Total Govt. Securities (8+9+10)	68530	64678	74874	84094	77926	83328	65304	88578
11.1 RBI	–	145	328	810	317	1644	489	133

No. 30: New Capital Issues By Non-Government Public Limited Companies

(Amount in ₹ Crore)

Security & Type of Issue	2021-22		2021-22 (Apr.-Jun.)		2022-23 (Apr.-Jun.) *		Jun. 2021		Jun. 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**	**22**	**12864**	**45**	**18298**	**10**	**9550**	**12**	**1469**
1A Premium	154	136893	21	12449	42	17493	10	9223	11	1347
1.1 Public	121	112567	16	12156	31	17103	8	9146	8	1344
1.1.1 Premium	119	111314	16	11821	30	16550	8	8881	8	1303
1.2 Rights	43	26327	6	709	14	1195	2	404	4	125
1.2.1 Premium	35	25580	5	629	12	943	2	342	3	44
2 Preference Shares	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.1 Public	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Bonds & Debentures	**28**	**11589**	**6**	**3581**	**11**	**2525**	**–**	**–**	**3**	**842**
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Public	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	28	11589	6	3581	11	2525	–	–	3	842
3.2.1 Public	28	11589	6	3581	11	2525	–	–	3	842
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Total(1+2+3)	**192**	**150484**	**28**	**16445**	**56**	**20823**	**10**	**9550**	**15**	**2311**
4.1 Public	149	124157	22	15737	42	19627	8	9146	11	2186
4.2 Rights	43	26327	6	709	14	1195	2	404	4	125

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 of numbers.

Source : Securities and Exchange Board of India.

* : Data is Provisional

External Sector

No. 31: Foreign Trade

Item	Unit	2021-22	2021	2022				
			Jun.	Feb.	Mar.	Apr.	May	Jun.
		1	2	3	4	5	6	7
1 Exports	₹ Crore	3146186	238996	278585	339207	303051	301825	313343
	US $ Million	421894	32491	37143	44489	39787	39036	40134
1.1 Oil	₹ Crore	503820	29072	51733	74744	60021	66248	67587
	US $ Million	67468	3952	6897	9803	7880	8568	8657
1.2 Non-oil	₹ Crore	2642366	209924	226852	264462	243029	235577	245756
	US $ Million	354427	28538	30246	34686	31907	30468	31477
2 Imports	₹ Crore	4569443	309605	418745	480163	458525	489020	517727
	US $ Million	612608	42090	55830	62977	60199	63247	66312
2.1 Oil	₹ Crore	1207782	78549	118171	161199	153257	148600	166306
	US $ Million	161808	10678	15755	21142	20121	19219	21301
2.2 Non-oil	₹ Crore	3361660	231057	300574	318964	305268	340420	351422
	US $ Million	450800	31411	40075	41834	40078	44028	45011
3 Trade Balance	₹ Crore	-1423256	-70609	-140159	-140957	-155474	-187195	-204385
	US $ Million	-190713	-9599	-18687	-18487	-20412	-24211	-26178
3.1 Oil	₹ Crore	-703962	-49477	-66438	-86454	-93236	-82352	-98719
	US $ Million	-94340	-6726	-8858	-11339	-12241	-10651	-12644
3.2 Non-oil	₹ Crore	-719294	-21133	-73721	-54502	-62238	-104843	-105666
	US $ Million	-96373	-2873	-9829	-7148	-8171	-13560	-13534

Source: DGCI&S and Ministry of Commerce & Industry.

No. 32: Foreign Exchange Reserves

Item	Unit	2021	2022					
		Jul. 30	Jun. 24	Jul. 1	Jul. 8	Jul. 15	Jul. 22	Jul. 29
		1	2	3	4	5	6	7
1 Total Reserves	**₹ Crore**	**4617303**	**4647773**	**4643705**	**4600703**	**4575190**	**4568803**	**4549652**
	US $ Million	**620576**	**593323**	**588314**	**580252**	**572712**	**571560**	**573875**
1.1 Foreign Currency Assets	₹ Crore	4287317	4145595	4141861	4107837	4086690	4077817	4053160
	US $ Million	576224	529216	524745	518089	511562	510136	511257
1.2 Gold	₹ Crore	280086	320594	319055	310699	306415	307766	314274
	US $ Million	37644	40926	40422	39186	38356	38502	39642
	Volume (Metric Tonnes)	711.18	767.89	768.82	774.76	779.42	780.36	781.29
1.3 SDRs	SDRs Million	1087	13657	13657	13657	13657	13657	13657
	₹ Crore	11545	142649	143129	142814	142651	143587	142583
	US $ Million	1552	18210	18133	18012	17857	17963	17985
1.4 Reserve Tranche Position in IMF	₹ Crore	38355	38934	39660	39353	39434	39632	39635
	US $ Million	5156	4970	5014	4966	4937	4960	4991

* 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
		Jun.	May	Jun.	Apr.-Jun.	Apr.-Jun.
	1	2	3	4	5	6
1 NRI Deposits	**139022**	**141529**	**137089**	**135977**	**2525**	**349**
1.1 FCNR(B)	16918	19699	15910	15681	-774	-1237
1.2 NR(E)RA	100801	102920	99928	98982	2782	981
1.3 NRO	21303	18910	21250	21314	518	606

No. 34: Foreign Investment Inflows

(US$ Million)

Item	2021-22	2021-22	2022-23	2021	2022	
		Apr.-Jun.	Apr.-Jun.	Jun.	May	Jun.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	**38587**	**11554**	**13614**	**354**	**4918**	**3735**
1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)	**56231**	**17237**	**16121**	**2555**	**5562**	**4724**
1.1.1.1 Gross Inflows/Gross Investments	**84835**	**23147**	**22347**	**4525**	**8070**	**5902**
1.1.1.1.1 Equity	59684	17773	16795	2734	6220	4047
1.1.1.1.1.1 Government (SIA/FIPB)	1698	110	379	39	203	113
1.1.1.1.1.2 RBI	42932	10610	12405	2088	4281	2285
1.1.1.1.1.3 Acquisition of shares	14143	6847	3805	538	1667	1580
1.1.1.1.1.4 Equity capital of unincorporated bodies	910	206	206	69	69	69
1.1.1.1.2 Reinvested earnings	19347	4378	4378	1459	1459	1459
1.1.1.1.3 Other capital	5805	997	1174	332	390	395
1.1.1.2 Repatriation/Disinvestment	**28605**	**5910**	**6226**	**1970**	**2508**	**1178**
1.1.1.2.1 Equity	27189	5818	5812	1939	2288	1074
1.1.1.2.2 Other capital	1416	92	414	31	220	103
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**	**5683**	**2507**	**2201**	**644**	**989**
1.1.2.1 Equity capital	10061	2532	1061	666	305	420
1.1.2.2 Reinvested Earnings	3379	845	845	282	282	282
1.1.2.3 Other Capital	7604	2849	1153	1434	217	476
1.1.2.4 Repatriation/Disinvestment	3400	542	552	181	159	189
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	**-16777**	**402**	**-15063**	**1252**	**-4209**	**-6694**
1.2.1 GDRs/ADRs	–	–	–	–	–	–
1.2.2 FIIs	-14071	378	-15115	1244	-4458	-6586
1.2.3 Offshore funds and others	–	–	–	–	–	–
1.2.4 Portfolio investment by India	2706	-24	-53	-8	-249	108
1 Foreign Investment Inflows	**21809**	**11956**	**-1449**	**1606**	**709**	**-2959**

No. 35: Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals

(US$ Million)

Item	2021-22	2021	2022		
		Jun.	Apr.	May	Jun.
	1	2	3	4	5
1 Outward Remittances under the LRS	**19610.77**	**1232.22**	**2023.70**	**2039.26**	**1984.68**
1.1 Deposit	830.05	64.32	113.90	79.46	72.49
1.2 Purchase of immovable property	112.90	10.02	14.09	11.76	14.54
1.3 Investment in equity/debt	746.57	66.91	76.24	82.47	65.03
1.4 Gift	2336.29	178.21	299.20	248.69	222.77
1.5 Donations	16.55	1.59	0.85	1.01	1.12
1.6 Travel	6909.04	277.65	880.78	994.82	1043.08
1.7 Maintenance of close relatives	3302.37	241.57	385.57	336.96	304.85
1.8 Medical Treatment	37.79	2.52	4.51	4.43	4.39
1.9 Studies Abroad	5165.33	380.23	232.95	264.61	240.86
1.10 Others	153.88	9.20	15.59	15.04	15.55

No. 36: Indices of Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER) of the Indian Rupee

Item	2020-21	2021-22	2021	2022	
			July	June	July
	1	2	3	4	5
40-Currency Basket (Base: 2015-16=100)					
1 Trade-weighted					
1.1 NEER	93.92	93.13	92.63	92.63	92.07
1.2 REER	103.46	104.66	104.85	104.02	103.65
2 Export-weighted					
2.1 NEER	93.59	93.55	92.79	93.95	93.50
2.2 REER	102.96	103.48	103.54	102.70	102.45
6-Currency Basket (Trade-weighted)					
1 Base: 2015-16 = 100					
1.1 NEER	88.45	87.03	86.66	87.40	86.88
1.2 REER	101.84	102.27	102.09	103.32	103.16
2 Base: 2020-21 = 100					
2.1 NEER	100.00	98.39	97.97	98.80	98.23
2.2 REER	100.00	100.42	100.24	101.45	101.30

No. 37: External Commercial Borrowings (ECBs) – Registrations

(Amount in US$ Million)

Item	2021-22	2021	2022	
		Jun	May	Jun
	1	2	3	4
1 Automatic Route				
1.1 Number	1086	87	95	109
1.2 Amount	28851	1485	1416	1789
2 Approval Route				
2.1 Number	18	0	1	1
2.2 Amount	11035	0	100	100
3 Total (1+2)				
3.1 Number	1104	87	96	110
3.2 Amount	39886	1485	1516	1889
4 Weighted Average Maturity (in years)	8.00	5.12	5.80	5.50
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.71	1.75	2.52	1.77
5.2 Interest rate range for Fixed Rate Loans	0.00-10.50	0.00-10.25	0.00-10.50	0.00-10.37
Borrower Category				
I. Corporate Manufacturing	12244	391	712	389
II. Corporate-Infrastructure	17023	802	456	131
a.) Transport	1597	0	0	0
b.) Energy	8215	293	54	125
c.) Water and Sanitation	10	0	10	0
d.) Communication	1,258	0	0	0
e.) Social and Commercial Infrastructure	0	0	100	0
f.) Exploration,Mining and Refinery	4691	510	16	5
g.) Other Sub-Sectors	1252	0	276	1
III. Corporate Service-Sector	1570	132	129	661
IV. Other Entities	609	0	0	300
a.) units in SEZ	9	0	0	0
b.) SIDBI				
c.) Exim Bank	600	0	0	300
V. Banks	100	0	0	0
VI. Financial Institution (Other than NBFC)	4	0	0	0
VII. NBFCs	7995	119	210	406
a). NBFC- IFC/AFC	5621	91	100	0
b). NBFC-MFI	93	0	0	6
c). NBFC-Others	2282	29	110	400
VIII. Non-Government Organization (NGO)	0	0	0	0
IX. Micro Finance Institution (MFI)	0	0	0	0
X. Others	341	40	9	2

No. 38: India's Overall Balance of Payments

(US$ Million)

Item	Jan-Mar 2021			Jan-Mar 2022(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**336072**	**332683**	**3389**	**384903**	**400927**	**-16024**
1 CURRENT ACCOUNT (1.1+ 1.2)	**173382**	**181543**	**-8161**	**218823**	**232247**	**-13424**
1.1 MERCHANDISE	**91281**	**133025**	**-41745**	**118020**	**172503**	**-54483**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**82101**	**48518**	**33583**	**100803**	**59744**	**41059**
1.2.1 Services	56004	32520	23485	69876	41557	28319
1.2.1.1 Travel	2308	3141	-834	2757	5133	-2376
1.2.1.2 Transportation	6080	5633	446	9398	11002	-1604
1.2.1.3 Insurance	647	566	82	904	428	476
1.2.1.4 G.n.i.e.	159	241	-82	160	271	-111
1.2.1.5 Miscellaneous	46811	22938	23873	56657	24723	31934
1.2.1.5.1 Software Services	26802	3327	23475	32786	3520	29266
1.2.1.5.2 Business Services	13324	12847	478	16835	13867	2968
1.2.1.5.3 Financial Services	1258	1402	-145	1615	1504	111
1.2.1.5.4 Communication Services	696	399	297	763	269	494
1.2.2 Transfers	20927	2085	18842	23723	2591	21132
1.2.2.1 Official	18	285	-267	21	239	-218
1.2.2.2 Private	20909	1801	19108	23702	2353	21350
1.2.3 Income	5170	13913	-8743	7204	15596	-8392
1.2.3.1 Investment Income	3517	13192	-9675	5589	14792	-9202
1.2.3.2 Compensation of Employees	1653	721	932	1614	804	810
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**162690**	**150429**	**12261**	**166081**	**167787**	**-1707**
2.1 Foreign Investment (2.1.1+2.1.2)	**108195**	**98236**	**9959**	**95111**	**96550**	**-1439**
2.1.1 Foreign Direct Investment	15393	12714	2679	24396	10620	13777
2.1.1.1 In India	13679	7928	5750	23281	6028	17253
2.1.1.1.1 Equity	8553	7894	659	15845	5177	10669
2.1.1.1.2 Reinvested Earnings	4519		4519	5229		5229
2.1.1.1.3 Other Capital	607	34	573	2207	851	1356
2.1.1.2 Abroad	1714	4786	-3072	1115	4592	-3477
2.1.1.2.1 Equity	1714	1197	517	1115	2132	-1017
2.1.1.2.2 Reinvested Earnings	0	753	-753	0	845	-845
2.1.1.2.3 Other Capital	0	2835	-2835	0	1615	-1615
2.1.2 Portfolio Investment	92802	85522	7280	70715	85930	-15215
2.1.2.1 In India	92500	84310	8190	70254	84543	-14289
2.1.2.1.1 FIIs	92500	84310	8190	70254	84543	-14289
2.1.2.1.1.1 Equity	81440	73679	7761	62553	75636	-13083
2.1.2.1.1.2 Debt	11059	10631	428	7701	8907	-1206
2.1.2.1.2 ADR/GDRs	0	0	0	0		0
2.1.2.2 Abroad	303	1212	-909	461	1387	-926
2.2 Loans (2.2.1+2.2.2+2.2.3)	**26446**	**18725**	**7721**	**33737**	**20826**	**12911**
2.2.1 External Assistance	5380	1387	3993	3988	1331	2657
2.2.1.1 By India	10	21	-11	13	16	-3
2.2.1.2 To India	5370	1366	4004	3976	1315	2661
2.2.2 Commercial Borrowings	11834	5759	6075	11346	7913	3433
2.2.2.1 By India	683	745	-63	514	373	141
2.2.2.2 To India	11152	5014	6138	10832	7540	3292
2.2.3 Short Term to India	9232	11578	-2346	18403	11582	6821
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	8067	11578	-3511	14571	11582	2988
2.2.3.2 Suppliers' Credit up to 180 days	1165	0	1165	3833	0	3833
2.3 Banking Capital (2.3.1+2.3.2)	**16733**	**21158**	**-4425**	**27241**	**33202**	**-5961**
2.3.1 Commercial Banks	16518	21158	-4640	27195	32602	-5407
2.3.1.1 Assets	4141	7973	-3832	13120	17970	-4850
2.3.1.2 Liabilities	12377	13185	-808	14075	14632	-557
2.3.1.2.1 Non-Resident Deposits	11350	11889	-539	13468	13309	159
2.3.2 Others	215	0	215	46	600	-554
2.4 Rupee Debt Service		7	-7	0	12	-12
2.5 Other Capital	11315	12302	-987	9991	17196	-7205
3 Errors & Omissions		**711**	**-711**	0	**893**	**-893**
4 Monetary Movements (4.1+ 4.2)	0	**3389**	**-3389**	**16024**	0	**16024**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	3389	-3389	16024	0	16024

Note : P : Preliminary

No. 39: India's Overall Balance of Payments

(₹ Crore)

Item	Jan-Mar 2021			Jan-Mar 2022(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**2449502**	**2424800**	**24702**	**2895618**	**3016163**	**-120545**
1 CURRENT ACCOUNT (1.1+ 1.2)	**1263718**	**1323202**	**-59484**	**1646199**	**1747190**	**-100991**
1.1 MERCHANDISE	**665312**	**969572**	**-304260**	**887863**	**1297738**	**-409875**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**598406**	**353629**	**244776**	**758336**	**449452**	**308883**
1.2.1 Services	408194	237025	171170	525672	312631	213042
1.2.1.1 Travel	16819	22896	-6077	20740	38617	-17877
1.2.1.2 Transportation	44312	41058	3254	70702	82770	-12068
1.2.1.3 Insurance	4719	4125	594	6801	3218	3583
1.2.1.4 G.n.i.e.	1158	1759	-601	1201	2035	-834
1.2.1.5 Miscellaneous	341186	167187	173999	426228	185990	240238
1.2.1.5.1 Software Services	195350	24250	171099	246649	26481	220167
1.2.1.5.2 Business Services	97117	93634	3484	126651	104321	22330
1.2.1.5.3 Financial Services	9166	10220	-1054	12147	11313	834
1.2.1.5.4 Communication Services	5073	2905	2168	5742	2024	3718
1.2.2 Transfers	152529	15199	137330	178471	19496	158975
1.2.2.1 Official	129	2074	-1945	158	1796	-1638
1.2.2.2 Private	152400	13125	139275	178313	17700	160613
1.2.3 Income	37682	101406	-63724	54193	117326	-63133
1.2.3.1 Investment Income	25637	96153	-70517	42047	111277	-69230
1.2.3.2 Compensation of Employees	12045	5252	6793	12145	6049	6096
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**1185784**	**1096418**	**89366**	**1249419**	**1262257**	**-12838**
2.1 Foreign Investment (2.1.1+2.1.2)	**788594**	**716008**	**72586**	**715520**	**726343**	**-10823**
2.1.1 Foreign Direct Investment	112193	92670	19523	183534	79893	103640
2.1.1.1 In India	99699	57788	41911	175144	45346	129797
2.1.1.1.1 Equity	62338	57537	4801	119205	38945	80260
2.1.1.1.2 Reinvested Earnings	32935	0	32935	39334	0	39334
2.1.1.1.3 Other Capital	4427	251	4176	16605	6401	10203
2.1.1.2 Abroad	12493	34882	-22389	8390	34547	-26157
2.1.1.2.1 Equity	12493	8726	3767	8390	16040	-7650
2.1.1.2.2 Reinvested Earnings	0	5490	-5490	0	6355	-6355
2.1.1.2.3 Other Capital	0	20666	-20666	0	12153	-12153
2.1.2 Portfolio Investment	676402	623338	53063	531986	646450	-114463
2.1.2.1 In India	674196	614505	59691	528521	636017	-107496
2.1.2.1.1 FIIs	674196	614505	59691	528521	636017	-107496
2.1.2.1.1.1 Equity	593588	537019	56569	470586	569008	-98422
2.1.2.1.1.2 Debt	80608	77487	3122	57935	67009	-9074
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	2206	8833	-6628	3465	10433	-6968
2.2 Loans (2.2.1+2.2.2+2.2.3)	**192758**	**136479**	**56279**	**253804**	**156675**	**97128**
2.2.1 External Assistance	39212	10111	29101	30003	10013	19989
2.2.1.1 By India	71	153	-82	95	120	-26
2.2.1.2 To India	39141	9958	29183	29908	9893	20015
2.2.2 Commercial Borrowings	86255	41978	44276	85354	59528	25826
2.2.2.1 By India	4975	5433	-459	3867	2804	1062
2.2.2.2 To India	81280	36545	44735	81487	56723	24764
2.2.3 Short Term to India	67291	84390	-17099	138447	87134	51313
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	58799	84390	-25591	109614	87134	22479
2.2.3.2 Suppliers' Credit up to 180 days	8492	0	8492	28833	0	28833
2.3 Banking Capital (2.3.1+2.3.2)	**121962**	**154215**	**-32253**	**204931**	**249778**	**-44847**
2.3.1 Commercial Banks	120397	154215	-33818	204584	245264	-40680
2.3.1.1 Assets	30186	58112	-27927	98701	135191	-36490
2.3.1.2 Liabilities	90211	96103	-5892	105884	110073	-4190
2.3.1.2.1 Non-Resident Deposits	82726	86651	-3925	101318	100121	1197
2.3.2 Others	1565	0	1565	347	4514	-4167
2.4 Rupee Debt Service	0	50	-50	0	93	-93
2.5 Other Capital	82471	89666	-7196	75165	129368	-54203
3 Errors & Omissions	0	**5180**	**-5180**	0	**6716**	**-6716**
4 Monetary Movements (4.1+ 4.2)	0	**24702**	**-24702**	**120545**	0	**120545**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	24702	-24702	120545	0	120545

Note : P: Preliminary

No. 40: Standard Presentation of BoP in India as per BPM6

(US$ Million)

Item	Jan-Mar 2021			Jan-Mar 2022(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**173382**	**181517**	**-8135**	**218822**	**232225**	**-13404**
1.A Goods and Services (1.A.a+1.A.b)	**147285**	**165545**	**-18260**	**187896**	**214060**	**-26164**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**91281**	**133025**	**-41745**	**118020**	**172503**	**-54483**
1.A.a.1 General merchandise on a BOP basis	89691	115206	-25515	118046	164299	-46253
1.A.a.2 Net exports of goods under merchanting	1590	0	1590	-26	0	-26
1.A.a.3 Nonmonetary gold		17819	-17819		8204	-8204
1.A.b Services (1.A.b.1 to 1.A.b.13)	**56004**	**32520**	**23485**	**69876**	**41557**	**28319**
1.A.b.1 Manufacturing services on physical inputs owned by others	102	6	96	214	24	190
1.A.b.2 Maintenance and repair services n.i.e.	54	211	-157	44	440	-397
1.A.b.3 Transport	6080	5633	446	9398	11002	-1604
1.A.b.4 Travel	2308	3141	-834	2757	5133	-2376
1.A.b.5 Construction	752	713	39	596	720	-124
1.A.b.6 Insurance and pension services	647	566	82	904	428	476
1.A.b.7 Financial services	1258	1402	-145	1615	1504	111
1.A.b.8 Charges for the use of intellectual property n.i.e.	238	2107	-1868	193	2518	-2325
1.A.b.9 Telecommunications, computer, and information services	27574	3909	23665	33629	4009	29620
1.A.b.10 Other business services	13324	12847	478	16835	13867	2968
1.A.b.11 Personal, cultural, and recreational services	727	878	-150	970	1224	-253
1.A.b.12 Government goods and services n.i.e.	159	241	-82	160	271	-111
1.A.b.13 Others n.i.e.	2781	865	1916	2560	416	2145
1.B Primary Income (1.B.1 to 1.B.3)	**5170**	**13913**	**-8743**	**7204**	**15596**	**-8392**
1.B.1 Compensation of employees	1653	721	932	1614	804	810
1.B.2 Investment income	2621	12952	-10331	4303	13417	-9113
1.B.2.1 Direct investment	1363	7837	-6474	3206	8193	-4987
1.B.2.2 Portfolio investment	28	1633	-1605	80	1591	-1511
1.B.2.3 Other investment	122	3481	-3359	96	3629	-3533
1.B.2.4 Reserve assets	1109	1	1107	922	4	918
1.B.3 Other primary income	896	240	656	1286	1375	-89
1.C Secondary Income (1.C.1+1.C.2)	**20927**	**2058**	**18868**	**23722**	**2570**	**21153**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	20909	1801	19108	23702	2353	21350
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	20224	1303	18920	22943	1677	21267
1.C.1.2 Other current transfers	686	497	188	759	676	83
1.C.2 General government	17	258	-240	20	217	-197
2 Capital Account (2.1+2.2)	**191**	**230**	**-38**	**244**	**173**	**71**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	87	38	49	117	29	88
2.2 Capital transfers	104	191	-88	127	144	-17
3 Financial Account (3.1 to 3.5)	**162499**	**153615**	**8884**	**181861**	**167636**	**14226**
3.1 Direct Investment (3.1A+3.1B)	**15393**	**12714**	**2679**	**24396**	**10620**	**13777**
3.1.A Direct Investment in India	13679	7928	5750	23281	6028	17253
3.1.A.1 Equity and investment fund shares	13071	7894	5177	21074	5177	15897
3.1.A.1.1 Equity other than reinvestment of earnings	8553	7894	659	15845	5177	10669
3.1.A.1.2 Reinvestment of earnings	4519		4519	5229		5229
3.1.A.2 Debt instruments	607	34	573	2207	851	1356
3.1.A.2.1 Direct investor in direct investment enterprises	607	34	573	2207	851	1356
3.1.B Direct Investment by India	1714	4786	-3072	1115	4592	-3477
3.1.B.1 Equity and investment fund shares	1714	1950	-236	1115	2977	-1862
3.1.B.1.1 Equity other than reinvestment of earnings	1714	1197	517	1115	2132	-1017
3.1.B.1.2 Reinvestment of earnings		753	-753		845	-845
3.1.B.2 Debt instruments	0	2835	-2835	0	1615	-1615
3.1.B.2.1 Direct investor in direct investment enterprises		2835	-2835		1615	-1615
3.2 Portfolio Investment	**92802**	**85522**	**7280**	**70715**	**85930**	**-15215**
3.2.A Portfolio Investment in India	92500	84310	8190	70254	84543	-14289
3.2.1 Equity and investment fund shares	81440	73679	7761	62553	75636	-13083
3.2.2 Debt securities	11059	10631	428	7701	8907	-1206
3.2.B Portfolio Investment by India	303	1212	-909	461	1387	-926
3.3 Financial derivatives (other than reserves) and employee stock options	**2662**	**4929**	**-2267**	**4629**	**7403**	**-2774**
3.4 Other investment	**51642**	**47061**	**4581**	**66098**	**63683**	**2415**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	11565	11889	-324	13514	13909	-395
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	215	0	215	46	600	-554
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	11350	11889	-539	13468	13309	159
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)	22382	16416	5966	29061	28537	524
3.4.3.A Loans to India	21690	15650	6040	28534	28148	386
3.4.3.B Loans by India	692	766	-74	527	389	138
3.4.4 Insurance, pension, and standardized guarantee schemes	27	43	-16	40	17	22
3.4.5 Trade credit and advances	9232	11578	-2346	18403	11582	6821
3.4.6 Other accounts receivable/payable - other	8435	7134	1301	5080	9637	-4557
3.4.7 Special drawing rights			0			0
3.5 Reserve assets	0	**3389**	**-3389**	**16024**	0	**16024**
3.5.1 Monetary gold			0			0
3.5.2 Special drawing rights n.a.			0			0
3.5.3 Reserve position in the IMF n.a.			0			0
3.5.4 Other reserve assets (Foreign Currency Assets)	0	3389	-3389	16024	0	16024
4 Total assets/liabilities	**162499**	**153615**	**8884**	**181861**	**167636**	**14226**
4.1 Equity and investment fund shares	99217	89707	9510	89872	92596	-2725
4.2 Debt instruments	54846	53384	1462	70886	65402	5484
4.3 Other financial assets and liabilities	8435	10524	-2088	21104	9637	11466
5 Net errors and omissions		**711**	**-711**		**893**	**-893**

No. 41: Standard Presentation of BoP in India as per BPM6

(₹ Crore)

Item	Jan-Mar 2021			Jan-Mar 2022(P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**1263714**	**1323006**	**-59291**	**1646190**	**1747025**	**-100835**
1.A Goods and Services (1.A.a+1.A.b)	**1073506**	**1206597**	**-133090**	**1413535**	**1610368**	**-196833**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**665312**	**969572**	**-304260**	**887863**	**1297738**	**-409875**
1.A.a.1 General merchandise on a BOP basis	653724	839694	-185970	888059	1236020	-347961
1.A.a.2 Net exports of goods under merchanting	11588	0	11588	-196	0	-196
1.A.a.3 Nonmonetary gold	0	129878	-129878	0	61718	-61718
1.A.b Services (1.A.b.1 to 1.A.b.13)	**408194**	**237025**	**171170**	**525672**	**312631**	**213042**
1.A.b.1 Manufacturing services on physical inputs owned by others	741	44	697	1613	184	1429
1.A.b.2 Maintenance and repair services n.i.e.	393	1536	-1143	329	3313	-2984
1.A.b.3 Transport	44312	41058	3254	70702	82770	-12068
1.A.b.4 Travel	16819	22896	-6077	20740	38617	-17877
1.A.b.5 Construction	5482	5199	283	4482	5418	-937
1.A.b.6 Insurance and pension services	4719	4125	594	6801	3218	3583
1.A.b.7 Financial services	9166	10220	-1054	12147	11313	834
1.A.b.8 Charges for the use of intellectual property n.i.e.	1737	15356	-13619	1454	18944	-17489
1.A.b.9 Telecommunications, computer, and information services	200979	28494	172485	252989	30162	222827
1.A.b.10 Other business services	97117	93634	3484	126651	104321	22330
1.A.b.11 Personal, cultural, and recreational services	5300	6397	-1096	7300	9206	-1906
1.A.b.12 Government goods and services n.i.e.	1158	1759	-601	1201	2035	-834
1.A.b.13 Others n.i.e.	20269	6308	13962	19262	3129	16133
1.B Primary Income (1.B.1 to 1.B.3)	**37682**	**101406**	**-63724**	**54193**	**117326**	**-63133**
1.B.1 Compensation of employees	12045	5252	6793	12145	6049	6096
1.B.2 Investment income	19106	94405	-75299	32373	100933	-68559
1.B.2.1 Direct investment	9937	57123	-47186	24116	61632	-37516
1.B.2.2 Portfolio investment	203	11901	-11699	602	11973	-11371
1.B.2.3 Other investment	886	25372	-24486	721	27299	-26578
1.B.2.4 Reserve assets	8080	10	8071	6935	29	6906
1.B.3 Other primary income	6530	1748	4782	9674	10344	-670
1.C Secondary Income (1.C.1+1.C.2)	**152526**	**15003**	**137523**	**178462**	**19331**	**159131**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	152400	13125	139275	178313	17700	160613
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	147403	9500	137903	172602	12613	159989
1.C.1.2 Other current transfers	4997	3625	1372	5711	5086	624
1.C.2 General government	126	1878	-1752	149	1631	-1482
2 Capital Account (2.1+2.2)	**1393**	**1673**	**-280**	**1836**	**1303**	**533**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	636	278	358	879	220	660
2.2 Capital transfers	757	1395	-638	957	1084	-127
3 Financial Account (3.1 to 3.5)	**1184395**	**1119643**	**64752**	**1368137**	**1261119**	**107018**
3.1 Direct Investment (3.1A+3.1B)	**112193**	**92670**	**19523**	**183534**	**79893**	**103640**
3.1.A Direct Investment in India	99699	57788	41911	175144	45346	129797
3.1.A.1 Equity and investment fund shares	95272	57537	37735	158539	38945	119594
3.1.A.1.1 Equity other than reinvestment of earnings	62338	57537	4801	119205	38945	80260
3.1.A.1.2 Reinvestment of earnings	32935	0	32935	39334	0	39334
3.1.A.2 Debt instruments	4427	251	4176	16605	6401	10203
3.1.A.2.1 Direct investor in direct investment enterprises	4427	251	4176	16605	6401	10203
3.1.B Direct Investment by India	12493	34882	-22389	8390	34547	-26157
3.1.B.1 Equity and investment fund shares	12493	14216	-1723	8390	22395	-14005
3.1.B.1.1 Equity other than reinvestment of earnings	12493	8726	3767	8390	16040	-7650
3.1.B.1.2 Reinvestment of earnings	0	5490	-5490	0	6355	-6355
3.1.B.2 Debt instruments	0	20666	-20666	0	12153	-12153
3.1.B.2.1 Direct investor in direct investment enterprises	0	20666	-20666	0	12153	-12153
3.2 Portfolio Investment	**676402**	**623338**	**53063**	**531986**	**646450**	**-114463**
3.2.A Portfolio Investment in India	674196	614505	59691	528521	636017	-107496
3.2.1 Equity and investment fund shares	593588	537019	56569	470586	569008	-98422
3.2.2 Debt securities	80608	77487	3122	57935	67009	-9074
3.2.B Portfolio Investment by India	2206	8833	-6628	3465	10433	-6968
3.3 Financial derivatives (other than reserves) and employee stock options	**19402**	**35925**	**-16523**	**34822**	**55690**	**-20868**
3.4 Other investment	**376398**	**343008**	**33391**	**497250**	**479086**	**18164**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	84291	86651	-2360	101664	104634	-2970
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	1565	0	1565	347	4514	-4167
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	82726	86651	-3925	101318	100121	1197
3.4.2.3 General government			0	0	0	0
3.4.2.4 Other sectors			0	0	0	0
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	163138	119653	43484	218623	214684	3939
3.4.3.A Loans to India	158092	114067	44025	214662	211760	2902
3.4.3.B Loans by India	5045	5586	-540	3961	2925	1037
3.4.4 Insurance, pension, and standardized guarantee schemes	198	313	-116	300	131	169
3.4.5 Trade credit and advances	67291	84390	-17099	138447	87134	51313
3.4.6 Other accounts receivable/payable - other	61481	52000	9481	38216	72502	-34286
3.4.7 Special drawing rights	0	0	0	0	0	0
3.5 Reserve assets	**0**	**24702**	**-24702**	**120545**	**0**	**120545**
3.5.1 Monetary gold			0	0	0	
3.5.2 Special drawing rights n.a.			0	0	0	
3.5.3 Reserve position in the IMF n.a.			0	0	0	
3.5.4 Other reserve assets (Foreign Currency Assets)	0	24702	-24702	120545	0	120545
4 Total assets/liabilities	**1184395**	**1119643**	**64752**	**1368137**	**1261119**	**107018**
4.1 Equity and investment fund shares	723159	653844	69315	676102	696601	-20499
4.2 Debt instruments	399754	389097	10657	533274	492016	41258
4.3 Other financial assets and liabilities	61481	76702	-15221	158761	72502	86259
5 Net errors and omissions	**0**	**5180**	**-5180**	**0**	**6716**	**-6716**

Note : P: Preliminary

No. 42: International Investment Position

(US$ Million)

Item	As on Financial Year /Quarter End							
	2021-22		2021				2022	
			Mar.		Dec.		Mar.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1.1 Equity and investment fund shares	132765	493987	122726	456947	130904	487895	132765	493987
1.2 Debt instruments	78807	27694	71203	25177	77192	26301	78807	27694
1 Direct investment	211573	521681	193929	482125	208096	514196	211573	521681
2.1 Equity and investment fund shares	1110	156381	2340	177278	6113	172794	1110	156381
2.2 Debt securities	9533	105994	5596	101232	3603	104286	9533	105994
2. Portfolio investment	10642	262375	7936	278510	9716	277080	10642	262375
3.1 Trade credit and advances	18603	118156	5644	100329	12891	113450	18603	118156
3.2 Loans	10474	205023	13335	197527	8856	204063	10474	205023
3.3 Currency and deposits	42081	140994	42436	143760	34796	143502	42081	140994
3.4 Other accounts receivable	19918	32203	19191	12384	19946	29833	19918	32203
3 Other investment	91075	496377	80606	454000	76489	490849	91075	496377
4 Reserve assets	607309		576984		633614		607309	
5 Total Assets / Liabilities	920599	1280433	859454	1214634	927915	1282125	920599	1280433
6 Net International Investment Position	-359834		-355180		-354210		-359834	

Payment and Settlement Systems

No.43: Payment System Indicators

PART I - Payment System Indicators - Payment & Settlement System Statistics

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2020-21	2021	2022		FY 2020-21	2021	2022	
		Jun.	May	Jun.		Jun.	May	Jun.
	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	2.90	3.32	3.42	206873112	17144527	19742339	22912930
1.1 Govt. Securities Clearing (1.1.1 to 1.1.3)	12.22	1.01	1.23	1.32	142072939	11317988	13110275	15445511
1.1.1 Outright	6.22	0.51	0.66	0.68	8793301	774292	832089	844409
1.1.2 Repo	3.08	0.27	0.31	0.34	51015712	4653921	4940038	5627915
1.1.3 Tri-party Repo	2.92	0.23	0.26	0.30	82263926	5889775	7338148	8973188
1.2 Forex Clearing	19.91	1.82	1.98	1.97	59775826	5408999	6039213	6778125
1.3 Rupee Derivatives @	0.88	0.07	0.11	0.13	5024347	417541	592851	689294
B. Payment Systems								
I Financial Market Infrastructures (FMIs)	–	–	–	–	–	–	–	–
1 Credit Transfers - RTGS (1.1 to 1.2)	2078.39	154.14	195.72	194.42	128657516	10196989	11183947	12356054
1.1 Customer Transactions	2063.73	152.92	194.53	193.18	113319292	8887546	9851274	10840909
1.2 Interbank Transactions	14.66	1.22	1.19	1.24	15338225	1309444	1332673	1515145
II Retail								
2 Credit Transfers - Retail (2.1 to 2.6)	577934.74	36684.40	72187.50	69921.27	42728006	3029728	4177865	4298158
2.1 AePS (Fund Transfers) @	9.76	1.06	0.58	0.62	575	64	36	37
2.2 APBS $	12573.33	1148.34	2268.03	1222.24	133345	8143	41011	23010
2.3 IMPS	46625.25	3038.45	4848.13	4557.01	4171037	284111	452328	443776
2.4 NACH Cr $	18757.82	1498.12	1794.53	1489.99	1281685	92266	97341	100909
2.5 NEFT	40407.29	2923.27	3813.34	4022.33	28725463	2097771	2546928	2716013
2.6 UPI @	459561.30	28075.16	59462.89	58629.08	8415900	547373	1040221	1014413
2.6.1 of which USSD @	11.99	1.03	1.00	0.99	177	16	14	12
3 Debit Transfers and Direct Debits (3.1 to 3.3)	12189.49	981.70	1177.32	1225.96	1034444	86759	95542	100325
3.1 BHIM Aadhaar Pay @	227.73	17.66	17.81	39.82	6113	417	571	1049
3.2 NACH Dr $	10754.74	878.73	1018.05	1048.14	1026641	86215	94752	99060
3.3 NETC (linked to bank account) @	1207.02	85.31	141.46	138.00	1689	128	218	216
4 Card Payments (4.1 to 4.2)	61782.93	4493.75	5698.25	5378.79	1701851	113790	179520	169754
4.1 Credit Cards (4.1.1 to 4.1.2)	22398.82	1547.01	2378.03	2279.46	971638	62746	113694	108752
4.1.1 PoS based $	11124.59	690.40	1220.26	1210.51	380643	23977	42266	40466
4.1.2 Others $	11274.23	856.61	1157.77	1068.95	590994	38769	71428	68286
4.2 Debit Cards (4.2.1 to 4.2.1)	39384.11	2946.74	3320.22	3099.33	730213	51044	65827	61002
4.2.1 PoS based $	22967.10	1505.09	2150.28	2012.90	451550	28743	44273	39877
4.2.2 Others $	16417.00	1441.65	1169.94	1086.43	278663	22300	21554	21126
5 Prepaid Payment Instruments (5.1 to 5.2)	65782.75	4585.92	6529.11	6258.03	279416	18657	25698	24738
5.1 Wallets	53013.86	3906.02	5198.06	4979.19	220183	15849	19616	18488
5.2 Cards (5.2.1 to 5.2.2)	12768.89	679.91	1331.05	1278.83	59233	2808	6082	6250
5.2.1 PoS based $	1116.16	50.54	92.80	87.22	19546	667	1336	1301
5.2.2 Others $	11652.73	629.36	1238.25	1191.62	39687	2140	4746	4949
6 Paper-based Instruments (6.1 to 6.2)	6999.12	511.38	590.44	593.72	6650333	477430	594562	599196
6.1 CTS (NPCI Managed)	6999.12	511.38	590.44	593.72	6650333	477430	594562	599196
6.2 Others	0.00	–	–	–	–	–	–	–
Total - Retail Payments (2+3+4+5+6)	724689.03	47257.15	86182.62	83377.76	52394049	3726363	5073187	5192171
Total Payments (1+2+3+4+5+6)	726767.42	47411.29	86378.35	83572.18	181051565	13923352	16257134	17548225
Total Digital Payments (1+2+3+4+5)	719768.30	46899.91	85787.91	82978.46	174401233	13445923	15662572	16949029

PART II - Payment Modes and Channels

System	Volume (Lakh)				Value (₹ Crore)			
	FY 2020-21	2021	2022		FY 2020-21	2021	2022	
		Jun.	May	Jun.		Jun.	May	Jun.
	1	2	3	4	5	6	7	8
A. Other Payment Channels								
1 Mobile Payments (mobile app based) (1.1 to 1.2)	507531.37	32127.11	64186.29	62579.11	14973395	1033735	1753658	1714907
1.1 Intra-bank $	40805.69	2829.58	4617.48	4309.49	2726360	196264	318478	305103
1.2 Inter-bank $	466725.68	29297.53	59568.81	58269.61	12247035	837471	1435180	1409804
2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2)	40726.59	3055.26	3751.53	3550.83	83159996	6709926	7259551	8206144
2.1 Intra-bank @	9583.32	705.17	993.69	866.17	52142582	4355975	4340071	5134603
2.2 Inter-bank @	31143.27	2350.09	2757.84	2684.67	31017413	2353951	2919480	3071541
B. ATMs								
3 Cash Withdrawal at ATMs $ (3.1 to 3.3)	65287.63	4761.69	5872.27	5734.36	3111948	229638	280267	271368
3.1 Using Credit Cards $	62.37	4.31	6.64	6.79	3130	219	328	336
3.2 Using Debit Cards $	64898.80	4735.38	5832.84	5694.37	3097741	228681	278833	269936
3.3 Using Pre-paid Cards $	326.45	22.00	32.79	33.20	11076	738	1106	1096
4 Cash Withdrawal at PoS $ (4.1 to 4.2)	91.17	7.87	2.23	2.30	728	59	22	22
4.1 Using Debit Cards $	79.42	7.03	2.20	2.27	557	44	22	22
4.2 Using Pre-paid Cards $	11.75	0.84	0.03	0.03	171	15	0	0
5 Cash Withrawal at Micro ATMs @	11126.04	856.89	1073.66	1167.16	299776	24187	29828	31318
5.1 AePS @	11126.04	856.89	1073.66	1167.16	299776	24187	29828	31318

PART III - Payment Infrastructures (Lakh)

System	As on March 2021	2021	2022	
		Jun.	May	Jun.
	1	2	3	4
Payment System Infrastructures				
1 Number of Cards (1.1 to 1.2)	9912.93	9684.46	10002.10	10004.74
1.1 Credit Cards	736.27	628.15	768.77	787.23
1.2 Debit Cards	9176.66	9056.31	9233.33	9217.52
2 Number of PPIs @ (2.1 to 2.2)	27411.16	22947.96	27989.08	30331.42
2.1 Wallets @	24645.40	20861.58	25302.43	27673.99
2.2 Cards @	2765.76	2086.38	2686.65	2657.43
3 Number of ATMs (3.1 to 3.2)	2.48	2.40	2.52	2.53
3.1 Bank owned ATMs $	2.16	2.14	2.20	2.20
3.2 White Label ATMs $	0.32	0.26	0.32	0.33
4 Number of Micro ATMs @	7.81	4.54	8.81	9.40
5 Number of PoS Terminals	60.70	45.93	61.69	65.91
6 Bharat QR @	49.72	40.83	41.38	42.80
7 UPI QR *	1727.34	1026.76	1880.15	1951.71

@: 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	2020	2021		
			Dec.	Oct.	Nov.	Dec.
		1	2	3	4	5
1 Small Savings	**Receipts**	**181237**	**16781**	**14339**	**13362**	**18175**
	Outstanding	**1259585**	**1196084**	**1366427**	**1379793**	**1397878**
1.1 Total Deposits	**Receipts**	**132687**	**12407**	**10091**	**9584**	**13855**
	Outstanding	**867494**	**827156**	**946406**	**955989**	**969847**
1.1.1 Post Office Saving Bank Deposits	Receipts	39748	3307	1868	929	4475
	Outstanding	205888	190437	221296	222225	226701
1.1.2 MGNREG	Receipts					
	Outstanding					
1.1.3 National Saving Scheme, 1987	Receipts	276	-21	-24	324	-366
	Outstanding	3419	3086	3243	3566	3200
1.1.4 National Saving Scheme, 1992	Receipts	166	-3	-5	-2	2
	Outstanding	175	-17	151	149	150
1.1.5 Monthly Income Scheme	Receipts	12211	1053	1263	1221	1228
	Outstanding	221379	217980	230298	231519	232747
1.1.6 Senior Citizen Scheme 2004	Receipts	21009	2014	1953	1204	1929
	Outstanding	97051	90914	111000	112205	114134
1.1.7 Post Office Time Deposits	Receipts	41470	4330	3209	3020	3926
	Outstanding	207557	195847	234088	237108	241034
1.1.7.1 1 year Time Deposits	Outstanding	108205	104601	114621	115037	116043
1.1.7.2 2 year Time Deposits	Outstanding	7473	7324	7883	7885	7931
1.1.7.3 3 year Time Deposits	Outstanding	7227	7330	6949	7028	6983
1.1.7.4 5 year Time Deposits	Outstanding	84652	76592	104635	107158	110077
1.1.8 Post Office Recurring Deposits	Receipts	17807	1727	1815	2899	2662
	Outstanding	132029	128912	146323	149222	151885
1.1.9 Post Office Cumulative Time Deposits	Receipts	0	0	12	-11	-1
	Outstanding	-25	-24	-14	-25	-25
1.1.10 Other Deposits	Receipts	0	0	0	0	0
	Outstanding	21	21	21	20	21
1.2 Saving Certificates	**Receipts**	**34860**	**3941**	**4109**	**3626**	**3978**
	Outstanding	**286863**	**274905**	**313511**	**317142**	**321027**
1.2.1 National Savings Certificate VIII issue	Receipts	17361	1923	1844	1332	1860
	Outstanding	135348	129270	147320	148653	150513
1.2.2 Indira Vikas Patras	Receipts	-3	-1	0	0	0
	Outstanding	159	158	158	158	158
1.2.3 Kisan Vikas Patras	Receipts	-7911	-669	-82	67	-426
	Outstanding	-6776	-5121	-8093	-8029	-8455
1.2.4 Kisan Vikas Patras - 2014	Receipts	25340	2677	2347	2227	2544
	Outstanding	147942	140538	163948	166175	168720
1.2.5 National Saving Certificate VI issue	Receipts	41	8	0	0	0
	Outstanding	-114	-147	-114	-114	-114
1.2.6 National Saving Certificate VII issue	Receipts	32	3	0	0	0
	Outstanding	-74	-103	-74	-74	-74
1.2.7 Other Certificates	Outstanding	10378	10310	10366	10373	10279
1.3 Public Provident Fund	**Receipts**	**13690**	**433**	**139**	**152**	**342**
	Outstanding	**105228**	**94023**	**106510**	**106662**	**107004**

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
	Mar.	Jun.	Sep.	Dec.	Mar.
	1	2	3	4	5
(A) Total (in ₹. Crore)	**7635902**	**7882533**	**8235318**	**8439811**	**8529036**
1 Commercial Banks	37.77	35.99	37.82	35.40	37.75
2 Non-Bank PDs	0.27	0.34	0.35	0.27	0.29
3 Insurance Companies	25.30	25.83	24.18	25.74	25.89
4 Mutual Funds	2.94	2.82	2.91	3.08	2.91
5 Co-operative Banks	1.82	1.82	1.50	1.82	1.81
6 Financial Institutions	1.00	1.43	1.17	1.69	0.94
7 Corporates	1.06	1.39	0.72	1.37	1.47
8 Foreign Portfolio Investors	1.87	1.79	1.81	1.66	1.56
9 Provident Funds	4.44	4.04	3.77	4.33	4.60
10 RBI	16.20	17.11	16.98	16.92	16.62
11. Others	7.33	7.43	8.79	7.73	6.15
11.1 State Governments	1.69	1.67	1.67	1.69	1.82

State Governments Securities					
Category	2021				2022
	Mar.	Jun.	Sep.	Dec.	Mar.
	1	2	3	4	5
(B) Total (in ₹. Crore)	**3879982**	**4028849**	**4153508**	**4257578**	**4410250**
1 Commercial Banks	33.69	33.75	35.94	34.41	34.39
2 Non-Bank PDs	0.48	0.39	0.44	0.40	0.38
3 Insurance Companies	30.04	29.67	27.50	28.85	28.42
4 Mutual Funds	1.82	1.74	1.97	1.91	1.82
5 Co-operative Banks	4.05	4.12	3.60	4.07	4.04
6 Financial Institutions	1.86	1.79	1.72	1.73	1.72
7 Corporates	0.49	1.45	1.32	1.70	1.82
8 Foreign Portfolio Investors	0.02	0.02	0.03	0.02	0.02
9 Provident Funds	22.00	21.09	18.27	20.66	20.79
10 RBI	0.77	0.88	0.85	0.83	0.80
11. Others	4.77	5.10	8.38	5.40	5.81
11.1 State Governments	0.18	0.18	0.18	0.19	0.20

Treasury Bills					
Category	2021				2022
	Mar.	Jun.	Sep.	Dec.	Mar.
	1	2	3	4	5
(C) Total (in ₹. Crore)	**690646**	**901327**	**763582**	**692869**	**757198**
1 Commercial Banks	55.54	52.25	50.22	47.01	51.14
2 Non-Bank PDs	2.82	1.82	1.33	1.53	4.20
3 Insurance Companies	5.61	4.75	4.12	6.29	6.58
4 Mutual Funds	17.80	19.93	17.72	13.72	14.01
5 Co-operative Banks	2.43	1.60	1.32	1.49	1.79
6 Financial Institutions	1.24	2.56	2.12	2.36	3.53
7 Corporates	3.16	3.00	2.40	3.13	3.47
8 Foreign Portfolio Investors	0.00	0.00	0.15	0.72	0.49
9 Provident Funds	0.22	0.10	0.37	0.85	0.21
10 RBI	0.49	2.58	2.63	0.00	0.00
11. Others	10.70	11.42	17.62	22.89	14.59
11.1 State Governments	5.98	7.97	12.64	18.92	11.54

No. 46: Combined Receipts and Disbursements of the Central and State Governments

(₹ Crore)

Item	2016-17	2017-18	2018-19	2019-20	2020-21 RE	2021-22 BE
	1	2	3	4	5	6
1 Total Disbursements	**4265969**	**4515946**	**5040747**	**5410887**	**6523916**	**7160694**
1.1 Developmental	2537905	2635110	2882758	3074492	3906147	4254004
1.1.1 Revenue	1878417	2029044	2224367	2446605	3259401	3242247
1.1.2 Capital	501213	519356	596774	588233	636062	922982
1.1.3 Loans	158275	86710	61617	39654	10684	88775
1.2 Non-Developmental	1672646	1812455	2078276	2253027	2526514	2810847
1.2.1 Revenue	1555239	1741432	1965907	2109629	2334608	2602289
1.2.1.1 Interest Payments	724448	814757	894520	955801	1082302	1244457
1.2.2 Capital	115775	69370	111029	141457	189487	177328
1.2.3 Loans	1632	1654	1340	1941	2419	31230
1.3 Others	55417	68381	79713	83368	91255	95843
2 Total Receipts	**4288432**	**4528422**	**5023352**	**5734166**	**6489736**	**7039032**
2.1 Revenue Receipts	3132201	3376416	3797731	3851563	3834126	4682025
2.1.1 Tax Receipts	2622145	2978134	3278947	3231582	3175594	3829889
2.1.1.1 Taxes on commodities and services	1652377	1853859	2030050	2012578	2100982	2514708
2.1.1.2 Taxes on Income and Property	965622	1121189	1246083	1216203	1071552	1311449
2.1.1.3 Taxes of Union Territories (Without Legislature)	4146	3086	2814	2800	3060	3732
2.1.2 Non-Tax Receipts	510056	398282	518783	619981	658532	852135
2.1.2.1 Interest Receipts	33220	34224	36273	31137	39830	33198
2.2 Non-debt Capital Receipts	69063	142433	140287	110094	54861	201138
2.2.1 Recovery of Loans & Advances	20942	42213	44667	59515	21151	19581
2.2.2 Disinvestment proceeds	48122	100219	95621	50578	33710	181557
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**1064704**	**997097**	**1102729**	**1449230**	**2634928**	**2277532**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	1046708	989167	1097210	1440548	2580406	2276017
3A.1.1 Net Bank Credit to Government	617123	144792	387091	571872	890012	-----
3A.1.1.1 Net RBI Credit to Government	195816	-144847	325987	190241	107494	-----
3A.1.2 Non-Bank Credit to Government	429585	844375	710119	868676	1690394	-----
3A.2 External Financing	17997	7931	5519	8682	54522	1514
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	1046708	989167	1097210	1440548	2580406	2276017
3B.1.1 Market Borrowings (net)	689821	794856	795845	971378	1778062	1620936
3B.1.2 Small Savings (net)	35038	71222	88961	209232	455724	367863
3B.1.3 State Provident Funds (net)	45688	42351	51004	38280	47300	45504
3B.1.4 Reserve Funds	-6436	18423	-18298	10411	-3450	5051
3B.1.5 Deposits and Advances	17792	25138	66289	-14227	29050	28868
3B.1.6 Cash Balances	-22463	-12476	17395	-323279	34179	121663
3B.1.7 Others	287268	49653	96014	548753	239540	86132
3B.2 External Financing	17997	7931	5519	8682	54522	1514
4 Total Disbursements as per cent of GDP	*27.7*	*26.4*	*26.7*	*26.6*	*33.0*	*32.1*
5 Total Receipts as per cent of GDP	*27.9*	*26.5*	*26.6*	*28.2*	*32.9*	*31.6*
6 Revenue Receipts as per cent of GDP	*20.3*	*19.8*	*20.1*	*18.9*	*19.4*	*21.0*
7 Tax Receipts as per cent of GDP	*17.0*	*17.4*	*17.4*	*15.9*	*16.1*	*17.2*
8 Gross Fiscal Deficit as per cent of GDP	*6.9*	*5.8*	*5.8*	*7.1*	*13.3*	*10.2*

…: 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 June-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	700.85	17	1660.00	15	695.61	6
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	156.17	7	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	-	-	-	-	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	98.13	2	-	-	-	-
9	Himachal Pradesh	-	-	53.81	7	-	-
10	Jammu & Kashmir UT	-	-	891.87	20	448.61	10
11	Jharkhand	-	-	-	-	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	-	-	-	-	-	-
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	18.12	27	193.21	27	203.56	8
17	Meghalaya	115.48	8	74.30	7	-	-
18	Mizoram	53.26	10	39.98	5	-	-
19	Nagaland	112.45	30	149.77	21	101.00	4
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	1067.81	17	-	-	-	-
23	Rajasthan	3125.64	30	-	-	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	710.06	30	1003.23	28	1200.67	7
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	-	-	-	-	-	-
29	West Bengal	-	-	-	-	-	-

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Crore)

Sr. No	State/Union Territory	As on end of June 2022			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	9520	939	0	0
2	Arunachal Pradesh	2069	3	0	0
3	Assam	3354	71	0	0
4	Bihar	6440	0	0	8000
5	Chhattisgarh	5682	0	1	4308
6	Goa	745	368	0	0
7	Gujarat	8313	552	0	1000
8	Haryana	1392	1400	0	0
9	Himachal Pradesh	0	0	0	0
10	Jammu & Kashmir UT	0	0	0	0
11	Jharkhand	993	0	0	0
12	Karnataka	10562	0	0	16000
13	Kerala	2468	0	0	0
14	Madhya Pradesh	0	1055	0	0
15	Maharashtra	53649	1165	0	18000
16	Manipur	177	115	0	0
17	Meghalaya	900	63	9	0
18	Mizoram	448	54	0	0
19	Nagaland	1892	38	0	0
20	Odisha	15010	1681	97	44900
21	Puducherry	387	0	0	923
22	Punjab	4179	0	8	0
23	Rajasthan	0	0	129	8600
24	Tamil Nadu	7680	0	28	9012
25	Telangana	6509	1417	0	0
26	Tripura	698	15	0	1600
27	Uttar Pradesh	3073	0	180	0
28	Uttarakhand	3957	156	0	0
29	West Bengal	10351	718	235	0
	Total	**160448**	**9812**	**686**	**112343**

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	
						April		May		June			
		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	41915	46443	36692	4000	2695	7390	6810	10500	9630	21890	19135
2	Arunachal Pradesh	767	767	563	530	-	-	-	-	-	-	-	-
3	Assam	15030	14230	12753	10753	-	-	-	-	2000	2000	2000	2000
4	Bihar	27285	24685	28489	24334	-	-	-	-750	-	-	-	-750
5	Chhattisgarh	13000	10500	4000	913	-	-	-	-	-	-	-	-
6	Goa	3354	3054	2000	1450	-	-	-	-	100	100	100	100
7	Gujarat	44780	33280	31054	13554	-	-	-	-3000	4000	2500	4000	-500
8	Haryana	30000	25550	30500	20683	-	-650	3000	1000	8000	5625	11000	5975
9	Himachal Pradesh	6000	3755	4000	1875	-	-	-	-	-	-430	-	-430
10	Jammu & Kashmir UT	9328	6020	8562	5373	-	-	1000	1000	-	-	1000	1000
11	Jharkhand	9400	8900	5000	3191	-	-	-	-	-	-200	-	-200
12	Karnataka	69000	61900	59000	49000	-	-	-	-	-	-	-	-
13	Kerala	28566	23066	27000	18120	-	-1000	-	-1000	1500	1500	1500	-500
14	Madhya Pradesh	45573	38773	22000	13900	-	-	-	-	2000	2000	2000	2000
15	Maharashtra	69000	50022	68750	40790	4000	4000	16000	13500	10000	3500	30000	21000
16	Manipur	1302	1044	1476	1326	-	-75	250	250	150	150	400	325
17	Meghalaya	1777	1587	1608	1298	-	-	-	-	200	200	200	200
18	Mizoram	944	677	747	447	-	-65	150	150	100	100	250	185
19	Nagaland	1721	1366	1727	1222	-	-	-	-	400	400	400	400
20	Odisha	3000	500	0	-6473	-	-1500	-	-	-	-1000	-	-2500
21	Puducherry	1390	790	1374	841	-	-	-	-	-	-	-	-
22	Punjab	32995	23467	25814	12428	1500	400	1500	800	-	-1742	3000	-542
23	Rajasthan	57359	44273	51149	38243	-	-	3500	3000	6500	3688	10000	6688
24	Sikkim	1292	1292	1511	1471	-	-	-	-	-	-	-	-
25	Tamil Nadu	87977	76796	87000	72500	-	-	-	-622	8000	6150	8000	5528
26	Telangana	43784	37365	45716	38667	-	-945	-	-420	7000	6370	7000	5005
27	Tripura	1916	1631	300	0	-	-	-	-	-	-125	-	-125
28	Uttar Pradesh	75500	59185	62500	42355	-	-	-	-1500	-	-2733	-	-4233
29	Uttarakhand	6200	5208	3200	1800	-	-	-	-	-	-	-	-
30	West Bengal	59680	50180	67390	45199	-	-2500	2500	-	5000	4500	7500	2000
	Grand Total	798816	651777	701626	492483	9500	360	35290	19218	65450	42183	110240	61761

- : 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)	**252658.0**	**513118.4**	**400437.3**	**446254.3**	**1612468.0**
Per cent of GDP	*5.1*	*10.6*	*7.8*	*8.7*	*8.0*
I. Financial Assets	**413192.2**	**604322.7**	**538186.1**	**843385.9**	**2399086.9**
Per cent of GDP	*8.4*	*12.4*	*10.5*	*16.4*	*12.0*
of which:					
1.Total Deposits (a+b)	13020.4	299089.8	138131.8	473183.4	923425.5
(a) Bank Deposits	-9769.4	280588.7	130328.0	465529.7	866677.0
i. Commercial Banks	-13293.8	269475.4	66666.7	446006.7	768855.0
ii. Co-operative Banks	3524.4	11113.2	63661.3	19523.0	97822.0
(b) Non-Bank Deposits	22789.9	18501.2	7803.7	7653.7	56748.5
2. Life Insurance Funds	117394.9	107731.0	109895.6	37236.1	372257.5
3. Provident and Pension Funds (including PPF)	110601.0	113593.0	113676.0	117235.0	455104.9
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)	65930.8	65930.8	65930.8	65930.8	263723.4
II. Financial Liabilities	**160534.2**	**91204.3**	**137748.8**	**397131.6**	**786618.9**
Per cent of GDP	*3.2*	*1.9*	*2.7*	*7.7*	*3.9*
Loans (Borrowings) from					
1. Financial Corporations (a+b)	160500.7	91170.8	137715.2	397098.1	786484.7
(a) Banking Sector	141332.5	58250.2	121754.0	200413.2	521749.9
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)	**623053.8**	**592327.3**	**506558.3**	**581769.1**	**2303708.6**
Per cent of GDP	*16.1*	*12.5*	*9.3*	*10.1*	*11.6*
I. Financial Assets	**828447.4**	**630907.1**	**676131.6**	**973510.9**	**3108997.0**
Per cent of GDP	*21.4*	*13.4*	*12.4*	*16.9*	*15.7*
of which:					
1.Total Deposits (a+b)	297376.2	278589.7	158113.5	533651.5	1267730.9
(a) Bank Deposits	281155.1	264523.3	147037.2	535157.5	1227873.0
i. Commercial Banks	279010.5	262033.7	143558.6	471730.9	1156333.7
ii. Co-operative Banks	2144.6	2489.6	3478.6	63426.6	71539.3
(b) Non-Bank Deposits	16221.1	14066.4	11076.3	-1506.0	39857.9
2. Life Insurance Funds	122369.1	141443.4	155516.3	100812.3	520141.0
3. Provident and Pension Funds (including PPF)	121582.5	124106.5	124949.5	130185.5	500824.0
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)	77381.6	77381.6	77381.6	77381.6	309526.3
II. Financial Liabilities	**205393.5**	**38579.8**	**169573.3**	**391741.8**	**805288.5**
Per cent of GDP	*5.3*	*0.8*	*3.1*	*6.8*	*4.1*
Loans (Borrowings) from					
1. Financial Corporations (a+b)	205436.7	38623.0	169616.5	391785.8	805462.1
(a) Banking Sector	211005.3	13211.7	139387.5	304100.8	667705.3
of which:					
Commercial Banks	211259.3	13213.8	140514.3	242476.0	607463.5
(b) Other Financial Institutions	-5568.6	25411.3	30229.0	87685.1	137756.8
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	1022.9	2556.6
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 (Concld.)

(Amount in ₹ Crore)

Item	2021-22	
	Q1	Q2
Net Financial Assets (I-II)	**760273.0**	**388307.9**
Per cent of GDP	*14.8*	*6.9*
I. Financial Assets	**631184.5**	**567403.7**
Per cent of GDP	*12.3*	*10.1*
of which:		
1.Total Deposits (a+b)	146933.8	207184.4
(a) Bank Deposits	124803.6	201833.5
i. Commercial Banks	123282.3	200159.7
ii. Co-operative Banks	1521.3	1673.8
(b) Non-Bank Deposits	22130.2	5350.9
2. Life Insurance Funds	114617.8	127356.0
3. Provident and Pension Funds (including PPF)	129821.9	132967.9
4. Currency	128660.2	-68631.2
5. Investments	24929.6	82305.4
of which:		
(a) Mutual Funds	14573.0	63151.3
(b) Equity	4502.5	13218.5
6. Small Savings (excluding PPF)	85163.8	85163.8
II. Financial Liabilities	**-129088.5**	**179095.8**
Per cent of GDP	*-2.5*	*3.2*
Loans (Borrowings) from		
1. Financial Corporations (a+b)	-129109.8	179074.5
(a) Banking Sector	-105750.5	124240.8
of which:		
Commercial Banks	-98583.4	126251.1
(b) Other Financial Institutions	-23359.3	54833.7
i. Non-Banking Financial Companies	-31118.4	28880.1
ii. Housing Finance Companies	7132.0	24403.8
iii. Insurance Companies	627.1	1549.8
2. Non-Financial Corporations (Private Corporate Business)	33.8	33.8
3. General Government	-12.5	-12.5

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. Data as ratios to GDP have been calculated based on the Second Advance Estimates of National Income 2021-22 released on February 28, 2022.
3. 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)	**16130869.8**	**16439609.3**	**16829228.1**	**17002698.8**
Per cent of GDP	*83.7*	*84.4*	*85.3*	*84.7*
(a) Bank Deposits (i+ii)	8831785.7	9111489.5	9239027.3	9688573.4
i. Commercial Banks	8131543.2	8401018.6	8467685.3	8913692.0
ii. Co-operative Banks	700242.5	710470.8	771341.9	774881.4
(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)	**6490282.2**	**6581453.0**	**6719168.2**	**7116266.3**
Per cent of GDP	*33.7*	*33.8*	*34.0*	*35.4*
Loans (Borrowings) from				
(a) Banking Sector	5268304.7	5326554.9	5448308.9	5648722.1
of which:				
i. Commercial Banks	4668496.4	4725631.3	4813008.7	5015222.9
ii. Co-operative Banks	513013.7	513764.2	542994.4	529720.6
(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)	**17850174.9**	**18408441.6**	**19129606.6**	**19979862.7**
Per cent of GDP	*93.9*	*97.6*	*99.7*	*100.9*
(a) Bank Deposits (i+ii)	9969728.5	10234251.8	10381289.0	10916446.4
i. Commercial Banks	9192702.5	9454736.2	9598294.8	10070025.7
ii. Co-operative Banks	777026.0	779515.6	782994.2	846420.7
(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)	**7321703.0**	**7360326.0**	**7529942.6**	**7921728.4**
Per cent of GDP	*38.5*	*39.0*	*39.3*	*40.0*
Loans (Borrowings) from				
(a) Banking Sector	5859727.5	5872939.2	6012326.7	6316427.4
of which:				
i. Commercial Banks	5226482.2	5239696.0	5380210.4	5622686.4
ii. Co-operative Banks	558551.1	558545.6	557545.8	608703.4
(b) Other Financial Institutions	1461975.5	1487386.9	1517615.9	1605301.0
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 (Concld.)

(Amount in ₹ Crore)

Item	Jun-2021	Sep-2021
Financial Assets (a+b+c+d)	**20533386.0**	**21086975.2**
Per cent of GDP	*97.4*	*98.1*
(a) Bank Deposits (i+ii)	11041250.0	11243083.5
i. Commercial Banks	10193308.0	10393467.7
ii. Co-operative Banks	847942.1	849615.9
(b) Life Insurance Funds	4894238.5	5105262.1
(c) Currency	2742897.3	2674266.1
(d) Mutual funds	1855000.1	2064363.5
Financial Liabilities (a+b)	**7793017.9**	**7972092.4**
Per cent of GDP	*37.0*	*37.1*
Loans (Borrowings) from		
(a) Banking Sector	6210676.9	6334917.7
of which:		
i. Commercial Banks	5524103.0	5650354.1
ii. Co-operative Banks	596687.9	603180.5
(b) Other Financial Institutions	1582341.0	1637174.6
of which:		
i. Non-Banking Financial Companies	755399.6	784279.7
ii. Housing Finance Companies	721510.0	745913.7

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 Second Advance Estimates of National Income 2021-22 released on February 28, 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

NM_2 and NM_3 do not include FCNR (B) deposits.

2.4: Consist of paid-up capital and reserves.

2.5: includes other demand and time liabilities of the banking system.

Table No. 9

Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.

L_1 and L_2 are compiled monthly and L_3 quarterly.

Wherever data are not available, the last available data have been repeated.

Table No. 13

Data against column Nos. (1), (2) & (3) are Final and for column Nos. (4) & (5) data are Provisional.

Table No. 14

Data in column Nos. (4) & (8) are Provisional.

Table No. 17

2.1.1: Exclude reserve fund maintained by co-operative societies with State Co-operative Banks

2.1.2: Exclude borrowings from RBI, SBI, IDBI, NABARD, notified banks and State Governments.

4: Include borrowings from IDBI and NABARD.

Table No. 24

Primary Dealers (PDs) include banks undertaking PD business.

Table No. 30

Exclude private placement and offer for sale.

1: Exclude bonus shares.

2: Include cumulative convertible preference shares and equi-preference shares.

Table No. 32

Exclude investment in foreign currency denominated bonds issued by IIFC (UK), SDRs transferred by Government of India to RBI and foreign currency received under SAARC 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 & 1.1.1.1.1.4: 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 data from 2019-20 pertains to the Provisional Estimates of National Income released by National Statistics Office on 29th May 2020. GDP for 2020-21 is from Union Budget 2020-21.
Data pertains to all States and Union Territories.
Total receipts and total expenditure exclude National Calamity Contingency Fund expenditure.
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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12. Perspectives on Central Banking Governors Speak (1935-2010) Platinum Jubilee	₹1400 per copy (over the counter)	US$ 50 per copy (inclusive of air mail courier charges)

Notes

1. Many of the above publications are available at the RBI website (www.rbi.org.in).
2. Time Series data are available at the Database on Indian Economy (http://dbie.rbi.org.in).
3. The Reserve Bank of India History 1935-1997 (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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