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# MONETARY POLICY STATEMENT FOR 2019-20

Seventh Bi-monthly Monetary Policy Statement, 2019-20

# *Seventh Bi-monthly Monetary Policy Statement, 2019-20 Resolution of the Monetary Policy Committee (MPC) Reserve Bank of India* *

On the basis of an assessment of the current and evolving macroeconomic situation, the Monetary Policy Committee (MPC) at its meeting today (March 27, 2020) decided to:

- reduce the policy repo rate under the liquidity adjustment facility (LAF) by 75 basis points to 4.40 per cent from 5.15 per cent with immediate effect;
- accordingly, the marginal standing facility (MSF) rate and the Bank Rate stand reduced to 4.65 per cent from 5.40 per cent;
- further, consequent upon the widening of the LAF corridor as detailed in the accompanying Statement on Developmental and Regulatory Polices, the reverse repo rate under the LAF stands reduced by 90 basis points to 4.0 per cent.
- The MPC also decided to continue with the accommodative stance as long as it is necessary to revive growth and mitigate the impact of coronavirus (COVID-19) on the economy, while ensuring that inflation remains within the target.

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.

* Released on March 27, 2020.

**Assessment**

Global Economy

2. Global economic activity has come to a near standstill as COVID-19 related lockdowns and social distancing are imposed across a widening swathe of affected countries. Expectations of a shallow recovery in 2020 from 2019's decade low in global growth have been dashed. The outlook is now heavily contingent upon the intensity, spread and duration of the pandemic. There is a rising probability that large parts of the global economy will slip into recession.

3. Financial markets have become highly volatile from January onwards due to the outbreak of COVID-19. Panic sell-offs have resulted in wealth destruction in equity markets across advanced and emerging economies alike. In the former, flight to safety has pulled down government bond yields to record lows with some hardening in recent days. In the latter, the rush to exit has rendered fixed income markets illiquid and resulted in firming up of yields. Emerging and advanced economy currencies are experiencing severe depreciation pressure on a daily basis because of fire sales due to extreme risk aversion. At this point, only the US dollar remains safe haven in a highly uncertain outlook. Japanese yen and gold – the other two safe havens till the early part of March – have given way to a flight to cash. International crude prices initially traded with a softening bias from January in anticipation of demand weakening due to the COVID-19 outbreak. Production cut disagreements among key oil producers, however, set off retaliatory supply scale-ups and a price war that plunged international Brent crude prices to a low of US$ 25 per barrel on March 18, 2020. These developments are likely to dampen inflation across advanced and emerging economies. Central banks and governments are in war mode, responding to the situation with several conventional and unconventional measures targeted at easing financial conditions to avoid a demand collapse and to prevent financial markets from freezing up due to illiquidity.

Domestic Economy

4. The second advance estimates of the National Statistics Office released in February 2020 implied real GDP growth of 4.7 per cent for Q4:2019-20 within the annual estimate of 5 per cent for the year as a whole. This is now at risk from the pandemic's impact on the economy. High frequency indicators suggest that private final consumption expenditure has been hit hardest, even as gross fixed capital formation has been in contraction since Q2:2019-20. On the supply side, the outlook for agriculture and allied activities appears to be the only silver lining, with foodgrains output at 292 million tonnes being 2.4 per cent higher than a year ago. A pick-up in manufacturing and electricity generation pulled industrial production into positive territory in January 2020 after intermittent contraction and/or lacklustre activity over the past five months; however, more data will need to be watched to assess whether the recent uptick will endure in the face of COVID-19. Meanwhile, most service sector indicators for January and February 2020 moderated or declined. Since then anecdotal evidence suggests that several services such as trade, tourism, airlines, the hospitality sector and construction have been further adversely impacted by the pandemic. Dislocations in casual and contract labour would result in losses of activity in other sectors as well.

5. Retail inflation, measured by the consumer price index, peaked in January 2020 and fell by a full percentage point in February 2020 to 6.6 per cent, as the ebbing of onion prices brought down food inflation from double digits in the preceding two months. Price pressures, however, remain firm across protein-rich items, edible oils and pulses; but the shock to demand from COVID-19 may weaken them going forward. While fuel inflation increased sharply in February on the back of the delayed domestic adjustment to international LPG prices, the plunge in international crude prices in March may bring a measure of relief to the extent it is allowed to pass-through. CPI inflation excluding food and fuel eased in February under the weight of softer prices of transport and communication, and personal care. Households' inflation expectations a year ahead softened by 20 bps in the March 2020 round of the Reserve Bank's survey.

6. Domestic financial conditions have tightened considerably, with equity markets facing massive sell-offs by foreign portfolio investors (FPIs). In the bond market too, yields have risen on sustained FPI selling, while redemption pressures, drop in trading activity and generalised risk aversion have pushed up yields to elevated levels in commercial paper, corporate bond and other fixed income segments. In the forex market, the Indian rupee (INR) has been under continuous downward pressure. Under these conditions, the Reserve Bank has endeavoured to keep financial markets liquid, stable and functioning normally. Systemic liquidity surplus, as reflected in net absorptions under the LAF, averaged ₹ 2.86 lakh crore in March (up to March 25, 2020). In addition, the Reserve Bank undertook unconventional operations in the form of auctions of what is called 'operation twist' involving the simultaneous sale of short-term government securities (of ₹ 28,276 crore) and purchase of long-term securities (of ₹ 40,000 crore), cumulatively injecting a net amount of ₹ 11,724 crore. The Reserve Bank also conducted five long term repo auctions of 1 year and 3 years tenors of a cumulative amount of ₹ 1.25 lakh crore so far to inject liquidity and improve monetary transmission. It also conducted two sell-buy swap auctions to inject cumulatively US dollar liquidity into the forex market to the tune of US$ 2.71 billion on March 16 and 23. Open market purchase operations of ₹ 10,000 crore on March 20 and ₹ 15,000 crore each on March 24 and March 26 have been conducted to bolster liquidity and smoothen financial conditions.

7. In the external sector, merchandise exports expanded in February 2020 after posting six consecutive months of contraction. Import growth

also moved into positive territory after eight months of continuous decline. Consequently, the trade deficit widened marginally on a year-on-year basis although it was lower than its level a month ago. On March 12, the Reserve Bank released balance of payments data which showed the current account having moved to near balance in Q3:2019-20 with a deficit of only 0.2 per cent of GDP. On the financing side, net FDI inflows at US$ 37.8 billion during April-January 2019-20 were substantially higher than a year ago. Portfolio investment recorded net outflows of US$ 5.2 billion during 2019-20 (up to March 25), down from US$ 6.6 billion a year ago. India's foreign exchange reserves reached a level of US$ 487.2 billion on March 6, 2020 – an increase of US$ 74.4 billion over their end-March 2019 level.

**Outlook**

8. In the sixth bi-monthly resolution of February 2020, CPI headline inflation was projected at 6.5 per cent for Q4:2019-20. The prints for January and February 2020 indicate that actual outcomes for the quarter are running 30 bps above projections, reflecting the onion price shock. Looking ahead, food prices may soften even further under the beneficial effects of the record foodgrains and horticulture production, at least till the onset of the usual summer uptick. Furthermore, the collapse in crude prices should work towards easing both fuel and core inflation pressures, depending on the level of the pass-through to retail prices. As a consequence of COVID-19, aggregate demand may weaken and ease core inflation further. Heightened volatility in financial markets could also have a bearing on inflation.

9. Turning to growth, apart from the continuing resilience of agriculture and allied activities, most other sectors of the economy will be adversely impacted by the pandemic, depending upon its intensity, spread and duration. If COVID-19 is prolonged and supply chain disruptions get accentuated, the global slowdown could deepen, with adverse implications for India. The slump in international crude prices could, however, provide some relief in the form of terms of trade gains. Downside risks to growth arise from the spread of COVID-19 and prolonged lockdowns. Upside growth impulses are expected to emanate from monetary, fiscal and other policy measures and the early containment of COVID-19.

10. The MPC is of the view that macroeconomic risks, both on the demand and supply sides, brought on by the pandemic could be severe. The need of the hour is to do whatever is necessary to shield the domestic economy from the pandemic. Central banks across the world have responded with monetary and regulatory measures – both conventional and unconventional. Governments across the world have unleashed massive fiscal measures, including targeted health services support, to protect economic activity from the impact of the virus. To mitigate the economic difficulties arising out of the virus outbreak, the Government of India has announced a comprehensive package of ₹ 1.70 lakh crore, covering cash transfers and food security, for vulnerable sections of society, including farmers, migrant workers, urban and rural poor, differently abled persons and women. The MPC notes that the Reserve Bank has taken several measures to inject substantial liquidity in the system. Nonetheless, the priority is to undertake strong and purposeful action in order to minimise the adverse macroeconomic impact of the pandemic. It is in this context that the MPC unanimously votes for a sizable reduction in the policy repo rate, but with some differences in the quantum of reduction. Furthermore, the MPC also notes that the Reserve Bank has decided to undertake several measures to further improve liquidity, monetary transmission and credit flows to the economy and provide relief on debt servicing. It also underscores the need for all stakeholders to fight against the pandemic. Banks and other financial institutions should do all they can to keep credit flowing to economic agents facing financial stress on account of the isolation that the virus has

imposed. Market participants should work with regulators like the Reserve Bank and the Securities and Exchange Board of India (SEBI) to ensure the orderly functioning of markets in their role of price discovery and financial intermediation. Strong fiscal measures are critical to deal with the situation.

11. All members voted for a reduction in the policy repo rate and maintaining the accommodative stance as long as it is necessary to revive growth and mitigate the impact of COVID-19 on the economy, while ensuring that inflation remains within the target.

12. Dr. Ravindra H. Dholakia, Dr. Janak Raj, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted for a 75 bps reduction in the policy repo rate. Dr. Chetan Ghate and Dr. Pami Dua voted for a 50 bps reduction in the policy repo rate.

13. The minutes of the MPC's meeting will be published by April 13, 2020.

**Statement on Developmental and Regulatory Policies**

This Statement sets out various developmental and regulatory policies that directly address the stress in financial conditions caused by COVID-19. They consist of: (i) expanding liquidity in the system sizeably to ensure that financial markets and institutions are able to function normally in the face of COVID-related dislocations; (ii) reinforcing monetary transmission so that bank credit flows on easier terms are sustained to those who have been affected by the pandemic; (iii) easing financial stress caused by COVID-19 disruptions by relaxing repayment pressures and improving access to working capital; and (iv) improving the functioning of markets in view of the high volatility experienced with the onset and spread of the pandemic. The policy initiatives in this section should be read in conjunction with the MPC's decision on monetary policy actions and stance in its resolution.

**I. Liquidity Management**

As stated earlier, the first set of measures is intended to ensure that adequate liquidity is available to all constituents so that COVID-19 related liquidity constraints are eased.

**1. Targeted Long Term Repos Operations (TLTROs)**

The onset and rapid propagation of COVID-19 in India has ignited large sell-offs in the domestic equity, bond and forex markets. With the intensification of redemption pressures, liquidity premia on instruments such as corporate bonds, commercial paper and debentures have surged. Combined with the thinning of trading activity with the COVID outbreak, financial conditions for these instruments, which are used, inter alia, to access working capital in the face of the slowdown in bank credit, have also tightened. In order to mitigate their adverse effects on economic activity leading to pressures on cash flows, it has been decided that the Reserve Bank will conduct auctions of targeted term repos of up to three years tenor of appropriate sizes for a total amount of up to ₹ 1,00,000 crore at a floating rate linked to the policy repo rate.

Liquidity availed under the scheme by banks has to be deployed in investment grade corporate bonds, commercial paper, and non-convertible debentures over and above the outstanding level of their investments in these bonds as on March 27, 2020. Banks shall be required to acquire up to fifty per cent of their incremental holdings of eligible instruments from primary market issuances and the remaining fifty per cent from the secondary market, including from mutual funds and non-banking finance companies. Investments made by banks under this facility will be classified as held to maturity (HTM) even in excess of 25 per cent of total investment permitted to be included in the HTM portfolio. Exposures under this facility will also not be reckoned under the large exposure framework.

The first TLTRO auction will be held today (March 27, 2020). Following a review of the outcome of this auction, the subsequent TLTRO auctions will be announced. Details about this facility are being issued separately.

**2. Cash Reserve Ratio**

a. Liquidity in the banking system remains ample, as reflected in absorption of surpluses from the banking system under reverse repo operations of the LAF of the order of ₹ 2.86 lakh crore on a daily average basis during March 1-25, 2020. It is observed, however, that the distribution of this liquidity is highly asymmetrical across the financial system, and starkly so within the banking system.

   As a one-time measure to help banks tide over the disruption caused by COVID-19, it has been decided to reduce the cash reserve ratio (CRR) of all banks by 100 basis points to 3.0 per cent of net demand and time liabilities (NDTL) with effect from the reporting fortnight beginning

March 28, 2020. This reduction in the CRR would release primary liquidity of about ₹ 1,37,000 crore uniformly across the banking system in proportion to liabilities of constituents rather than in relation to holdings of excess SLR. This dispensation will be available for a period of one year ending on March 26, 2021.

b. Furthermore, taking cognisance of hardships faced by banks in terms of social distancing of staff and consequent strains on reporting requirements, it has been decided to reduce the requirement of minimum daily CRR balance maintenance from 90 per cent to 80 per cent effective from the first day of the reporting fortnight beginning March 28, 2020. This is a one-time dispensation available up to June 26, 2020.

**3. Marginal Standing Facility**

Under the marginal standing facility (MSF), banks can borrow overnight at their discretion by dipping up to 2 per cent into the Statutory Liquidity Ratio (SLR). In view of the exceptionally high volatility in domestic financial markets which bring in phases of liquidity stress and to provide comfort to the banking system, it has been decided to increase the limit of 2 per cent to 3 per cent with immediate effect. This measure will be applicable up to June 30, 2020. This is intended to provide comfort to the banking system by allowing it to avail an additional ₹ 1,37,000 crore of liquidity under the LAF window in times of stress at the reduced MSF rate announced in the MPC's resolution.

These three measures relating to TLTRO, CRR and MSF will inject a total liquidity of ₹ 3.74 lakh crore to the system.

**4. Widening of the Monetary Policy Rate Corridor**

In view of persistent excess liquidity, it has been decided to widen the existing policy rate corridor from 50 bps to 65 bps. Under the new corridor, the reverse repo rate under the liquidity adjustment facility (LAF) would be 40 bps lower than the policy repo rate. The marginal standing facility (MSF) rate would continue to be 25 bps above the policy repo rate.

**II. Regulation and Supervision**

Alongside liquidity measures, it is important that efforts are undertaken to mitigate the burden of debt servicing brought about by disruptions on account of the fall-out of the COVID-19 pandemic. Such efforts, in turn, will prevent the transmission of financial stress to the real economy, and will ensure the continuity of viable businesses and provide relief to borrowers in these extraordinarily troubled times.

**5. Moratorium on Term Loans**

All commercial banks (including regional rural banks, small finance banks and local area banks), co-operative banks, all-India Financial Institutions, and NBFCs (including housing finance companies and micro-finance institutions) ("lending institutions") are being permitted to allow a moratorium of three months on payment of instalments in respect of all term loans outstanding as on March 1, 2020. Accordingly, the repayment schedule and all subsequent due dates, as also the tenor for such loans, may be shifted across the board by three months.

**6. Deferment of Interest on Working Capital Facilities**

In respect of working capital facilities sanctioned in the form of cash credit/overdraft, lending institutions are being permitted to allow a deferment of three months on payment of interest in respect of all such facilities outstanding as on March 1, 2020. The accumulated interest for the period will be paid after the expiry of the deferment period.

In respect of paragraphs 5 and 6 above, the moratorium/deferment is being provided specifically to enable the borrowers to tide over the economic fallout from COVID-19. Hence, the same will not be treated as change in terms and conditions of loan agreements

due to financial difficulty of the borrowers and, consequently, will not result in asset classification downgrade. The lending institutions may accordingly put in place a Board approved policy in this regard.

**7. Easing of Working Capital Financing**

In respect of working capital facilities sanctioned in the form of cash credit/overdraft, lending institutions may recalculate drawing power by reducing margins and/or by reassessing the working capital cycle for the borrowers. Such changes in credit terms permitted to the borrowers to specifically tide over the economic fallout from COVID-19 will not be treated as concessions granted due to financial difficulties of the borrower, and consequently, will not result in asset classification downgrade.

In respect of paragraphs 5, 6 and 7, the rescheduling of payments will not qualify as a default for the purposes of supervisory reporting and reporting to credit information companies (CICs) by the lending institutions. CICs shall ensure that the actions taken by lending institutions pursuant to the above announcements do not adversely impact the credit history of the beneficiaries.

**8. Deferment of Implementation of Net Stable Funding Ratio (NSFR)**

As part of reforms undertaken in the years following the global financial crisis, the Basel Committee on Banking Supervision (BCBS) had introduced the Net Stable Funding Ratio (NSFR) which reduces funding risk by requiring banks to fund their activities with sufficiently stable sources of funding over a time horizon of a year in order to mitigate the risk of future funding stress. As per the prescribed timeline, banks in India were required to maintain NSFR of 100 per cent from April 1, 2020. It has now been decided to defer the implementation of NSFR by six months from April 1, 2020 to October 1, 2020.

**9. Deferment of Last Tranche of Capital Conservation Buffer**

The capital conservation buffer (CCB) is designed to ensure that banks build up capital buffers during normal times (i.e., outside periods of stress) which can be drawn down as losses are incurred during a stressed period. As per Basel standards, the CCB was to be implemented in tranches of 0.625 per cent and the transition to full CCB of 2.5 per cent was set to be completed by March 31, 2019. It was subsequently decided to defer the implementation of the last tranche of 0.625 per cent of the CCB from March 31, 2019 to March 31, 2020. Considering the potential stress on account of COVID-19, it has been decided to further defer the implementation of the last tranche of 0.625 per cent of the CCB from March 31, 2020 to September 30, 2020. Consequently, the pre-specified trigger for loss absorption through conversion/write-down of Additional Tier 1 instruments (PNCPS and PDI) shall remain at 5.5 per cent of risk-weighted assets (RWAs) and will rise to 6.125 per cent of RWAs on September 30, 2020.

**III. Financial Markets**

The decision in respect of financial markets is essentially of a developmental nature, intended to improve depth and price discovery in the forex market segments by reducing arbitrage between onshore and offshore markets. This measure assumes greater importance in the context of the increased volatility of the rupee caused by the impact of COVID-19 on currency markets.

**10. Permitting Banks to Deal in Offshore Non-Deliverable Rupee Derivative Markets (Offshore NDF Rupee Market)**

The offshore Indian Rupee (INR) derivative market - the Non-Deliverable Forward (NDF) market - has

been growing rapidly in recent times. At present, Indian banks are not permitted to participate in this market, although the benefits of their participation in the NDF market have been widely recognised. All aspects of the issue have been examined in detail and a consensus has emerged in RBI that the time is apposite to remove segmentation between the onshore and offshore markets and improve efficiency of price discovery. Accordingly, it has been decided, in consultation with the Government, to permit banks in India which operate International Financial Services Centre (IFSC) Banking Units (IBUs) to participate in the NDF market with effect from June 1, 2020. Banks may participate through their branches in India, their foreign branches or through their IBUs. Final directions are being issued today.

# MONETARY POLICY STATEMENT FOR 2019-20

Monetary Policy Report - April 2020

# *I. Macroeconomic Outlook*

*The global macroeconomic outlook is overcast with the COVID-19 pandemic, with massive dislocations in global production, supply chains, trade and tourism. Financial markets across the world are experiencing extreme volatility; global commodity prices, especially of crude oil, have declined sharply. COVID-19 would impact economic activity in India directly due to lockdowns, and through second round effects operating through global trade and growth. The impact of COVID-19 on inflation is ambiguous, with a possible decline in food prices likely to be offset by potential cost-push increases in prices of non-food items due to supply disruptions.*

As this Monetary Policy Report (MPR) goes for release, the global macroeconomic outlook is overcast with the COVID-19 pandemic. With over 12 lakh confirmed infections and over 67,000 deaths across 211 countries as of April 7, 2020 and counting, the sheer scale and speed of the unfolding human tragedy is overwhelming. The disruption of economic activity in a wide swathe of affected countries is set to intensify in the face of headwinds in the form of massive dislocations in global production, supply chains, trade and tourism. Global output is now seen as contracting in 2020. Financial markets across the world are experiencing extreme volatility: equity markets recorded sharp sell-offs, with volatility touching levels seen during the global financial crisis; flights to safety have taken down sovereign bond yields to record lows; risk spreads have widened; and financial conditions have tightened. Global commodity prices, especially of crude oil, have also declined sharply in anticipation of weakening global demand on the one hand, and the failed negotiations of the Organisation of the Petroleum Exporting Countries (OPEC) and Russia, on the other.

Many central banks have eased monetary, liquidity and regulatory policies to support domestic demand, including through emergency off-cycle meetings. Bilateral swap lines between some central banks that were deployed during the global financial crisis have been activated. G7 finance ministers and central bank governors have stated that they stand ready to cooperate further on timely and effective measures. G20 finance ministers and central bank governors have committed to use all available policy tools to deal with COVID-19. G20 Leaders have resolved to do whatever it takes to overcome the pandemic. The International Monetary Fund (IMF) and the World Bank Group are making available US$ 50 billion and US$ 14 billion, respectively, through various financing facilities to their membership to help them respond to the crisis.

Turning to the domestic economy, India has not been spared from the exponential spread of COVID-19 and by April 7, more than 4,700 cases had been reported. While efforts are being mounted on a war footing to arrest its spread, COVID-19 would impact economic activity in India directly through domestic lockdown. Second round effects would operate through a severe slowdown in global trade and growth. More immediately, spillovers are being transmitted through finance and confidence channels to domestic financial markets. These effects and their interactions would inevitably accentuate the growth slowdown, which started in Q1:2018-19 and continued through H2:2019-20. Meanwhile, headline inflation stayed above the upper tolerance band of the inflation target band during December 2019-February 2020, led by a spike in vegetable prices. While it has peaked and vegetable prices are on the ebb, the impact of COVID-19 on inflation is ambiguous relative to that on growth, with a possible decline in prices of food items being offset by potential cost-push increases in prices of non-food items due to supply disruptions.

* Released on April 09, 2020.

*Monetary Policy Committee: October 2019-March 2020*

During October 2019-March 2020, the monetary policy committee (MPC) met four times. The meeting scheduled for March 31, April 1 and 3, 2020 was advanced to March 24, 26 and 27, 2020. In its October 2019 meeting, the MPC had noted that the continuing slowdown warranted intensified efforts to restore the growth momentum. With inflation expected to remain below target in the remaining period of 2019-20 and Q1:2020-21, the MPC took the view that policy space could be used to address growth concerns within the flexible inflation targeting mandate. Accordingly, it voted to reduce the policy repo rate by 25 basis points (bps) to 5.15 per cent (5 members voted for a reduction of 25 bps and one member voted for a reduction of 40 bps), and committed to continue with an accommodative stance as long as necessary to revive growth, while ensuring that inflation remained within the target.

The MPC decided to hold the policy rate unchanged in its December 2019 and February 2020 meetings. While domestic demand conditions weakened further in the run-up to these meetings, inflation rose sharply and breached the upper tolerance level of the mandated inflation band in November and December 2019. Given the evolving growth-inflation dynamics, the MPC felt it appropriate to maintain *status quo*, although it voted to persevere with the accommodative stance as long as necessary to revive growth, given the space available for future policy action.

In its off-cycle meeting in March, the MPC noted that macroeconomic risks brought on by the pandemic could be severe, both on the demand and supply sides, and stressed upon the need to do whatever is necessary to shield the domestic economy from the pandemic. The MPC reduced the policy repo rate by 75 bps to 4.4 per cent (4 members voted for a reduction of 75 bps and 2 members voted for a reduction of 50 bps). During February-March 2020, the Reserve Bank of India (RBI) also undertook several measures to further improve liquidity, monetary transmission and credit flows to the economy, and provide relief on debt servicing (Chapter IV).

The MPC's voting pattern reflects the differences in individual members' assessments, expectations and policy preferences, as also reflected in MPCs in other central banks (Table I.1).

*Macroeconomic Outlook*

Chapters II and III analyse macroeconomic developments during October 2019-March 2020 and explain the deviations of inflation and growth outcomes from projections. Turning to the outlook, the evolution of key macroeconomic and financial variables over the past six months warrants revisions in the baseline assumptions (Table I.2).

First, international crude oil prices (Indian basket) have fluctuated in a wide range since the October 2019 MPR. These prices initially increased during late December 2019 and early January 2020

**Table I.1: Monetary Policy Committees and Voting Patterns**

| Country | Policy Meetings: October 2019 - March 2020 | | |
|---|---|---|---|
| | Total Meetings | Meetings with Full Consensus | Meetings with Dissents |
| Brazil | 4 | 4 | 0 |
| Chile | 5 | 4 | 1 |
| Colombia | 4 | 4 | 0 |
| Czech Republic | 5 | 2 | 3 |
| Hungary | 5 | 5 | 0 |
| Israel | 4 | 0 | 4 |
| Japan | 4 | 0 | 4 |
| South Africa | 3 | 2 | 1 |
| Sweden | 3 | 2 | 1 |
| Thailand | 5 | 3 | 2 |
| UK | 6 | 3 | 3 |
| US | 5 | 3 | 2 |

**Sources:** Central bank websites.

**Table I.2: Baseline Assumptions for Projections**

| Indicator | MPR October 2019 | MPR April 2020 |
|---|---|---|
| Crude Oil (Indian basket) | US$ 62.6 per barrel during H2: 2019-20 | US$ 35 per barrel during 2020-21 |
| Exchange rate | ₹ 71.3/US$ | ₹ 75/US$ |
| Monsoon | 10 per cent above long period average for 2019 | Normal for 2020 |
| Global growth | 3.2 per cent in 2019<br>3.5 per cent in 2020 | Contraction in 2020 |
| Fiscal deficit (per cent of GDP) | To remain within BE 2019-20<br>Centre: 3.3<br>Combined: 5.9 | To remain within BE 2020-21<br>Centre: 3.5<br>Combined: 6.1 |
| Domestic macroeconomic/ structural policies during the forecast period | No major change | No major change |

**Notes:** 1. The Indian basket of crude oil represents a derived numeraire comprising sour grade (Oman and Dubai average) and sweet grade (Brent) crude oil.
2. The exchange rate path assumed here is for the purpose of generating the baseline projections and does not indicate any 'view' on the level of the exchange rate. The Reserve Bank of India is guided by the objective of containing excessive volatility in the foreign exchange market and not by any specific level of and/or band around the exchange rate.
3. BE: Budget estimates.
4. Combined fiscal deficit refers to that of the Centre and States taken together.

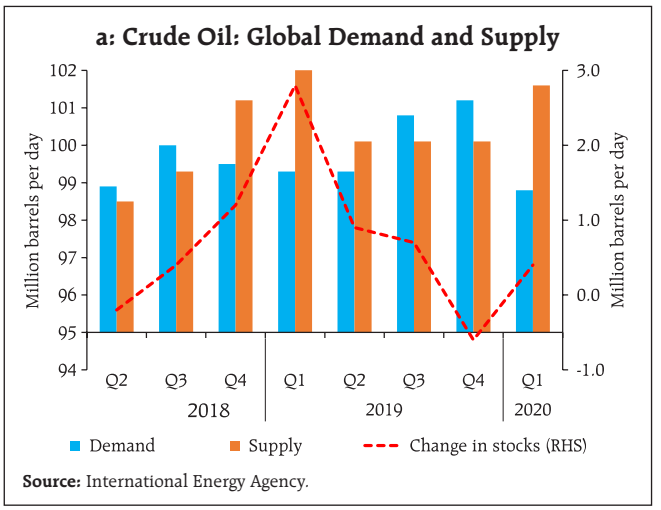
**Sources**: RBI estimates; Budget documents; and IMF.

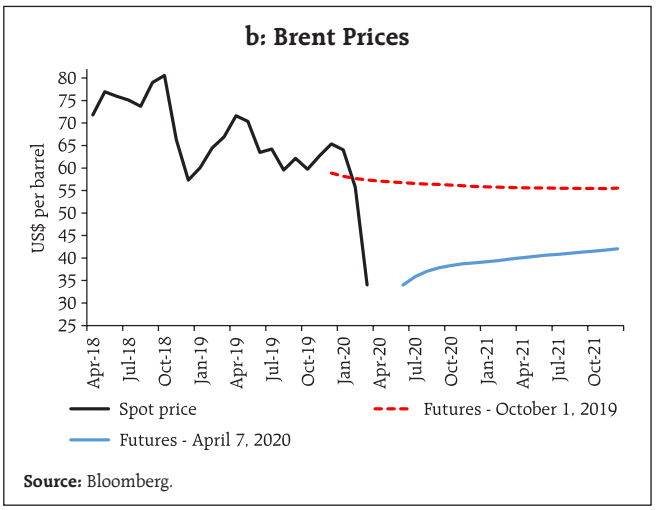
to around US$ 70 per barrel, triggered by US-Iran tensions. They subsequently softened, however, to reach US$ 51 by early March in anticipation of lower global demand following the outbreak of COVID-19 and its rapid geographical spread. Brent prices crashed to US$ 32 on March 9, 2020 following Saudi Arabia's decision to cut prices and increase production over the failure to reach an agreement with Russia on production cuts. Brent fell further to US$ 23 on March 30, 2020 while US crude prices dipped briefly below US$ 20. Brent rebounded to US$ 34 per barrel on April 3. Given the current demand-supply assessment, the baseline scenario assumes crude oil prices (Indian basket) to average around US$ 35 per barrel during 2020-21 (Chart I.1).

Second, the nominal exchange rate (the Indian rupee or INR *vis-à-vis* the US dollar) exhibited sizable two-way movements during October-December 2019. The INR came under intensified and sustained depreciation pressures beginning mid-January, reflecting a generalised weakening of emerging market currencies amidst flights to safety. Accordingly, the baseline assumes an average of INR 75 per US dollar to reflect these recent developments.

Third, even though uncertainties relating to US-China trade relations and Brexit have receded, the COVID-19 pandemic has taken over. This has

**Chart I.1: Crude Oil: Demand-Supply Balance and Prices**



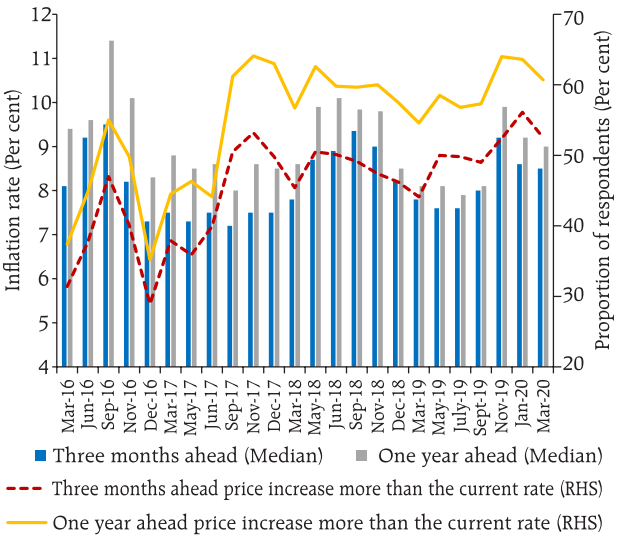
cast a shadow on the macroeconomic outlook, with global supply chains, trade, tourism, and the hotel industry being severely affected. The World Trade Organisation's (WTO) goods and services trade barometers indicate that world trade volume growth weakened in early 2020; it is expected to be debilitated further by the adverse impact of COVID-19. The IMF expects that the contraction in global output in 2020 could be as bad as or worse than in 2009. The depth of the recession and the pace of recovery in 2021 would depend on the speed of containment of the pandemic and the efficacy of monetary and fiscal policy actions by various countries. The slowdown could be more protracted in dire scenarios in which the duration of COVID-19 extends longer. The Organisation for Economic Cooperation and Development (OECD) estimates suggest that annual global gross domestic product (GDP) growth could be lower by up to 2 percentage points for each month in which strict containment measures continue. If the shutdown continues for three months with no offsetting factors, annual GDP growth could be between 4-6 percentage points lower than it otherwise might have been.

### I.1 The Outlook for Inflation

Headline consumer price index (CPI) inflation breached the upper tolerance band of the target in December 2019 and peaked in January 2020, before ebbing prices of vegetables, fruits and petroleum products produced a downward shift of 100 bps in February. The trajectory of inflation in the near-term is likely to be conditioned by the pace of reversal of the spike in vegetables prices, the dispersion of inflationary pressures across other food prices, the incidence of one-off cost-push effects on various elements of core inflation and especially, the evolution of the COVID-19 outbreak.

Looking ahead, three months and one year ahead median inflation expectations of urban households softened by 10 bps and 20 bps, respectively, in the

**Chart I.2: Inflation Expectations of Households**




**Source:** Inflation Expectations Survey of Households, RBI.

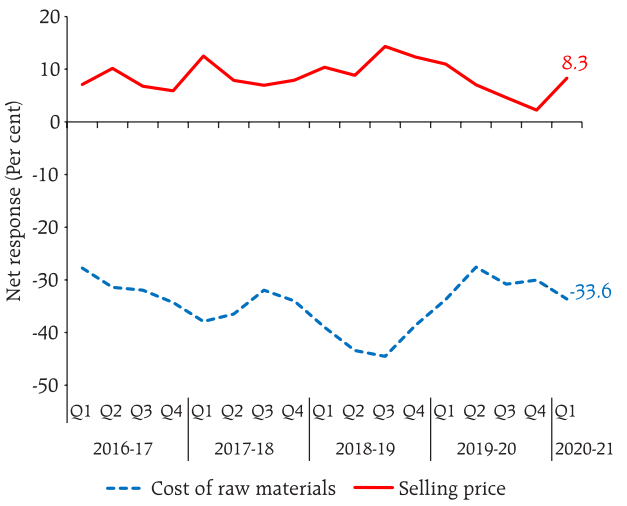
March 2020 round of the survey conducted by the RBI[1]. The proportion of respondents expecting the general price level to increase by more than the current rate also decreased for both three months and one year ahead horizons *vis-à-vis* the January 2020 round (Chart I.2). Although largely adaptive, inflation expectations of households and firms can shape future inflation through price and wage setting behaviour. According to the Reserve Bank's consumer confidence survey for March 2020, inflation expectations moderated over the previous round[2].

Manufacturing firms polled in the January-March 2020 round of the Reserve Bank's industrial outlook survey expected an increase in selling prices as well as in the cost of raw materials in Q1:2020-21; nonetheless, pricing power of firms is expected to remain weak (Chart I.3)[3]. Purchasing managers'

[1] The Reserve Bank's inflation expectations survey of households is conducted in 18 cities and the results of the March 2020 survey undertaken during February 27– March 7, 2020 are based on responses from 5,912 households.

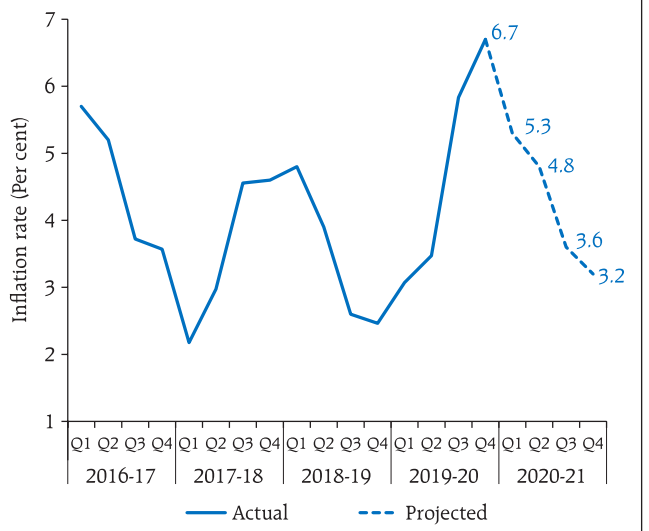
[2] The Reserve Bank's consumer confidence survey is conducted in 13 major cities and the results of the March 2020 round undertaken during February 27-March 7, 2020 are based on responses from 5,365 respondents.

**Chart I.3: Expectations about Cost of Raw Materials and Selling Prices**




**Note:** Net response is the difference between the respondents reporting optimism and those reporting pessimism. The range is -100 to 100. An increase/decrease in net responses in respect of the selling price is optimistic/pessimistic, while the increase/decrease in net response in respect of the cost of raw materials is pessimistic/optimistic from the view point of respondent firms. Therefore, higher negative values for the cost of raw materials indicate higher input price pressures and vice versa.
**Source:** Industrial Outlook Survey, RBI.

**Chart I.4: Inflation Expectations of Professional Forecasters**




**Sources:** Survey of Professional Forecasters, RBI and National Statistical Office.

surveys for manufacturing and services reported moderation in the rate of increase in input and output prices for March 2020.

Professional forecasters surveyed by the Reserve Bank in March 2020 expected CPI inflation to ease from 6.6 per cent in February 2020 to 5.3 per cent in Q1:2020-21 and 3.2 per cent by Q4:2020-21 (Chart I.4) [4].

Thus, an array of forward-looking indicators is pointing to a much softer inflation trajectory. Looking ahead, the balance of inflation risks is slanted even further to the downside. First, food prices may soften under the beneficial effects of the record foodgrains and horticulture production, at least till the onset of the usual summer uptick. Second, the collapse in crude prices should work towards easing inflationary pressures, depending on the level of the pass-through to retail prices. All these signals are, however, heavily conditioned by the depth, spread and duration of COVID-19 and shifts in any of these characteristics of the pandemic can produce drastic changes in the outlook. In these conditions, forecasts are hazardous as they are subject to large revisions with every incoming data on the pandemic. The RBI Act, however, enjoins the Reserve Bank to publish and explain in the MPR, *inter alia*, the forecasts of inflation for 6-18 months from the date of its publication. Therefore, taking into account initial conditions, signals from forward-looking surveys and estimates from time series and structural models, CPI inflation is tentatively projected to ease from 4.8 per cent in Q1:2020-21 to 4.4 per cent in Q2, 2.7 per cent in Q3 and 2.4 per cent in Q4, with the caveat that in the prevailing high uncertainty, aggregate demand may weaken further than currently anticipated and ease core inflation further, while supply bottlenecks could exacerbate pressures more than expected. *Per contra*, a quick containment of COVID-19 could lead to faster recovery and, therefore, firmer inflation pressures. Given the lockdown, the

[3] The results of the January-March 2020 round of the industrial outlook survey (launched on January 30, 2020) are based on 860 responses received till March 18, 2020.

[4] 25 panellists participated in the March 2020 round of the Reserve Bank's survey of professional forecasters, conducted during March 6-19, 2020.

compilation of the CPI for March and the following few months by the National Statistical Office could also become challenging. For 2021-22, assuming a normal monsoon and no major exogenous or policy shocks, structural model estimates indicate that inflation could move in a range of 3.6-3.8 per cent.

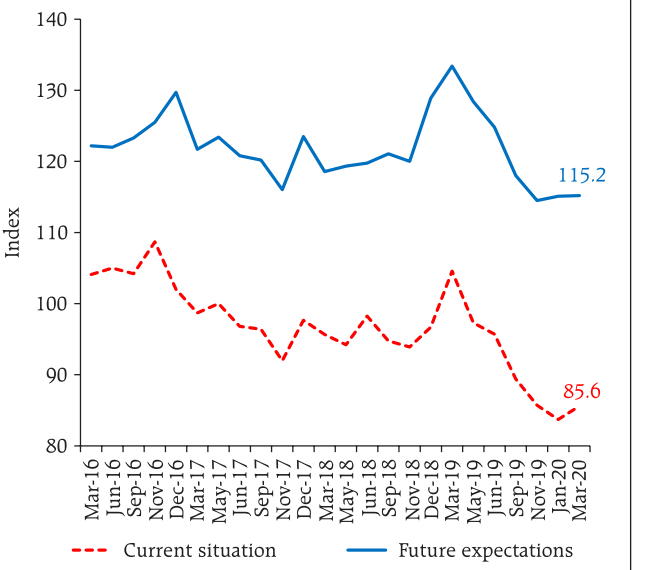
### I.2 The Outlook for Growth

Prior to the outbreak of COVID-19, the outlook for growth for 2020-21 was looking up. First, the bumper *rabi* harvest and higher food prices during 2019-20 provided conducive conditions for the strengthening of rural demand. Second, the transmission of past reductions in the policy rate to bank lending rates has been improving, with favourable implications for both consumption and investment demand. Third, reductions in the goods and services tax (GST) rates, corporate tax rate cuts in September 2019 and measures to boost rural and infrastructure spending were directed at boosting domestic demand more generally. The COVID-19 pandemic has drastically altered this outlook. The global economy is expected to slump into recession in 2020, as post-COVID projections indicate. The sharp reduction in international crude oil prices, if sustained, could improve the country's terms of trade, but the gain from this channel is not expected to offset the drag from the shutdown and loss of external demand.

Turning to key messages from forward-looking surveys, the March 2020 round of the Reserve Bank's survey showed that consumer confidence for the year ahead was expected to remain around its level recorded in the previous survey round in January 2020 (Chart I.5). However, an important caveat to the forward-looking surveys presented in this section is that they were completed before the nation-wide lockdown effective March 25.

Optimism in the manufacturing sector for the quarter ahead had improved in the January-March

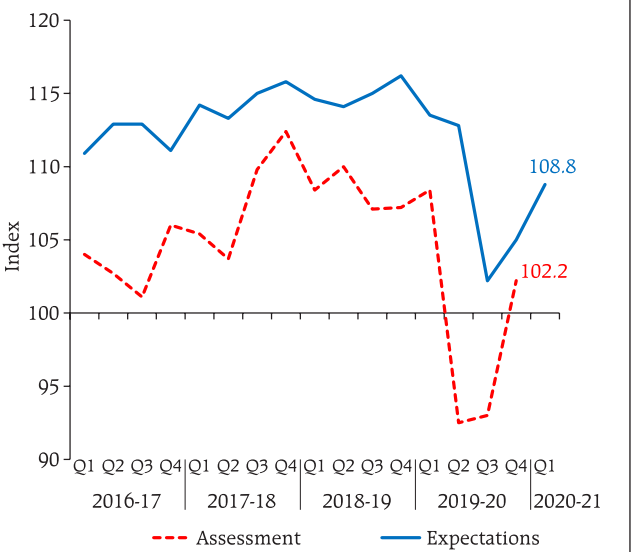
**Chart I.5: Consumer Confidence**




**Source:** Consumer Confidence Survey, RBI.

2020 round of the Reserve Bank's industrial outlook survey, reflecting expectations of higher production, order books, capacity utilisation, employment conditions, exports and overall business situation (Chart I.6). In view of the intensification of COVID-19, a quick survey with select parameters was specially conducted during March 18-20 to capture business

**Chart I.6: Business Assessment and Expectations**




**Source:** Industrial Outlook Survey, RBI.

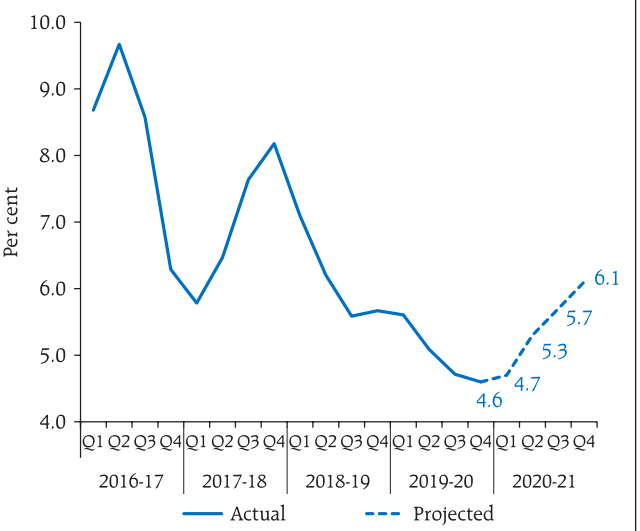
sentiments. From the limited responses received, a considerable worsening of the key demand indicators is seen in the outlook for Q1:2020-21.

Surveys by other agencies (conducted prior to the intensification of COVID-19) indicated optimism on future business expectations (Table I.3). According to the purchasing managers' surveys for March 2020, one year ahead business expectations of firms in manufacturing slumped to its weakest level, driven by fears of prolonged disruption from COVID-19. Business expectations of firms in the services sector also fell.

Professional forecasters polled in the March 2020 round of the Reserve Bank's survey (conducted during March 6-19 before the announcement of the nation-wide lockdown) expected real GDP growth to recover from 4.6 per cent in Q4:2019-20 to 6.1 per cent in Q4:2020-21 (Chart I.7 and Table I.4).

Overall, apart from the continuing resilience of agriculture and allied activities, other sectors of the economy will be adversely impacted by the pandemic, depending upon its intensity, spread and duration.

**Chart I.7: Professional Forecasters' Projection of Real GDP Growth**




**Sources:** Survey of Professional Forecasters, RBI and National Statistical Office.

Relatively modest upsides are expected to emanate from monetary, fiscal and other policy measures and the early containment of COVID-19, if that occurs. Such uncertainties make the forecasting of inflation and growth highly challenging (Box I.1).

**Table I.3: Business Expectations Surveys**

| Item | NCAER Business Confidence Index (February 2020) | FICCI Overall Business Confidence Index (January 2020) | Dun and Bradstreet Composite Business Optimism Index (March 2020) | CII Business Confidence Index (March 2020) |
|---|---|---|---|---|
| Current level of the index | 111.2 | 59.0 | 63.0 | 53.4 |
| Index as per previous survey | 103.1 | 55.0 | 56.4 | 49.4 |
| % change (q-o-q) sequential | 7.9 | 7.3 | 11.7 | 8.1 |
| % change (y-o-y) | -12.4 | -2.2 | -14.6 | -18.1 |

**Notes:**
1. NCAER: National Council of Applied Economic Research.
2. FICCI: Federation of Indian Chambers of Commerce & Industry.
3. CII: Confederation of Indian Industry.

**Table I.4: Projections - Professional Forecasters**

(Per cent)

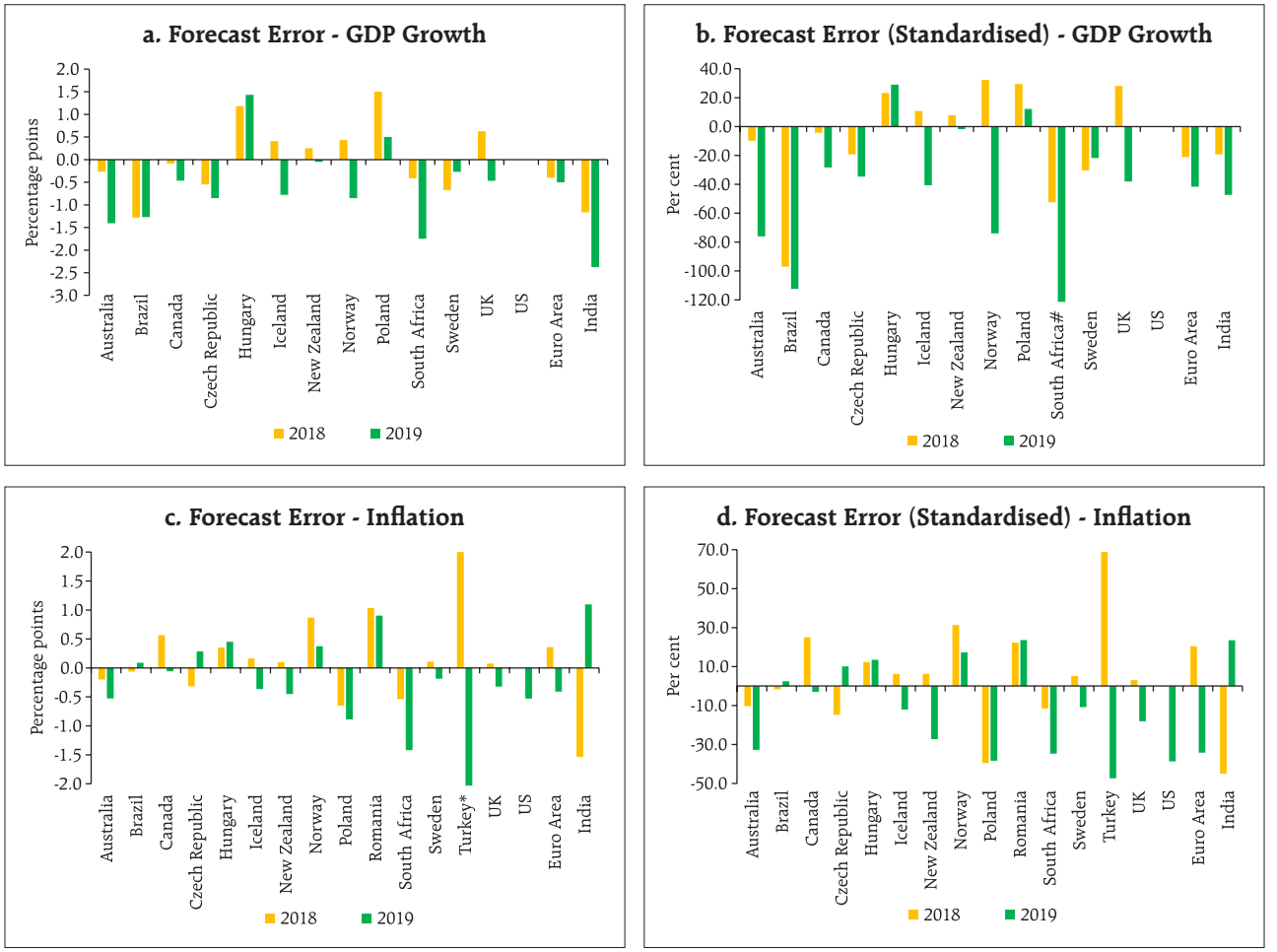
| Median Projections of Professional Forecasters | 2019-20 | 2020-21 |
|---|---|---|
| Inflation, Q4 (y-o-y) | 6.7 | 3.2 |
| Real GDP growth | 5.0 | 5.5 |
| Gross domestic saving (per cent of GNDI) | 29.4 | 29.5 |
| Gross capital formation (per cent of GDP) | 30.0 | 30.0 |
| Credit growth of scheduled commercial banks | 7.2 | 9.3 |
| Combined gross fiscal deficit (per cent of GDP) | 6.8 | 6.5 |
| Central government gross fiscal deficit (per cent of GDP) | 3.8 | 3.6 |
| Repo rate (end-period) | 5.15 | 4.65 |
| Yield on 91-days treasury bills (end-period) | 4.9 | 4.7 |
| Yield on 10-year central government securities (end-period) | 6.2 | 6.1 |
| Overall balance of payments (US$ billion) | 49.8 | 40.0 |
| Merchandise exports growth | -2.9 | -0.6 |
| Merchandise imports growth | -7.2 | -2.9 |
| Current account balance (per cent of GDP) | -1.0 | -0.7 |

**Note:** GNDI: Gross National Disposable Income.
**Source:** Survey of Professional Forecasters (March 2020 round, conducted during March 6-19, 2020).

## Box I.1: Forecasting Under Uncertainty in a Cyclical Downturn

Monetary policy actions impact output and inflation with long and variable lags. Hence, timely and reliable forecasts of output and inflation are of critical importance. Domestic and global shocks to key conditioning variables such as global crude oil prices, global trade and growth, the exchange rate, the monsoon outturn and the rising frequency of their visitations make forecasting a challenging task, however, especially around the turning points. In an analysis of inflation and GDP growth forecasts of 17 select central banks for 2018 and 2019, most of them, including the RBI, were initially optimistic about economic activity (*i.e.*, negative forecast errors)[5]. The standardised forecast errors (*i.e.*, errors divided by the actual growth rate/inflation) were comparable (Chart I.1.1).

**Chart I.1.1: Growth and Inflation Forecast Performance**




**Note:** Forecast Error (Standardised) is forecast error as percentage of actual GDP growth/inflation of the country.
*: 15.4 percentage points in 2018 and (-) 4.9 percentage points in 2019; #: (-)1145 per cent in 2019.
**Sources:** Respective central banks' websites; and RBI staff estimates.

*(contd.)*

[5] Apart from the RBI, the analysis covers the central banks of Australia, Brazil, Canada, Czech Republic, Hungary, Iceland, New Zealand, Norway, Poland, Romania, South Africa, Sweden, Turkey, UK, US and Euro area. For Romania and Turkey, the analysis is restricted to inflation forecasts in the absence of information on GDP growth forecasts. The focus of the analysis is on one-year ahead forecast errors (actual outturn less the forecast); therefore, the forecasts for the years 2018 and 2019 made in the last quarter of 2017 and 2018, respectively, are considered. For the RBI, the forecasts for the financial years 2018-19 and 2019-20 available in the February 2018 and February 2019 policy statements, respectively, are taken.

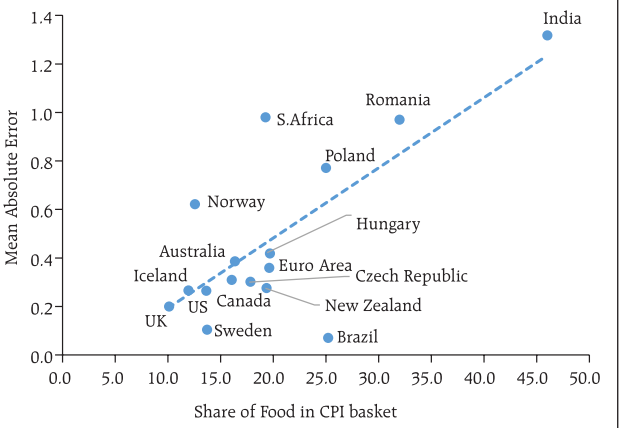
Panel regression results indicate that global growth surprises have been an important factor underlying domestic growth forecast errors; crude oil price surprises have a negative impact, although not significant (Equation 1). However, inflation forecast errors seem to be more due to country-specific idiosyncratic factors - domestic growth forecast errors as well as crude oil price surprises are not statistically significant (Equation 2). The constant term is statistically insignificant in both the regressions, suggesting that the forecast errors were unbiased, once the global growth and crude oil surprises were controlled for.

$$y\_fe_{it} = 0.18 + 1.04\ yw\_s_{t} - 0.006\ doil_{it} \quad \text{..... (1)}$$
$$(0.93)\ \ (4.91)\qquad (0.66)$$

$$\pi\_fe_{it} = -0.12 + 0.09\ y\_fe_{it} + 0.002\ doil_{it} \quad \text{..... (2)}$$
$$(1.27)\ \ (1.13)\qquad (0.14)$$

Figures in parentheses are t-statistics; *y_fe*, *π_fe*, *yw_s*, *doil* are growth forecast errors, inflation forecast errors, global growth surprise and change in crude oil prices in local currency terms, respectively[6].

**Chart I.1.2: Inflation Forecast Errors and Share of Food**




**Note:** Mean absolute error is average of absolute forecast errors for the years 2018 and 2019.
**Sources:** Websites of central banks/statistics offices and RBI staff estimates.

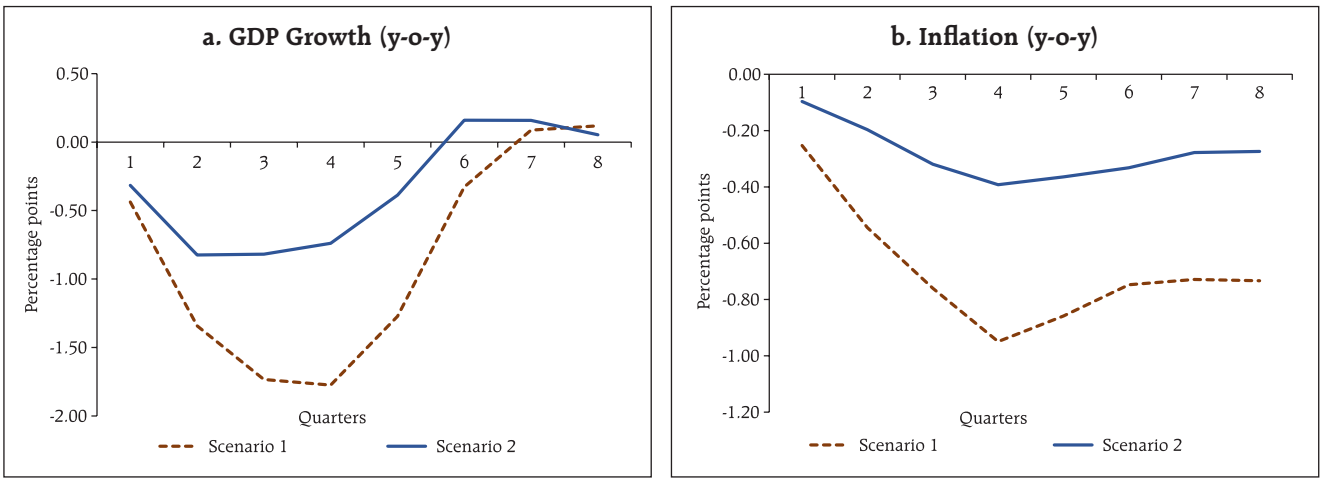
In India, the forecasting challenges are even more acute, given the high share (45.9 per cent) of the food basket in the CPI (Combined) (Chart I.1.2) as well as large revisions in past GDP growth rates. The Reserve Bank, like other central banks, provides fan charts around the baseline projections to convey future uncertainty.

Against this backdrop and especially, the highly fluid circumstances in which incoming data produce shifts in the outlook for growth on a daily basis, forecasts for real GDP growth in India are not provided here, awaiting a clear fix on the intensity, spread and duration of COVID-19. To illustrate, in early March, the OECD projected the decline in global growth for 2020 in the range of 0.5-1.5 percentage points. More recently, with COVID-19 having spread to more than 200 countries, the IMF's latest assessment is that global growth during 2020 could be negative *vis-à-vis* growth of 2.9 per cent in 2019 (which itself was a decadal low). Thus, global growth could be lower by three percentage points or more in 2020 relative to 2019. The possible impact of the global slowdown on India's growth and inflation can be assessed by using the Quarterly Projection Model (QPM)[7] under alternative scenarios. Scenario 1 assumes global growth in 2020 to be 3 percentage points lower than in 2019. Scenario 2 assumes that the outbreak is contained faster and the loss of global output growth is only 1.5 percentage points relative to 2019. Lower global output and demand can impact the Indian economy through a variety of channels. First, it can affect exports adversely, leading to lower domestic demand, growth and inflation. Second, international crude oil and other commodity prices have already softened sharply amidst high volatility and India, being a net importer, can benefit from the lower commodity prices. Finally, heightened global financial market volatility can feed into

[6] Global growth surprise is captured by actual global growth less the forecast made in the preceding year's October edition of the IMF's World Economic Outlook. Crude oil price surprise is measured as the percentage change in its local-currency price during the year from its level in the last quarter of the preceding year.

[7] The QPM is a semi-structural, forward-looking, open economy, calibrated, gap model in the New Keynesian tradition and provides an internally consistent analysis of various feedback mechanisms.

**Chart I.8: COVID-19 Outbreak: Impact of Global Slowdown on India's Growth and Inflation**




**Source:** RBI staff estimates.

domestic financial markets and impact both growth and inflation. The QPM captures all these channels. The model's simulations suggest that, on account of global factors, domestic growth could be lower, at its peak, by 180 bps in Scenario 1 and by 80 bps in Scenario 2. Inflation could be lower by 40-100 bps at its peak under the two scenarios (Chart I.8).

### I.3 Balance of Risks

The COVID-19 pandemic poses upside and downside risks to the baseline assumptions and outlook.

#### (i) Exchange Rate

The exchange rate of the Indian rupee *vis-à-vis* the US dollar has moved in both directions in recent months. Renewed bouts of global financial market volatility caused by the uncertainty of macroeconomic impact of the COVID-19, as in February-March 2020, could exert pressure on the Indian rupee. Should the INR depreciate by 5 per cent from the baseline, inflation could edge up by around 20 bps while GDP growth could be higher by around 15 bps through increased net exports. In contrast, should COVID-19 normalise quickly, strong capital flows could revive. An appreciation of the INR by 5 per cent could moderate inflation by around 20 bps and GDP growth by around 15 bps *vis-à-vis* the baseline.

#### (ii) International Crude Oil Prices

Global crude oil prices have declined sharply from their October 2019 levels mainly due to weakening of global demand following the outbreak of COVID-19, and Saudi Arabia's decision to cut prices. However, the short and medium-term outlook of oil remains highly uncertain. A V-shaped global recovery due to an early containment of the COVID-19 or renewed geopolitical tensions or an agreement on production cuts could lead to a sharp reversal in international crude oil prices. Should the Indian basket of crude oil prices increase by 10 per cent above the baseline assumption, inflation could be higher by 20 bps and growth could be weaker by around 15 bps. If COVID-19 were to persist longer, global economic activity and demand for crude oil could fall further in an environment of sustained oversupply due to Saudi Arabia's decision to enhance production. Should the Indian basket crude price fall by 10 per cent *vis-à-vis* the baseline, inflation could ease by up to 20 bps and growth higher by up to 15 bps, depending upon the extent of pass-through to domestic product prices.

**(iii) Food Prices**

After remaining subdued for a considerable period, food inflation in India increased sharply during October 2019-January 2020, driven by a spike in vegetable prices. The baseline path assumes vegetable prices to fall rapidly in response to arrivals of *rabi* harvests and a normal south-west monsoon during 2020, which is supported by early signals of likely ENSO (El Nino – Southern Oscillation) neutral conditions. Adequate buffer stocks in cereals and a good *rabi* harvest (2019 season) could soften food inflation more than anticipated and pull down headline inflation by 50 bps below the baseline. On the other hand, a deficient or spatially skewed south-west monsoon, and an unexpected hardening of prices of non-vegetable food items could push headline inflation above the baseline by around 50 bps in 2020-21.

**I.4 Conclusion**

COVID-19, the accompanying lockdowns and the expected contraction in global output in 2020 weigh heavily on the growth outlook. The actual outturn would depend upon the speed with which the outbreak is contained and economic activity returns to normalcy. Significant monetary and liquidity measures taken by the Reserve Bank and fiscal measures by the government would mitigate the adverse impact on domestic demand and help spur economic activity once normalcy is restored. Risks around the inflation projections appear balanced at this juncture and the tentative outlook is benign relative to recent history. But COVID-19 hangs over the future, like a spectre.

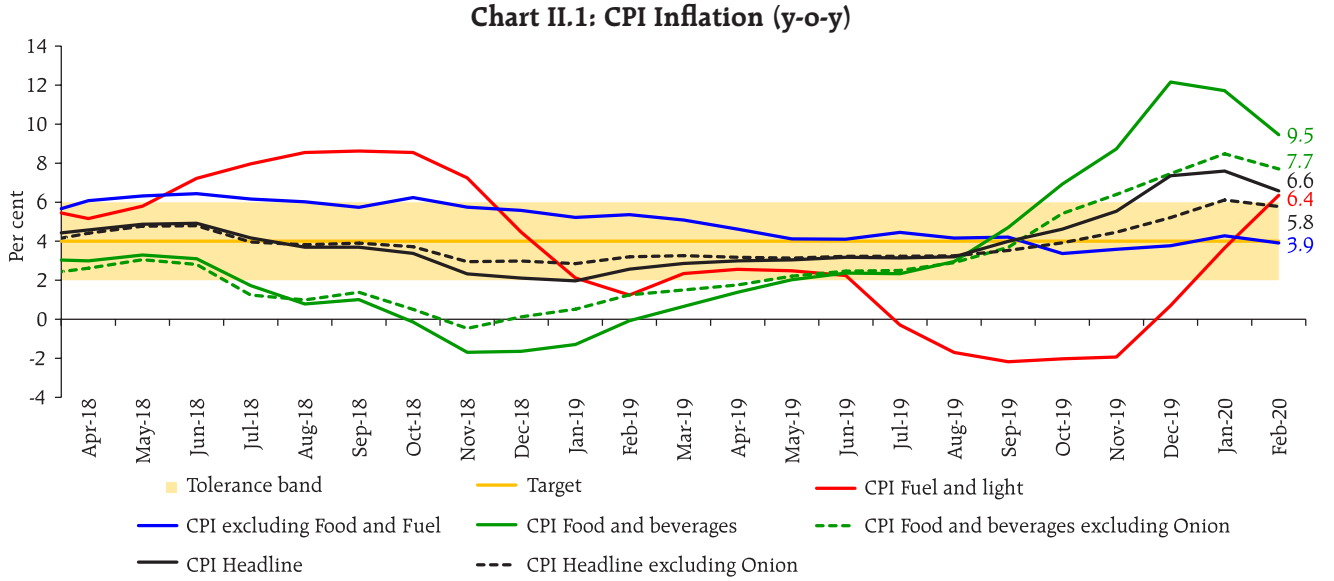
# *II. Prices and Costs*

*Consumer price inflation surged between October 2019 and January 2020 propelled by a vegetable price spike, particularly of onions and breached the upper tolerance threshold in December before moderating in February. Fuel prices emerged out of deflation in December. After touching a historic low in October, inflation in CPI excluding food and fuel edged up due to idiosyncratic cost-push factors. Costs of farm inputs, industrial raw materials, agricultural and non-agricultural labourers' nominal wages and organised sector staff costs remained muted.*

Headline inflation, measured by the consumer price index (CPI),[1] had been trailing below target for thirteen consecutive months till Q2:2019-20 when a ratcheting up of vegetables prices – mainly those of onions – dispelled this environment of price stability. In the event, headline inflation breached the upper tolerance ceiling of 6 per cent by December 2019 and peaked at 7.6 per cent in January 2020 before moderating to 6.6 per cent in February. An unusually prolonged south-west monsoon and unseasonal rains ravaged the later part of the *kharif* harvest and produced an unprecedented rise in prices of onions. In fact, excluding onions, headline inflation would have been 4.5 per cent in Q3 and 5.9 per cent in Q4 (till February), underscoring the severity of the onion price shock. Fuel prices too moved out of five months of deflation into positive territory in December 2019 and increased sharply thereafter. Inflation excluding food and fuel – or core inflation – hardened in a sustained manner from a historic low of 3.4 per cent in October 2019 to 4.3 per cent in January 2020, propelled by a series of cost pushes before registering some moderation in February (Chart II.1).

The Reserve Bank of India (RBI) Act, 1934 (amended in 2016) enjoins the RBI to set out deviations of actual inflation outcomes from projections, if any, and explain the underlying reasons thereof. The

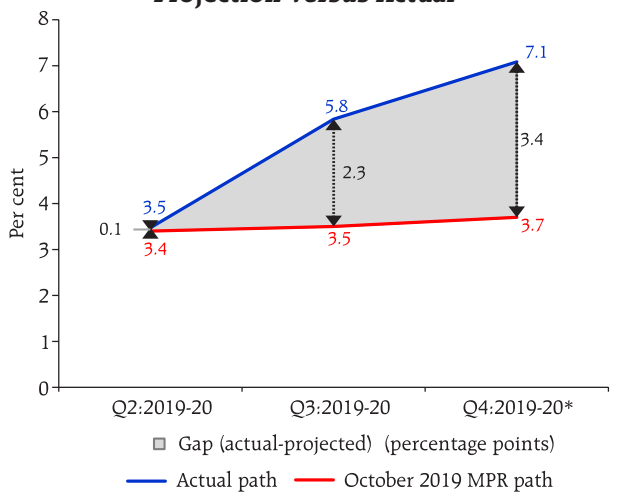
**Chart II.1: CPI Inflation (y-o-y)**




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

[1] Headline inflation is measured by year-on-year changes in all India CPI Combined (Rural and Urban).

**Chart II.2: CPI Inflation (y-o-y): Projection *versus* Actual**




*: Projections for entire Q4:2019-20 *vis-a-vis* actual average inflation during Jan.- Feb. 2020.
**Sources:** NSO; and RBI staff estimates.

Monetary Policy Report (MPR) of October 2019 had projected CPI inflation to remain range-bound in H2: 2019-20, at 3.5 per cent in Q3:2019-20 and at 3.7 per cent for Q4:2019-20. Actual inflation outcomes have overshot projections by a considerable margin – 2.3 percentage points in Q3 and 3.4 percentage points in Q4 (Chart II.2).

As stated earlier, the unanticipated and unparalleled spike in onion prices was the major source of deviation of headline inflation from projections. Unseasonal rains also delayed the seasonal winter moderation in prices of other vegetables, particularly those of potatoes. In addition, a larger than anticipated pick-up in cereals and milk prices due to *kharif* crop damage coming from the unseasonal rains, lower wheat imports and higher minimum support prices for wheat in the case of the former and an escalation in input costs in the case of the latter aggravated inflation pressures. CPI excluding food and fuel inflation also turned out to be a source of projection errors in Q4 due to a series of cost-push shocks – higher mobile phone tariffs; higher motor-vehicles prices due to the ongoing switchover to BS-VI[2] compliant vehicles, higher gold prices reflecting international price movements; and higher services prices for sweepers, laundry, beauticians, bus fares – reflecting, *inter alia*, the spill over from higher food and fuel prices. In Q4:2019-20 (January-February), crude oil prices (Indian basket) softened from around US$ 63 per barrel at the time of the October MPR to US$ 55 per barrel by February, which helped temper these cost-push upsides.

### II.1 Consumer Prices

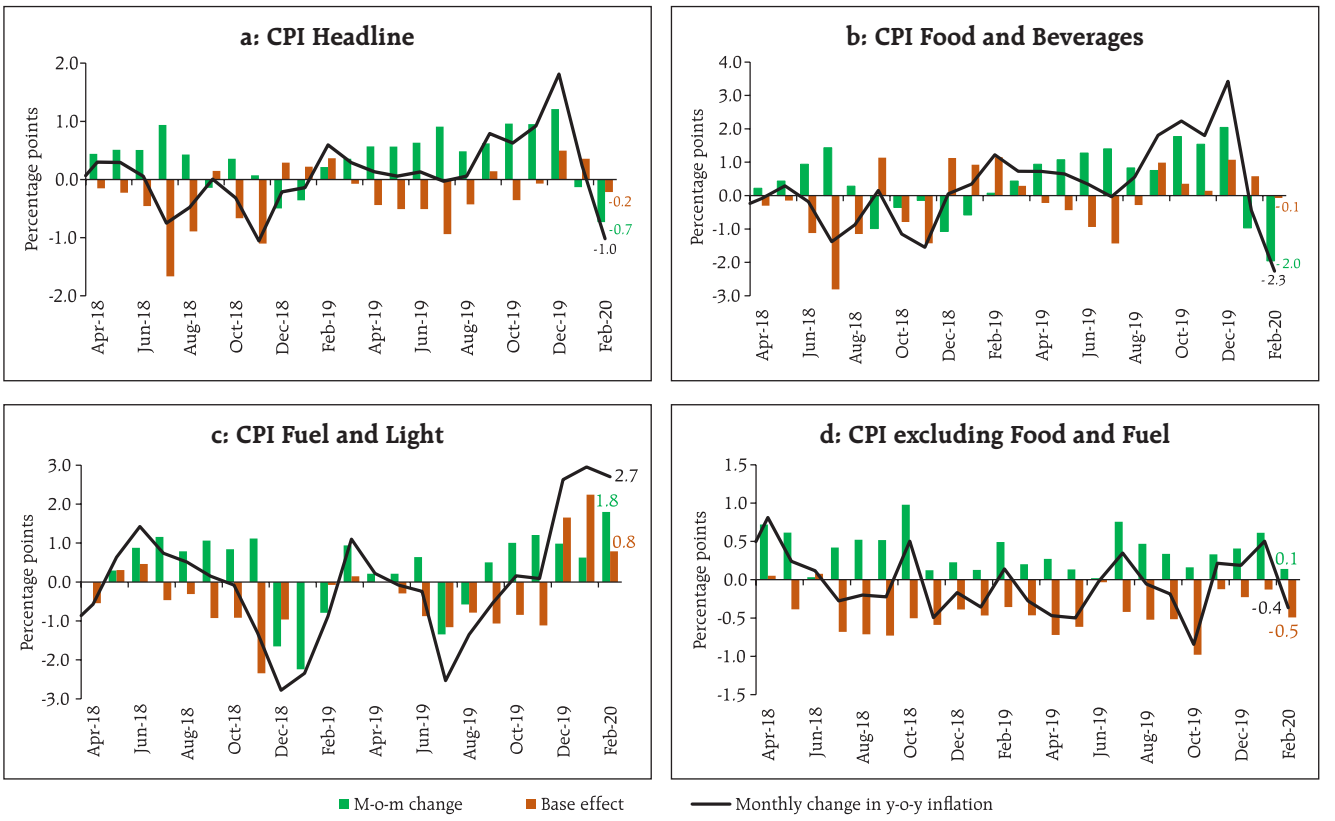
A decomposition of year-on-year (y-o-y) inflation suggests that a sharp increase in price momentum as well as unfavourable base effects were at work in H2:2019-20[3]. As against the normal seasonal decline in food prices during Q3, the measured food price momentum in Q3 was positive registering the highest increase during any third quarter in the history of the index. As a result, food inflation surged to double digits by the end of Q3. Adverse base effects also pushed up fuel inflation. In January, food prices started to decline, but the persisting firmness in the momentum of core inflation pushed headline inflation to a peak in January. In February, headline inflation moderated coming from a sharp decline in food prices and waning of core inflation momentum (Chart II.3).

The distribution of inflation across CPI groups in 2019-20 has diverged considerably from the recent historical experience. Median inflation rate turned out to be lower compared with the last three-year average. However, 2019-20 exhibited high

[2] BS VI or Bharat Stage VI denotes the new emission standard that needs to be complied by all light and heavy vehicles, two and three wheeled vehicles manufactured on or after April 1, 2020.

[3] A change in CPI year-on-year (y-o-y) inflation between any two months is the difference between the current month-on-month (m-o-m) change in the price index (momentum) and the m-o-m change in the price index 12 months earlier (base effect). For more details see Box I.1 of the MPR, September 2014.

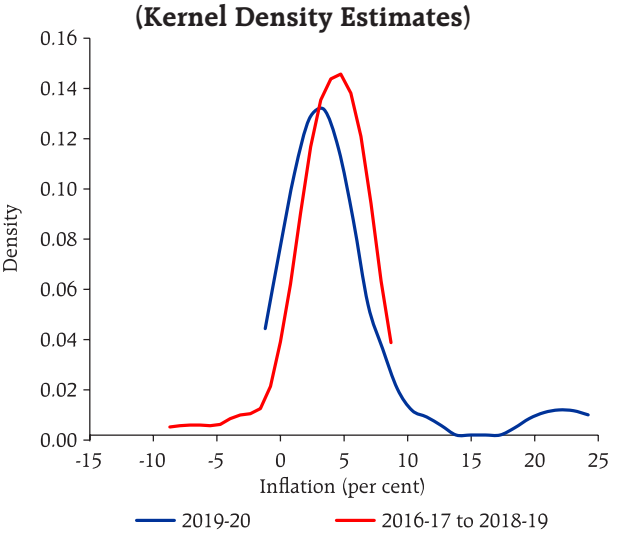
**Chart II.3: CPI Inflation – Momentum and Base Effects**




**Sources:** NSO; and RBI staff estimates.

positive skew – as food sub-groups like vegetables exhibited very high inflation rates – compared to a negative skew for the historical average. As a result, the mean inflation rate for 2019-20 turned out to be considerably higher than the average of last 3 years (Chart II.4). Even as select food items swayed overall inflation rates in Q3:2019-20, a pick-up in the diffusion indices[4] of price changes in CPI items, on a seasonally adjusted basis, also point to a broad-basing of price increases in the CPI basket – across goods and services – during this period. In Q4 so far, while almost all services have continued to register price increases, incidence of price increases in goods has seen some compression, largely on account of food items (Chart II.5).

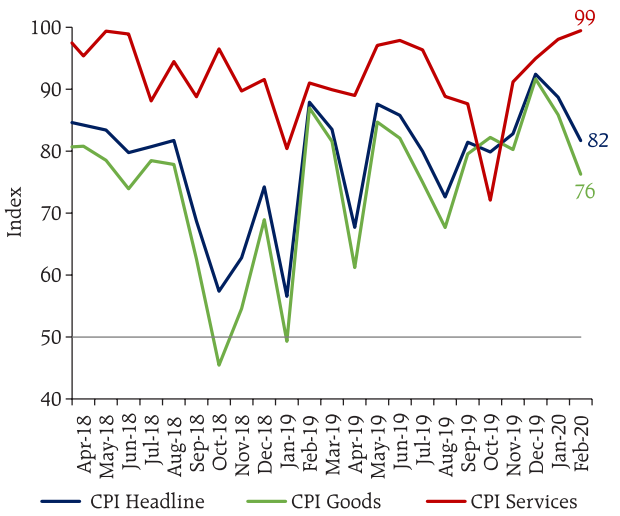
**Chart II.4: Average CPI Inflation (y-o-y) (Kernel Density Estimates)**




**Sources:** NSO; and RBI staff estimates.

[4] The CPI diffusion index, a measure of dispersion of price changes, categorises items in the CPI basket according to whether their prices have risen, remained stagnant or fallen over the previous month. A reading above 50 for the diffusion index signals a broad expansion or generalisation of price increases and a reading below 50 signals a broad-based price decline.

**Chart II.5: Diffusion Indices: CPI (M-o-m Seasonally Adjusted)**




**Sources:** NSO; and RBI staff estimates.

## II.2 Drivers of Inflation

A historical decomposition of inflation outcomes in H2:2019-20 reveals how adverse supply shocks overwhelmed the disinflationary impact of subdued domestic demand, both urban and rural (Chart II.6a).[5] Perishable goods (non-durable goods with a 7-day recall[6]) – food items such as vegetables, milk and meat products – were the key drivers, contributing 1.3 percentage points to overall inflation in Q2, 3.7 percentage points in Q3 and 4.0 percentage points in Q4 so far (Chart II.6b). The contribution of less perishable goods (non-durable goods with a 30-day recall) also picked up from Q3:2019-20 due to cereals, pulses, sugar and petroleum products. Durable goods contribution to headline inflation, which remained largely steady during September-December – on an average at 36 bps – picked up to around 40 bps in January-February due to a rise in gold prices. Imported goods[7] contributed negatively to overall inflation during September-November 2019, but their contribution turned positive during December 2019-February 2020 – on an average contributing around 60 bps to headline inflation, after a surge in energy and precious metals prices (Chart II.6c). The contribution of services to overall inflation remained sticky at around one percentage point as the sharp increase in mobile telecom charges during December 2019-January 2020 more than offset the moderation in inflation in house rentals, hospital services and tuition fees (Chart II.6b).

*CPI Food Group*

Food and beverages (weight: 45.9 per cent in CPI) weighed heavily on changes in the overall CPI inflation during April 2019-February 2020, with the cumulative peak food price build-up in December turning out to be at a historical high (Chart II.7a & II.7b).

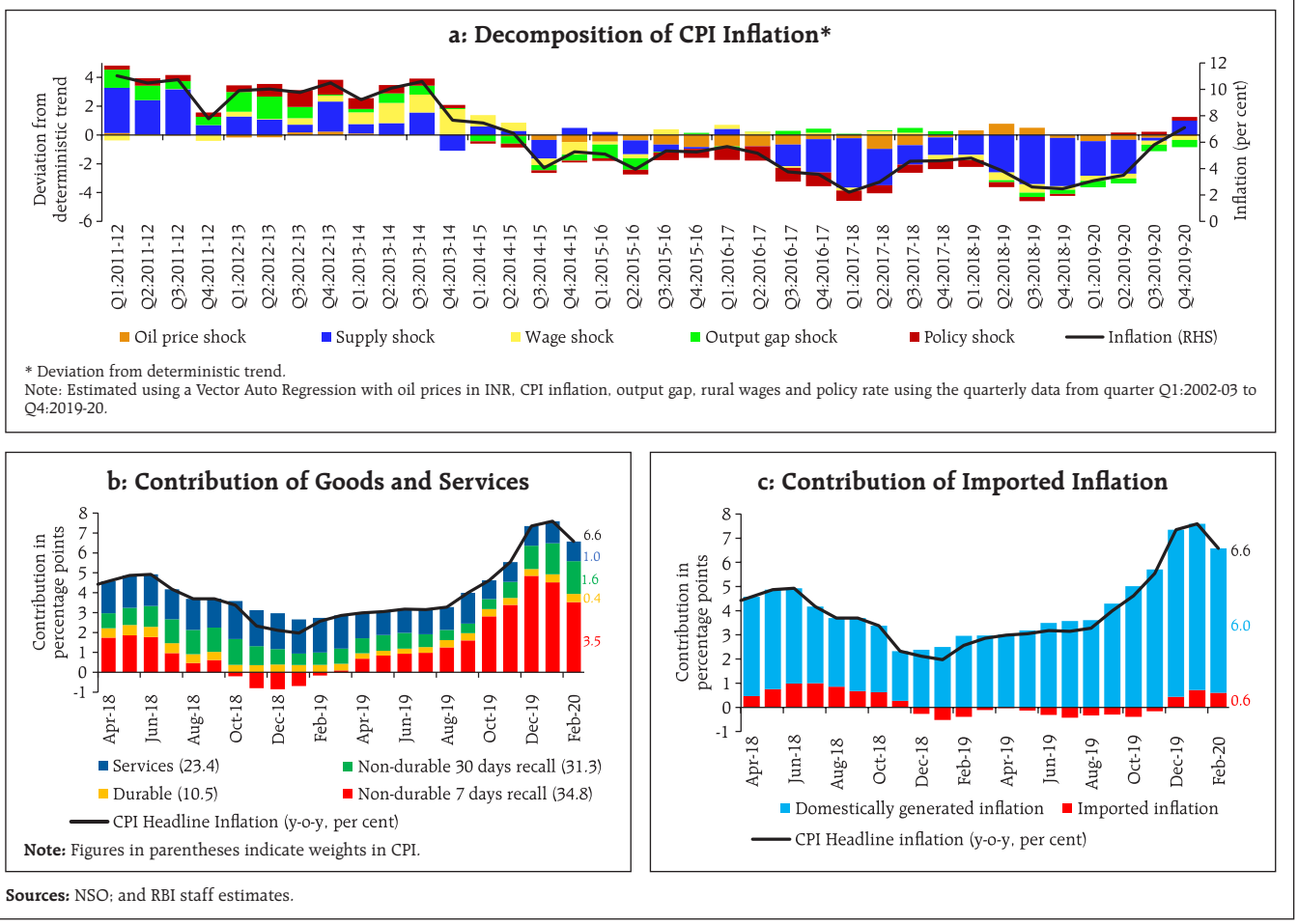
As a result, food inflation, which had ranged between 0.7 per cent and 4.7 per cent during March-September 2019, accelerated thereafter to peak at 12.2 per cent in December (Chart II.8a). Most of this upsurge was propelled by a vegetables price spike as a consequence of unseasonal rains; however, broad-

[5] Historical decompositions are used to estimate the contribution of each shock to the movements in inflation over the sample period, based on a vector auto regression (VAR) with the following variables (represented as the vector $Y_t$) – the annual growth rate in crude oil prices; inflation; the output gap; the annual growth rate in rural wages and the policy repo rate. The VAR can be written in reduced form as: $Y_t = c + A\,Y_{t-1} + e_t$; where $e_t$ represents a vector of shocks [oil price shock; supply shock (inflation shock); output gap shock; wage shock; and policy shock]. Using Wold decomposition, $Y_t$ can be represented as a function of its deterministic trend and sum of all the shocks $e_t$. This formulation facilitates decomposition of the deviation of inflation from its deterministic trend into the sum of contributions from various shocks.

[6] The CPI weighting diagrams use the modified mixed reference period (MMRP) data based on the 2011-12 Consumer Expenditure Survey conducted by the National Sample Survey Office (NSSO). Under MMRP, data on expenditure incurred are collected for frequently purchased items – for edible oil, eggs, fish, meat, vegetables, fruits, spices, beverages, processed foods, pan, tobacco and intoxicants, during the last seven days; for clothing, bedding, footwear, education, medical (institutional), durable goods, during the last 365 days; and for all other food, fuel and light, miscellaneous goods and services including non-institutional medical services, rents and taxes, during the last 30 days.

[7] India's imports are dominated by crude petroleum & petroleum products (around 25.0 per cent of the total imports. The other major components of imports are electronic goods (11.0 per cent), gold and silver (8.0 per cent), chemical and chemical products (6.0 per cent), metal and metal products (6.0 per cent), pears and precious stones (6.0 per cent) and vegetables oils (2.0 per cent). Also, the domestic prices of items such as raw cotton move in tandem with international cotton prices.

**Chart II.6: Drivers of CPI Inflation**



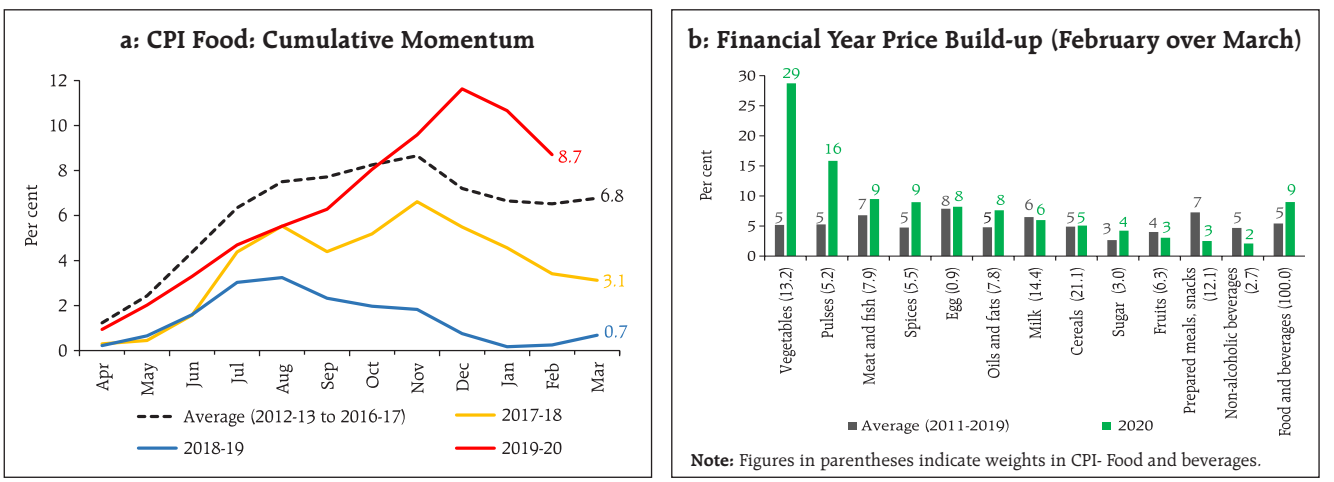

* Deviation from deterministic trend.
Note: Estimated using a Vector Auto Regression with oil prices in INR, CPI inflation, output gap, rural wages and policy rate using the quarterly data from quarter Q1:2002-03 to Q4:2019-20.

**Note:** Figures in parentheses indicate weights in CPI.

**Sources:** NSO; and RBI staff estimates.

basing of price pressures across the food category was observed in H2:2019-20 encompassing pulses, meat and fish, spices, eggs, cereals and milk (Chart II.8b). Food inflation moderated sequentially in January and

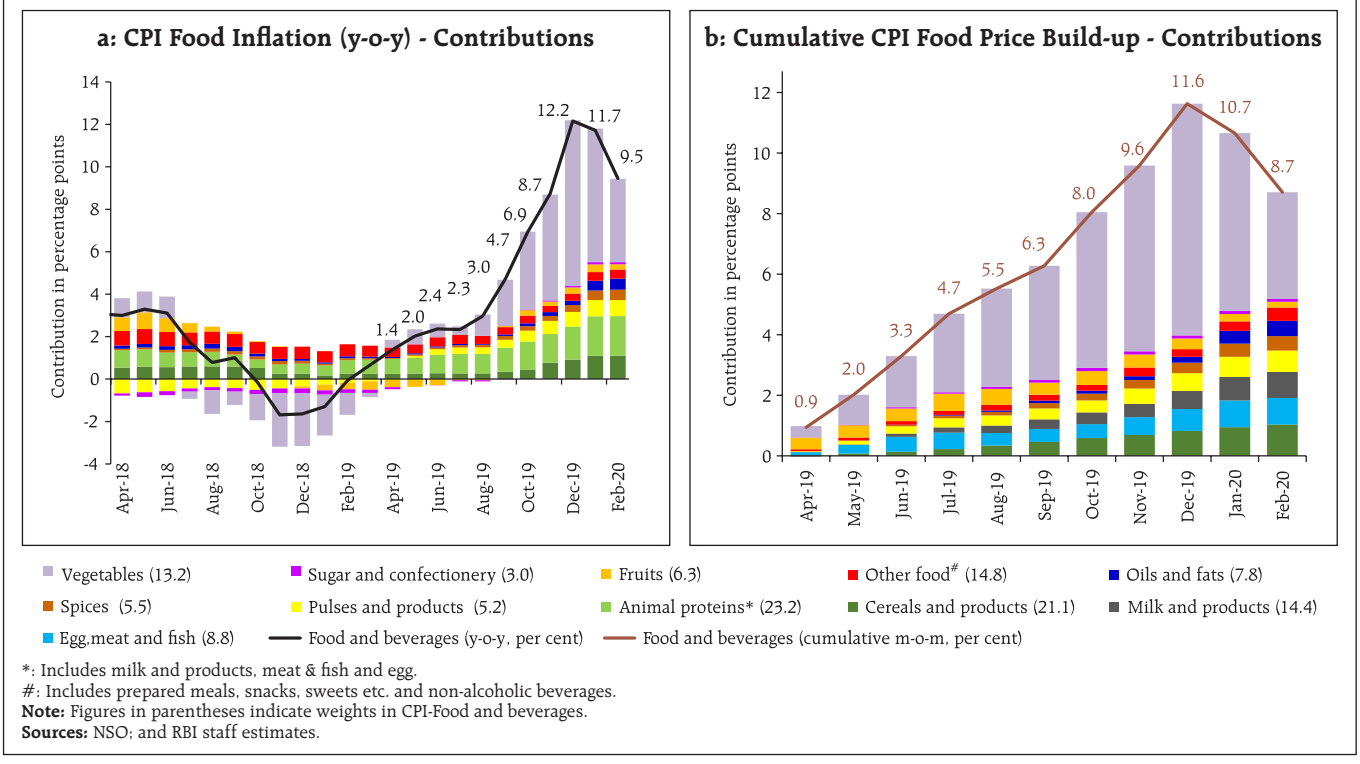
**Chart II.7: CPI Food Price Build-up**




**Note:** Figures in parentheses indicate weights in CPI- Food and beverages.

**Sources:** NSO; and RBI staff estimates.

**Chart II.8: CPI Food Inflation and Price Build-up**




*: Includes milk and products, meat & fish and egg.
#: Includes prepared meals, snacks, sweets etc. and non-alcoholic beverages.
**Note:** Figures in parentheses indicate weights in CPI-Food and beverages.
**Sources:** NSO; and RBI staff estimates.

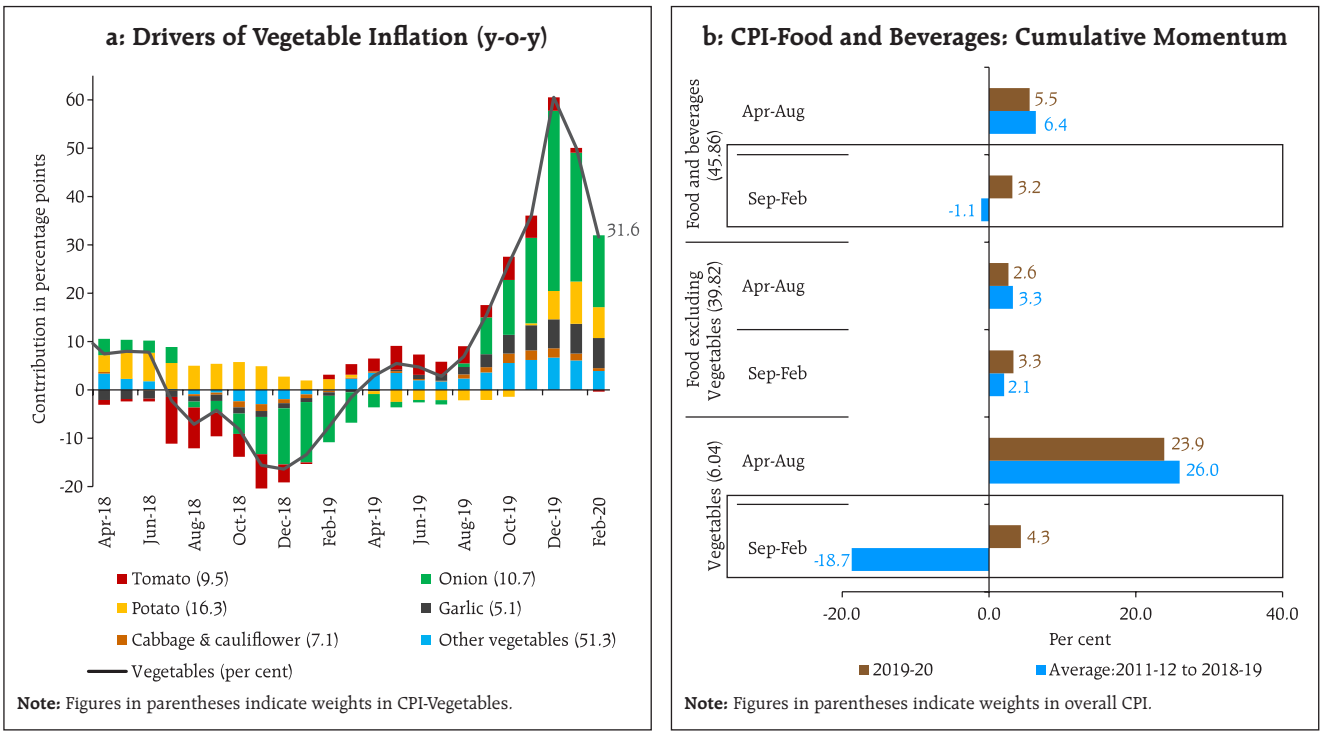
February 2020, with the delayed seasonal easing in vegetables prices.

Price increases in respect of cereals (weight of 9.7 per cent in the CPI and 21.1 per cent in the food and beverages group) were sharper in H2: 2019-20. Wheat prices were driven up by higher procurement at upwardly revised minimum support prices (MSPs) and significantly lower imports [(-)39 per cent lower during April 2019-January 2020]. Non-public distribution system (PDS) rice prices emerged out of 11 months of deflation in October 2019 and gained momentum thereafter in the wake of damage to *kharif* crops due to unseasonal rain in October and early November 2019. They started to moderate from February 2020 due to large carry forward stocks, better *rabi* harvest prospects and lower exports.

Inflation in prices of vegetables (weight of 6.0 per cent in the CPI and 13.2 per cent in the food and beverages group) rose to double digits from September 2019 and peaked at 60.5 per cent in December 2019, reflecting the impact of crop losses and supply disruptions due to excessive and unseasonal rains (Chart II.9a). With the arrival of the late *kharif* harvest, a delayed seasonal easing in vegetables prices started in January 2020. The year 2019-20 will likely be unique in vegetable price pressures, as the severe supply shock completely overshadowed the seasonal pattern of usual winter easing in prices of vegetables, particularly onions, tomatoes and potatoes which brings relief from the price build-up during the preceding months of the year (Chart II.9b).

In India, a societal intolerance to inflation in double digits stands out starkly including in political discourse. This is best exemplified in social responses to inflation in onion prices. In 2019-20, onion prices surged from September 2019, with inflation in this category spiking to 327 per cent in December 2019 and contributing a staggering 4.7 percentage points to

**Chart II.9: CPI Vegetables and CPI Food Price Momentum**




**Sources:** NSO; and RBI staff estimates.

food inflation and 2.1 percentage points to headline inflation. This unpleasant inflation surprise exposed the time lags and lack of adequate band-width of supply-side measures such as imposing minimum export price (MEP) of US$ 850 per tonnes, banning export of onions, and imposing stock holding limits on wholesale traders and retailers in September 2019, as well as announcing import of 1.2 lakh tonnes of onions from Turkey, Afghanistan and Egypt during November-December 2019. It was only with the arrival of late *kharif* crop from January 2020 that onion prices began moderating. The ferocious pace of onion price escalation and the extent of spillovers highlight the urgent need for supply side reforms (Box II.1).

As regards other inflation-sensitive vegetables, potato prices remained in deflation from April 2019 to October 2019, despite a pick-up in prices during this period, largely due to favourable base effects. The momentum of potato prices remained broadly positive during April 2019-January 2020, firmed up by crop loss and supply disruptions from excess/ unseasonal rains during October-November 2019 in Punjab, Uttar Pradesh and West Bengal, which was reflected in lower *mandi* arrivals. Anecdotal evidence also suggests that cyclone *bulbul* resulted in delayed sowing in West Bengal by around 20 days. As a result, potato price inflation rose to 62.9 per cent in January 2020, before moderating to 47.0 per cent in February 2020 due to fresh arrivals on the back of production turning out to be higher by 3.5 per cent in 2019-20. On the other hand, inflation in tomato prices moderated from its peak of 70 per cent in May 2019 and remained in high double digits during October-December 2019, reflecting untimely rains and associated supply disruptions. Beginning January 2020, tomato price inflation started moderating in the usual seasonal downturn and turned into deflation in February 2020 at (-)4.3 per cent.

## Box II.1: Onion Price Shock – Issues in Supply Management

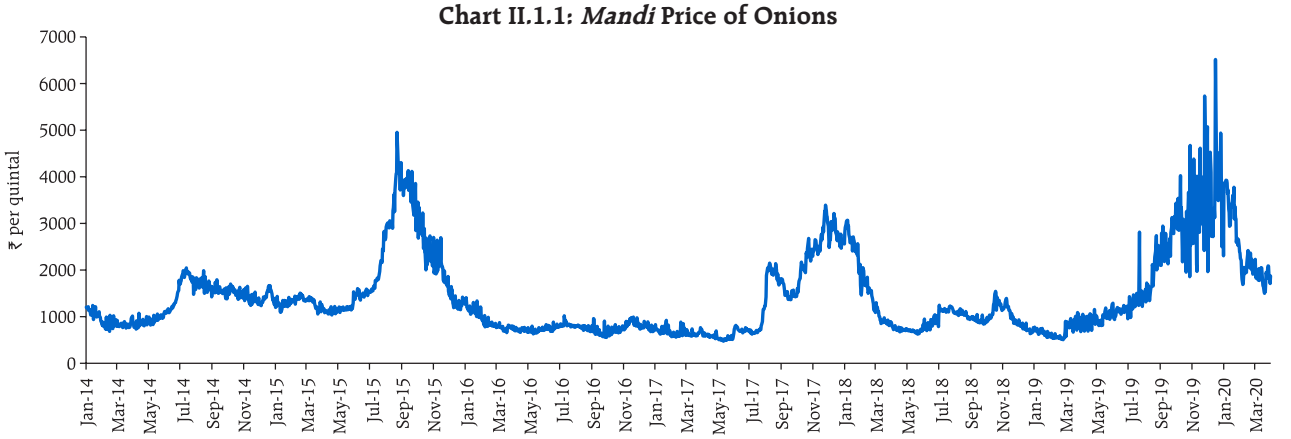
The onion price shock of 2019 is the largest in recent times in terms of magnitude and duration (Chart II.1.1).

In order to understand this, in many ways, unprecedented experience, the dynamics of the transmission of onion price shocks from various wholesale markets to all India average retail prices are evaluated with a vector autoregressive (VAR) model using daily data on price of onions from wholesale and retail markets with the following specification:

$$Y_t = c + A\,Y_{t-1} + e_t \quad \text{.....(1)}$$

where $Y_t$ represents the vector of daily prices of onion in the key wholesale markets, *viz.* Jodhpur, Kurnool, Nashik, Pune and Others (average of other markets), and the average all-India retail prices; $e_t$ represents the vector of supply and demand shocks – shocks corresponding to wholesale market prices represent the supply shocks and the shock corresponding to average retail market price represents the demand shock. The estimates are based on daily wholesale and retail price data provided by Department of Consumer Affairs (DCA), Government of India from August 5, 2019 to February 28, 2020.

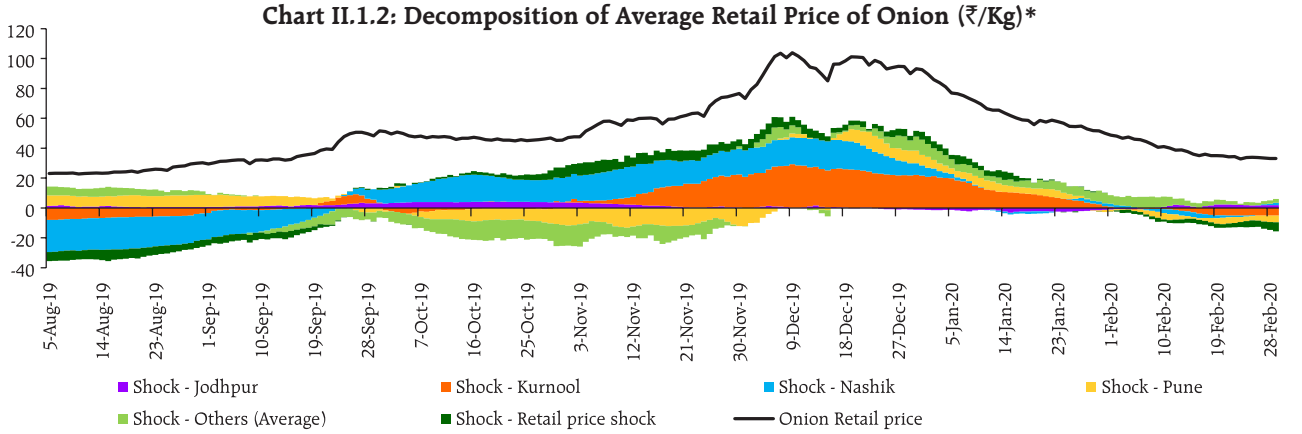
**Chart II.1.1: *Mandi* Price of Onions**




**Source**: Agmarknet.

The historical decomposition of average retail prices points to onion price shocks from the wholesale markets of Maharashtra in early-October and thereafter spreading to Karnataka by early-November and almost immediately getting transmitted to all-India retail prices, exacerbated by widening of price margins between wholesale and retail markets. By end-January, the onion price shocks completely reversed (Chart II.1.2).

**Chart II.1.2: Decomposition of Average Retail Price of Onion (₹/Kg)***




* Deviation from the deterministic trend.

**Sources:** RBI staff estimates based on data from DCA, Ministry of Consumer Affairs, Food and Public Distribution.

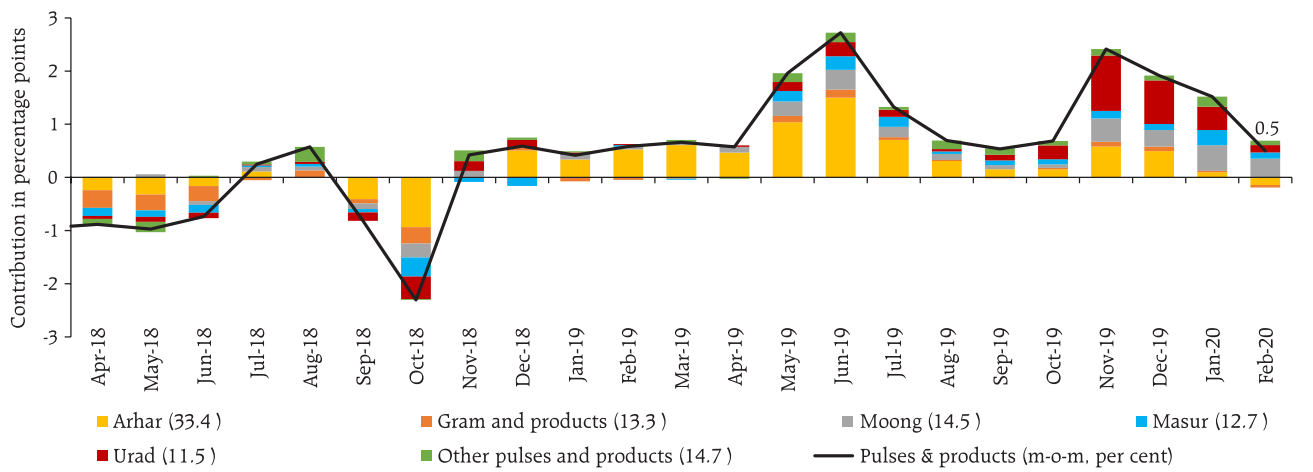
*(contd.)*

Given that onion production in India in any given year comfortably meets demand with additional produce available for exports, this analysis underscores the need for refining the supply management policies in managing the volatility in onion prices. The contours of more effective supply management for onions need to centre around the following: (1) making available better information systems to farmers on weather and the production outlook so as to enable them better plan onion production for the year ahead; (2) initiating reforms in the agricultural marketing systems to encourage direct sale of farm produce by farmers to consumers; (3) strengthening initiatives like e-NAM for better price discovery; (4) improving storage facilities for farmers so as to avoid distress sales; (5) creating an adequate buffer stock of *rabi* produce to help manage supply disruptions during leaner *kharif* and late-*kharif* seasons; and (6); encouraging food processing initiatives – dehydrating onions to convert into powder and paste forms that can be made available at a reasonable price. In fact, most of the onion price spikes in the past have occurred in *kharif* and late-*kharif* seasons, pointing to the key role of supply-side management policies in mitigating onion price spikes.

Prices of fruits (weight of 2.9 per cent in the CPI and 6.3 per cent within the food and beverages group) emerged out of 9 months of deflation in September 2019 to reach a level of 5.8 per cent in January 2020, primarily due to unfavourable base effects. By February 2020, fruit price inflation eased to 4.0 per cent. Banana prices have seen a sustained decline since November 2019. On the other hand, apple prices started a decline from August 2019 itself on the back of higher market arrivals consequent on production being higher by 18.0 per cent during 2019-20, although prices recovered somewhat since January 2020.

Prices of pulses (weight of 2.4 per cent in the CPI and 5.2 per cent in the food and beverages group) were another source of inflation pressures with inflation in this category picking up considerably to reach 16.6 per cent in February 2020 from (-) 0.8 per cent in April 2019. This reflected a decline in *kharif* pulses production – by 2.1 per cent as per second advance estimates (AE) for 2019-20 over final estimates for 2018-19 – and especially *urad* production (by 27.1 per cent) on account of lower *kharif* sowing and unseasonal rains-led crop damages (Chart II.10). Even though imports were higher by 25 per cent during

**Chart II.10: Drivers of CPI-Pulses and Products (m-o-m)**




**Note:** Figures in parentheses indicate weights in CPI-Pulses and products.
**Sources:** NSO; and RBI staff estimates.

April 2019-January 2020 y-o-y, they failed to mitigate the rising price pressures in pulses.

Besides vegetables and pulses, prices of animal-based protein-rich items were another pressure point, contributing 20.4 per cent to overall food inflation in 2019-20. Inflation in the case of meat and fish remained elevated during April 2019-January 2020 and reached 10.6 per cent in January 2020 (highest in last 72 months). The prices of meat and fish increased significantly during the year (except during the lean season of August-October 2019) reflecting higher feed prices (especially, maize and soybean) on account of unseasonal rains, which accentuated seasonal price pressures. Concomitantly, egg price inflation also inched up to 10.5 per cent in January 2020 from 1.9 per cent in April 2019, but softened to 7.3 per cent in February 2020. Prices of both chicken and egg contracted sharply in February 2020 on account of a fall in consumption due to COVID-19 scare.

Prices of milk and milk products (weight of 6.6 per cent in the CPI and 14.4 per cent in the food and beverages group) also contributed to higher food inflation. Co-operatives like *Amul* and *Mother Dairy* raised retail milk prices for the second time (first round in May 2019) in December 2019 in the range of ₹ 2-3 per litre due to increased procurement prices. Many state milk co-operatives also announced increases in prices, which kept the momentum of milk and its products at an elevated level during the year. Procurement prices were raised in response to the increase in the cost of production. Additionally, higher global prices for skimmed milk products also impacted domestic milk prices positively. Milk inflation hardened to a 56-month high of 6.0 per cent in February 2020.

Sugar and confectionery prices (weight of 1.4 per cent in the CPI and 3.0 per cent in the food and beverages group) emerged out of four months of continuous deflation in October 2019, partly due to adverse base effects. Despite domestic and global production shortfalls, higher than expected domestic availability due to last year's carry forward stock has helped keep domestic price pressures under check.

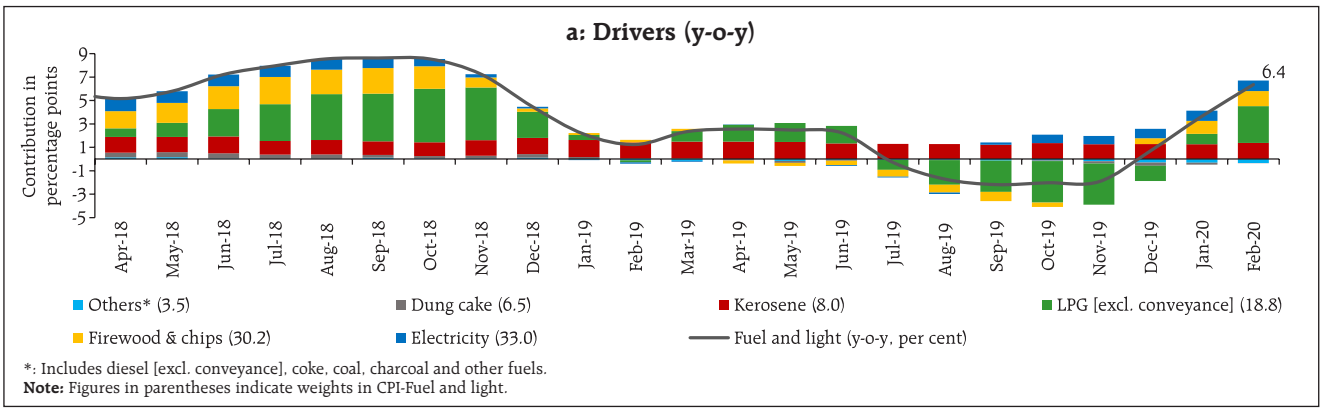
Inflation in prices of edible oils and fats also edged up during the year from 0.7 per cent in April 2019 to 7.6 per cent in February 2020. Higher edible oils inflation emerged from a combination of rising international prices, lower domestic production of *rabi* oilseeds and adverse base effects. Higher milk prices also impacted the prices of ghee and butter.

Price pressures picked up considerably in spices leading to a gradual hardening of inflation in this group to 8.8 per cent in February 2020 from 0.8 per cent in April 2019 due to overall lower production.

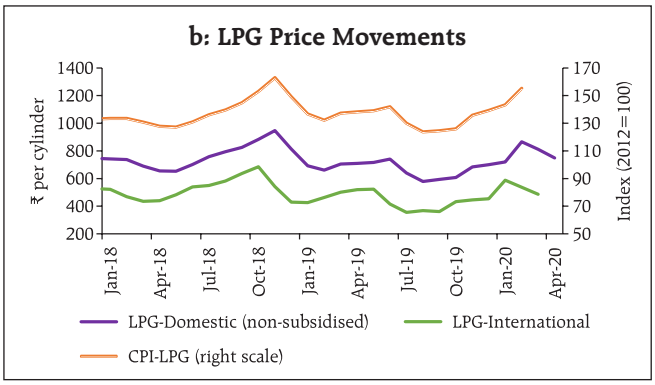
*CPI Fuel Group*

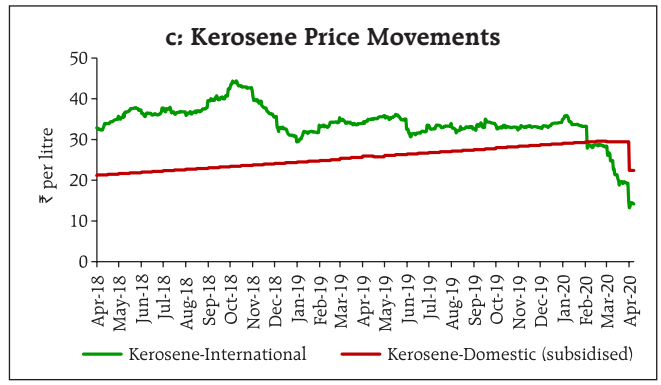
Prices of the CPI fuel group, which sank into deflation in July at (-)0.3 per cent, continued in negative territory till November 2019 as prices of key fuel items such as liquefied petroleum gas (LPG), firewood and chips and dung cake moved into deep deflation. The fuel group moved out of deflation in December registering a sharp rise thereafter, taking inflation in this category to 6.4 per cent by February. A pick-up in prices of electricity, LPG and firewood and chips and strong adverse base effects contributed to this upsurge (Chart II.11a). International propane and butane prices, which were declining through H1:2019-20, registered sustained price increases during October 2019-January 2020, accentuated by supply disruptions due to geopolitical tensions. These pressures were also transmitted to domestic LPG prices with a lag in February 2020 (Chart II.11b). Administered kerosene price inflation remained sticky and elevated reflecting calibrated price increases by oil marketing companies (OMCs) to phase out the fuel subsidy. By early February, however, administered prices were above market rates, particularly due to the sudden plunge in international prices. This led to a reduction in kerosene prices in the PDS during March-April (Chart II.11c).

**Chart II.11: CPI Fuel Group Inflation**




*: Includes diesel [excl. conveyance], coke, coal, charcoal and other fuels.
**Note:** Figures in parentheses indicate weights in CPI-Fuel and light.



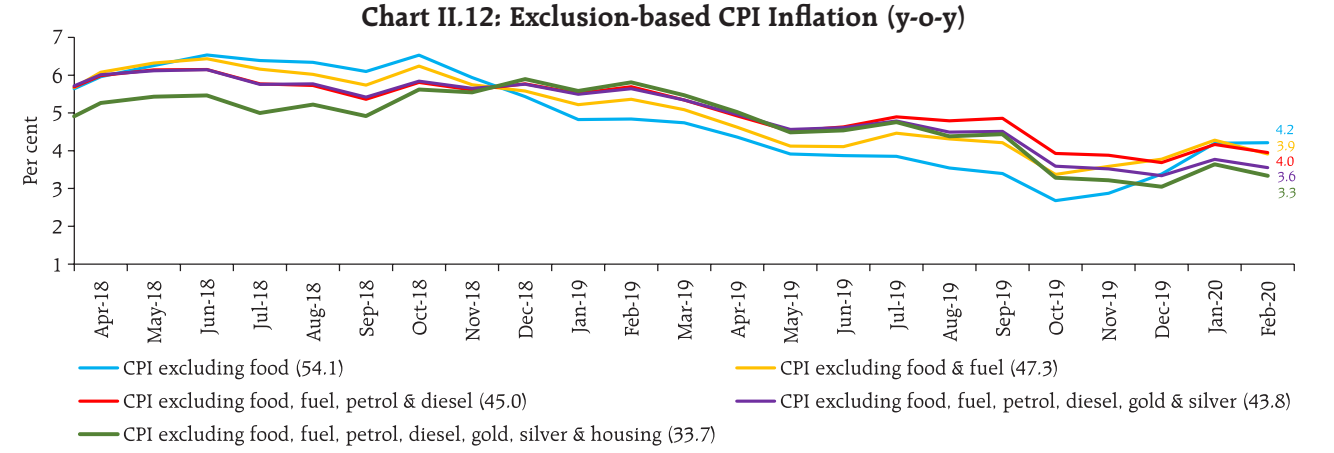




**Notes:** (1) The international price for LPG is based on spot prices for Saudi Butane and Propane, combined in the ratio of 60:40 respectively. These international product prices are indicative import prices. Further details are available at www.ppac.org.in.
(2) The indicative international price for Kerosene is the Singapore Jet Kero spot price.
(3) The domestic prices of LPG and Kerosene represent the average prices at four metros from Indian Oil Corporation Limited (IOCL).
**Sources:** (i) For Chart II.11a, NSO and RBI staff estimates.
(ii) For Chart II.11b & II.11c, Bloomberg; Indian Oil Corporation Limited (IOCL); and NSO.

*CPI excluding Food and Fuel*

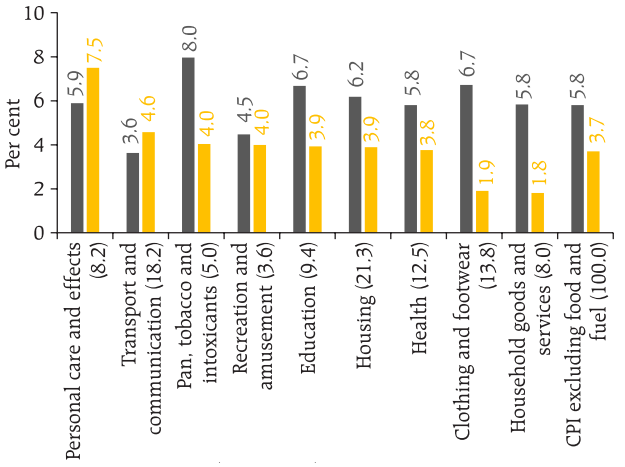
CPI inflation excluding food and fuel or core inflation picked up sequentially from 3.4 per cent in October 2019 to 4.3 per cent in January 2020, before registering some moderation in February 2020 (Chart II.12). In terms of components, the price

**Chart II.12: Exclusion-based CPI Inflation (y-o-y)**




**Notes:** (1) Figures in parentheses indicate weights in CPI. (2) Dervided as residual from headline CPI.
**Sources:** NSO; and RBI staff estimates.

**Chart II.13: CPI excluding Food and Fuel – Financial Year Price Buildup (February over March)**



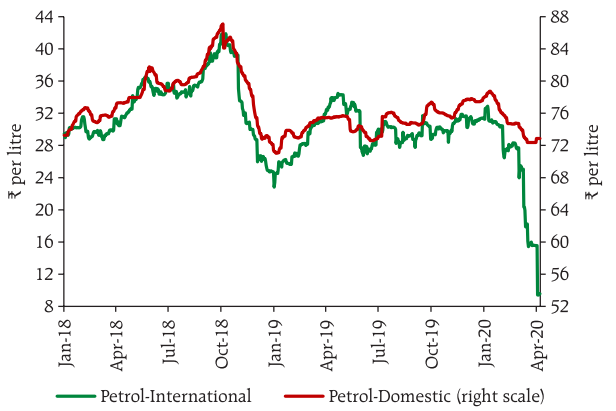

**Note:** Figures in parentheses indicate weights in CPI excluding food and fuel.
**Sources:** NSO; and RBI staff estimates.

build-up during 2019-20 was much lower than historical averages, barring for the transport and communication, and personal care and effects sub-groups (Chart II.13).

Volatile movements in international crude oil prices and the consequent increase in domestic pump prices mainly contributed to the upturn in CPI excluding food and fuel inflation till January 2020 and the subsequent moderation in February. CPI petrol and diesel, which was in deflation for 11 months till November 2019, saw a sharp uptick in inflation during December 2019-January 2020 before moderating in February. Volatility in crude oil prices in H2:2019-20 emanated from a series of events starting with rising geo-political tensions in early September, followed by production cuts by the Organization of the Petroleum Exporting Countries (OPEC)-plus in early December and renewed geo-political tensions in early January. Crude oil prices moderated sharply from mid-January on easing of geo-political tensions, price war between OPEC and Russia, and fears of a global recession due to COVID-19. While the pass-through of collapse in international crude oil prices to domestic pump prices is still unfolding, its extent has been tempered by increases in taxes on petrol and diesel (Chart II.14a). Excise duties for petrol and diesel were increased by ₹ 3 per litre each on March 14, 2020 as international crude oil prices tumbled below US$ 40 per barrel. With this increase, the total excise duty on petrol and diesel works out to ₹ 22.98 per litre and ₹ 18.83 per litre, respectively. The divergence between international and domestic pump prices has now widened to highest levels seen in the recent period (Chart II.14b).

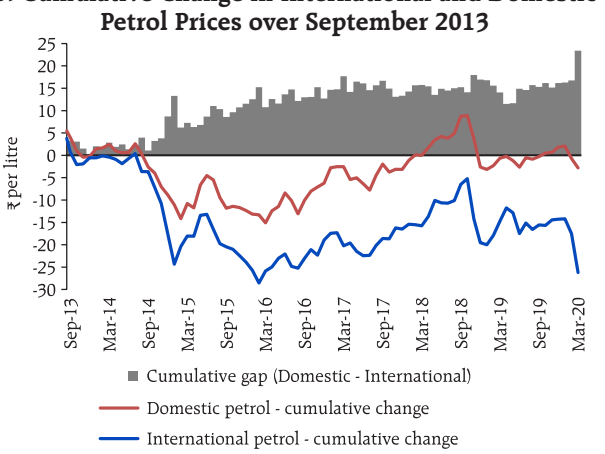
**Chart II.14: Movements in International and Domestic Petroleum Product Prices**

**a: Petrol**




**Note:** International petrol prices denote the spot price of Singapore gasoline. Domestic prices represent the average pump prices at four metros from Indian Oil Corporation Limited (IOCL).

**b: Cumulative Change in International and Domestic Petrol Prices over September 2013**




**Note:** September 2013 represents the peak level for petrol prices in India.

**Sources:** Bloomberg; IOCL; and RBI staff estimates.

CPI inflation excluding food, fuel, petrol and diesel troughed in December, before registering a sharp increase in Q4 so far (January-February). CPI inflation excluding food, fuel, petrol, diesel, gold, silver – which further excludes the volatile gold and silver price effects – also saw similar movements (Chart II.12).

A break-up of CPI excluding food, fuel, petrol and diesel into its good and services components, shows the impact of cost-push factors which reversed a sharp moderation in inflation in this category and hardened it during December 2019- January 2020 (Chart II.15).

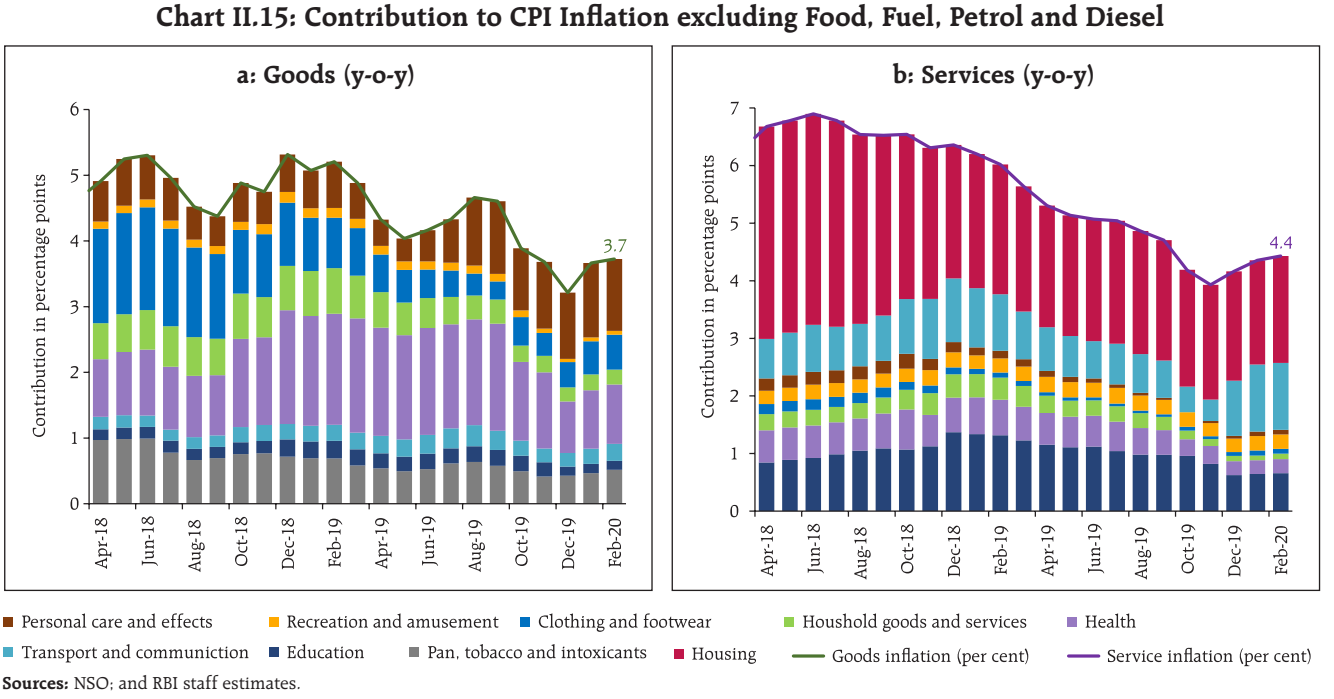
Core goods prices inflation moderated sequentially till December 2019, caused by a broad-based fall in inflation across goods items, particularly health inflation due to large and favourable base effects. Goods inflation has been ticking up since January due to firming up of prices of clothing, pan, tobacco, medicines in the health sub-group following an increase in administered prices of essential medicines and automobiles in the transport and communication sub-group due to a rise in input costs and a switch-over in emission norms to BS-VI (Chart II.15a).

Core services inflation moderated sharply during October-November 2019 due to a fall in inflation in domestic maid/cook and other household services; tuition fees in education services; house rentals; transport fares and mobile telephone charges under transportation and communication services. Mobile telephone charges have, however, increased (by close to 12 per cent between November 2019 and February 2020), following the increase in tariffs by major private mobile operators in early December. Bus fares and administered railway fares also increased during this period. As a result, transport and communication services inflation registered significant increases, pushing up overall services inflation. Reflecting subdued demand conditions, housing inflation softened throughout H2:2019-20. Education services inflation also remained soft during December 2019-February 2020 (Chart II.15b).

*Other Measures of Inflation*

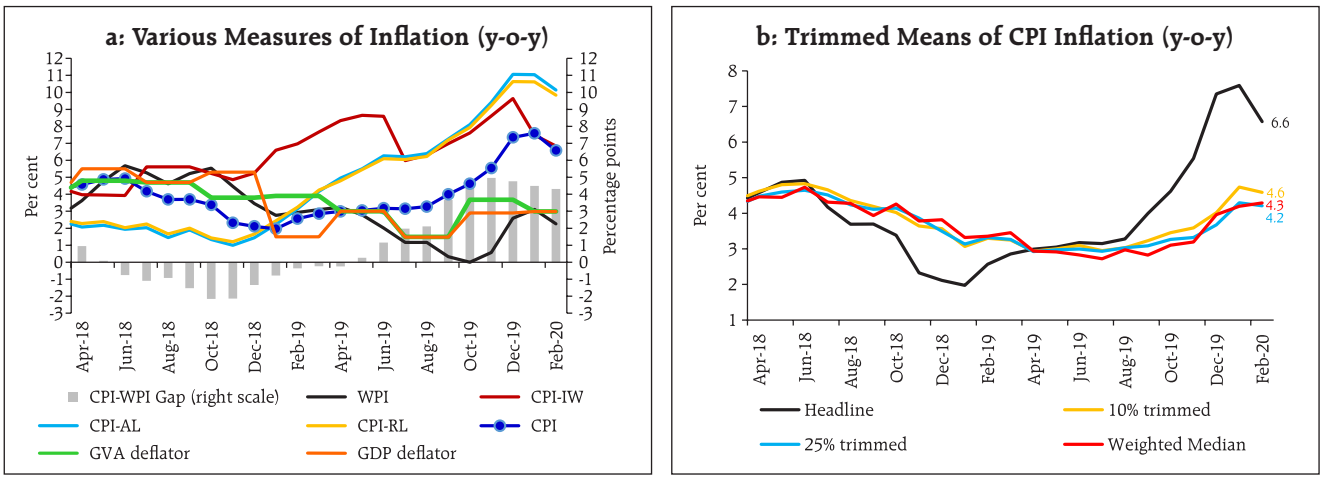
Inflation in sectoral CPIs, *i.e.*, for industrial workers (CPI-IW), agricultural labourers (CPI-AL) and rural labourers (CPI-RL), increased sharply during

**Chart II.15: Contribution to CPI Inflation excluding Food, Fuel, Petrol and Diesel**




**Sources:** NSO; and RBI staff estimates.

**Chart II.16: Alternative Inflation Measures (y-o-y)**




**Sources:** NSO; Labour Bureau; Ministry of Commerce and Industry; and RBI staff estimates.

August-December 2019, driven up primarily by the unseasonal rise in food prices. The pace of increase, however, softened in January-February 2020, on the back of cooling of prices in the food group. Inflation in food and fuel components of CPI-AL and CPI-RL was higher than that in headline CPI. A larger share of food nudged overall inflation measured by these indices to double digit levels during December 2019-February 2020.

In the case of CPI-IW, with the complete waning of the house rent allowance impact of the seventh central pay commission (CPC) after December 2019, inflation registered a sharp fall, closing the gap with headline CPI. Notwithstanding this ebbing, the latest increase in momentum in housing index in CPI-IW – which is revised once in six months, in January and July every year – contributed the largest upward push to CPI-IW in January 2020 (with a m-o-m increase of 3.7 percentage points). CPI-IW inflation decreased further in February 2020 due to sharp correction in food prices by 1.7 percentage points.

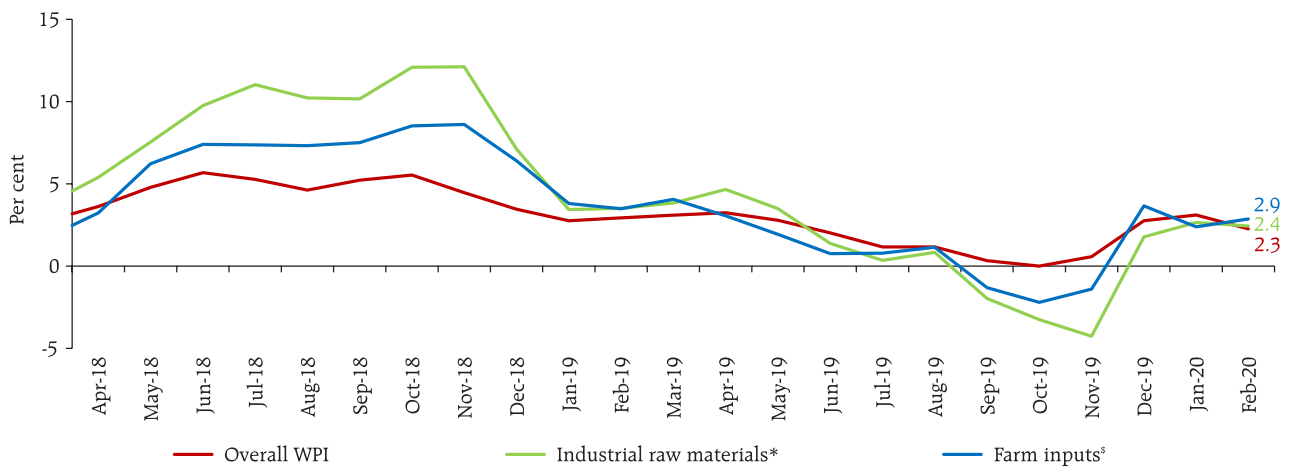
Inflation in terms of the wholesale price index (WPI) fell during August-October 2019 in sharp contrast to the sectoral CPIs, due to a decline in prices of non-food manufactured products on account of the softening of global commodity prices. Subsequently, WPI inflation edged up in line with sectoral CPIs as wholesale food prices rose in December 2019-January 2020 before moderating again in February with easing of food prices. Gross Domestic Product (GDP) and Gross Value Added (GVA) deflators picked up in Q3:2019-20 after reaching a record low in Q2:2019-20, indicating a clear divergence with CPI and a broad alignment with WPI (Chart II.16a).

Trimmed mean measures of inflation, obtained by statistically removing outliers and eliminating positive and negative skew, provide a measure of underlying inflation movements. Exclusion based measures of CPI also capture persistent trends in inflation by removing components that are considered idiosyncratic. Over the last six months, both trimmed means and exclusion-based measures, have firmed up (Charts II.12 and II.16b).

### II.3 Costs

Underlying cost conditions have largely been in sync with inflation in terms of the WPI (Chart II.17). Inflation in terms of farm inputs and industrial raw material prices (extracted from WPI) moderated significantly after April 2019 and remained in negative territory during September-November 2019, before

**Chart II.17: Farm and Non-farm Input Cost Inflation (y-o-y)**




*: Comprising primary non-food articles, minerals, coal, aviation turbine fuel, high speed diesel, naphtha, bitumen, furnace oil, lube oil, petroleum coke, electricity, cotton yarn and paper & pulp from WPI.
$: Comprising high speed diesel, fodder, electricity, fertilisers, pesticides and agricultural & forestry machinery from WPI.
**Sources:** Ministry of Commerce and Industry; and RBI staff estimates.

registering a pick up during December 2019-February 2020. The pick-up during December 2019-January 2020 partly reflected recovery in prices of global crude oil and petrochemicals as well as adverse base effects. In addition, cost of minerals and non-food articles also influenced the recent price dynamics of non-farm input costs.

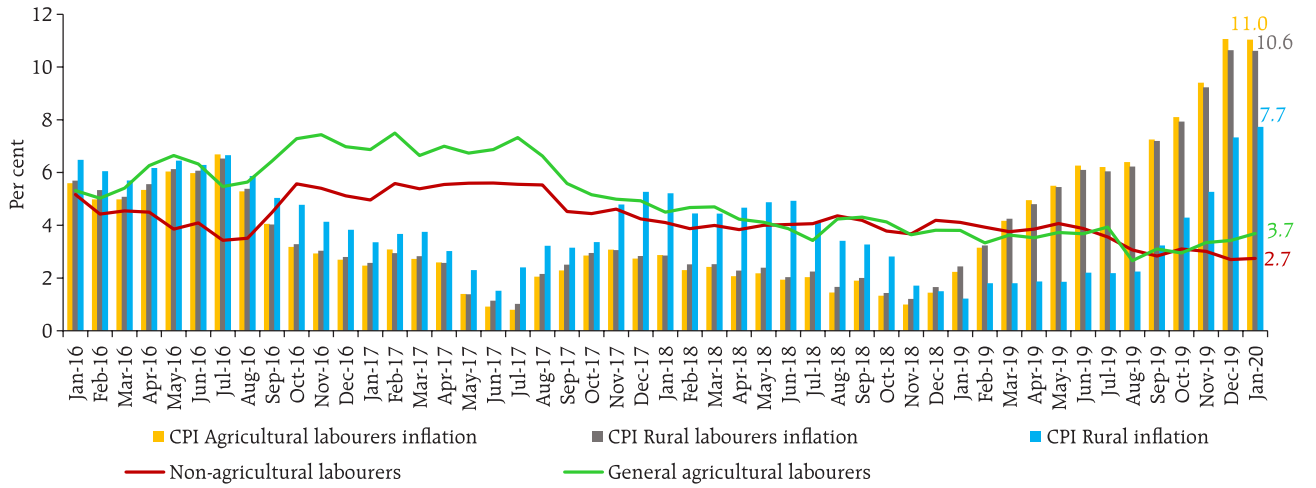
Among other industrial raw materials, domestic coal inflation picked up to 2.4 per cent during October 2019-February 2020 from 0.4 per cent in April 2019 in line with the increase in international coal prices. Prices of paper and paper products remained in deflation during July 2019-February 2020 due to lower raw material cost, including that of pulp. In the case of fibres, deflation persisted during August 2019-February 2020, following easing in prices of raw cotton and coir fibre, which also reflected in the contraction in cotton yarn prices during the same period.

As regards farm sector inputs, inflation hardened in the case of fodder due to unseasonal rains, while some easing was observed in the case of fertilisers and pesticides reflecting generally subdued momentum in international fertiliser prices. Prices of electricity, which carry a high weight in both industrial and farm inputs, recorded a modest increase during the year, reflecting weak demand conditions. Inflation in terms of agricultural machinery and implements costs has also softened gradually during the current financial year.

Growth in nominal rural wages, both for agricultural and non-agricultural labourers, remained subdued averaging around 3.4 per cent and 3.3 per cent, respectively, during 2019-20 so far (up to January 2020) mainly reflecting continued slowdown in the construction sector (Chart II.18). With a sharp rise in rural retail inflation, however, real rural wage growth has been negative as derived from CPI-AL and CPI-RL measures since March 2019 and CPI-rural inflation since September 2019.

Growth in organised sector staff costs showed divergent movements for services and manufacturing firms. While staff cost growth of services firms increased in Q3:2019-20 over the previous quarter, it declined for manufacturing firms. Unit labour costs (ratio of staff cost to value of production in percentage terms) for companies in the manufacturing sector increased

**Chart II.18: Wage Growth and Inflation in Rural Areas (y-o-y)**

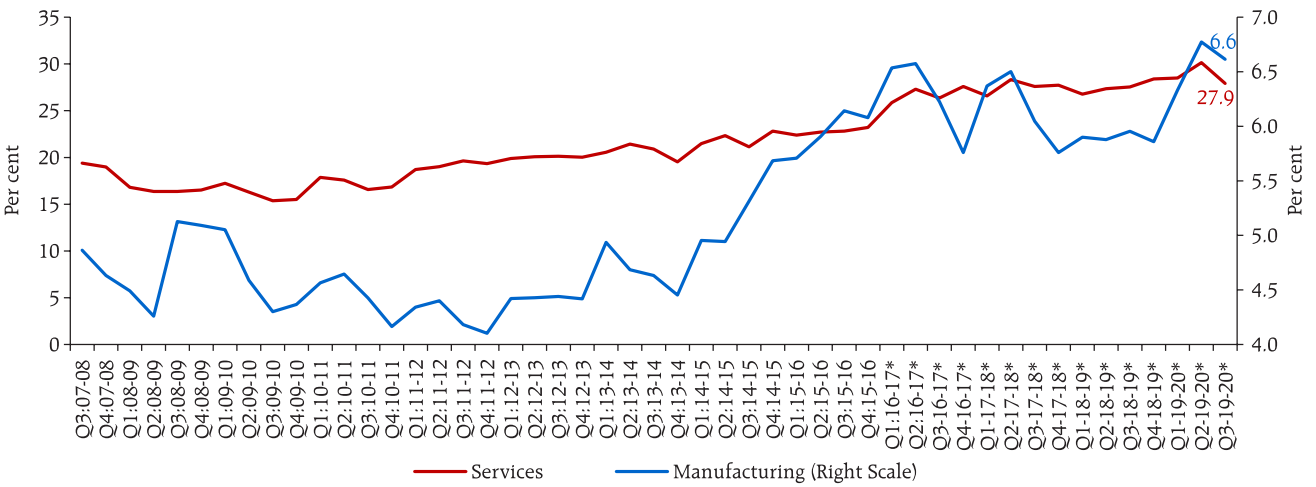



**Sources:** NSO; Labour Bureau; and RBI staff estimates.

sequentially from 5.9 per cent in Q4:2018-19 to 6.3 per cent in Q1:2019-20 and further to 6.8 per cent in Q2 due to sequential decline in the value of production, alongside an increase in staff cost. In Q3:2019-20, unit labour cost for manufacturing moderated marginally. On the other hand, higher quarterly growth in value of production for firms in the services sector led to a fall of 220 basis points in unit labour cost from 30.1 per cent in Q2:2019-20 to 27.9 per cent in Q3 even as staff cost increased somewhat (Chart II.19).

Manufacturing firms participating in the Reserve Bank's industrial outlook survey reported muted cost pressures in Q3:2019-20 and Q4. This reflected softening of inflation in farm and industrial raw materials in Q3 and weak metal and other commodity price pressures in Q4. A decline in cost of finance

**Chart II.19: Labour Cost in Manufacturing and Services (Staff Cost Per Unit Value of Production)**




*: Listed companies with net worth more than ₹5 billion were required to adopt the new accounting standards, 'Ind-AS', by Q1:2016-17 and rest of the listed companies by Q1:2017-18, as mandated by the Ministry of Corporate Affairs. The impact of the transition appears muted at the aggregate level in terms of growth rates, although the same may not hold for the ratios. The data may be accordingly read with appropriate caveats.

**Sources:** Capitaline database; and RBI staff estimates.

was also reported by the companies polled in Q3 and Q4. Cost pressures on account of salary outgoes also fell in Q3 and are expected to have remained weak in Q4. Weak demand conditions and muted input price pressures kept selling prices soft, with expectations showing only a muted uptick in Q4. While producers' price expectations were subdued, inflation expectations of households, as measured in the Reserve Bank survey, softened.

Manufacturing firms polled for the purchasing managers' index (PMI) reported modest increases in input prices and stable output prices in Q4. Input prices, however, firmed up markedly in case of the PMI services firms in Q4 (up to February) driven by higher food, labour and material costs before slowing sharply in March 2020 amid lower food and fuel prices, and reduced demand. Prices charged by services firms remained broadly range bound in Q3 and Q4 but softened in March 2020 with some firms reducing their fees due to weak demand conditions.

**II.4 Conclusion**

The inflation landscape changed dramatically during H2:2019-20 primarily on account of wide swings in onion prices. In Q4:2019-20, before the intensification of COVID-19, forward looking surveys were already indicating weak consumer confidence and low pricing power of firms. Since March 2020 the inflation outlook has become highly uncertain due to the COVID-19 outbreak turning into a pandemic. Crude oil prices have collapsed to lows not seen since early 2000s. With several major economies in lockdown mode, demand conditions may weaken sharply. Accordingly, countries across the world are bracing up for deflationary forces to take hold. India may not be immune to these extreme downside pressures imparted by the pandemic. With the entire country in lockdown, the NSO would face considerable challenges in compilation and measurement of consumer prices.

# *III. Demand and Output*

*The deterioration in aggregate demand conditions in 2019-20, was exacerbated by contraction in investment, and moderation in government expenditure in H2. On the supply side, agriculture and allied activities accelerated, buoyed by the late surge in south-west monsoon rainfall and bountiful north-east monsoon precipitation. However, industrial growth decelerated, led by a slowdown in manufacturing activity. Services sector activity moderated, pulled down by a slowdown in construction; trade, hotels, transport and communication; and public administration, defence and other services.*

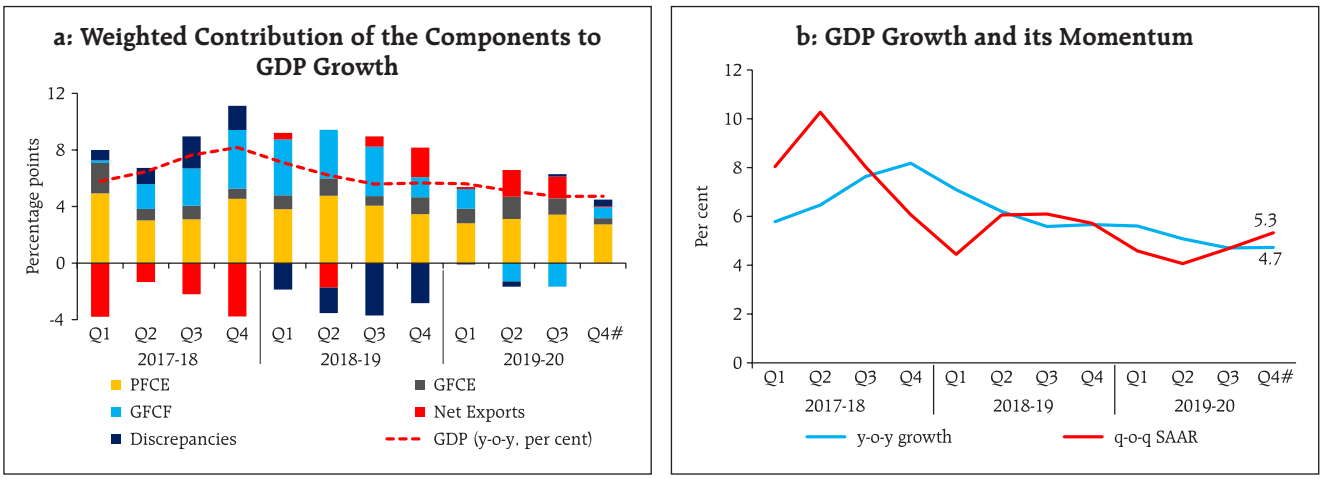
The February 2020 data release by the National Statistical Office (NSO) reveals that a sequential slowdown set in upon the Indian economy from Q1:2018-19. Over H2:2018-19 and H1:2019-20, real GDP growth lost momentum further, averaging 5.5 per cent. The sub-5 per cent reading for Q3:2019-20 (4.7 per cent) has caused heightened uncertainty about the outlook. The oppressive force of the novel coronavirus (COVID-19) on weak or moderating high frequency indicators of activity, barring agriculture, indicates that the implicit real GDP growth for Q4:2019-20 in the NSO's data release could be undershot by a fair margin. In fact, the widening incidence of COVID-19 in March 2020 may produce downward pulls to Q4 GDP.

Underlying this marked downturn relative to recent experience is the contraction in gross fixed capital formation (GFCF) from Q2:2019-20. Consumption demand accelerated and sustained overall demand, driven mainly by a sharp pick up in government final consumption expenditure (GFCE). Net exports also contributed positively to aggregate demand, but essentially because the contraction in imports outpaced the decline in exports. On the supply side, agriculture and allied activities imparted momentum to gross value added (GVA) in Q2 and Q3, buoyed by increases in *kharif* and horticulture production. The industrial sector remained moribund, bound down by weak demand conditions, and hence weak pricing power. In the services sector, activity has been weakening through H2:2019-20 with high frequency indicators for January and February 2020 either moderating or declining, barring PMI, cement production and railway freight traffic. Public administration, defence and other services (PADO) remained robust in Q2 and Q3. However, during January-February 2020, centre's revenue expenditure excluding interest payments and subsidies grew marginally. Beginning March, the lockdown in the wake of the outbreak of COVID-19 has choked manufacturing activities. Anecdotal evidence suggests that in the manufacturing sector, dislocations of labour adversely impacted automobiles, electronic goods and appliances, and apparel. Services such as trade, tourism, airlines, the hospitality sector and construction have been hit hard.

### III.1 Aggregate Demand

The deterioration in aggregate demand conditions in 2019-20, was exacerbated by contraction (1.3 per cent) in gross fixed capital formation, and moderation in government expenditure in H2. Although private consumption held up in sequential terms, it was slower in H2:2019-20 on a y-o-y basis (Chart III.1a and Table III.1). Overall, the drag on GDP growth in H2:2019-20 can be decoded to unfavourable base effects, since momentum – measured by the q-o-q seasonally adjusted annualised growth rate (SAAR) - accelerated in H2 (Chart III.1b). With COVID-19 having taken a grievous toll in February and particularly in March, it is unlikely that this momentum was sustained as the year closed. Accordingly, the NSO's estimate of real GDP growth for the year as a whole at 5.0 per cent in 2019-20, which itself was down from 6.1 per cent in 2018-19, may be at risk.

**Chart III.1: Seasonally Adjusted GDP Growth and its Constituents**




**Notes:** 1. # - Implicit growth. 2. SAAR – Seasonally adjusted annualised rate.
**Sources:** National Statistical Office (NSO); and RBI staff estimates.

In the absence of hard data on underlying activity from traditional sources, availability of high frequency information in large volumes, either structured or unstructured, varying in form and content, has opened up avenues for extracting meaningful signals on the state of the economy. A sentiment index (SI), prepared on the basis of daily news feed in print media is able to track economic activity relatively well in the Indian context. The SI indicates weak activity in Q4:2019-20 (Box III.1).

**Table III.1: Real GDP Growth**

(y-o-y, per cent)

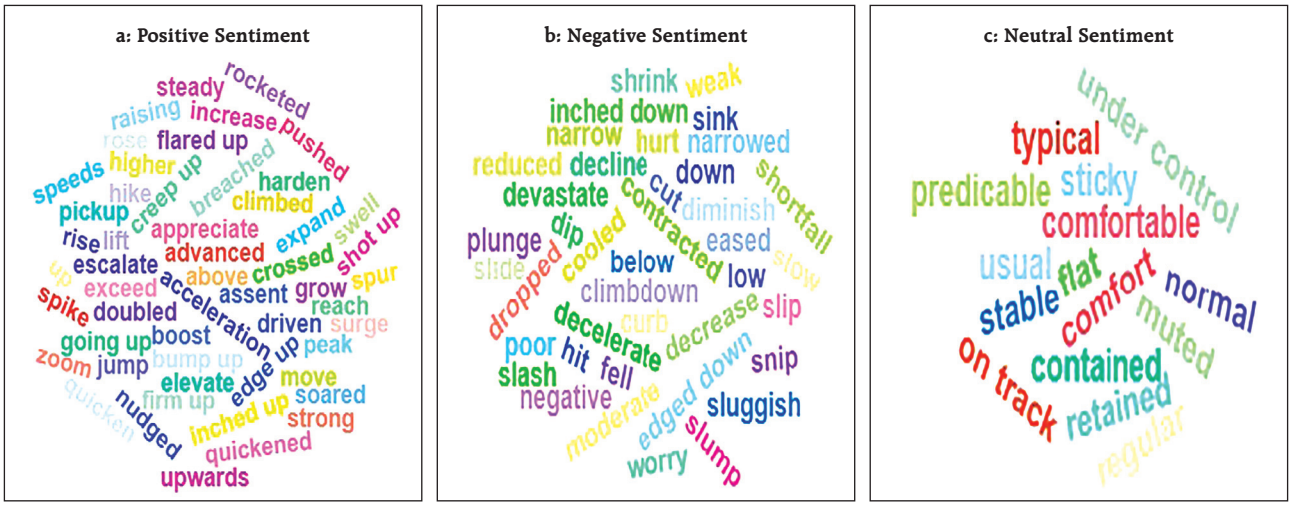
| Item | 2018-19 (FRE) | 2019-20 (SAE) | Weighted Contribution* | | 2018-19 (FRE) | | | | 2019-20 (SAE) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2018-19 | 2019-20 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4# |
| Private final consumption expenditure | 7.2 | 5.3 | 4.0 | 3.0 | 6.7 | 8.8 | 7.0 | 6.2 | 5.0 | 5.6 | 5.9 | 4.9 |
| Government final consumption expenditure | 10.1 | 9.8 | 1.0 | 1.0 | 8.5 | 10.8 | 7.0 | 14.4 | 8.8 | 13.2 | 11.8 | 4.9 |
| Gross fixed capital formation | 9.8 | -0.6 | 3.0 | -0.2 | 12.9 | 11.5 | 11.4 | 4.4 | 4.3 | -4.1 | -5.2 | 2.5 |
| Exports | 12.3 | -1.9 | 2.4 | -0.4 | 9.5 | 12.5 | 15.8 | 11.6 | 3.2 | -2.1 | -5.5 | -2.8 |
| Imports | 8.6 | -5.5 | 2.0 | -1.3 | 5.9 | 18.7 | 10.0 | 0.8 | 2.1 | -9.3 | -11.2 | -3.0 |
| **GDP at market prices** | **6.1** | **5.0** | **6.1** | **5.0** | **7.1** | **6.2** | **5.6** | **5.7** | **5.6** | **5.1** | **4.7** | **4.7** |

FRE: First Revised Estimates; SAE: Second Advance Estimates; #: Implicit growth.
*: Component-wise contributions to growth do not add up to GDP growth in the table because change in stocks, valuables and discrepancies are not included.
**Source**: NSO.

## Box: III.1: Media Sentiments on Economic Growth – A Machine Learning Approach

Big data tools and machine learning (ML) techniques such as natural language processing (NLP) and text mining have facilitated extraction and construction of numerical indicators out of news text (Shapiro *et. al.* 2018). The broad approach is to extract sentiment from daily news items pertaining to variables of interest (Godbole *et. al.* 2007). Each news item is classified into one of three sentiment classes, *viz.*, positive, negative and neutral, based on the words present in the news. News items with no sentiments or those that are unrelated are discarded. A sentiment class explicitly represents words with similar semantic orientation as illustrated below (Chart III.1.1).

**Chart III.1.1: Semantic Orientation of Words**




**Source:** RBI staff estimates.

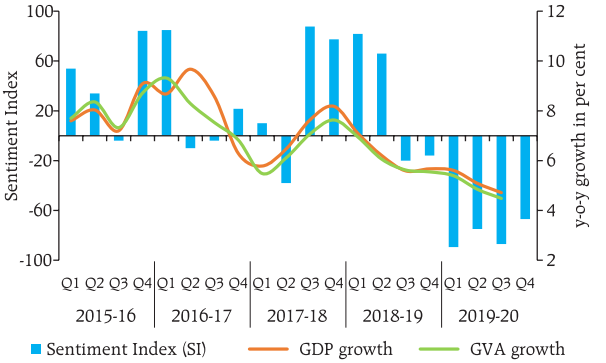
Relevant news items under positive/ negative/ neutral sentiment class are consolidated and summarised into a Sentiment Index (SI)[1], as defined below:

*SI = news items with "positive" sentiment (%) – news items with "negative" sentiment (%)*

For this analysis, daily news feeds for the period April 2015 to March 2020 have been sourced from media intelligence firm (Meltwater) and aggregated to derive a quarterly Sentiment Index to track upturns and downturns in year-on-year (y-o-y) growth in real GDP and GVA (Chart III.1.2).

The association between sentiment index and economic activity (GDP or GVA growth) is measured in terms of correlation. Directional precision is measured in terms of a Sign Success Ratio (SSR)[2] which is the proportion of time periods when the direction indicated by SI matches the directional change in GDP/GVA growth and is defined as follows:

**Chart III.1.2: Sentiment *vis-a-vis* GDP and GVA Growth**




**Sources:** NSO; and RBI staff estimates.

(a) Denote $IG_t$ as the variable representing whether the year on year growth for the quarter $t$ has increased/ decreased/remained same sequentially and defined by

*(contd.)*

[1] The range of SI is -100 to 100. While a positive (negative) value of SI indicates optimism/ improvement (pessimism/deterioration), a zero value is associated with neutral sentiment.

[2] A high value of SSR, which is close to 100 in a scale of 0 to 100, indicates that media sentiment is able to gauge directional changes in the macroeconomic variables of interest (Buono *et. al.* 2018).

$$IG_t = \begin{cases} 1, & \text{if } G_t > G_{t-1} \\ 2, & \text{if } G_t < G_{t-1} \\ 3, & \text{if } G_t = G_{t-1} \end{cases} \quad \ldots\ldots (1)$$

where, $G_t$ is Y-o-Y growth in GDP or GVA for quarter t.

(b) Denote $MS_t$ as the variable indicating whether the sentiment index for the quarter $t$ is positive/negative/neutral and defined by

$$MS_t = \begin{cases} 1, & \text{if } SI_t > 0 \\ 2, & \text{if } SI_t < 0 \\ 3, & \text{if } SI_t = 0 \end{cases} \quad \ldots\ldots (2)$$

(c) Denote $I_t$ as an indicator function for the quarter $t$ capturing whether the sequential direction of GDP/GVA growth and the sentiment index of the quarter are directionally matching or not. It is defined by

$$I_j = \begin{cases} 1, \text{if } MS_t = IG_t \\ 0, \text{otherwise} \end{cases} \quad \ldots\ldots (3)$$

Under the above settings, the sign success ratio ($SSR$) is defined as

$$SSR = \frac{\sum_{j=1}^{n} I_j}{n} * 100 \quad \ldots\ldots (4)$$

where n is the total number of quarters under consideration (during Q1: 2015-16 to Q3:2019-20).

The Sentiment index is found to be strongly correlated with both GDP and GVA growth and it is able to gauge the directional change satisfactorily (Table III.1.1). Sentiment index reveals subdued economic activities for the fourth quarter of 2019-20.

**Table III.1.1: Statistical Association between SI and GDP/GVA Growth**

| | GDP growth (Y-o-Y) | GVA growth (Y-o-Y) |
|---|---|---|
| Correlation with SI | 0.62* | 0.71* |
| SSR of SI (%) | 58 | 74 |

*Statistically significant at 5 per cent level of significance
**Sources:** NSO; and RBI staff estimates.

Unconventional big data sources, such as news in online print media that are available on a high frequency basis complement survey-based gauges of the pulse of the economy. However, machine learning techniques are usually difficult to comprehend with macroeconomic interlinkages and are generally treated as additional monitoring techniques.

**References:**

Buono, D., Kapetanios, G., Marcellino, M., Mazzi, G., and Papailias, F. (2018), "Big Data Econometrics: Now Casting and Early Estimates", Milan, Bocconi University, Baffi-Carefin Centre working paper 82.

Godbole, N., Srinvasaiah, M., and Skiena, S. (2007), "Large-Scale Sentiment Analysis for News and Blogs", Conference Proceedings of the International Conference on Weblogs and Social Media, January.

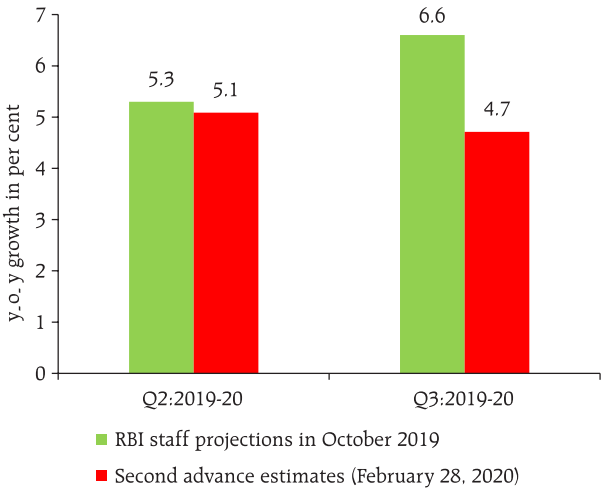
Kumari, Shweta and Giddi, Geetha (2020), "Inflation Decoded through Power of Words", *Mimeo.*

Shapiro, Adam Hale, Moritz Sudhof, Daniel Wilson (2018), "Measuring News Sentiment", Federal Reserve Bank of San Francisco Working Paper 2017-01.

### *GDP Projections versus Actual Outcomes*

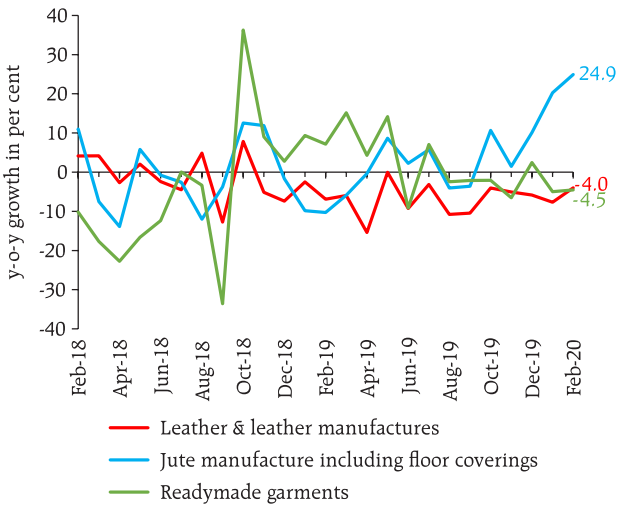
The October 2019 Monetary Policy Report (MPR) projected GDP growth at 5.3 per cent for Q2:2019-20, 6.6 per cent for Q3 and 7.2 per cent for Q4, with risks evenly balanced around this baseline path (Chart III.2). Actual outcomes in terms of the NSO's second advance estimates (SAE) undershot these projections by 20 and 190 basis points in Q2 and Q3, respectively. The downward surprise in Q2 stemmed from a stronger than anticipated drag from gross fixed capital formation and marginal weakness in private final consumption expenditure. In Q3, projection errors emanated mainly from a steep unanticipated contraction in gross fixed capital formation, which was the deepest in the new series of GDP.

**Chart III.2: GDP Growth - Projections *versus* Actual**



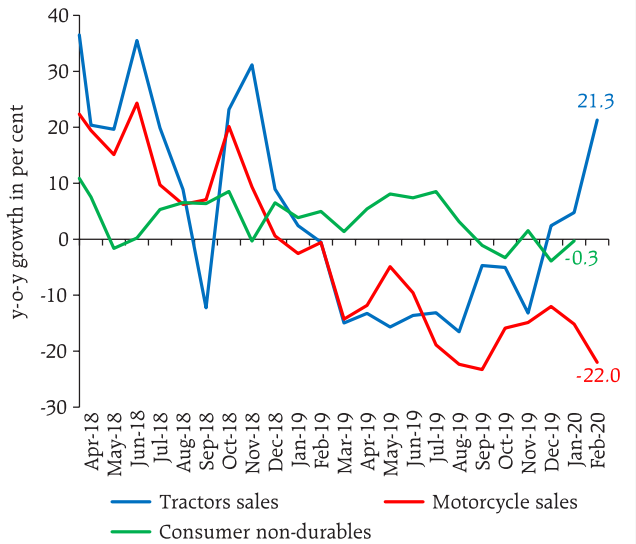

**Sources:** NSO; and RBI staff estimates.

**Chart III.3: Select indicators - Export Demand in Labour-intensive Sectors**




**Source:** Directorate General of Commercial Intelligence & Statistics (DGCI&S).

**Chart III.5: Select Indicators - Rural Demand**




**Sources:** Tractor Manufactures Association; SIAM; and NSO.

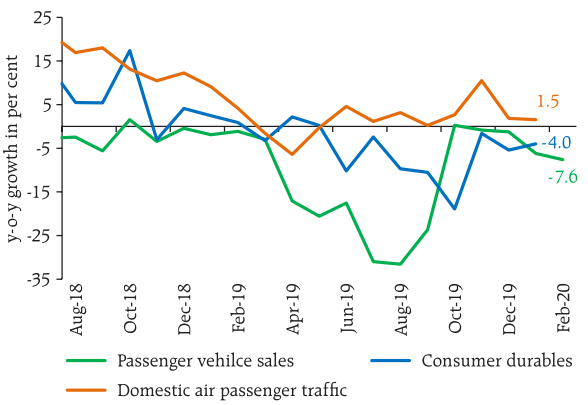
### III.1.1 Private Final Consumption Expenditure

Private final consumption expenditure (PFCE) remains the mainstay of aggregate demand, with its share at 57.6 per cent in H2:2019-20. The slowdown in PFCE in H2:2019-20 was caused by a combination of factors — weak rural demand due to depressed food prices/inflation in the previous two years; deceleration in rural wages; and downturn in labour-intensive exports which impacted rural consumption; and slowdown in urban consumption due to decelerating incomes (Chart III.3).

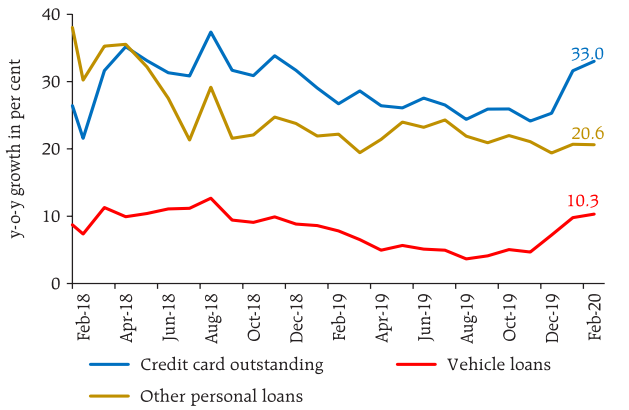
High frequency indicators of urban consumption demand present a subdued picture for Q4:2019-20 (Chart III.4a). Sales of passenger vehicles continued to contract in February 2020. Domestic air passenger traffic growth slowed in January 2020. Consumer durables growth contracted in January 2020. Even though there has been some uptick in vehicle loan growth for households and growth in credit card outstanding in February 2020, overall, urban consumption appears to have lost steam in Q4 with the outbreak of COVID-19 having accentuated the moderation (Chart III.4b).

**Chart III.4: High Frequency Indicators: Consumption Demand**

a: High Frequency Indicators - Urban Demand




b: Household Credit




**Sources:** Directorate General of Civil Aviation (DGCA); Society of Indian Automobile Manufacturers (SIAM); NSO; and RBI.

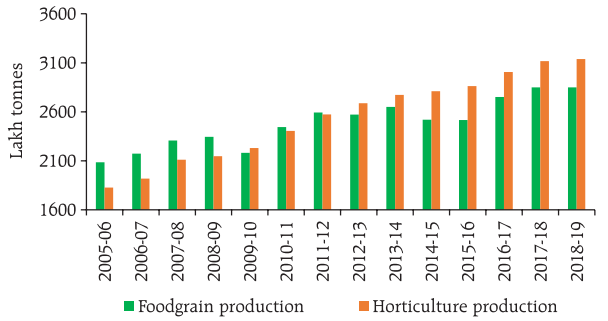
Among the indicators of rural consumption, motorcycle sales remained in contraction in February 2020 (Chart III.5). This sector faces some uncertainty following the change in emission norms, which was to be effective from April. Tractor sales, however, improved in January and steadied further in February 2020, reflecting improved *rabi* sowing. The consumer non-durable segment remained in contraction, reflecting weak rural demand (Box III.2).

## Box III.2: What Ails Rural Demand?

The performance of agriculture is key to the state of rural demand. In recent years, the terms of trade (ToT) have moved against the farm economy, with back-to-back bumper harvests during 2016, 2017 and 2018 causing a decline in some food prices/inflation (Chart III.2.1). In the face of a global food supply glut, India's exports of agricultural products were affected and consequently, they could not fulfil their usual vent for surplus role (Chart III.2.2). The excess supply resulting in an accumulation of stocks depressed agriculture commodities prices/inflation even further (Chart III.2.3).

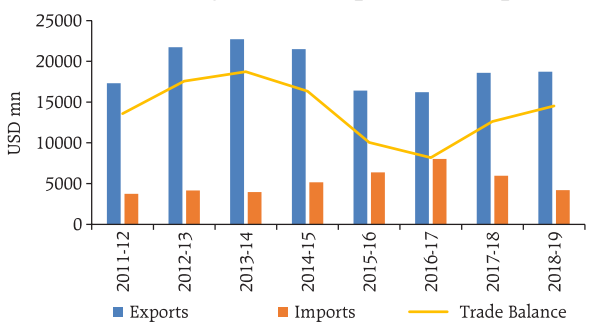
The index of inter-sectoral ToT, *i.e.*, the ratio of agriculture GVA deflator to non-agriculture GVA deflator declined between 2016-17 and 2018-19 (Chart III.2.4). An alternative

**Chart III.2.1: Domestic Food Availability**



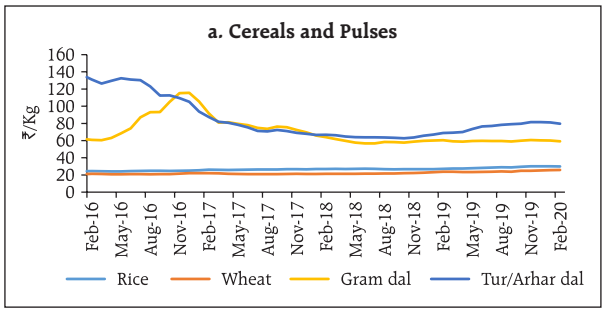

**Source:** Ministry of Agriculture and Farmers' Welfare (MOAFW).

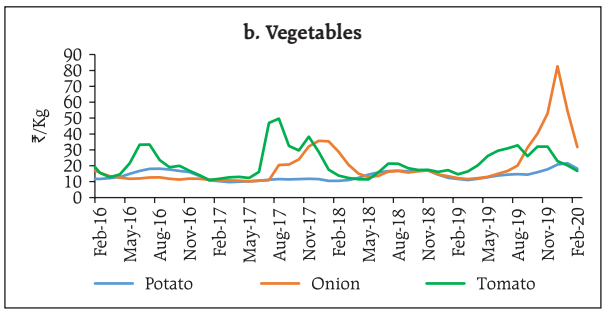
**Chart III.2.2: Agriculture Exports and Imports**

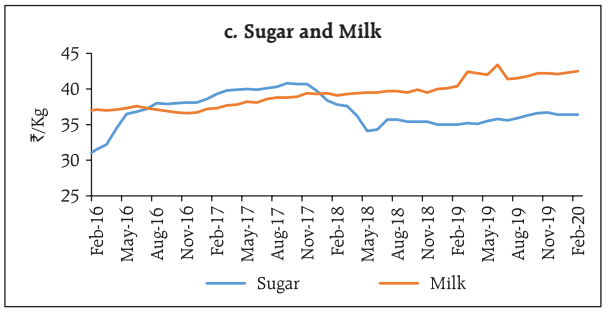


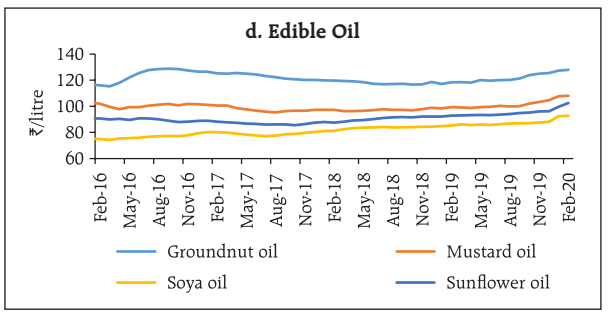

**Source:** Agricultural & Processed Foods Product Export Development Authority.

**Chart III.2.3: Wholesale Prices of Major Essential Agricultural Commodities**



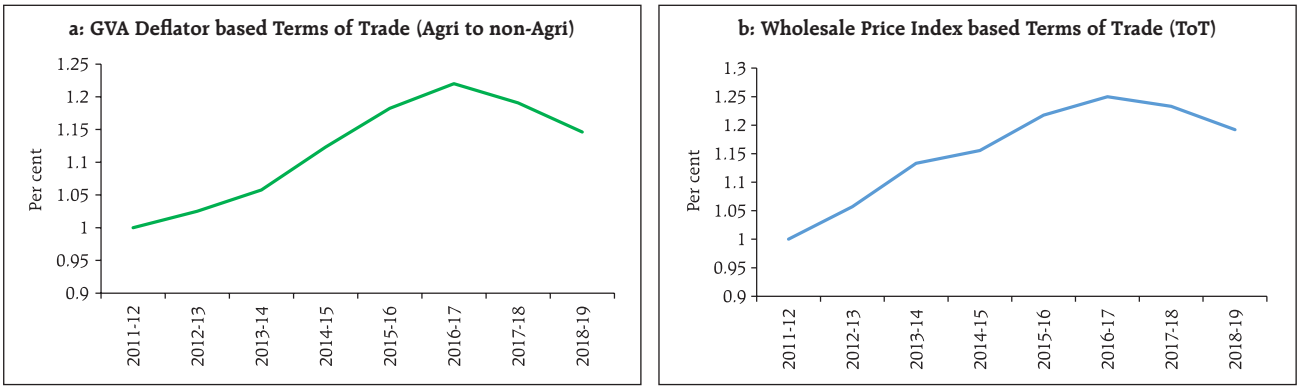




**Source:** Department of Consumer Affairs, Government of India.

*(contd.)*

**Chart III.2.4: Inter-sectoral Terms of Trade between Agriculture and Non-Agriculture**




**Sources:** NSO; Office of Economic Adviser; and RBI staff estimates.

measure – the ratio of the wholesale price index (WPI) between agriculture and non-agriculture (excluding services) – corroborates this loss of ToT.

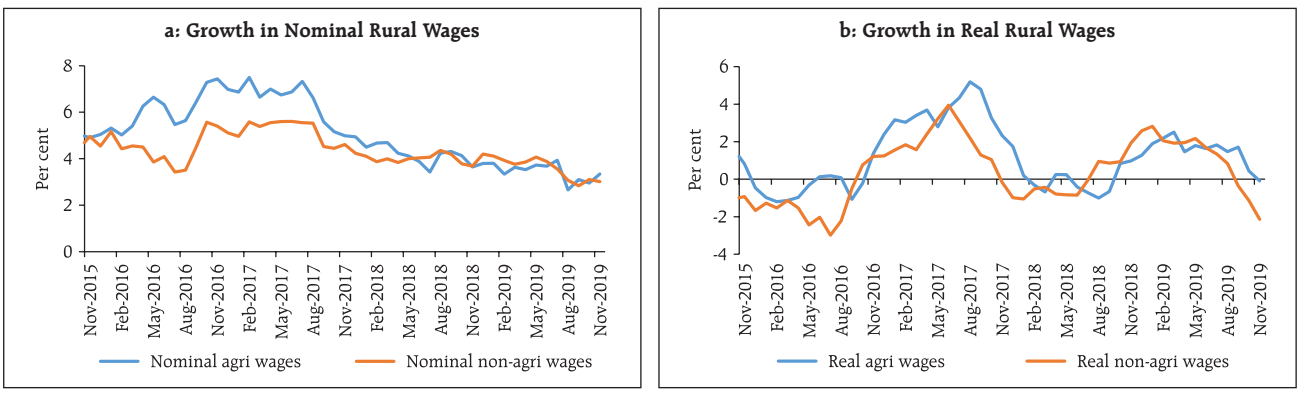
Alongside these developments, growth in rural wages has remained subdued, particularly for agricultural labour in both nominal and real terms, partly due to the slowdown in the construction sector (Chart III.2.5).

Moreover, in recent years, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme does not seem to support rural income much due to delayed wage payments, lower wages and insufficient budgetary allocations. The Periodic Labour Force Survey (PLFS) report released by the NSO in May 2019 shows that wages under MGNREGA work are lower than the market wage rate for non-public work by 74 per cent for rural men and 21 per cent for rural women.

The recent outbreak of COVID-19 and the subsequent lockdown enforced in the country are expected to bring down the aggregate demand drastically, both in rural and urban areas. The Government has announced a slew of measures like direct cash transfer to farmers, hiking wages under the MGNREGA scheme, and utilisation of welfare funds for construction workers to offset the adverse impact on rural demand. However, given the severity of the pandemic, rural demand is expected to go down further at least in the near future.

In conclusion, unusually lower agriculture prices, slowdown in the construction sector and below average performance of the flagship MGNREGA programme have contributed to lower farm incomes, deceleration in rural wages and loss of employment opportunities in the rural sector and, more so, in the wake of COVID-19.

**Chart III.2.5: Growth in Nominal and Real Rural Wages**




**Sources:** Labour Bureau, Ministry of Labour and Employment; and RBI staff estimates.

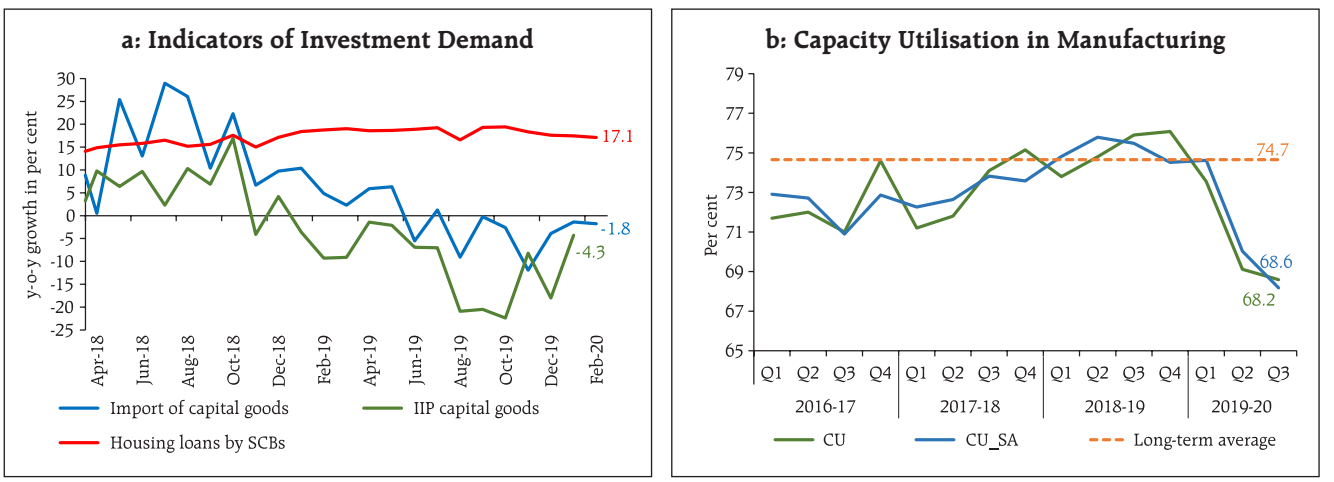
### III.1.2 Gross Fixed Capital Formation

Gross fixed capital formation (GFCF) growth turned negative in Q2 and Q3:2019-20. Consequently, the share of GFCF in GDP dropped to 30.2 per cent in 2019-20 from 31.9 per cent a year ago. Two key indicators of investment demand, *viz.*, production and imports of capital goods have remained in contraction in January/February 2020 as well (Chart III.6a). As regards construction activity, finished steel consumption contracted in February, while cement production grew significantly. The performance of software firms – a proxy for investment in intellectual property products – has remained resilient, as evident from the latest financial results. Seasonally adjusted capacity utilisation (CU-SA) in the manufacturing sector declined below the long-term average in Q3:2019-20, corroborating that the need for fresh investment is depressed as also reflected in a slowdown in adjusted non-food bank credit (ANFC) (Chart III.6b).

Half-yearly unaudited financial statements of listed non-government non-financial (NGNF) companies suggest a rise in the capex ratio[3] in H1:2019-20 from H2:2018-19 across major industries such as motor vehicles, cement, petroleum, telecommunications and construction (Chart III.7). Funds mobilised by these corporates during H1:2019-20 were mainly used for fixed assets formation and deleveraging (reduced borrowing). The total cost of projects sanctioned/contracted by major financing channels also increased in H1:2019-20 over H1:2018-19.

As per the first revised estimates, gross domestic saving (GDS) rate decreased to 30.1 per cent of GDP in 2018-19 from 32.4 per cent in 2017-18. The saving rate of the household sector, which is a net supplier of funds to the economy, declined from 23.6 per cent of GDP in 2011-12 to 18.2 per cent in 2018-19. While the private corporate sector finances its investment predominantly through its own savings, the public sector continues to rely heavily on households for financing its deficit (Chart III.8). During April-December 2019, household financial savings appeared to have improved as households' liabilities declined more than the increase in household deposits with scheduled commercial banks whereas their investment in insurance and mutual funds remained at the same level as in the previous year.

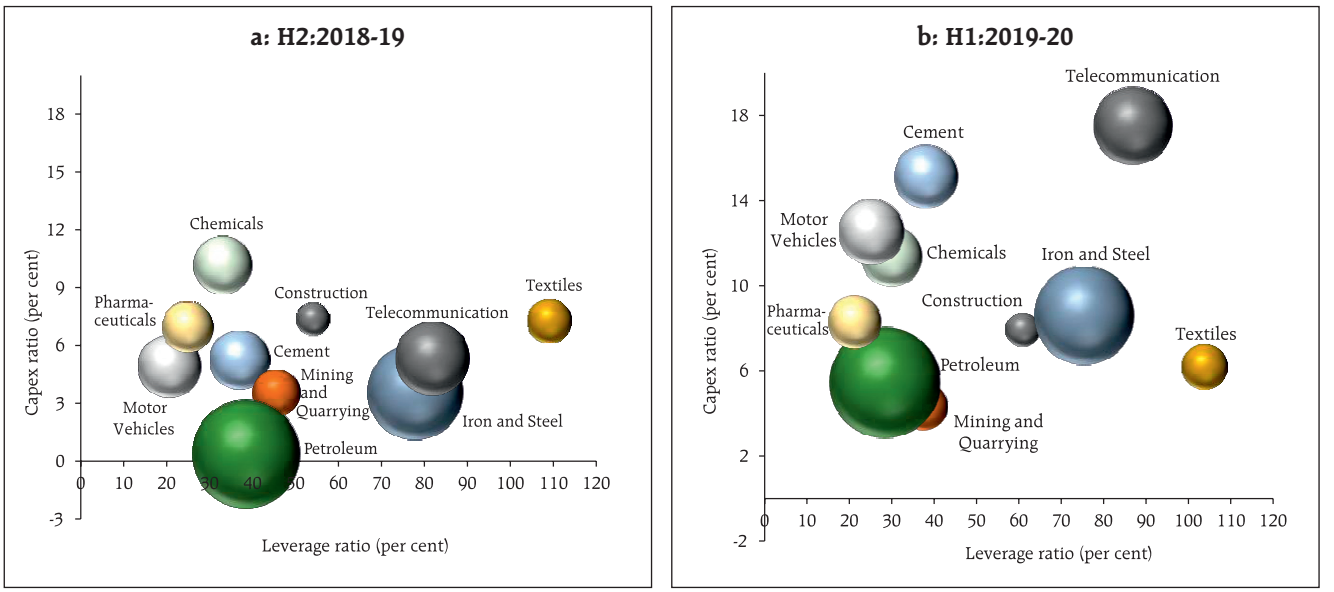
**Chart III.6: Investment Demand**




**Sources:** DGCI&S; NSO; and RBI.

[3] Capex ratio is defined as [net fixed assets (current half year) - net fixed assets (previous half year) + depreciation (current half year)]/net fixed assets (previous half year).

**Chart III.7: Leverage and Investment Activity**



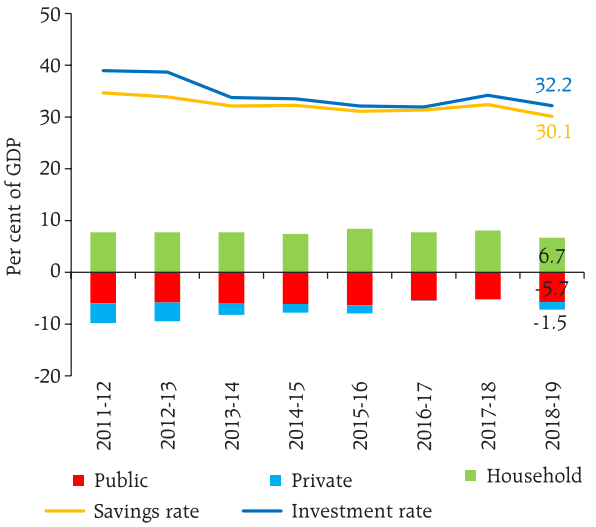

**Notes:** 1. Leverage ratio: debt-equity ratio.
2. Size of the bubble denotes the net fixed assets held by the industries as at end-March 2019 (chart a) and end-September 2019 (chart b).
3. Analysis is based on 2,362 listed non-government non-financial (NGNF) companies common for the half years H1:2018-19, H2:2018-19 and H1:2019-20.
**Source:** RBI staff estimates.

### III.1.3 Government Expenditure

Growth in government final consumption expenditure (GFCE) moderated in H2:2019-20 due to a sharp slowdown in Q4 as implicit in the SAE released by the NSO. During January-February 2020, revenue expenditure of the Centre grew by 3.9 per cent. In 2020-21, revenue expenditure is budgeted higher than in 2019-20 revised estimates (RE) (Table III.2).

During 2019-20 (April-February), the fiscal position of the central government deteriorated mainly due to a decline in gross revenue under corporation tax, reflecting mid-year cut in tax rates. GST collections at ₹5.5 lakh crore were 89.5 per cent of RE and 4.5 per cent higher than a year ago. On the whole, direct taxes

**Chart III.8: Saving Investment Gap**




**Sources:** NSO; and RBI staff estimates.

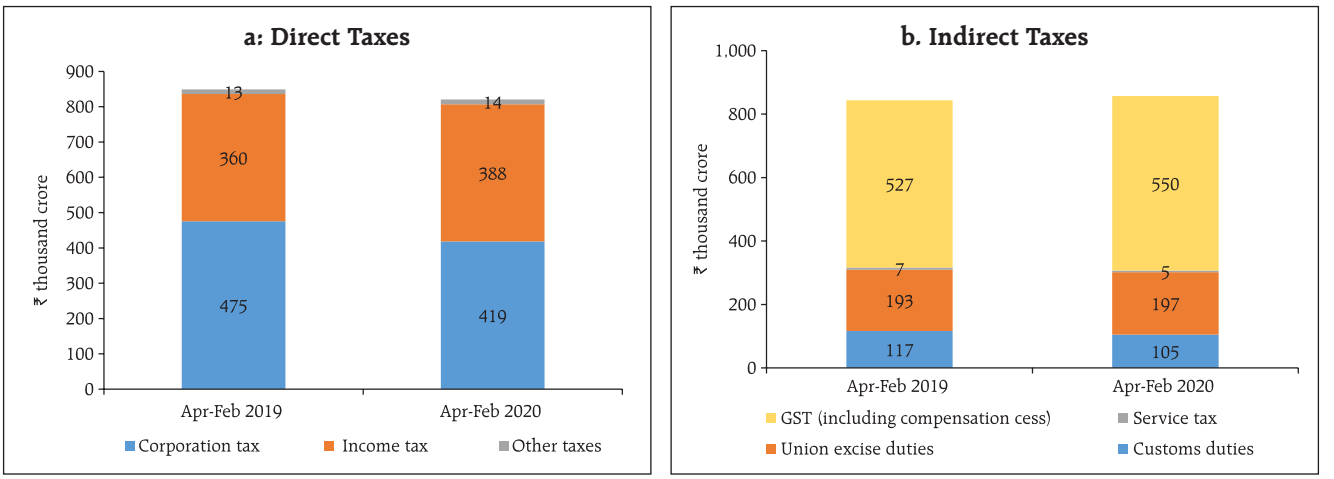
**Table III.2: Key Fiscal Indicators – Central Government Finances**

(Per cent to GDP)

| Indicator | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
|---|---|---|---|
| 1. Revenue Receipts | 9.3 | 9.1 | 9.0 |
| *a. Tax Revenue (Net)* | 7.8 | 7.4 | 7.3 |
| *b. Non-Tax Revenue* | 1.5 | 1.7 | 1.7 |
| 2. Non-Debt Capital Receipts | 0.6 | 0.4 | 1.0 |
| 3. Revenue Expenditure | 11.6 | 11.5 | 11.7 |
| 4. Capital Expenditure | 1.6 | 1.7 | 1.8 |
| 5. Total Expenditure | 13.2 | 13.2 | 13.5 |
| 6. Gross Fiscal Deficit | 3.3 | 3.8 | 3.5 |
| 7. Revenue Deficit | 2.3 | 2.4 | 2.7 |
| 8. Primary Deficit | 0.2 | 0.7 | 0.4 |

**Note:** BE: Budget Estimates. RE: Revised Estimates.
**Source:** Union Budget, 2020-21.

**Chart III.9: Tax Collection during April- February**




**Source:** Controller General of Accounts, Ministry of Finance.

contracted by 3.3 per cent, while indirect taxes grew barely by 1.6 per cent in the first 11 months of the year, lower than the budget estimates (BE) (Chart III.9 a & b).

Revenue expenditure growth also stood lower than the RE mainly due to lower interest payments. Outgoes on account of major subsidies moderated from the BE of 1.4 per cent of GDP to 1.1 per cent in RE due to curtailment of on-budget food subsidy. Nonetheless, food subsidy continues to dominate the overall subsidy bill. Capital expenditure growth was also lower than in the RE.

Under the provisions of section 4(3) of the revised FRBM Act, which can be invoked under specific conditions[4], the Centre's GFD was revised up to 3.8 per cent of GDP in 2019-20 (RE) from the budgeted 3.3 per cent, due to a shortfall in tax revenue and disinvestment proceeds. The implications of these evolving dynamics can be examined in a general equilibrium framework (Box III.3). The GFD is budgeted to moderate to 3.5 per cent of GDP in 2020-21 and in a glide path it will return to 3.1 per cent by 2022-23.

## Box III.3 Augmenting Quarterly Projection Model (QPM): Fiscal Block

Fiscal policy measures can impact output, inflation and monetary policy decisions and *vice versa* (Government of India, 2017). However, all fiscal measures need not affect the macroeconomic variables in a similar way. The various conduits of fiscal-monetary interface and their impact on growth and inflation are assessed by incorporating a fiscal block in RBI's Quarterly Projection Model (QPM)[5].

Salient features of the fiscal block in the QPM are the following: (a) headline fiscal deficit is decomposed into structural and cyclical primary deficits and interest payments; (b) the cyclical component of the primary deficit depends on the state of the economy and recognises that government tax revenue will be lower and expenditure will be higher leading to higher fiscal deficit when the overall

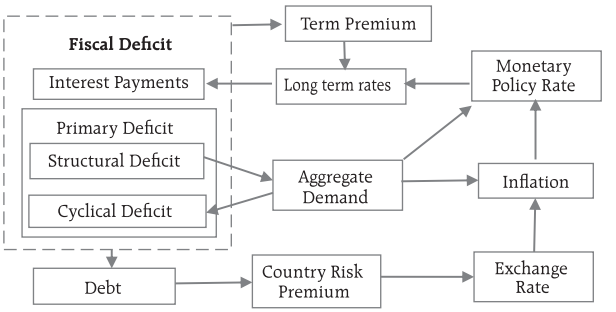
*(contd.)*

[4] On ground or grounds of national security, act of war, national calamity, collapse of agriculture severely affecting farm output and incomes, structural reforms in the economy with unanticipated fiscal implications, and decline in real output growth of a quarter by at least three per cent points below its average of the previous four quarters (*Source*: Finance Act, 2018).

[5] The QPM is a semi-structural, forward-looking, open economy, calibrated, gap model in the New Keynesian tradition and provides an internally consistent analysis of various feedback mechanisms.

economy slows down and *vice versa*; (c) deviation of the fiscal deficit from the announced fiscal path on account of cyclically-adjusted (*i.e.*, structural – the part of fiscal deficit which is not related to the state of the economy) component of the primary deficit is a fiscal impulse and contributes to aggregate demand; (d) link between debt dynamics and fiscal deficit is identified for stock-flow consistency (Escolano, 2010); (e) the fiscal deficit and debt has implications for the country risk premium and the exchange rate; and (f) monetary policy's interaction with the fiscal deficit is captured through interest payments (Chart III.3.1).

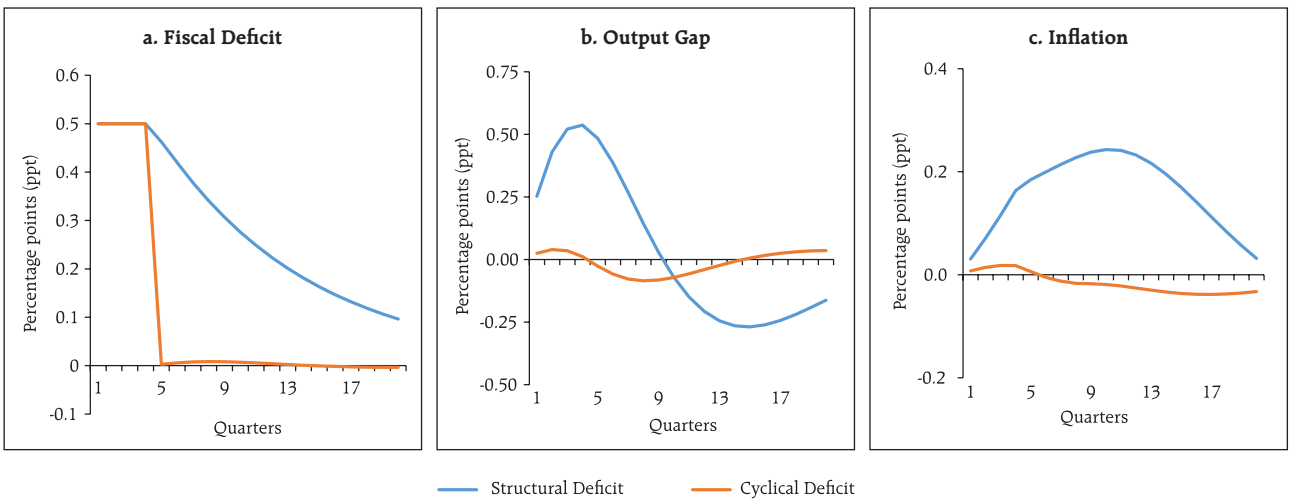
**Chart III.3.1: Monetary-Fiscal Linkages**




The model's dynamics indicate that a shock to the cyclically-adjusted (structural) fiscal deficit impacts aggregate demand. The higher level of debt to finance higher fiscal deficit leads to increase in country risk premium and exchange rate depreciation. Thus, inflation gets impacted through both the aggregate demand and exchange rate channels. However, if the deviation of the headline fiscal position from the announced path is on account of cyclical factors, the impact on inflation and output would be muted (Chart III.3.2).

In 2019-20, the GDP growth has slowed down, which contributed to an increase in the fiscal deficit mainly on account of (a) lower aggregate demand (denominator), (b) lower fiscal revenue due to lower economic activity, and (c) higher fiscal expenditure on account of the measures to address the economic slowdown. Thus, a considerable portion of the fiscal deficit deviation in 2019-20 could be attributed to cyclical factors. In such scenario, the inflationary impact of this deviation was largely subdued.

**Chart III.3.2: Structural and Cyclical Fiscal Deficit: Impact on Output and Inflation**




**Source:** RBI staff estimates.

***References:***

Escolano, M. J. (2010), "A Practical Guide to Public Debt Dynamics, Fiscal Sustainability, and Cyclical Adjustment of Budgetary Aggregates", Technical Notes and Manuals 10/02, International Monetary Fund.

Government of India (2017), "Fiscal Responsibility and Budget Management Review Committee" (Chairman: N.K Singh).

**Table III.3: State Government Finances - Key Deficit Indicators**

(per cent to GSDP)

| Item | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
|---|---|---|---|---|
| Revenue Deficit | 0.1 | 0.1 | 0.7 | 0.0 |
| Gross Fiscal deficit | 2.4 | 2.5 | 2.9 | 2.4 |

**Notes:** 1. Negative (-) sign indicates surplus.
2. Data pertain to 22 out of 28 States.
3. GSDP is the sum of GSDP of respective 22 states.

**Sources**: Budget Documents of State Governments.

Based on the latest available data, the gross fiscal deficit of 22 states increased to 2.9 per cent of their gross state domestic product (GSDP) in 2019-20 (RE) from the budgeted 2.5 per cent (Table III.3). The deviation was mainly caused by lower revenue – both own and central transfer – due to the slowdown in economic activity, which, in turn, induced states to cut both revenue and capital expenditure in an adverse feedback loop that further weakened aggregate demand. For 2020-21, states have budgeted a consolidated GFD of 2.4 per cent of GSDP, anticipating higher revenue and lower expenditure than a year ago.

Under the centre's market borrowing programme during 2019-20, that is managed by the Reserve Bank, gross borrowings were ₹2,68,000 crore during H2:2019-20, as compared to ₹2,83,000 crore during H2:2018-19, i.e., lower by 5.3 per cent than their level a year ago. Net market borrowings during H2:2019-20 at ₹1,33,000 crore were also 43.2 per cent lower. As part of active debt consolidation, seven tranches of switch operations worth ₹1,24,694 crore were carried out during H2:2019-20 with the objective of managing redemption and enhancing liquidity of government securities. Furthermore, cash management bills worth ₹2,50,000 crore were issued on seven occasions during H2:2019-20 to tide over frequent recourse to ways and means advances/overdrafts in the face of negative cash balances with the Reserve Bank. States completed their gross borrowings of ₹6,34,521 crore for the year (Table III.4).

### III.1.4 External Demand

Net exports contributed positively to aggregate demand in H2:2019-20, with imports contracting more sharply than exports (Chart 10).

According to data released by the Directorate General of Commercial Intelligence and Statistics (DGCI&S), the contraction in merchandise exports, which started in Q1:2019-20, accentuated in Q2, as the slump in shipment of engineering goods, gems and jewellery, cotton and handloom products, and rice became pronounced in the face of a prolonged slowdown in world trade and demand. The pace of overall export contraction moderated during Q3:2019-20, and eventually there was a turnaround in February, supported by petroleum, oil and lubricants (POL), engineering goods, electronic goods and chemicals (Chart III.11a). Overall, exports shrank by 1.5 per cent during April-February 2019-20, though the adverse impact of COVID-19 on global supply chains and global economic activity more generally may dent export performance in March.

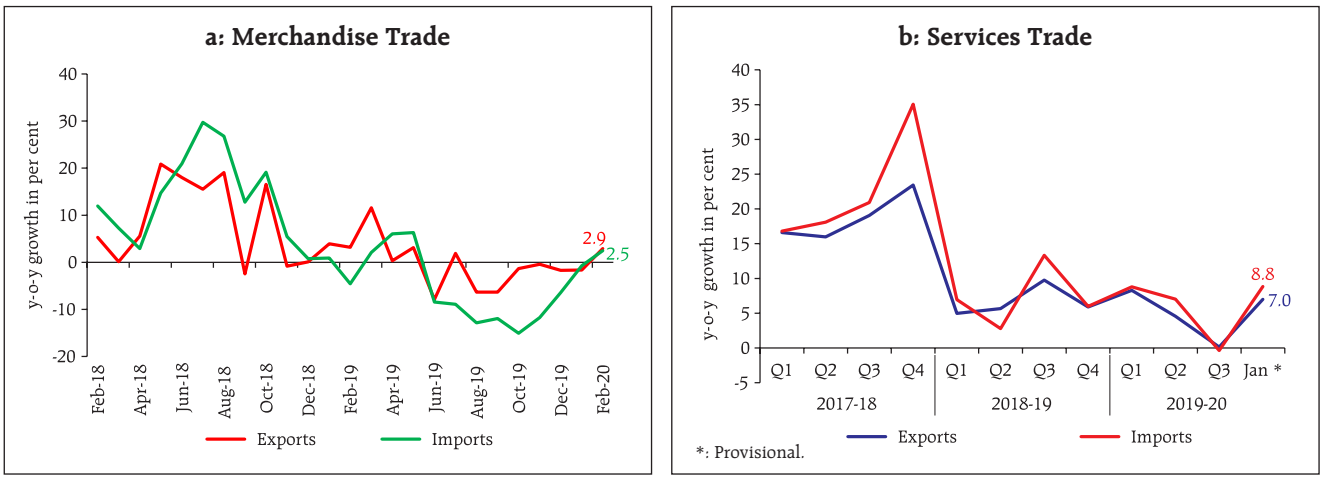
**Table III.4: Government Market Borrowings**

(₹ crore)

| Item | 2017-18 | | | 2018-19 | | | 2019-20 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Centre | States | Total | Centre | States | Total | Centre | States | Total |
| Net Borrowings | 4,48,410 | 3,40,281 | 7,88,691 | 4,22,737 | 3,48,643 | 7,71,380 | 4,73,972 | 4,87,454 | 9,61,426 |
| Gross Borrowings | 5,88,000 | 4,19,100 | 10,07,100 | 5,71,000 | 4,78,323 | 10,49,323 | 7,10,000 | 6,34,521 | 13,44,521 |

**Sources**: Government of India; and RBI staff estimates.

**Chart III.10. Growth in Trade**

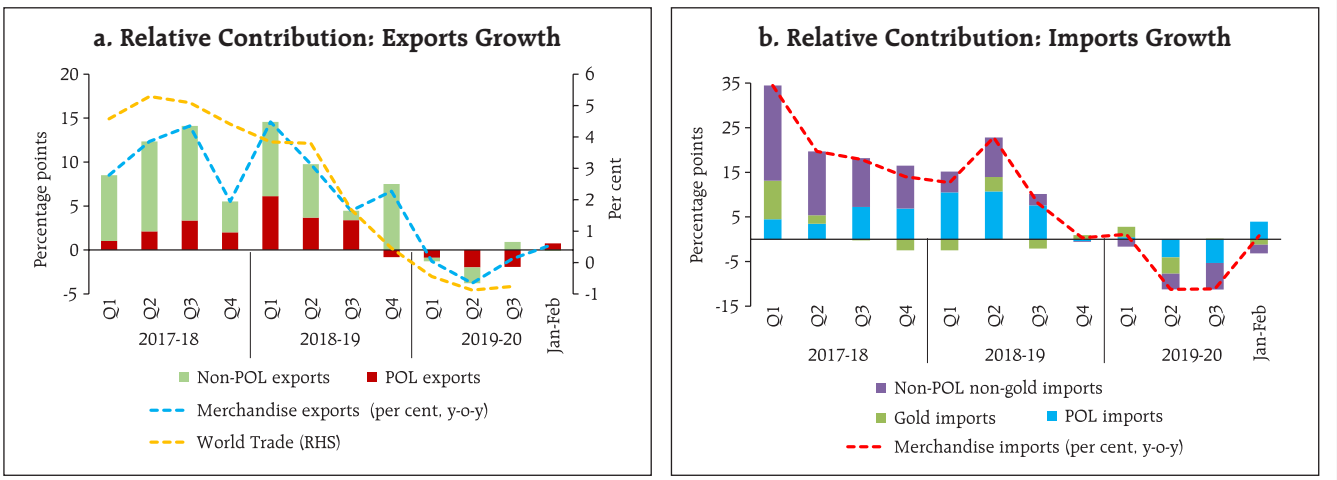



**Sources:** DGCI&S; and RBI.

Imports contracted in Q2:2019-20, pulled down by gold, POL and non-POL non-gold imports (Chart III.11b). Within the latter, the decline was broad-based and covered sectors such as transport equipment, pearls and precious stones, coal and chemicals. Imports also contracted in Q3 and in January 2020, but expanded in February, driven by POL, pearls and precious stones and machinery. Overall, imports contracted by 7.3 per cent during April-February 2019-20. With imports declining more than exports, the trade deficit narrowed from US$ 173.0 billion in April-February 2018-19 to US$ 143.1 billion in April-February 2019-20. India's oil import bill is expected to decline in March with a steep fall in crude oil prices and this may compress the trade deficit further for the full year.

The current account deficit (CAD) narrowed to 0.2 per cent of GDP in Q3:2019-20 from 0.9 per cent in Q2:2019-20 and from 2.7 per cent in Q3 a year ago. The contraction in the CAD was primarily on account of a lower trade deficit and a rise in net services receipts.

**Chart III.11: Relative Contribution to Export and Import Growth**




**Sources:** DGCI&S; and CPB Netherlands.

Services exports grew on the back of a rise in net earnings from software, travel and financial services (Chart 10.b). Remittances from overseas Indians were strong in Q3:2019-20, while the net outgo of payments due to investment income and compensation of employees together, remained broadly unchanged from the previous year.

Net capital inflows exceeded the CAD in Q3:2019-20. Net foreign direct investment (FDI) flows at US$ 37.8 billion in April-January 2019-20 were higher than those a year ago, flowing mainly to manufacturing, communication, retail and wholesale trade, financial and computer services. Amidst growing risk aversion on fears of global recession in the wake of COVID-19 pandemic, foreign portfolio investors (FPIs) turned net sellers beginning February 18, 2020. Foreign portfolio investment (FPI) outflows accentuated further from March 6, 2020 as the oil price war between Saudi Arabia and Russia caused fresh turbulence in global financial markets. Overall, FPI outflows were of the order of US$ 7.1 billion in 2019-20 (up to March 31, 2020). Under the voluntary retention route, however, net investment by FPIs amounted to US$ 8.7 billion up to March 31, 2020. Net disbursals under external commercial borrowings (ECBs) by Indian entities at US$ 3.2 billion in Q3:2019-20 were higher than those of US$ 2.0 billion a year ago. Net International Investment Position (IIP), *i.e.,* the difference between a country's external financial assets and liabilities, improved during Q3:2019-20 over Q2. India's foreign exchange reserves were placed at US$ 475.6 billion, equivalent to 11.8 months of import, as on March 27, 2020 – an increase of US$ 62.7 billion over the level at end-March 2019.

### III.2 Aggregate Supply

Gross value added (GVA) growth at basic prices – the metric for aggregate supply – decelerated to 4.7 per cent in H2:2019-20 from 5.1 per cent in H1 and 5.6 per cent in H2:2018-19 (Table III.5). This deceleration can be attributed to base effects to a large extent since its momentum measured in terms of q-o-q SAAR accelerated to 5.6 per cent in H2 from 4.2 per cent in H1 (Chart III.12a). With COVID-19 impacting the GVA in the last phase of Q4 strongly, it is unlikely that this momentum would be maintained as the year closed.

The slowdown in y-o-y GVA growth reflected the deceleration in industrial and services activities. On the other hand, GVA growth in agriculture and allied activities accelerated in H2:2019-20 in comparison with both H1:2019-20 and H2:2018-19, buoyed by the late surge in south-west monsoon rainfall and

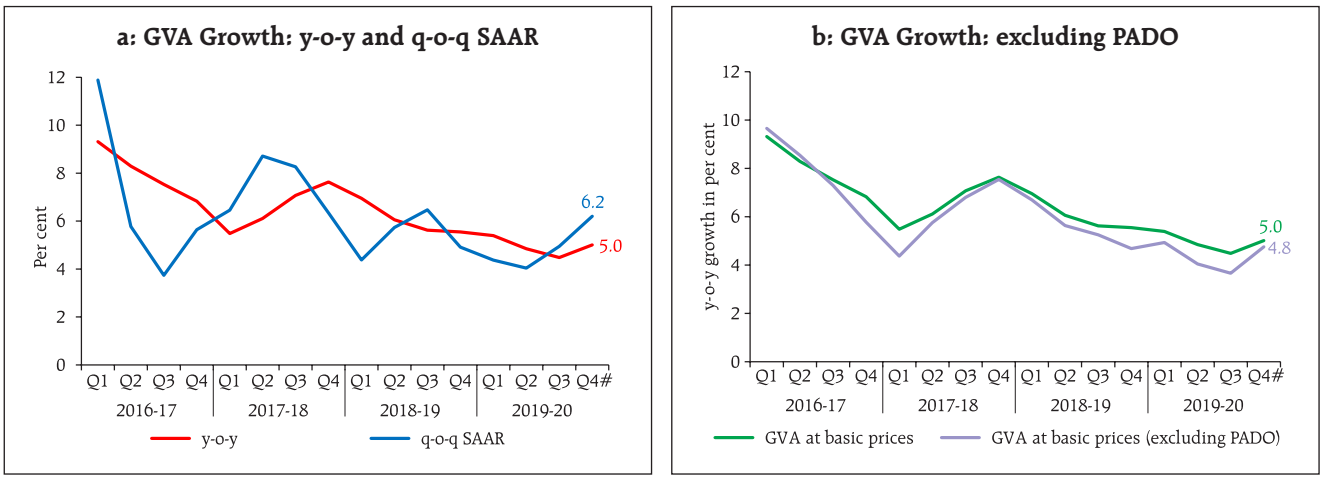
**Table III.5: Sector-wise Growth in GVA**

(y-o-y, per cent)

| Sector | 2018-19 (FRE) | 2019-20 (SAE) | Weighted 2019-20 | 2018-19 (FRE) | | | | 2019-20 (SAE) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4# |
| **Agriculture, forestry and fishing** | **2.4** | **3.7** | **0.5** | **3.8** | **2.5** | **2.0** | **1.6** | **2.8** | **3.1** | **3.5** | **5.0** |
| **Industry** | **4.5** | **1.5** | **0.3** | **7.8** | **4.7** | **4.4** | **1.4** | **3.2** | **0.1** | **0.1** | **2.3** |
| Mining and quarrying | -5.8 | 2.8 | 0.1 | -7.3 | -7.0 | -4.4 | -4.8 | 4.7 | 0.2 | 3.2 | 2.6 |
| Manufacturing | 5.7 | 0.9 | 0.2 | 10.7 | 5.6 | 5.2 | 2.1 | 2.2 | -0.4 | -0.2 | 1.8 |
| Electricity, gas, water supply and other utilities | 8.2 | 4.6 | 0.1 | 7.9 | 9.9 | 9.5 | 5.5 | 8.8 | 3.9 | -0.7 | 6.5 |
| **Services** | **7.5** | **6.5** | **4.1** | **7.3** | **7.2** | **7.3** | **8.3** | **6.7** | **6.8** | **6.4** | **6.1** |
| Construction | 6.1 | 3.0 | 0.2 | 6.4 | 5.2 | 6.6 | 6.0 | 5.5 | 2.9 | 0.3 | 3.2 |
| Trade, hotels, transport, communication | 7.7 | 5.6 | 1.1 | 8.5 | 7.8 | 7.8 | 6.9 | 5.7 | 5.8 | 5.9 | 5.1 |
| Financial, real estate and professional services | 6.8 | 7.3 | 1.6 | 6.0 | 6.5 | 6.5 | 8.7 | 6.9 | 7.1 | 7.3 | 8.0 |
| Public administration, defence and other services | 9.4 | 8.8 | 1.1 | 8.8 | 8.9 | 8.1 | 11.6 | 8.7 | 10.1 | 9.7 | 6.7 |
| **GVA at basic prices** | **6.0** | **4.9** | **4.9** | **6.9** | **6.1** | **5.6** | **5.6** | **5.4** | **4.8** | **4.5** | **5.0** |

FRE: First Revised Estimates; SAE: Second Advance Estimates. #: Implicit growth.
**Source:** NSO.

**Chart III.12: GVA Growth**




# : Implied
**Sources:** NSO; and RBI staff estimates.

bountiful north-east monsoon precipitation. Based on the Ministry of Agriculture & Farmers Welfare's second advance estimates, production of all major food grains, except *urad* and *moong*, in 2019-20 was higher than the final estimates of the preceding year. Public administration, defence and other services (PADO) continued to provide support to overall supply conditions (Chart 12b).

### III.2.1 Agriculture

GVA growth at basic prices in agriculture and allied activities accelerated in H2:2019-20 to 4.2 per cent from 3.0 per cent in H1:2019-20. Acreage of *rabi* crops increased by 9.5 per cent, underpinned by the favourable northeast monsoon, sufficient reservoir levels, improved soil moisture and an increase in prices for agricultural commodities. The second advance estimates of crop production for 2019-20 placed *kharif* and *rabi* foodgrain production higher by 0.6 and 4.1 per cent, respectively (Table III.6). Horticultural production was placed at a record level of 3,133.5 lakh tonnes during 2019-20, 0.8 per cent higher than the final estimates for 2018-19 and driven largely by production of vegetables.

**Table III.6: Agricultural Production in 2019-20 (Second Advance Estimates)**

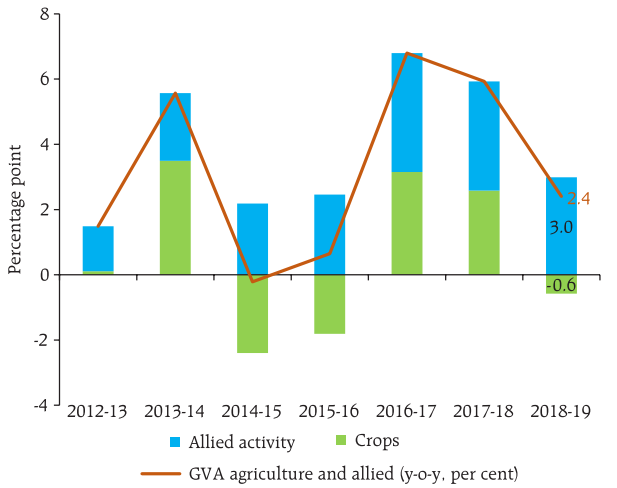
(in Lakh Tonnes)

| Crop | 2018-19 | | 2019-20 | | 2019-20 Variation (Per cent) | | |
|---|---|---|---|---|---|---|---|
| | 2nd AE | Final | Target | 2nd AE | Over 2nd AE 2018-19 | Over Final 2018-19 | Over Target |
| Foodgrains | 2814 | 2852 | 2911 | 2920 | 3.8 | 2.4 | 0.3 |
| Rice | 1156 | 1165 | 1160 | 1175 | 1.6 | 0.8 | 1.3 |
| Wheat | 991 | 1036 | 1005 | 1062 | 7.2 | 2.5 | 5.7 |
| Pulses | 240 | 221 | 263 | 230 | -4.2 | 4.3 | -12.5 |
| Oilseeds | 315 | 315 | 361 | 342 | 8.5 | 8.5 | -5.3 |
| Sugarcane | 3808 | 4054 | 3855 | 3538 | -7.1 | -12.7 | -8.2 |
| Cotton # | 301 | 280 | 358 | 349 | 16 | 24.4 | -2.4 |
| Jute & Mesta ## | 101 | 98 | 112 | 98 | -2.6 | -0.1 | -12.4 |

#: Lakh bales of 170 kgs. each.
##: Lakh bales of 180 kgs. each.
**Source:** Ministry of Agriculture and Farmers' Welfare, Government of India.

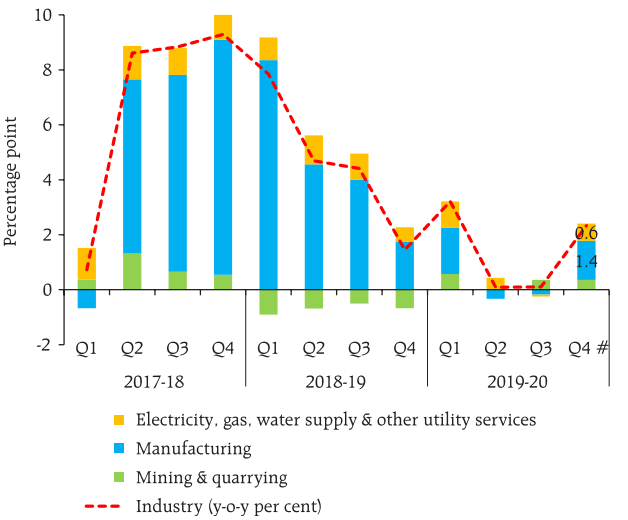
Allied activities, including livestock, forestry and fishing, constitute about 40 per cent of the GVA in agriculture and allied sector and contributed four-fifths of overall agricultural GVA growth during 2012-19 (Chart III.13).

**Chart III.13: Contribution of Crops and Allied Activities**




**Sources:** NSO; and RBI staff estimates.

**Chart III.14: Weighted Contribution to Industrial GVA Growth**




**Sources:** NSO; and RBI staff estimates.

According to the US National Oceanic and Atmospheric Administration (NOAA), near- to above-average sea surface temperatures (SSTs) prevailed across the equatorial Pacific Ocean during March 2020. There is 65 per cent chance of ENSO[6]-neutral prevailing in the spring and 55 per cent chance in the summer of 2020. The Australian Bureau of Meteorology (BoM) has indicated that the ENSO Outlook is neutral, suggesting low or no possibility of *El Niño* or *La Niña* developing in the coming months. Skymet expects neutral conditions to prevail during monsoon months with more than 50 per cent probability. The India Meteorological Department also expects ENSO-neutral conditions to prevail during April-June 2020.

### III.2.2 Industrial Sector

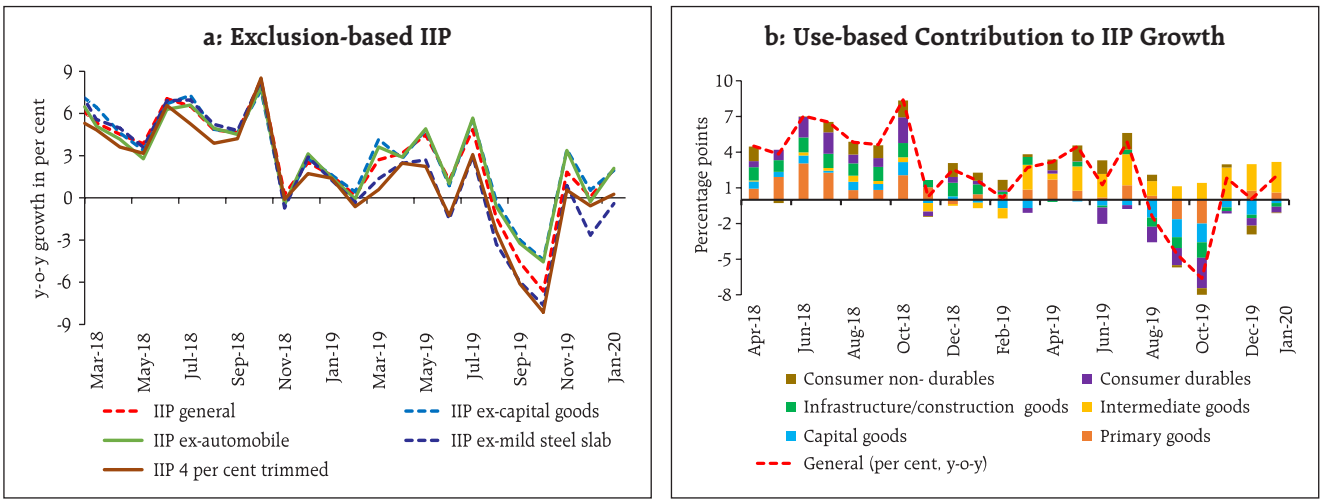
In the industrial sector, GVA growth at basic prices decelerated to 1.3 per cent in H2:2019-20 from 1.7 per cent in the preceding half, and 2.8 per cent a year ago (Chart III. 14). It was the deceleration in the manufacturing sector – the dominant component of industry – that deepened this slowdown, due to weak domestic and external demand. The mining sector growth picked up, but electricity generation weakened.

Among the high frequency indicators, the index of industrial production (IIP) emerged out of contraction in November 2019 and remained in positive territory in the following two months. The truncated IIP, by taking 96 per cent of IIP, *i.e.*, excluding top 2 per cent and bottom 2 per cent of volatile items, improved marginally in January 2020 (Chart III.15a).

Manufacturing IIP contracted in Q3:2019-20, pulled down by a decline in the production of motor vehicles, machinery and equipment, computer, electronic and optical products, fabricated metal products, rubber and plastics products. Of the 23 industry groups constituting the IIP, 17 contracted during Q3 as against 15 during Q2. In terms of the use-based classification, the intermediate goods sector grew by double digits in Q3:2019-20 led by growth in mild steel (MS) slabs. On the other hand, consumer non-durables slipped into contraction (Chart III.15b).

[6] "ENSO" refers to the *El Niño*-Southern Oscillation, the interaction between the atmosphere and ocean in the tropical Pacific that results in a somewhat periodic variation between below-normal and above-normal sea surface temperatures and dry and wet conditions over the course of a few years.

**Chart III.15: IIP and Use-based Classification**



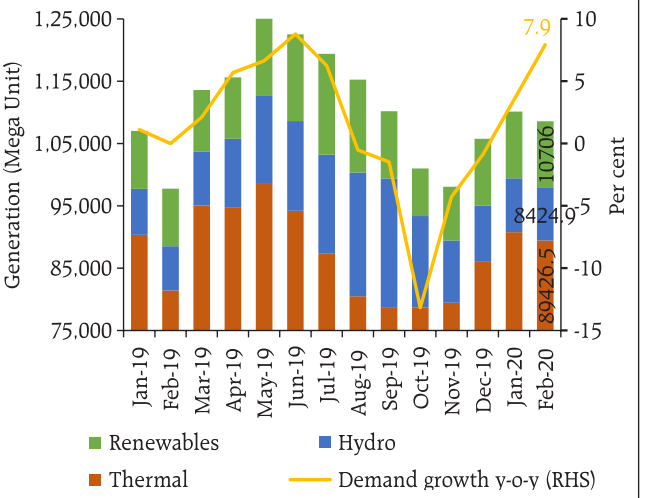

**Source:** NSO.

Primary goods, infrastructure and consumer durables remained in contraction in Q3. The consumer durables segment contracted in Q3:2019-20 due to the decline in production of two wheelers, TV sets and auto components. The capital goods sector also remained in contraction in Q3 mainly due to weak investment demand pertaining especially to commercial vehicles and power generation.

In January 2020, while the IIP growth was positive at 2.0 per cent, this was also broad-based. However, its sustainability in the near term seems to be uncertain in view of supply chain disruptions caused by COVID-19 and weak automobile sales. Intermediate goods continued to register robust growth emanating mostly from mild steel slabs, which contributed 197 basis points to headline IIP growth in January. Capital goods production continued to contract, taking the sequential decline to its thirteenth consecutive month.

Electricity generation decelerated in H2 in comparison with H1, reflective of low demand from the organised manufacturing sector amidst extended monsoon season. This subdued performance was mainly on account of thermal power generation, the source of two-thirds of energy supply. Electricity generation increased in December-January 2020, after six months of contraction (Chart III.16). In the mining sector, production picked up marginally in H2 but remained weak. Recent announcements by the Government such as doing away with end-use restrictions in coal mining, extending the validity of

**Chart III.16: Electricity Generation and Demand Growth**




**Source:** Central Electricity Authority.

clearances for mining leases and opening up of this sector to new participants may spur activity in this sector.

The Reserve Bank's business assessment of the industrial outlook survey (IOS)[7] showed improvement in Q4:2019-20, with the sentiment on employment conditions slightly improved. In view of the intensification of COVID-19, a quick survey with select parameters was specially conducted during March 18-20 to capture the updated sentiments of the enterprises. The limited responses received indicate a considerable worsening of the key demand indicators in Q4:2019-20 and the pessimism was more pronounced in the outlook for the next quarter. Manufacturing PMI softened to 51.8 in March from 54.5 in February due to the marked decline in new business order (export); the COVID-19 negatively impacted the supply-side of the sector, with suppliers' delivery times lengthening for the first time in five months. Services PMI moved to contraction zone: 49.3 in March from a seven-year high of 57.5 in February due to deterioration in new export business as well as business expectations.

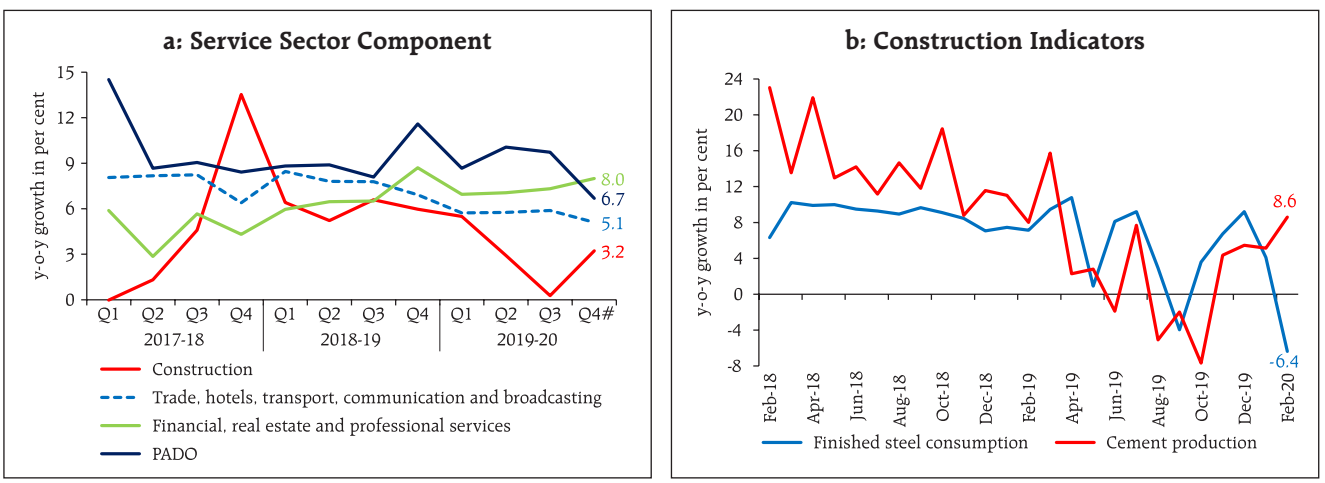
### III.2.3 Services

Service sector activity moderated in H2:2019-20, pulled down by a slowdown in construction and trade, hotels, transport and communication and PADO (Chart III.17a). The slowdown in the construction sector was reflected in a decline in one of its key indicators, *viz.*, cement production (Chart III.17b).

Growth in trade, hotels, transport, communication and services related to broadcasting was muted in H2:2019-20. Commercial vehicle sales – a lead indicator for road transport – continued to contract in H2:2019-20 as the impact of the upward revision in axle norms[8] in July 2018 lingered (Chart III.18a). Other constituents of the transport segment like freight traffic by rail, water and air improved marginally in December-February 2019-20 (Chart III.18b).

The growth of financial, real estate and professional services accelerated in H2:2019-20,

**Chart III.17: Services Sector Components and Construction Indicators**

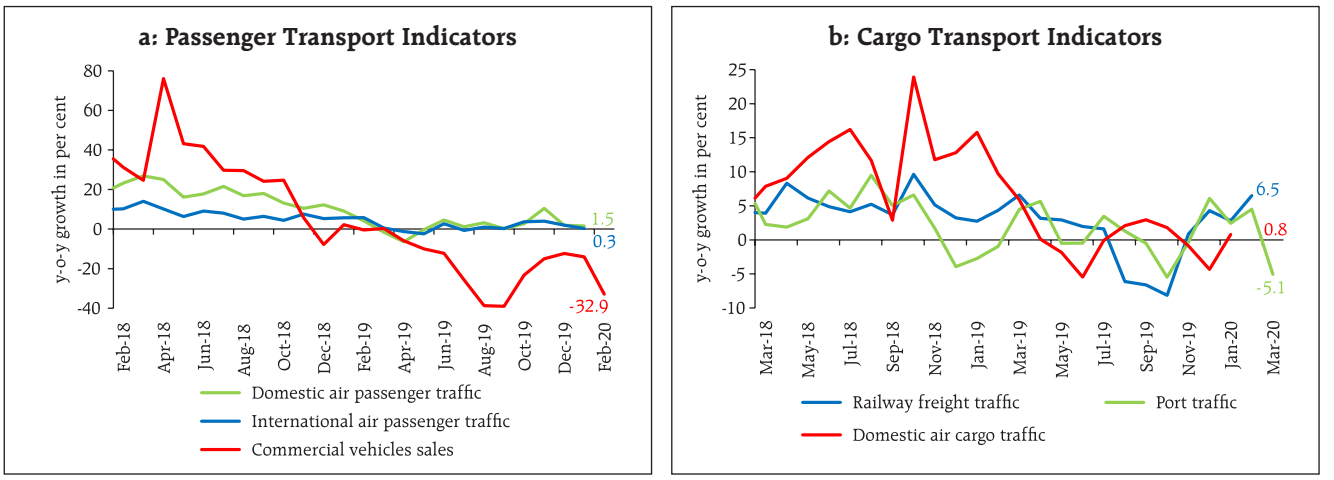



**Sources:** NSO, Office of Economic Adviser; Joint Plant Committee; Department of Industrial Policy & Promotion, Ministry of Commerce & Industry; and RBI staff estimates.

[7] The current round of the survey was launched on January 30, 2020 and the results are summarised from 860 responses received till March 18, 2020.

[8] Ministry of Road Transport & Highways notified increase in truck axle load of heavy vehicles to raise the carrying capacity of goods vehicles by about 20-25 per cent and lower logistics costs by about 2 per cent on July 18, 2018.

**Chart III.18: Performance of the Transport Sector**



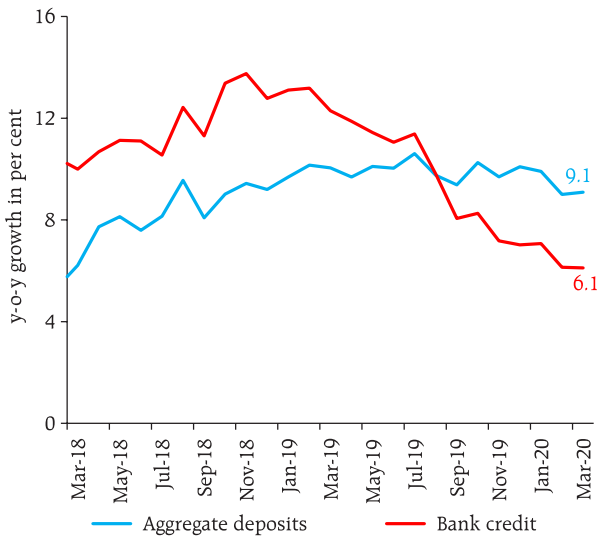

**Sources:** SIAM; Airport Authority of India; Ministry of Railways; and Indian Port Association.

reflecting the robust performance of information technology companies in the professional services segment. However, the growth of aggregate deposits and bank credit remained muted (Chart III.19).

The growth of public administration, defence and other services (PADO) moderated in Q3:2019-20, reflecting subdued revenue expenditure (net of interest payments and subsidies) of the Union and the state governments. This has likely got accentuated in Q4 in view of the tight financial position of the Centre and States: the Union finance ministry has directed all government departments and ministries to restrict their expenditures within the budgeted level.

The residential real estate sector has continued to suffer from low demand and large inventory overhang. As a result, new launches declined in Q3:2019-20 (Chart III.20 a). Reflecting the large volume of inventory overhang, all-India level housing prices have moderated somewhat (Chart III.20b).

**Chart III.19: Growth of Financial Services**

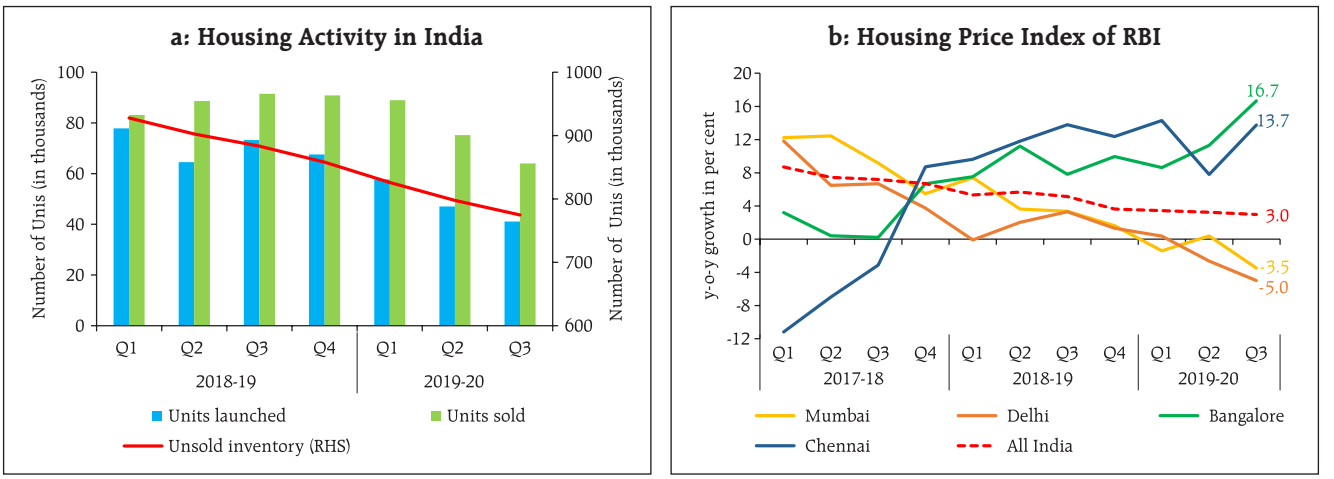



**Source:** RBI.

### III.3 Output Gap

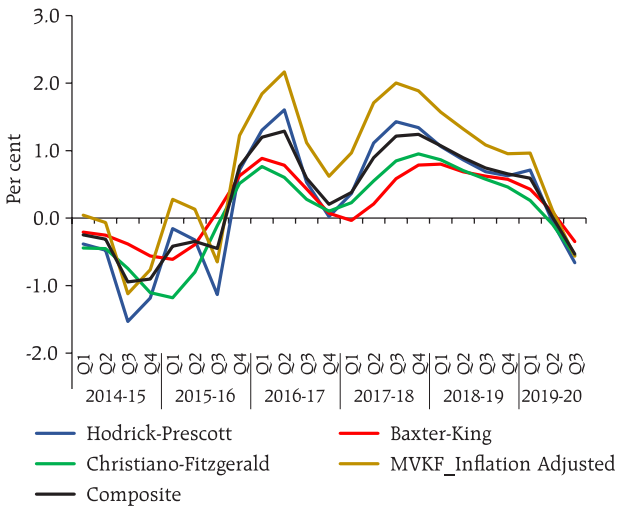
The output gap – the deviation of actual output from its potential level and expressed as a proportion to potential output – is a summary measure of demand-supply conditions in the economy and an important input for monetary policy formulation, since it provides a 'fix' about the position of the economy *vis-à-vis* the underlying business cycle. As potential output is unobservable, it has to be empirically estimated and hence, it is sensitive to the choice of methodology, time period and revisions in data. A variety of measures - univariate filters such as the Hodrick-Prescott (HP) filter, the Baxter-King (BK) filter and the Christiano-

**Chart III.20: Housing Sector – Launches, Sales and Prices**




**Sources:** PropTiger; and RBI staff estimates.

**Chart III.21: Output Gap Estimates**




**Note:** MVKF: Multivariate Kalman Filter.
**Source:** RBI staff estimates.

Fitzgerald (CF) filter and the multivariate Kalman filter (MVKF) taking into account inflation developments – are used to assess the state of business cycle. The composite estimate, by combining all these measures, suggests that the output gap was negative in Q3:2019-20 (Chart III.21).

### III.4 Conclusion

In Q3:2019-20, the economy hit a multi-quarter low and going forward, the risks are tilted largely to the downside. Private consumption, in particular, is at serious risk from the COVID-19 pandemic, notwithstanding improved *rabi* prospects and the recent rise in food prices, and the rationalisation of personal income tax rates in the Union Budget 2020-21 along with measures to boost rural and infrastructure spending. Aggregate demand is expected to be impacted adversely by likely recession in the global economy, caused by disruptions in global supply chains, travel and tourism, and lockdowns in many economies. Domestic production will also be impacted by the nation-wide lockdown. In the near-term, the challenge is to mitigate the adverse impact of COVID-19.

# *IV. Financial Markets and Liquidity Conditions*

*Domestic financial markets were overwhelmingly influenced by evolving domestic and global developments and the outbreak of COVID-19 in India in end-January 2020. Markets witnessed heightened volatility beginning February, culminating into a state of seizure in March with sharp shrinkage in trading activity. Search for safe haven assets and flight to safety resulted in large scale capital outflows which sent equity markets into a tailspin and exerted sharp depreciation pressure on the Indian Rupee. The risk premium in the bond markets increased sharply amidst increasing fears of illiquidity.*

Global financial markets turned volatile during the latter part of H2:2019-20 against the backdrop of geo-political tensions between Iran and the US and outbreak of the coronavirus (COVID-19) pandemic, the latter overwhelming the positive impact of de-escalation of trade tensions between the US and China and the UK election outcome being conducive to an amicable resolution of Brexit. Towards end-February and early-March, global markets experienced episodic meltdowns as COVID-19 spread out of China to many countries rapidly. The severity of the crisis prompted emergency rate cuts by the US Federal Reserve on March 3 and March 15, 2020. Similar moves by the central banks in Canada, the UK, Australia, New Zealand and several others were backed up by measures, both conventional and unconventional to unfreeze markets, ensure adequate liquidity and ease financial conditions. Amidst heightened uncertainty, equity markets in many advanced economies (AEs) and emerging market economies (EMEs) suffered their worst week after the global financial crisis (GFC) during March 9-16, 2020. Bond yields fell sharply, most noticeably in the US where the 10-year benchmark yield fell below 1 per cent on the days of the Fed rate cut on March 03 and March 15. In currency markets, the US dollar appreciated in December as trade tensions receded and gained further on safe haven demand after the COVID-19 outbreak. Most EME currencies weakened sharply with flight to safety intensifying in late February and early March.

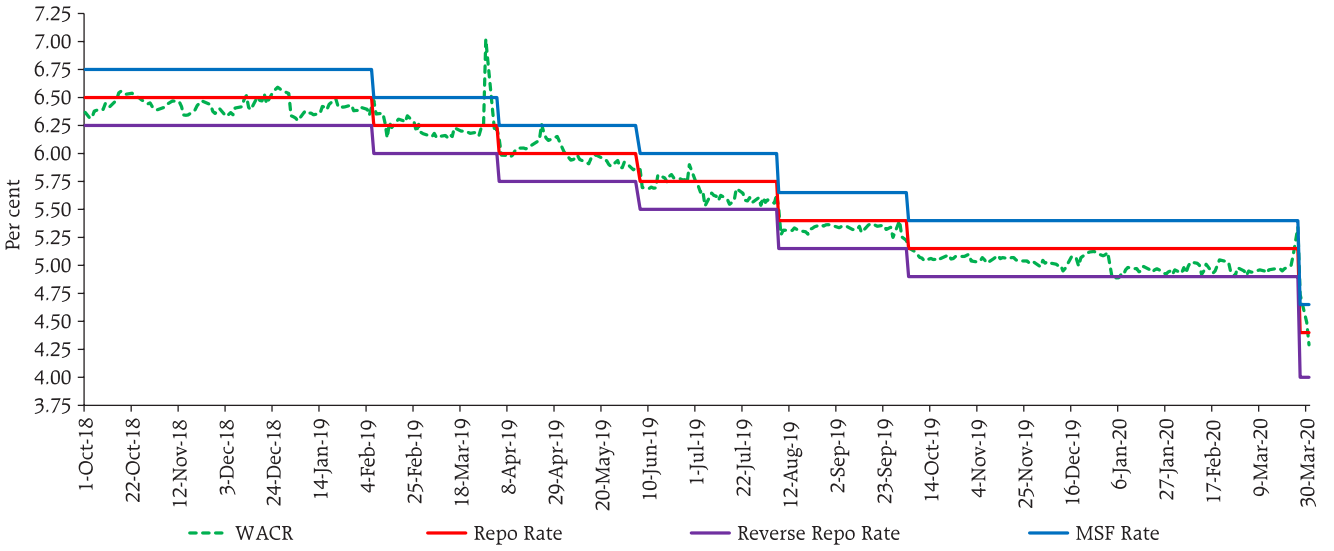
## IV.1 Domestic Financial Markets

During H2:2019-20, domestic financial markets exhibited divergent movements. A policy rate cut in October 2019 and liquidity management operations undertaken by the Reserve Bank of India (RBI) enthused market sentiment but growing concerns about the domestic economic slowdown, fiscal slippages, geo-political tensions and heightened uncertainties caused by the rapid spread of COVID-19 posed significant challenges, particularly towards the close of Q4. An unscheduled meeting of the Monetary Policy Committee (MPC) of the RBI on March 24, 26 and 27 delivered an unprecedented reduction in the policy repo rate and the announcement of several liquidity-augmenting measures briefly assuaged market fears (see Box IV.3).

In the credit market, monetary policy transmission was facilitated by large surplus liquidity, long term repo operations (LTROs) targeted to reduce banks' cost of funds, simultaneous purchase and sale of securities under open market operations (special OMOs)[1] and exemption from cash reserve ratio (CRR) requirements to incentivise lending to specific sectors. Equity markets scaled a new high on January 14, 2020, but turned highly volatile thereafter in sync with global markets. The Indian Rupee (INR) came under pressure due to fears sparked by the spread of

[1] These operations have been commonly referred to as "operation twist" by the financial media drawing on the experience of the US Federal Reserve having conducted two such operations in 1961 and 2011 in a bid to lower long-term interest rates and provide a boost to the economy by making credit cheaper for businesses, industries and other borrowers.

**Chart IV.1: Policy Corridor and WACR**




**Source:** Reserve Bank of India (RBI).

pandemic and flight to safety. In the event, however, the depreciation of INR was significantly lower than currencies of many EME peers.

### IV.1.1 Money Market

Money markets have remained broadly resilient reflecting the RBI's proactive liquidity management operations. During H2, the weighted average call rate (WACR) in the unsecured overnight money market has remained within the policy corridor with a downward bias (13 bps below the repo rate on an average basis) reflecting sustained surplus liquidity (Chart IV.1). The WACR spiked in the typical financial year-end phenomenon, compounded by reduced market participation because of the COVID-19 induced nation-wide lockdown.

In the overnight call money segment, the weighted average rate of traded deals continued to be higher than that of reported deals.[2] The share of traded deals (in terms of volume) was also higher *vis-a-vis* reported deals, though the latter picked up in H2 *vis-à-vis* H1 on: (i) increased lending by co-operative banks; and (ii) higher levels of surplus liquidity in the second half of the year (Chart IV.2).

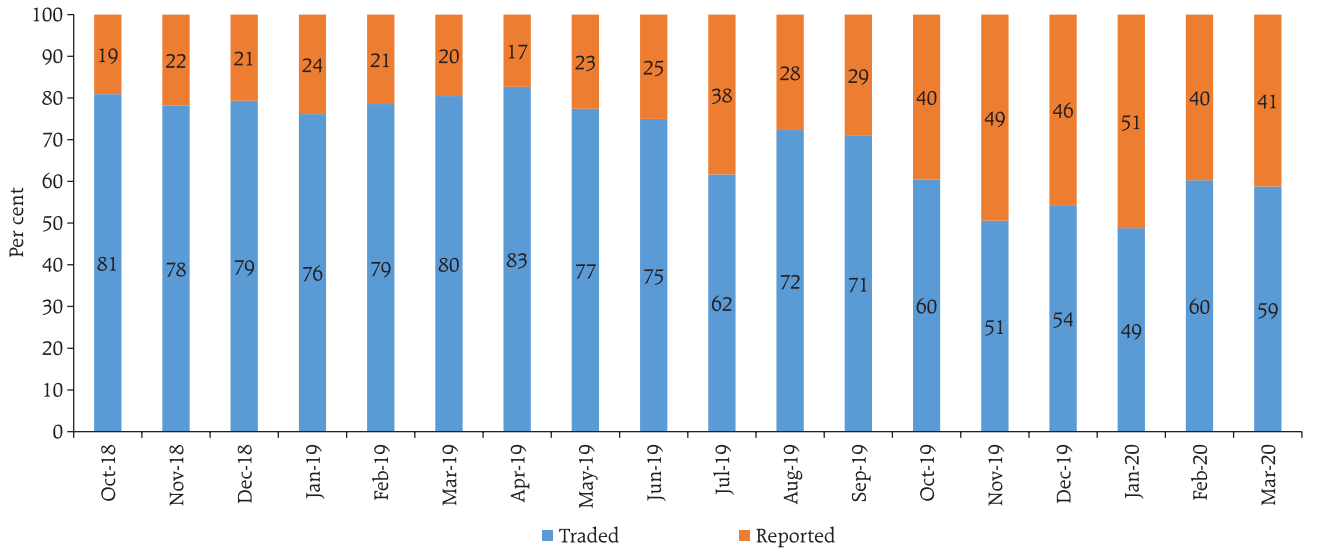
The share of the collateralised money market (triparty repo and market repo) in the overnight money market volume increased in H2:2019-20 (Chart IV.3). The dependency of banks on the call money market, however, has increased (the share of call money in total overnight transactions increased to 6 per cent during February-March 2020 from 4 per cent in January), partly reflecting the discontinuation of the daily fixed rate repo operations since February 14, 2020 as part of the revised liquidity management framework announced on February 06, 2020 (see Box IV.2).

In particular, the share of triparty repo in overnight money market volumes improved due to increased lending by mutual funds (MFs) from October 2019. The change in the cut-off timing[3] for applicability of net asset value (NAV) on purchase of units in liquid and overnight funds has given more leeway to asset management companies (AMCs) to deploy funds in

[2] 'Traded deals' are deals negotiated directly on the NDS-Call platform whereas 'reported deals' are over-the-counter (OTC) deals which are reported on the NDS-Call platform after the completion of negotiation of deals.

[3] The cut-off timing for computing NAV was advanced from 2:00 PM to 1:30 PM by the Securities and Exchange Board of India (SEBI) on September 20, 2019.

**Chart IV.2: Share of Traded/Reported Deals in Call Money Market**

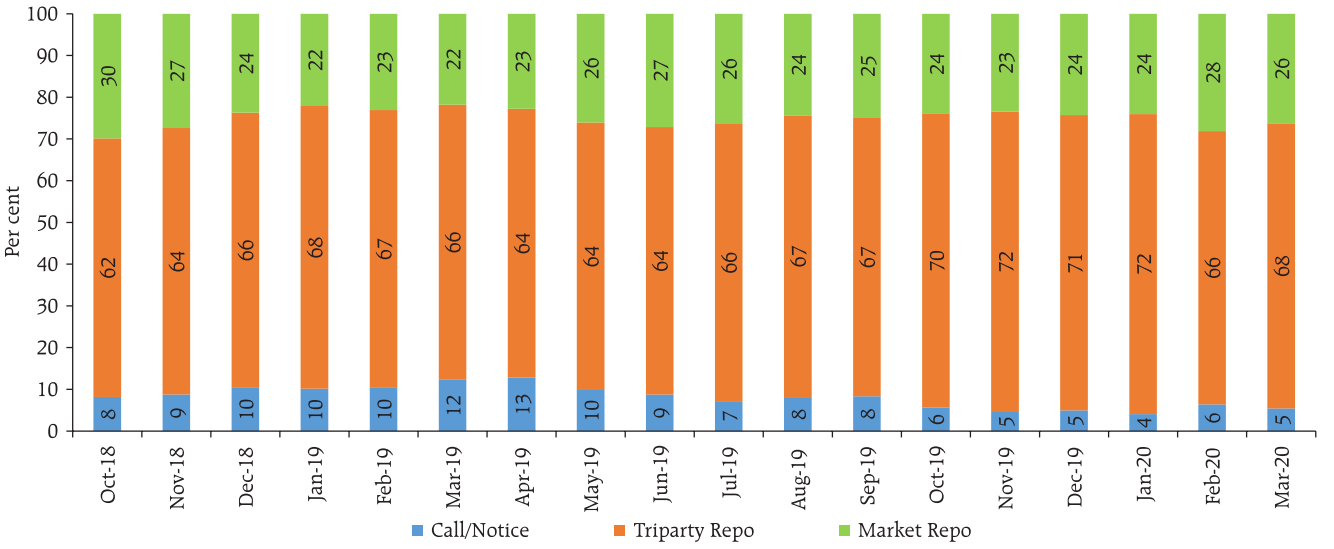



**Sources:** Clearing Corporation of India Ltd. (CCIL); and RBI staff estimates.

the triparty repo segment. Accordingly, the share of lending by MFs in triparty repo increased from 60.5 per cent in September 2019 to 64.7 per cent in October and peaked at 72.1 per cent in March. Concomitantly, borrowings by MFs reduced sharply from 9.8 per cent in September 2019 to 2.4 per cent in October, averaging only 2.2 per cent in the succeeding months.

During H2:2019-20, interest rates in the collateralised overnight money market segments softened in tandem with the WACR, though the moderation was more pronounced around the time of the conduct of the third auction of the special OMOs on January 06, 2020. Overnight rates in the triparty repo and market repo segments declined

**Chart IV.3: Share in Overnight Money Market Volumes**



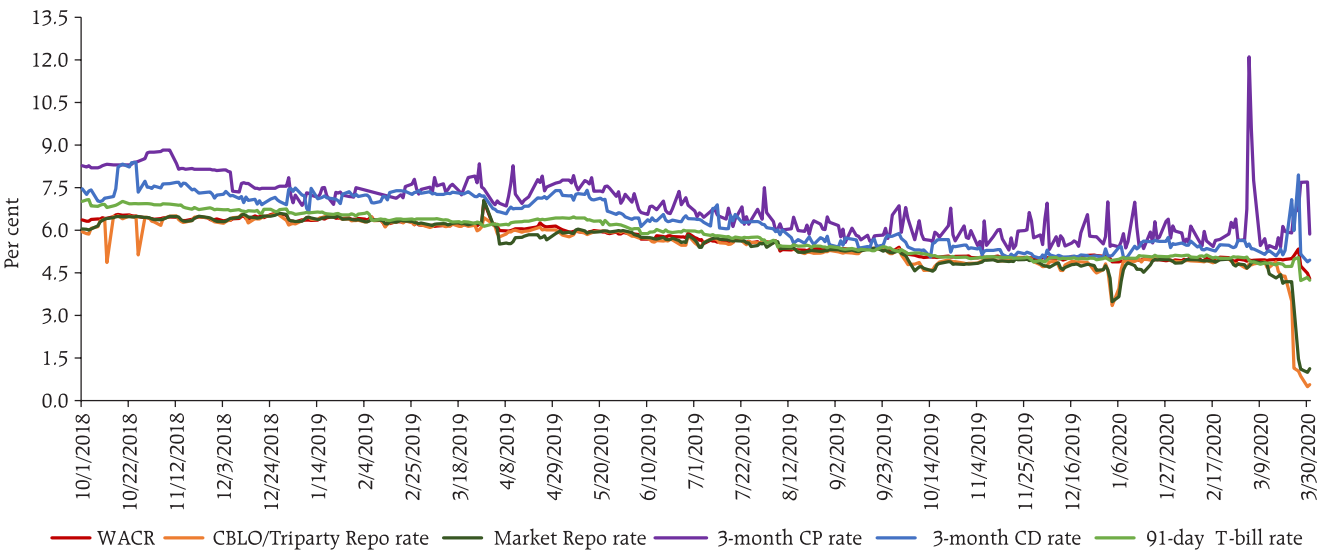

**Sources:** CCIL; and RBI staff estimates.

sharply towards end-March 2020, with the former trading close to zero as liquidity surplus increased in the wake of extreme risk-aversion gripping investors, including corporates and non-banks. The triparty repo and market repo traded below the WACR (on an average) by 36 bps and 37 bps, respectively, in H2. Interest rates on longer-term money market instruments such as certificates of deposit (CDs), commercial paper (CPs) and treasury bills (T-Bills) of 3-month maturity moved divergently, responding to the policy rate cut in October and the build-up of surplus liquidity (Chart IV.4). CP rates experienced intermittent bouts of volatility before hardening in late-February and early-March 2020.

In view of the persistent liquidity surplus, banks reduced their recourse to CDs as fresh issuances declined to ₹1,86,954 crore during H2:2019-20 from ₹2,01,302 crore during H1. CP issuances also declined to ₹10,02,667 crore in H2 from ₹12,38,324 crore in H2:2018-19, mainly reflecting risk aversion. The weighted average discount rate (WADR) of CPs in the primary market generally eased up to February (i) in sync with the build-up of surplus liquidity; and (ii) with the predominance of issuances by top rated issuers backed by relatively stronger parent companies. The WADR, which had firmed up by 24 bps in December 2019 reflecting credit rating concerns, increased sharply by 229 bps in March on account of contagion fears arising out of (i) COVID-19 induced financial stress; and (ii) interconnectedness in the banking system with distress in a private sector bank (Chart IV.5a). The share of non-banking financial companies (NBFCs) in primary issuances of CPs, which had declined immediately after the IL&FS crisis, increased in October subsequently peaking at around 35 per cent in March 2020 (Chart IV.5b).

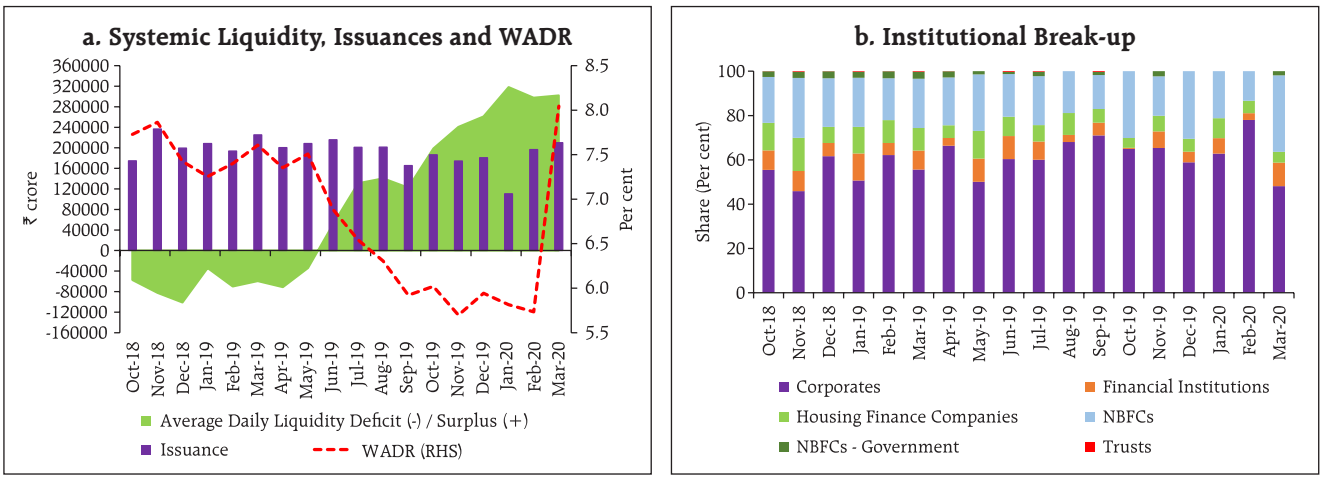
Monetary policy transmission was more than proportionate in the triparty repo and market repo segments, facilitated by large surplus liquidity conditions in H2:2019-20 and partly due to the year-end phenomenon as discussed earlier (Table IV.1). The risk premium (on an average) in the money market (3-month CPs *over* 91-day T-Bills), however, firmed up to 97 bps in H2 from 87 bps in H1, driven by

**Chart IV.4: Money Market Rates**




**Sources:** RBI; CCIL; F-TRAC, CCIL; FBIL and RBI staff estimates.

**Chart IV.5: Primary Issuances of Commercial Paper**




**Sources:** RBI; F-TRAC, CCIL; and RBI staff estimates.

fears of illiquidity and market seizure post COVID-19 induced turbulence in global and domestic financial markets.

### IV.1.2 Government Securities (G-sec) Market

At the beginning of H2:2019-20, the benchmark G-sec yield softened by 4 bps on (i) market expectations of monetary policy easing; (ii) the Centre's decision to announce the auction of a new 10-year paper; and (iii) a benign inflation trajectory. Yields, however, firmed up by 8 bps after the policy announcement on October 4, 2019 as the rate cut of 25 bps fell short of market expectations. Yields continued to harden thereafter due to persistent worries about the Centre's finances, expectation of a rise in inflation prints and subdued appetite for government paper. They moderated towards end-October, however, taking cues from (i) a decline in the overnight index swap (OIS) rates; (ii) a fall in global crude oil prices; and (iii) softening of US treasury yields. Overall, the benchmark yield declined by 5 bps during October 2019.

Yields firmed up by 7 bps on both the new benchmark (6.45% GS 2029) and the old benchmark (7.26% GS 2029) as on November 5, 2019 reflecting concerns about fiscal slippages, and the hardening of US treasury yields. At the beginning of December, both benchmark yields increased due to market sentiment turning jittery about the Centre's fiscal position. On the day of the monetary policy announcement on December 5, yields hardened by 14 bps on the new benchmark and by 18 bps on the old benchmark in the wake of (i) the MPC's decision to keep the policy rate unchanged in the face of upside risks to inflation; and

**Table IV.1: Policy Transmission in the Money Market**

(basis points)

| | Changes in rate | | | | | | |
|---|---|---|---|---|---|---|---|
| **2019-20** | **Repo** | **Call/Notice (WACR)** | **Triparty Repo** | **Market Repo** | **3-Month CD** | **91-Day T-Bill** | **3-Month CP** |
| H1: (April 02 – Sep 30) | -85 | -162 | -111 | -178 | -132 | -90 | -59 |
| H2: (Oct 01 – Mar 31) | -100 | -111 | -477 | -416 | -94 | -100 | -100 |

**Note**: easing (-) / hardening (+).
**Sources**: RBI; CCIL; F-TRAC, CCIL; FBIL; and RBI staff estimates.

(ii) foreign portfolio investors (FPIs) selling heavily on a pessimistic growth outlook. Market participants, however, welcomed the Reserve Bank's decision to conduct special OMOs on December 19, which resulted in new and old benchmark yields shedding 15 bps and 13 bps, respectively.[4] Yields softened at the long end, while firming up at the short-end, thereby reducing the term premium (Box IV.1). On the whole, the new and the old benchmark yields increased by 9 bps and 15 bps, respectively, in December.

### Box IV.1: Estimating Term Premium and its Determinants

The term premium is the difference in yield of a long-term bond *vis-a-vis* a short-term bond and reflects the excess return investors demand for holding bonds of longer maturity (Swanson, 2007). The long-term interest rates at any maturity can be decomposed into two components: (i) risk-neutral rate that reflects expectations of future short-term rates; and (ii) term premium, which is indicative of investors' expectations relating to future central bank policy, inflation and growth outlook, given the expected future path of short-term interest rates.

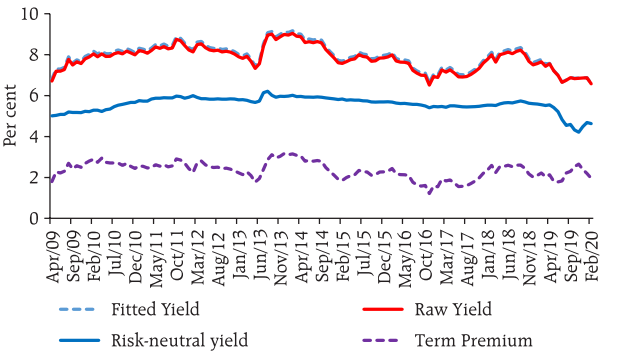
The Adrian, Crump and Moench (ACM) approach, which allows for the decomposition of yield into risk-neutral component and term premium, belongs to the regular class of dynamic term structure models (Adrian *et al.*, 2013). These models are premised on the no-arbitrage condition[5]. The ACM approach uses principal components of bond yields as pricing factors. The risk-neutral rate is modelled as a linear function of these pricing factors. The longer-term yields are also obtained as linear functions of the pricing factors, with appropriate restrictions on parameters to incorporate the assumptions of the no-arbitrage, affine term-structure models. The time-varying term premium is the difference between the model-fitted yield and the risk- neutral yield.

*Decomposition*

Empirical analysis in the Indian context involves decomposition of 10-year government bond yield into expectation and term premium components following the ACM methodology (Dilip, 2019), based on monthly data on 10-year G-sec yields spanning April 2009 to February 2020. This shows that the 10-year yield has broadly tracked movements in the term premium (Chart IV.1.1).

The contribution of the term premium in G-Sec yields approximated as $\frac{\Delta Term\ Premium^2}{\Delta Term\ Premium^2+\Delta Risk-neutral\ yield^2}$ indicates that the term premium monotonically increases across the term structure, accounting for more than 84 per cent of the fluctuations in 10-year G-Sec yields (Table IV.1.1). While term premium accounts for only about 27-39 per cent of the fluctuations in short-term yields (1 to 2-years), around 73-61 per cent of the variation is attributed to changes in expectation on short rates. In contrast, the US term premium explains a relatively higher proportion of variation in short-term yields.

**Chart IV.1.1: 10-Year G-Sec Yield Decomposition**




**Sources**: CCIL; US Fed; and RBI staff estimates.

**Table IV.1.1: Share of Term Premium in Bond Yield Variations**

(per cent)

| Tenor | India | US |
|---|---|---|
| 1-year | 26.7 | 41.4 |
| 2-years | 38.8 | 45.0 |
| 3-years | 50.4 | 49.8 |
| 4-years | 58.5 | 53.3 |
| 5-years | 64.1 | 55.9 |
| 6-years | 70.2 | 58.1 |
| 7-years | 74.7 | 60.1 |
| 8-years | 78.1 | 61.9 |
| 9 years | 81.6 | 63.7 |
| 10 years | 84.4 | 65.4 |

**Source**: RBI staff estimates.

*(contd.)*

[4] Reflecting these operations, the 10-year G-sec yield softened cumulatively by 61 bps between December 19, 2019 and March 31, 2020. During the intervening period, however, the yields fell by as much as 69 bps.

[5] Two securities that provide the same future cash flow and have the same level of risk must sell for the same price.

In order to identify the determinants of the term premium in India, the 10-year term premium is regressed on its own lag, G-Sec market depth proxied by daily average turnover as proportion of GDP, international oil prices, the INR-USD spot exchange rate, systemic liquidity measured by outstanding balances under the liquidity adjustment facility as proportion of GDP, and both global and India-specific policy uncertainty represented by Global Economic Policy Uncertainty Index (GEPU) and Economic Policy Uncertainty (EPU) for India, respectively. The differenced series of all the explanatory variables is found to be stationary and the equation is estimated in an ordinary least squares (OLS) framework. Most of the estimated coefficients are statistically significant with expected signs (Table IV.1.2). The high coefficient of the lagged term indicates persistence of the term premium. The significance of the turnover and systemic liquidity variables is indicative of the important role of liquidity in higher demand for bonds and a consequent reduction in term premium. Movements in oil prices and the exchange rate of Indian Rupee (INR) also impact yields significantly – a spike in oil prices and a depreciation of the INR leads to search for safe haven assets among investors, resulting in flight to safety (panic selling) and increase in term premium. Global uncertainty (lagged) and Indian policy uncertainty, although having a positive impact, are not statistically significant.

**Table IV.1.2: Determinants of Term Premium**

| Variable | Coefficient |
|---|---|
| Term_Premium (-1) | 0.83 *** (9.60) |
| ΔAverage_Turnover | -5.35*** (-5.57) |
| Δ(Crude_Oil_Price) | 0.02***(6.65) |
| Δ(INR/USD) | 0.08*** (3.33) |
| Δ(Systemic_Liquidity) | -0.89**(-2.14) |
| Δ (Global_ Uncertainty)(-1) | 0.003(0.77) |
| Δ(Policy_Uncertainty) | 0.001(0.81) |
| c | 0.29* (1.76) |
| R-bar$^2$ | 0.82 |
| Durbin Watson | 1.64 |
| LB-Q (p-value) | 0.59 |

***, **, * represent significance at 1%, 5% and 10% levels, respectively

**Note**: Figures in parentheses are t-statistics based on heteroscedasticity and autocorrelation consistent (HAC)-corrected standard errors; LB-Q is p-value of Box-Pierce-Ljung Q-statistic for the null hypothesis of no correlation up to 4 lags; and Δ is the difference operator.

Average_Turnover = Daily average turnover (% of GDP), Crude_Oil_Price = Price of Brent Crude Oil in USD/barrel, INR/USD= Spot Rupee-US Dollar exchange rate, Systemic_Liquidity = Outstanding LAF balance (% of GDP), Global_ Uncertainty = Global Economic Policy Uncertainty Index (GEPU), Policy_Uncertainty = Economic Policy Uncertainty (EPU) for India.

**Source**: RBI staff estimates.

**References:**

Adrian, T., Crump, R. K., & Moench, E. (2013), "Pricing the term structure with linear regressions", Journal of Financial Economics, 110(1), 110-138.

Dilip, A. (2019), "Term premium spillover from the US to Indian markets", RBI Working Paper Series, WPS (DEPR): 05 / 2019, December.

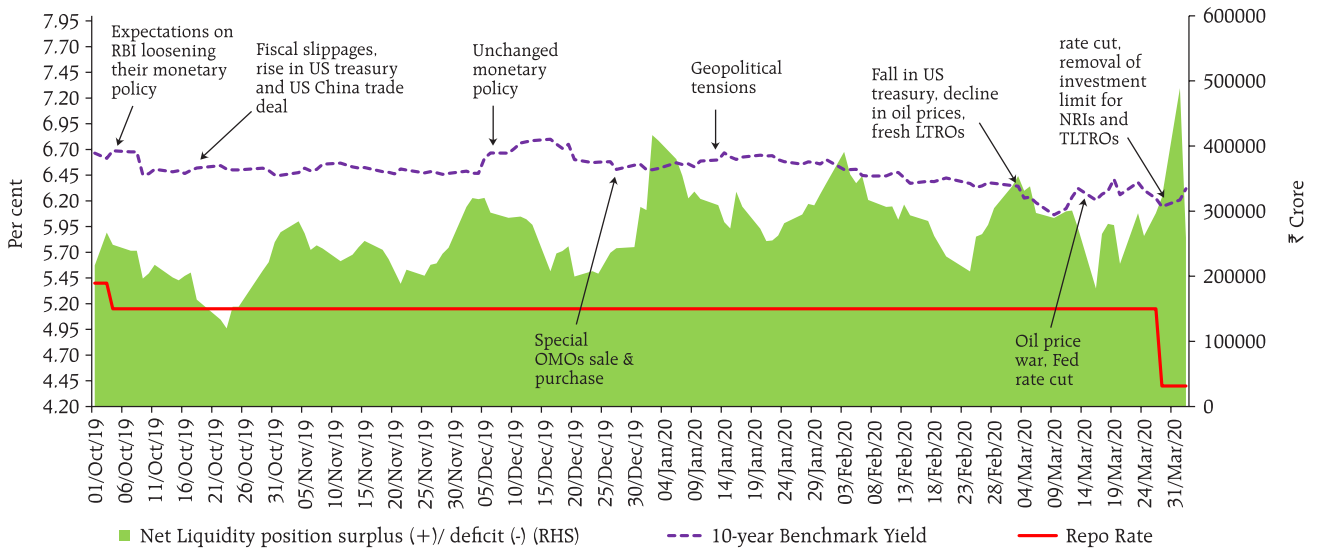
Swanson, E. T. (2007), "What we do and don't know about the term premium", FRBSF Economic Letter, Number 2007-21, July.

At the beginning of January, most government papers in the 10-14-year maturity segment gained on expectations of open market purchases of long-term bonds by the Reserve Bank. Bond prices, however, fell subsequently because of lower than expected cut-off in the special OMOs. The escalation in yields continued due to rising tensions between the US and Iran and a higher than expected inflation print in January 2020. Overall, the new and the old benchmark rose by 4 bps and 7 bps, respectively, during January 2020.

After the Union Budget, the market was pleasantly surprised as the government refrained from additional market borrowing for 2019-20, despite an upward revision in the projected fiscal deficit. Consequently, new and old benchmark yields fell by 10 bps and 14 bps, respectively, at the beginning of February. Yields moderated significantly on announcement of long term repo operations (LTROs) to infuse additional liquidity at the policy rate (Chart IV.6).[6] Overall, the new and the old benchmark fell by 23 bps and 26 bps, respectively, during February 2020.

[6] Since the announcement of LTRO on February 6, yields on 1-year, 3-year, 5-year and benchmark 10-year G-sec paper have come down by 62 bps, 71 bps, 31 bps and 37 bps, respectively, by end-March, 2020.

**Chart IV.6: 10-year Generic Yield, Repo Rate and Liquidity Conditions**




**Sources:** RBI; and Bloomberg.

In early-March, yields started with a softening bias of 19 bps and 13 bps in the new and old benchmarks, respectively, due to (i) unscheduled reduction of 150 bps (in two phases) by the Fed in its policy rate; and (ii) fall in crude oil prices due to Saudi Arabia increasing its supply. Yields, however, hardened thereafter due to (i) crude prices firming up in the wake of the US pledging fiscal stimulus to arrest the pandemic; (ii) a sharp depreciation of the INR triggered by COVID-19 driven panic sales by FPIs; and (iii) fears of global recession triggering a shortfall in global dollar liquidity. Yield on the new benchmark, however, fell by 15 bps with announcement of OMO purchases on March 20. The fall in yields was, however, transient as (i) the rupee depreciated to a new record low; and (ii) shrinking G-sec volumes exacerbated the fall in prices. In the backdrop of COVID-19 related stress, the RBI announced several measures on March 27, 2020. In this milieu, while the market frowned over the prospect of larger than expected government borrowings, it welcomed the Reserve Bank's policy announcement to remove investment limit for non-residents in select dated securities. Overall, the new benchmark fell by 23 bps in March.

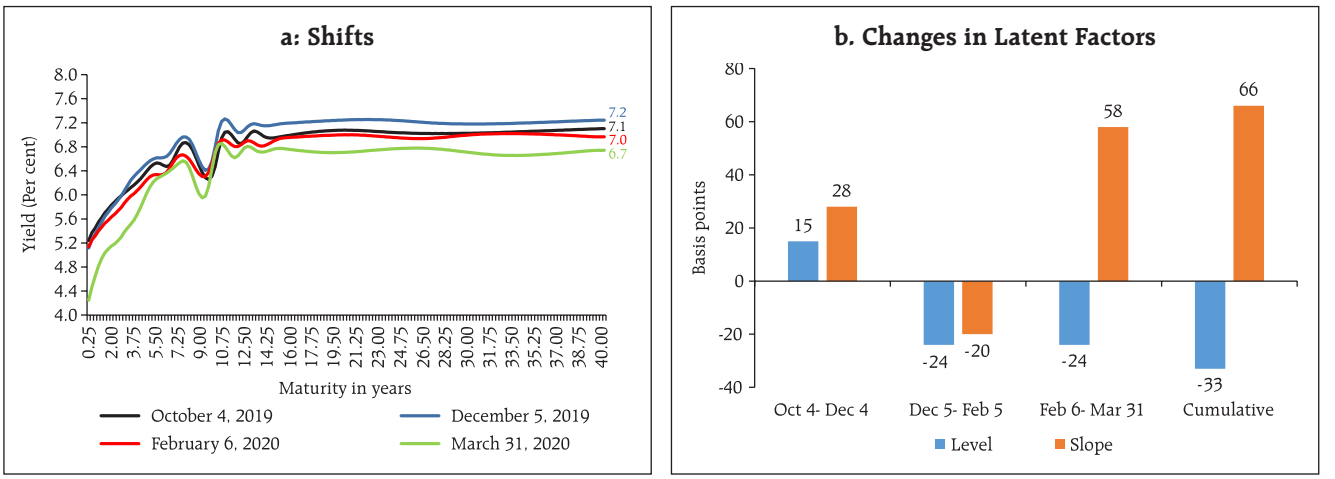
The yield curve underwent episodic shifts in H2:2019-20, characterised by its level and slope (Chart IV.7a).[7] Since the October monetary policy announcement, the average level of the yield softened by 33 bps, while the slope became steeper by 66 bps. Since the February policy announcement (up to March 31, 2020), the average level of the yield softened by 24 bps even as the slope steepened by 58 bps (Chart IV.7b).

*FPI Investments in G-sec*

With inflation remaining range bound in October 2019, foreign portfolio investors (FPIs) remained net buyers in the debt market. They turned net sellers, however, till January 2020 on concerns about government finances along with Moody's downgrading of India's credit rating (to "negative" from "stable") and fears of sovereign rating downgrade by S&P Global ratings. The lower fiscal deficit projected for 2020-21 in the Union Budget buoyed sentiment and FPIs turned net buyers in February. With heightened turbulence

[7] While the level is the average of all yields across maturities, the slope is represented by the difference in yield between the longest and the shortest maturity (term spread).

**Chart IV.7: G-Sec Yield Curve**




**Sources:** Financial Benchmark India Private Ltd (FBIL); and RBI staff estimates.

in domestic markets following worldwide financial market meltdown, FPIs again turned net sellers in March (Chart IV.8).

*Treasury Bills*

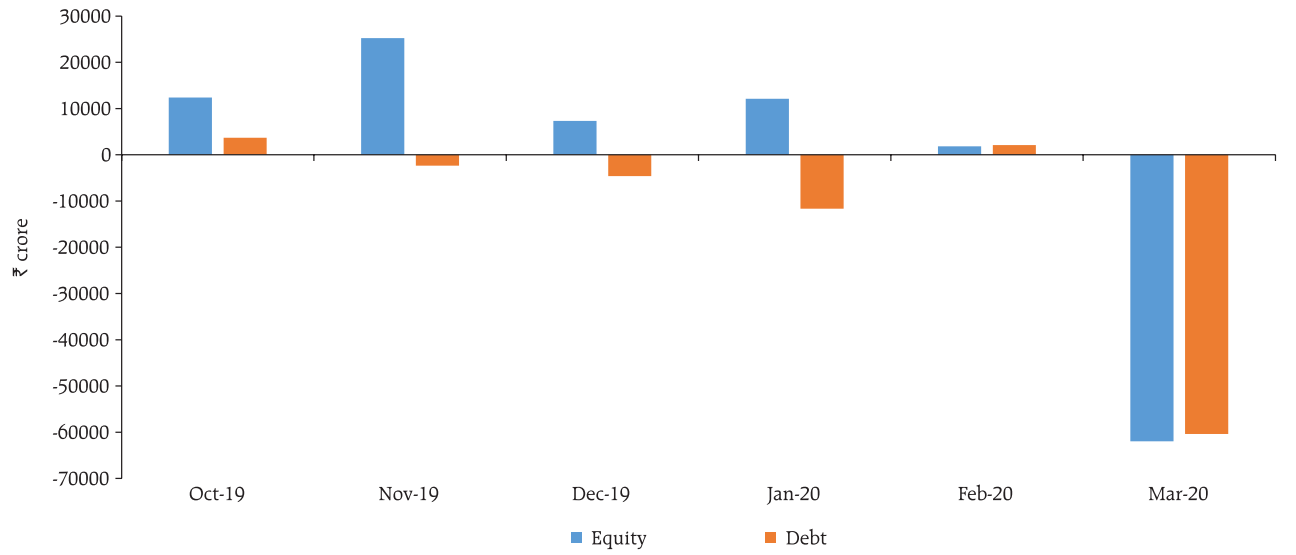
At the shorter end of the primary segment, yields on T-Bills softened during H2:2019-20, tracking the benchmark paper and even traded lower than the reverse repo rate in certain maturities due to surplus liquidity in the banking system (Chart IV.9).

The weighted average spread of state development loans (SDLs) cut-off over the corresponding G-sec yield increased to 55 bps in H2 from 52 bps in H1:2019-20 (Chart IV.10). The average inter-state spread on securities of 10-year tenor at 7.2 bps in H2 was higher by 3.2 bps than in H1.

*Switching of Securities*

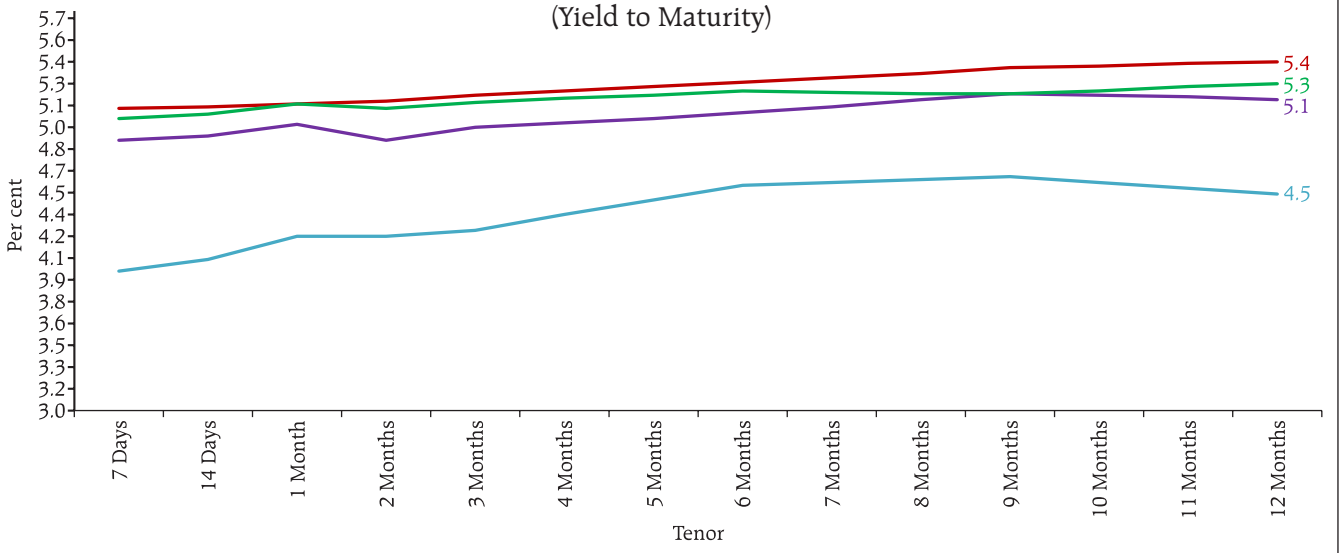
During H2:2019-20, the Reserve Bank conducted seven switch operations amounting to ₹1,24,694 crore

**Chart IV.8: FPI Investment in Equity and Debt**




**Source:** National Securities Depository Limited (NSDL).

**Chart IV.9: FBIL -T-Bill Benchmark**
(Yield to Maturity)



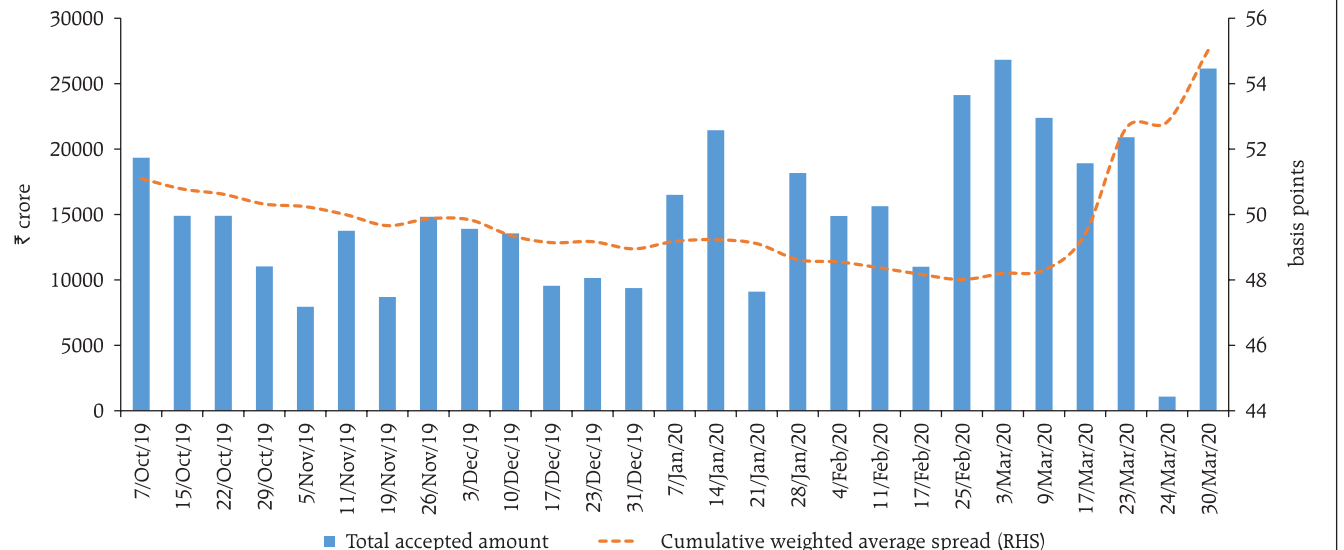

**Source:** FBIL.

for active debt consolidation. This partly contributed to the weighted average maturity (WAM) of outstanding stock of G-secs increasing to 10.54 years as on March 31, 2020 from 10.02 years as on September 30, 2019. As on March 31, 2020, the weighted average coupon (WAC) at 7.69 per cent was lower than 7.77 per cent at end-September 2019.

*Cash Balance of the Central Government*

At the beginning of H2:2019-20, the Government started with a negative cash balance and continued to avail ways and means advances/overdraft (WMA/OD) intermittently up to end-March. Cash management bills (CMBs) were issued seven times during

**Chart IV.10: SDLs - Amount Raised and the Spread**




**Source:** RBI.

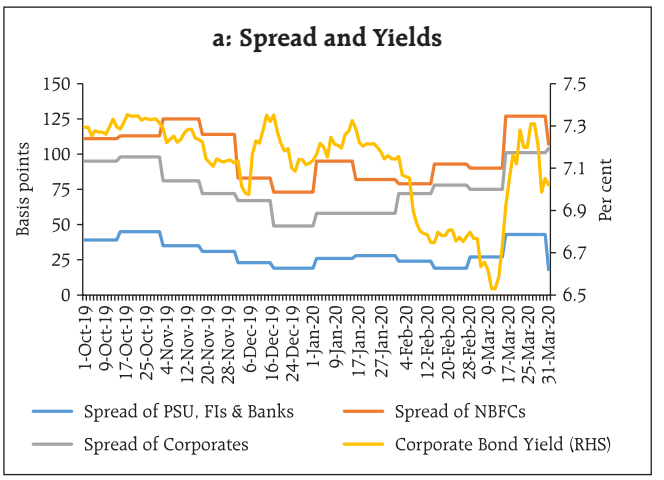
H2:2019-20 with maturities between 42-84 days[8] for a cumulative amount of ₹2,50,000 crore or 104.2 per cent of the revised estimate of ₹2,40,000 crore of CMBs for 2019-20.

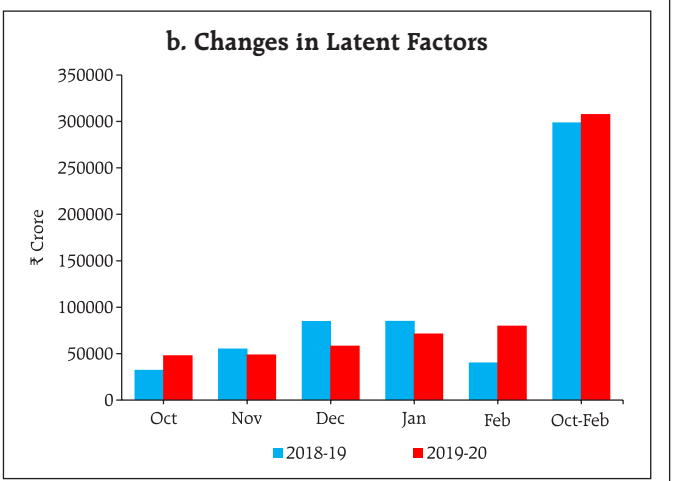
### IV.1.3 Corporate Bond Market

Corporate bond yields eased during H2:2019-20, largely tracking G-sec yields and reflecting surplus systemic liquidity conditions (Chart IV.11a). The AAA 5-year corporate bond yields softened by 42 bps – from 7.44 per cent at end-September 2019 to 7.02 per cent at end-March 2020. Overall, AAA 5-year yields moderated by 108 bps during 2019-20, reflecting the transmission of monetary policy actions to the corporate bond market and the impact of special OMOs and LTRO auctions during December 2019 - March 2020. The risk premia on bonds (5-year AAA corporate bonds *over* 5-year G-sec) issued by public sector undertakings (PSUs), financial institutions (FIs) and banks reduced by 26 bps while those issued by NBFCs reduced by 14 bps. In contrast, the risk premia on bonds issued by corporates increased by 5 bps. Reflecting the stress in the banking sector from a major private sector bank and declaration of the pandemic, State Bank of India's and ICICI Bank's 5-year credit default swap (CDS) spreads increased by 174 bps and 163 bps, respectively, during H2: 2019-20.

Resource mobilisation through issuances of corporate bonds in the primary market at ₹3.1 lakh crore during October 2019-February 2020 was higher by 3.0 per cent than ₹3.0 lakh crore during the corresponding period of the previous year (Chart IV.11b). Almost the entire resource mobilisation in the corporate bond market (97.9 per cent) was through the private placement route. In order to provide an alternative source of financing for public sector entities at lower cost and help deepen bond markets by diversifying the investor base with increased retail participation, the Government of India (GoI) launched the Bharat Bond Exchange Traded Fund (ETF) in December 2019 – the first ETF for corporate bonds in India – which mobilised ₹12,395 crore. Investments by FPIs in corporate bonds declined by 14.8 per cent – from ₹2.03 lakh crore at end-September 2019 to ₹1.73 lakh crore at end-March 2020. Consequently, FPIs' utilisation of the approved limit for investment in corporate bonds declined to 54.5 per cent at end-

**Chart IV.11: Corporate Bonds**

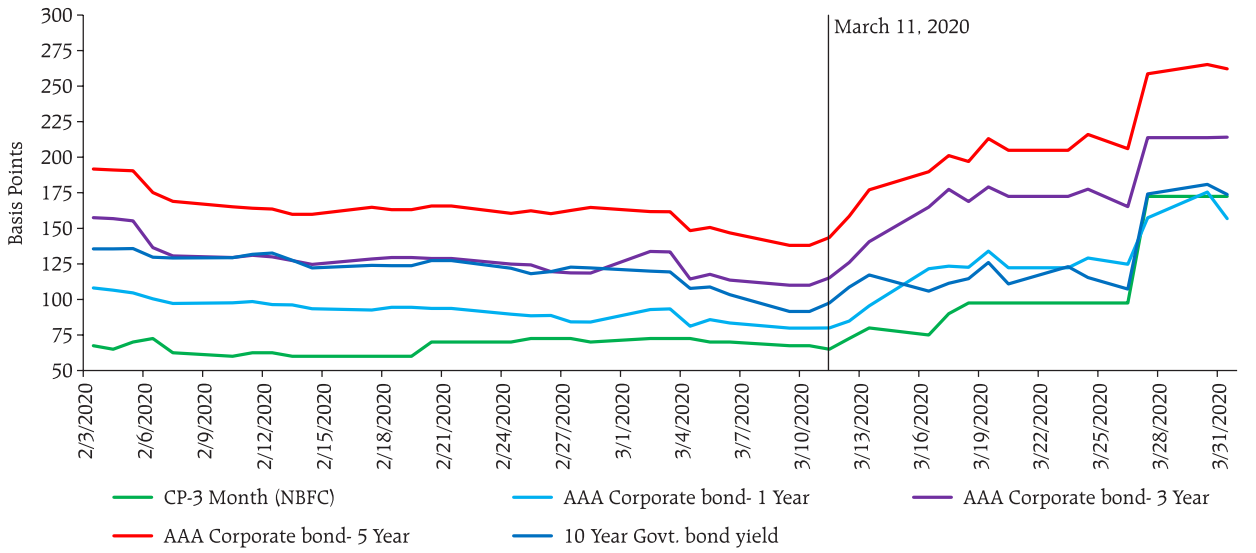



**Sources:** Bloomberg; and SEBI.

[8] The maturities of the CMBs were designed to alleviate the liquidity tightness caused by advance tax outflows in the second half of March 2020.

**Chart IV.12: Tightening Financial Conditions - Spread over Repo Rate**




**Sources:** RBI; and Bloomberg.

March 2020 from 66.9 per cent at end-September 2019. The average daily turnover in the corporate bond market increased to ₹8,460 crore during H2:2019-20 (up to March 6, 2020) from ₹7,097 crore during the corresponding period of H2:2018-19.

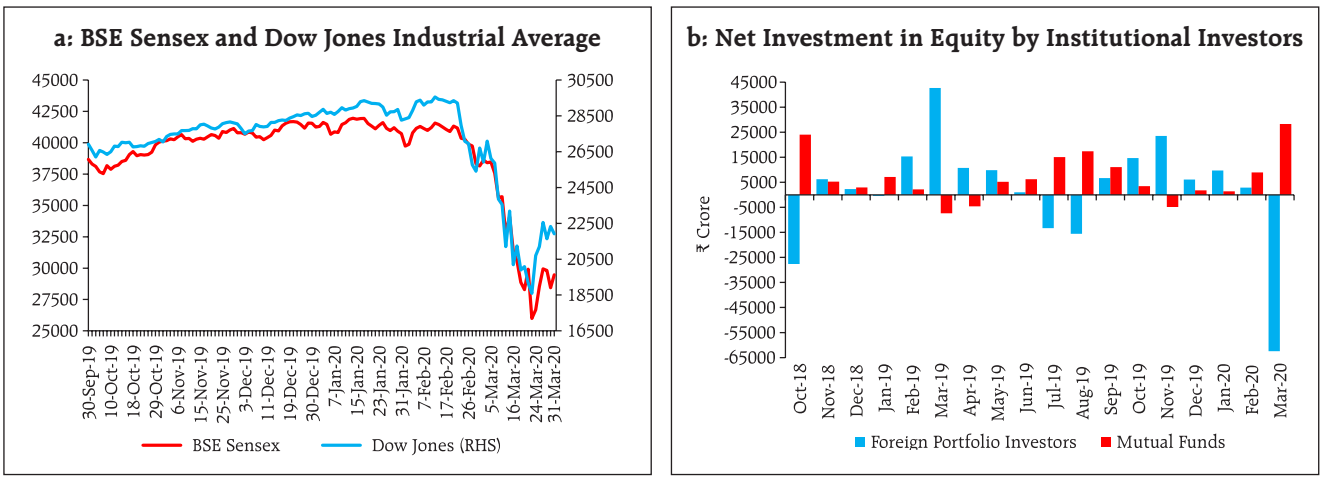
Following the declaration of COVID-19 as a pandemic on March 11, global financial markets were gripped by bearish sentiments. Heightened global turbulence resulted in a significant tightening of financial conditions in India since March 11, 2020 (Chart IV.12). While the spread of secondary market 3-month CP rates of NBFCs over the policy repo rate increased by 108 bps during the period March 11-31, that of AAA corporate bonds of 1-year, 3-year and 5-year maturity increased by 77, 99 and 119 bps, respectively. The spread of the benchmark 10-year G-sec over the policy repo rate also firmed up by 76 bps during the same period. The worsening of financial conditions is attributed to both external and domestic factors. While the upheaval in global markets sparked off panic sales by FPIs in search of safe haven assets, MFs liquidated their positions to create a liquidity buffer in anticipation of redemption pressures from investors.

### IV.1.4 Equity Market

The Indian equity market, which made sizable gains till mid-January 2020, recorded a sharp decline in the remaining part of H2:2019-20 tracking the deterioration in global equity market sentiment due to COVID-19. The BSE Sensex touched the 40,000 level during Q3:2019-20 but it came under intense pressure during Q4: 2019-20. Overall, the Sensex declined by 23.8 per cent during H2:2019-20 (Chart IV.13a).

The BSE Sensex reclaimed the 40,000 level on October 30, 2019 taking positive cues from global markets amidst fresh optimism over the US-China trade negotiations and agreement on Brexit deal between the UK and the European Union (EU). The uptrend continued in November and December on the back of growth boosting measures by the Government of India (GoI), support to the Insolvency and Bankruptcy Code amendment and approval for a partial credit guarantee scheme for public sector banks to purchase pooled assets from NBFCs. Furthermore, positive global signals emanating from the US Fed's dovish outlook, the US-China phase one trade deal and Brexit favouring UK election outcome also brightened market sentiment.

**Chart IV.13: Stock Market Indices and Investment**




**Sources:** Bloomberg; NSDL; and SEBI.

The buoyancy in the equity market continued till mid-January 2020 against the backdrop of a fall in global crude prices, recovery in industrial output in November, higher GST collection and expansion in manufacturing Purchasing Managers' Index (PMI) in December which pushed the Sensex to a record close of 41953 on January 14, 2020. Markets wilted, however, following the escalation of geo-political tensions between the US and Iran, a subdued domestic GDP growth outlook along with downward revision of India's growth forecast for 2019-20 by the International Monetary Fund (IMF).

The decline got accentuated on February 1, 2020 with the Sensex plunging by 988 points (2.4 per cent) as proposals in the Union Budget 2020-21 fell short of market expectations. A V-shaped recovery, however, was witnessed on the back of a sharp fall in crude oil prices, release of robust PMI data for January 2020 and announcement of credit and liquidity enhancing measures on February 6, 2020. Subsequently, Indian equity markets retracted in line with global markets reacting to COVID-19.

Growing risk aversion across the world triggered heavy sell-offs in equity markets, including in India, during March 2020. The BSE Sensex fell by 2919 points (8.2 per cent) on March 12, 2020. Market sentiment worsened the following day as market fell over 10 per cent during early hours of trading, attracting circuit breakers and suspension of trading for 45 minutes. This was followed by a statement from SEBI indicating that the fall in the Indian stock indices had been significantly lower than in many other countries and assuring market participants of suitable and appropriate actions, if required. Market rebounded, ending the day with a net gain of 1325 points (4.0 per cent), the largest ever recovery in a single day. Subsequently, however, bearish momentum returned due to (i) sharp moderation in global crude prices; (ii) reports of a spike in COVID-19 cases in India; (iii) strain on the banking sector caused by the distress of a private sector bank; and (iv) growing worries about global recession. Consequently, the Indian equity market breached the lower circuit for the second time during March 2020 with the BSE Sensex recording its biggest fall of 3,935 points (13.2 per cent) on March 23, 2020. Markets recovered thereafter amid expectations of fiscal measures by the government after the announcement of extension of regulatory deadlines and relaxation of norms for corporates and taxpayers. Subsequently, expectations of more fiscal stimulus buoyed market sentiment. Notwithstanding the

announcement of comprehensive liquidity measures by the Reserve Bank including sizeable reduction in policy rates, the BSE Sensex fell marginally on March 27. Overall, the BSE Sensex registered a sharp decline of 23.0 per cent during March 2020.

During H2, while MFs were net buyers to the tune of ₹ 38,989 crore (up to March 30), FPIs were net sellers at ₹5,599 crore in the Indian equity market (Chart IV.13b). FPIs, in particular, sold heavily with net sales amounting to ₹62,433 crore in March 2020.

In the primary segment of the equity market, resource mobilisation through public issues of equity (initial public offers and right issues) remained muted at ₹6,176 crore during October 2019-February 2020 (although higher than ₹3,429 crore in the corresponding period of the previous year).

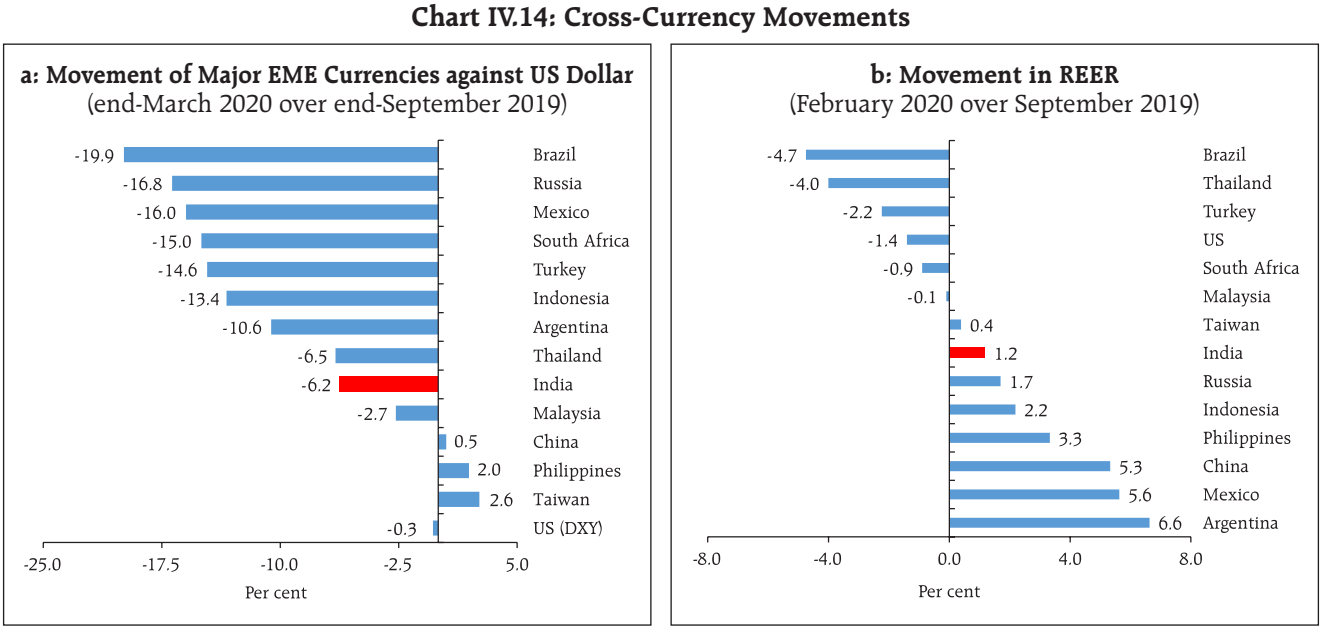
### IV.1.5 Foreign Exchange Market

The INR remained volatile during H2:2019-20 due to multiple factors referred to in preceding sections and the high volatility in equity markets. Portfolio investment was severely impacted. Consequently, EME currencies, including the INR, weakened sharply in March, with the latter depreciating to a low of ₹76.15 on March 24, 2020. While the INR depreciated by 6.2 per cent *vis-à-vis* the US dollar during H2:2019-20 (end-March 2020 over end-September 2019), the decline was modest in comparison with many EME peers such as the Thai baht, the Argentine peso, the Indonesian rupiah, the Turkish lira, the South African rand, the Mexican peso, the Russian ruble, and the Brazilian real (Chart IV.14a).

In terms of the 36-currency nominal effective exchange rate (NEER), the INR depreciated by 2.9 per cent (as at end-March 2020 over average of September 2019). The INR also depreciated by 1.3 per cent in terms of the 36-currency real effective exchange rate (REER) during the same period (Table IV.2).

Between September 2019 and February 2020, the appreciation of the INR in terms of the REER was modest as compared with those of the Russian ruble, the Indonesian rupiah, the Philippine peso, the Chinese yuan, the Mexican peso, and the Argentine peso (Chart IV.14b).

**Chart IV.14: Cross-Currency Movements**




**Sources:** RBI; FBIL; IMF; Bloomberg; Thomson Reuters; and Bank for International Settlements (BIS).

**Table IV.2: Nominal and Real Effective Exchange Rates – Trade-based Weights**

(Base: 2004-05 = 100)

| Item | Index: end-March 2020 (P) | Appreciation (+) / Depreciation (-) (Per cent) |
|---|---|---|
| | | end-March 2020 over September (average) 2019 |
| 36-currency REER | 114.6 | -1.3 |
| 36-currency NEER | 71.1 | -2.9 |
| 6-currency REER | 120.3 | -4.5 |
| 6-currency NEER | 60.3 | -5.5 |
| ₹/ US$ | 75.4 | -5.4 |

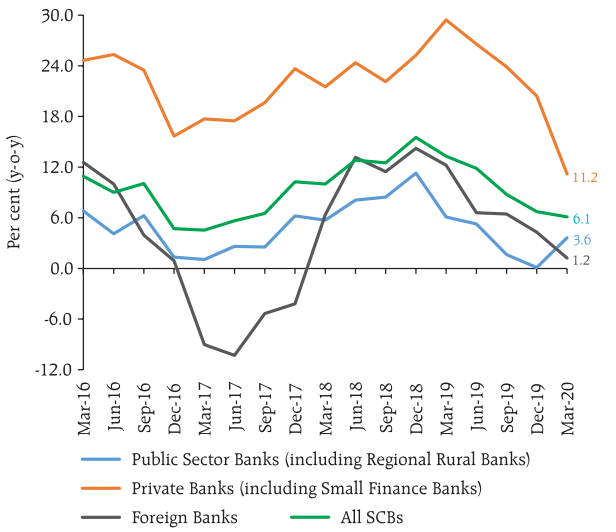
**P**: Provisional.
**Sources:** RBI; and FBIL.

### IV.1.6 Credit Market

Credit offtake during 2019-20 (up to March 13, 2020) was muted with non-food credit growth at 6.1 per cent being less than half the growth of 14.4 per cent in the corresponding period of the previous year. Both low momentum and unfavourable base effects were at work (Chart IV.15). The seasonal decline in Q3 credit growth in 2019-20 was more pronounced than a year ago, while the offtake during Q4:2019-20 (up to March 13) has been subdued as compared with the corresponding quarters of previous two years.

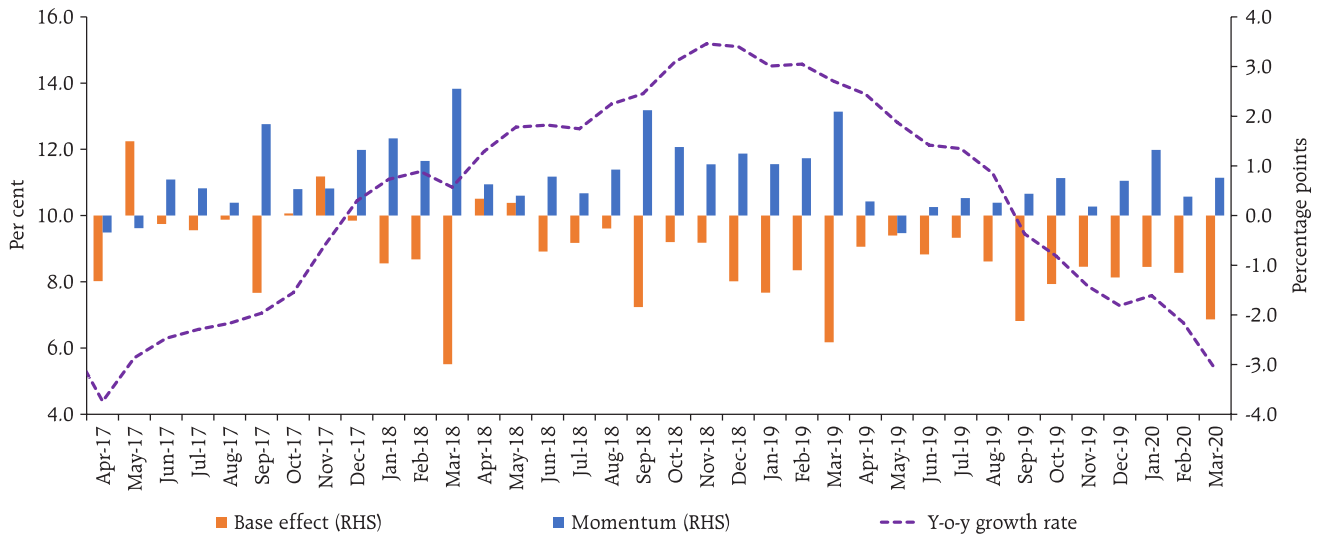
The slowdown in credit growth was spread across all bank groups, especially private sector banks. Credit growth of public sector and foreign banks remained modest, even as there has been some uptick in credit by public sector banks in the recent period (Chart IV.16). Of the incremental credit extended by scheduled commercial banks (SCBs) during the year

**Chart IV.16: Bank Group-wise Credit Growth**



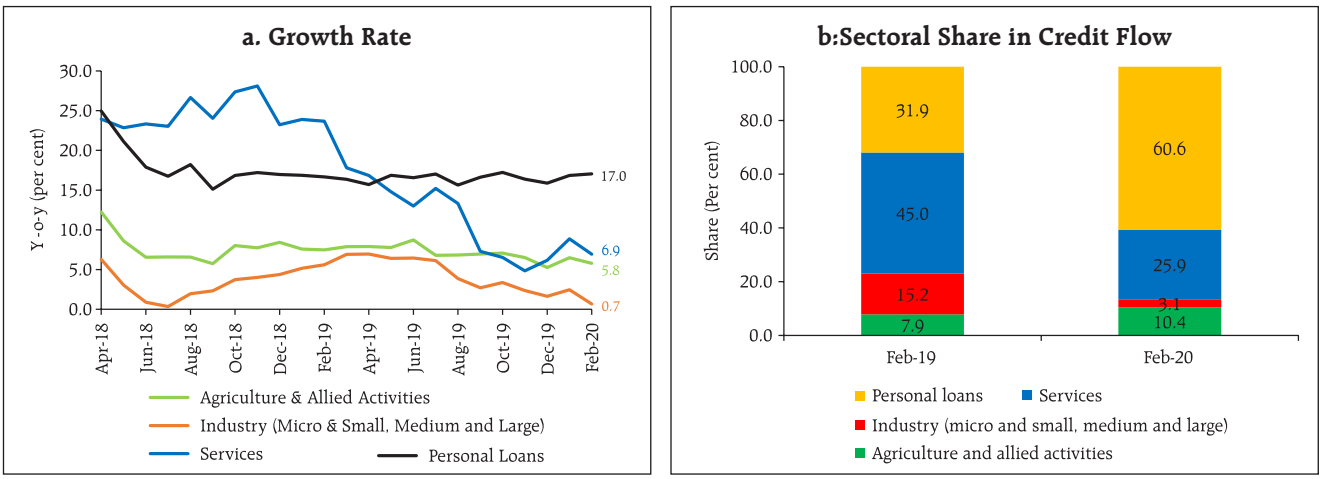

**Source:** RBI.

**Chart IV.15: Non-food Credit Growth of SCBs (Monthly Average)**




**Source:** RBI.

**Chart IV.17: Sectoral Deployment of Credit**



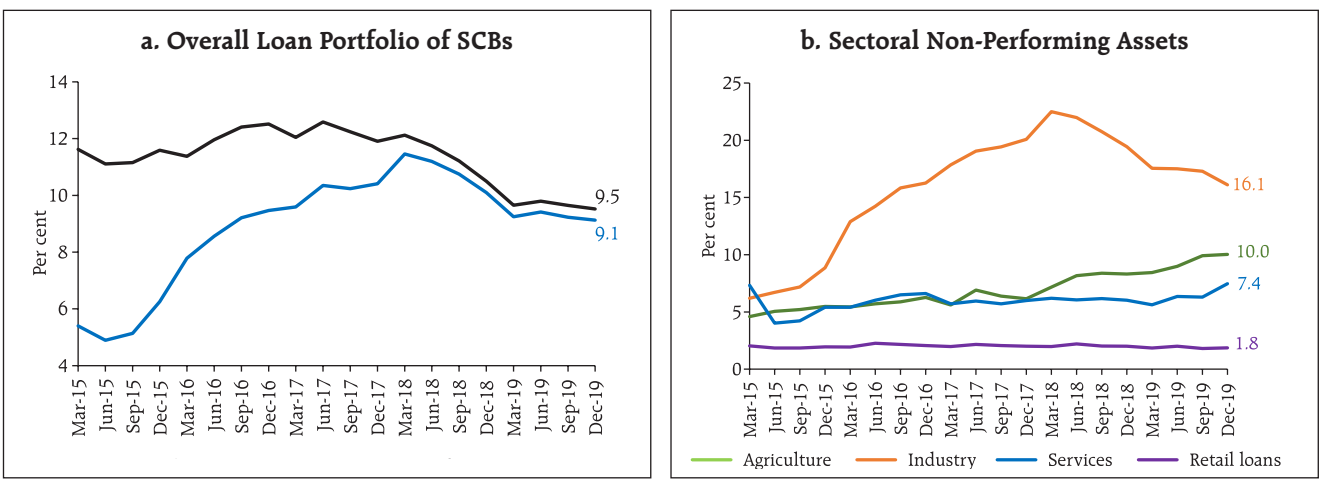

**Source:** RBI.

(March 15, 2019 to March 13, 2020), 62.6 per cent was provided by private sector banks, 36.6 per cent by public sector banks and 0.8 per cent by foreign banks.

While growth (y-o-y) of personal loans accelerated marginally to 17.0 per cent in February 2020 from 16.7 per cent in February 2019, credit growth to both agriculture and industry moderated over the last five months. Although credit growth to the services sector showed an uptick in January 2020, it again weakened in February 2020 (Chart IV.17a). Credit offtake in personal loans segment accounted for the largest share (Chart IV.17b). Within the personal loan segment, credit offtake has been mainly concentrated in housing and credit card outstandings. Within industry, credit growth to beverage and tobacco accelerated, but credit flows to chemical and chemical products, cement and cement products, construction and infrastructure decelerated. Credit to basic metal and metal products, textiles, food processing and all engineering contracted in February 2020.

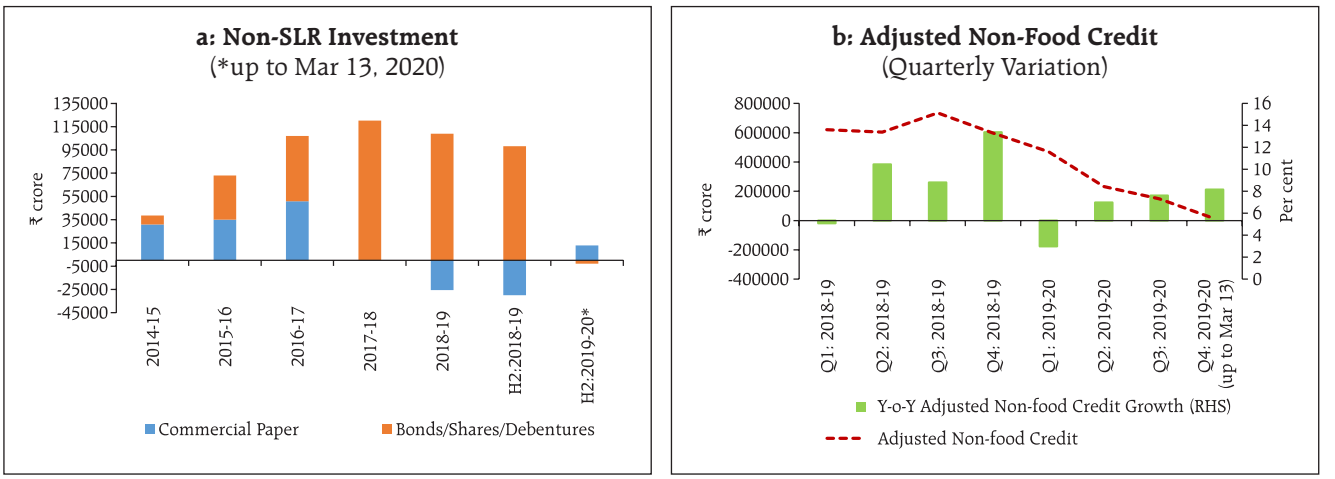
Even as the overall non-performing assets (NPA) ratio of SCBs remained unchanged in December 2019 from end-March 2019 (Chart IV.18a), the NPA ratio in respect of industry dipped (Chart IV.18b).

**Chart IV.18: Stressed Assets and Non-Performing Assets**




**Source:** RBI.

**Chart IV.19: Non-SLR Investment and Adjusted Non-Food Credit**




**Source:** RBI.

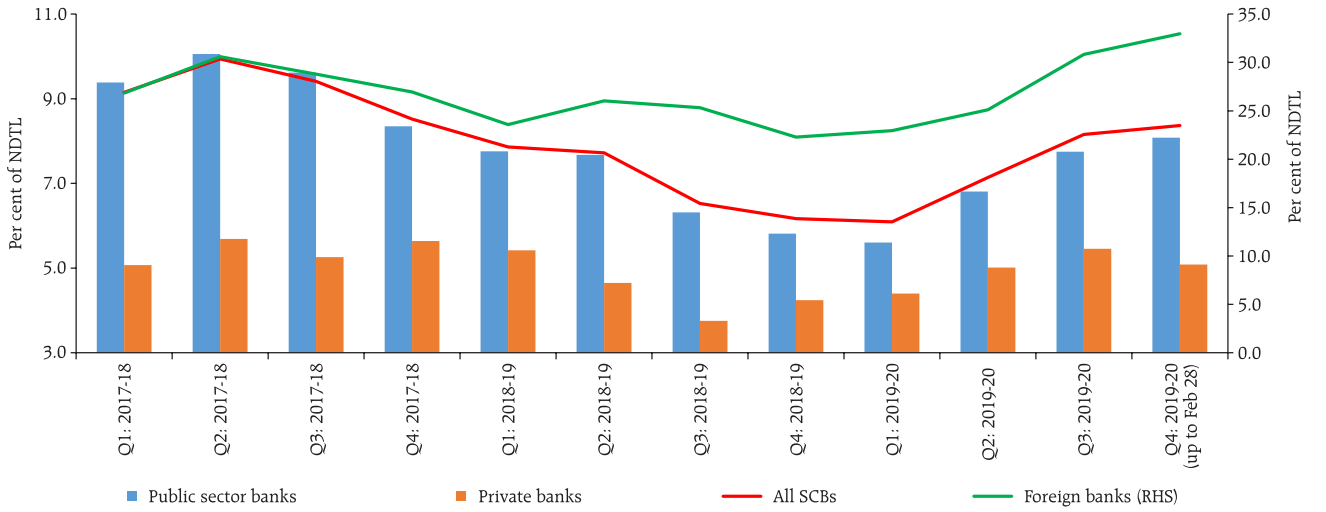
Banks' investments in CPs, bonds, debentures and shares of public and private corporates – reflected in non-SLR investment – were lower during H2:2019-20 (up to March 13) than a year ago mainly due to lower investment in bonds/shares and debentures (Chart IV.19a). As a result, adjusted non-food credit growth was lower in Q4:2019-20 (up to March 13) than in Q3 (Chart IV.19b).

With credit offtake remaining muted and non-SLR investments declining, banks augmented their SLR portfolios. Banks held excess SLR of 8.4 per cent of net demand and time liabilities (NDTL) on Feb 28, 2020 as compared with 6.3 per cent of NDTL at end-March 2019 (Chart IV.20).

## IV.2 Monetary Policy Transmission

Since the October 2019 Monetary Policy Report, monetary policy transmission to banks' term deposit and lending interest rates has improved (Table IV.3). The pass-through of the policy rate cut to the weighted

**Chart IV.20: Excess SLR of Banks**




**Note:** Excess SLR is the average of all SLR maintained on reporting Fridays in a quarter.
**Source:** RBI.

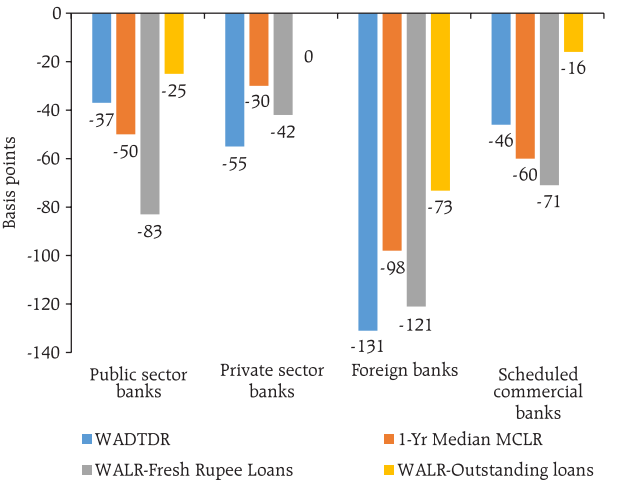
**Table IV.3: Transmission to Deposit and Lending Rates**

(Basis points)

| Period | Repo Rate | Term Deposit Rates | | Lending Rates | | |
|---|---|---|---|---|---|---|
| | | Median Term Deposit Rate | WADTDR | 1-year Median MCLR | WALR - Out-standing Rupee Loans | WALR - Fresh Rupee Loans |
| February-September 2019 | -110 | -9 | -7 | -30 | 2 | -40 |
| October 2019-March 2020* | -100 | -29 | -39 | -30 | -18 | -31 |
| February 2019-March 2020* | -210 | -48 | -46 | -60 | -16 | -71 |

*: Latest data on WALR and WADTDR pertain to February 2020.
WADTDR: Weighted Average Domestic Term Deposit Rate. WALR: Weighted Average Lending Rate.
MCLR: Marginal Cost of Funds-based Lending Rate.
**Source**: RBI.

**Chart IV.21: Transmission Across Bank Groups during Easing Cycle: February 2019 - February 2020**




**Source:** RBI.

average domestic term deposit rate (WADTDR) on outstanding rupee deposits improved to 39 bps during October 2019-February 2020 from a mere 7 bps during the previous eight months (February-September 2019), resulting in an overall reduction of 46 bps. The weighted average lending rate (WALR) on outstanding rupee loans has also declined by 18 bps since October 2019 in contrast to a rise of 2 bps during February-September 2019. The WALR on fresh rupee loans declined by 71 bps (February 2019-February 2020). Of this, a decline of 31 bps occurred during October 2019-February 2020.

The improvement in transmission during H2:2019-20 to banks' deposit and lending interest rates reflected the lagged impact of the previous rate cuts (110 bps during February–September 2019) as also the introduction of the external benchmark system from October 1, 2019 for the pricing of new floating rate loans to select sectors, *viz.*, retail loans and loans to micro and small enterprises (MSEs).[9]

During February 2019 - February 2020, the WALR on fresh rupee loans declined across bank groups, with the largest decline observed in the case of foreign banks, followed by public sector banks (Chart IV.21).

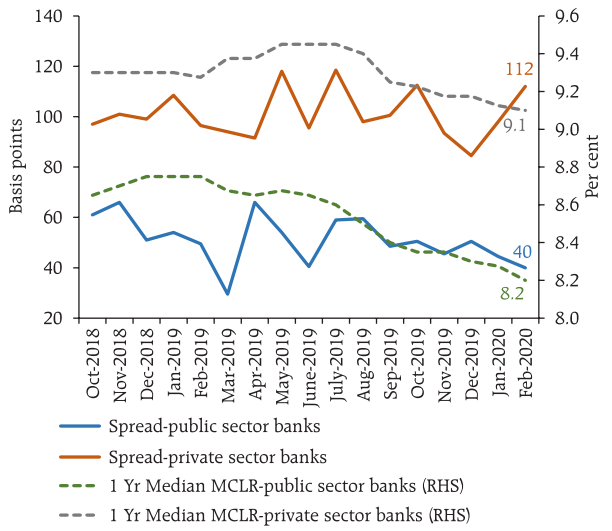
The median spread[10] [WALR on fresh rupee loans over 1-year median marginal cost of funds-based lending rate (MCLR)] charged by private sector banks was higher than that of public sector banks, reflecting, *inter alia*, differences in the lending portfolio (Chart IV.22). Sector-specific WALRs in respect of sectors such as micro, small and medium enterprises (MSMEs), credit card and other personal loans were higher than the overall WALR for both public and private sector banks. The share of loans to each of these sectors in total loans sanctioned by private sector banks was higher than that of public sector banks.

The share of public sector banks in fresh rupee loans sanctioned by scheduled commercial banks was comparable to that of private sector banks during April-August 2019, even though public sector banks account for a significantly larger share in outstanding

[9] Effective April 1, 2020, loans to medium enterprises have also been linked to an external benchmark.

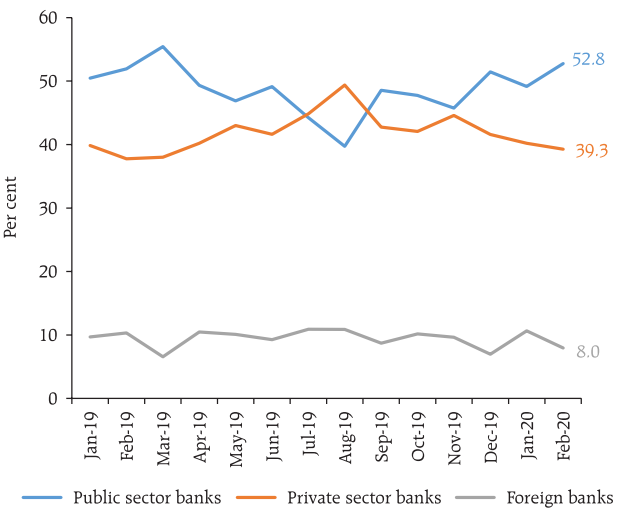
[10] Median spread of a bank group is arrived at from the spread (difference between WALR on fresh rupee loans and 1-year MCLR) of each bank within the group.

**Chart IV.22: Median Spread - WALR (Fresh loans) over 1-Year MCLR**




**Source:** RBI.

**Chart IV.23: Bank Group-wise Share of Fresh Rupee Loans**

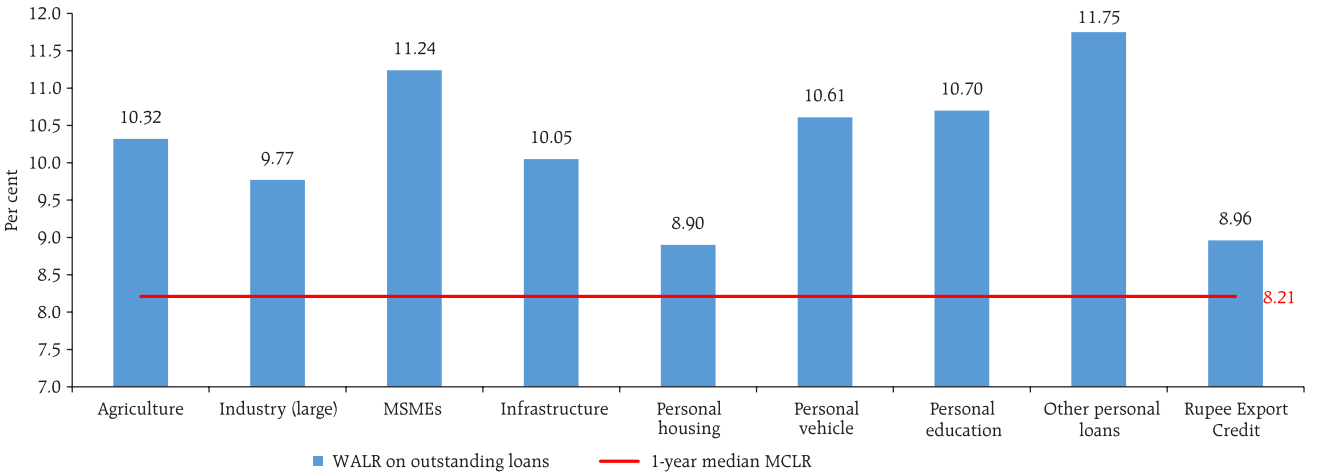



**Source:** RBI.

credit. In comparison with private sector banks, non-performing assets of public sector banks have been higher and the capital to risk weighted assets ratio (CRAR) lower. Despite this, the share of public sector banks in total fresh rupee loans sanctioned by scheduled commercial banks increased to 52.8 per cent from a low of 39.7 per cent in August 2019 (Chart IV.23).

Spreads, *i.e.*, WALR on outstanding rupee loans over 1-year MCLR charged by scheduled commercial banks, were lowest in respect of housing loans, reflecting lower probability of default and availability of collateral, as also competition from NBFCs (Chart IV.24). Personal loans – other than housing, vehicles and education – are mostly unsecured and involve higher credit risk; hence, the spread charged was the highest for 'other personal loans'.

**Chart IV.24: Sector-wise WALR (Outstanding Rupee Loans) Relative to 1-year Median MCLR- February 2020**




**Source:** RBI.

**Chart IV.25: Spreads - Lending Rates over Corporate Bond Yields**


**Sources:** Bloomberg; and RBI.

The spreads between lending rates in the credit market and corporate bond yields have risen sharply since January 2019, implying faster transmission of policy rate cuts to the corporate bond market as against relatively muted transmission to the credit market (Chart IV.25).

Following the introduction of the external benchmark system in the banking sector on October 1, 2019, 36 banks – out of 62 banks from whom information was collected – adopted the policy repo rate as the external benchmark for floating rate loans to the retail and MSE sectors (Table IV.4). Six banks have linked their loans to various other benchmarks published by Financial Benchmarks India Private Ltd (FBIL) such as CD rate, overnight index swap (OIS) rate, Mumbai Interbank Outright Rate (MIBOR) and 3-month T-Bill rate. Eleven banks have linked different sectors to different benchmarks.

The median spread in respect of fresh rupee loans linked to the policy repo rate (*i.e.*, median WALR over the repo rate) was the highest for 'other personal loans' (Table IV.5). Among the bank-groups, the median spread charged by public sector banks for different categories of loans was lower than that charged by private sector banks.

**Table IV.4: External Benchmarks of Commercial Banks: February 2020**

| Bank Group | Policy Repo Rate | CD Rate | OIS Rate | MIBOR | 3-Month T-Bill Rate | Sector-specific Benchmark |
|---|---|---|---|---|---|---|
| Public Sector Banks (15) | 14 | - | - | - | - | 1 |
| Private Banks (20) | 15 | 1 | | - | - | 4 |
| Foreign Banks (27)@ | 7 | - | 1 | 1 | 3 | 6 |
| **Commercial banks (62) @** | **36** | **1** | **1** | **1** | **3** | **11** |

@ 9 banks do not have any exposure to retail loans and MSE loans segments.
**Note:** Figures in parentheses refer to the number of banks.
**Source**: RBI.

**Table IV.5: Loans Linked to the Policy Repo Rate - Median Spread (February 2020)**

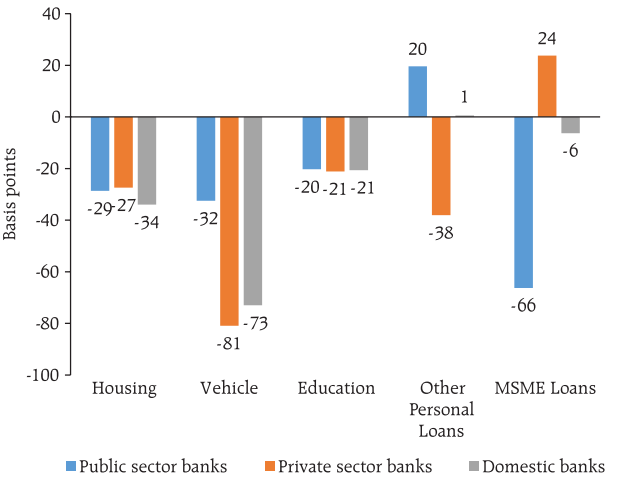
(Percentage points)

| Bank Group | Personal Loan | | | | Micro and Small Enterprises |
|---|---|---|---|---|---|
| | Housing | Vehicle | Education | Other Personal Loans | |
| Public Sector Banks (15) | 3.3 | 4.6 | 4.2 | 6.7 | 5.8 |
| Private Sector Banks (20) | 5.3 | 6.2 | 6.8 | 7.1 | 6.4 |
| Domestic Banks (35) | 4.0 | 4.9 | 4.6 | 6.8 | 6.1 |

**Source:** RBI.

There are early indications of an improvement in transmission to fresh rupee loans sanctioned in respect of sectors where new floating rate loans have been linked to the external benchmark. During October 2019 - February 2020, the WALRs of domestic (public and private sector) banks declined in respect of fresh rupee loans sanctioned for housing loans by 34 bps, vehicle loans by 73 bps, education loans by 21 bps and micro, small and medium enterprises (MSMEs) by 6 bps (Chart IV.26).

**Chart IV.26: WALR on Personal Loans and Loans to MSMEs – Variation**
(October 2019 – February 2020)




**Source:** RBI.

Administered interest rates on small saving schemes set by the Government of India have implications for monetary transmission. These administered interest rates are linked to market yields on G-secs with a lag and are fixed on a quarterly basis at a spread ranging from 0-100 bps over and above G-sec yields of comparable maturities. On March 31, 2020, the Government of India sharply reduced rates of interest on all small saving schemes (except saving deposit) in the range of 70-140 bps for Q1:2020-21. Following the revision, interest rates on small saving schemes for Q1:2020-21 are broadly aligned with the prescribed formula based administered interest rates on small savings (Table IV.6). This augurs well for monetary transmission, going forward.

**Table IV.6: Interest Rates on Small Saving Instruments - Q1:2020-21**

| **Small Savings Scheme** | **Maturity** (years) | **Spread** (Percentage point) $ | **Average G-sec yield (%) of Corresponding Maturity** (December 2019 to February 2020) | **Formula based Rate of Interest (%)** (Applicable for Q1: 2020-21) | **Government Announced Rate of Interest (%)** (Q1:2020-21) | **Difference between Government Announced Rate and the Formula-based Rate** (basis points) |
|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) = (3) + (4) | (6) | (7) = (6)-(5) |
| Savings Deposit | - | - | - | - | 4.00 | - |
| Public Provident Fund | 15 | 0.25 | 6.88 | 7.13 | 7.10 | -3 |
| Term Deposits | | | | | | |
| 1 Year | 1 | 0 | 5.15 | 5.15 | 5.50 | 35 |
| 2 Year | 2 | 0 | 5.47 | 5.47 | 5.50 | 3 |
| 3 Year | 3 | 0 | 5.78 | 5.78 | 5.50 | -28 |
| 5 Year | 5 | 0.25 | 6.41 | 6.66 | 6.70 | 4 |
| Post Office Recurring Deposit Account | 5 | 0 | 5.78 | 5.78 | 5.80 | 2 |
| Post Office Monthly Income Scheme | 5 | 0.25 | 6.38 | 6.63 | 6.60 | -3 |
| *Kisan Vikas Patra* | 124 Months | 0 | 6.88 | 6.88 | 6.90 | 2 |
| NSC VIII issue | 5 | 0.25 | 6.57 | 6.82 | 6.80 | -2 |
| Senior Citizens Saving Scheme | 5 | 1.00 | 6.41 | 7.41 | 7.40 | -1 |
| *Sukanya Samriddhi* Account Scheme | 21 | 0.75 | 6.88 | 7.63 | 7.60 | -3 |

$: Spreads for fixing small saving rates as per Government of India Press Release of February 16, 2016.
**Note**: Compounding frequency varies across instruments.
**Sources**: Government of India; and RBI staff estimates.

### IV.3. Liquidity Management and the Operating Procedure of Monetary Policy

The RBI Act, 1934 amended in 2016 requires the RBI to place the operating procedure relating to the implementation of monetary policy and changes thereto from time to time, if any, in the public domain. During H2:2019-20, liquidity management operations by the RBI were conducted in line with the revised liquidity management framework announced on February 6, 2020 and guided by the need to ease liquidity constraints in the banking system and financial markets on account of COVID-19 related stress (Box IV.2). During H1 and a major part of H2:2019-20, systemic liquidity increased mainly on

**Box IV.2: Revised Liquidity Management Framework**

As announced in the Statement on Developmental and Regulatory Policies of June 6, 2019, an Internal Working Group was set up to review the liquidity management framework with a view to simplifying it and suggesting measures to clearly communicate the objectives and the toolkit for liquidity management. The Group's report was placed on the Reserve Bank's website on September 26, 2019 for comments from stakeholders and members of the public (RBI, 2019). Based on the feedback received, it was decided to fine-tune the erstwhile liquidity management framework. The key elements of the revised framework are set out below:

(i) Liquidity management remains the operating procedure of monetary policy; the weighted average call rate (WACR) continues to be its operating target.

(ii) The liquidity management corridor is retained, with the marginal standing facility (MSF) rate as its upper bound (ceiling) and the fixed rate reverse repo rate as the lower bound (floor), with the policy repo rate in the middle of the corridor.

(iii) The width of the corridor is retained at 50 basis points – the reverse repo rate being 25 basis points below the repo rate and the MSF rate 25 basis points above the repo rate.[11]

(iv) The daily fixed rate repo and four 14-day term repos conducted every fortnight earlier, have been withdrawn. The Reserve Bank, however, would ensure adequate provision/absorption of liquidity as warranted by underlying and evolving market conditions – unrestricted by quantitative ceilings – at or around the policy rate.

(v) Instruments of liquidity management continue to include fixed and variable rate repo/reverse repo auctions, outright open market operations (OMOs), forex swaps and other instruments as may be deployed from time to time to ensure that the system has adequate liquidity at all times.

(vi) A 14-day term repo/reverse repo operation at a variable rate and conducted to coincide with the cash reserve ratio (CRR) maintenance cycle is the main liquidity management tool for managing frictional liquidity requirements.

(vii) The main liquidity operation would be supported by fine-tuning operations, overnight and/or longer tenor, to tide over any unanticipated liquidity changes during the reserve maintenance period.

(viii) In addition, the RBI will conduct, if needed, longer-term variable rate repo/reverse repo operations of more than 14 days.

(ix) The current requirement of maintaining a minimum of 90 per cent of the prescribed CRR on a daily basis will continue.[12]

(x) Standalone Primary Dealers (SPDs) were allowed to participate directly in all overnight liquidity management operations.

(xi) The margin requirements under the Liquidity Adjustment Facility (LAF) would be reviewed on a periodic basis; the margin requirement for reverse repo transactions, however, would continue to be 'Nil'.

[11] The corridor width was asymmetrically widened on March 27, 2020 (see Box IV.3 for details).

[12] The requirement of minimum daily CRR balance was reduced to 80 per cent on March 27, 2020 (see Box IV.3 for details).

*(contd.)*

(xii) In order to improve communication on the RBI's liquidity management framework and procedures, the following measures were introduced: (a) the Press Release detailing Money Market Operations (MMO) was modified suitably to show both the daily flow impact as well as the stock impact of the RBI's liquidity operations; (b) the Reserve Bank started publishing a quantitative assessment of durable liquidity conditions of the banking system on a fortnightly basis with a lag of one fortnight; and (c) periodic consultations will be conducted with market participants and other stakeholders.

**Reference:**

Reserve Bank of India (2019), "Report of the Internal Working Group to Review the Liquidity Management Framework", September 26.

account of (i) the Reserve Bank's forex operations; and (ii) higher spending by the government, including recourse to WMA and OD. In order to mop up the increasing surplus liquidity, the Reserve Bank conducted variable rate reverse repo auctions of various tenors (ranging from overnight to 63 days including the main 14-day term reverse repo auction conducted on reporting Fridays since February 14, 2020) amounting to ₹1,96,02,726 crore in H2. Moreover, five LTROs were conducted during February and March with a view to ensuring monetary transmission. Furthermore, one targeted long term repo operation (TLTRO) was conducted in March to address the COVID-19 induced pressure on financial conditions.

In view of the COVID-19 pandemic and its adverse impact on global and domestic financial markets, the MPC advanced its meeting in an unprecedented move, after a careful evaluation of the current and evolving macroeconomic and financial conditions, and the outlook. The MPC voted for an unprecedented 75 bps reduction in the policy repo rate and for continuing with the accommodative stance as long as necessary to revive growth and mitigate the impact of COVID-19 on the economy, while ensuring that inflation remains within the target. Alongside, several measures were also announced on March 27, 2020 to address the stress in financial conditions and ease COVID-19 related liquidity constraints (Box IV.3).

**Box IV.3: Liquidity Measures to Combat Adverse Impact of COVID-19**

(I) *Targeted Long-Term Repo Operations (TLTROs)*

Reserve Bank to conduct auctions of targeted long-term repos of up to three years tenor of appropriate sizes for a total amount of up to ₹1,00,000 crore at a floating rate linked to the policy repo rate. Liquidity availed by banks under TLTROs should be deployed in investment grade corporate bonds, commercial paper, and non-convertible debentures over and above the outstanding level of their investments in these bonds as on March 27, 2020.

(II) *Cash Reserve Ratio (CRR)*

(i) CRR requirement of banks was reduced by 100 bps from 4.0 per cent of NDTL to 3.0 per cent effective fortnight beginning March 28, 2020, which would augment primary liquidity in the banking system by about ₹1,37,000 crore. This dispensation will be available for a period of one year ending March 26, 2021.

(ii) The minimum daily CRR balance requirement was reduced from 90 per cent to 80 per cent effective from the first day of the fortnight beginning March 28, 2020. This dispensation will be available up to June 26, 2020.

(III) *Marginal Standing Facility (MSF)*

In view of the exceptionally high volatility in domestic financial markets and to provide comfort to the banking system, banks' limit for borrowing overnight under the MSF by dipping into their Statutory Liquidity Ratio (SLR) was raised to 3 per cent of NDTL from 2 per cent. This measure will allow the banking system to avail an additional ₹1,37,000 crore of liquidity under the liquidity adjustment facility (LAF) window at the reduced MSF rate of 4.65 per cent and will be applicable up to June 30, 2020.

*(contd.)*

(IV) *Reduction in Policy Rate and Widening of the Policy Corridor*

(i) The policy repo rate under the LAF was reduced by 75 basis points to 4.40 per cent from 5.15 per cent with immediate effect. Accordingly, the MSF rate and the Bank Rate were reduced to 4.65 per cent from 5.40 per cent.

(ii) In view of persistent excess liquidity, the existing LAF corridor was widened asymmetrically to 65 bps from 50 bps. Accordingly, the reverse repo rate was reduced by 90 bps from 4.90 per cent to 4.00 per cent. The purpose of this measure was to make it relatively unattractive for banks to passively deposit funds with the RBI; instead, these funds should be deployed for on-lending to productive sectors of the economy.

(iii) Thus, the reverse repo rate is now 40 bps lower than the policy repo rate while the MSF rate continues to be 25 bps above the policy repo rate.

***Reference***:

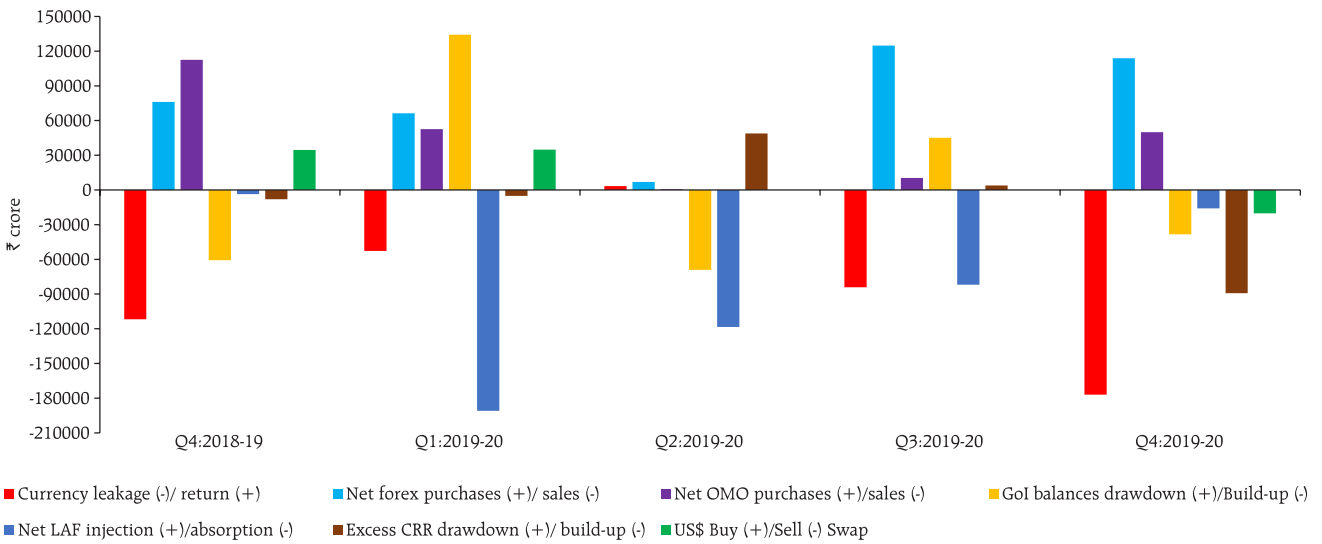
Reserve Bank of India (2020), "Statement on Developmental and Regulatory Policies", March 27.

*Drivers and Management of Liquidity*

The leakage of currency from the system during H2:2019-20 was more than offset by Reserve Bank's forex operations and drawdown of government cash balances, thereby augmenting liquidity in the banking system (Chart IV.27). The surplus liquidity was absorbed through reverse repo operations under the LAF. The increase in currency in circulation (CiC) of ₹2.61 lakh crore in H2 was more than five-fold than that of ₹49,378 crore in H1:2019-20 and higher than ₹2.11 lakh crore in H2:2018-19. As a result, growth in CiC at 11.9 per cent during H2:2019-20 was higher than 11.0 per cent during the corresponding period of 2018-19.

Surplus liquidity conditions persisted in Q3:2019-20 as daily net liquidity absorption under the LAF progressively increased from ₹1.99 lakh crore in October to ₹2.41 lakh crore in November and further to ₹2.61 lakh crore in December 2019. Expecting the continuance of surplus liquidity, the Reserve Bank conducted four longer term reverse repo auctions in November – two of 21-days and one each of 42-days and 35-days tenor – thereby absorbing ₹78,934 crore. During Q3, the Reserve Bank's forex operations

**Chart IV.27 : Drivers and Management of Liquidity**



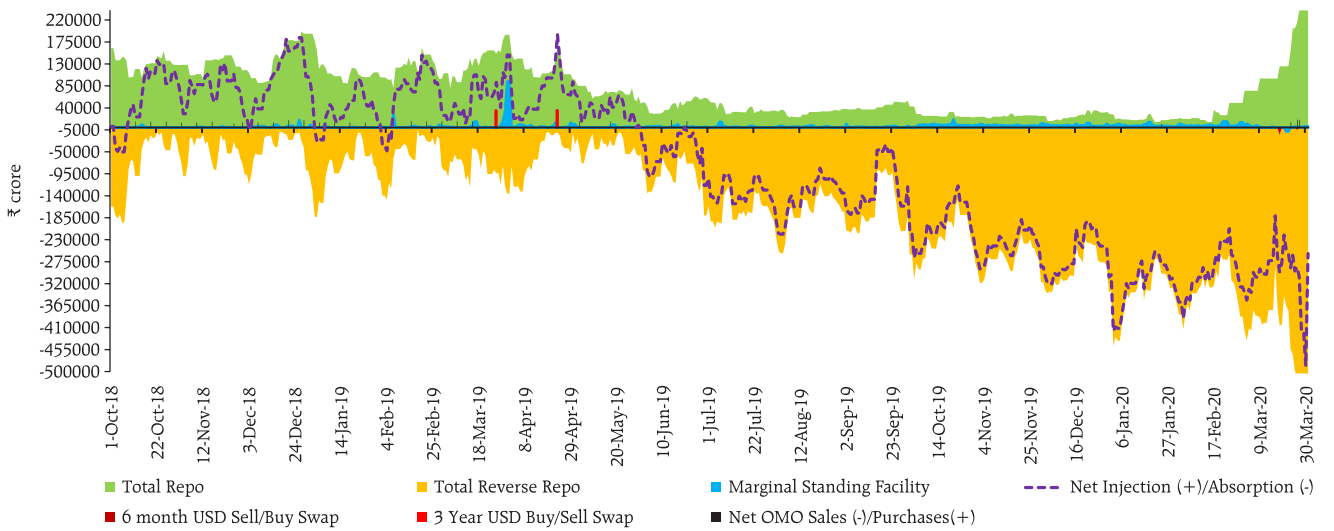

**Source:** RBI.

(₹1.25 lakh crore) and drawdown of GoI cash balances (₹45,184 crore) augmented systemic liquidity. The Reserve Bank also conducted four special OMOs during December and January (December 23 and 30, 2019 and January 6 and 23, 2020), which augmented net banking system liquidity by ₹11,724 crore.[13]

In Q4, average daily surplus liquidity further increased to ₹3.18 lakh crore in January as the Government continued to avail WMA/OD for the entire month, but moderated to ₹2.98 lakh crore in February as GoI's cash balance turned positive in the second half of the month, due to issuance of CMBs as discussed earlier (see IV.1.2 for details). In March, average daily net absorption under the LAF amounted to ₹3.02 lakh crore. Taking into consideration the increased demand for US dollars amidst flight to safety triggered by extremely volatile global financial markets, the Reserve Bank conducted two 6-month US Dollar/INR sell/buy swap auction on March 16 and March 23, 2020, which cumulatively provided dollar liquidity of USD 2.71 billion (Chart IV.28). Furthermore, in view of hardening yields and widening spreads in certain market segments symptomatic of stressed financial conditions (see Chart IV.12), three open market purchase operations were conducted on March 20, 24 and 26, 2020, thereby injecting ₹40,000 crore cumulatively.

With a view to reinforcing monetary transmission and augmenting credit flows to productive sectors, the Reserve Bank conducted five long term repo operations (LTRO) at fixed repo rate (one of one-year and four of three-year tenors) between February 17 and March 18, 2020, which infused durable liquidity amounting to ₹1.25 lakh crore into the system with additional ₹75,000 crore in the pipeline. The LTROs provided banks with durable liquidity at reasonable cost (fixed repo rate) relative to prevailing market rates. Moreover, a TLTRO auction of 3-year maturity held on March 27, 2020 also augmented durable liquidity by ₹25,009 crore.[14] Thus, total durable

**Chart IV.28: Liquidity Management**

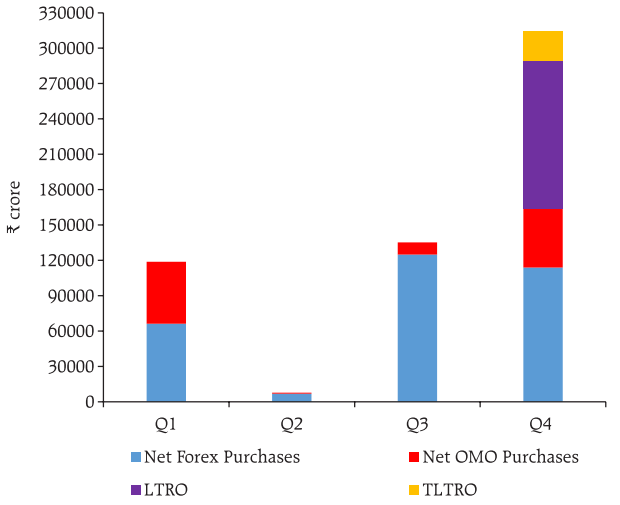



**Source:** RBI.

[13] While long-term paper amounting to ₹40,000 crore was purchased through these auctions, sale of short-term securities amounted to ₹28,276 crore.

[14] Two more TLTRO auctions of 3-year maturity were conducted on April 3 and April 9, respectively, which cumulatively augmented durable liquidity by ₹50,032 crore.

**Chart IV.29: Durable Liquidity Injections during 2019-20**



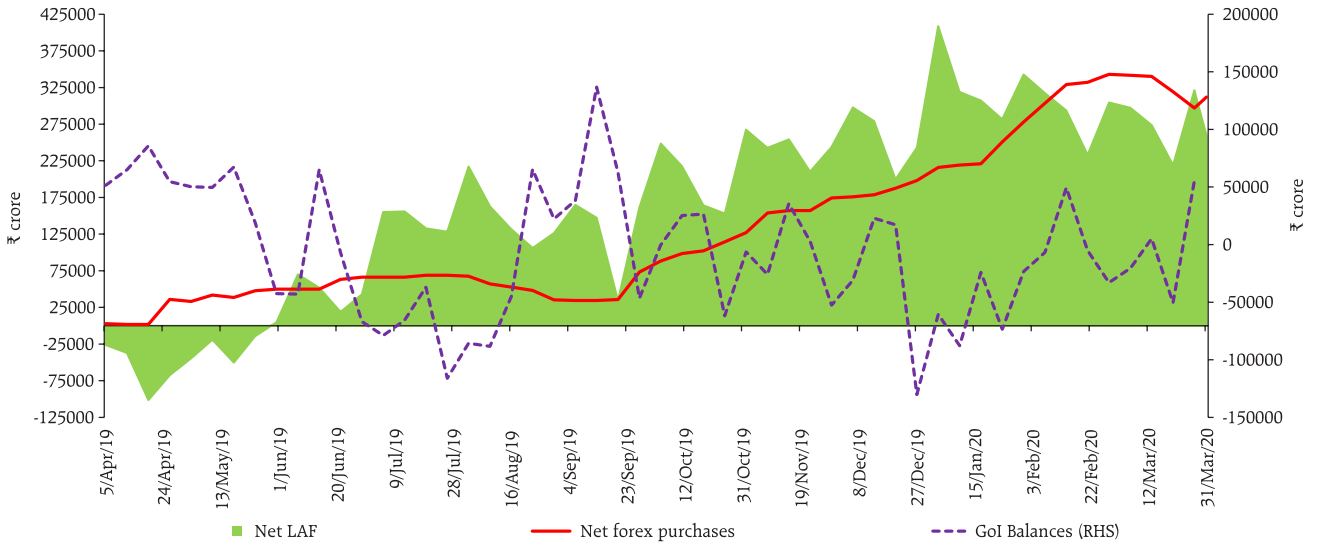

**Source:** RBI.

liquidity (including forex purchases, OMOs, LTROs and TLTRO) amounting to ₹4,49,326 crore was injected in H2:2019-20 as compared with ₹1,26,514 crore in H1 (Chart IV.29).

Summing up, currency expansion, Reserve Bank's forex operations and government spending were the key liquidity drivers in the banking system during H2:2019-20 (Chart IV.30).

Given surplus liquidity conditions, fine-tuning operations through variable rate reverse repo auctions with maturity ranging from overnight to 3 days were extensively used for absorbing liquidity till February 14, 2020. As a pre-emptive measure to tide over any frictional liquidity requirements caused by dislocations due to COVID-19, two fine-tuning variable rate repo auctions of 16-day maturity were conducted on March 23 and March 24, 2020 injecting ₹77,745 crore cumulatively (Table IV.7). To address any additional demand for liquidity and provide flexibility to the banking system in its liquidity management towards the year-end, one fine-tuning variable rate repo auction of 12-days maturity was conducted on March 26 injecting ₹11,772 crore.[15] As a special case, SPDs were allowed to participate in these auctions along with other eligible participants.

**Chart IV.30: Net LAF and Forex Purchases during 2019-20**




**Source:** RBI.

[15] Two other fine-tuning operations through variable rate repo auctions were held – for ₹ 25,000 crore each of 7-days and 3-days maturity on March 13 and March 31, respectively – which did not elicit any response from the market.

**Table IV.7: Fine-tuning Operations through Variable Rate Auctions in H2:2019-20**

| | Repo | Reverse Repo | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Maturity in Days | 12, 16 | 1-3 | 4 | 21 | 28-29 | 31 | 35 | 42 | 63 |
| Number of Operations | 3 | 90 | 2 | 2 | 3 | 1 | 1 | 2 | 3 |
| Total Volume (₹ crore) | 89,517 | 1,85,67,948 | 3,21,328 | 28,923 | 47,165 | 12,790 | 25,004 | 30,507 | 65,033 |
| Average Volume (₹ crore) | 29,839 | 2,06,311 | 1,60,664 | 14,462 | 15,722 | 12,790 | 25,004 | 15,254 | 21,678 |

**Source**: RBI.

## IV.4 Conclusion

Domestic financial markets remain vulnerable to global developments, deepening of the growth slowdown in India and rising concerns about COVID-19. Despite the weak domestic growth outlook, Indian equity markets scaled new highs, before turning highly volatile in early-March in tandem with global equity markets. The outlook is characterised by heightened uncertainty with capital outflows continuing and exerting pressures on the INR. This outlook is uncertain and is increasingly getting reflected in bond market yields. Credit growth is likely to remain modest, reflecting weak demand and risk aversion. Going forward, liquidity conditions would be managed under the revised liquidity management framework, consistent with the accommodative stance of monetary policy as long as necessary to revive growth and mitigate the impact of COVID-19, while ensuring that inflation remains within the target. Better transmission of monetary policy impulses to the credit market would remain a priority.

# V. External Environment

*Economic activity remained subdued across major advanced economies (AEs) and emerging market economies (EMEs). Though some transitory signs of stabilisation were evident in early 2020, the outbreak of COVID-19 and its rapid spread over a large number of countries has clouded the near-term outlook. Monetary policy has remained highly accommodative as most central banks across the world resorted to massive easing through both conventional and unconventional measures. Global financial markets, which remained buoyant on risk-on sentiments in Q4:2019, slumped on sell-off pressures triggered by intensifying COVID-19 disruptions.*

Global economic activity remained subdued during the major part of H2:2019. In January 2020, the IMF estimated global GDP growth at 2.9 per cent for 2019, the lowest since the global financial crisis (GFC). Early into 2020, signs of stabilisation seemed to appear in the form of de-escalating trade tensions between the US and China and receding possibility of a hard Brexit. A pneumonia of unknown cause detected in Wuhan, China first reported to the World Health Organization (WHO) on December 31, 2019 delivered a cataclysmic shock to these green shoots and changed the world. The WHO declared a Public Health Emergency of International Concern on January 30, 2020 and christened the novel coronavirus as COVID-19 on February 11, 2020. On March 11, 2020, the WHO declared it a pandemic – "the first pandemic caused by a corona virus"[1]. At the time of going to press, more than 12 lakh people were infected around the world with more than 67,000 deaths[2]. In the G-20 Ministerial Call on the Coronavirus Emergency on March 23, 2020 the Managing Director, IMF formally informed that the global economy had entered into recession in 2020.

Amongst the early incoming data, GDP of Singapore shrank by 10.6 per cent in Q1:2020. In the US, jobless claims surged to a peak as the number of people filling for unemployment insurance claims jumped to 6.6 million in the week ended March 28, 2020, the highest since the series began in 1967. Crude oil prices plummeted in March due to price war between Saudi Arabia and Russia over disagreement on production cuts. Prices of other global commodities ebbed on fears of weakening global demand. Prices of precious metals initially rallied on safe haven demand as investors resorted to flight to safety, but they declined in the second week of March as investors preferred to hold cash. Central banks across major advanced economies (AEs) and emerging market economies (EMEs) switched to highly accommodative mode, with most of them resorting to rate cuts in unscheduled meetings. Central banks also announced several liquidity measures and regulatory relaxations in the face of tightening financial conditions. Fiscal authorities across the world have launched stimuli in the range of 0.8-16.0 per cent of their GDP. Besides direct support, measures also include tax deferment and credit guarantee.

### V.1 Global Economic Conditions

In the US, GDP grew by 2.1 per cent in Q4:2019 – the same pace as in the previous quarter. Overall GDP growth for 2019 decelerated to its slowest pace in three years amidst continuing weakness in business investment and exports (Table V.1). In Q1:2020, industrial production growth stalled in February after contracting for the fifth consecutive month in January and the manufacturing purchasing managers' index (PMI) of the Institute for Supply Management (ISM)

[1] Opening remarks of WHO Director-General, Media Briefing, March 11, 2020.

[2] World Health Organization.

**Table V.1: Real GDP Growth (q-o-q, annualised)**

(Per cent)

| Country | Q4-2018 | Q1-2019 | Q2-2019 | Q3-2019 | Q4-2019 | 2020 (P) | 2021 (P) |
|---|---|---|---|---|---|---|---|
| **Advanced Economies** | | | | | | | |
| Canada | 1.0 | 1.0 | 3.4 | 1.1 | 0.3 | 1.8 | 1.8 |
| Euro area | 1.2 | 1.6 | 0.8 | 1.2 | 0.4 | 1.3 | 1.4 |
| Japan | 2.4 | 2.2 | 2.3 | 0.1 | -7.1 | 0.7 | 0.5 |
| South Korea | 3.6 | -1.6 | 4.0 | 1.6 | 5.2 | 2.2 | 2.7 |
| UK | 0.8 | 2.4 | -0.4 | 2.0 | 0.0 | 1.4 | 1.5 |
| US | 1.1 | 3.1 | 2.0 | 2.1 | 2.1 | 2.0 | 1.7 |
| **Emerging Market Economies** | | | | | | | |
| Brazil | 0.0 | 0.0 | 2.0 | 2.4 | 2.0 | 2.2 | 2.3 |
| China* | 6.5 | 6.4 | 6.2 | 6.0 | 6.0 | 6.0 | 5.8 |
| Indonesia* | 5.2 | 5.1 | 5.1 | 5.0 | 5.0 | 5.0 | 5.1 |
| Russia* | 2.7 | 0.5 | 0.9 | 1.7 | 2.1 | 1.9 | 2.0 |
| South Africa | 1.4 | -3.2 | 3.3 | -0.8 | -1.4 | 0.8 | 1.0 |
| Thailand | 5.2 | 3.2 | 1.4 | 0.6 | 1.0 | 3.0 | 3.5 |
| ***Memo:*** | **2019 (E)** | | | **2020 (P)** | | | **2021 (P)** |
| World Output | 2.9 | | | 3.3 | | | 3.4 |
| World Trade Volume | 1.0 | | | 2.9 | | | 3.7 |

E: Estimate P: Projection *: y-o-y growth
**Sources:** Bloomberg; and International Monetary Fund.

contracted in March after improving marginally in January-February. Retail sales have also softened since January. Although labour market remained strong in February as reflected in better than expected US jobs report, number of people filling jobless claims in the US for the week ended March 28 rose to a record level of 6.6 million – the highest since the series began in 1967.

Economic activity in the Euro area decelerated markedly in Q4:2019 as a pronounced downturn in industrial activity and subdued consumer demand weighed on overall economic performance. GDP growth contracted in France and Italy in Q4:2019 on waning consumer confidence, and stagnated in Germany on muted private and government spending. In Q1:2020, the rapid spread of COVID-19 infections in Italy, Spain and other European countries is likely to impact manufacturing and services sectors. The ECB has projected GDP growth to decline to 0.8 per cent for 2020 under its baseline scenario assumption that the impact of virus would get contained in next few months and growth would normalise in H2:2020.

The Japanese economy contracted sharply in Q4 as private consumption slumped in the wake of October's sales tax hike. The slowdown in factory activity due to a string of typhoons and sluggish external demand added further pressure on domestic activity. In Q1:2020, the increased number of infections, including across the East Asian regions, threaten to disrupt economic activity severely.

In the UK, GDP growth stagnated in Q4, after rebounding in Q3. Positive contributions from the services and construction sectors were offset by a decline in manufacturing output. Political uncertainty due to the Brexit deadline in October and general election in December appeared to have slowed activity in the final quarter. In Q1:2020, industrial production contracted and retail sales remained subdued. Risks emanating from COVID-19 may undermine the outlook for Q1.

Sluggish growth across major EMEs in Q4:2019 was overwhelmed by the outbreak of COVID-19; suddenly, the downside risks to growth became acute (Box V.1).

The Chinese economy had managed to maintain the pace of GDP growth in Q4:2019 at the momentum secured in Q3 only to be overtaken in Q1:2020 by COVID-19. Caixin's manufacturing PMI plunged to 40.3 in February – the lowest since the survey began in April 2004 – with new orders and employment falling the most on enforced shutdowns in many regions. However, it rebounded in March to 50.1 suggesting slight expansion in manufacturing activity as output improved marginally relative to February's

## Box V.1: Impact of COVID-19 on Global Growth

In the initial weeks of February, most forecasts of global output loss due to COVID-19 were in terms of the outbreak being confined to China and being brought under control by March/June. It was, however, acknowledged that even in the limited scenario, the economic impact would be significant as China is a much larger player – both in terms of economic size and its role in global value chains – now than in 2003, the period of the SARS epidemic (Chart V.1.1).

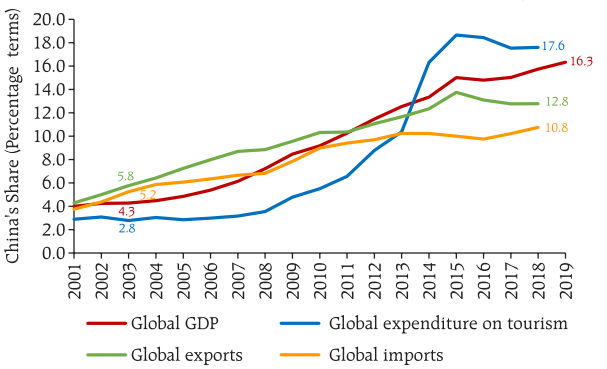
Owing to extended lunar new year holidays as also government-imposed factory shutdowns and travel restrictions in a number of regions, China's manufacturing/services activity declined sharply in February. In the latter part of February, a rapid surge of infections and fatalities around the world began to surface, even as the spread of the virus in China began to plateau. Lockdowns were/have been imposed in most countries. Travel bans have created distress for airlines, tourism and hospitality industries.

In the commodity and financial markets, crude oil prices have been on a downward spiral; with West Texas intermediate (WTI) crude prices crashing below US$ 20 per barrel on March 30, 2020. Equity markets have suffered major losses, while gold, fixed income assets – mainly government debt, and the US dollar gained ground due to safe haven demand, but later corrected significantly on profit-booking and flight to cash (refer to Chart V.4, and Charts V.6-8).

With the pandemic still looming, the estimates of the downward drag on global growth are being continuously revised. The consensus, however, is that there will be a recession in 2020 (Chart V.1.2).

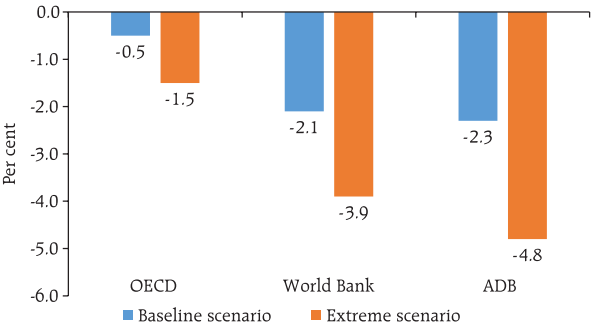
Multilateral institutions, governments and central banks are taking swift action to tackle the pandemic and its consequences (Table V.1.1.)

**Chart V.1.1: China in the Global Economy**




**Sources:** World Bank; IMF; WTO; and RBI staff estimates.

**Chart V.1.2: Multilateral Institutions' Estimate of Impact on Global Growth in 2020 due to COVID-19**




**Notes:** 1. Organisation for Economic Co-operation and Development (OECD) estimates of March considered baseline scenario of COVID-19 peaking in China in Q1:2020 and limited spread to other regions. Extreme scenario considered a longer-lasting and more intensive COVID-19 outbreak spreading to most regions. The estimated impact is in terms of percentage point of global GDP growth.

2. World Bank estimates of April considered baseline scenario of a global pandemic and extreme scenario of extreme global pandemic. The estimated impact is in terms of per cent deviation from the benchmark from Envisage model.

3. Asian Development Bank (ADB) estimates of April considered baseline scenario of shorter containment and smaller demand shocks; and an extreme scenario of longer containment and larger demand shocks. The estimated impact is in terms of per cent of GDP.

**Sources:** OECD; World Bank; and ADB.

**Table V.1.1: Key Measures[3] by Select Central Banks in Response to COVID-19 Outbreak**

| Central Bank | Measures |
|---|---|
| People's Bank of China | • 1.7 trillion yuan of liquidity injected on February 3 and 4<br>• Rate on 200 billion yuan worth of one-year medium-term lending facility loans to financial institutions lowered by 10 bps to 3.15 per cent on February 17<br>• 1-year Loan Prime Rate lowered by 10 bps to 4.05 per cent effective February 20, 2020; 5-year LPR lowered by 5 bps to 4.75 per cent<br>• Reduction in reserve requirement ratio for select banks<br>• 7-day reverse repo rate lowered by 20 bps to 2.2 per cent on March 30 |

*(contd.)*

[3] Up to March 31, 2020.

| Central Bank | Measures |
|---|---|
| Federal Reserve | • Target range of the federal funds rate lowered by 50 bps on March 3 and a further 100 bps on March 16 to 0-0.25 per cent<br>• Unlimited asset purchases, commercial mortgage-backed securities included in the asset purchase programme<br>• Lowering of primary credit rate to 0.25 per cent<br>• Banks allowed to use capital and liquidity buffers for lending<br>• Reserve requirement reduced to 0 per cent from March 26<br>• Additional repo operations<br>• Primary Dealer Credit Facility established<br>• Commercial Paper Funding Facility established<br>• Money Market Mutual Fund Liquidity Facility established<br>• Term Asset-Backed Securities Loan Facility established<br>• Primary Market Corporate Credit Facility and the Secondary Market Corporate Credit Facility established to support credit to large employers<br>• The existing dollar liquidity swap line arrangements with five central banks (EU, UK, Japan, Canada and Switzerland) made lower cost, with more frequent and longer-term operations<br>• Temporary swap lines with central banks of Australia, Brazil, Denmark, South Korea, Mexico, Norway, New Zealand, Singapore and Sweden established<br>• Temporary repurchase agreement facility for foreign and international monetary authorities (FIMA Repo Facility) established to help support the smooth functioning of financial markets, including the US Treasury market |
| European Central Bank | • Additional longer-term refinancing operations (LTROs) to provide immediate liquidity support to the euro area financial system till June 2020<br>• More favourable terms under TLTRO III from June 2020 to June 2021, to support bank lending to those affected most by the spread of COVID-19<br>• Additional net asset purchases of €120 billion until end 2020<br>• Banks allowed to use capital and liquidity buffers, including Pillar 2 Guidance<br>• €750 billion Pandemic Emergency Purchase Programme (PEPP) to be conducted until end-2020 in a flexible manner, to include purchase of Greek government debt<br>• Non-financial commercial paper included in asset purchases<br>• Collateral standards eased for ECB's refinancing operations |
| Bank of England | • Bank Rate reduced in two steps of 50 bps and 15 bps to all-time low of 0.1 per cent on March 19<br>• Additional purchases of £200 billion to be done in 2020<br>• A new Term Funding Scheme with additional incentives for Small and Medium-sized Enterprises introduced<br>• Counter-cyclical capital buffer rate reduced to 0 per cent of banks' exposures to UK borrowers effective March 11.<br>• Supervisory guidance on dividends and other distributions issued<br>• Other supervisory and prudential policy measures including cancellation of annual stress test of banks in 2020<br>• Covid Corporate Financing Facility launched, in association with the Government<br>• Contingent Term Repo Facility activated |
| Bank of Japan | • Provide loans against corporate debt as collateral at 0 per cent with maturity up to one year<br>• Additional 2 trillion yen purchases of commercial paper and corporate bonds<br>• Double the annual pace of purchases of exchange traded funds and J-REITs |
| Bank of Korea | • Base Rate lowered by 50 bps to 0.75 per cent on March 17<br>• Interest rate on the Bank Intermediated Lending Support Facility reduced to 0.25 per cent and the ceiling on the facility increased by 5 trillion won<br>• Collateral for open market operations broadened<br>• Unlimited liquidity through weekly 91-day repo auctions<br>• Forex market stability rules eased |
| Bank Indonesia | • Policy rate lowered by 25 bps each in February and March to 4.5 per cent effective March 19, 2020<br>• Daily repo auctions of 12-month tenor introduced<br>• Frequency of forex swap auctions increased<br>• Triple intervention policy intensified to minimize the risk of increasing rupiah exchange rate volatility<br>• Forex reserve requirement for commercial banks halved to 4 per cent effective March 16, 2020<br>• Rupiah reserve requirement lowered by 50 bps for banks financing export-import activity, MSMEs and other priority sectors effective April 1, 2020<br>• Range of underlying transactions available to foreign investors expanded to provide alternative hedging instruments against rupiah holdings |

*(contd.)*

| Central Bank | Measures |
|---|---|
| Reserve Bank of Australia | • Cash rate target reduced in two steps of 25 bps each to a further all-time low of 0.25 per cent with effect from March 20<br>• Target set for the yield on 3-year government bonds of around 0.25 per cent, to be achieved through secondary market purchases<br>• Term funding facility for the banking system, with particular support for credit to small and medium-sized businesses instituted<br>• Exchange settlement balances to be remunerated at 10 bps |
| Bank of Canada | • Reduced key rate in three steps of 50 bps each to 0.25 per cent in March<br>• Announced purchase of government securities, minimum purchase of $5 billion per week<br>• Bankers' Acceptance Purchase Facility launched<br>• Provincial Money Market Purchase announced<br>• Standing Term Liquidity Facility established<br>• Commercial Paper Purchase Program launched |

**Sources:** Websites of central banks; and www.centralbanking.com

The key existential question is: Will the worldwide effort contain the mortality and morbidity as also the macroeconomic consequences of COVID-19?

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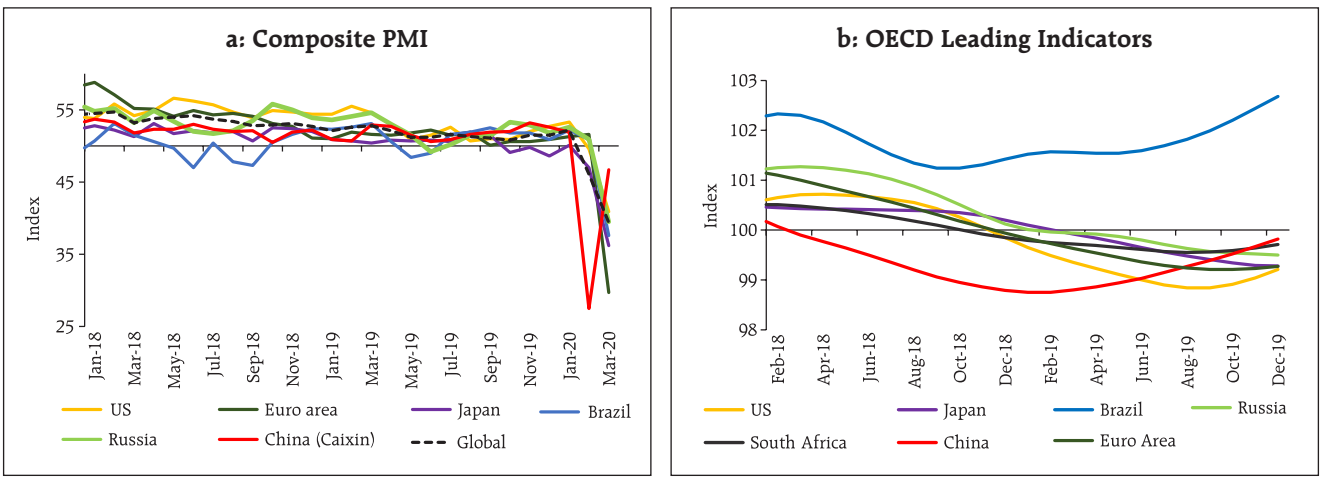
disruptions. Industrial production contracted sharply to its lowest level in 30 years and retail sales registered its first ever decline in January-February 2020. The imposition of shipping restrictions and order cancellations as part of virus containment measures weighed heavily on exports and supply chains. Wide-ranging policy support – both fiscal and monetary and health services – is expected to mitigate the slowdown in the second half of 2020.

Among the other BRICS countries, economic activity in Russia was sustained in H2:2019 as reflected in improved retail sales, tight labour markets and falling inflation. Increased government spending on national projects and lower interest rates appeared to have supported activity in Q4:2019. Incoming data for Q1:2020 suggest that the economy has maintained the pace so far as retail sales have been increasing since January, while industrial production improved in February after a moderation in January. However, a sharp fall in crude oil prices due to the tensions with Saudi Arabia poses a large downside risk. The Brazilian economy ended the year on a relatively weak note due to a fall in construction and mining activity and private consumption. During Q1:2020, incoming data point to a slowdown in both industrial production and retail sales, while deteriorating external sector dynamics on increasing COVID-19 uncertainty is further expected to pull down the growth, going ahead. The South African economy entered a technical recession in Q4 – second time in two years – as agriculture, transport and construction activities declined sharply amidst frequent power outages. Moreover, falling export growth due to supply constraints, and weak fixed investment and government spending added further downward pressures.

In Indonesia, economic activity maintained momentum: GDP growth in Q4:2019 was at the same pace as in Q3. Positive contribution from the external

**Chart V.1: Survey Indicators**




**Sources:** Bloomberg; and OECD.

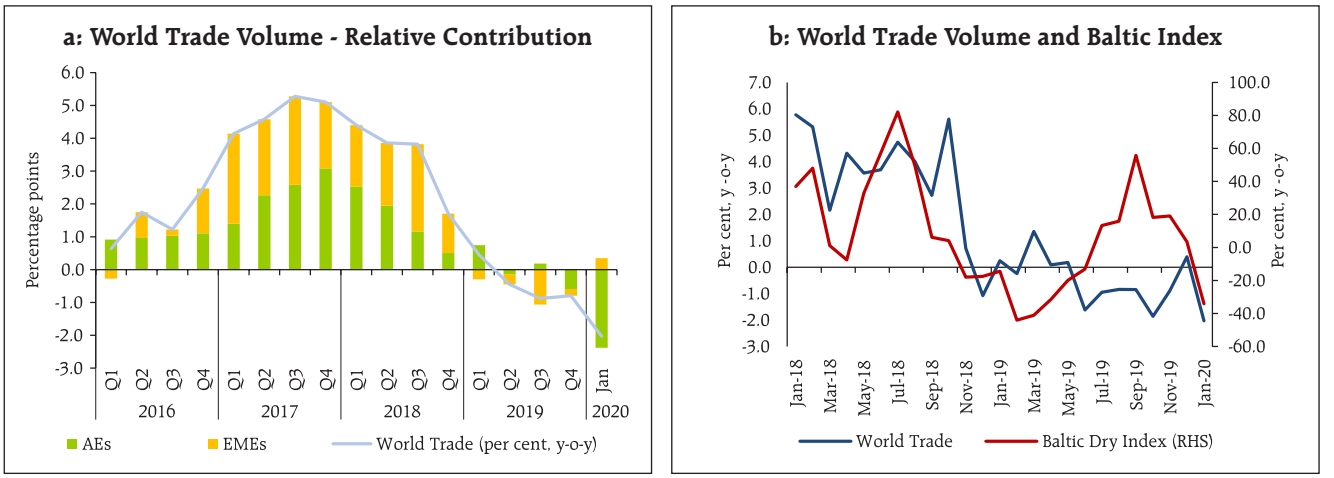
sector due to falling imports was offset by weak fixed investment and household consumption. While strong infrastructure spending and accommodative monetary policy are expected to provide a boost to economic activity, downside risks emerging from the pandemic may impact the momentum, going ahead. In Thailand, GDP growth in Q4 registered a five-year low in y-o-y terms, pulled down by weak domestic and external demand, delay in the government budget and drought. The growth outlook for Q1 remains bleak as tourism is adversely impacted by COVID-19.

The global composite PMI plunged in February-March, reversing the uptrend that occurred between October 2019 and January 2020. The index reached a ten-month high in January as output, new orders and employment rose faster on the back of strong business optimism. However, it fell sharply since February, even falling to 133-month low level of 39.4 in March, as both manufacturing and services activity declined considerably amidst disruptions caused by COVID-19 (Chart V.1a). Among the major OECD economies, composite leading indicators (CLIs) – available till December – suggested a firming up of growth momentum across major AEs and EMEs in the final months of 2019 (Chart V.1b).

The slowdown in global trade got entrenched in H2:2019 as the mild recovery in trade volume of AEs during Q3:2019 turned out to be short-lived, with contraction setting in again in Q4:2019. EMEs dragged down global trade in all four quarters of 2019 (Chart V.2a).

Forward-looking indicators suggest that world trade growth is likely to remain weak in Q1:2020 due to supply and demand disruptions caused by COVID-19. The WTO's Goods Trade Barometer remained below trend, pulled down by contraction in constituent indices pertaining to agricultural raw materials and container shipping. The Baltic Dry Index, which measures the shipping costs for a wide variety of bulk commodities such as coal, iron ore and grain, continues to show weakness (Chart V.2b).

**Chart V.2: World Trade Volume**




**Sources:** CPB Netherlands; and Bloomberg.

## V.2 Commodity Prices and Inflation

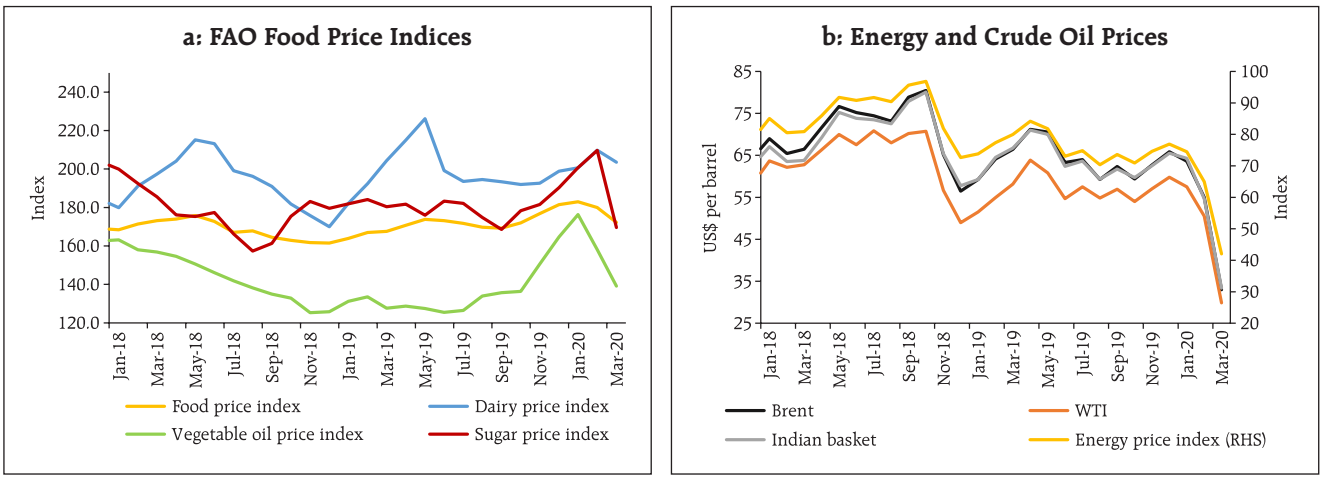
Global commodity prices remained largely supported in Q4:2019 as uncertainty related to trade eased and the US dollar weakened. However, global headwinds relating to US-Iran conflict in early January followed by the outbreak of COVID-19 exerted downward pressures. The Bloomberg commodity price index declined by 20.5 per cent between October 2019 and March 2020.

On the contrary, the food price index of the Food and Agriculture Organisation (FAO) increased by 1.8 per cent between October 2019 and March 2020. Global food prices firmed up beginning October 2019 to a five-year high in December and continued to firm up in January 2020 on the back of rising vegetable oil, sugar and dairy products prices amidst robust demand and expectations of tightening world supplies. The food price index slid in February on a sharp fall in the price of vegetable oil, which subsequently softened on excess supply from Malaysia and fear of global demand slowdown. Sugar and dairy prices have risen on tightening of export supplies from major producers and robust demand. In March, the index fell further, primarily on sharp fall in vegetable oil and sugar prices, led by demand contractions amidst COVID-19 pandemic (Chart V.3a).

Crude oil prices remained largely supported in Q4:2019 on extended production cuts by OPEC *plus* before tumbling towards the end of January. A spike to US$ 69 per barrel on January 6, 2020 followed escalation of US-Iran tensions, but a correction ensued as tensions eased. From end-January, oil prices came under intense downward pressure on fears of demand slowdown caused by COVID-19, plummeting by almost 30 per cent on March 9, 2020. Increased supplies by Saudi Arabia following failure to strike an agreement on production cuts with Russia, sparked fears of price war (Chart V.3b). On March 30, 2020, WTI crude prices slid below US$ 20 per barrel as COVID-19 widened its vice-like grip on the world.

Base metal prices, measured by Bloomberg's base metal index, fell by 17.9 per cent between October 2019 and March 2020 largely due to a demand slowdown. The firming of these prices during October-December on optimism over signing of the phase one trade deal between the US and China gave way to bearish sentiments from mid-January 2020. The spiralling of infected cases beyond Chinese borders and concerns

**Chart V.3: Commodity Prices**



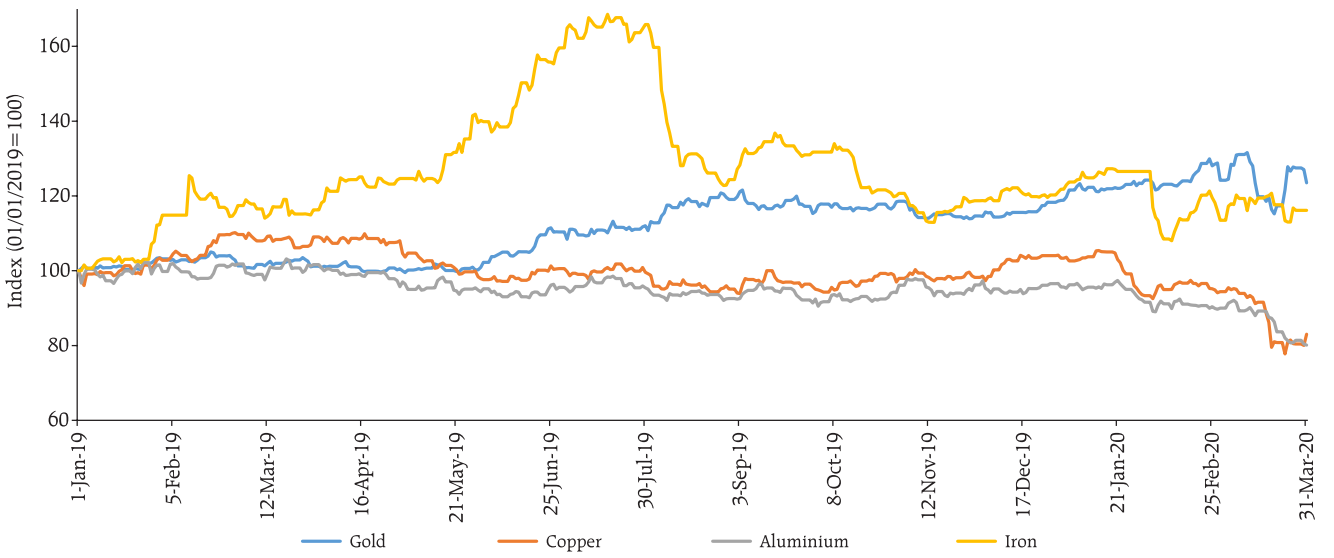

**Sources:** Food and Agricultural Organization (FAO); and World Bank.

about the global downturn intensified deflationary pressures pushing metal prices down (Chart V.4).

Gold prices remained elevated in January-February, with prices rallying on safe haven demand amidst increased concerns over the global growth outlook (Box V.2). From mid-March, however, gold prices declined, falling below the US$ 1500 per troy ounce mark, on large sell-offs as investors fled to cash to compensate losses in other markets amidst heightened volatility.

Inflation remained broadly contained in major AEs, but picked up in key EMEs on firming food prices. In the US, CPI inflation picked up modestly beginning October on rising prices of health services and food, though eased marginally in February on falling travel and fuel prices amidst COVID-19 disruptions. In terms of changes in the core personal consumption expenditure (PCE) deflator – the Fed's preferred measure – inflation remained below the Fed's 2 per cent target. In the Euro area too, inflation remained

**Chart V.4: Metal Price Indices**




**Source:** Bloomberg.

## Box V.2: What Drives Gold Prices?

As a financial asset, gold's appeal typically rises in times of financial turmoil. Recently, growing concerns about a deep global slowdown due to COVID-19 boosted its safe haven demand. On year to date basis, gold prices shot up by 11 per cent (till March 09, 2020) on top of an 18 per cent increase in 2019 (Chart V.2.1a). Gold futures also traded higher (Chart V.2. 1b). Through 2019, risk-off sentiments kept the overall appetite for gold strong as also evident in high exchange traded fund inflows, large purchases by central banks and increased COMEX net long positions. This upside to gold prices extended into 2020 up to mid-March as extreme risk aversion caused by COVID-19 sparked off sustained gold sales as it too lost allure amid heightened volatility, and gave way to an overriding preference to hold cash. This pulled down gold prices by 12 per cent between March 9 and 19, 2020. However, with subsequent recovery towards the end of March 2020, gold prices increased by 3.9 per cent on year to date basis (up to March 31, 2020).

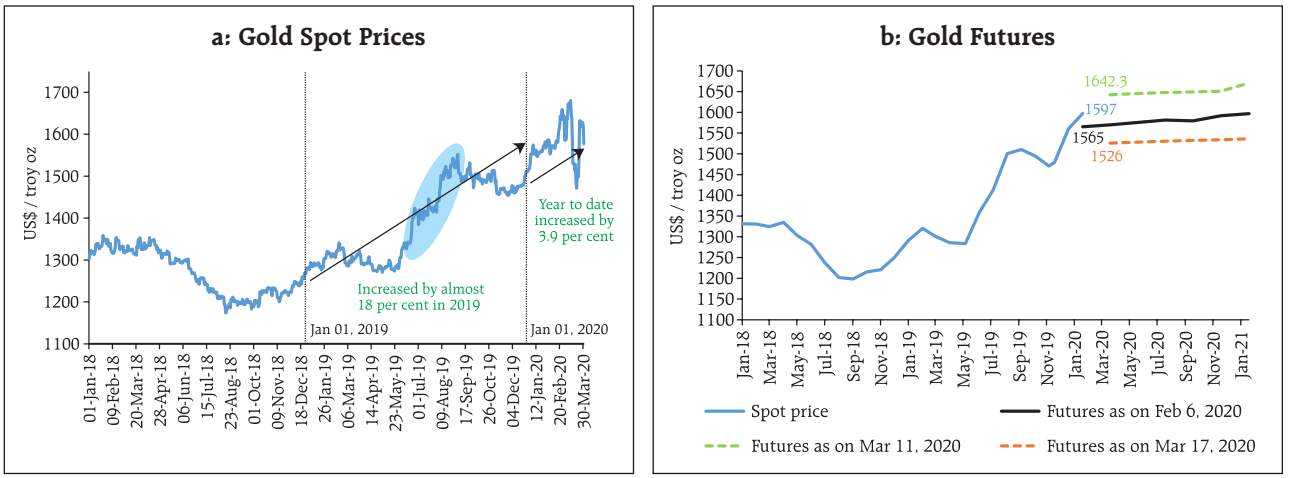
The empirical literature identifies a host of factors, *viz.,* oil prices, global liquidity conditions, exchange rate, inflation, bond yields, stock prices and economic policy uncertainty as major drivers of gold prices. Investors consider gold as a tool for portfolio diversification, as it enables hedges against price risks of other financial instruments, and as a safe haven in times of economic and financial turmoil (Levin *et al.,* 2006; Buar and Lucey, 2010; Emmrich and McGroarty, 2013; and Bilgin *et al.*, 2018).

The dynamics of gold prices are examined on a Johansen's cointegration framework to estimate the long-run relationship. Gold prices (LGOLD), the US general price index (LCPIUS) and the US real exchange rate (LREERUS) are of one order of integration or I(1) and hence a long-run relationship between them could exist, as borne out by tests for cointegration. The estimated long-run equation is as follows:

$$LGOLD = -10.6 - 2.8\log(\text{LREERUS}) + 1.7\ \text{LCPIUS} \qquad \ldots(1)$$

Equation (1) is augmented with the error correction term to capture the short-run dynamics of gold prices, while controlling for exogenous factors, *viz.,* global economic policy uncertainty (EPU) index[4], flight to safety proxied by changes in the Standard and Poor's Index of US equity markets (ΔLS&P) and changes in Brent spot prices (ΔLOIL). The empirical analysis used monthly data for the period spanning January 2005 to December 2019. All the data, barring LCPIUS, were sourced from Bloomberg. LCPIUS was sourced from the website of the Federal Reserve of St. Louis.

### Chart V.2.1: Gold Price Movement




**Sources:** Bloomberg; and The World Bank.

*(contd.)*

[4] Davis, Steven J. (2016), "An Index of Global Economic Policy Uncertainty," *Macroeconomic Review,* October.

The short-run equation was estimated by adjusting for ARCH effects, since the errors were found to be heteroscedastic. Time dummies (October 2008 and May 2006) representing the periods of excessive intra-month volatility in gold prices were included (Table V.1.1). The error correction term turned out to be statistically significant with the correct negative sign. This indicates the return of the gold price to its long-run relationship and that the estimated model is stable. *ΔLREERUS* was found to be significant at one lag with a negative sign. This suggests that a depreciation in the US dollar would make gold cheaper outside the US dollar area leading to higher demand for gold and increase in gold prices in US dollar terms. *ΔLCPIUS* has negative relationship with gold prices in the short-run, which implies that a higher inflation in the US could dampen the demand for gold and reduce its price. This could be attributed to a host of factors, *viz.*, central bank policies, investors' preference to hold cash ahead of a recession and uncertainty perturbing the long-run relationship. The other variables, *viz.*, economic and political uncertainty, stock index and crude oil prices had their expected signs and were statistically significant.

In sum, the empirical findings suggest that a rise in crude oil prices and a depreciation of the US dollar in the short-run lead to increase in gold prices. On the other hand, gold prices fall with a rise in equity prices. Gold prices also move in tandem with heightened economic policy uncertainty, thereby indicating the safe haven feature of the asset.

**Table V.1.1: Short-run Estimates of Change in Gold Prices**

| | Coefficient | P-values |
|---|---|---|
| ECM | -0.071 | 0.00 |
| $\sum_{i=1}^{3} \Delta LGOLD$ | -0.090 | 0.512 |
| $\sum_{i=1}^{3} \Delta LCPIUS$ | -3.13 | 0.004 |
| $\sum_{i=1}^{3} \Delta LREERUS$ | -1.217 | 0.001 |
| $\Delta LOIL$ | 0.124 | 0.001 |
| $\Delta LS\&P$ | -0.222 | 0.014 |
| EPU | 0.022 | 0.000 |

**Notes:** 1. Diagnostic tests based on correlogram of standardised residuals suggest no autocorrelation in residuals.

2. Correlogram of the standardised residual squares suggest no residual heteroscedasticity.

3. ARCH LM test p-value: 0.116

**Source:** RBI staff estimates.

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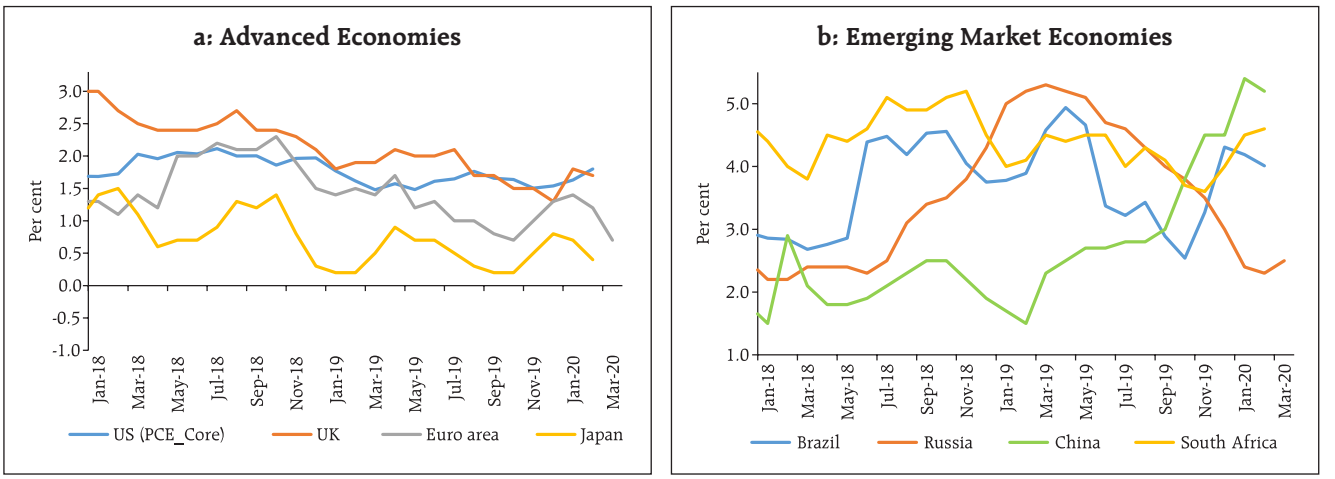
below target. Although energy and food inflation firmed up, measures of underlying inflation remained generally muted. Moreover, CPI inflation eased further in March on sharp decline in energy prices. In Japan, CPI inflation remained at a low level and edged down further in February on soft food prices and declining fuel prices (Chart V.5a).

Inflation edged up across major EMEs, except Russia. China experienced persisting inflationary pressures on account of surging pork prices, which got accentuated in January due to seasonal demand during the lunar new-year holiday. However, inflation moderated slightly in February on easing non-food prices. In Brazil, CPI inflation has been rising since November on the back of strong gains in food prices, especially meat and transport prices, although falling food and beverages prices provided some relief in February. In South Africa, inflation increased for the third consecutive month in February, primarily driven by a rise in prices of food, non-alcoholic beverages

**Chart V.5: CPI Inflation (y-o-y) – Select Economies**




**Source:** Bloomberg.

and health services. CPI inflation eased in Russia, falling below the 4 per cent target from October 2019. Subdued external demand, falling food prices amidst excess supply and strong base effect related to the VAT rate hike a year ago exacerbated the downtrend. However, it increased marginally in March on firming services and non-food prices (Chart V.5b).

### V.3 Monetary Policy Stance

In 2019, monetary policy was said[5] to have been the most accommodative across the world since the GFC. Most AEs as also some EMEs, kept their policy rate on hold in Q4:2019, but resorted to massive easing through both conventional and unconventional measures with the outbreak and rapid spread of COVID-19 in Q1:2020.

The US Fed, which had paused in two consecutive FOMC meetings in December 2019 and January 2020, resorted to emergency rate cuts – 50 bps on March 3 and 100 bps on March 15 (Chart V.6a). With these sharp reductions, the Fed brought down the target range for the Federal Funds rate to the same level as during the GFC. The Fed has also announced several other measures such as asset purchases needed to support smooth market functioning and effective transmission of monetary policy, including commercial mortgage-backed securities in its purchase programme, lowering of the interest rate on primary credit to the same level as the top of the target range of the Federal Funds rate, allowing banks to use capital and liquidity buffers for lending, and reducing the reserve requirement to zero. The Fed has also launched dedicated facilities for financing support to commercial paper, primary dealers and money market mutual funds, while reviving the Term Asset-Backed Securities Loan Facility from the crisis time. The Fed would also be supporting credit to large employers, under new programmes. Besides, the Fed has also expanded dollar liquidity swap lines with other central banks and set up a temporary repo facility for foreign and international monetary authorities.

The European Central Bank (ECB), has not changed key rates since a 10 bps reduction in deposit rate announced in its September 2019 meeting. In its March 2020 meeting, however, the ECB announced an additional €120 billion of net asset purchases, temporary longer-term refinancing operations and more favourable terms and quantum for the targeted

[5] See https://blogs.imf.org/2020/01/28/a-call-for-vigilance-after-a-strong-year-for-risky-assets/. Also https://www.ft.com/content/b8709ca4-e8f8-11e9-85f4-d00e5018f061.

longer-term refinancing operations (TLTRO) III for one year from June 2020. The ECB also announced a new €750 billion Pandemic Emergency Purchase Programme (PEPP) under which private and public sector securities would be purchased until end-2020 with flexibility on purchase flows over time, and across asset classes and jurisdictions, including Greek government bonds. The ECB also included non-financial commercial paper as eligible assets for its corporate sector purchase programme, and eased collateral requirements for its refinancing operations.

The Bank of England (BoE), which was on a pause after raising the Bank rate in August 2018, undertook two out-of-turn rate cuts in March – of 50 bps and 15 bps – thereby reducing the Bank rate to an all-time low of 0.1 per cent. The BoE also announced additional asset purchases of £200 billion to be completed quickly in 2020. The BoE also announced macro-prudential relaxations and other incentives in order to support the economy with funds to tackle COVID-19 repercussions.

The Bank of Canada (BoC), which was on a pause after October 2018, cut its policy rate by a cumulative 150 bps in March 2020, in three steps of 50 bps each to 0.25 per cent, to provide support to the Canadian financial system and the economy during the COVID-19 pandemic. The BoC has also introduced new liquidity support measures, including launching a quantitative easing programme.

The Bank of Japan announced an enhancement of monetary easing in March 2020. The Reserve Bank of Australia (RBA), which was on a pause from November 2019 after having reduced the cash rate to an all-time low in October, reduced the cash rate by 25 bps each on two occasions in March to a new low of 0.25 per cent. The RBA also undertook additional measures such as yield curve control to be achieved through bond purchases, term funding facility and remuneration of exchange settlement balances of banks. The Reserve Bank of New Zealand undertook an emergency rate cut of 75 bps in March, pushing the policy rate to a new low of 0.25 per cent, besides announcing purchases under open market operations and other measures to support smooth functioning of the market.

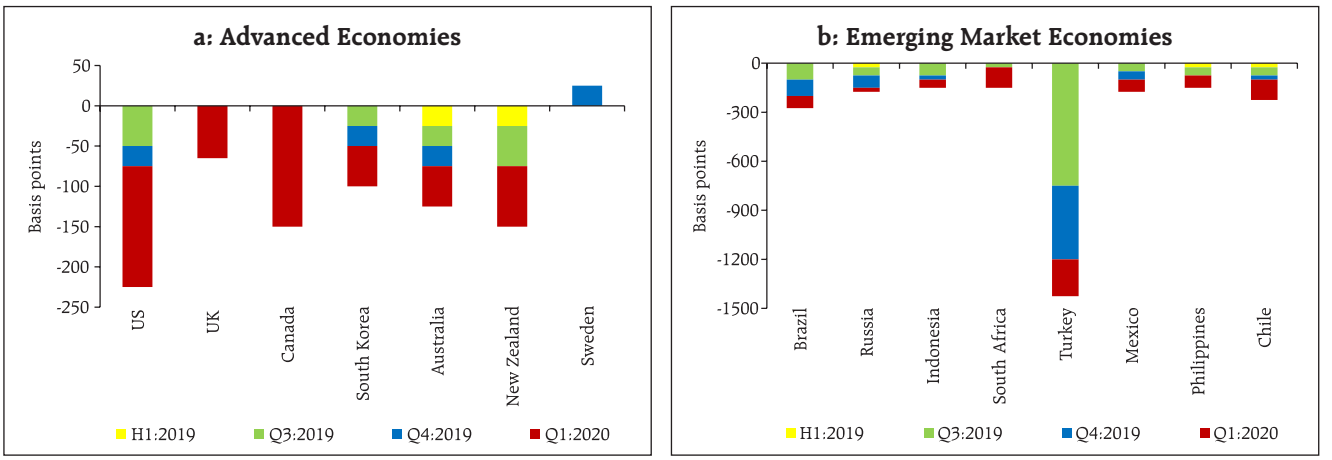
The Bank of Korea, on a pause since November 2019, undertook an emergency rate cut of 50 bps in March 2020 and announced other measures to stabilise economic and financial conditions.

Riksbank was one of the few central banks that raised policy rates in 2019 with a hike of 25 bps in December 2019, thereby moving out of negative policy rate territory. In an emergency monetary policy meeting in March, however, the Riksbank announced additional asset purchases of SEK 300 billion, besides offering increased funding to banks on favourable terms and other measures.

EMEs have also undertaken monetary easing and announced other liquidity support measures. The People's Bank of China (PBoC) had effected a 5 bps cut in the one-year Loan Prime Rate (LPR) in November and followed it up with another 10 bps reduction in February 2020. The PBoC also injected about 1.2 trillion Chinese yuan of liquidity when markets opened on February 3 after an extended lunar new year break. It also announced a low-cost refinancing facility aimed at small and medium sized enterprises. In March, the PBoC lowered the reserve ratios for certain categories of banks and lowered the 7-day reverse repo rate by 20 bps.

Other BRICS central banks remained in accommodative mode. The central bank of Brazil, which has been following 'stimulative monetary policy' and reducing the Selic rate since August 2019, cut this rate further by 50 bps each on two occasions in Q4:2019, and followed up with a 25 bps cut in February and a 50 bps cut in March. The Bank has also offered regulatory relaxations and other liquidity support facilities. The

**Chart V.6: Policy Rate Changes – Select Major Economies**




**Note:** The policy rate changes are mapped to the time when the decision was announced and not when it took effect.
**Source:** Bloomberg.

Bank of Russia, which had been reducing its policy rate in every policy meeting since June 2019, cut it by 25 bps each in its October, December and February meetings, but maintained a pause in the March meeting. The South African Reserve Bank, which had cut policy rate in July 2019 and had since maintained a pause, reduced its repo rate by 25 bps in January 2020 and a further 100 bps in March 2020 as the South African economy was expected to contract in 2020, having entered a recession in H2:2019 while inflation remained moderate (Chart V.6b).

The central bank of Turkey, which embarked on policy accommodation in July 2019, cumulatively cut the policy rate by 675 bps on five occasions since October 2019. Banco de México, which cut its policy rate by 25 bps in each of its meeting since August 2019 as growth stagnated for several quarters, effected a 50 bps cut in March. The central bank of Philippines and Bank Indonesia, which were on pause after cutting rates in September, cut their policy rates by 25 bps each in February 2020, and by 50 bps and 25 bps, respectively, in March to support growth. Other central banks that cut rates on COVID-19 concerns include, *inter alia*, the Bank of Thailand, the Bank Negara Malaysia and the Central Bank of Chile.

## V.4 Global Financial Markets

Global financial markets witnessed firming up of risk-on sentiment in Q4:2019 as a host of factors that had kept markets on edge – notably, the US-China trade tensions; and uncertainty regarding Brexit – receded to an extent. There was a bout of risk-off sentiment in early January due to geopolitical tensions emanating from the US-Iran conflict. However, calm quickly returned but when China declared on January 20 that there had been cases of human to human transmission of the novel coronavirus, sentiments turned extremely volatile, exacerbated by disagreement on oil production cuts between OPEC and Russia in March. In the same week, the WHO categorised the COVID-19 as a pandemic, which led to a tailspin in the markets and financing conditions tightened worldwide.

Among AEs, US equities were on a continuous uptrend in Q4:2019, as the US Fed cut rates in October while the unemployment level in the US remained at a historic low. Positive news on the trade front – passing of the US-Mexico-Canada agreement by the House of Representatives and the announcement of the phase one agreement between the US and China – buoyed markets. In January, escalation of tension with Iran

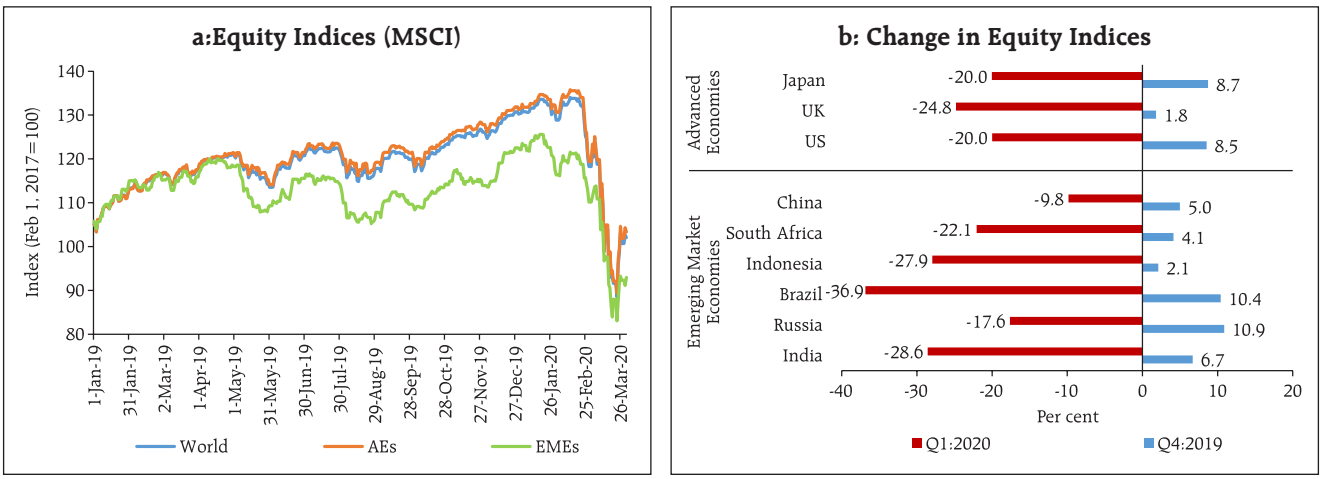
pulled down equities for a brief period. Another slide occurred after the outbreak of COVID-19. As China took strong action to restrict the limit and impact of COVID-19, US equities began rising again, reaching all-time highs in the third week of February. Immediately thereafter, with the rapid spread of COVID-19 to Italy, South Korea and Iran, sentiments worsened and the US indices registered their worst weekly performance since the GFC. The US Fed issued a statement that it stood ready to support the economy and announced an out-of-turn rate cut, which led to a recovery in the market for a couple of days. After the fallout between Russia and Saudi Arabia on crude oil and COVID-19 being declared a pandemic, the US equity market hit circuit breakers on two days in one week (March 9 and 12) – March 12 was the worst trading day since the Black Monday crash of October 19, 1987. The markets hit a circuit breaker again on March 16, just after the second emergency rate cut by the Fed. The marginal recovery in the latter part of March was on account of economic stimulus package worth about US$ 2 trillion being signed into law.

In the UK and the Euro area, equity markets gained strength from December onwards with the UK general elections and certainty about Brexit. In Japan, stocks rose in Q4:2019 on expectation of higher profitability with favourable currency movement even as overall growth remained sluggish. With the COVID-19 outbreak, however, their indices crashed in sync with stock markets worldwide.

Stock markets in EMEs mirrored this pattern. Driven by risk-on sentiments, stock markets in most EMEs registered handsome gains in Q4:2019 (Chart V.7). In Q1:2020, EME stock markets have been driven mainly by concerns about COVID-19, with additional headwinds arising from the crude oil price war in March. Chinese stocks fell most on February 3 after an extended lunar break. Other EME markets suffered sharper slides with frequent trading curbs in the second week of March.

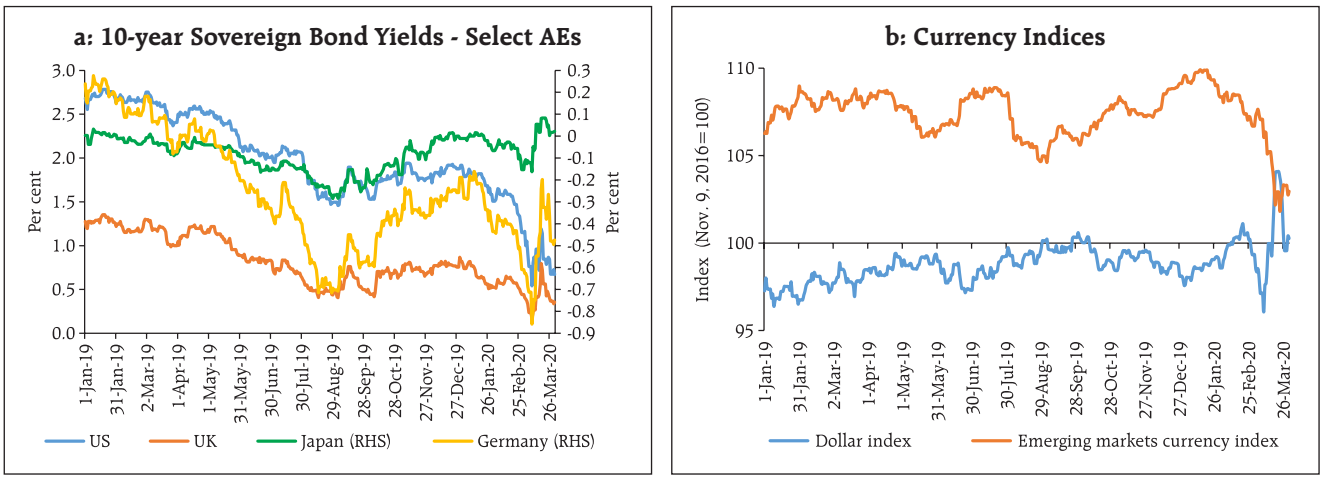
Bond yields firmed up across major AEs in the wake of risk-on sentiments, as also on improving global growth outlook and receding trade tensions in Q4:2019. With COVID-19, yields dipped on strong safe haven demand. In the US, the 10-year yield fell to historic lows in the fourth week of February as stock markets fell and demand for government bonds soared exemplifying flight to quality with the rapid spread of COVID-19 outside China and the US Centers for Disease Control and Prevention warning of increased risk to US residents. Yields dived below one

**Chart V.7: Equity Markets**




**Sources:** Bloomberg; and RBI staff estimates.

**Chart V.8: Bond Yields and Currency Movements**




**Source:** Bloomberg.

per cent after the first emergency rate cut by the Fed, reaching an all-time low on March 9, before recovering marginally (Chart V.8a).

Similar rallies were seen in bonds in other AEs, with yields reaching new lows in the UK and the Euro area. Bond yields across AEs continued to dip up to March 9, but increased sharply thereafter, with 10-year Japanese yields turning positive. Yields in EMEs, in general, softened in Q4:2019 with search for yield driving rates down. However, yields broadly remained range-bound up to February, but sharp risk-off sentiment in March led to a rout and yields across these economies rose sharply.

In currency markets, the US dollar weakened against major currencies, with the policy rate reduction by the Fed in October and guidance that it would pause. The dollar recovered in January with receding of trade tensions. With COVID-19, safe haven demand pushed up the dollar index further. However, with the virus spreading to the US and rising fatalities, as well as the rate cut by the Fed, the dollar weakened in early March (Chart V.8b). Most emerging market currencies, which had strengthened due to risk-on sentiment towards end-2019, weakened sharply with flight to safety in Q1:2020. The MSCI Emerging Market Currency Index increased by 3.6 per cent in Q4:2019 and declined by 6.0 per cent in Q1:2020.

## V.5 Conclusion

In sum, global growth prospects have been rendered askew by COVID-19, with the near-term outlook extremely weak. Inflation in AEs remains benign, and a sharp decline in non-food commodity prices has imparted a further downward bias. Inflation concerns, however, remain in some EMEs although considerable uncertainty clouds the inflation outlook in the context of COVID-19. Global financial markets have become extremely volatile. Quick and coordinated actions by monetary authorities and governments have been taken, but there is little evidence as yet that they could mitigate the risks to the global economy from amplifying.

# SPEECH

## Micro, Small and Medium Enterprises: Challenges and Way Forward

Shaktikanta Das

# *Micro, Small and Medium Enterprises: Challenges and Way Forward* *

*Shaktikanta Das*

At the outset, I wish to thank ASSOCHAM for inviting me to their 15th Annual Banking Summit. More so because this is ASSOCHAM's centenary year. It is a remarkable accomplishment and I extend warm greetings to all those associated with ASSOCHAM. Over the years, ASSOCHAM has transformed itself into a forceful, proactive, forward-looking organisation to meet the aspirations of Indian business. I am certain that ASSOCHAM's journey towards excellence will continue.

In a country like India with a population size of about 1.3 billion, the Micro, Small and Medium Enterprises (MSME) sector has a vital role in the economy. It fosters entrepreneurship and generates large employment opportunities. As MSMEs absorb the surplus agricultural labour, they help reduce the problem of disguised unemployment in rural areas. MSMEs are also complementary to large industries as ancillary units and also play an important role in the whole eco-system of the secondary and tertiary sector.

We all are aware that the MSME sector is passing through a challenging phase. The theme of today's Summit - 'Structural Reforms in MSME Funding' - chosen by ASSOCHAM, therefore, could not be more apt and timely. In my address today, I would begin by underlining the importance of the MSMEs to the economy. I would then delve into some challenges faced by them and discuss some of the measures undertaken by the Reserve Bank. I shall also list out some issues as a way forward.

* Shri Shaktikanta Das, Governor, Reserve Bank of India, Address at the 15th Associated Chambers of Commerce and Industry of India (ASSOCHAM) Annual Banking Summit held in Mumbai on March 6, 2020.

## I. Importance to the Economy

Let me begin by highlighting a few stylised facts on the contribution of MSME sector in India. The MSME sector contributes in a significant way to the growth of the Indian economy with a vast network of about 6.3 crore units and a share of around 30 per cent in nominal GDP in 2016-17[1]. The share of the sector in total manufacturing output was even higher at 45 per cent[2]. Taking cognisance of the wider set of benefits that the sector offers to the rest of the economy, the Government has envisioned to increase its contribution to GDP to over 50 per cent in next few years as the country aspires for a ₹5 trillion economy[3].

As per the 73rd round of National Sample Survey (NSS) conducted during the period 2015-16, the estimated employment in MSME sector was around 11 crore. Within MSME sector, each of the three sub-sectors, namely, trade, manufacturing and other services accounted for about a third of total employment. Around 50 per cent of the total MSMEs operate in rural areas and provide 45 per cent of total employment. Interestingly, the micro enterprises account for 97 per cent of total employment in MSME sector[4]. This relates to the problem of what is called the missing middle[5], which suggests that micro firms have failed to grow into smaller and medium firms and so on over time. This seems to have kept the micro sector bereft of enjoying economies of scale, investment into fixed assets, adoption of technology and innovation.

The share of MSME sector in India's merchandise exports stood at around 48 per cent in 2018-19[6]. This

1 Annual Report, Ministry of MSME 2018-19.

2 Report of the Expert Committee on Micro, Small and Medium Enterprises (Chairman: U.K. Sinha), June 25, 2019.

3 Ministry of Micro, Small and Medium Enterprises, Government of India, September 24, 2019.

4 Annual Report Ministry of MSME 2018-19

5 Krueger, A. O. (2013). The missing middle. *Economic reform in India: Challenges, prospects, and lessons*, 299.

6 Ministry of Micro, Small and Medium Enterprises, Government of India, July 2019

signifies that Indian MSMEs are becoming globally competitive and their products/services are being accepted overseas. In this background, special attention needs to be given to improve the competitiveness and technology up-gradation endeavours. Various schemes and programmes of the Government, therefore, should be continued and effectively implemented.

**II. Challenges in the MSME Sector**

Despite the MSME sector contributing significantly to the economy, it continues to face several challenges. The major challenges include physical infrastructure bottlenecks; absence of formalisation; inertia to technology adoption; capacity building; backward and forward linkages; lack of access to credit and risk capital; and the perennial problem of delayed payments, among others. Let me now elaborate on some of these issues.

*Infrastructure bottlenecks and Competition*

Notwithstanding various efforts to upgrade the infrastructure, the MSME clusters, particularly the micro enterprises, are inadequately equipped with necessary support systems which not only impede their day-to-day business operations but also their future growth prospects. While infrastructure constraint is only one side of the story, I believe that MSMEs also need to do their bit to improve competitiveness. They need to shed their inhibition to adopt new technologies; accept e-payments; and foster in-house innovation which will help them manage their businesses digitally and compete globally. Given the current scenario of global trade, the age-old methods of operating business with low levels of technology adoption deprives them of potential economies of scale. Lack of expertise in product development, designing, packaging and marketing strategy due to their small size add up to the pressure of adapting to the changing environment around them. The strategy for MSMEs should be to gradually expand in size and reduce the dependence on the incentive structure provided by the Government. Their aim should be eventually to compete on a global scale.

*Access to Credit and Formalisation*

Credit plays a vital role in the development of MSME sector as funds at a reasonable cost can increase their competitiveness. Credit disbursal to this sector has, however, remained sluggish in recent periods. At an aggregate level, the total credit outstanding from banks and NBFCs to the MSME sector was approximately ₹16.6 lakh crore as at end of September, 2019. Scheduled commercial banks account for 90 per cent share of total credit outstanding.

As many MSMEs mainly operate in the informal space assessing their creditworthiness can be difficult due to information asymmetry, particularly with respect to the financial performance of their businesses. In the absence of collateral, under-writing the customer often entails higher operating cost. Furthermore, due to their small-scale operations, MSMEs are not able to raise risk capital. They are also unable to take advantage of most of the Government schemes which are mostly based on digital infrastructure and require beneficiaries to have some form of digital identity and presence. With the implementation of structural reforms like goods and service tax (GST) and Jan Dhan-Aadhaar-Mobile (JAM) trinity, the informal units are, however, getting integrated with the mainstream in recent years.

*Delayed Payments*

A large number of MSMEs are ancillary units catering to the needs of large industries, both in the public and private sector. They often face the problem of delayed payments, affecting their cash flow and working capital availability. Most of the time, delay in realisation of such receivables increases their operating cycle and reduces their ability to procure new orders or fulfil the existing ones. A primary survey conducted by the Reserve Bank in December 2019 showed that 44 per cent of MSMEs engaged in manufacturing activities faced delay in payments. The ones not receiving timely payment mainly belonged to basic metal and metal products, engineering, construction and infrastructure related industries.

On the other hand, delay in payments was lower at 27 per cent for services sector. Here transport operators mostly faced such situations. Although Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 contains provisions related to penalty in case of delayed payments by the buyers, weak bargaining power and the fear of losing the business prevents MSMEs to invoke this provision.

**III. Expert Committee on MSMEs**

In order to understand the structural bottlenecks and factors affecting the performance of the MSMEs, RBI had set up an Expert Committee on MSMEs under the Chairmanship of Shri U.K Sinha in January 2019. The Committee has undertaken comprehensive review of the sector and given several recommendations for the economic and financial sustainability of the MSME sector. These recommendations are wide-ranging and broadly relate to legislative changes; infrastructure development; capacity building; technological upgradation; improving backward and forward linkages; improving financial support from formal sources; newer technological interventions for robust underwriting practices; and credit delivery, among others. While some of the recommendations of the Committee have already been implemented, others are under consideration by the authorities concerned.

**IV. Measures Undertaken by RBI**

*Measures to Improve the Credit Flow*

The Reserve Bank has taken several measures in the recent period to improve the flow of credit to the MSME sector. Banks form the predominant source of formal credit to MSMEs with all such loans by banks qualifying for Priority Sector Lending classification. In August 2019, we have further incentivised banks to lend to MSMEs through the NBFC sector. Consequently, bank credit to registered NBFCs (other than Micro Finance Institutions) for on-lending to micro and small enterprises up to ₹20 lakh per borrower are eligible for classification as priority sector lending.

A scheme of one-time restructuring without an asset classification downgrade was permitted to GST registered MSME accounts that were in default but standard as on January 1, 2019. As the process of formalisation of the MSME sector has a positive impact on financial stability and this process is still underway, the scheme has been extended to accounts that are standard but in default as on January 1, 2020 and restructuring, wherever eligible, has to be implemented latest by December 31, 2020. This will enhance the scope of the scheme by benefitting the eligible MSME entities which could not be restructured under the provisions of the circular dated January 1, 2019 as also the MSME entities which have become stressed thereafter. So far, banks have restructured 6 lakh accounts out of 15 lakh eligible accounts under the scheme. Our primary survey suggested lack of awareness about the scheme among the MSMEs.

We have announced last month that incremental loans to MSMEs along with retail loans for automobiles and residential housing will be exempted from CRR from fortnight ending January 31, 2020 up to fortnight ending July 31, 2020.

Subsequent to the introduction of an external benchmark system in October 2019, the monetary policy transmission has improved where new floating rate loans to the micro and small entrepreneurs were linked to the external benchmark. With a view to further strengthening monetary policy transmission, all new floating rate loans to medium enterprises extended by banks from April 01, 2020 will also be linked to the external benchmarks.

*Addressing Delayed Payments*

As I have mentioned earlier, delay in getting payments is one the perennial problems faced by MSMEs. To address this issue, the Reserve Bank introduced the Trade Receivables Discounting System (TReDS) in 2014. TReDS is an electronic platform where receivables of MSMEs drawn against buyers (large corporates, PSUs, Government departments) are

financed through multiple financiers at competitive rates. This is done through an auction-based mechanism. To widen the scope of TReDS and to incentivise more players to be part of this platform, banks' exposure through this platform were brought under priority sector lending in 2016. Presently, three entities, [*viz.*, Receivables Exchange of India Ltd. (RXIL), A. TReDS, and Mynd Solutions] licensed by the Reserve Bank are operating the platform for more than two years. Further, the Reserve Bank recently allowed 'on tap' authorisation to entities desirous to provide platforms for TReDS. Hence, in coming years, competition in receivables discounting space is bound to increase with the entry of new players. This requires the corporates, both in the public and private sector, to join the TReDS platform and make the system more efficient.

In 2018, the Government made it mandatory for all companies with a turnover greater than ₹500 crores to register with TReDS. As on February 2020, while 8211 MSME sellers were registered, only 1530 buyers were participating on the platforms. I would appeal to the ASSOCHAM to encourage and handhold all its members to participate in the TReDS platform.

In the Union Budget 2020-21, the Government has announced app- based invoice financing products to obviate the problem of delayed payments of MSME. The mechanism may prove complementary to the TReDS platform and would further alleviate the problem of delayed payments.

**V. Way forward**

As the MSME sector holds immense potential, the need is to have a right set of policies and enabling framework which guide and support MSMEs to effectively handle their existing problems and venture into new areas. While both the Government and the RBI have introduced a plethora of measures for improving access to finance and to promote growth of the sector, the small size of individual units and informal nature of the sector continue to pose challenges.

The traditional bank lending system by banks is based on financial statements and collateral of the borrower. With increased availability of data from several sources, including GSTN, income tax, credit bureaus, *etc.,* it is now possible to appraise the MSME loan proposals expeditiously by doing due diligence online. Further, with the help of Account Aggregators (AA), lenders will have access to potential borrower's financial information at a single point, of course, with his/her consent. Furthermore, emergence of FinTech companies has made it possible to assess credit worthiness of MSMEs by utilising unexplored data sources such as digital transaction trails, data generated through e-commerce sites, *etc.* Some lenders are collaborating with FinTech companies to take advantage of such surrogate data for speedier credit underwriting for extending loans to MSME sector. These new architectures would expand the reach of credit.

While the new models are beneficial for those units which are digitally active, a large segment of MSME units access credit through traditional lending models. While micro enterprises act as a starting stage of entrepreneurship that requires low investment in technology, units graduating to small and medium enterprises have to enhance their technical capacity and explore newer markets in order to stay competitive for sustainable growth. Recent policy efforts will provide an enabling environment and facilitate the MSME sector seize the new emerging opportunities. I must add that as a regulator, we in RBI have to safeguard financial stability while ensuring wider access to finance. Banks and other players on their part have to ensure prudent lending.

Besides, we in RBI have started launching cohorts under the Regulatory Sandbox. First such cohort was launched in November 2019 with the theme of 'Retail Payments' to spur innovation in digital payments space to design and test newer payment services for the unserved and underserved segments. In due course, we propose to run a regulatory sandbox for cohorts

focussed on lending. This would promote innovation in MSME lending segment. The project on Public Credit Registry (PCR) will fundamentally address the information asymmetry that impedes access to credit for micro and small entrepreneurs. The PCR has been envisaged as a database of core credit information. The registry would play crucial role in reducing credit gap in the segment.

Given the fact that the MSME sector contributes significantly to exports, it is essential that they should be integrated with global value chains (GVC) to remain competitive as it offers unique opportunity to become technologically and digitally empowered. Being part of GVC would enable MSMEs to produce quality goods and services which will have greater acceptability in the global market. The major challenges for the sector to connect to the GVC are lack of information, knowledge of markets and quality standards. In this regard, I see a greater role for cooperation among all stakeholders.

Let me conclude by reiterating that industry bodies like the ASSOCHAM will need to extend their role and assist MSMEs embrace best business practices in line with the fast-changing business environment.

I wish this summit of ASSOCHAM all success in its centenary year.

Thank You.

# ARTICLES

Climate Change: Macroeconomic Impact and Policy Options for Mitigating Risks

Union Budget 2020-21 – An Assessment

# *Climate Change: Macroeconomic Impact and Policy Options for Mitigating Risks**

*This article highlights the rising risks from climate change to the macroeconomic outlook of economies around the world and also reviews the available risk mitigating policy options. An analysis of major weather-related events in India since 1901 shows that the incidence of extreme events has increased in the last two decades, with rising average temperature levels and more volatile precipitation pattern relative to the long period average (LPA). Empirical findings suggest that the macroeconomic impact of climate change, particularly on food inflation and certain indicators of real economic activity, has been statistically significant for India.*

**Introduction**

Climate change and the associated shift in weather pattern following an increase in average global temperature has emerged as a key risk to the macroeconomic outlook of both advanced and emerging economies. The United Nations notes that '*the climate change is the defining issue of our time and we are at a defining moment*'. India has also witnessed significant changes in climatic patterns in the recent period. With the increase in population, the cumulative level of greenhouse gas (GHG) emissions has increased, resulting in a rise of average temperature. According to a study by the International Energy Agency (IEA), India emitted 2,299 million tonnes of carbon dioxide ($CO_2$) in 2018, a rise of 4.8 per cent over the previous year[1].

In India, the growth and inflation outlook continues to be influenced by the amount of rainfall received from the south west monsoon (SWM) season (June-September) and its distribution. The country receives around 75 per cent of its annual rainfall during these four months, which is vital for the agricultural sector, as 65 per cent of the gross cropped area in India still remains unirrigated. In 2019, India received one of the highest levels of SWM rains in the past two decades. However, a prolonged dry spell in the initial months coupled with very heavy/excessive rainfall as monsoon progressed led to floods and crop damage in several parts of the country.

Besides precipitation (rainfall), temperature and its variability is another key indicator of changing climatic conditions. During the past two decades, the mean annual temperature in India has witnessed a significant rise. So far, as per the India Meteorological Department (IMD), 2016 has been the warmest year on record for India. While the gradually rising average temperature is a long-term feature of changing climatic conditions all over the world, extreme/volatile weather events like changing rainfall patterns, its skewed distribution, increasing frequency and intensity of floods, unseasonal rainfall, heat waves and droughts pose serious macroeconomic risks. India is also witnessing rising sea levels and melting of glaciers, which can be attributed to global warming. The gradually rising sea levels may reduce the area of available arable land.

At the current rate of increase in temperature, extreme precipitation and temperature events can become a regular feature, with the potential for causing severe damage to the livelihood of people and output [Intergovernmental Panel on Climate Change (IPCC), 2018]. Thus, climate change, along with rapid advancements in technology and demographic shifts, has the potential to bring about significant economic transformation (Rudebusch, 2019). Changes in climatic conditions can have

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* This article is prepared by Archana Dilip and Sujata Kundu, Research Officers posted in the Financial Markets Operations Department (FMOD) and Department of Economic and Policy Research (DEPR), Reserve Bank of India (RBI), respectively. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

[1] In 2018, the growth rate of $CO_2$ emission for India surpassed that of US and China, which are considered as the biggest emitters in the world.

long-term macroeconomic consequences through various channels. While the most evident channel is agricultural output, the others could be adverse effects on labour productivity, mortality rates and investment decisions [Acevedo, 2018; Batten, 2018; Kahn *et al.*, 2019; International Monetary Fund (IMF), 2019]. The important types of risks due to climate change and their channels of transmission to the economy are presented in Annex Table 1. The adverse effects of disruptions in climatic conditions on asset prices and financial stability have also been highlighted [Global Financial Stability Report (IMF), 2019].

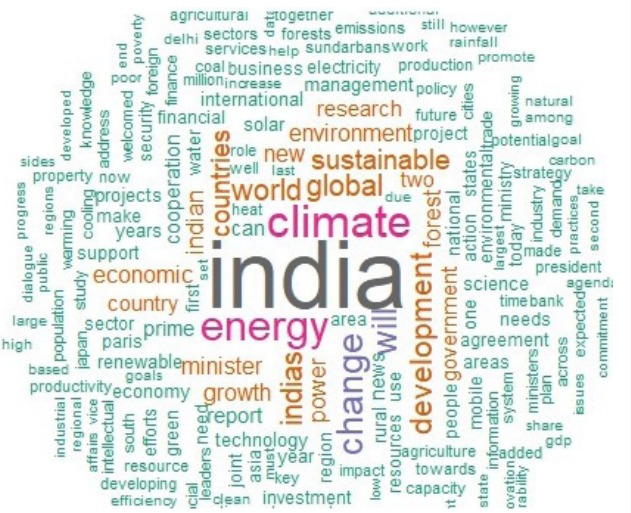
This article analyses some of the channels through which climate change risks can influence macroeconomic outcomes in India. While literature on India has largely concentrated on the impact of temperature and weather events on agricultural yields, this article aims to look at the impact of weather on inflation (particularly, food inflation) and economic activity. It also reviews the available policy options for risk mitigation. The article is structured as follows: Section II provides a brief review of facts on the changing climatic conditions at the all-India level. It presents stylised facts documenting climate change – the occurrence of extreme weather events – in India, especially during the last two decades. Section III provides a brief review of select theoretical and empirical literature on the impact of climate change on the economy, followed by our empirical analysis of the impact on food inflation and real economic activity indicators in section IV. Section V outlines the various risk mitigation policies highlighted in the literature that could be adopted by the government and central banks. Section VI provides the concluding observations.

## II. Climate Change: Is it a myth?

Climate change is generally defined as long-term deviations in the strength or frequency of weather events relative to a historic baseline (Mani *et al.*, 2018). It may encompass an entire range of weather events of different forms or gradually occurring changes in weather, such as significant alterations in the average annual temperatures, increase in the frequency/ strength of extreme weather events like floods, droughts, heat waves and storms and/or changes in the pattern of monsoon.

In India, one can find increasing evidence of changing temperature and rainfall patterns. Even a word cloud[2] based on newspaper articles that were published in India during 1999-2019 containing the key word 'climate change' shows how it has truly emerged as an important subject of discussion over the years (Illustration 1). This section looks at some visible evidence of climate change in India.

**Illustration 1: Word Cloud Based on the Key Word 'Climate Change'**



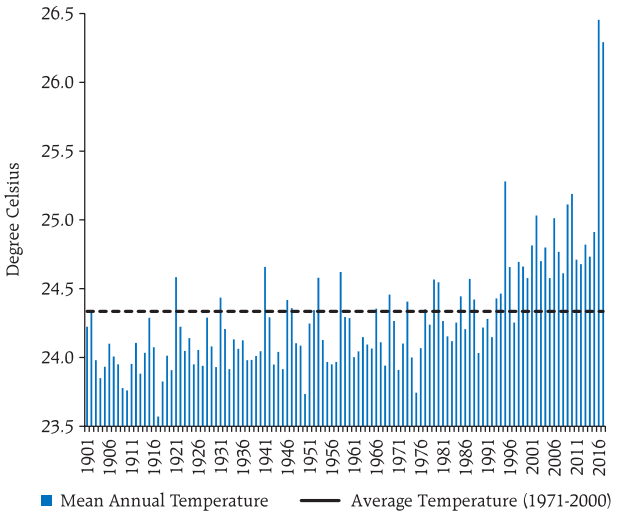

**Source:** Proquest Database; https://data.gov.in; and Authors' calculations.

### *Temperature*

In the last two decades (2001-17), the average annual temperature has witnessed a significant rise (Chart 1). The magnitude of increase in average

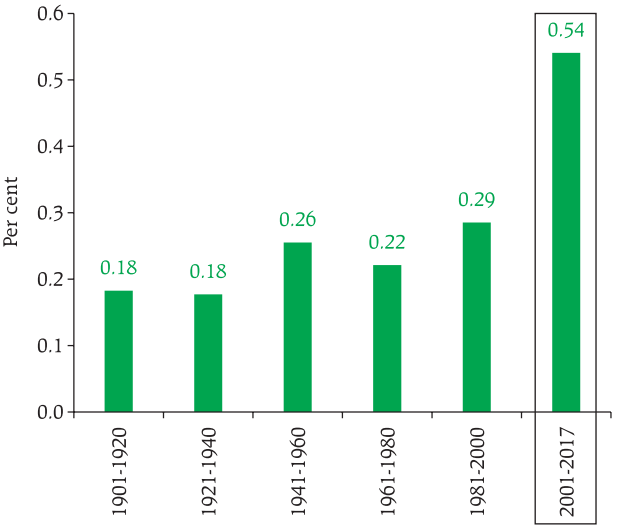
[2] A word cloud is an illustration made of words, with the size of a word indicating the frequency of it appearing in a text. Larger the size of a particular word, the more important it is.

**Chart 1: All India Average Annual Temperature during 1901-2017**




**Source:** https://data.gov.in; and Authors' calculations.

**Chart 3: Temperature Volatility**

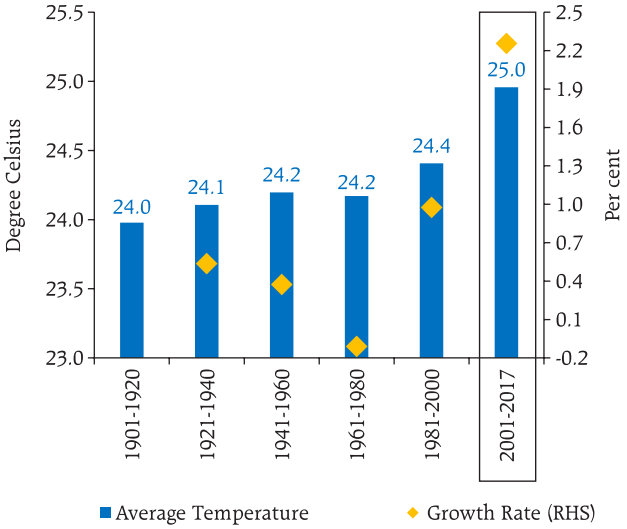



**Note:** Temperature volatility has been measured using standard deviation.
**Source:** https://data.gov.in; and Authors' calculations.

temperature (as well as temperature volatility) during 2001-17 has been significantly higher than during any other 20-year time interval since 1901 (Charts 2 and 3).

Intra-year periodic averages of temperature pattern in India are such that the minimum temperature during any year usually falls during January-February (winter months), while the maximum temperature is generally observed during March-May (pre-monsoon months). Data indicate increasing trends in both minimum and maximum temperatures over the years during these months (Charts 4.a and 4.b). Further, the 5-year moving averages (MA) since 1901 show higher fluctuations around rising trends, particularly during the past 30 years.

**Chart 2: Average Temperature and its Rate of Growth**




**Source:** https://data.gov.in; and Authors' calculations.

*Rainfall*

The deviations in SWM from its usual pattern/ distribution pose a key risk to the macroeconomic outlook. Over the years, the dynamics of the SWM season appears to have undergone gradual changes. For instance, during 2019, despite a delayed onset (June 8, 2019) and a highly deficient phase during June (33 per cent from LPA), the season ended with a 10 per cent above normal rainfall, which is the highest recorded in the past 25 years (the highest during the period 1990-2019 being 12.5 per cent in 1994) (Chart 5).

In 2019, after witnessing a significant rainfall deficiency in June, monsoon gained some pace in July (Charts 6.a and 6.b). However, the extent of excess rainfall during August and September was large (Charts 6.c and 6.d). In August, rainfall was 15 per cent above LPA, highest in the past 23 years, while in September,

**Chart 4.a: Trends in All-India Annual Maximum Temperature during March-May**

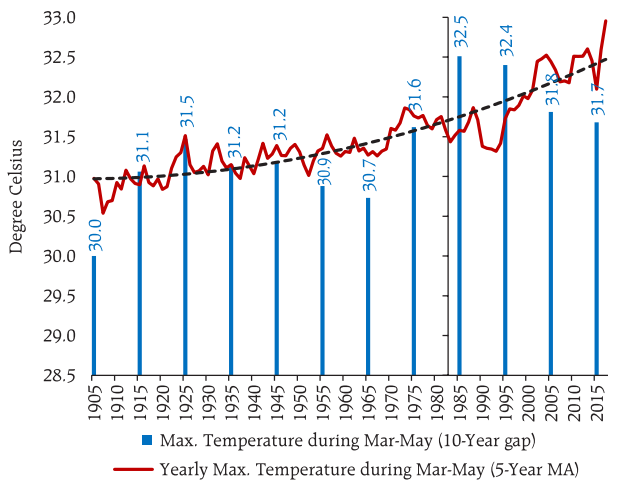
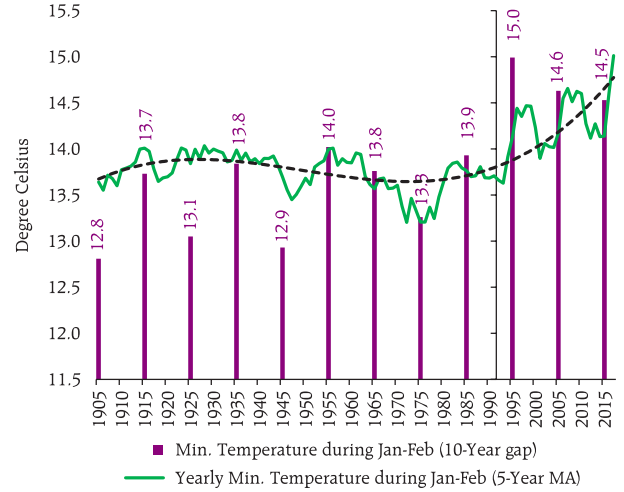



**Chart 4.b: Trends in All-India Annual Minimum Temperature during January-February**

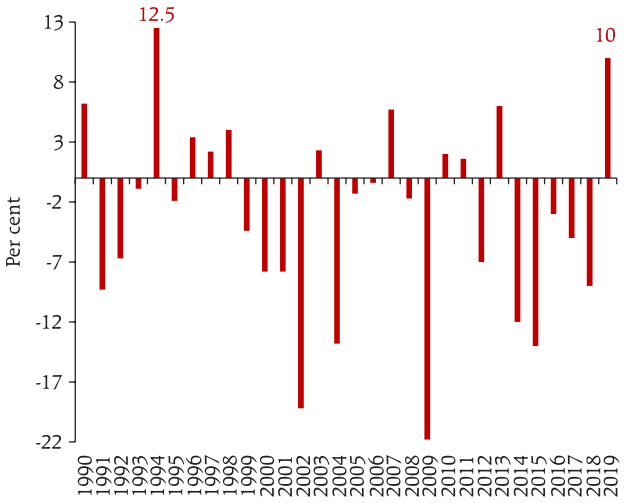



**Note:** The black dotted lines in Charts 4.a and b indicate polynomial trendlines of orders 2 and 3, respectively.
**Source:** https://data.gov.in; and Authors' calculations.

it was 52 per cent above LPA, the highest since 1918. Further, the extent of rainfall during August and September taken together (557 mm) was the highest recorded since 1983 (564 mm).

Furthermore, the onset and withdrawal dates of the SWM (since 2010) provide useful information to analyse visible changes in its timeline (Table 1). As per the IMD, the normal dates for the onset and withdrawal of SWM are June 1 and September 1, respectively. The onset of SWM was delayed in five years since 2010 with the average delay being five days. During 2019, the onset was delayed by seven days. What was particularly disruptive was the delay of 39 days in its withdrawal, which is in sharp contrast to the previous nine years.[3] The number of days taken

**Chart 5: South West Monsoon (June-September) Departure from LPA (1990 -2019)**




**Source:** https://data.gov.in; and IMD reports.

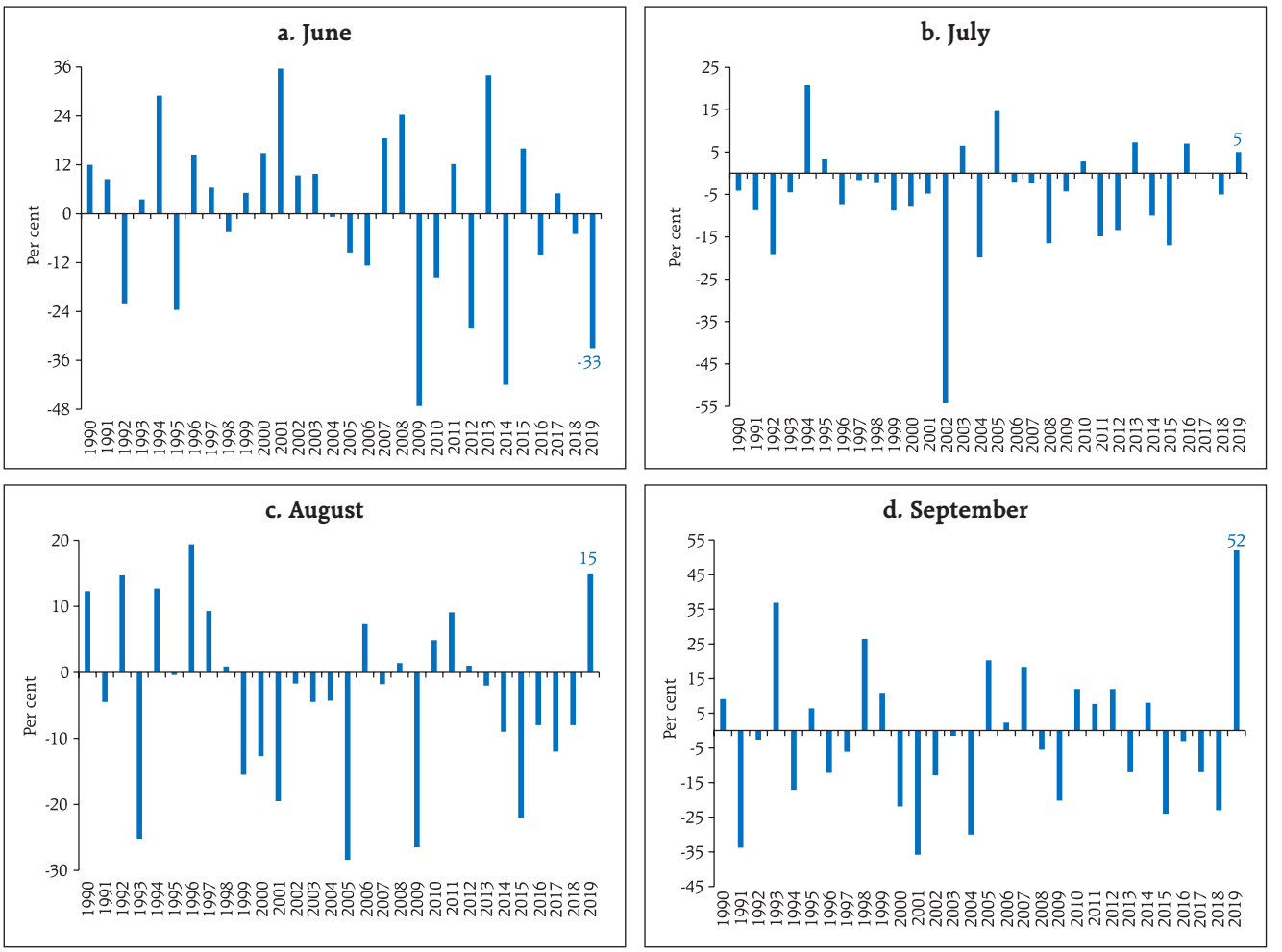
**Table 1: South West Monsoon Onset and Withdrawal Timeline (Number of Days)**

| Year | Delay in Onset | Delay in Withdrawal | Time Taken for Complete Withdrawal |
|---|---|---|---|
| 2010 | 1 | 27 | 33 |
| 2011 | 3 | 23 | 32 |
| 2012 | -4 | 24 | 25 |
| 2013 | 0 | 9 | 43 |
| 2014 | -5 | 23 | 26 |
| 2015 | -4 | 4 | 46 |
| 2016 | -7 | 15 | 44 |
| 2017 | 2 | 27 | 15 |
| 2018 | 3 | 29 | 23 |
| 2019 | -7 | 39 | 8 |

**Source:** Monsoon reports, IMD.

[3] As per IMD reports, prior to 2019 the most delayed withdrawal of SWM was recorded in 1961 (October 1; 31 days) and 2007 (September 30; 30 days).

**Chart 6: Month-wise Departure of South West Monsoon Rainfall from LPA (1990-2019)**




**Source:** https://data.gov.in; and IMD reports.

by the SWM for its complete withdrawal (eight days only) was also unusual. Additionally, the withdrawal of SWM in 2019 coincided with the onset of the north-east monsoon, a fairly new phenomenon.

*Extreme Weather Events*

Along with gradual changes in temperature and rainfall patterns, extreme weather events, such as excessive/unseasonal rainfall (often leading to floods), severe temperature fluctuations (*e.g.*, heat waves and cold waves) and high wind speeds (*e.g.*, cyclones) are being witnessed with rising frequency and intensity all over the world. In India too, during the past two decades, floods followed by cyclones, unseasonal rainfall and heat waves have been the major types of extreme weather events (Chart 7.a). The frequency of these events has also increased since 2008 (Chart 7.b).

Incidents of major floods and torrential rains have been reported largely since 2004, while unseasonal rainfall has been a rising concern since 2011. Moreover, if we look at the regional spread of these events, it is found that some of the major agricultural States (either food grain or cash crop producers) are

**Chart 7.a: Types of Extreme Weather Events (1998-2019)**

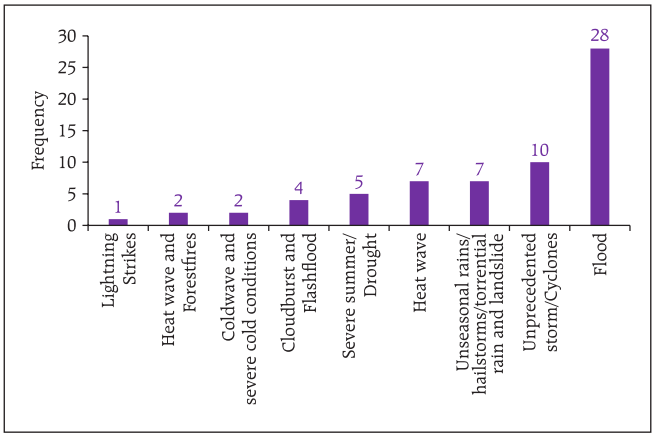
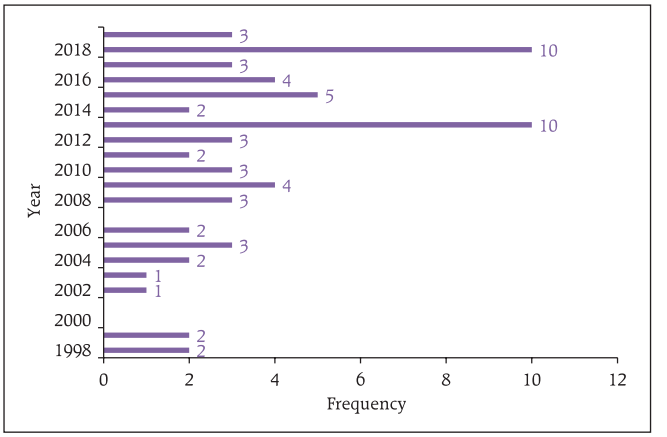



**Chart 7.b: Occurrence of Extreme Weather Events (1998-2019)**




**Note:** The events were noted based on occurrences in geographically non-contiguous States and/or non-consecutive months.
**Source:** Down to Earth (assisted by the Centre for Science and Environment); IMD publications; and Authors' calculations.

the most affected (Andhra Pradesh, Odisha, West Bengal, Gujarat, Maharashtra and Madhya Pradesh) (Chart 8).

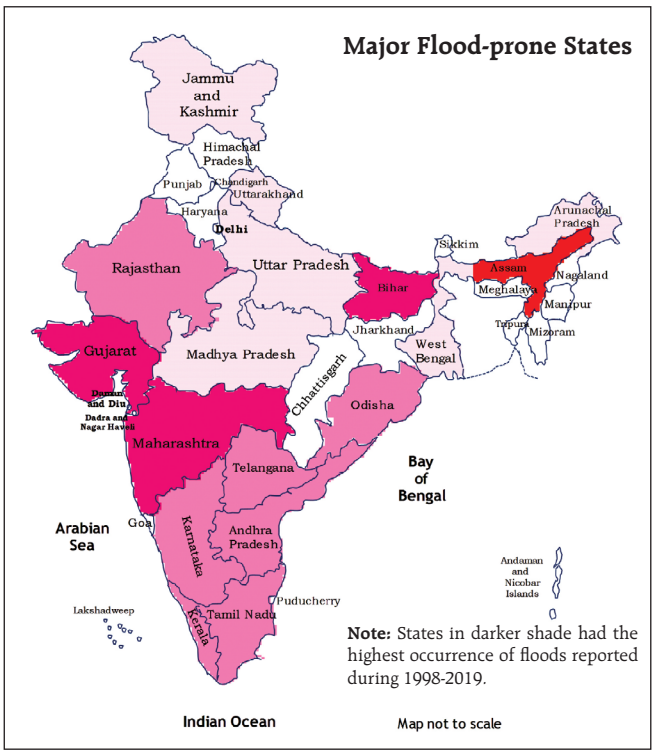
## III. Literature Review

The literature on climate change and its impact on the economy is overwhelming in terms of both the depth of analysis and coverage of the range of complex issues. While in the context of developed economies a lot of work has been done, the literature is still at a nascent stage for the developing economies. Policy makers and central bankers are also realising the growing economic consequences/risks of climate change, necessitating changes in the systems for modelling and forecasting of macroeconomic variables (Nordhaus, 2017; Batten, 2018). The literature suggests that climate-related disclosures could lead to an orderly transition to a low carbon economy if the process helps a majority of the investors in better evaluation of their financial risk exposures (Batten *et al.*, 2016).

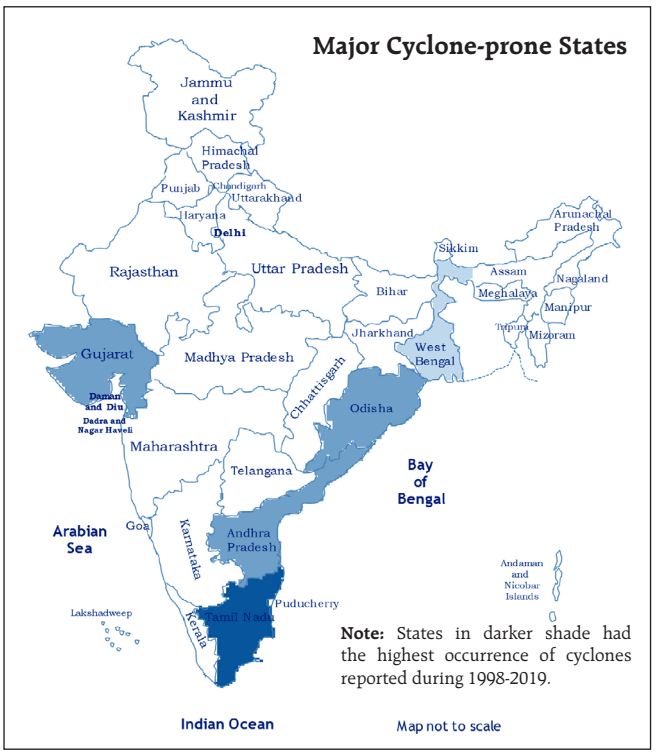
With regard to the impact of weather fluctuations on the overall economic health, studies have generally focused on aggregate economic output and agricultural yields. For example, findings from a study show that higher temperatures may not only have an adverse impact on the level of aggregate economic output but may also reduce its growth rate (Dell *et al.*, 2012; Acevedo *et al.*, 2018). Another study shows that during 1964-2007, drought and extreme heat damaged agricultural production significantly across the globe, and recent droughts caused a larger impact on cereals production than the earlier ones (Lesk *et al.*, 2016).

Studies also indicate that climate change is causing negative impact on living standards, livestock productivity, and food security in drylands (Mani *et al.*, 2018; IPCC, 2019). Temperature-related extreme weather events have a stronger association with agricultural yield anomalies than precipitation-related factors; irrigation facilities help mitigate the negative effects of temperature extremes but only partially (Vogel *et al.*, 2019). Using a panel dataset of 174 countries for the period 1960-2014, a study finds that per capita real output growth is adversely affected by persistent deviations in temperature from its historical norm (Kahn *et al.*, 2019). It also provides evidence for a sustained negative impact of climate change on real output, labour productivity and employment across many States and sectors. Similar findings for the US are also found in Colacito *et al.*, (2018). Using a Macro Weather Index, a study done in Japan found

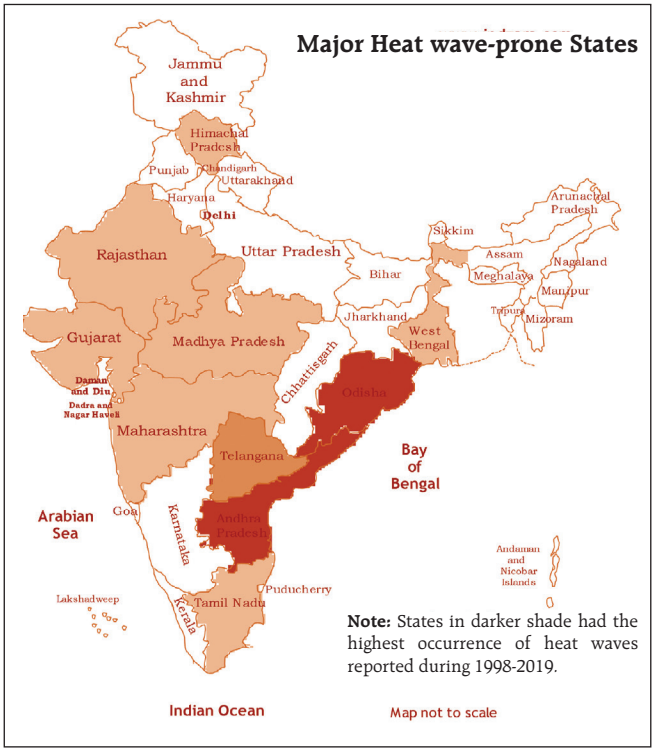
## Chart 8: Regional Spread of Major Extreme Weather Events in India



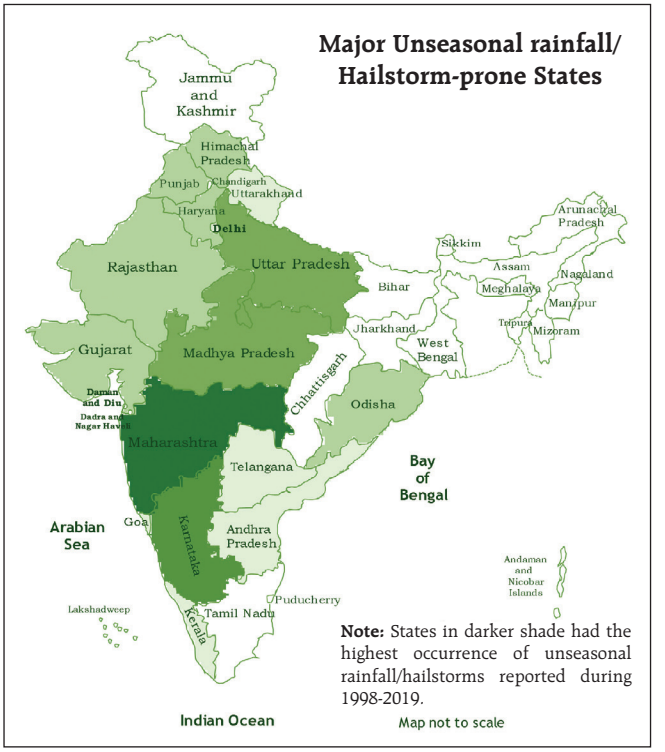

**Note:** States in darker shade had the highest occurrence of floods reported during 1998-2019.




**Note:** States in darker shade had the highest occurrence of cyclones reported during 1998-2019.




**Note:** States in darker shade had the highest occurrence of heat waves reported during 1998-2019.




**Note:** States in darker shade had the highest occurrence of unseasonal rainfall/hailstorms reported during 1998-2019.

**Source:** Down to Earth (assisted by the Centre for Science and Environment); and IMD publications.

that a rise in precipitation would result in a decline in consumer spending and a rise in temperature would cause the private consumption to increase in summer and decrease in winter (Akutsu and Koike, 2019).

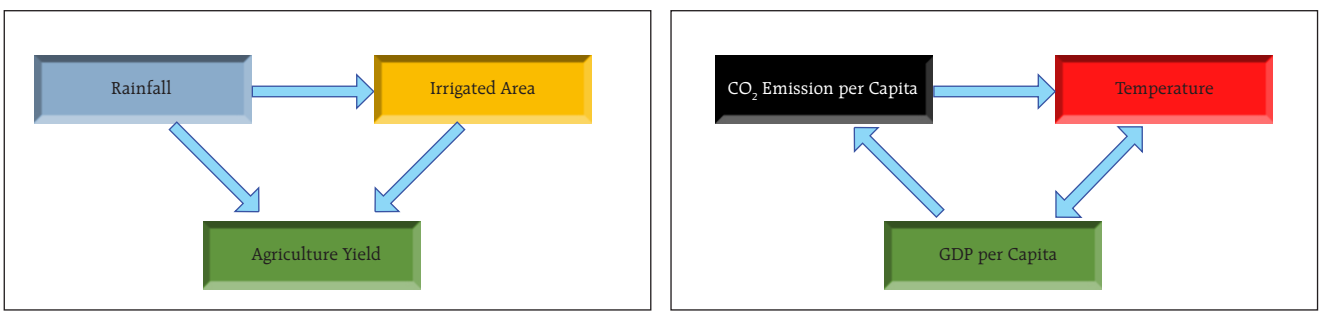
In the Indian context, there are a few studies that have highlighted the risks from climate change primarily on the farm sector (in particular, crop yields) and living standards of people. India is seen to be more vulnerable to climate change than the US, China, Russia, and most other parts of the world, barring Africa (Joshi and Patel, 2009). Using a district-level panel dataset for 1957-2000, it is estimated that a one standard deviation increase in high temperature days in a year decreases agricultural yields and real wages by 12.6 per cent and 9.8 per cent, respectively, while increasing the annual mortality among rural population by 7.3 per cent (Burgess *et al.*, 2014). Another study analysing the impact of exposure to extreme temperatures on crop yields across crops (such as paddy, *jowar*, *ragi* and pigeon pea) in Karnataka finds an inverse linear relationship between crop yields and extreme temperature days, with the impact of temperature on yields exceeding that of rainfall (Murari *et al.*, 2018). Furthermore, an increase in temperature is seen to reduce agricultural productivity, while rainfall (unless in excess) tends to nullify it (Birthal *et al.*, 2014). A persistent increase in temperature in India in the absence of risk mitigating policies can cause the per capita GDP to reduce by 6.4 per cent by 2100 (Kahn *et al.*, 2019).

## IV. Empirical Analysis for India

The amount of $CO_2$ emission in India has been a major concern as scientists have argued that the emissions are the main culprit for the rising temperature levels. Also, it is widely believed that increased economic activity results in more emission of $CO_2$. Therefore, to begin with, three sets of pair-wise Granger-causality tests are conducted using data on GDP per capita, $CO_2$ emission (metric tons) per capita, and annual average temperature for the period 1960-2014 in the Indian context. The results show that economic activity measured by GDP per capita causes $CO_2$ emissions and $CO_2$ emissions cause increase in average temperature (Annex Table 2.a). Moreover, the results indicate the existence of a bi-directional causality between temperature and GDP per capita. As expected, rainfall affects the amount of available irrigated area (gross irrigated area), which in turn affects agricultural yield (output and/or sown area) (Annex Table 2.b). The results are also summarised in the form of flowcharts (Illustration 2).

Considering the diverse climatic conditions in India at any given point of time, simple averages of weather indicators across all States may not be able to fully capture the true nature of changing patterns. In order to account for this problem, weather indices – temperature index and precipitation index – are computed as weighted averages of deviations from long-run averages. Further, as most of the economic data are available for the economy as a whole and on

**Illustration 2: Relation Between Temperature, Rainfall and Economic Activity**




**Source:** Department of Agriculture, Cooperation and Farmers Welfare; World Bank; NSO; and Authors' calculations.

a monthly frequency, the indices are calculated on a monthly basis at the all India level.

Following Bloesch and Gourio (2015), the steps involved in the construction of the indices are outlined below:

*Step 1*: Data on monthly deviations (difference between the monthly average and long-run normal) of temperature and rainfall for the important weather stations of the country are obtained. Let the deviations be denoted as $D_i$, where $i$ represents the State/station.

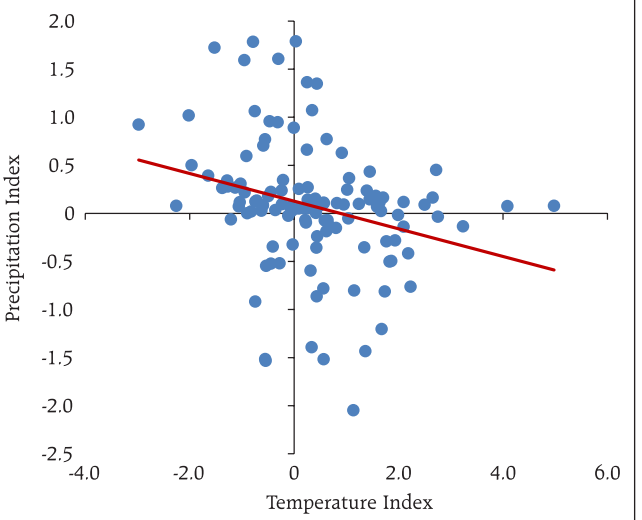
*Step 2*: The deviations are normalised by a measure of variability, which is standard deviation ($\sigma_d$). Let the normalised deviations (ratio of temperature/rainfall deviation to standard deviation) be represented as $\widehat{D}_i$.

*Step 3*: The normalised deviations over all States are aggregated by weighting the States by their population ($w_i$), assuming that the economic activity is correlated with population.

$$\overline{D} = \frac{\sum_i w_i \widehat{D}_i}{\sum_i w_i}$$

*Step 4*: Considering the importance of the SWM on India's economic activity, $\overline{D}$ is then normalised with the mean and standard deviation over June-September.

**Chart 9: Correlation Between Temperature Index and Precipitation Index**

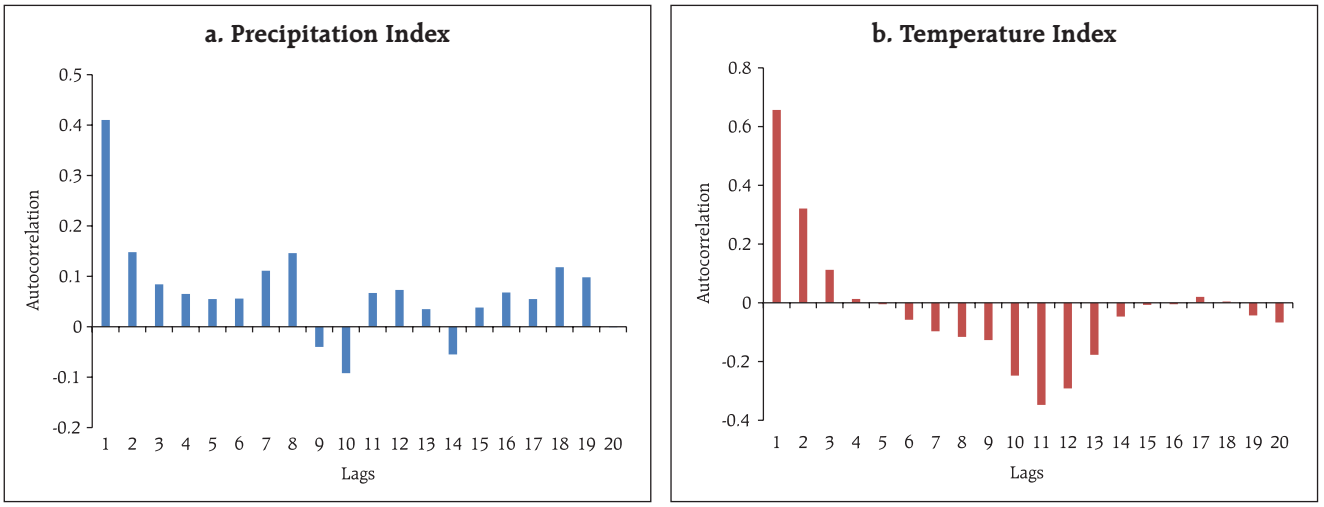



**Source:** CSO; CEIC Database; and Authors' calculations.

As expected in the Indian context, the scatter plot of the temperature index against the precipitation index constructed for the period October 2009-July 2019 displays a negative and statistically significant correlation [(-)0.32]. This indicates that temperature decreases with an increase in precipitation (Chart 9).

Additionally, the correlograms for the precipitation and temperature indices show how long the deviations persist (Chart 10). In the case of temperature index, the correlation falls quickly. The

**Chart 10: Correlograms**




**Source:** NSO; CEIC Database; and Authors' calculations.

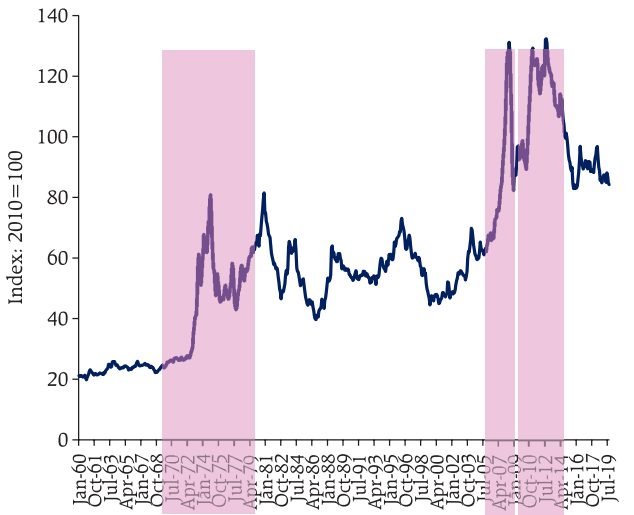
lasting positive correlation in the precipitation index indicates longer monsoons and shrinkage of the gap between the SWM withdrawal and arrival of the north-east monsoon.

The impact of climate change on inflation and economic activity are analysed in the next two sub-sections. Here, although there are other factors like sea level and wind patterns that indicate the changing climatic pattern, the analysis is done to study the effect of temperature and precipitation (as measured using the indices) alone for ease.[4]

### IV.1. Impact on Inflation

Globally, periods of food price spikes have always been driven by weather-related events with the channel of impact being crop loss/lower agricultural production. During the last six decades, there were three major episodes of significantly high food prices globally: 1970s; 2007-08; and 2010-14, all of which were triggered by adverse weather shocks followed by other factors like increase in oil prices, trade policy interventions and biofuel consumption (Chart 11).

**Chart 11: Global Food Price Index (Jan. 1960-Sep. 2019)**




**Source:** World Bank commodity price data (The Pink Sheet).

In the case of India, headline inflation[5] has moderated significantly over the years alongside a remarkable fall in food inflation (Annex Table 3). With food group comprising 46 per cent of the overall Consumer Price Index (CPI), it remains a crucial determinant of the headline inflation trajectory. Both inflation and its volatility across different food components exhibit distinct patterns. Vegetables inflation has remained high (6.8 per cent) during January 2012-September 2019 along with significantly high volatility (15.8 per cent). Further, it is one of the key components in CPI-food (weight: 13.2 per cent in CPI-Food) having a strong positive correlation with overall food inflation (Table 2).

Rainfall deviation has a good association with vegetables inflation and thereby, with overall food inflation. There is growing evidence of newspaper

**Table 2: CPI-Food and Beverages and its Major Components: Summary Statistics**

| Components | Correlation with Food Inflation | Average Inflation (per cent) | Inflation Volatility (per cent) |
|---|---|---|---|
| Cereals and products (21.1) | 0.77*** | 5.3 | 4.3 |
| Meat and fish (7.9) | 0.81*** | 7.3 | 3.6 |
| Egg (0.9) | 0.72*** | 5.9 | 5.4 |
| Milk and products (14.4) | 0.64*** | 6.4 | 3.9 |
| Oils and fats (7.8) | 0.47*** | 4.6 | 4.7 |
| Fruits (6.3) | 0.51*** | 5.9 | 5.5 |
| Vegetables (13.2) | 0.78*** | **6.8** | **15.8** |
| Pulses and products (5.2) | 0.37*** | 5.2 | 16.5 |
| Sugar and confectionery (3.0) | 0.17 | 3.0 | 9.8 |
| Spices (5.5) | 0.24** | 4.7 | 4.0 |
| Non-alcoholic beverages (2.7) | 0.84*** | 4.9 | 2.4 |
| Prepared meals, snacks, sweets etc. (12.1) | 0.82*** | 7.5 | 3.3 |
| **Food and beverages** | **1.00** | **5.8** | **4.3** |

***,** and * represent 1 per cent, 5 per cent and 10 per cent levels of significance, respectively.

**Note:** 1. Figures in parentheses indicate weight in CPI-Food and beverages.
2. Inflation volatility has been measured using standard deviation.

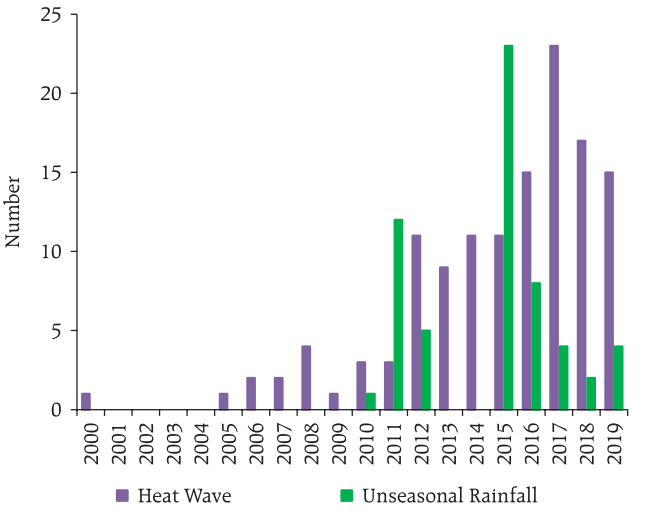
**Source:** NSO; and Authors' calculations.

[4] With the increase in frequency of extreme events, the effect of temperature and precipitation are likely to change.

[5] Headline inflation is measured by year-on-year (y-o-y) changes in all-India CPI-Combined (Rural and Urban).

**Illustration 3: Word Cloud on Newspaper Articles with Keywords Unseasonal Rainfall, Monsoon and Food/Vegetables Prices in India during 2000-19**


**Chart 12: Number of Relevant Articles with Heat Wave/Unseasonal Rainfall and Vegetables Prices**




**Source:** Proquest Database; and Authors' calculations.

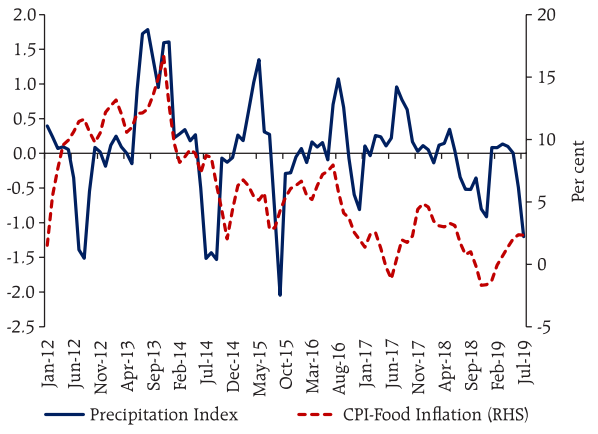
articles covering reports on food prices (especially prices of vegetables) being impacted by unseasonal rainfall and heat waves (Illustration 3 and Chart 12).

Against this backdrop, we first look at plots of food inflation and vegetables inflation with all India precipitation index (Charts13.a and 13.b). While food inflation reveals some association, the co-movement of vegetables inflation with precipitation index appears stronger.

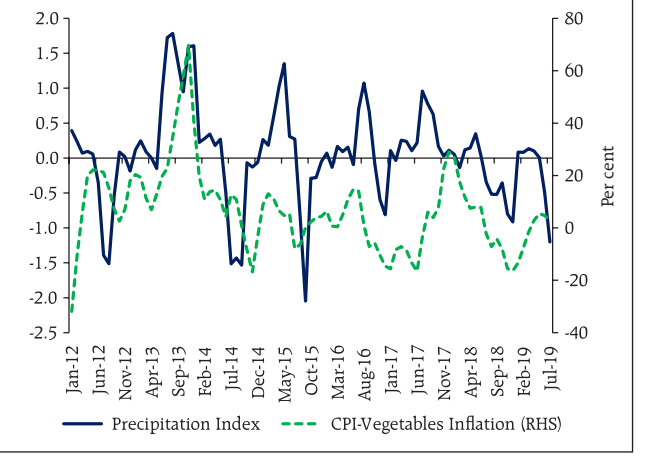
Contemporaneous correlation between the precipitation index and food inflation and its various components show vegetables inflation having the highest correlation of 0.38 with the precipitation index (Table 3)[6]. Additionally, 12-months rolling

**Chart 13: All India Precipitation Index and CPI-Food/CPI-Vegetables Inflation**

a. Precipitation Index and CPI-Food Inflation




b. Precipitation Index and CPI-Vegetables Inflation




**Source:** NSO; CEIC database; and Authors' calculations.

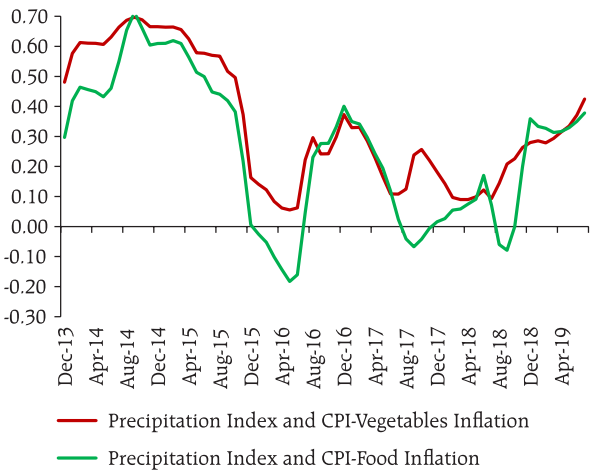
6 We could not find any statistically significant correlation between food inflation and temperature index.

**Table 3: Correlation between Food Inflation, its Components and Precipitation Index**

| Components | Correlation Coefficient | P-value |
|---|---|---|
| Cereals and products | 0.26 | 0.01*** |
| Meat and fish | 0.18 | 0.08* |
| Egg | 0.10 | 0.37 |
| Milk and products | 0.02 | 0.82 |
| Oils and fats | -0.18 | 0.08 |
| Fruits | -0.04 | 0.67 |
| Vegetables | 0.38 | 0.00*** |
| Pulses and products | -0.11 | 0.29 |
| Sugar and confectionery | 0.03 | 0.77 |
| Spices | 0.11 | 0.30 |
| Non-alcoholic beverages | 0.21 | 0.05** |
| Prepared meals, snacks, sweets etc. | 0.16 | 0.13 |
| **Food and beverages** | **0.25** | **0.02**** |

***,** and * represent 1 per cent, 5 per cent and 10 per cent levels of significance, respectively.
**Source:** NSO; CEIC database; and Authors' calculations.

**Chart 14: Rolling Correlation Coefficients between Precipitation Index and CPI-Food/ Vegetables Inflation**



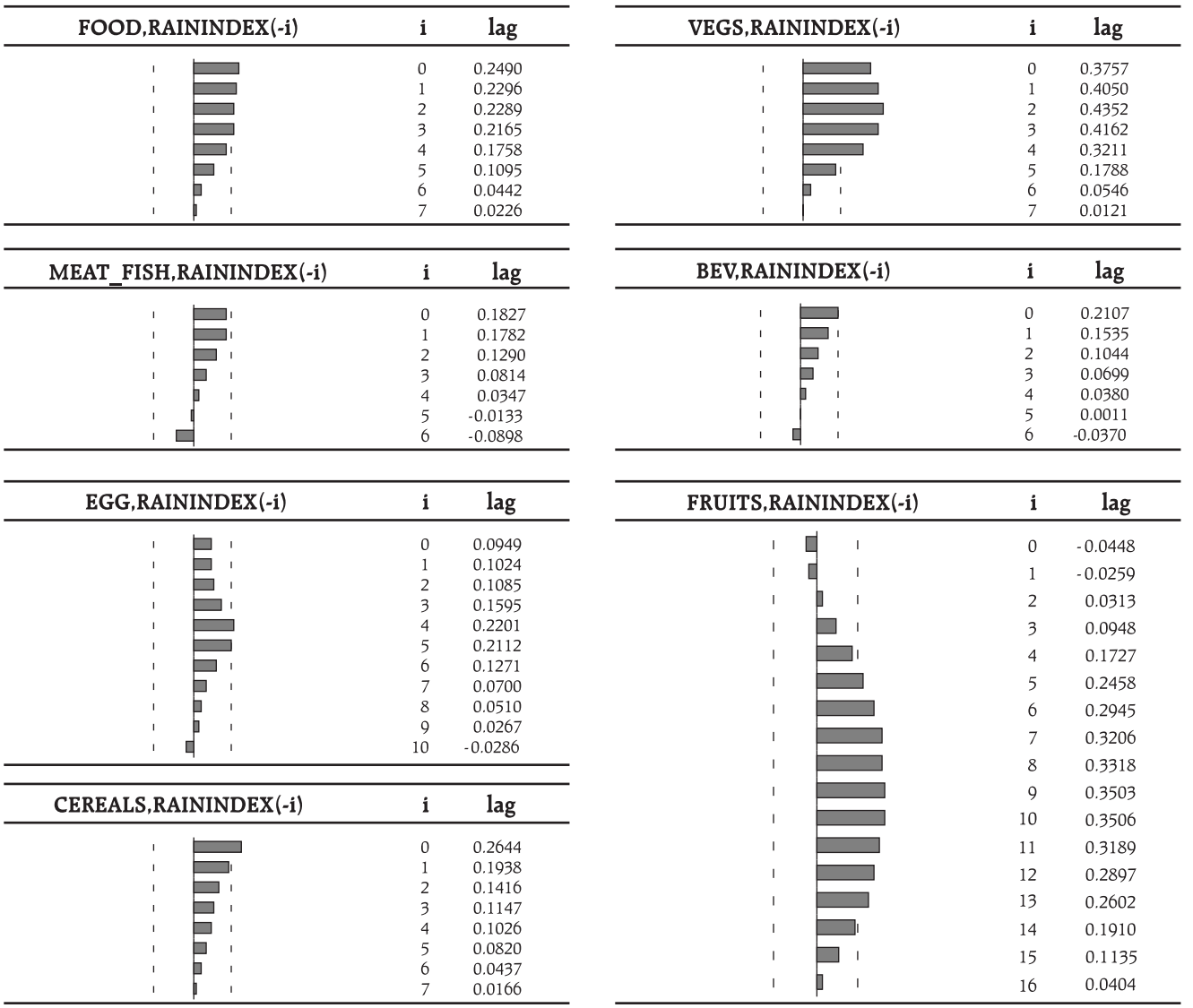

**Source:** NSO; CEIC database; and Authors' calculations.

correlation coefficients (starting from January 2012) depict periods when correlation between vegetables (food) inflation and precipitation index peaked at 0.70 (Chart 14).

Furthermore, we look at the cross-correlation coefficients, which would capture not only the contemporaneous correlation but would also show the impact of rainfall with lag(s). This is because, in some food components, the impact of rainfall could appear with some time lag, while for others the impact of rain could last for some months. The results reveal that the impact of rainfall usually lasts for 5-6 months in the case of vegetables inflation as well as overall food inflation (Chart 15). Further, for vegetables, the extent of impact could increase with some lag. This is usually the case because vegetables are perishable in nature and the impact on prices is gradually reflected after crops are damaged and adverse supply shocks from the production centres spread across regions. For cereals, we do not find much of a lagged relationship between precipitation index and inflation, which could be primarily on account of cereals being non-perishables and the stabilising role of available buffer stocks/ well-defined supply management system in place. Any contemporaneous correlation could be primarily driven by market sentiments amongst traders related to adverse rainfall pattern and crop sowing. For fruits, the precipitation index influences inflation with some lag, which could be because most of the fruits are seasonal and are not produced throughout the year. Therefore, if production is adversely impacted by unfavourable rainfall, the impact on prices is gradual and once affected, could last for a brief period.

Since prices of vegetables are the most affected by rainfall disturbances, we look at the impact of precipitation index on vegetables prices at a disaggregated level. Within CPI-vegetables, tomato (weight: 9.5 per cent), onion (weight: 10.7 per cent) and potato (weight: 16.3 per cent) together constitute 36 per cent of the total share and the price movements of these three primary vegetables significantly determine overall vegetables inflation. Again, results based on cross-correlation analysis show precipitation index to have a strong and statistically significant impact on inflation in onions, tomatoes and vegetables excluding tomatoes, onions and potatoes (TOP),

**Chart 15: Cross-Correlation Coefficients Between Precipitation Index and Food Inflation**

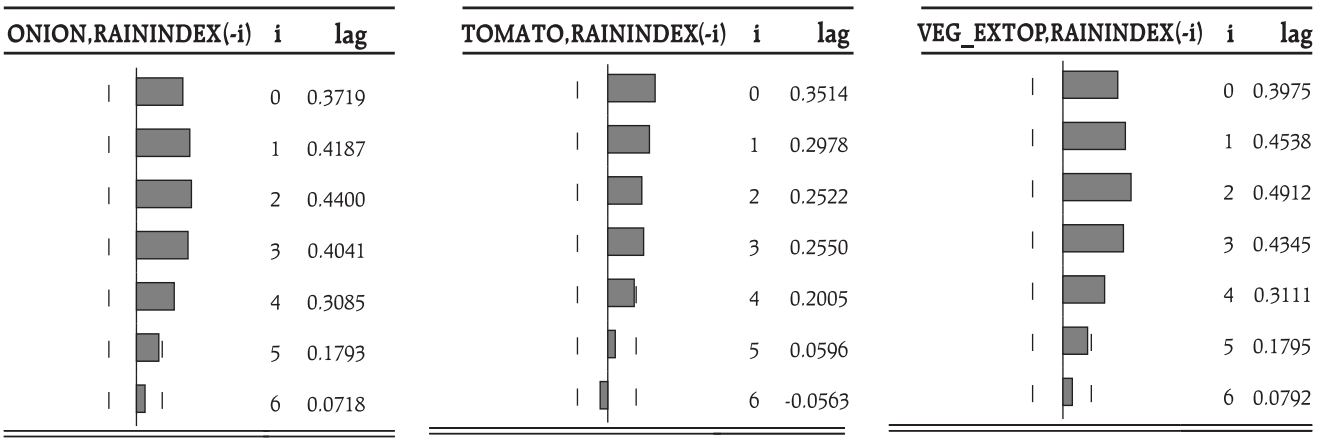



**Note:** The broken lines represent 95 per cent confidence intervals.
**Source:** NSO; CEIC database; and Authors' calculations.

with the impact continuing for 4-5 months (Chart 16). Potato inflation did not have any statistically significant association with the precipitation index.[7] This could be due to the storable nature of potatoes and availability of storage facilities. Price pressures in vegetables, especially onions and tomatoes, were a major concern in 2019-20 owing to significant crop losses and supply disruptions on account of delayed monsoon withdrawal in October, and excessive/ unseasonal post-monsoon rainfall leading to floods in major producing States like Maharashtra, Karnataka, Telangana, Madhya Pradesh and Himachal Pradesh. In the past too (specifically, during 2011, 2015, 2017 and 2018), there were episodes of unseasonal rainfall affecting vegetables prices, especially of onions and tomatoes (RBI, 2011; 2015; 2018).

[7] Cross correlation coefficients between precipitation index and vegetables excluding tomato and onion were found to be significant in second and third lags, but with reduced magnitude. This possibly reflects a fairly larger influence of potato prices.

**Chart 16: Cross-Correlation Coefficients Between Precipitation Index and CPI-Vegetables Inflation**




**Note:** The broken lines represent 95 per cent confidence intervals.
**Source:** NSO; CEIC database; and Authors' calculations.

### IV.2. Impact on Economic Activity

In order to study the impact of climate change on economic activity, eight high-frequency economic indicators (the data for which are available on a monthly basis) have been used. The indicators have been selected in such a way that they track different sectors of the economy. These indicators include: Foreign Tourist Arrivals, Automobile Sales, Tractor Sales, Demand for Electricity, India's Total Trade, Purchasing Managers Index (PMI), Index of Industrial Production (IIP) and IIP-Manufacturing Food Products.

For the analysis, all variables are seasonally adjusted. Separate time-series regressions for each indicator are performed against the two weather indices as per the following equation:

$$\Delta log Y_t = \alpha + \beta P_t + \gamma T_t + \in_t$$ [8]

where, $Y_t$ represents one of the eight economic indicators considered at time $t$, $P_t$ is the precipitation index at time $t$, $T_t$ is the temperature index at time $t$ and $\in_t$ is the residual.

The results show that rainfall has a larger impact on the economy in comparison to the changes in temperature (Table 4). The negative signs for PMI in

**Table 4: Regression Results**[9]

| Dependent Variable | Precipitation | Temperature | R-squared |
|---|---|---|---|
| Foreign Tourist Arrivals[10] | 0.007<br>(0.205) | 0.002<br>(0.441) | 0.016 |
| Automobile Sales | 0.015**<br>(0.026) | 0.002<br>(0.624) | 0.043 |
| Tractor Sales | 0.020*<br>(0.086) | 0.007<br>(0.234) | 0.030 |
| Electricity Power: Demand | 0.005<br>(0.192) | 0.005***<br>(0.009) | 0.061 |
| Total Trade | -0.068**<br>(0.048) | -0.045***<br>(0.012) | 0.068 |
| PMI | -0.019***<br>(0.0000) | -0.005**<br>(0.049) | 0.222 |
| IIP | 0.002<br>(0.441) | 0.001<br>(0.429) | 0.011 |
| IIP: Mfg. Food Products[11] | -0.007<br>(0.267) | -0.005<br>(0.199) | 0.026 |

***,** and * represent 1 per cent, 5 per cent and 10 per cent levels of significance, respectively.
**Note:** Figures in parentheses denote p-values.

[8] The model considered is not a very robust one as the objective is to study if the weather indices have an impact on the indicators of economic activity or not. However, collinearity amongst variables (using Variance Inflation Factor) and autocorrelation (using Durbin Watson statistic) are checked for. Low R-squared values were also observed in a similar analysis of the effect of temperature and snowfall on economic indicators in the US context (Bloesch and Gourio, 2015).

[9] Results of the unit root tests are presented in Annex Table 4.

[10] The lagged values of precipitation index negatively impacted the number of foreign tourist arrivals (and was found to be statistically significant). This is plausible as weather-related events in the country of visit would be closely monitored by prospective visitors.

[11] The analysis done after including lagged values of precipitation and temperature indices showed that temperature and rainfall departure were statistically significant and negatively impacted manufactured food production.

the case of both precipitation and temperature indices indicate that as the country gets warmer or when more than expected rains are received, the manufacturing and the service sectors tend to decelerate. The negative impact is observable for total trade as well. Further, as expected, increase in temperature causes the demand for electricity to increase as the requirement for air-conditioners, coolers and refrigerators tend to rise. Tractor sales are positively impacted by the rainfall received. Also, an increase in rainfall tends to accelerate automobile sales.

## V. Mitigation of Climate Change Risks

Krogstrup and Oman (2019) provide a comprehensive review of the literature on the macroeconomic and financial policies that could be effective in mitigating climate change risks. They conclude that the fiscal tools are the first best options, but should be complemented by appropriate monetary policy instruments.

### V.1. Fiscal Policy Tools

In April 2016, India officially signed the 2015 Paris climate agreement along with other 194 countries. As per the agreement, the increase in global average temperature should be held well below 2 degree Celsius above pre-industrial levels and efforts should be made to limit the temperature increase to 1.5 degree Celsius.

According to Krogstrup and Oman (2019), fiscal policy tools can be classified into: (1) price policies (carbon taxation which will force firms and individuals to reduce emissions; and subsidies for mitigation actions); (2) spending and investment (outright public investments and concessional loans); and (3) public guarantees. The IMF's Fiscal Monitor (October 2019) discusses the use of other instruments in addition to the carbon taxation, which include Emission Trading Systems[12], Feebates[13] and regulations for setting emission rate standards, or minimum requirements for the use of renewables in power generation. However, creation of awareness is the first step, which would be the prime responsibility of the governing bodies.

### V.2. Commodity Derivatives Market

Currently, the Multi Commodity Exchange (MCX) is the largest commodity futures exchange in India, followed by National Commodity and Derivatives Exchange (NCDEX). The commodities traded include metal, bullion, energy, spices, plantation, pulses, cereals, petrochemicals, oil and oil seeds.

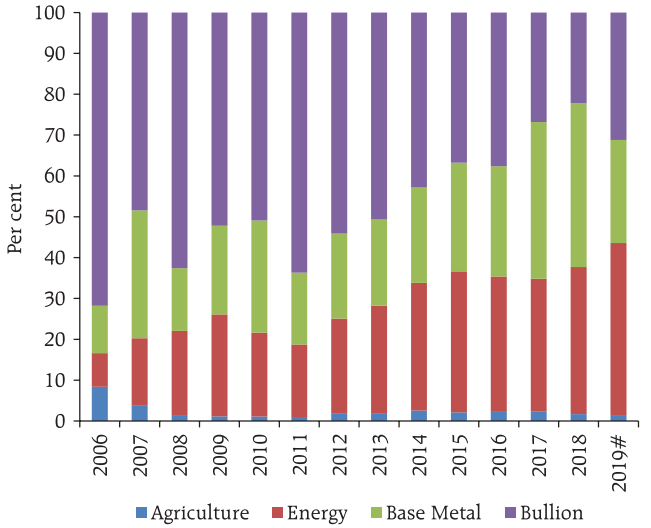
Data reveal that futures trading in agricultural commodities is low and the share in total trade has declined in the recent past (Chart 17). Moreover, there has been a sharp decline in the volume of futures/ options traded at NCDEX, which is the largest farm futures exchange (Chart 18). Considering the impact of climate change on the economy, a developed commodity derivatives market can help mitigate risks by enabling continuous price discovery and providing a strategy for hedging price risk in the face of uncertainty.

Weather derivatives may be viewed as '*financial instruments whose value and/or cash flows depend on the occurrence of weather related events, which can be identified and measured easily and can serve as underlyings of financial contracts*' (Barrieu and Scaillet, 2009; Considine, 2000). Weather derivatives which were introduced in the US and Europe in 1997 and 1998, respectively have become increasingly popular. The markets have grown tremendously in the US and Europe and have expanded to the over the counter (OTC) markets. The Chicago Mercantile Exchange (CME) has introduced weather derivatives that can be traded electronically on the CME's GLOBEX platform. The popular contracts are the month futures (swap) contracts based on heating degree days (HDD), which measure how much heating is required in winter; and

[12] Firms are required to hold an allowance for each ton of their emissions and the government sets a cap on total emissions.

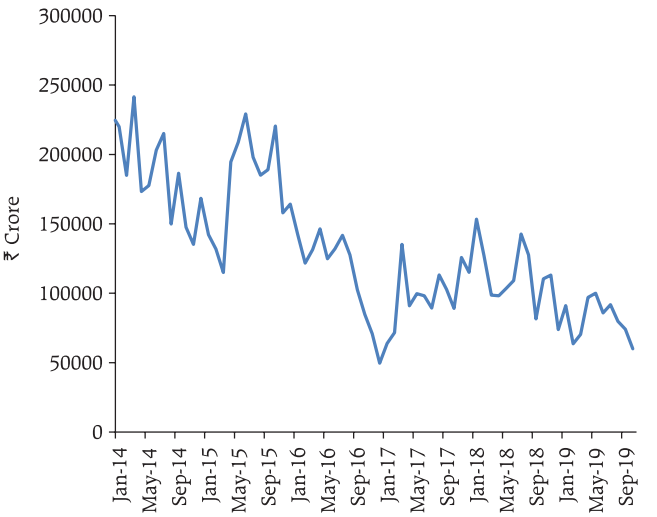
[13] Imposition of fees on above-average emissions and rebates for below-emission rates.

**Chart 17: Share of Commodities in Futures Trading**




# data up to October 2019.

**Chart 18: Volume of Options/Futures Traded**




**Source:** MCX, NCDEX; and Authors' calculations.

cooling degree days (CDD), which measure how much cooling is necessary in summer months, along with options on futures (Schlenker and Taylor, 2019).

Insurance is normally used to cover the loss due to the occurrence of low-probability, high-risk events. But in the case of weather derivatives, the underlying event need not be necessarily catastrophic and are best suited for high-probability, low-risk events. Considering the climate change patterns witnessed in the country, introduction and popularisation of weather derivatives have become the need of the hour.

The challenges in introducing weather derivatives include design issues, choice of appropriate pricing rules, and choice of underlying assets. A pilot run using an appropriate index for rainfall may be conducted in order to explore its significance and feasibility in mitigating risks from unseasonal rainfalls.

### V.3. Central Banking Tools

Central banks would require to monitor two types of risks: physical risks and transition risks (Batten *et al.*, 2016). While physical risks would include damage of balance sheets of households, corporates, banks and insurers triggered by a weather-related event causing financial and macroeconomic instability, transition risks would include the after-effects of the implementation of fiscal policy tools, which could lead to re-pricing of carbon-intensive assets and also trigger negative supply shocks.

As per the Central Bank's Survey on Climate Change for 2019, 64 per cent respondents described climate change as a significant concern. Eight central banks and supervisors established the Central Banks and Supervisors Network for Greening the Financial System (NGFS) in 2017, which is concerned with the analysis and management of risks in the financial sector[14]. The NGFS provides six recommendations (for central banks, supervisors, policymakers and financial institutions) including integration of climate-related factors into prudential supervision and emphasises the importance of a robust and internationally consistent climate and environmental disclosure framework [NGFS (2019)].

[14] NGFS has expanded tremendously and presently has 48 members comprising central banks from across the globe.

A quick review of suggestions offered by Krogstrup and Oman (2019), Batten *et al.*, (2016), Silva (2019) and the Central Banking Focus Report would indicate the important measures that can be examined by central banks for adoption to mitigate risks from climate change:

1. Provide support to activities/initiatives targeting green finance (like the NGFS).
2. Include climate risks in the analytical models used in policy formulation and research and perform scenario analysis and stress testing to understand areas where actions would be required.
3. Bridge gaps on data related to various environmental aspects of finance.
4. As a part of its reserve management, central banks can invest in green assets rather than in brown assets like carbon-intensive assets.
5. Provide additional/subsidised liquidity support to banks that invest in environment-friendly products.
6. Incentivise banks towards green projects by redesigning capital and collateral rules.
7. Encourage regulated/supervised entities (banks) to allocate at least a certain minimum credit to environment-friendly sectors.

## VI. Conclusion

Climatic conditions, comprising the two key indicators - precipitation and temperature, play a crucial role in the overall health of the Indian economy. Over the years, India has witnessed changes in climatic patterns in line with the rest of the world. With increase in population and economic activity, the cumulative level of GHG emissions has increased causing the average temperature to rise over time. Importantly, the rainfall pattern, particularly with respect to the SWM, which provides around 75 per cent of the annual rainfall, has undergone significant changes. Moreover, the occurrence of extreme weather events like floods/unseasonal rainfall, heat waves and cyclones has increased during the past two decades and data reveal that some of the key agricultural States in India have been the most affected by such events.

Two separate indices were constructed at the all-India level – the temperature index and the precipitation index – and their impact on food inflation and economic activity indicators was analysed. The results indicated weather conditions, especially rainfall, to have a strong influence on the food inflation trajectory and the impact was found to last for a couple of months. Within food, vegetables prices are the most vulnerable to rainfall shocks. The results also showed weather conditions to have a significant impact on some of the key indicators of economic activity like PMI, IIP, demand for electricity, trade, tourist arrivals, and tractor and automobile sales. This article also highlighted various policy tools that could help mitigate climate change risks.

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| Annex Table 1: Climate Change and Macroeconomy – Transmission Channels and Risks | | | | |
|---|---|---|---|---|
| **Type of shock/impact** | | **Physical Risks** | | **Transition Risks** |
| | | **From extreme weather events** | **From gradual global warming** | |
| **Demand** | **Investment** | Uncertainty about climate events | | 'Crowding out' from climate policies |
| | **Consumption** | Increased risk of flooding to residential property | | 'Crowding out'from climate policies |
| | **Trade** | Disruption to import / export flows due to natural disasters | | Distortions from asymmetric climate policies |
| | **Labour supply** | Loss of hours worked due to natural disasters | Loss of hours worked due to extreme heat | |
| | **Energy, food and other inputs** | Food and other input shortages | | Risks to energy supply |
| **Supply** | **Capital stock** | Damage due to extreme weather | Diversion of resources from productive investment to adaptation capital | Diversion of resources from productive investment to mitigation activities |
| | **Technology** | Diversion of resources from innovation to reconstruction and replacement | Diversion of resources from innovation to adaptation capital | Uncertainty about the rate of innovation and adoption of clean energy technologies |

**Source:** Batten (2018).

| Annex Table 2.a: Pairwise Granger Causality Tests | |
|---|---|
| **Null Hypothesis** | **P-value** |
| GDP per capita does not Granger Cause $CO_2$ Emissions per capita | 0.008 |
| $CO_2$ Emissions per capita does not Granger Cause GDP per capita | 0.392 |
| Temperature does not Granger Cause $CO_2$ Emissions per capita | 0.983 |
| $CO_2$ Emissions per capita does not Granger Cause Temperature | 0.000 |
| Temperature does not Granger Cause GDP per capita | 0.085 |
| GDP per capita does not Granger Cause Temperature | 0.000 |

| Annex Table 2.b: Pairwise Granger Causality Tests | |
|---|---|
| **Null Hypothesis** | **P-value** |
| Agriculture yield does not Granger Cause Rainfall | 0.162 |
| Rainfall does not Granger Cause Agriculture yield | 0.000 |
| Gross Irrigated Area does not Granger Cause Rainfall | 0.168 |
| Rainfall does not Granger Cause Gross Irrigated Area | 0.000 |
| Gross Irrigated Area does not Granger Cause Agriculture yield | 0.001 |
| Agriculture yield does not Granger Cause Gross Irrigated Area | 0.481 |

| Annex Table 3: CPI Headline Inflation and Its Major Components | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Components** | **2012-13** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | **2018-19** | **2019-20 (Apr.-Sep.)** |
| Food and beverages (45.86) | 11.2 | 11.9 | 6.5 | 5.1 | 4.4 | 2.2 | 0.7 | 2.6 |
| Fuel and light (6.84) | 9.7 | 7.7 | 4.2 | 5.3 | 3.3 | 6.2 | 5.7 | 0.5 |
| Excluding food and fuel (47.30) | 9.0 | 7.2 | 5.4 | 4.6 | 4.8 | 4.6 | 5.8 | 3.3 |
| All Groups | 10.0 | 9.4 | 5.8 | 4.9 | 4.5 | 3.6 | 3.4 | 4.3 |

**Note:** Figures in parentheses indicate weight in CPI-Combined.
**Source:** NSO; and Authors' calculations.

| Annex Table 4: Results of the Unit Root Tests | | | | |
|---|---|---|---|---|
| **Variables** | **Augmented Dickey Fuller Test Statistic** | | **Phillips-Perron Test Statistic** | |
| | X | ΔX | X | ΔX |
| Foreign Tourist Arrivals | -0.182 | -9.727*** | -0.387 | -29.786*** |
| Automobile Sales | -1.910 | -13.367*** | -2.287 | -14.592*** |
| Tractor Sales | -3.016 | -9.311*** | -2.660 | -16.058*** |
| Electricity Power: Demand | -0.325 | -15.339*** | -0.323 | -17.275*** |
| Total Trade | -2.093 | -22.254*** | -1.957 | -19.867*** |
| IIP | 0.333 | -10.567*** | 0.480 | -25.973*** |
| IIP: Mfg. Food Products | -0.089 | -10.629*** | -0.162 | -25.561*** |
| PMI | -4.695*** | - | -4.640*** | - |

***,** and * represent 1 per cent, 5 per cent and 10 per cent levels of significance, respectively.
**Source:** NSO; and Authors' calculations.

# *Union Budget 2020-21 – An Assessment**

*The Union Budget 2020-21 aimed at energising the Indian economy through a combination of short-term, medium-term and long-term measures. It walked a tight rope, balancing the need for providing counter-cyclical support to growth, while adhering to fiscal discipline. The Union Budget 2020-21 introduced tax reforms that aim to stimulate growth, simplify the tax structure, ease compliance and reduce litigations. The budget also avoided cutting down capital expenditure to meet the fiscal deficit target, which is laudable.*

**Introduction**

The Union Budget 2020-21 walked a tight rope, balancing the dual imperatives of providing counter-cyclical support to growth and adhering to Fiscal Responsibility and Budget Management (FRBM) Act - prescribed fiscal deficit target. It adhered to fiscal prudence, given shortfalls in the tax collections, within the FRBM escape clause, while striving to maintain the quality of expenditure. The step-up in allocations to various sectors, such as agriculture, irrigation, rural development, education, skill upgradation, industry, commerce, investment, infrastructure, digital economy, environment and climate change, is sought to be financed mainly by non-tax revenue and disinvestment. Against this background, the rest of the article is divided into seven sections. Section II discusses the gross fiscal deficit and the underlying fiscal arithmetic, while Section III examines the receipt side of central government finances. Section IV deals with government spending and Section V highlights financing pattern of gross fiscal deficit. Section VI reflects upon outstanding liabilities of the government and Section VII presents an analysis of resource transfers from the Centre to states. Section VIII sets out concluding observations. Annex 1 lists the detailed sector-wise measures laid out in the Budget.

**II. Fiscal Deficit**

As against the budgeted gross fiscal deficit (GFD) of 3.3 per cent of GDP for 2019-20, the revised estimates placed the GFD at 3.75 per cent of GDP[1]. A similar overshoot, *i.e.*, of 0.5 per cent of GDP, has also been budgeted for 2020-21, invoking the provisions under section 4(3) of the revised FRBM Act.[2] The deterioration in the GFD in 2019-20 was primarily caused by a decline of 1.1 per cent of GDP in tax revenues even as non-tax revenues have provided some cushion. For 2020-21 the projected deviation from FRBM target is on account of maintaining expenditure trajectories, both revenue and capital, so as to stimulate domestic economic activity while pegging tax revenues to more realistic levels (Table 1).

*The Union Budget and Underlying Arithmetic*

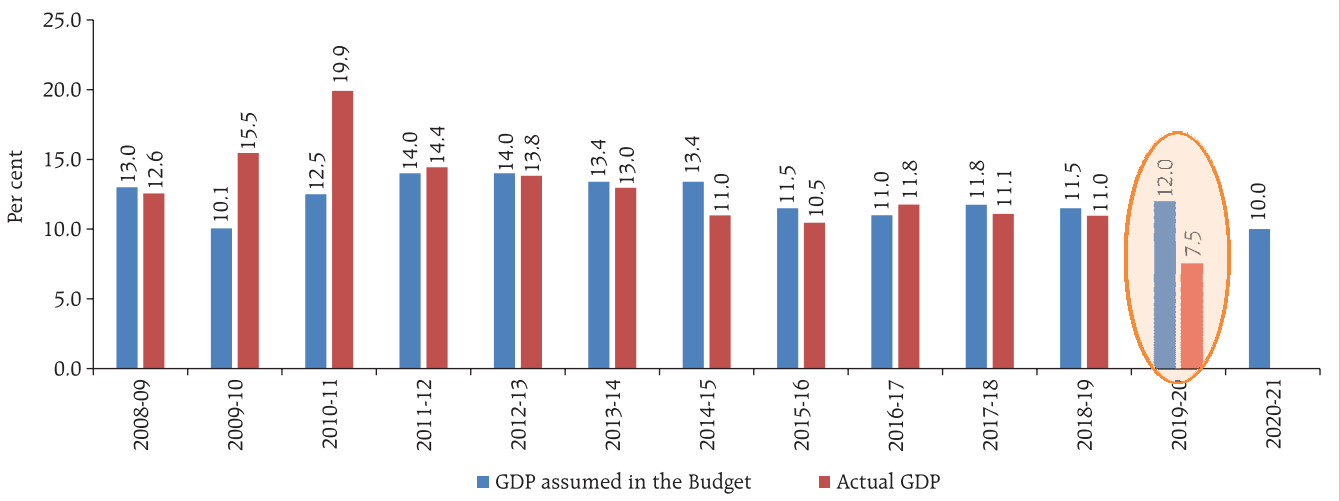
The year 2019-20 witnessed a sharp deceleration in nominal GDP growth rate (between budgeted and revised estimates) which was sharper than even what was observed in 2008-09, the year of the global financial crisis (Chart 1).

* Prepared by Kaushiki Singh, Saksham Sood, Rahul Agarwal and Anshuman Kamila under the guidance of Samir Ranjan Behera of the Department of Economic and Policy Research, Reserve Bank of India. Data support from Archana Verma is acknowledged. The views expressed are of the authors and do not pertain to the institution they belong to. Usual disclaimers apply. The previous article on Union Budget 2019-20 was published in the Reserve Bank of India Bulletin, September 2019.

[1] Going by the principle of using latest estimates of GDP for any given year, we have used First Revised Estimates of GDP for 2018-19 and Second Advance Estimates of GDP for 2019-20 in this article, due to which certain ratios to GDP for these two years may vary from those published in the Union Budget. For instance, the GFD-GDP ratio for 2019-20 (RE), based on the First Advance Estimate of nominal GDP (₹204.4 lakh crore) used in the Union Budget, stands at 3.75 per cent. However, based on the Second Advance Estimates (₹203.8 lakh crore), which were released subsequently, the GFD-GDP ratio for 2019-20 (RE) stands at 3.76 per cent.

[2] Gross fiscal deficit may be allowed to deviate by not more than one-half percent of GDP in a year under specific conditions, as specified under Section 4(2) of the revised FRBM Act, *viz.*, on ground or grounds of national security, act of war, national calamity, collapse of agriculture severely affecting farm output and incomes, structural reforms in the economy with unanticipated fiscal implications, decline in real output growth of a quarter by at least three per cent points below its average of the previous four quarters.
Source: Finance Act, 2018.

**Chart 1: Nominal GDP Growth**




**Source:** Union Budget Documents and Ministry of Statistics and Programme Implementation.

**Table 1: Key Fiscal Indicators**

(Per cent of GDP)

| | 2018-19 | 2019-20 | | 2020-21 | 2021-22 | 2022-23 |
|---|---|---|---|---|---|---|
| | Actuals | BE | RE | BE | Projections | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Fiscal Deficit | 3.4 | 3.3 | 3.8 | 3.5 | 3.3 | 3.1 |
| 2. Revenue Deficit | 2.4 | 2.3 | 2.5 | 2.7 | 2.3 | 1.9 |
| 3. Primary Deficit | 0.4 | 0.2 | 0.7 | 0.4 | 0.2 | 0.0 |
| 4. Tax Revenue | 11.0 | 11.7 | 10.6 | 10.8 | 10.7 | 10.7 |
| 5. Non-Tax Revenue | 1.2 | 1.5 | 1.7 | 1.7 | 1.5 | 1.5 |
| 6. Revenue Expenditure | 10.6 | 11.6 | 11.5 | 11.7 | - | - |
| 7. Capital Expenditure | 1.6 | 1.6 | 1.7 | 1.8 | - | - |

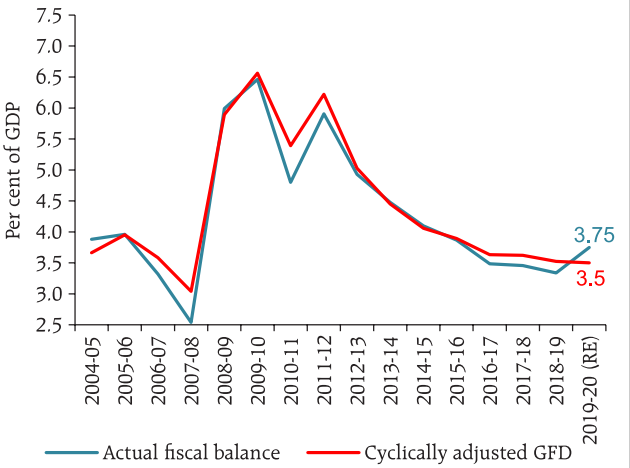
**Source:** Union Budget 2020-21.

A slowdown in GDP growth can impact the GFD-GDP ratio in two ways: (i) automatic stabilisers come into play as tax revenues fall but the expenditure trajectory is maintained, thereby pushing up the numerator; and (ii) the denominator is lower than budgeted due to less than projected nominal growth in GDP. Adjusting for these two effects, the cyclically adjusted GFD works out to 3.5 per cent[3], lower by 25 basis points than the revised estimate of 3.75 per cent in 2019-20, of which 12 basis points is due to the direct impact of lower GDP growth on the denominator (Chart 2).

*Decomposition of GFD*

The revenue deficit is likely to pre-empt almost 76.5 per cent of the GFD in 2020-21, reversing the

**Chart 2: Fiscal Deficit: Actual *vis-a-vis* Unobservable Parameters**




**Note:** GDP used is First Advance Estimates for 2019-20
**Source:** Union Budget Documents and Staff estimates.

[3] Fedelino Annalisa, Mark Horton, and Anna Ivanova (2009), "Computing Cyclically-Adjusted Balances and Automatic Stabilizers", Technical Notes and Manuals, Fiscal Affairs Department, International Monetary Fund, December.

**Table 2: Decomposition of GFD**

(Per cent)

| | 2017-18 | | 2018-19 | | 2019-20 | | 2020-21 |
|---|---|---|---|---|---|---|---|
| | BE | Actual | BE | Actual | BE | RE | BE |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. Revenue Deficit | 58.8 | 75.1 | 66.6 | 70.0 | 68.9 | 65.1 | 76.5 |
| 2. Capital Outlay | 49.4 | 41.5 | 44.6 | 43.0 | 44.2 | 41.9 | 47.8 |
| 3. Net Lending | 5.1 | 0.4 | 1.5 | 1.6 | 1.8 | 1.4 | 2.1 |
| 4. Disinvestment (minus) | 13.3 | 16.9 | 12.8 | 14.6 | 14.9 | 8.5 | 26.4 |

**Source:** Union Budget Documents.

improvement that was secured in 2018-19 and 2019-20. Importantly, however, capital expenditure is budgeted to post a sharp increase, likely to be funded primarily by higher disinvestments (Table 2).

### III. Receipts

Total receipts, comprising net tax and non-tax revenues along with non-debt capital receipts, were 9.5 per cent of GDP in the Revised Estimates (RE) for 2019-20, falling short of the budgeted 9.9 per cent of GDP on account of lower realisations of tax revenue (7.4 per cent of GDP in RE as against 7.8 per cent in the Budget Estimates (BE)). Non-tax revenues held up well and even exceeded the BE modestly.

#### *Tax Revenues*

The gross tax revenue to GDP ratio is expected to reach 10.8 per cent in 2020-21 (10.6 per cent of GDP in 2019-20) on the back of higher budgeted buoyancies for all tax categories except personal income tax – on account of tax rate adjustments in favour of middle income brackets – and union excise duty. Notably, the envisaged buoyancies are also higher than their trend levels (proxied by 2011-18 averages) in respect of all taxes except excise duties (Table 3).

#### *Direct Taxes*

Direct taxes are budgeted to grow by 12.7 per cent in 2020-21 after a subdued 2.9 per cent growth recorded in 2019-20 (RE) (Table 4). Rationalisation of income tax rates across income groups and simplification in compliance is envisaged, which will result in

**Table 3: Tax Buoyancy**

| | Average Tax Buoyancy (2010-11 to 2017-18) | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. Gross Tax Revenue | 1.15 | 0.77 | 1.63 | 0.54 | 1.16 |
| 2. Direct Taxes | 1.00 | 1.23 | 1.56 | 0.39 | 1.23 |
| (i) Corporation Tax | 0.84 | 1.48 | 1.38 | -1.07 | 1.12 |
| (ii) Income Tax | 1.20 | 1.19 | 1.83 | 2.49 | 1.38 |
| 3. Indirect taxes | 1.37 | 0.27 | 1.72 | 0.70 | 1.08 |
| (i) GST | - | 2.87 | 1.25 | 0.71 | 1.24 |
| (ii) Customs Duty | 0.47 | -0.79 | 2.88 | 0.82 | 1.01 |
| (iii) Union Excise | 1.17 | -0.97 | 2.61 | 0.93 | 0.74 |

**Note:** '-': Not applicable. Tax buoyancy is defined as the responsiveness of tax revenue to changes in nominal GDP.

**Source:** Staff calculations based on Union Budget Documents for various years.

₹40,000 crore of revenue foregone. In addition, the removal of the dividend distribution tax will imply revenue losses of ₹25,000 crore. These losses to the exchequer need to be balanced against potential gain in tax buoyancy due to increased compliance and the enhanced attractiveness of India as an investment destination. Furthermore, tax concessions for start-ups, foreign investments, electricity generation companies, cooperatives, micro, small and medium enterprises (MSMEs) and affordable housing are likely to brighten the investment environment (details of the tax proposals in Annex I). Moreover, a simplified income tax architecture entails benefits for the middle class. The combined stimulus on account of the rationalisation of income tax and corporate tax rates (as announced earlier in 2019) amounts to around 0.7 per cent of GDP.

**Table 4: Tax Revenue of Central Government**

| | ₹ thousand crore | | | | Per cent of GDP | | | Growth Rate (per cent) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **1. Direct tax** | **1136.6** | **1335.0** | **1170.0** | **1319.0** | **6.3** | **5.7** | **5.9** | **17.5** | **2.9** | **12.7** |
| *of which:* | | | | | | | | | | |
| i. Income tax | 461.5 | 556.2 | 547.0 | 625.0 | 2.6 | 2.7 | 2.8 | 20.5 | 18.5 | 14.3 |
| ii. Corporation tax | 663.6 | 766.0 | 610.5 | 681.0 | 3.6 | 3.0 | 3.0 | 15.4 | -8.0 | 11.5 |
| **2. Indirect tax** | **943.9** | **1126.2** | **993.4** | **1104.0** | **5.3** | **4.9** | **4.9** | **19.3** | **5.3** | **11.1** |
| *of which:* | | | | | | | | | | |
| i. GST | 581.6 | 663.3 | 612.3 | 690.5 | 3.1 | 3.0 | 3.1 | 14.1 | 5.3 | 12.8 |
| CGST | 457.5 | 526.0 | 514.0 | 580.0 | 2.5 | 2.5 | 2.6 | 15.0 | 12.3 | 12.8 |
| IGST | 28.9 | 28.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -3.3 | - | - |
| Compensation Cess | 95.1 | 109.3 | 98.3 | 110.5 | 0.5 | 0.5 | 0.5 | 15.0 | 3.4 | 12.4 |
| ii. Customs | 117.8 | 155.9 | 125.0 | 138.0 | 0.7 | 0.6 | 0.6 | 32.3 | 6.1 | 10.4 |
| iii. Excise | 232.0 | 300.0 | 248.0 | 267.0 | 1.4 | 1.2 | 1.2 | 29.3 | 6.9 | 7.7 |
| **3. Gross Tax Revenue (1+2)** | **2080.5** | **2461.2** | **2163.4** | **2423.0** | **11.7** | **10.6** | **10.8** | **18.3** | **4.0** | **12.0** |

**Source:** Union Budget Documents.

### *Indirect Taxes*

Indirect tax collections in 2019-20 (RE) fell short by ₹1.3 lakh crore from the budget estimates due to shortfall in all its components. Indirect taxes are budgeted to grow by 11.1 per cent during 2020-21, with GST collections budgeted at ₹6.9 lakh crore - an increase of 12.8 per cent. The rationalisation of GST rates over the period is estimated to provide a stimulus of around ₹1.0 lakh crore. A step towards removal of bottlenecks associated with GST will further strengthen and streamline GST collections, going forward. On customs duty, the emphasis is on the containment of dumping of imports under various Free Trade Agreements (FTAs) that are harmful to domestic industry, especially labour-intensive MSMEs and sectors notified under Make in India.

### *Non-Tax Revenues*

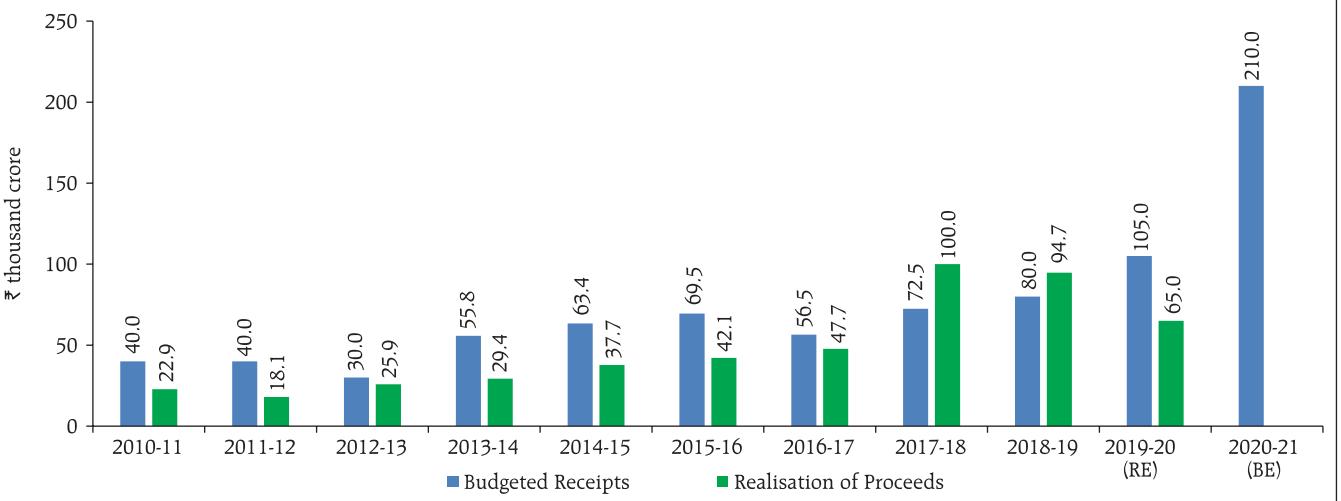
Receipts from non-tax revenues are budgeted to increase in 2020-21 by 11.4 per cent. Dividend and profits from public sector enterprises (including PSU banks) and surplus transfer from the RBI, which were higher than the budgeted amount by 22.2 per cent during 2019-20 (RE), are budgeted to decrease in 2020-21 (BE) (Table 5).

**Table 5: Non-Tax Revenue**

| | ₹ thousand crore | | | | Growth Rate (per cent) | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **Total Non-Tax Revenue** | **235.7** | **313.2** | **345.5** | **385.0** | **22.3** | **32.9** | **46.6** | **11.4** |
| *Of which* | | | | | | | | |
| Dividend and Profits | 113.4 | 163.5 | 199.9 | 155.4 | 24.1 | 44.2 | 76.2 | -22.3 |
| From PSEs | 43.1 | 57.5 | 48.3 | 65.7 | -7.4 | 33.5 | 12.1 | 36.2 |
| From RBI/Banks/FIs | 70.4 | 106.0 | 151.6 | 89.6 | 56.9 | 50.7 | 115.5 | -40.9 |

**Source:** Union Budget Documents for various years.

**Chart 3: Disinvestment: Actual *vis-a-vis* BE**




**Source:** Union Budget Documents.

### *Non-debt Capital Receipts*

The target for disinvestment has been pegged at an all-time high of ₹2.1 lakh crore in 2020-21 (BE). In 2019-20 (RE), disinvestment proceeds fell short by 38 percent *vis-a-vis* the target of ₹1.05 lakh crore (Chart 3). In a historical perspective, shortfalls *vis-à-vis* budgeted targets in respect of disinvestment have occurred in eight out of last ten years, with 2017-18 and 2018-19 being the notable exceptions. Moreover, it is noteworthy to realise the growing importance of Exchange Traded Funds (ETFs) in disinvestment (Box I). Recoveries of loans and advances are budgeted to decline in 2020-21 (BE) by 9.9 per cent over 2019-20 (RE).

**Box I: Disinvestment through Exchange Traded Funds (ETFs)**

ETFs are bundles of securities that are traded, like individual stocks, on an exchange. Contrary to regular mutual funds, ETFs can be bought and sold throughout the trading day like any stock. ETFs usually track different asset classes, such as government bonds and corporate bonds, commodities including crude oil or gold, foreign currencies such as the Euro or Canadian dollar.

For investors, ETFs are favoured investment avenues because (i) they are cost efficient (they don't use services of star fund managers; in India, most ETFs charge annual expenses of 0.05 to 1 per cent of their Net Asset Value (NAV) whereas actively managed funds charge 2.5-3.25 per cent a year and Open-end index funds levy 0.20-2 per cent a year) (Prashanta and Raj, 2015); (ii) they enable investors to benefit from more informed security selection by the fund manager, while also offering them a diversified investment portfolio; (iii) they offer high liquidity through the exchanges; (iv) they are simple and convenient to buy/sell, given the initial investment is low.

In recent years, Government of India has been pursuing the issue of ETFs as part of its broader disinvestment programme. The two ETFs launched under this initiative are: (a) CPSE ETF – which tracks shares of 11 Central Public Sector Enterprises (CPSEs) – Oil and Natural Gas Corporation (ONGC), National Thermal Power Corporation (NTPC), Coal India, Indian Oil Corporation (IOC), Rural Electrification Corporation (REC), Power Finance Corporation (PFC), Bharat Electronics, Oil India, NBCC India, NLC India and SJVN; and (b) Bharat-22 ETF – comprising National Aluminium Company (NALCO), ONGC, IOC, Bharat Petroleum, Coal India, State Bank of India (SBI), Axis Bank, Bank of Baroda, REC, PFC, Indian Bank, ITC, Larsen & Toubro, Bharat Electronics, Engineers

*(Contd...)*

India Limited, NBCC, Power Grid Corporation of India Ltd (PGCIL), NTPC, Gas Authority of India Limited (GAIL), National Hydro Power Corporation (NHPC), NLC, SJVN.

Details of disinvestment achieved through ETFs starting from 2013-14 are as follows:

**Table I.1: Share of ETFs in Disinvestment**

(₹ crore)

| Fiscal Year | ETFs | | | Total Disinvestment | Share of ETF in total disinvestment (per cent) |
|---|---|---|---|---|---|
| | CPSE ETF | Bharat 22 ETF | Total | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 2013-14 | 3,000 | 0 | 3,000 | 29,368 | 10.2 |
| 2014-15 | 0 | 0 | 0 | 37,737 | 0.0 |
| 2015-16 | 0 | 0 | 0 | 42,132 | 0.0 |
| 2016-17 | 8,500 | 0 | 8,500 | 47,743 | 17.8 |
| 2017-18 | 0 | 14,500 | 14,500 | 1,00,045 | 14.5 |
| 2018-19 | 26,350 | 18,730 | 45,080 | 94,727 | 47.6 |
| 2019-20 | 26,500* | 4,369* | 30,869* | 65,000 | 47.5 |

**Note:** * Data for 2019-20 is till February 24, 2020. Data in Column (5) is from Union Budget Documents.
**Source:** Department of Investment and Public Asset Management (DIPAM), Union Budget Documents.

Proceeds from the ETF route have formed an increasing portion of the aggregate disinvestment collections, as evident from Table I.1. In line with the disinvestment policy of the Government of India (as outlined by Department of Investment and Public Asset Management (DIPAM)) – namely, to promote public ownership of CPSEs – ETFs have emerged as the preferred vehicle for disinvestment by the government.

Strategic disinvestment is an alternative mode of disinvestment. It implies the sale of substantial portion of the Government share-holding of a CPSE of up to 50 per cent, or even higher as may be determined, along with transfer of management control. During the time period since 2013-14, the government mobilised ₹10,779 crore in 2016-17, ₹42,469 crore in 2017-18 and ₹15,914 crore in 2018-19 through this route – accounting for 22.6 per cent, 42.5 per cent and 16.8 per cent of aggregate disinvestment proceeds, respectively.

**Reference:**

Prashanta, A. and Raj, K.K. (2015), "ETF *vis-a-vis* Index Funds: An Evaluation", *Asia Pacific Journal of Research in Business Management,* Vol 20(1).

## IV. Expenditure Pattern and Priorities

Total expenditure is budgeted to grow by 12.7 per cent in 2020-21, lower than the rate of increase witnessed in 2019-20 (RE). Noteworthy from the point of view of reviving investment and growth is that capital expenditure is budgeted to grow by 18.1 percent, which is higher than the historical average of post-FRBM period (2004-05 to 2018-19) (Table 6). By contrast, revenue expenditure growth is projected to be moderate (relative to 2004-05 to 2018-19) which is indicative of the commitment of the government to improve the quality of expenditure as capital expenditure has higher multiplier effect than revenue expenditure (RBI, 2019)[4].

**Table 6: Expenditure of Central Government**

| Item | ₹ thousand crore | | | Growth rate (per cent) | |
|---|---|---|---|---|---|
| | 2018-19 | 2019-20 (RE) | 2020-21 (BE) | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 |
| **1. Total Expenditure** | **2,315** | **2,699** | **3,042** | **16.6** | **12.7** |
| **2. Revenue Expenditure** *(of which)* | **2,007** | **2,350** | **2,630** | **17.0** | **11.9** |
| (i) Interest Payments | 583 | 625 | 708 | 7.3 | 13.3 |
| (ii) Major Subsidies | 197 | 227 | 228 | 15.5 | 0.2 |
| Food | 101 | 109 | 116 | 7.3 | 6.3 |
| Fertiliser | 71 | 80 | 71 | 13.3 | -10.9 |
| Petroleum | 25 | 39 | 41 | 55.3 | 6.1 |
| (iii) MGNREGA | 62 | 71 | 62 | 14.9 | -13.4 |
| (iv) PM-KISAN | 1 | 54 | 75 | - | 37.9 |
| (v) Defence (Revenue) | 196 | 206 | 209 | 5.3 | 1.7 |
| **3. Capital Expenditure** | **308** | **349** | **412** | **13.4** | **18.1** |

**Source:** Union Budget Documents.

### Subsidies and Interest Payments

Expenditure on subsidies and interest payments is budgeted to come down to 37.8 per cent of revenue expenditure in 2019-20 (RE) and further to 36.9 per cent in 2020-21 (BE), which is its lowest level in the last twenty years. In 2019-20, interest payments declined from ₹6.60 lakh crore in BE to ₹6.25 lakh crore in RE, which may be reflective of the lower interest rate environment that prevailed during the year. Outgoes on account of subsidies also declined from 1.6 per

[4] Reserve Bank of India (2019), "Estimable Fiscal Multipliers for India", Box III.1, Chapter III – Demand and Output, Monetary Policy Report, April.

**Table 7: Expenditure on Major Government Schemes**

| Item | ₹ thousand crore | | | | Per cent of Total Expenditure | | Growth Rate (per cent) | |
|---|---|---|---|---|---|---|---|---|
| | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) | 2019-20 (RE) | 2020-21 (BE) | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **A. Central Sector Schemes** | | | | | | | | |
| 1. PM-KISAN | 1 | 75 | 54 | 75 | 2.0 | 2.5 | - | 37.9 |
| 2. Pradhan Mantri Shram Yogi Maandhan | 0 | 1 | 0 | 1 | 0.0 | 0.0 | - | - |
| 3. Deen Dayal Upadhyaya Gram Jyoti Yojana | 4 | 4 | 4 | 5 | 0.2 | 0.1 | 7.0 | 10.7 |
| 4. Ujjwala Yojana | 3 | 3 | 4 | 1 | 0.1 | 0.0 | 16.4 | -70.0 |
| 5. Road Works | 38 | 46 | 46 | 49 | 1.7 | 1.6 | 21.4 | 6.3 |
| 6. Sagarmala | 0 | 1 | 0 | 0 | 0.0 | 0.0 | 5.8 | -22.0 |
| 7. National River Conservation Programme | 2 | 1 | 1 | 1 | 0.0 | 0.0 | -25.9 | -30.0 |
| **B. Centrally Sponsored Schemes** | | | | | | | | |
| 1. MGNREGA | 62 | 60 | 71 | 62 | 2.6 | 2.0 | 14.9 | -13.4 |
| 2. Ayushman Bharat (PMJAY) | 2 | 7 | 3 | 6 | 0.1 | 0.2 | 49.0 | 94.0 |
| 3. PM Krishi Sinchayi Yojana | 8 | 10 | 8 | 11 | 0.3 | 0.4 | -3.0 | 40.9 |
| 4. PM Gram Sadak Yojana | 15 | 19 | 14 | 20 | 0.5 | 0.6 | -8.7 | 38.6 |
| 5. PM Awas Yojana | 25 | 26 | 25 | 28 | 0.9 | 0.9 | -0.4 | 8.6 |
| 6. Swachh Bharat Mission | 15 | 13 | 10 | 12 | 0.4 | 0.4 | -37.3 | 27.6 |
| 7. National Health Mission | 32 | 34 | 34 | 34 | 1.3 | 1.1 | 8.9 | -0.5 |
| 8. National Education Mission | 31 | 39 | 38 | 39 | 1.4 | 1.3 | 22.2 | 4.0 |

**Source:** Union Budget Documents.

cent of GDP in 2019-20 (BE) to 1.3 per cent in 2019-20 (RE) and has been budgeted even lower at 1.2 per cent in 2020-21 (BE). However, this has primarily been achieved by slashing on-budget expenditure on food subsidy from 0.9 per cent budgeted to 0.5 per cent of GDP in both 2019-20 (RE) as well as 2020-21 (BE). Despite this huge retrenchment, food subsidy continues to dominate the overall subsidy bill.

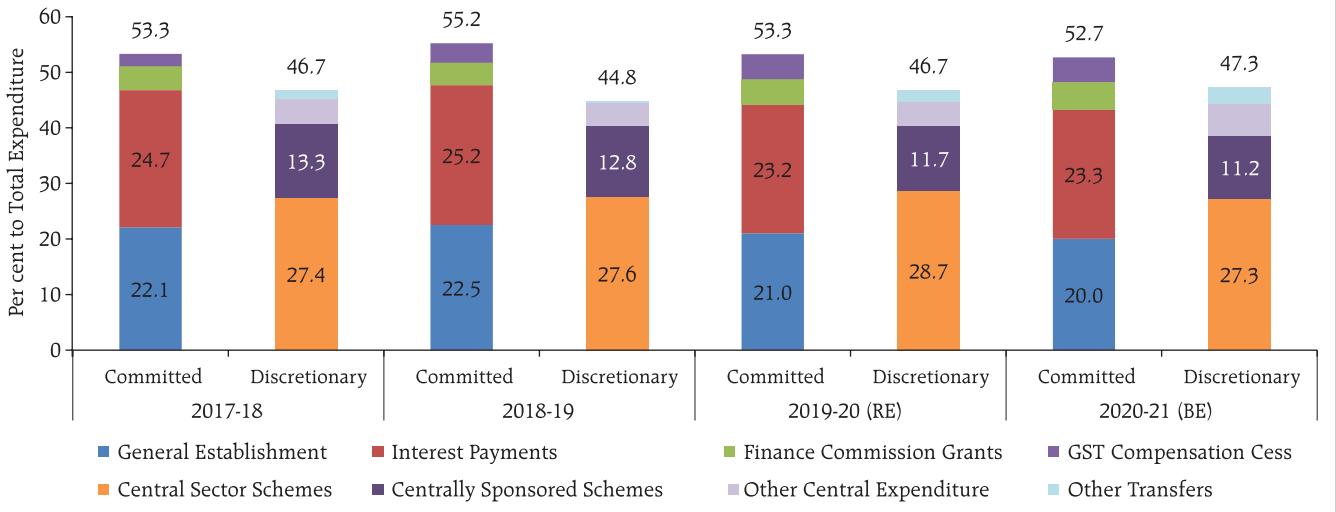
In terms of allocations to major government schemes, the budgeted amount in 2020-21 remains the same for Pradhan Mantri Kisan Samman Nidhi (PMKISAN) and marginally higher for Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)than in 2019-20 (BE) (Table 7). Both MGNREGA and PMKISAN are designed to directly increase the income of rural households and boost the rural economy.

***Committed vis-à-vis Discretionary Expenditure***

Total expenditure of the Union government can be decomposed into committed expenditure, which includes those expenses that the government must incur, *viz.,* establishment expenditure (*i.e.* expenditure on salaries, wages, pensions and office expenses), interest payments, grants recommended by the Finance Commission and GST compensation to states, and discretionary expenditure which includes expenses over which the government enjoys certain discretion, *viz.*, central sector schemes (which include all subsidies), centrally sponsored schemes and transfers to states (excluding Finance Commission grants and GST compensation). More than half of the total expenditure of the union government falls under the head of committed expenditure, consequently being difficult to contain (Chart 4). It is only the discretionary expenditure that the government may be able to rein in for the purpose of fiscal consolidation[5].

[5] It may be noted that many items included under the head of discretionary expenditure are backed by statutes, such as the National Food Security Act, among others, and hence may be difficult to roll back.

**Chart 4: Committed *vis-a-vis* Discretionary Expenditure**




**Source:** Union Budget Documents.

## Capital Expenditure

On top of an increase of 16.9 per cent during 2018-19, capital expenditure is budgeted to increase by 13.4 per cent in 2019-20 (RE) and further by 18.1 per cent in 2020-21. For major infrastructure, capital expenditure is estimated to grow by 22.4 per cent – led by communications sector which is budgeted to see over five-fold increase in allocation in 2020-21 (Table 8).

This thrust on capital expenditure is in line with the vision outlined in the National Infrastructure Pipeline Report, which envisages an investment of ₹102 lakh crore in creating new and upgrading existing infrastructure which will hold the key to raising India's competitiveness and achieving the target of a $5 trillion economy by 2024-25. The Union Budget 2020-21 has also made explicit provisions of ₹22,050

**Table 8: Capital Expenditure**

| | ₹ thousand crore | | | Growth Rate (per cent) | | |
|---|---|---|---|---|---|---|
| | 2018-19 | 2019-20 (RE) | 2020-21 (BE) | 2018-19 | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **1. Total Capital Expenditure** | **308** | **349** | **412** | **16.9** | **13.4** | **18.1** |
| 2. Defence | 95 | 110 | 114 | 5.3 | 15.9 | 3.0 |
| 3. Capital Expenditure (excluding defence) | 212 | 239 | 298 | 23.0 | 12.3 | 25.1 |
| (i) Major Infrastructure | 138 | 147 | 179 | 27.7 | 6.1 | 22.4 |
| Irrigation | 0.3 | 0.3 | 0.3 | -3.4 | 0.0 | 24.0 |
| Energy | 9 | 5 | 6 | 92.1 | -38.1 | 9.5 |
| Indian Railways | 53 | 68 | 70 | 21.7 | 28.4 | 3.2 |
| Roads & Bridges | 70 | 68 | 77 | 30.3 | -2.2 | 13.3 |
| Civil Aviation | 4 | 0.03 | 0.03 | 116.5 | -99.4 | 3.8 |
| Ports and Light Houses | 0.2 | 0.2 | 0.1 | 3.5 | 36.5 | -69.1 |
| Communications | 3 | 5 | 26 | -43.0 | 83.1 | 450.3 |
| (ii) Industry & Minerals | 5 | 7 | 7 | -4.1 | 40.6 | 5.0 |
| (iii) Science, Technology and Environment | 7 | 9 | 10 | 35.8 | 27.7 | 9.5 |
| (iv) Others | 62 | 76 | 101 | 15.0 | 21.9 | 34.2 |

**Source:** Union Budget Documents

crore for projects coming under the National Infrastructure Pipeline.

### V. GFD Financing

Gross market borrowing through dated securities is budgeted at ₹7.8 lakh crore for 2020-21 as compared to ₹7.1 lakh crore in 2019-20 (RE). Despite the higher than budgeted fiscal deficit, the gross and net market borrowings for 2019-20 has been kept intact, as the entire additional borrowing requirement is being met from the National Small Savings Fund (NSSF). Recent years have witnessed a growing share of NSSF in Centre's borrowing programme (Box II). Net market borrowings through dated securities will cover 68.4 per cent of GFD while that from NSSF will cover slightly over 30 per cent of the GFD in 2020-21 (BE) (Table 9).

The Union Budget 2020-21 has budgeted for switches of securities of ₹2.7 lakh crore (gross amount) (₹1.7 lakh crore during 2019-20 (RE)) and buyback of securities of ₹30,000 crore for 2020-21. It has also provided for net short-term borrowings of ₹25,000 crore and issuance of cash management bills (CMBs)

**Table 9: GFD Financing**

(₹ thousand crore)

| | 2018-19 | 2019-20 (BE) | 2019-20 (RE) | 2020-21 (BE) |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| **Gross Fiscal Deficit** | 649 | 704 | 767 | 796 |
| | (100.0) | (100.0) | (100.0) | (100.0) |
| *Financed by* | | | | |
| Net Market Borrowings | 423 | 473 | 473 | 545 |
| | (65.1) | (67.2) | (61.7) | (68.4) |
| Net treasury bills | 7 | 25 | 25 | 25 |
| | (1.1) | (3.6) | (3.3) | (3.1) |
| NSSF | 125 | 130 | 240 | 240 |
| | (19.2) | (18.5) | (31.3) | (30.1) |
| External Assistance | 6 | -3 | 5 | 5 |
| | (0.8) | -(0.4) | (0.6) | (0.6) |
| State Provident Fund | 16 | 18 | 18 | 18 |
| | (2.5) | (2.6) | (2.3) | (2.3) |
| Reserve Fund | -18 | -1 | 0 | 3 |
| | -(2.8) | -(0.1) | (0.0) | (0.4) |
| Deposits and Advances | 66 | 14 | 33 | 36 |
| | (10.2) | (1.9) | (4.3) | (4.5) |
| Draw Down of Cash Balances | -1 | 51 | 0 | -53 |
| | -(0.2) | (7.3) | (0.0) | -(6.7) |
| Others | 27 | -3 | -27 | -22 |
| | (4.1) | -(0.5) | -(3.6) | -(2.8) |
| *Memo Item* | | | | |
| Gross Market Borrowings | 571 | 710 | 710 | 780 |

**Notes:** Net market borrowings include borrowings through dated securities only. Net treasury bills include borrowings through 91-day, 182-day, 364-day and all other treasury bills. Others include buyback of securities, switching off of securities, saving bonds, relief bonds, *etc.*
Figures in parenthesis represent percentages of GFD.
**Source:** Union Budget Documents.

**Box II: Growing Importance of National Small Savings Fund (NSSF)**

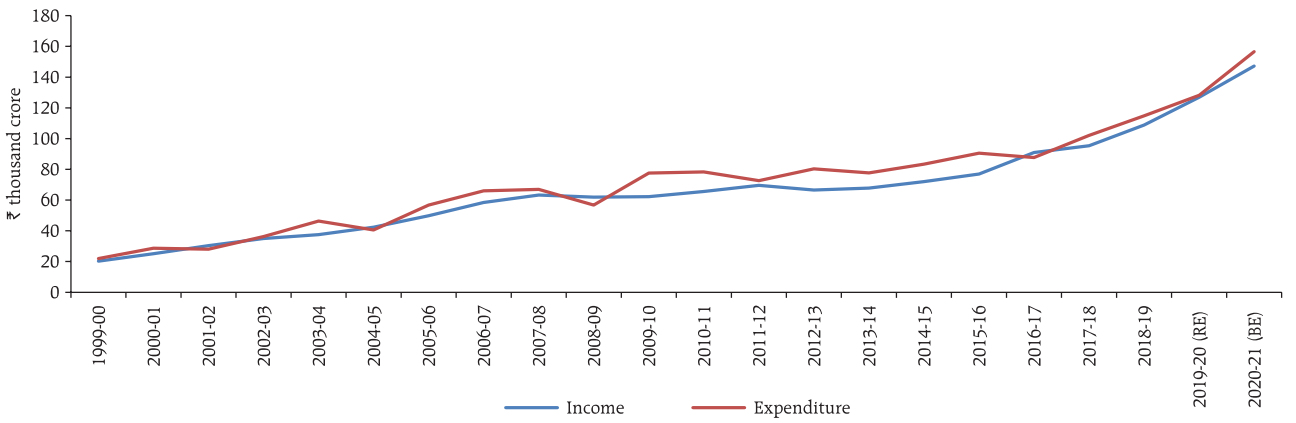
The NSSF is a fund created in the Public Account of India in which the proceeds of all small savings schemes, run by the government to promote financial savings, are accumulated. The receipts into NSSF come from three sources, *viz.*, Post Office Savings Deposits, National Savings Certificates and Public Provident Fund. The funds collected in the NSSF are invested in special securities of Central and state governments. After the implementation of recommendations of the Fourteenth Finance Commission (FC - XIV), all state governments except Arunachal Pradesh, Delhi, Kerala and Madhya Pradesh have stopped borrowing from NSSF. The surplus funds, thus, available with the NSSF are being loaned out to the Public-Sector Undertakings (PSUs) like Food Corporation of India, Air India, National Highway Authority of India (NHAI) and Indian Railway Finance Corporation (IRFC), among others[6].

The NSSF, therefore, is essentially a financial intermediary which channelises the surplus funds of households to the public sector. In doing so, it earns income on the loans given to the government and PSUs and incurs costs on account of interest payments to depositors and management expenses, the difference being its operating profit/loss. An analysis of income and expenditure of the NSSF from 1999-00 (the year in which NSSF was first carved out in the Public Account of India) to 2018-19 (the latest year for which actual data is available) reveals that

*(Contd...)*

[6] This is in line with the recommendations of Committee on Comprehensive Review of National Small Savings Fund (Chair: Smt. S. Gopinath) which proposed that in addition to government securities, NSSF may invest in securities issued by infrastructure companies that are wholly owned by the Government.

**Chart II.1: Income and Expenditure of NSSF**

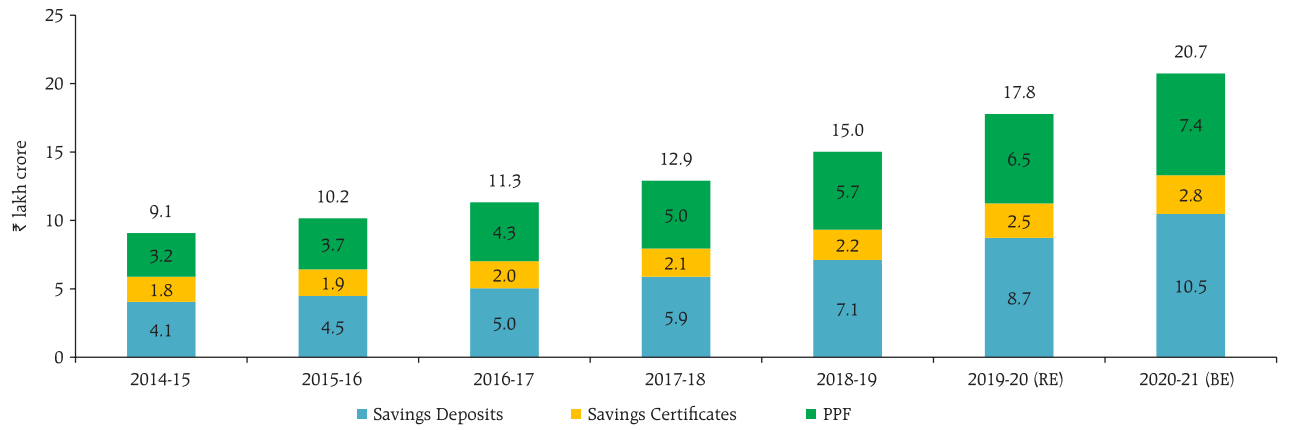



**Source:** Union Budget Documents.

during this twenty-year period, the NSSF has achieved a surplus in only four years and the accumulated losses amount to ₹1.13 lakh crore as at end-March 2019, which is budgeted to increase to ₹1.24 lakh crore by end-March 2021 (Chart II.1).

It is notable that the NSSF borrows and lends money at administered rates of interest. While the lending rates are fixed annually, deposit rates are reviewed quarterly and have been aligned to G-sec rates of similar maturities, with a certain amount of spread on certain small savings schemes.[7] In 2018-19, the ratio of interest expenditure to total deposits of NSSF was 6.9, whereas the comparable figure for scheduled commercial banks was 4.8. It is due to this differential between rate of interest offered on small savings schemes and bank deposits that the total corpus of NSSF has seen a phenomenal growth since 2014-15 and is budgeted to more than double to ₹20.7 lakh crore in 2020-21 from ₹9.1 lakh crore in 2014-15 (Chart II.2, Annex II).

**Chart II.2: Outstanding Deposits in NSSF**

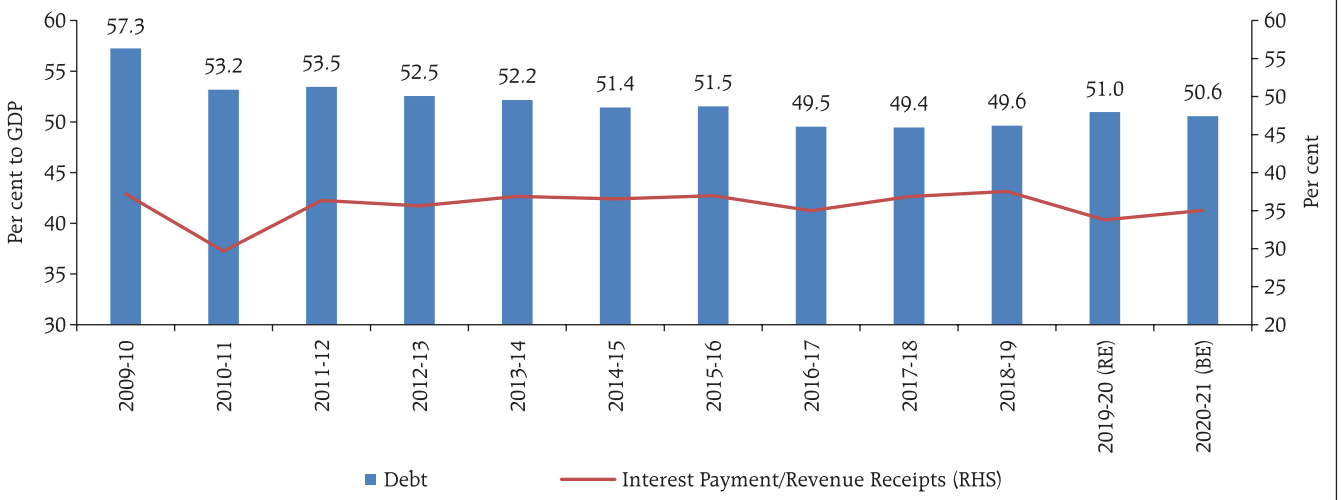



**Source:** Union Budget Documents.

[7] On March 31, 2020 the government announced a significant reduction in interest rates on small savings schemes for Q1: 2020-21 (https://dea.gov.in/sites/default/files/RoI%20Q1%202020-21%20%281%29.pdf).

of ₹2.5 lakh crore. There is no allocation under the Market Stabilisation Scheme (MSS). The Government has also planned to raise a gross amount of ₹10,500 crore *via* Sovereign Gold Bonds (SGBs) in 2020-21.

**Chart 5: Debt and Interest Burden of Central Government**




**Source:** Union Budget Documents.

## VI. Outstanding Liabilities

Total outstanding liabilities of the Union government (including borrowings through extra budgetary resources) are budgeted to increase sharply to 51.0 per cent of GDP in 2019-20 (RE) and moderate slightly to 50.6 per cent in 2020-21 BE (Chart 5). The government has projected that the outstanding liabilities will contract to 45.5 per cent by 2022-23.[8] It may be noted that as per the revised FRBM framework, the target is to reduce the outstanding liabilities of Union government to 40 per cent of GDP by 2024-25.

## VII. Resource Transfers from the Centre to States

Resource transfers from the Centre to states declined in 2019-20 (RE) due to significantly lower tax devolution, which was partially offset by increase in other transfers. As per cent of GDP, gross transfers declined by 0.5 per cent during the year. Coupled with lower central tax collections, another main reason for the decline in tax devolution in the year is lower actual tax collections of Centre in the previous year *viz.*, 2018-19 compared to revised estimates which has been adjusted in 2019-20 (RE) to the extent of about 30 basis points. In 2020-21, gross transfers are budgeted at 6.2 per cent of GDP, which represents a significant increase from 5.8 per cent in 2019-20 (RE). Tax devolution is as per the formula recommended by the Fifteenth Finance Commission in its interim report (Box III) and continues to be the mainstay of resources transferred from the Centre to states.

**Box III: Interim Report of the Fifteenth Finance Commission: A Reflection**

The Centre-state fiscal imbalance in India is sought to be corrected through a system of federal transfers from the Centre to states, which have principally been in the form of tax devolution and funding of centrally sponsored schemes since 2015-16. The Finance Commission (FC), a constitutional body under Article 280, is entrusted with determining the ratio of tax devolution and has thus come to play the pivotal role in Centre-state fiscal relations.

Tax devolution as per cent of GDP has shown a significant increase in the period, attributable to the Fourteenth Finance Commission (FC-XIV), even though aggregate resource transfer has broadly remained stable (Chart III.1a). This stability has been attained by arresting the growth in tax devolution through an increase in Centre's reliance on cesses and surcharges in tax collections that are outside the shareable pool of taxes (divisible pool) as per

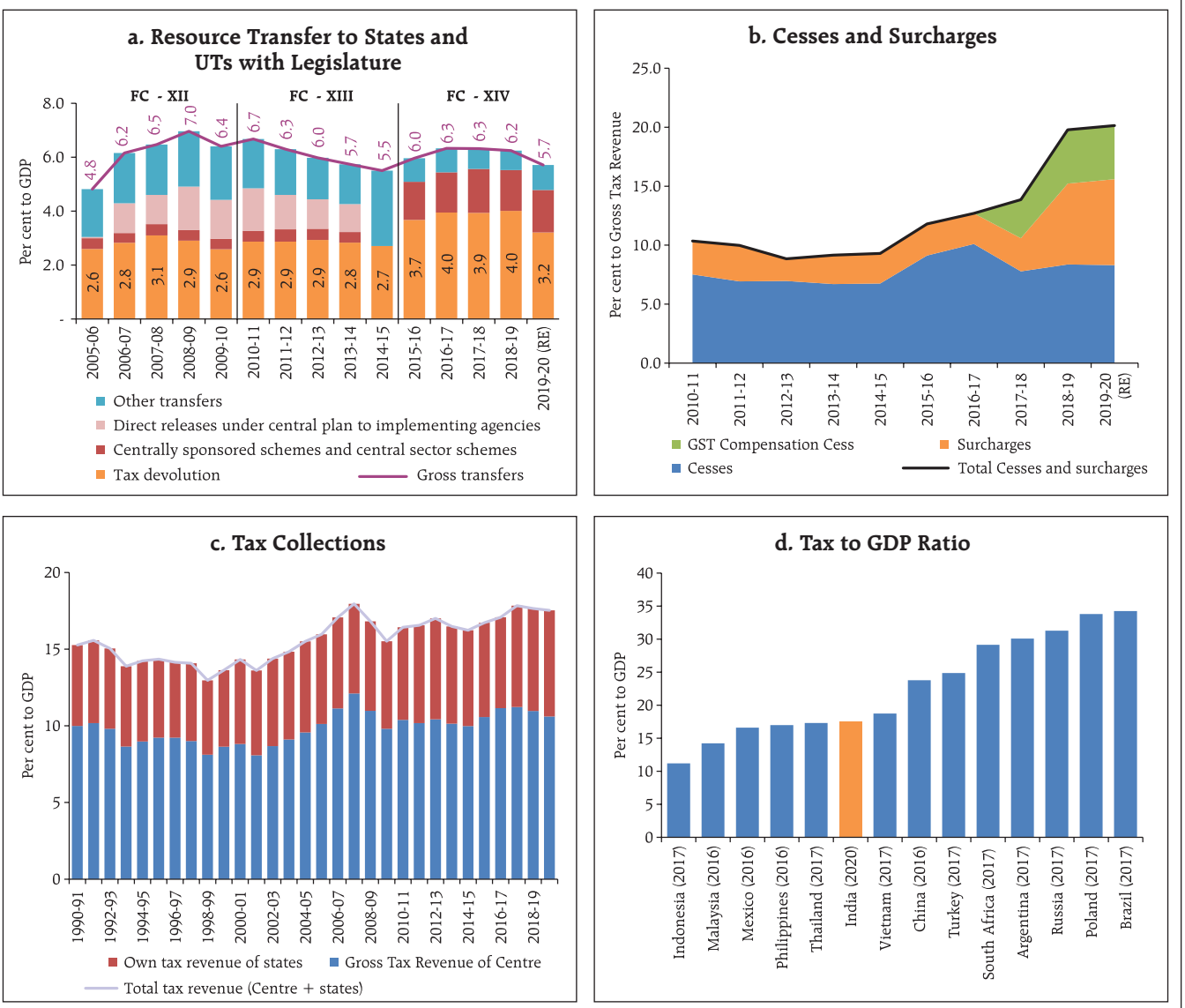
*(Contd...)*

[8] Medium Term Fiscal Policy cum Fiscal Policy Strategy Statement, Union Budget 2020-21.

Article 271 of the constitution (Chart III.1b). Concurrently, tax collections as per cent of GDP for both Centre and states have stagnated since 2007-08, after registering robust increase between 2001-02 to 2007-08 (Chart III.1c). Another reality that institutions of federal fiscal polity in India are confronted with is a low intensity of tax to GDP in India *vis-a-vis* its peers (Chart III.1d).

In this milieu, the interim report of the Fifteenth Finance Commission (FC-XV) was tabled in the Budget Session of the Parliament on February 1, 2020. Its recommendations have been largely accepted by the Central government and reflected in the Union Budget provisions of 2020-21. The tax devolution ratio is recommended at 41 per cent of the divisible pool for 2020-21, 1 per cent lower than the 42 per cent in 2015-20, the period corresponding to the FC-XIV. The reduction in the share of states is primarily because of elimination of the share which used to be allocated to the erstwhile state of Jammu and Kashmir (0.8 per cent of the divisible pool).

**Chart III.1: Dynamics of Federal Transfers: Stylised Evidence**




**Notes on charts:**
a. For the year 2014-15, resources transferred to centrally sponsored schemes and central sector schemes were included in central assistance for state and UT plans.
c. Gross tax revenue for Centre in 2019-20 is revised estimate. Own tax revenues for states in 2018-19 and 2019-20 are revised estimates and budget estimates, respectively.
**Sources:** Union budget documents (various issues), RBI State Finances Report (various issues), United Nations University, Government Revenue Dataset, 2019.

*(Contd...)*

Other than tax devolution, the FC also recommends specific transfers to states in the form of grants under Article 280 of the constitution. The purpose of these grants has varied considerably over successive FCs, though the share of devolution to local bodies has increased considerably since the passage of the 73rd and 74th amendments to the constitution in 1992 that mandated federal transfers to local bodies. For 2020-21 as well, devolution to local bodies commands the major share in FC grants; the commission also recommended a significant increase in grants for bridging revenue deficit (Table III.1).

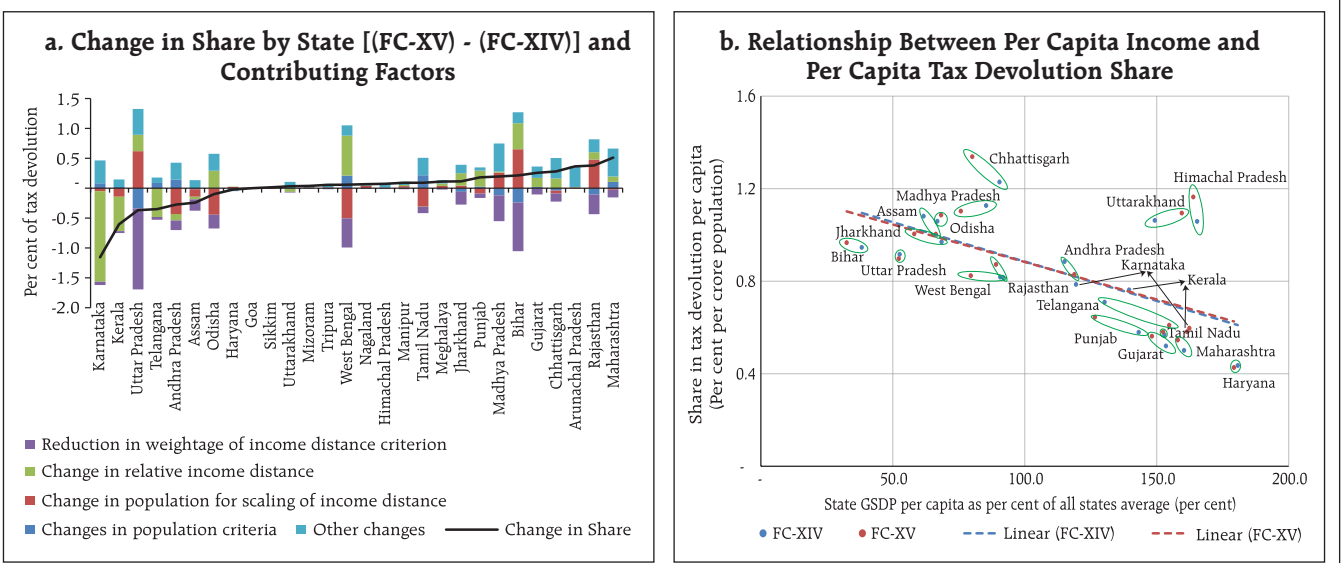
The FC is also entrusted with determination of criteria and formula for *inter se* distribution of taxes among states, with the objective of enabling a minimum level of government services to all citizens while addressing states' different revenue raising capacities owing to the disparity in their income levels. The FC-XV has made significant changes in the criteria and devolution share of individual states, primarily attributable to the change in population census year from 1971 to 2011. The change in population census is governed by the Terms of Reference (ToR) of the commission. Though the FC-XV tries to balance the loss in share for low population growth states due to the change in reference census by introducing a criterion for demographic performance[9], population is also indirectly used as a criterion in scaling the income distance of a state and thus disadvantages those states that have achieved low growth rates in population (Chart III.2a). Other changes in criteria for *inter se* distribution include increase in weightage of forest cover (by 2.5 per

**Table III.1: Finance Commission Grants**

(₹ crore)

| Name of grant | Union budget 2020-21 | | | FC-XV recommendation |
|---|---|---|---|---|
| | 2018-19 | 2019-20 (RE) | 2020-21 (BE) | 2020-21 |
| Grants for local bodies - Rural | 35,064 | 58,616 | 69,925 | 60,750 |
| Grants for local bodies - Urban | 14,400 | 25,843 | 30,000 | 29,250 |
| Grants-in-Aid for State Disaster Relief Fund | 9,658 | 10,938 | 20,000 | 22,184 |
| Post devolution revenue deficit bridging grants | 34,582 | 28,314 | 30,000 | 74,340 |
| Special Grants | | | | 6,764 |
| Sector-specific grants for nutrition | | | | 7,735 |
| **Total Finance Commission Grants** | **93,704** | **1,23,710** | **1,49,925** | **2,01,023** |

**Chart III.2: *Inter se* Distribution of Devolved Taxes**




**Notes:** 1. In chart a, change in population criteria reflects the impact from change in reference census year and replacement of demographic change criterion with demographic performance criterion. Other changes include impact from increase in weightage of forest cover and introduction of tax effort criterion.
2. In chart b, for the x-axis, per capita GSDP for individual states and all states average is for the reference years used by the respective finance commissions for their income distance criterion. Analysis is based on prevalent studies on regional income disparity and convergence in India over long time periods (Krishna, 2004; Kumar, 2005; Mishra and Mishra, 2015; Bandyopadhyay, 2016).

**Sources:** FC-XIV report, FC-XV interim report, author's calculations.

*(Contd...)*

[9] Defined as the product of the inverse of the total fertility rate as per 2011 population census, and a state's population in 1971.

cent), introduction of a new criterion for tax effort (2.5 per cent weightage) and reduction in weightage of income distance criteria by 5 per cent. On the whole, per capita share in tax devolution recommended by the FC-XV in its interim report are at the same level of progressivity as the FC-XIV (Chart III.2b and Annex III).

The full report of the FC-XV that will contain the recommendations on tax devolution and grants for the years 2021-22 to 2025-26 is to be submitted by October 30, 2020. In its full report, the FC-XV also envisages recommending sector-specific grants for health, pre-primary education, judiciary, rural connectivity, railways, statistics and police training and housing. Further, the commission is also evaluating the feasibility of recommending performance based grants to states in six areas: agriculture reforms; performance on Aspirational Districts Programme (ADP); power sector reforms; trade (exports); education; and tourism promotion.

**References:**

Bandopadhyay, S. (2016), "The persistence of inequality across Indian states", *CSAE Working Paper WPS/2016-26.*

Krishna, K.L. (2004), "Patterns and Determinants of Economic Growth in Indian States", *Working Paper No 144,* Indian Council of Research on International Economic Relations.

Kumar, T.R. (2005), "Tax Devolution and Regional Disparities", *Economic and Political Weekly,* Vol. 40(20).

Mishra, A. and Mishra, V. (2015), "Examining Income Convergence among Indian States: Time Series Evidence with Structural Breaks", *Discussion Paper 44/15,* Monash Business School, Department of Economics.

The increase in Finance Commission grants in 2019-20 (RE) and 2020-21 (BE) is driven by higher grants for rural and urban local bodies. Transfers to Union Territories have increased in 2019-20 (RE) and 2020-21 (BE) due to the inclusion of transfers to the erstwhile state of Jammu and Kashmir within this head (Table 10).

**Table 10: Gross and Net Transfers from Centre to States**

| | ₹ thousand crore | | | | Per cent of GDP | | | |
|---|---|---|---|---|---|---|---|---|
| | 2017-18 | 2018-19 | 2019-20 (RE) | 2020-21 (BE) | 2017-18 | 2018-19 | 2019-20 (RE) | 2020-21 (BE) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| **1. Devolution of States' Share in Taxes** | **673.0** | **761.5** | **656.0** | **784.2** | **3.9** | **4.0** | **3.2** | **3.5** |
| a. Tax devolution to states' as accrued during the year* | 697.6 | 678.0 | 714.9 | 784.2 | 4.1 | 3.6 | 3.5 | 3.5 |
| b. States' share adjustment as per actual of previous year | 0.0 | 24.6 | -58.8 | 0.0 | 0.0 | 0.1 | -0.3 | 0.0 |
| **2. Finance Commission Grants** | **92.2** | **93.7** | **123.7** | **149.9** | **0.5** | **0.5** | **0.6** | **0.7** |
| a. Grant for Rural Local Bodies | 34.4 | 35.1 | 58.6 | 69.9 | 0.2 | 0.2 | 0.3 | 0.3 |
| b. Grants for urban local bodies | 12.6 | 14.4 | 25.8 | 30.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| c. Grants-in-aid for SDRF | 9.4 | 9.7 | 10.9 | 20.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| d. Post Devolution Revenue Deficit Grants | 35.8 | 34.6 | 28.3 | 30.0 | 0.2 | 0.2 | 0.1 | 0.1 |
| **3. Scheme Related Transfers** | **278.8** | **286.0** | **322.4** | **335.9** | **1.6** | **1.5** | **1.6** | **1.5** |
| a. Under Centrally Sponsored Schemes | 262.0 | 271.5 | 283.1 | 295.3 | 1.5 | 1.4 | 1.4 | 1.3 |
| b. Under Central Sector Schemes | 16.0 | 13.6 | 38.2 | 39.5 | 0.1 | 0.1 | 0.2 | 0.2 |
| c. Other transfers | 0.8 | 0.9 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| **4. Some Important Items of Transfer** | **37.2** | **46.2** | **57.3** | **73.3** | **0.2** | **0.2** | **0.3** | **0.3** |
| a. Special Assistance | 7.0 | 4.7 | 4.0 | 15.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| b. Assistance to states from NDRF | 4.7 | 10.0 | 20.0 | 25.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| c. Externally aided projects-loans | 17.5 | 23.8 | 25.0 | 25.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| d. Other transfers | 8.1 | 7.8 | 8.3 | 8.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| **5. Transfers to Delhi, Puducherry and Jammu and Kashmir (since October 2019)** | **3.8** | **8.0** | **28.4** | **47.4** | **0.0** | **0.0** | **0.1** | **0.2** |
| **6. Gross Transfers to States and UTs (1 to 5)** | **1,085.1** | **1,195.4** | **1,188.0** | **1,390.7** | **6.3** | **6.3** | **5.8** | **6.2** |
| **7. Recovery of Loans and Advances** | **13.1** | **14.4** | **14.2** | **12.5** | **0.1** | **0.1** | **0.1** | **0.1** |
| **8. Net Resources transferred to States and UTs (6-7)** | **1,072.0** | **1,181.0** | **1,173.8** | **1,378.2** | **6.3** | **6.2** | **5.7** | **6.1** |

**Note:** * Tax devolution to states as accrued during the year = Tax devolution to states - States' share adjustment as per actual (accrued in the previous year) + Next year's states' share adjustment as per actual. For example, Tax accrued in 2018-19 = 761.5 - 24.6 + (-58.8).
Figures in columns might not add up to the total due to rounding off of numbers.
**Source:** Union Budget Documents

**VIII. Conclusion**

The Union Budget 2020-21 aims at energising the Indian economy through a combination of short-term, medium-term, and long-term measures. The direct tax reforms, particularly the exemption from income tax is likely to boost purchasing power of the middle-income households. The abolition of dividend distribution tax, a long-standing demand of the industry, should work towards making India an attractive destination for investment. Overall, the budget is growth promoting and welfare enhancing within the envelope governed by fiscal prudence. The budget has also avoided cutting down capital expenditure to meet the fiscal deficit target in a year of subdued growth momentum in the economy, which is desirable. As regards the FRBM targets, the escape clause has been used for three successive years now – in 2018-19 and 2019-20 to allow the GST regime to stabilise in due course and in 2019-20 and 2020-21 to account for the revenue implications of lower corporate taxes which could make India globally more competitive and stimulate investment and growth in the medium-term. During the ensuing year, the economic developments especially against the backdrop of the COVID-19 pandemic and the evolving situation will be crucial in determining the fiscal performance of the country.

**Annex I: Budget Highlights: Measures**

***Measures in the Budget 2020-21 pertaining to RBI:***

- Deposit Insurance and Credit Guarantee Corporation (DICGC) permitted to increase deposit insurance coverage from ₹1 lakh to ₹5 lakh per depositor.
- Proposal to introduce governance reforms in PSBs so that they become more competitive.
- Proposal to strengthen cooperative banks through appropriate amendments to Banking Regulation Act for increasing professionalism, enabling access to capital and improving governance and oversight by RBI, apart from taking further steps to bring in transparency in Public Sector Banks (PSBs).
- Limit for NBFCs to be eligible for debt recovery under SARFAESI Act is proposed to be reduced from ₹500 crore to asset size of ₹100 crore or loan size from existing ₹1 crore to ₹50 lakh.
- Government has asked RBI to consider extension of window (which is slated to close on March 31, 2020) for restructuring of debt by MSMEs.
- A scheme will be devised to strengthen the Partial Credit Guarantee scheme for the NBFCs (that had been announced earlier). Government will guarantee securities thereby floated.
- Financial markets:
  - Certain specified categories of government securities would be opened fully for non-resident investors as well.
  - FPI Limit for corporate bonds, currently at 9 per cent of outstanding stock, to be increased to 15 per cent.

**Part I**

***Theme A: Aspirational India*** in which all sections of the society seek better standards of living, with access to health, education and better jobs.

***1. Agriculture, Irrigation and Rural Development***

- PM KUSUM (Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan) to cover 20 lakh farmers for standalone solar pumps and an additional 15 lakh to be supported to solarise their grid connected pumps.
- Proposal for viability gap funding for creation of efficient, Warehouse Development and Regulatory Authority (WDRA) norms-compliant warehouses on PPP mode.
- SHG-run village storage scheme to be launched which will provide farmers a good holding capacity and reduce their logistics cost. Women, SHGs shall regain their position as "Dhaanya Lakshmi".
- Integration of e-NWR (Negotiable Warehouse Receipts) with e-NAM (National Agricultural Market).
- "Kisan Rail" and "Krishi Udaan" to be launched by Indian Railways and Ministry of Civil Aviation respectively for a national cold supply chain for perishables. Express and freight trains shall have refrigerated coaches.
- In horticulture sector, for better marketing and export, it is proposed to support states which, adopting a cluster basis, will focus on "one product one district".
- Integrated farming systems in rainfed areas is proposed to be expanded and national portal on organic products will be strengthened.
- Agricultural credit target of ₹15 lakh crore has been set for 2020-21. Fish production target of 200 lakh tonnes by 2022-23, in addition to promotion of growing of algae and sea weed and of cage culture.

**Annex I: Budget Highlights: Measures** *(Contd.)*

- Proposal to involve youth in fishery through 'Sagar Mitras' and giving a fillip for creation of 500 fish Farmer Producer Organisations (FPOs).

***2. Wellness, Water and Sanitation:***

- Proposal to provide viability gap funding to set up hospitals under the PPP mode, starting with Aspirational districts that have no empanelled hospital under PMJAY (Pradhan Mantri Jan Arogya Yojana).
- Expansion of Jan Aushadhi Kendra Scheme to all districts by 2024.
- Commitment to ODF Plus to sustain ODF behaviour and to ensure comprehensive coverage across all sections of population.
- Focus on liquid and grey water management along with solid waste management.
- Thrust on million-plus cities meeting their targets under Jal Jeevan Mission (augmenting conventional and unconventional sources of water) on expedited basis.

***3. Education and Skills***

- New Education Policy to be announced soon.
- Steps would be taken to enable sourcing External Commercial Borrowings (ECBs) and FDI so as to able to deliver higher quality education through enhancement of physical and human capital.
- About 150 higher educational institutions will start apprenticeship-embedded courses by March 2021 to enhance employability of youth.
- Internship opportunities to fresh engineers for a period of up to one year by ULBs
- Initiation of degree level full-fledged online education programme by institutions within first 100 ranks of National Institutional Ranking Framework (NIRF).
- Ind-SAT to be conducted in Asia and Africa under Study in India programme. It shall be used for benchmarking foreign candidates who receive scholarships for studying in Indian higher education centres.
- It is proposed to attach a medical college to an existing district hospital in PPP mode.
- Special bridge courses to be designed by the Ministries of Health and Skill Development together with professional bodies to bring in equivalence with global standards, to facilitate Indian teachers, nurses, para-medical staff and care-givers in securing employment abroad.

***Theme B: Economic Development***

***1. Industry, Commerce and Investment***

- National Technical Textiles Mission has been proposed for a period of 4 years from 2020-21 to 2023-24.
- NIRVIK Scheme for higher export credit disbursement to be launched which provides for higher insurance coverage, reduction in premium for small exporters and simplified procedure for claim settlements.
- Setting up of an Investment Clearance Cell, working through a portal, to provide end to end facilitation and support, including pre-investment advisory, information related to land banks and facilitate clearances at Centre and State level.
- Development of 5 new smart cities in collaboration with states on PPP basis.

**Annex I: Budget Highlights: Measures** *(Contd.)*

- Scheme to be launched to encourage manufacture of mobile phones, electronic equipment, semi-conductor packaging, medical devices to leverage India's cost competitiveness in electronics manufacturing.
- Emphasis to raise turnover on Government e-marketplace to ₹3 lakh crore, for maximising opportunities for MSMEs.

***2. Infrastructure***

- A project preparation facility is proposed to be setup for infrastructure projects.
- A National Logistics Policy will be launched soon to create a single window e-logistics market and focus on generation of employment, skills and making MSMEs competitive.
- Roads: Accelerated development of Highways will be undertaken, involving scaling up access control highways, economic corridors, strategic highways.
- Railways: Four station redevelopment projects and operation of 150 passenger trains through PPP mode. Creation of large solar power capacity in railway land alongside rail tracks. 148 km long Bengaluru Suburban transport project to be started with 20 per cent equity by Central government.
- Port: Government would consider corporatizing at least one major port and subsequently its listing on the stock exchanges.
- Air: 100 more airports to be developed under UDAN (*Ude Desh ka Aam Naagrik* / Regional Connectivity Scheme).
- Power: Efforts to replace conventional energy meters by prepaid smart meters.
- Gas Grid: Expand National Gas Grid from 16,200 km to 27,000 km

***3. New Economy***

- A policy to enable private sector to build Data Centre parks throughout the country to be rolled out soon, to enable dovetailing of data in every step of value chain.
- Fibre to the Home (FTTH) connections through Bharatnet will link 1,00,000 gram panchayats this year.
- National Mission on Quantum Technologies and applications with an outlay of ₹8,000 crore proposed.
- Knowledge Translation Clusters would be set up across different technology sectors including new and emerging areas.
- Special emphasis on early life funding to start ups, including a seed fund to support ideation and development of early stage Start-ups.

***Theme C: Caring Society***

***1. Women & Child, Social Welfare***

- Consultation with and financial assistance to urban local bodies for adoption of suitable technologies identified to eliminate manual cleaning of sewer systems or septic tanks.
- A task force to be appointed to recommend regarding lowering Maternal Mortality Rate (MMR) and improving nutrition levels.
- Allocation of ₹85,000 crore, ₹53,700 crore and ₹9,500 crore respectively for benefit of SCs, STs and senior citizens and *divyangjan.*

**Annex I: Budget Highlights: Measures** *(Contd.)*

***2. Culture and Tourism***

- Proposal to establish Indian Institute of Heritage and conservation under Ministry of Culture which shall have the status of a deemed University to start with.
- 5 archaeological sites to be developed as iconic sites with on-site Museums.
- Tribal museum to be set up in Ranchi.
- Raft of measures announced to re-curate existing museums (such as Indian Museum in Kolkata) and establish new museums (such as maritime museum at Lothal) with a view to offering world class experience to tourists.

***3. Environment and Climate Change***

- Incentive-based scheme for encouragement to states implementing plans for cleaner air in cities with population above 1 million.
- For old and high carbon emitting power plants, it proposed that utilities running them would be advised to close them, if their emission is above the pre-set norms. The land so vacated can be put to alternative use.

Two hands that will hold this bouquet consisting of three themes as mentioned above are *Governance* and *Financial Sector.*

***Governance***

- Proposal for inclusion of tax payer charter in statute, with a view to ensuring that our citizens are free from harassment of any kind.
- For Companies Act, certain amendments are proposed to be made that will correct for criminal liability for acts that are civil in nature.
- It is proposed to set up a National Recruitment Agency (NRA) for recruitment to Non-Gazetted posts. A test-centre in every district, particularly in the Aspirational Districts would be set up.
- The proposed new National Policy on Official Statistics would use latest technology including AI to fulfil the growing need for the Indian Statistical system
- A sum of ₹100 crore is allocated to begin the preparations to host G 20 presidency in the year 2022.
- Firms in selected sectors such to be provided handholding support for technology upgradation, R&D, business strategy by a scheme worth ₹100 crore to be anchored by both SIDBI and EXIM Bank.
- Sums of ₹30, 757 crore and ₹5, 958 crore for supporting the all-round development of UTs of Jammu and Kashmir and Ladakh respectively.

***Financial Sector***

- Proposal to sell balance holding of government in IDBI Bank to private, retail and institutional investors through the stock exchange.
- Proposal for separation of NPS Trust for government employees from PFRDAI.
- It is proposed to introduce a scheme to provide subordinated debt for entrepreneurs of MSMEs, which count as quasi-equity and be guaranteed by Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE).
- Proposal to launch new Debt-ETF consisting primarily of government securities to allow retail access to government securities.
- Proposed amendments to Factor Regulation Act 2011 to enable NBFCs to extend invoice financing to the MSMEs through Trade Receivables Discounting System (TReDS).

**Annex I: Budget Highlights: Measures** *(Contd.)*

- With the approval of the regulator, GIFT City would set up an International Bullion exchange(s) in GIFT-IFSC as an additional option for trade by global market participants.
- The government has proposed to sell a part of its holding in LIC by way of Initial Public Offer (IPO).

**Part II: Tax Proposals**

***A. Direct Tax***

- Simplified and New Income tax regime. The new tax regime shall be optional for the taxpayers and bring significant relief.
- Dividend Distribution Tax (DDT) is abolished and classical system of dividend taxation adopted under which the companies would not be required to pay DDT. The dividend shall be taxed only in the hands of the recipients at their applicable rate.
- Concessional corporate tax rate of 15 per cent extended to new domestic companies engaged in the generation of electricity.
- Tax concession of 100 per cent on interest, dividend and capital gains income in respect of investment made in infrastructure and other notified sectors by sovereign wealth fund of foreign governments and other foreign investments in order to incentivise the investments in the above sectors.
- Tax benefits to start-ups by way of deduction of 100 per cent of their profits enhanced (by increasing turnover limit from ₹25 crore to ₹100 crore) and period of eligibility for claim of deduction increased from 7 years to 10 years considering starts-ups as engine of growth. Also, tax on Employee Stock Option Plan (ESOP) given to start-ups employees deferred by five years or till they leave the company or when they sell their shares, whichever is earliest.
- Concessional tax rate for cooperatives - cooperative societies to be taxed at 22 per cent plus 10 per cent surcharge and 4 per cent cess with no exemption/deductions against existing 30 per cent rate plus cess and surcharges. Cooperative societies also exempted from Alternate Minimum Tax (AMT).
- To further incentivise the affordable housing, extension of time limits pertaining to the tax benefits (additional deduction of up to ₹1,50,000 for interest paid on loans taken for purchase of an affordable house) for affordable housing for realisation of the goal of 'Housing for All'.

***B. Indirect Tax***

- Special attention to limit import of those items which are being produced by our MSMEs with better quality. Accordingly, customs duty is proposed to be raised on items like footwear and furniture. Customs duty rates are proposed to be revised on electric vehicles, and parts of mobiles as part of carefully conceived Phased Manufacturing Plans under Make in India initiative.

***C. Tax Administration***

- Turnover threshold for audit (by accountant) of MSMEs increased from the existing ₹1 crore to ₹5 crore in order to reduce the compliance burden on small retailers, traders, shopkeepers. To boost less cash economy, increased limit apply only to

**Annex I: Budget Highlights: Measures** *(Concld.)*

those businesses which carry out less than 5 per cent of their transactions in cash.

- Issuance of Unique Registration Number to all charity institutions for easy tax compliance.
- Amendment of Income Tax act to enable faceless appeal in extension of faceless assessment.
- Initiation of scheme to launch a system under which PAN shall be instantly allotted online on the basis of Aadhaar without any requirement for filling up of detailed application form.
- Health cess to be imposed on imports of medical equipment. These proceeds to be used for creating infrastructure for health services in the aspirational districts.
- Mandate the CBDT to adopt a 'Taxpayers' Charter' with the objective of enhancing the efficiency of the delivery system of the Income Tax Department.
- No Dispute but Trust Scheme - '*Vivad Se Vishwas*' Scheme to reduce litigations in direct taxes.
- Simplified GST return shall be implemented from April 1, 2020. Refund process to be fully automated. Dynamic QR-code is proposed for consumer invoices. A system of cash reward is envisaged to incentivise customers to seek invoice.

**Annex II**

| Annual Flow of Funds Relating to NSSF (₹ crore) | | | | |
|---|---|---|---|---|
| **Year** | **Receipts** | **Disbursements** | **Net Accrual** | **Outstanding** |
| 1 | 2 | 3 | 4 (2-3) | 5 |
| 2015-16 | 4,45,974 | 3,39,036 | 1,06,938 | 10,15,225 |
| 2016-17 | 5,16,000 | 3,98,734 | 1,17,266 | 11,32,490 |
| 2017-18 | 5,92,710 | 4,35,596 | 1,57,114 | 12,89,604 |
| 2018-19 | 6,80,021 | 4,68,018 | 2,12,004 | 15,01,608 |
| 2019-20 RE | 8,28,520 | 5,51,932 | 2,76,588 | 17,78,196 |
| 2020-21 BE | 8,69,946 | 5,74,009 | 2,95,936 | 20,74,132 |

**Source:** Union Budget Documents.

**Annex III: Criteria for *Inter-se* Distribution of Taxes among States**

| **Criteria** | **FC-XIV** | | **FC-XV** | |
|---|---|---|---|---|
| | **Weightage** | **Formula (share of state i)** | **Weightage** | **Formula (share of state i)** |
| Population - 1971 | 17.5 | $POP_{i1971}/\sum_{j=1}^{29} POP_j 1971$ | | |
| Population - 2011 | 10 | $POP_{i2011}/\sum_{j=1}^{29} POP_j 2011$ | 15 | $POP_{i2011}/\sum_{j=1}^{29} POP_j 2011$ |
| Demographic Performance (DP) | | | 12.5 | $DP_i/\sum_{j=1}^{28} \mathrm{DP}_j$ $[\mathrm{DP}_i = POP_{i1971/} TFR_i]$ |
| Forest and Ecology | 7.5 | $F_i/\sum_{j=1}^{29} F_j$ $F_i$ = *very dense forest + moderately dense forest* | 10 | $F_i/\sum_{j=1}^{28} F_j$ $F_i$ = *very dense forest + moderately dense forest* |
| Income Distance | 50 | $D_i/\sum_{j=1}^{29} D_j$ $D_i$ = *distance in per capita income of ith state from third highest state * $POP_{i1971}$* | 45 | $D_i/\sum_{j=1}^{28} D_j$ $D_i$ = *distance in per capita income of ith state from third highest state * $POP_{i2011}$* |
| Area | 15 | $Area_i/\sum_{j=1}^{29} Area_j$ | 15 | $Area_i/\sum_{j=1}^{28} Area_j$ |
| Tax Effort | | | 2.5 | $TE_i/\sum_{j=1}^{28} TE_j$ *[TE = tax ratio * Population]* |
| **Total** | **100** | | **100** | |

**Source:** FC IV Report, FC XV Interim Report.

# CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

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

## No. 1: Select Economic Indicators

| Item | 2018-19 | 2018-19 | | 2019-20 | |
|---|---|---|---|---|---|
| | | Q2 | Q3 | Q2 | Q3 |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Real Sector (% Change)** | | | | | |
| 1.1 GVA at Basic Prices | 6.0 | 6.1 | 5.6 | 4.8 | 4.5 |
| 1.1.1 Agriculture | 2.4 | 2.5 | 2.0 | 3.1 | 3.5 |
| 1.1.2 Industry | 4.5 | 4.7 | 4.4 | 0.1 | 0.1 |
| 1.1.3 Services | 7.5 | 7.2 | 7.3 | 6.8 | 6.4 |
| 1.1a Final Consumption Expenditure | 7.6 | 9.1 | 7.0 | 7.0 | 6.7 |
| 1.1b Gross Fixed Capital Formation | 9.8 | 11.5 | 11.4 | -4.1 | -5.2 |
| | 2018-19 | 2019 | | 2020 | |
| | | Jan. | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 |
| 1.2 Index of Industrial Production | 3.8 | 1.6 | 0.2 | 2.0 | - |
| **2 Money and Banking (% Change)** | | | | | |
| 2.1 Scheduled Commercial Banks | | | | | |
| 2.1.1 Deposits | 10.0 | 9.6 | 10.0 | 9.9 | 9.0 |
| 2.1.2 Credit | 13.3 | 14.8 | 14.7 | 7.2 | 6.1 |
| 2.1.2.1 Non-food Credit | 13.4 | 14.7 | 14.6 | 7.1 | 6.1 |
| 2.1.3 Investment in Govt. Securities | 1.9 | -0.1 | -1.2 | 11.2 | 10.6 |
| 2.2 Money Stock Measures | | | | | |
| 2.2.1 Reserve Money (M0) | 14.5 | 16.2 | 16.5 | 12.3 | 11.3 |
| 2.2.2 Broad Money (M3) | 10.5 | 10.4 | 10.8 | 11.2 | 10.2 |
| **3 Ratios (%)** | | | | | |
| 3.1 Cash Reserve Ratio | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| 3.2 Statutory Liquidity Ratio | 19.25 | 19.25 | 19.25 | 18.25 | 18.25 |
| 3.3 Cash-Deposit Ratio | 5.1 | 4.7 | 4.7 | 4.7 | 4.7 |
| 3.4 Credit-Deposit Ratio | 77.7 | 78.0 | 78.1 | 75.8 | 75.8 |
| 3.5 Incremental Credit-Deposit Ratio | 99.9 | 127.7 | 123.5 | 44.4 | 44.3 |
| 3.6 Investment-Deposit Ratio | 26.9 | 27.9 | 27.6 | 28.0 | 28.3 |
| 3.7 Incremental Investment-Deposit Ratio | 5.4 | 4.4 | 3.6 | 46.9 | 51.8 |
| **4 Interest Rates (%)** | | | | | |
| 4.1 Policy Repo Rate | 6.25 | 6.50 | 6.25 | 5.15 | 5.15 |
| 4.2 Reverse Repo Rate | 6.00 | 6.25 | 6.00 | 4.90 | 4.90 |
| 4.3 Marginal Standing Facility (MSF) Rate | 6.50 | 6.75 | 6.50 | 5.40 | 5.40 |
| 4.4 Bank Rate | 6.50 | 6.75 | 6.50 | 5.40 | 5.40 |
| 4.5 Base Rate | 8.95/9.40 | 8.95/9.45 | 8.95/9.45 | 8.45/9.40 | 8.45/9.40 |
| 4.6 MCLR (Overnight) | 8.05/8.55 | 8.15/8.55 | 8.15/8.55 | 7.50/7.95 | 7.50/7.90 |
| 4.7 Term Deposit Rate >1 Year | 6.25/7.50 | 6.25/7.50 | 6.25/7.50 | 6.10/6.40 | 6.00/6.40 |
| 4.8 Savings Deposit Rate | 3.50/4.00 | 3.50/4.00 | 3.50/4.00 | 3.25/3.50 | 3.25/3.50 |
| 4.9 Call Money Rate (Weighted Average) | 6.35 | 6.43 | 6.29 | 4.94 | 4.96 |
| 4.10 91-Day Treasury Bill (Primary) Yield | 6.31 | 6.56 | 6.40 | 5.13 | 5.08 |
| 4.11 182-Day Treasury Bill (Primary) Yield | 6.35 | 6.69 | 6.48 | 5.24 | 5.18 |
| 4.12 364-Day Treasury Bill (Primary) Yield | 6.39 | 6.78 | 6.55 | 5.29 | 5.16 |
| 4.13 10-Year G-Sec Par Yield (FBIL) | 7.34 | 7.30 | 7.41 | 6.86 | 6.65 |
| **5 Reference Rate and Forward Premia** | | | | | |
| 5.1 INR-US$ Spot Rate (Rs. Per Foreign Currency) | 69.17 | 71.11 | 71.22 | 71.51 | 72.19 |
| 5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency) | 77.70 | 80.50 | 80.75 | 78.82 | 79.44 |
| 5.3 Forward Premia of US$ 1-month (%) | 6.07 | 4.05 | 4.13 | 3.52 | 3.82 |
| 3-month (%) | 4.80 | 4.22 | 4.38 | 4.25 | 3.93 |
| 6-month (%) | 4.16 | 4.11 | 4.16 | 4.21 | 3.91 |
| **6 Inflation (%)** | | | | | |
| 6.1 All India Consumer Price Index | 3.4 | 2.0 | 2.6 | 7.6 | 6.6 |
| 6.2 Consumer Price Index for Industrial Workers | 5.4 | 6.6 | 7.0 | 7.5 | 6.8 |
| 6.3 Wholesale Price Index | 4.3 | 2.8 | 2.9 | 3.1 | 2.3 |
| 6.3.1 Primary Articles | 2.7 | 3.0 | 4.8 | 10.0 | 6.7 |
| 6.3.2 Fuel and Power | 11.5 | 1.8 | 1.7 | 3.4 | 3.4 |
| 6.3.3 Manufactured Products | 3.7 | 2.8 | 2.3 | 0.3 | 0.4 |
| **7 Foreign Trade (% Change)** | | | | | |
| 7.1 Imports | 10.4 | 1.9 | -3.4 | -0.7 | 2.5 |
| 7.2 Exports | 8.7 | 3.9 | 3.2 | -1.6 | 2.9 |

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.

# Reserve Bank of India

## No. 2: RBI - Liabilities and Assets *

(₹ Crore)

| Item | As on the Last Friday/ Friday | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2019-20 | 2019 | 2020 | | | | |
| | | Mar. | Feb. 28 | Mar. 6 | Mar. 13 | Mar. 20 | Mar. 27 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **1 Issue Department** | | | | | | | |
| **1.1 Liabilities** | | | | | | | |
| 1.1.1 Notes in Circulation | 2412993 | 2113764 | 2321924 | 2347848 | 2373668 | 2383278 | 2412993 |
| 1.1.2 Notes held in Banking Department | 10 | 11 | 13 | 14 | 13 | 11 | 10 |
| **1.1/1.2 Total Liabilities (Total Notes Issued) or Assets** | **2413003** | **2113775** | **2321937** | **2347862** | **2373681** | **2383289** | **2413003** |
| **1.2 Assets** | | | | | | | |
| 1.2.1 Gold Coin and Bullion | 103439 | 79481 | 100833 | 103496 | 98308 | 93661 | 103439 |
| 1.2.2 Foreign Securities | 2308718 | 2033559 | 2220225 | 2243498 | 2274517 | 2288781 | 2308718 |
| 1.2.3 Rupee Coin | 846 | 735 | 879 | 868 | 856 | 847 | 846 |
| 1.2.4 Government of India Rupee Securities | – | – | – | – | – | – | – |
| **2 Banking Department** | | | | | | | |
| **2.1 Liabilities** | | | | | | | |
| 2.1.1 Deposits | 1187409 | 806012 | 990618 | 1028839 | 1011050 | 1027741 | 1187409 |
| 2.1.1.1 Central Government | 100 | 101 | 100 | 101 | 101 | 101 | 100 |
| 2.1.1.2 Market Stabilisation Scheme | | – | – | | | | |
| 2.1.1.3 State Governments | 43 | 43 | 42 | 42 | 42 | 42 | 43 |
| 2.1.1.4 Scheduled Commercial Banks | 536186 | 565707 | 550033 | 570358 | 551020 | 591163 | 536186 |
| 2.1.1.5 Scheduled State Co-operative Banks | 7603 | 4197 | 6739 | 6843 | 6781 | 6901 | 7603 |
| 2.1.1.6 Non-Scheduled State Co-operative Banks | 3445 | 3494 | 3132 | 3151 | 3046 | 3165 | 3445 |
| 2.1.1.7 Other Banks | 32641 | 32036 | 31600 | 31701 | 31982 | 32110 | 32641 |
| 2.1.1.8 Others | 605100 | 199734 | 398150 | 414318 | 414615 | 391944 | 605100 |
| 2.1.1.9 Financial Institution Outside India | 2291 | 700 | 822 | 2325 | 3463 | 2315 | 2291 |
| 2.1.2 Other Liabilities | 1350333 | 1087686 | 1219283 | 1347892 | 1314453 | 1300857 | 1350333 |
| **2.1/2.2 Total Liabilities or Assets** | **2537742** | **1893698** | **2209901** | **2376731** | **2325503** | **2328598** | **2537742** |
| **2.2 Assets** | | | | | | | |
| 2.2.1 Notes and Coins | 10 | 11 | 13 | 14 | 13 | 11 | 10 |
| 2.2.2 Balances held Abroad | 1006357 | 646640 | 1022250 | 1108603 | 1061825 | 1020444 | 1006357 |
| 2.2.3 Loans and Advances | | | | | | | |
| 2.2.3.1 Central Government | 50477 | – | 5081 | 32976 | 20553 | – | 50477 |
| 2.2.3.2 State Governments | 1967 | 10 | 2882 | 7239 | 6154 | 2339 | 1967 |
| 2.2.3.3 Scheduled Commercial Banks | 285623 | 180688 | 54186 | 84559 | 105035 | 175754 | 285623 |
| 2.2.3.4 Scheduled State Co-op.Banks | – | – | – | – | – | – | – |
| 2.2.3.5 Industrial Dev. Bank of India | – | – | – | – | – | – | – |
| 2.2.3.6 NABARD | – | – | – | – | – | – | – |
| 2.2.3.7 EXIM Bank | – | – | – | – | – | – | – |
| 2.2.3.8 Others | 10064 | 13463 | 1815 | 1815 | 1815 | 2385 | 10064 |
| 2.2.3.9 Financial Institution Outside India | 2300 | 700 | 10336 | 9090 | 2269 | 2301 | 2300 |
| 2.2.4 Bills Purchased and Discounted | | | | | | | |
| 2.2.4.1 Internal | – | – | – | – | – | – | – |
| 2.2.4.2 Government Treasury Bills | – | – | – | – | – | – | – |
| 2.2.5 Investments | 1042951 | 923080 | 983802 | 998435 | 998469 | 999964 | 1042951 |
| 2.2.6 Other Assets | 137993 | 129106 | 129535 | 134000 | 129370 | 125400 | 137993 |
| 2.2.6.1 Gold | 127644 | 87169 | 120566 | 125071 | 119743 | 115577 | 127644 |

* Data are provisional

## No. 3: Liquidity Operations by RBI

(₹ Crore)

| Date | Liquidity Adjustment Facility | | | | MSF | Standing Liquidity Facilities | Market Stabilisation Scheme | OMO (Outright) | | Long Term Repo Operations | Net Injection (+)/ Absorption (-) (1+3+5+6+9+10-2-4-7-8) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Repo | Reverse Repo | Variable Rate Repo | Variable Rate Reverse Repo | | | | Sale | Purchase | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Feb. 1, 2020 | 1505 | 21197 | - | - | 4765 | – | - | - | - | - | -14927 |
| Feb. 2, 2020 | - | 16 | - | - | 0 | – | - | - | - | - | -16 |
| Feb. 3, 2020 | 3099 | 72443 | - | 210011 | 4666 | – | - | - | - | - | -274689 |
| Feb. 4, 2020 | 3309 | 72421 | 5020 | 175010 | 3750 | – | - | - | - | - | -235352 |
| Feb. 5, 2020 | 2939 | 42280 | - | 190013 | 2802 | – | - | - | - | - | -226552 |
| Feb. 6, 2020 | 2934 | 54744 | - | 190027 | 4290 | – | - | - | - | - | -237547 |
| Feb. 7, 2020 | 2944 | 68933 | 6000 | 140016 | 3200 | – | - | - | - | - | -196805 |
| Feb. 8, 2020 | - | 20 | - | - | 200 | – | - | - | - | - | 180 |
| Feb. 9, 2020 | - | 674 | - | - | 150 | – | - | - | - | - | -524 |
| Feb. 10, 2020 | 3080 | 59552 | - | 140026 | 4280 | – | - | - | - | - | -192218 |
| Feb. 11, 2020 | 2150 | 43473 | - | 150020 | 1530 | 274 | - | - | - | - | -189539 |
| Feb. 12, 2020 | 2135 | 55624 | - | 120016 | 4080 | – | - | - | - | - | -169425 |
| Feb. 13, 2020 | 1895 | 69683 | - | 140016 | 3310 | – | - | - | - | - | -204494 |
| Feb. 14, 2020 | - | 77970 | - | 112429 | 4426 | – | - | - | - | - | -185973 |
| Feb. 15, 2020 | - | 18615 | - | - | 860 | – | - | - | - | - | -17755 |
| Feb. 16, 2020 | - | 13 | - | - | - | – | - | - | - | - | -13 |
| Feb. 17, 2020 | - | 92753 | - | - | 2950 | 317 | - | - | - | 25035 | -64451 |
| Feb. 18, 2020 | - | 64590 | - | - | 2715 | -190 | - | - | - | - | -62065 |
| Feb. 19, 2020 | - | 11331 | - | - | 1255 | – | - | - | - | - | -10076 |
| Feb. 20, 2020 | - | 39983 | - | - | 4065 | 190 | - | - | - | - | -35728 |
| Feb. 21, 2020 | - | 10582 | - | - | 8109 | – | - | - | - | - | -2473 |
| Feb. 22, 2020 | - | 30 | - | - | 60 | – | - | - | - | - | 30 |
| Feb. 23, 2020 | - | 1822 | - | - | - | – | - | - | - | - | -1822 |
| Feb. 24, 2020 | - | 59168 | - | - | 3177 | – | - | - | - | 25021 | -30970 |
| Feb. 25, 2020 | - | 136776 | - | - | 3300 | – | - | - | - | - | -133476 |
| Feb. 26, 2020 | - | 140443 | - | - | 3080 | -432 | - | - | - | - | -137795 |
| Feb. 27, 2020 | - | 156264 | - | - | 4534 | -217 | - | - | - | - | -151947 |
| Feb. 28, 2020 | - | 131050 | - | 162725 | 4130 | – | - | - | - | - | -289645 |
| Feb. 29, 2020 | - | 28429 | - | - | 6467 | – | - | - | - | - | -21962 |

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

**i) Operations in onshore / offshore OTC segment**

| Item | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|
| | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 |
| 1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2) | -15377 | 825 | 10266 | 9144 |
| 1.1 Purchase (+) | 40804 | 2086 | 11486 | 10604 |
| 1.2 Sale (–) | 56181 | 1261 | 1220 | 1460 |
| 2 ₹ equivalent at contract rate (₹ Crores) | -111946 | 5404 | 72793 | 64883 |
| 3 Cumulative (over end-March) (US $ Million) | -15377 | -24785 | 40007 | 49151 |
| (₹ Crores) | -111945 | -176910 | 278096 | 342979 |
| 4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US $ Million) | -13774 | -4372 | -1215 | -2295 |

**ii) Operations in currency futures segment**

| Item | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|
| | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 |
| 1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2) | 0 | 0 | 0 | 0 |
| 1.1 Purchase (+) | 13935 | 233 | 400 | 0 |
| 1.2 Sale (–) | 13935 | 233 | 400 | 0 |
| 2 Outstanding Net Currency Futures Sales (–)/ Purchase (+) at the end of month (US $ Million) | 0 | -300 | 0 | 0 |

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

| Item | As on February 29, 2020 | | |
|---|---|---|---|
| | Long (+) | Short (-) | Net (1-2) |
| | 1 | 2 | 3 |
| 1. Upto 1 month | 1854 | 0 | 1854 |
| 2. More than 1 month and upto 3 months | 519 | 0 | 519 |
| 3. More than 3 months and upto 1 year | 7057 | 1705 | 5352 |
| 4. More than 1 year | 0 | 10020 | -10020 |
| **Total (1+2+3+4)** | **9430** | **11725** | **-2295** |

## No. 5: RBI's Standing Facilities

(₹ Crore)

| Item | As on the Last Reporting Friday | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2019-20 | 2019 | | | | 2020 | | |
| | | Mar. 29 | Oct. 25 | Nov. 22 | Dec. 20 | Jan. 31 | Feb. 28 | Mar. 27 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 MSF | 1262 | 12882 | 4373 | 3231 | 3856 | 2340 | 4130 | 1262 |
| 2 Export Credit Refinance for Scheduled Banks | | | | | | | | |
| 2.1 Limit | - | – | - | - | - | - | - | - |
| 2.2 Outstanding | - | – | - | - | - | - | - | - |
| 3 Liquidity Facility for PDs | | | | | | | | |
| 3.1 Limit | 10000 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 10000 |
| 3.2 Outstanding | 4782 | 2678 | 1884 | 1604 | 1615 | 1872 | 1815 | 4782 |
| 4 Others | | | | | | | | |
| 4.1 Limit | - | – | - | - | - | - | - | - |
| 4.2 Outstanding | - | – | - | - | - | - | - | - |
| 5 Total Outstanding (1+2.2+3.2+4.2) | 6044 | 15560 | 6257 | 4835 | 5471 | 4212 | 5945 | 6044 |

# Money and Banking

## No. 6: Money Stock Measures

(₹ Crore)

| Item | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | |
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4) | 2052209 | 2029451 | 2218775 | 2257855 | 2255426 |
| 1.1 Notes in Circulation | 2110883 | 2079892 | 2284695 | 2320416 | 2321924 |
| 1.2 Circulation of Rupee Coin | 25144 | 25080 | 25537 | 25537 | 25572 |
| 1.3 Circulation of Small Coins | 743 | 743 | 743 | 743 | 743 |
| 1.4 Cash on Hand with Banks | 84561 | 76265 | 92199 | 88840 | 92812 |
| 2 Deposit Money of the Public | 1658254 | 1427467 | 1588103 | 1514641 | 1613427 |
| 2.1 Demand Deposits with Banks | 1626512 | 1401265 | 1554247 | 1481214 | 1578869 |
| 2.2 'Other' Deposits with Reserve Bank | 31742 | 26202 | 33856 | 33427 | 34558 |
| **3 $M_1$ (1 + 2)** | **3710464** | **3456918** | **3806879** | **3772496** | **3868854** |
| 4 Post Office Saving Bank Deposits | 140599 | 134863 | 141786 | 141786 | 141786 |
| **5 $M_2$ (3 + 4)** | **3851063** | **3591781** | **3948665** | **3914282** | **4010640** |
| 6 Time Deposits with Banks | 11721603 | 11482901 | 12611745 | 12587868 | 12590123 |
| **7 $M_3$ (3 + 6)** | **15432067** | **14939818** | **16418624** | **16360364** | **16458977** |
| 8 Total Post Office Deposits | 367287 | 357952 | 409246 | 409246 | 409246 |
| **9 $M_4$ (7 + 8)** | **15799354** | **15297770** | **16827870** | **16769610** | **16868223** |

## No. 7: Sources of Money Stock ($M_3$)

(₹ Crore)

| Sources | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | |
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Net Bank Credit to Government** | **4388490** | **4433410** | **5014594** | **5004051** | **4983904** |
| 1.1 RBI's net credit to Government (1.1.1–1.1.2) | 801951 | 873047 | 1057037 | 997547 | 990539 |
| 1.1.1 Claims on Government | 929686 | 875548 | 1057180 | 997690 | 990681 |
| 1.1.1.1 Central Government | 928166 | 871456 | 1055970 | 989289 | 987799 |
| 1.1.1.2 State Governments | 1520 | 4092 | 1210 | 8401 | 2882 |
| 1.1.2 Government deposits with RBI | 127735 | 2501 | 143 | 143 | 142 |
| 1.1.2.1 Central Government | 127693 | 2459 | 101 | 101 | 100 |
| 1.1.2.2 State Governments | 42 | 42 | 42 | 42 | 42 |
| 1.2 Other Banks' Credit to Government | 3586539 | 3560363 | 3957557 | 4006504 | 3993365 |
| **2 Bank Credit to Commercial Sector** | **10382719** | **10038752** | **10756819** | **10695015** | **10759445** |
| 2.1 RBI's credit to commercial sector | 15363 | 8068 | 6380 | 4110 | 3779 |
| 2.2 Other banks' credit to commercial sector | 10367356 | 10030684 | 10750439 | 10690905 | 10755666 |
| 2.2.1 Bank credit by commercial banks | 9771722 | 9440366 | 10105180 | 10042583 | 10104866 |
| 2.2.2 Bank credit by co-operative banks | 585931 | 581722 | 632356 | 632404 | 633477 |
| 2.2.3 Investments by commercial and co-operative banks in other securities | 9703 | 8596 | 12903 | 15918 | 17323 |
| **3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)** | **3070841** | **2964287** | **3559574** | **3604871** | **3681669** |
| 3.1 RBI's net foreign exchange assets (3.1.1–3.1.2) | 2848587 | 2835016 | 3351074 | 3396371 | 3473169 |
| 3.1.1 Gross foreign assets | 2848800 | 2835241 | 3351293 | 3396590 | 3473388 |
| 3.1.2 Foreign liabilities | 213 | 225 | 219 | 219 | 219 |
| 3.2 Other banks' net foreign exchange assets | 222254 | 129271 | 208500 | 208500 | 208500 |
| **4 Government's Currency Liabilities to the Public** | **25887** | **25823** | **26280** | **26280** | **26315** |
| **5 Banking Sector's Net Non-monetary Liabilities** | **2435870** | **2522454** | **2938643** | **2969853** | **2992356** |
| 5.1 Net non-monetary liabilities of RBI | 1058795 | 1146678 | 1158386 | 1152770 | 1214879 |
| 5.2 Net non-monetary liabilities of other banks (residual) | 1377075 | 1375776 | 1780257 | 1817083 | 1777477 |
| **$M_3$ (1+2+3+4–5)** | **15432067** | **14939818** | **16418624** | **16360364** | **16458977** |

## No. 8: Monetary Survey

(₹ Crore)

| Item | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | |
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| **Monetary Aggregates** | | | | | |
| $NM_1$ (1.1 + 1.2.1+1.3) | 3710464 | 3456918 | 3806879 | 3772496 | 3868854 |
| $NM_2$ ($NM_1$ + 1.2.2.1) | 8911512 | 8554285 | 9402185 | 9357114 | 9454268 |
| $NM_3$ ($NM_2$ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5) | 15646602 | 15145553 | 16552195 | 16492262 | 16589311 |
| **1 Components** | | | | | |
| 1.1 Currency with the Public | 2052209 | 2029451 | 2218775 | 2257855 | 2255426 |
| 1.2 Aggregate Deposits of Residents | 13184397 | 12728747 | 13988261 | 13891476 | 13990902 |
| 1.2.1 Demand Deposits | 1626512 | 1401265 | 1554247 | 1481214 | 1578869 |
| 1.2.2 Time Deposits of Residents | 11557885 | 11327482 | 12434014 | 12410262 | 12412032 |
| 1.2.2.1 Short-term Time Deposits | 5201048 | 5097367 | 5595306 | 5584618 | 5585414 |
| 1.2.2.1.1 Certificates of Deposit (CDs) | 284993 | 217306 | 176959 | 181741 | 181028 |
| 1.2.2.2 Long-term Time Deposits | 6356837 | 6230115 | 6838708 | 6825644 | 6826618 |
| 1.3 'Other' Deposits with RBI | 31742 | 26202 | 33856 | 33427 | 34558 |
| 1.4 Call/Term Funding from Financial Institutions | 378254 | 361153 | 311303 | 309504 | 308425 |
| **2 Sources** | | | | | |
| 2.1 Domestic Credit | 15659336 | 15342465 | 16647197 | 16578426 | 16620023 |
| 2.1.1 Net Bank Credit to the Government | 4388490 | 4433410 | 5014594 | 5004051 | 4983904 |
| 2.1.1.1 Net RBI credit to the Government | 801951 | 873047 | 1057037 | 997547 | 990539 |
| 2.1.1.2 Credit to the Government by the Banking System | 3586539 | 3560363 | 3957557 | 4006504 | 3993365 |
| 2.1.2 Bank Credit to the Commercial Sector | 11270846 | 10909055 | 11632603 | 11574375 | 11636120 |
| 2.1.2.1 RBI Credit to the Commercial Sector | 15363 | 8068 | 6380 | 4110 | 3779 |
| 2.1.2.2 Credit to the Commercial Sector by the Banking System | 11255483 | 10900987 | 11626223 | 11570265 | 11632341 |
| 2.1.2.2.1 Other Investments (Non-SLR Securities) | 879849 | 858172 | 865080 | 866242 | 866695 |
| 2.2 Government's Currency Liabilities to the Public | 25887 | 25823 | 26280 | 26280 | 26315 |
| 2.3 Net Foreign Exchange Assets of the Banking Sector | 2801726 | 2755358 | 3307262 | 3341921 | 3438198 |
| 2.3.1 Net Foreign Exchange Assets of the RBI | 2848587 | 2835016 | 3351074 | 3396371 | 3473169 |
| 2.3.2 Net Foreign Currency Assets of the Banking System | -46861 | -79658 | -43812 | -54450 | -34971 |
| 2.4 Capital Account | 2346743 | 2387793 | 2497037 | 2497836 | 2545604 |
| 2.5 Other items (net) | 493605 | 590301 | 931507 | 956529 | 949621 |

## No. 9: Liquidity Aggregates

(₹ Crore)

| Aggregates | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|
| | | Feb. | Dec. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 |
| **1 $NM_3$** | **15646602** | **15145553** | **16203315** | **16552195** | **16589311** |
| 2 Postal Deposits | 367287 | 357952 | 409246 | 409246 | 409246 |
| **3 $L_1$ ( 1 + 2)** | **16013889** | **15503505** | **16612561** | **16961441** | **16998557** |
| 4 Liabilities of Financial Institutions | 2932 | 2932 | 54287 | 56400 | 57964 |
| 4.1 Term Money Borrowings | 2656 | 2656 | 3078 | 2976 | 2851 |
| 4.2 Certificates of Deposit | 31 | 31 | 46887 | 49631 | 51556 |
| 4.3 Term Deposits | 245 | 245 | 4322 | 3793 | 3557 |
| **5 $L_2$ (3 + 4)** | **16016821** | **15506437** | **16666848** | **17017841** | **17056522** |
| 6 Public Deposits with Non-Banking Financial Companies | 31905 | .. | 31905 | .. | .. |
| **7 $L_3$ (5 + 6)** | **16048726** | .. | **16698753** | .. | .. |

**Note :** Since November 2019, updated data on liabilities of financial institutions have been incorporated in this table , and hence, are not comparable with past data

## No. 10: Reserve Bank of India Survey

(₹ Crore)

| Item | Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays | | | | |
|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | |
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Components** | | | | | |
| 1.1 Currency in Circulation | 2136770 | 2105715 | 2310975 | 2346696 | 2348239 |
| 1.2 Bankers' Deposits with the RBI | 601969 | 526238 | 592254 | 597724 | 591504 |
| 1.2.1 Scheduled Commercial Banks | 558496 | 491843 | 550704 | 556182 | 550033 |
| 1.3 'Other' Deposits with the RBI | 31742 | 26202 | 33856 | 33427 | 34558 |
| Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5) | 2770481 | 2658155 | 2937085 | 2977847 | 2974301 |
| **2 Sources** | | | | | |
| 2.1 RBI's Domestic Credit | 954802 | 943994 | 718117 | 707966 | 689696 |
| 2.1.1 Net RBI credit to the Government | 801951 | 873047 | 1057037 | 997547 | 990539 |
| 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) | 800473 | 868997 | 1055869 | 989188 | 987699 |
| 2.1.1.1.1 Loans and Advances to the Central Government | – | – | 73545 | 6817 | 5081 |
| 2.1.1.1.2 Investments in Treasury Bills | – | – | – | – | – |
| 2.1.1.1.3 Investments in dated Government Securities | 927427 | 870671 | 981706 | 981772 | 981839 |
| 2.1.1.1.3.1 Central Government Securities | 927427 | 870671 | 981706 | 981772 | 981839 |
| 2.1.1.1.4 Rupee Coins | 739 | 785 | 719 | 700 | 879 |
| 2.1.1.1.5 Deposits of the Central Government | 127693 | 2459 | 101 | 101 | 100 |
| 2.1.1.2 Net RBI credit to State Governments | 1478 | 4050 | 1168 | 8359 | 2840 |
| 2.1.2 RBI's Claims on Banks | 137488 | 62879 | -345300 | -293691 | -304622 |
| 2.1.2.1 Loans and Advances to Scheduled Commercial Banks | 137488 | 62879 | -345300 | -293691 | -304622 |
| 2.1.3 RBI's Credit to Commercial Sector | 15363 | 8068 | 6380 | 4110 | 3779 |
| 2.1.3.1 Loans and Advances to Primary Dealers | 2678 | 1794 | 1872 | 2146 | 1815 |
| 2.1.3.2 Loans and Advances to NABARD | – | – | – | – | – |
| 2.2 Government's Currency Liabilities to the Public | 25887 | 25823 | 26280 | 26280 | 26315 |
| 2.3 Net Foreign Exchange Assets of the RBI | 2848587 | 2835016 | 3351074 | 3396371 | 3473169 |
| 2.3.1 Gold | 159585 | 161705 | 206919 | 207871 | 221399 |
| 2.3.2 Foreign Currency Assets | 2689019 | 2673328 | 3144172 | 3188517 | 3251787 |
| 2.4 Capital Account | 970265 | 1052936 | 1010660 | 1003528 | 1047453 |
| 2.5 Other Items (net) | 88530 | 93742 | 147726 | 149242 | 167426 |

## No. 11: Reserve Money - Components and Sources

(₹ Crore)

| Item | 2018-19 | Outstanding as on March 31/ last Fridays of the month/ Fridays | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | | | | |
| | | Mar. 1 | Jan. 31 | Feb. 7 | Feb. 14 | Feb. 21 | Feb. 28 |
| | 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) | 2770481 | 2665502 | 2937085 | 2944049 | 2977847 | 2977471 | 2974301 |
| **1 Components** | | | | | | | |
| 1.1 Currency in Circulation | 2136770 | 2106053 | 2310975 | 2337525 | 2346696 | 2357702 | 2348239 |
| 1.2 Bankers' Deposits with RBI | 601969 | 531841 | 592254 | 573077 | 597724 | 586330 | 591504 |
| 1.3 'Other' Deposits with RBI | 31742 | 27608 | 33856 | 33447 | 33427 | 33439 | 34558 |
| **2 Sources** | | | | | | | |
| 2.1 Net Reserve Bank Credit to Government | 801951 | 914062 | 1057037 | 1015557 | 997547 | 934452 | 990539 |
| 2.2 Reserve Bank Credit to Banks | 137488 | 18846 | -345300 | -319642 | -293691 | -233023 | -304622 |
| 2.3 Reserve Bank Credit to Commercial Sector | 15363 | 7869 | 6380 | 6380 | 4110 | 4427 | 3779 |
| 2.4 Net Foreign Exchange Assets of RBI | 2848587 | 2845742 | 3351074 | 3369143 | 3396371 | 3408531 | 3473169 |
| 2.5 Government's Currency Liabilities to the Public | 25887 | 25841 | 26280 | 26280 | 26280 | 26280 | 26315 |
| 2.6 Net Non- Monetary Liabilities of RBI | 1058795 | 1146858 | 1158386 | 1153669 | 1152770 | 1163196 | 1214879 |

## No. 12: Commercial Bank Survey

(₹ Crore)

| Item | Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month | | | | |
|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | |
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Components** | | | | | |
| 1.1 Aggregate Deposits of Residents | 12410053 | 11964048 | 13146270 | 13048689 | 13148127 |
| 1.1.1 Demand Deposits | 1511287 | 1287716 | 1436076 | 1363045 | 1459926 |
| 1.1.2 Time Deposits of Residents | 10898766 | 10676332 | 11710195 | 11685644 | 11688201 |
| 1.1.2.1 Short-term Time Deposits | 4904445 | 4804349 | 5269588 | 5258540 | 5259691 |
| 1.1.2.1.1 Certificates of Deposits (CDs) | 284993 | 217306 | 176959 | 181741 | 181028 |
| 1.1.2.2 Long-term Time Deposits | 5994321 | 5871983 | 6440607 | 6427104 | 6428511 |
| 1.2 Call/Term Funding from Financial Institutions | 378254 | 361153 | 311303 | 309504 | 308425 |
| **2 Sources** | | | | | |
| 2.1 Domestic Credit | 14032206 | 13656825 | 14707970 | 14702800 | 14751128 |
| 2.1.1 Credit to the Government | 3379001 | 3353658 | 3730741 | 3781730 | 3769059 |
| 2.1.2 Credit to the Commercial Sector | 10653205 | 10303167 | 10977229 | 10921070 | 10982069 |
| 2.1.2.1 Bank Credit | 9771722 | 9440366 | 10105180 | 10042583 | 10104866 |
| 2.1.2.1.1 Non-food Credit | 9730112 | 9378626 | 10026280 | 9969259 | 10039270 |
| 2.1.2.2 Net Credit to Primary Dealers | 8542 | 12395 | 10967 | 13381 | 10242 |
| 2.1.2.3 Investments in Other Approved Securities | 2055 | 1197 | 4965 | 7826 | 9227 |
| 2.1.2.4 Other Investments (in non-SLR Securities) | 870886 | 849209 | 856117 | 857279 | 857733 |
| 2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3) | -46861 | -79658 | -43812 | -54450 | -34971 |
| 2.2.1 Foreign Currency Assets | 262383 | 209924 | 242206 | 231596 | 250745 |
| 2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits | 163719 | 155418 | 177731 | 177606 | 178091 |
| 2.2.3 Overseas Foreign Currency Borrowings | 145526 | 134164 | 108287 | 108440 | 107625 |
| 2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3) | 538104 | 495597 | 977850 | 928470 | 937016 |
| 2.3.1 Balances with the RBI | 565707 | 491843 | 550704 | 556182 | 550033 |
| 2.3.2 Cash in Hand | 74877 | 66633 | 81846 | 78597 | 82361 |
| 2.3.3 Loans and Advances from the RBI | 102480 | 62879 | -345300 | -293691 | -304622 |
| 2.4 Capital Account | 1352307 | 1310686 | 1462206 | 1470137 | 1473980 |
| 2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2) | 382835 | 436879 | 722229 | 748490 | 722640 |
| 2.5.1 Other Demand and Time Liabilities (net of 2.2.3) | 398120 | 382532 | 435464 | 446706 | 476507 |
| 2.5.2 Net Inter-Bank Liabilities (other than to PDs) | -47846 | -52455 | 54049 | 59841 | 72117 |

## No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

| Item | As on March 29, 2019 | 2019 | 2020 | | |
|---|---|---|---|---|---|
| | | Feb. 15 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 SLR Securities | 3381056 | 3354855 | 3735514 | 3789557 | 3778286 |
| 2 Commercial Paper | 90362 | 96474 | 94533 | 95824 | 99608 |
| 3 Shares issued by | | | | | |
| 3.1 PSUs | 11535 | 11582 | 12172 | 13736 | 13690 |
| 3.2 Private Corporate Sector | 69592 | 72073 | 67153 | 66482 | 66287 |
| 3.3 Others | 6379 | 6206 | 5558 | 5769 | 5766 |
| 4 Bonds/Debentures issued by | | | | | |
| 4.1 PSUs | 134819 | 119458 | 128910 | 123720 | 119187 |
| 4.2 Private Corporate Sector | 268783 | 253407 | 230608 | 227140 | 223145 |
| 4.3 Others | 170047 | 139359 | 191035 | 191213 | 196377 |
| 5 Instruments issued by | | | | | |
| 5.1 Mutual funds | 20988 | 56962 | 42463 | 49038 | 47629 |
| 5.2 Financial institutions | 98382 | 93653 | 79815 | 83567 | 85261 |

## 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 | | | |
| | 2018-19 | 2019 | 2020 | | 2018-19 | 2019 | 2020 | |
| | | Feb. | Jan. | Feb. | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Number of Reporting Banks | 222 | 222 | 219 | 219 | 147 | 148 | 142 | 142 |
| **1 Liabilities to the Banking System** | **276350** | **255093** | **279961** | **328972** | **271426** | **250568** | **274771** | **323775** |
| 1.1 Demand and Time Deposits from Banks | 181651 | 160954 | 199889 | 233067 | 176828 | 156578 | 194935 | 228063 |
| 1.2 Borrowings from Banks | 79487 | 85131 | 66900 | 82676 | 79459 | 85065 | 66868 | 82635 |
| 1.3 Other Demand and Time Liabilities | 15212 | 9007 | 13172 | 13229 | 15139 | 8925 | 12968 | 13078 |
| **2 Liabilities to Others** | **13835976** | **13293386** | **14598202** | **14638332** | **13495672** | **12963744** | **14179034** | **14218776** |
| 2.1 Aggregate Deposits | 12901579 | 12409475 | 13726481 | 13728836 | 12573772 | 12093293 | 13324001 | 13326218 |
| 2.1.1 Demand | 1542554 | 1294188 | 1463589 | 1493527 | 1511287 | 1265310 | 1431011 | 1459926 |
| 2.1.2 Time | 11359025 | 11115286 | 12262891 | 12235309 | 11062484 | 10827984 | 11892990 | 11866292 |
| 2.2 Borrowings | 381864 | 368985 | 315590 | 312624 | 378254 | 364724 | 311303 | 308425 |
| 2.3 Other Demand and Time Liabilities | 552533 | 514926 | 556132 | 596871 | 543646 | 505726 | 543730 | 584132 |
| **3 Borrowings from Reserve Bank** | **180688** | **147395** | **16915** | **54186** | **180688** | **147395** | **16915** | **54186** |
| 3.1 Against Usance Bills /Promissory Notes | – | – | – | – | – | – | – | – |
| 3.2 Others | 180688 | 147395 | 16915 | 54186 | 180688 | 147395 | 16915 | 54186 |
| 4 Cash in Hand and Balances with Reserve Bank | 657555 | 588437 | 650927 | 650830 | 640584 | 574417 | 632549 | 632394 |
| 4.1 Cash in Hand | 76554 | 72783 | 84191 | 84805 | 74877 | 71081 | 81845 | 82361 |
| 4.2 Balances with Reserve Bank | 581001 | 515654 | 566736 | 566024 | 565707 | 503336 | 550704 | 550033 |
| **5 Assets with the Banking System** | **372670** | **370684** | **290256** | **320156** | **327814** | **318085** | **231623** | **261901** |
| 5.1 Balances with Other Banks | 245880 | 238124 | 178084 | 192006 | 223048 | 217043 | 151373 | 165994 |
| 5.1.1 In Current Account | 17216 | 13973 | 24273 | 35928 | 13329 | 11236 | 21376 | 33287 |
| 5.1.2 In Other Accounts | 228663 | 224150 | 153811 | 156077 | 209719 | 205807 | 129997 | 132706 |
| 5.2 Money at Call and Short Notice | 47047 | 54887 | 37079 | 36790 | 32252 | 31210 | 20180 | 18239 |
| 5.3 Advances to Banks | 32950 | 34858 | 32315 | 34050 | 29635 | 30546 | 24959 | 27488 |
| 5.4 Other Assets | 46793 | 42816 | 42777 | 57311 | 42879 | 39286 | 35111 | 50180 |
| **6 Investment** | **3475607** | **3436578** | **3849568** | **3890053** | **3381056** | **3342703** | **3735514** | **3778286** |
| 6.1 Government Securities | 3467845 | 3430053 | 3838797 | 3874670 | 3379001 | 3341633 | 3730741 | 3769059 |
| 6.2 Other Approved Securities | 7762 | 6525 | 10771 | 15383 | 2055 | 1070 | 4773 | 9227 |
| **7 Bank Credit** | **10047125** | **9729542** | **10431745** | **10433183** | **9771722** | **9449740** | **10105176** | **10104866** |
| 7a Food Credit | 64636 | 82341 | 108222 | 94717 | 41610 | 59314 | 78899 | 65596 |
| 7.1 Loans, Cash-credits and Overdrafts | 9792287 | 9494882 | 10214455 | 10212972 | 9521994 | 9220045 | 9891378 | 9887932 |
| 7.2 Inland Bills-Purchased | 27641 | 24082 | 25518 | 26051 | 26223 | 22613 | 24595 | 25463 |
| 7.3 Inland Bills-Discounted | 160984 | 148922 | 136629 | 141937 | 158296 | 146336 | 135171 | 140341 |
| 7.4 Foreign Bills-Purchased | 24914 | 23122 | 23000 | 21734 | 24588 | 22798 | 22422 | 21239 |
| 7.5 Foreign Bills-Discounted | 41299 | 38534 | 32142 | 30489 | 40622 | 37949 | 31611 | 29892 |

## No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Crore)

| Item | Outstanding as on | | | | Growth (%) | |
|---|---|---|---|---|---|---|
| | Mar. 29, 2019 | 2019 | 2020 | | Financial year so far | Y-o-Y |
| | | Feb. 15 | Jan. 31 | Feb. 28 | 2019-20 | 2020 |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 Gross Bank Credit** | **8674893** | **8368057** | **8978800** | **8980095** | **3.5** | **7.3** |
| **1.1 Food Credit** | **41474** | **61535** | **78664** | **65384** | **57.7** | **6.3** |
| **1.2 Non-food Credit** | **8633419** | **8306522** | **8900136** | **8914711** | **3.3** | **7.3** |
| **1.2.1 Agriculture & Allied Activities** | **1111300** | **1092771** | **1153386** | **1155990** | **4.0** | **5.8** |
| **1.2.2 Industry** | **2885778** | **2774257** | **2817525** | **2792812** | **–3.2** | **0.7** |
| 1.2.2.1 Micro & Small | 375505 | 372659 | 373050 | 371333 | –1.1 | -0.4 |
| 1.2.2.2 Medium | 106395 | 103444 | 106813 | 107502 | 1.0 | 3.9 |
| 1.2.2.3 Large | 2403878 | 2298154 | 2337662 | 2313977 | –3.7 | 0.7 |
| **1.2.3 Services** | **2415609** | **2276196** | **2431975** | **2433858** | **0.8** | **6.9** |
| 1.2.3.1 Transport Operators | 138524 | 134940 | 141293 | 142127 | 2.6 | 5.3 |
| 1.2.3.2 Computer Software | 18535 | 19177 | 18775 | 19205 | 3.6 | 0.1 |
| 1.2.3.3 Tourism, Hotels & Restaurants | 39005 | 38636 | 45394 | 45184 | 15.8 | 16.9 |
| 1.2.3.4 Shipping | 7748 | 7400 | 6682 | 6527 | –15.8 | -11.8 |
| 1.2.3.5 Professional Services | 171517 | 178078 | 172686 | 172907 | 0.8 | -2.9 |
| 1.2.3.6 Trade | 528158 | 504664 | 519547 | 538608 | 2.0 | 6.7 |
| 1.2.3.6.1 Wholesale Trade | 250528 | 224291 | 237341 | 254833 | 1.7 | 13.6 |
| 1.2.3.6.2 Retail Trade | 277630 | 280372 | 282206 | 283775 | 2.2 | 1.2 |
| 1.2.3.7 Commercial Real Estate | 202291 | 198755 | 227266 | 228826 | 13.1 | 15.1 |
| 1.2.3.8 Non-Banking Financial Companies (NBFCs) | 641208 | 575401 | 737198 | 703667 | 9.7 | 22.3 |
| 1.2.3.9 Other Services | 668623 | 619146 | 563134 | 576807 | –13.7 | -6.8 |
| **1.2.4 Personal Loans** | **2220732** | **2163298** | **2497250** | **2532051** | **14.0** | **17.0** |
| 1.2.4.1 Consumer Durables | 6299 | 4528 | 6453 | 6495 | 3.1 | 43.4 |
| 1.2.4.2 Housing | 1160111 | 1134906 | 1316481 | 1328991 | 14.6 | 17.1 |
| 1.2.4.3 Advances against Fixed Deposits | 82873 | 70600 | 67240 | 75469 | –8.9 | 6.9 |
| 1.2.4.4 Advances to Individuals against share & bond | 6265 | 5862 | 5185 | 5183 | –17.3 | -11.6 |
| 1.2.4.5 Credit Card Outstanding | 88262 | 83401 | 110864 | 110946 | 25.7 | 33.0 |
| 1.2.4.6 Education | 67988 | 68891 | 67038 | 66563 | –2.1 | -3.4 |
| 1.2.4.7 Vehicle Loans | 202154 | 200470 | 220240 | 221129 | 9.4 | 10.3 |
| 1.2.4.8 Other Personal Loans | 606780 | 594640 | 703749 | 717275 | 18.2 | 20.6 |
| **1.2A Priority Sector** | **2739021** | **2682926** | **2772197** | **2690428** | **–1.8** | **0.3** |
| 1.2A.1 Agriculture & Allied Activities | 1104988 | 1086322 | 1142576 | 1145063 | 3.6 | 5.4 |
| 1.2A.2 Micro & Small Enterprises | 1067175 | 1026613 | 1100615 | 1095182 | 2.6 | 6.7 |
| 1.2A.2.1 Manufacturing | 375505 | 372659 | 373050 | 371333 | –1.1 | -0.4 |
| 1.2A.2.2 Services | 691670 | 653954 | 727566 | 723849 | 4.7 | 10.7 |
| 1.2A.3 Housing | 432703 | 433224 | 461089 | 460496 | 6.4 | 6.3 |
| 1.2A.4 Micro-Credit | 24101 | 24294 | 36176 | 36477 | 51.4 | 50.1 |
| 1.2A.5 Education Loans | 53950 | 56297 | 53101 | 52692 | –2.3 | -6.4 |
| 1.2A.6 State-Sponsored Orgs. for SC/ST | 397 | 389 | 413 | 115 | –71.0 | -70.4 |
| 1.2A.7 Weaker Sections | 662628 | 614877 | 715057 | 701304 | 5.8 | 14.1 |
| 1.2A.8 Export Credit | 15566 | 16506 | 13503 | 14325 | –8.0 | -13.2 |

## No. 16: Industry-wise Deployment of Gross Bank Credit

(₹ Crore)

| Industry | Outstanding as on | | | | Growth (%) | |
|---|---|---|---|---|---|---|
| | Mar. 29, 2019 | 2019 | 2020 | | Financial year so far | Y-o-Y |
| | | Feb. 15 | Jan. 31 | Feb. 28 | 2019-20 | 2020 |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 Industry** | **2885778** | **2774257** | **2817525** | **2792812** | **–3.2** | **0.7** |
| **1.1 Mining & Quarrying (incl. Coal)** | **41752** | **41513** | **41886** | **41600** | **–0.4** | **0.2** |
| **1.2 Food Processing** | **157058** | **154724** | **150279** | **149851** | **–4.6** | **–3.1** |
| 1.2.1 Sugar | 29705 | 28365 | 26288 | 26623 | –10.4 | –6.1 |
| 1.2.2 Edible Oils & Vanaspati | 21343 | 21437 | 20745 | 19461 | –8.8 | –9.2 |
| 1.2.3 Tea | 4966 | 4988 | 5438 | 5290 | 6.5 | 6.1 |
| 1.2.4 Others | 101044 | 99934 | 97808 | 98476 | –2.5 | –1.5 |
| **1.3 Beverage & Tobacco** | **14662** | **14586** | **14991** | **15063** | **2.7** | **3.3** |
| **1.4 Textiles** | **203549** | **201291** | **190108** | **188067** | **–7.6** | **–6.6** |
| 1.4.1 Cotton Textiles | 97726 | 96331 | 87850 | 86276 | –11.7 | –10.4 |
| 1.4.2 Jute Textiles | 2119 | 2146 | 2198 | 2117 | –0.1 | –1.4 |
| 1.4.3 Man-Made Textiles | 26748 | 26565 | 26017 | 25822 | –3.5 | –2.8 |
| 1.4.4 Other Textiles | 76956 | 76249 | 74043 | 73852 | –4.0 | –3.1 |
| **1.5 Leather & Leather Products** | **11071** | **10972** | **10882** | **10720** | **–3.2** | **–2.3** |
| **1.6 Wood & Wood Products** | **11968** | **11759** | **12205** | **12102** | **1.1** | **2.9** |
| **1.7 Paper & Paper Products** | **30319** | **30202** | **31085** | **30607** | **0.9** | **1.3** |
| **1.8 Petroleum, Coal Products & Nuclear Fuels** | **63136** | **55691** | **55622** | **58679** | **–7.1** | **5.4** |
| **1.9 Chemicals & Chemical Products** | **191484** | **182988** | **183048** | **184239** | **–3.8** | **0.7** |
| 1.9.1 Fertiliser | 40043 | 28262 | 34535 | 37028 | –7.5 | 31.0 |
| 1.9.2 Drugs & Pharmaceuticals | 50500 | 50742 | 52072 | 50685 | 0.4 | –0.1 |
| 1.9.3 Petro Chemicals | 46717 | 50913 | 40697 | 40188 | –14.0 | –21.1 |
| 1.9.4 Others | 54224 | 53071 | 55744 | 56339 | 3.9 | 6.2 |
| **1.10 Rubber, Plastic & their Products** | **45803** | **45221** | **49254** | **48752** | **6.4** | **7.8** |
| **1.11 Glass & Glassware** | **9887** | **9976** | **8678** | **8494** | **–14.1** | **–14.9** |
| **1.12 Cement & Cement Products** | **55683** | **55041** | **57715** | **56634** | **1.7** | **2.9** |
| **1.13 Basic Metal & Metal Product** | **371564** | **370686** | **335104** | **333597** | **–10.2** | **–10.0** |
| 1.13.1 Iron & Steel | 282878 | 285119 | 252173 | 250942 | –11.3 | –12.0 |
| 1.13.2 Other Metal & Metal Product | 88686 | 85567 | 82931 | 82655 | –6.8 | –3.4 |
| **1.14 All Engineering** | **168621** | **163229** | **157586** | **155428** | **–7.8** | **–4.8** |
| 1.14.1 Electronics | 37856 | 37520 | 33594 | 32900 | –13.1 | –12.3 |
| 1.14.2 Others | 130765 | 125709 | 123992 | 122528 | –6.3 | –2.5 |
| **1.15 Vehicles, Vehicle Parts & Transport Equipment** | **79859** | **79885** | **79793** | **79111** | **–0.9** | **–1.0** |
| **1.16 Gems & Jewellery** | **72014** | **71051** | **59841** | **59147** | **–17.9** | **–16.8** |
| **1.17 Construction** | **99473** | **95900** | **105113** | **103972** | **4.5** | **8.4** |
| **1.18 Infrastructure** | **1055921** | **986557** | **1036852** | **1018749** | **–3.5** | **3.3** |
| 1.18.1 Power | 568966 | 554411 | 559305 | 538993 | –5.3 | –2.8 |
| 1.18.2 Telecommunications | 115585 | 91490 | 136080 | 141171 | 22.1 | 54.3 |
| 1.18.3 Roads | 186852 | 189183 | 192232 | 186148 | –0.4 | –1.6 |
| 1.18.4 Other Infrastructure | 184518 | 151473 | 149235 | 152437 | –17.4 | 0.6 |
| **1.19 Other Industries** | **201954** | **192985** | **237483** | **238000** | **17.8** | **23.3** |

## 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 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2018-19 | 2019 | | | | | 2020 | | |
| | | Jan, 25 | Nov, 29 | Dec, 06 | Dec, 20 | Dec, 27 | Jan, 03 | Jan, 17 | Jan, 31 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Number of Reporting Banks | 32 | 31 | 31 | 30 | 30 | 30 | 30 | 30 | 30 |
| **1 Aggregate Deposits (2.1.1.2+2.2.1.2)** | **62003.4** | **55265.2** | **66211.7** | **122809.6** | **123291.7** | **123179.7** | **123700.8** | **124215.1** | **122402.4** |
| 2 Demand and Time Liabilities | | | | | | | | | |
| **2.1 Demand Liabilities** | **18241.3** | **17411.0** | **18712.1** | **23045.1** | **24293.2** | **23483.5** | **24516.6** | **23862.0** | **22274.8** |
| 2.1.1 Deposits | | | | | | | | | |
| 2.1.1.1 Inter-Bank | 5842.3 | 4871.2 | 5353.2 | 4226.5 | 3973.9 | 4316.8 | 4705.0 | 4426.1 | 4194.1 |
| 2.1.1.2 Others | 9,808.6 | 9022.5 | 10206.8 | 12582.4 | 13224.2 | 13180.2 | 13478.7 | 12911.9 | 11625.8 |
| 2.1.2 Borrowings from Banks | 0.0 | 869.9 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 40.0 |
| 2.1.3 Other Demand Liabilities | 2590.5 | 2647.4 | 3152.0 | 6236.2 | 7070.1 | 5986.4 | 6332.8 | 6524.0 | 6414.9 |
| **2.2 Time Liabilities** | **98531.4** | **88354.4** | **113699.8** | **160651.0** | **162694.5** | **162534.0** | **164398.3** | **166685.2** | **166326.7** |
| 2.2.1 Deposits | | | | | | | | | |
| 2.2.1.1 Inter-Bank | 45655.9 | 40850.1 | 56770.2 | 48880.0 | 51079.3 | 50938.9 | 52339.1 | 53874.8 | 54063.3 |
| 2.2.1.2 Others | 52194.8 | 46242.6 | 56004.9 | 110227.2 | 110067.5 | 109999.5 | 110222.0 | 111303.1 | 110776.7 |
| 2.2.2 Borrowings from Banks | 0.0 | 0.6 | 0.0 | 632.9 | 673.0 | 743.7 | 958.2 | 629.9 | 629.9 |
| 2.2.3 Other Time Liabilities | 680.7 | 1261.1 | 924.7 | 910.8 | 874.7 | 851.9 | 878.9 | 877.4 | 856.7 |
| 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 | 50375.4 | 51231.5 | 46823.1 | 46786.6 | 47670.2 | 48445.0 | 47721.8 | 46896.8 | 47300.4 |
| 4.1 Demand | 16826.7 | 16883.7 | 13300.6 | 14149.6 | 14121.3 | 14382.0 | 14077.8 | 13830.6 | 13669.2 |
| 4.2 Time | 33548.7 | 34347.8 | 33522.5 | 32636.9 | 33548.9 | 34063.0 | 33644.0 | 33066.2 | 33631.2 |
| **5 Cash in Hand and Balances with Reserve Bank** | **5721.0** | **4639.3** | **6016.7** | **6813.0** | **9236.7** | **8941.9** | **9369.9** | **9277.5** | **9090.9** |
| 5.1 Cash in Hand | 319.1 | 293.9 | 309.6 | 856.6 | 770.4 | 712.5 | 709.1 | 727.2 | 756.6 |
| 5.2 Balance with Reserve Bank | 5401.9 | 4345.3 | 5707.1 | 5956.3 | 8466.3 | 8229.5 | 8660.9 | 8550.3 | 8334.2 |
| **6 Balances with Other Banks in Current Account** | **1543.2** | **846.9** | **747.1** | **1185.1** | **814.3** | **677.7** | **860.5** | **1050.5** | **1030.4** |
| **7 Investments in Government Securities** | **30885.3** | **31296.2** | **32995.3** | **48688.4** | **49795.3** | **49891.9** | **50062.6** | **49368.8** | **49622.6** |
| **8 Money at Call and Short Notice** | **16190.2** | **17404.1** | **20120.9** | **22024.8** | **23287.8** | **25021.1** | **22950.8** | **21965.6** | **19796.7** |
| **9 Bank Credit (10.1+11)** | **60089.8** | **57951.4** | **63661.0** | **98678.5** | **98692.2** | **100148.6** | **107241.7** | **101523.2** | **104233.2** |
| 10 Advances | | | | | | | | | |
| **10.1 Loans, Cash-Credits and Overdrafts** | **60086.2** | **57948.4** | **63659.3** | **98678.0** | **98691.7** | **100148.1** | **107241.2** | **101522.7** | **104232.7** |
| 10.2 Due from Banks | 82610.9 | 81270.1 | 80806.6 | 77427.8 | 77825.3 | 77214.1 | 70604.2 | 78326.2 | 78091.6 |
| 11 Bills Purchased and Discounted | 3.7 | 3.0 | 1.8 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 27.2 |

# Prices and Production

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

| Group/Sub group | 2018-19 | | | Rural | | | Urban | | | Combined | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rural | Urban | Combined | Feb. '19 | Jan. '20 | Feb. '20 | Feb. '19 | Jan. '20 | Feb. '20 | Feb. '19 | Jan. '20 | Feb. '20 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **1 Food and beverages** | **139.5** | **138.4** | **139.1** | **137.2** | **153.0** | **149.8** | **138.0** | **154.4** | **151.7** | **137.5** | **153.5** | **150.5** |
| 1.1 Cereals and products | 137.7 | 137.2 | 137.5 | 136.8 | 143.7 | 144.2 | 139.4 | 145.6 | 146.2 | 137.6 | 144.3 | 144.8 |
| 1.2 Meat and fish | 149.5 | 147.5 | 148.8 | 153.0 | 167.3 | 167.4 | 150.1 | 167.6 | 167.6 | 152.0 | 167.4 | 167.5 |
| 1.3 Egg | 137.3 | 137.3 | 137.3 | 139.1 | 153.5 | 150.9 | 145.3 | 157.0 | 153.1 | 141.5 | 154.9 | 151.8 |
| 1.4 Milk and products | 142.7 | 141.3 | 142.2 | 142.5 | 150.5 | 150.9 | 141.7 | 149.3 | 150.7 | 142.2 | 150.1 | 150.8 |
| 1.5 Oils and fats | 124.0 | 117.6 | 121.6 | 124.1 | 132.0 | 133.7 | 118.4 | 126.3 | 127.3 | 122.0 | 129.9 | 131.3 |
| 1.6 Fruits | 146.8 | 143.4 | 145.2 | 135.8 | 142.2 | 140.7 | 137.0 | 144.4 | 143.1 | 136.4 | 143.2 | 141.8 |
| 1.7 Vegetables | 141.4 | 142.1 | 141.6 | 128.7 | 191.5 | 165.1 | 131.6 | 207.8 | 181.7 | 129.7 | 197.0 | 170.7 |
| 1.8 Pulses and products | 124.1 | 115.3 | 121.1 | 121.5 | 141.1 | 141.8 | 119.9 | 139.1 | 139.6 | 121.0 | 140.4 | 141.1 |
| 1.9 Sugar and confectionery | 111.9 | 110.8 | 111.5 | 108.3 | 113.8 | 113.1 | 110.4 | 114.8 | 114.6 | 109.0 | 114.1 | 113.6 |
| 1.10 Spices | 138.8 | 140.7 | 139.4 | 139.2 | 151.6 | 152.8 | 140.8 | 149.5 | 150.4 | 139.7 | 150.9 | 152.0 |
| 1.11 Non-alcoholic beverages | 134.9 | 127.5 | 131.8 | 137.4 | 139.7 | 140.1 | 128.3 | 131.1 | 131.5 | 133.6 | 136.1 | 136.5 |
| 1.12 Prepared meals, snacks, sweets | 155.3 | 151.3 | 153.4 | 156.2 | 158.7 | 159.2 | 153.5 | 158.5 | 159.0 | 154.9 | 158.6 | 159.1 |
| **2 Pan, tobacco and intoxicants** | **159.4** | **162.9** | **160.4** | **162.8** | **168.6** | **169.4** | **164.9** | **170.8** | **172.0** | **163.4** | **169.2** | **170.1** |
| **3 Clothing and footwear** | **150.3** | **139.3** | **145.9** | **149.9** | **152.1** | **152.3** | **141.4** | **144.9** | **145.2** | **146.5** | **149.2** | **149.5** |
| 3.1 Clothing | 151.2 | 141.0 | 147.2 | 150.5 | 152.8 | 153.0 | 143.3 | 147.0 | 147.3 | 147.7 | 150.5 | 150.8 |
| 3.2 Footwear | 145.2 | 129.5 | 138.7 | 146.1 | 147.4 | 147.5 | 130.8 | 133.2 | 133.5 | 139.7 | 141.5 | 141.7 |
| **4 Housing** | **--** | **145.6** | **145.6** | **--** | **--** | **--** | **148.5** | **153.9** | **154.8** | **148.5** | **153.9** | **154.8** |
| **5 Fuel and light** | **147.0** | **129.3** | **140.3** | **145.3** | **150.4** | **152.2** | **127.1** | **135.1** | **138.9** | **138.4** | **144.6** | **147.2** |
| **6 Miscellaneous** | **138.6** | **131.1** | **134.9** | **142.2** | **148.1** | **148.4** | **132.4** | **138.4** | **138.4** | **137.4** | **143.4** | **143.6** |
| 6.1 Household goods and services | 145.9 | 134.8 | 140.6 | 150.1 | 151.7 | 151.8 | 136.6 | 140.1 | 140.4 | 143.7 | 146.2 | 146.4 |
| 6.2 Health | 143.5 | 135.5 | 140.5 | 149.9 | 155.7 | 156.2 | 138.5 | 143.8 | 144.4 | 145.6 | 151.2 | 151.7 |
| 6.3 Transport and communication | 128.5 | 120.3 | 124.2 | 129.2 | 136.3 | 136.0 | 119.2 | 126.1 | 125.2 | 123.9 | 130.9 | 130.3 |
| 6.4 Recreation and amusement | 140.4 | 130.3 | 134.7 | 143.4 | 150.1 | 150.4 | 132.2 | 137.2 | 137.7 | 137.1 | 142.8 | 143.2 |
| 6.5 Education | 149.4 | 144.5 | 146.5 | 155.5 | 161.7 | 161.9 | 146.6 | 152.1 | 152.2 | 150.3 | 156.1 | 156.2 |
| 6.6 Personal care and effects | 132.6 | 129.9 | 131.5 | 134.9 | 142.5 | 143.3 | 133.0 | 142.1 | 143.5 | 134.1 | 142.3 | 143.4 |
| **General Index (All Groups)** | **141.3** | **137.7** | **139.6** | **141.0** | **151.9** | **150.4** | **138.6** | **148.2** | **147.7** | **139.9** | **150.2** | **149.1** |

**Source:** National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India.

## No. 19: Other Consumer Price Indices

| Item | Base Year | Linking Factor | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|---|---|
| | | | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Consumer Price Index for Industrial Workers | 2001 | 4.63 | 300 | 307 | 330 | 328 |
| 2 Consumer Price Index for Agricultural Labourers | 1986-87 | 5.89 | 907 | 917 | 1016 | 1010 |
| 3 Consumer Price Index for Rural Labourers | 1986-87 | – | 915 | 925 | 1021 | 1016 |

**Source:** Labour Bureau, Ministry of Labour and Employment, Government of India.

## No. 20: Monthly Average Price of Gold and Silver in Mumbai

| Item | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|
| | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 |
| 1 Standard Gold (₹ per 10 grams) | 31193 | 33217 | 39984 | 41195 |
| 2 Silver (₹ per kilogram) | 38404 | 40059 | 46498 | 46567 |

**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 | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|---|
| | | | Feb. | Dec. | Jan. (P) | Feb. (P) |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 ALL COMMODITIES** | **100.000** | **119.8** | **119.5** | **123.0** | **122.9** | **122.2** |
| **1.1 PRIMARY ARTICLES** | **22.618** | **134.2** | **134.1** | **148.9** | **147.2** | **143.1** |
| **1.1.1 FOOD ARTICLES** | **15.256** | **143.7** | **143.7** | **162.6** | **160.8** | **154.9** |
| 1.1.1.1 Food Grains (Cereals+Pulses) | 3.462 | 146.7 | 153.8 | 163.5 | 164.9 | 163.4 |
| 1.1.1.2 Fruits & Vegetables | 3.475 | 147.3 | 136.1 | 195.6 | 183.6 | 158.2 |
| 1.1.1.3 Milk | 4.440 | 143.1 | 142.9 | 148.5 | 148.7 | 149.3 |
| 1.1.1.4 Eggs,Meat & Fish | 2.402 | 138.0 | 143.8 | 149.2 | 152.2 | 153.7 |
| 1.1.1.5 Condiments & Spices | 0.529 | 129.6 | 127.7 | 154.1 | 156.9 | 150.0 |
| 1.1.1.6 Other Food Articles | 0.948 | 144.4 | 147.7 | 143.5 | 143.5 | 142.7 |
| **1.1.2 NON-FOOD ARTICLES** | **4.119** | **123.1** | **123.2** | **134.0** | **132.1** | **131.6** |
| 1.1.2.1 Fibres | 0.839 | 127.0 | 125.0 | 123.7 | 124.3 | 124.4 |
| 1.1.2.2 Oil Seeds | 1.115 | 140.5 | 146.9 | 152.9 | 157.1 | 153.7 |
| 1.1.2.3 Other non-food Articles | 1.960 | 107.3 | 102.0 | 105.4 | 105.8 | 105.1 |
| 1.1.2.4 Floriculture | 0.204 | 164.1 | 189.3 | 348.3 | 280.7 | 294.6 |
| **1.1.3 MINERALS** | **0.833** | **136.5** | **144.0** | **147.6** | **142.6** | **147.6** |
| 1.1.3.1 Metallic Minerals | 0.648 | 123.0 | 133.0 | 137.5 | 133.0 | 137.5 |
| 1.1.3.2 Other Minerals | 0.185 | 183.5 | 182.4 | 182.6 | 176.4 | 182.6 |
| **1.1.4 CRUDE PETROLEUM & NATURAL GAS** | **2.410** | **92.4** | **88.2** | **88.2** | **88.3** | **87.0** |
| **1.2 FUEL & POWER** | **13.152** | **104.1** | **100.5** | **103.2** | **102.7** | **103.9** |
| **1.2.1 COAL** | **2.138** | **123.3** | **123.6** | **126.5** | **126.5** | **126.5** |
| 1.2.1.1 Coking Coal | 0.647 | 132.9 | 133.9 | 141.9 | 141.9 | 141.9 |
| 1.2.1.2 Non-Coking Coal | 1.401 | 119.0 | 119.0 | 119.0 | 119.0 | 119.0 |
| 1.2.1.3 Lignite | 0.090 | 120.3 | 120.0 | 131.1 | 131.1 | 131.1 |
| **1.2.2 MINERAL OILS** | **7.950** | **96.7** | **91.4** | **91.3** | **93.5** | **92.4** |
| **1.2.3 ELECTRICITY** | **3.064** | **109.6** | **108.2** | **117.9** | **110.0** | **117.9** |
| **1.3 MANUFACTURED PRODUCTS** | **64.231** | **117.9** | **118.2** | **118.0** | **118.5** | **118.7** |
| **1.3.1 MANUFACTURE OF FOOD PRODUCTS** | **9.122** | **128.6** | **128.7** | **137.0** | **138.2** | **136.9** |
| 1.3.1.1 Processing and Preserving of meat | 0.134 | 136.7 | 134.3 | 135.8 | 135.9 | 136.7 |
| 1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof | 0.204 | 132.1 | 132.3 | 136.6 | 134.3 | 135.7 |
| 1.3.1.3 Processing and Preserving of fruit and Vegetables | 0.138 | 114.3 | 113.1 | 115.0 | 114.9 | 114.9 |
| 1.3.1.4 Vegetable and Animal oils and Fats | 2.643 | 117.6 | 115.5 | 126.4 | 131.1 | 129.1 |
| 1.3.1.5 Dairy products | 1.165 | 136.2 | 134.4 | 149.5 | 151.2 | 151.2 |
| 1.3.1.6 Grain mill products | 2.010 | 141.6 | 144.2 | 147.5 | 146.6 | 146.3 |
| 1.3.1.7 Starches and Starch products | 0.110 | 116.6 | 129.9 | 133.7 | 134.2 | 133.4 |
| 1.3.1.8 Bakery products | 0.215 | 129.3 | 130.7 | 134.6 | 135.7 | 136.3 |
| 1.3.1.9 Sugar, Molasses & honey | 1.163 | 111.2 | 111.7 | 119.3 | 119.8 | 119.1 |
| 1.3.1.10 Cocoa, Chocolate and Sugar confectionery | 0.175 | 126.7 | 127.0 | 128.0 | 126.1 | 125.9 |
| 1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products | 0.026 | 134.5 | 142.6 | 123.4 | 131.7 | 130.5 |
| 1.3.1.12 Tea & Coffee products | 0.371 | 137.7 | 128.3 | 138.5 | 130.1 | 126.1 |
| 1.3.1.13 Processed condiments & salt | 0.163 | 122.2 | 125.1 | 135.7 | 135.9 | 137.5 |
| 1.3.1.14 Processed ready to eat food | 0.024 | 127.0 | 126.9 | 129.1 | 129.6 | 129.9 |
| 1.3.1.15 Health supplements | 0.225 | 143.6 | 154.6 | 159.7 | 164.5 | 155.9 |
| 1.3.1.16 Prepared animal feeds | 0.356 | 157.5 | 160.5 | 175.7 | 174.6 | 170.0 |
| **1.3.2 MANUFACTURE OF BEVERAGES** | **0.909** | **120.7** | **121.7** | **123.7** | **124.0** | **124.1** |
| 1.3.2.1 Wines & spirits | 0.408 | 113.8 | 114.0 | 118.6 | 118.5 | 119.2 |
| 1.3.2.2 Malt liquors and Malt | 0.225 | 120.5 | 122.1 | 125.8 | 125.7 | 126.6 |
| 1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters | 0.275 | 131.2 | 132.7 | 129.5 | 131.0 | 129.1 |
| **1.3.3 MANUFACTURE OF TOBACCO PRODUCTS** | **0.514** | **150.4** | **152.5** | **151.0** | **151.0** | **154.2** |
| 1.3.3.1 Tobacco products | 0.514 | 150.4 | 152.5 | 151.0 | 151.0 | 154.2 |

## No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|---|
| | | | Feb. | Dec. | Jan. (P) | Feb. (P) |
| **1.3.4 MANUFACTURE OF TEXTILES** | **4.881** | **117.9** | **119.2** | **116.0** | **116.4** | **116.7** |
| 1.3.4.1 Preparation and Spinning of textile fibres | 2.582 | 110.6 | 111.2 | 105.1 | 105.6 | 105.7 |
| 1.3.4.2 Weaving & Finishing of textiles | 1.509 | 127.3 | 129.7 | 129.3 | 129.5 | 130.5 |
| 1.3.4.3 Knitted and Crocheted fabrics | 0.193 | 112.9 | 112.3 | 114.8 | 114.7 | 113.9 |
| 1.3.4.4 Made-up textile articles, Except apparel | 0.299 | 130.3 | 134.2 | 135.5 | 135.1 | 133.6 |
| 1.3.4.5 Cordage, Rope, Twine and Netting | 0.098 | 138.7 | 137.7 | 145.8 | 147.2 | 146.0 |
| 1.3.4.6 Other textiles | 0.201 | 118.3 | 118.0 | 116.0 | 116.0 | 116.7 |
| **1.3.5 MANUFACTURE OF WEARING APPAREL** | **0.814** | **138.8** | **137.5** | **139.2** | **138.0** | **137.8** |
| 1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel | 0.593 | 139.4 | 138.3 | 140.2 | 138.6 | 138.1 |
| 1.3.5.2 Knitted and Crocheted apparel | 0.221 | 137.0 | 135.5 | 136.7 | 136.4 | 136.9 |
| **1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS** | **0.535** | **121.8** | **119.5** | **118.4** | **118.3** | **117.8** |
| 1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur | 0.142 | 111.0 | 103.3 | 104.6 | 103.0 | 102.8 |
| 1.3.6.2 Luggage, HandbAgs, Saddlery and Harness | 0.075 | 134.7 | 133.0 | 135.9 | 137.1 | 137.6 |
| 1.3.6.3 Footwear | 0.318 | 123.5 | 123.5 | 120.4 | 120.7 | 119.9 |
| **1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK** | **0.772** | **133.5** | **136.2** | **133.0** | **133.1** | **132.7** |
| 1.3.7.1 Saw milling and Planing of wood | 0.124 | 124.5 | 127.6 | 120.5 | 119.8 | 120.1 |
| 1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards | 0.493 | 136.3 | 139.6 | 135.7 | 136.2 | 135.4 |
| 1.3.7.3 Builder's carpentry and Joinery | 0.036 | 158.7 | 157.0 | 177.8 | 178.0 | 178.0 |
| 1.3.7.4 Wooden containers | 0.119 | 124.1 | 124.9 | 121.2 | 120.7 | 121.5 |
| **1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS** | **1.113** | **123.3** | **124.1** | **118.9** | **119.1** | **120.0** |
| 1.3.8.1 Pulp, Paper and Paperboard | 0.493 | 129.3 | 131.0 | 122.7 | 122.6 | 123.4 |
| 1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard | 0.314 | 116.5 | 116.4 | 112.1 | 112.7 | 113.8 |
| 1.3.8.3 Other articles of paper and Paperboard | 0.306 | 120.6 | 121.1 | 120.0 | 119.9 | 120.8 |
| **1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA** | **0.676** | **146.6** | **146.0** | **151.2** | **151.5** | **151.5** |
| 1.3.9.1 Printing | 0.676 | 146.6 | 146.0 | 151.2 | 151.5 | 151.5 |
| **1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS** | **6.465** | **119.1** | **119.7** | **116.2** | **116.3** | **116.0** |
| 1.3.10.1 Basic chemicals | 1.433 | 125.0 | 125.8 | 116.8 | 116.8 | 117.2 |
| 1.3.10.2 Fertilizers and Nitrogen compounds | 1.485 | 121.1 | 123.0 | 123.9 | 123.2 | 122.9 |
| 1.3.10.3 Plastic and Synthetic rubber in primary form | 1.001 | 117.6 | 114.7 | 109.0 | 110.8 | 109.2 |
| 1.3.10.4 Pesticides and Other agrochemical products | 0.454 | 120.2 | 123.5 | 121.8 | 121.5 | 121.8 |
| 1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics | 0.491 | 112.7 | 114.5 | 113.9 | 114.3 | 113.2 |
| 1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations | 0.612 | 116.8 | 119.1 | 118.7 | 119.1 | 118.8 |
| 1.3.10.7 Other chemical products | 0.692 | 116.6 | 116.0 | 113.6 | 113.1 | 113.3 |
| 1.3.10.8 Man-made fibres | 0.296 | 104.0 | 103.0 | 96.1 | 95.6 | 95.5 |
| **1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS** | **1.993** | **123.5** | **126.0** | **127.8** | **127.8** | **130.3** |
| 1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products | 1.993 | 123.5 | 126.0 | 127.8 | 127.8 | 130.3 |
| **1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS** | **2.299** | **109.6** | **109.6** | **108.2** | **107.9** | **107.7** |
| 1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres | 0.609 | 98.9 | 99.6 | 98.3 | 98.7 | 98.7 |
| 1.3.12.2 Other Rubber Products | 0.272 | 91.7 | 91.8 | 93.9 | 93.8 | 94.0 |
| 1.3.12.3 Plastics products | 1.418 | 117.6 | 117.3 | 115.2 | 114.6 | 114.3 |
| **1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS** | **3.202** | **115.9** | **117.5** | **115.5** | **115.5** | **116.3** |
| 1.3.13.1 Glass and Glass products | 0.295 | 121.4 | 125.9 | 125.1 | 126.0 | 125.4 |
| 1.3.13.2 Refractory products | 0.223 | 111.1 | 111.1 | 106.9 | 107.6 | 108.7 |
| 1.3.13.3 Clay Building Materials | 0.121 | 98.0 | 98.7 | 103.7 | 102.1 | 103.3 |
| 1.3.13.4 Other Porcelain and Ceramic Products | 0.222 | 112.7 | 114.4 | 113.3 | 114.8 | 114.7 |
| 1.3.13.5 Cement, Lime and Plaster | 1.645 | 114.3 | 117.6 | 118.0 | 117.8 | 119.4 |

## No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|---|
| | | | Feb. | Dec. | Jan. (P) | Feb. (P) |
| 1.3.13.6 Articles of Concrete, Cement and Plaster | 0.292 | 121.5 | 121.9 | 122.2 | 122.7 | 123.0 |
| 1.3.13.7 Cutting, Shaping and Finishing of Stone | 0.234 | 118.8 | 118.5 | 119.1 | 118.5 | 117.9 |
| 1.3.13.8 Other Non-Metallic Mineral Products | 0.169 | 130.4 | 119.3 | 80.6 | 78.1 | 78.1 |
| **1.3.14 MANUFACTURE OF BASIC METALS** | **9.646** | **112.2** | **111.0** | **103.6** | **105.8** | **107.0** |
| 1.3.14.1 Inputs into steel making | 1.411 | 113.0 | 108.9 | 96.6 | 102.1 | 104.3 |
| 1.3.14.2 Metallic Iron | 0.653 | 117.8 | 113.6 | 102.8 | 107.8 | 109.7 |
| 1.3.14.3 Mild Steel - Semi Finished Steel | 1.274 | 99.5 | 98.2 | 93.7 | 96.0 | 96.1 |
| 1.3.14.4 Mild Steel -Long Products | 1.081 | 110.2 | 109.9 | 102.4 | 104.3 | 105.6 |
| 1.3.14.5 Mild Steel - Flat products | 1.144 | 119.6 | 115.0 | 103.4 | 106.5 | 109.5 |
| 1.3.14.6 Alloy steel other than Stainless Steel- Shapes | 0.067 | 111.7 | 111.6 | 99.5 | 100.0 | 102.0 |
| 1.3.14.7 Stainless Steel - Semi Finished | 0.924 | 112.7 | 112.4 | 98.5 | 98.6 | 104.0 |
| 1.3.14.8 Pipes & tubes | 0.205 | 126.6 | 128.6 | 126.5 | 126.4 | 127.2 |
| 1.3.14.9 Non-ferrous metals incl. precious metals | 1.693 | 112.2 | 110.2 | 105.8 | 107.0 | 105.7 |
| 1.3.14.10 Castings | 0.925 | 109.8 | 113.3 | 113.4 | 113.4 | 112.4 |
| 1.3.14.11 Forgings of steel | 0.271 | 126.8 | 141.0 | 149.7 | 147.1 | 146.6 |
| **1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT** | **3.155** | **115.1** | **116.1** | **115.2** | **115.4** | **114.6** |
| 1.3.15.1 Structural Metal Products | 1.031 | 112.8 | 114.2 | 112.8 | 113.6 | 112.9 |
| 1.3.15.2 Tanks, Reservoirs and Containers of Metal | 0.660 | 127.3 | 123.1 | 124.9 | 124.2 | 123.0 |
| 1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers | 0.145 | 105.9 | 104.8 | 106.3 | 106.3 | 107.7 |
| 1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy | 0.383 | 96.3 | 103.3 | 99.8 | 99.3 | 98.0 |
| 1.3.15.5 Cutlery, Hand Tools and General Hardware | 0.208 | 99.7 | 99.9 | 100.5 | 100.6 | 100.9 |
| 1.3.15.6 Other Fabricated Metal Products | 0.728 | 123.1 | 125.8 | 123.7 | 124.4 | 123.5 |
| **1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS** | **2.009** | **111.8** | **111.3** | **109.9** | **109.7** | **109.5** |
| 1.3.16.1 Electronic Components | 0.402 | 100.9 | 98.5 | 97.8 | 97.7 | 98.9 |
| 1.3.16.2 Computers and Peripheral Equipment | 0.336 | 132.5 | 135.0 | 135.0 | 135.0 | 135.0 |
| 1.3.16.3 Communication Equipment | 0.310 | 116.7 | 116.6 | 118.9 | 116.8 | 115.0 |
| 1.3.16.4 Consumer Electronics | 0.641 | 103.8 | 102.4 | 96.7 | 96.9 | 96.5 |
| 1.3.16.5 Measuring, Testing, Navigating and Control equipment | 0.181 | 109.1 | 108.9 | 111.1 | 111.9 | 110.6 |
| 1.3.16.6 Watches and Clocks | 0.076 | 137.9 | 136.6 | 139.7 | 140.5 | 140.9 |
| 1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment | 0.055 | 103.2 | 106.6 | 101.4 | 101.4 | 104.7 |
| 1.3.16.8 Optical instruments and Photographic equipment | 0.008 | 108.7 | 107.5 | 110.9 | 112.0 | 112.0 |
| **1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT** | **2.930** | **111.7** | **112.0** | **110.8** | **110.8** | **110.7** |
| 1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus | 1.298 | 107.7 | 108.6 | 108.2 | 108.4 | 108.5 |
| 1.3.17.2 Batteries and Accumulators | 0.236 | 117.7 | 116.5 | 116.0 | 116.7 | 115.9 |
| 1.3.17.3 Fibre optic cables for data transmission or live transmission of images | 0.133 | 126.1 | 124.6 | 109.2 | 108.0 | 107.6 |
| 1.3.17.4 Other electronic and Electric wires and Cables | 0.428 | 111.2 | 111.3 | 109.8 | 110.2 | 109.4 |
| 1.3.17.5 Wiring devices, Electric lighting & display equipment | 0.263 | 108.6 | 109.3 | 110.3 | 111.3 | 111.7 |
| 1.3.17.6 Domestic appliances | 0.366 | 121.6 | 120.7 | 120.4 | 118.3 | 118.2 |
| 1.3.17.7 Other electrical equipment | 0.206 | 108.6 | 110.2 | 108.5 | 108.1 | 108.9 |
| **1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT** | **4.789** | **111.3** | **111.9** | **113.0** | **113.0** | **113.4** |
| 1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines | 0.638 | 103.0 | 103.3 | 105.5 | 105.2 | 105.3 |
| 1.3.18.2 Fluid power equipment | 0.162 | 118.2 | 119.1 | 120.1 | 120.1 | 119.6 |
| 1.3.18.3 Other pumps, Compressors, Taps and Valves | 0.552 | 108.9 | 109.9 | 111.2 | 111.5 | 111.7 |
| 1.3.18.4 Bearings, Gears, Gearing and Driving elements | 0.340 | 111.2 | 110.5 | 109.7 | 108.0 | 111.0 |
| 1.3.18.5 Ovens, Furnaces and Furnace burners | 0.008 | 78.2 | 78.0 | 80.6 | 80.9 | 81.0 |
| 1.3.18.6 Lifting and Handling equipment | 0.285 | 110.4 | 111.6 | 111.9 | 111.7 | 112.0 |

## No. 21: Wholesale Price Index (Concld.)

(Base: 2011-12 = 100)

| Commodities | Weight | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|---|
| | | | Feb. | Dec. | Jan. (P) | Feb. (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 | 129.6 | 128.9 | 129.0 | 128.4 | 128.4 |
| 1.3.18.9 Agricultural and Forestry machinery | 0.833 | 116.9 | 118.5 | 121.1 | 121.1 | 121.4 |
| 1.3.18.10 Metal-forming machinery and Machine tools | 0.224 | 101.8 | 104.6 | 109.0 | 108.2 | 109.5 |
| 1.3.18.11 Machinery for mining, Quarrying and Construction | 0.371 | 75.7 | 77.0 | 74.8 | 75.2 | 75.0 |
| 1.3.18.12 Machinery for food, Beverage and Tobacco processing | 0.228 | 124.7 | 123.4 | 125.6 | 126.3 | 128.6 |
| 1.3.18.13 Machinery for textile, Apparel and Leather production | 0.192 | 119.9 | 118.1 | 117.2 | 119.3 | 117.7 |
| 1.3.18.14 Other special-purpose machinery | 0.468 | 123.8 | 125.2 | 126.2 | 126.7 | 126.9 |
| 1.3.18.15 Renewable electricity generating equipment | 0.046 | 67.3 | 67.0 | 65.4 | 65.4 | 65.4 |
| **1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS** | **4.969** | **112.8** | **113.2** | **115.3** | **115.1** | **114.8** |
| 1.3.19.1 Motor vehicles | 2.600 | 113.3 | 113.6 | 115.0 | 115.0 | 114.8 |
| 1.3.19.2 Parts and Accessories for motor vehicles | 2.368 | 112.2 | 112.8 | 115.6 | 115.3 | 114.8 |
| **1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT** | **1.648** | **111.7** | **112.9** | **118.4** | **118.7** | **120.5** |
| 1.3.20.1 Building of ships and Floating structures | 0.117 | 158.8 | 158.8 | 158.8 | 158.8 | 158.8 |
| 1.3.20.2 Railway locomotives and Rolling stock | 0.110 | 104.7 | 105.2 | 106.6 | 106.6 | 106.0 |
| 1.3.20.3 Motor cycles | 1.302 | 106.6 | 107.9 | 114.7 | 115.2 | 117.6 |
| 1.3.20.4 Bicycles and Invalid carriages | 0.117 | 127.8 | 129.7 | 130.5 | 128.2 | 128.3 |
| 1.3.20.5 Other transport equipment | 0.002 | 123.5 | 124.1 | 127.0 | 127.4 | 127.5 |
| **1.3.21 MANUFACTURE OF FURNITURE** | **0.727** | **127.3** | **128.7** | **130.3** | **129.7** | **128.2** |
| 1.3.21.1 Furniture | 0.727 | 127.3 | 128.7 | 130.3 | 129.7 | 128.2 |
| **1.3.22 OTHER MANUFACTURING** | **1.064** | **107.0** | **106.4** | **114.4** | **113.1** | **117.0** |
| 1.3.22.1 Jewellery and Related articles | 0.996 | 103.9 | 103.2 | 111.6 | 110.3 | 114.4 |
| 1.3.22.2 Musical instruments | 0.001 | 174.1 | 177.0 | 172.7 | 177.2 | 175.1 |
| 1.3.22.3 Sports goods | 0.012 | 127.4 | 126.2 | 131.4 | 131.7 | 131.3 |
| 1.3.22.4 Games and Toys | 0.005 | 132.2 | 132.6 | 138.2 | 134.6 | 135.5 |
| 1.3.22.5 Medical and Dental instruments and Supplies | 0.049 | 159.2 | 160.9 | 162.5 | 162.9 | 163.2 |
| **2 FOOD INDEX** | **24.378** | **138.1** | **138.1** | **153.0** | **152.3** | **148.2** |

**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 | 2017-18 | 2018-19 | April-January | | January | |
|---|---|---|---|---|---|---|---|
| | | | | 2019 | 2020 | 2019 | 2020 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **General Index** | 100.00 | 125.3 | 130.1 | 129.0 | 129.6 | 134.4 | 137.1 |
| **1 Sectoral Classification** | | | | | | | |
| 1.1 Mining | 14.37 | 104.9 | 107.9 | 104.9 | 106.0 | 119.1 | 124.3 |
| 1.2 Manufacturing | 77.63 | 126.6 | 131.5 | 130.4 | 130.8 | 135.5 | 137.6 |
| 1.3 Electricity | 7.99 | 149.2 | 156.9 | 158.5 | 160.0 | 150.9 | 155.6 |
| **2 Use-Based Classification** | | | | | | | |
| 2.1 Primary Goods | 34.05 | 121.8 | 126.1 | 125.2 | 125.8 | 131.0 | 133.4 |
| 2.2 Capital Goods | 8.22 | 105.6 | 108.4 | 107.5 | 95.1 | 107.1 | 102.5 |
| 2.3 Intermediate Goods | 17.22 | 125.1 | 126.2 | 124.2 | 138.0 | 127.0 | 147.1 |
| 2.4 Infrastructure/ Construction Goods | 12.34 | 132.0 | 141.7 | 140.4 | 136.8 | 147.2 | 143.9 |
| 2.5 Consumer Durables | 12.84 | 123.6 | 130.4 | 130.8 | 122.7 | 128.7 | 123.6 |
| 2.6 Consumer Non-Durables | 15.33 | 139.9 | 145.5 | 143.5 | 146.8 | 159.2 | 158.7 |

**Source :** National Statistical Office, Ministry of Statistics and Programme Implementation, Government of India.

# Government Accounts and Treasury Bills

### No. 23: Union Government Accounts at a Glance

(Amount in ₹ Crore)

| Item | Financial Year | April - February | | | |
|---|---|---|---|---|---|
| | 2019-20 (Revised Estimates) | 2019-20 (Actuals) | 2018-19 (Actuals) | Percentage to Revised Estimates | |
| | | | | 2019-20 | 2018-19 |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Revenue Receipts** | **1850101** | **1377777** | **1265678** | **74.5** | **73.2** |
| 1.1 Tax Revenue (Net) | 1504587 | 1114636 | 1093923 | 74.1 | 73.7 |
| 1.2 Non-Tax Revenue | 345514 | 263141 | 171755 | 76.2 | 70.0 |
| **2 Non-Debt Capital Receipt** | **81605** | **51092** | **71662** | **62.6** | **76.9** |
| 2.1 Recovery of Loans | 16605 | 15849 | 15042 | 95.4 | 114.3 |
| 2.2 Other Receipts | 65000 | 35243 | 56620 | 54.2 | 70.8 |
| **3 Total Receipts (excluding borrowings) (1+2)** | **1931706** | **1428869** | **1337340** | **74.0** | **73.4** |
| 4 Revenue Expenditure | 2349645 | 2160701 | 1915303 | 92.0 | 89.5 |
| 4.1 Interest Payments | 625105 | 512984 | 501160 | 82.1 | 85.3 |
| 5 Capital Expenditure | 348907 | 304653 | 273536 | 87.3 | 86.4 |
| **6 Total Expenditure (4+5)** | **2698552** | **2465354** | **2188839** | **91.4** | **89.1** |
| **7 Revenue Deficit (4-1)** | **499544** | **782924** | **649625** | **156.7** | **158.1** |
| **8 Fiscal Deficit (6-3)** | **766846** | **1036485** | **851499** | **135.2** | **134.2** |
| **9 Gross Primary Deficit (8-4.1)** | **141741** | **523501** | **350339** | **369.3** | **748.1** |

**Source:** Controller General of Accounts, Ministry of Finance, Government of India.

## No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

| Item | 2018-19 | 2019 | 2020 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Mar. 1 | Jan. 24 | Jan. 31 | Feb. 7 | Feb. 14 | Feb. 21 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **1 91-day** | | | | | | | | |
| 1.1 Banks | 18521 | 24508 | 6106 | 7116 | 6634 | 7633 | 9067 | 11205 |
| 1.2 Primary Dealers | 17878 | 11010 | 12681 | 12593 | 11146 | 9997 | 7688 | 10259 |
| 1.3 State Governments | 26999 | 39293 | 46206 | 40201 | 32977 | 32492 | 24532 | 18532 |
| 1.4 Others | 27747 | 40860 | 96286 | 90368 | 87430 | 82427 | 77157 | 66467 |
| **2 182-day** | | | | | | | | |
| 2.1 Banks | 31953 | 36418 | 73785 | 73542 | 74602 | 77063 | 74068 | 71102 |
| 2.2 Primary Dealers | 38738 | 41243 | 26534 | 27297 | 29134 | 30773 | 34725 | 36667 |
| 2.3 State Governments | 28036 | 29573 | 7151 | 7155 | 7155 | 18640 | 18600 | 18600 |
| 2.4 Others | 18567 | 15591 | 19176 | 19654 | 17737 | 14604 | 14636 | 15656 |
| **3 364-day** | | | | | | | | |
| 3.1 Banks | 48811 | 49736 | 55090 | 55279 | 54682 | 54958 | 54458 | 52590 |
| 3.2 Primary Dealers | 74170 | 71165 | 53981 | 55714 | 55823 | 57385 | 58577 | 61612 |
| 3.3 State Governments | 18892 | 18937 | 22369 | 22369 | 11869 | 11869 | 11870 | 11870 |
| 3.4 Others | 62393 | 64718 | 66858 | 65783 | 66235 | 63982 | 63606 | 62394 |
| **4 14-day Intermediate** | | | | | | | | |
| 4.1 Banks | | | | | | | | |
| 4.2 Primary Dealers | | | | | | | | |
| 4.3 State Governments | 165605 | 161494 | 138311 | 141449 | 105994 | 89685 | 160993 | 179421 |
| 4.4 Others | 252 | 417 | 464 | 382 | 205 | 320 | 209 | 281 |
| **Total Treasury Bills (Excluding 14 day Intermediate T Bills) #** | 412704 | 443052 | 486223 | 477071 | 455424 | 461822 | 448983 | 436955 |

# 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** | | | | | | | | | | |
| **2019-20** | | | | | | | | | | |
| Jan. 29 | 4000 | 61 | 11114 | 7 | 27 | 3993 | 7 | 4000 | 98.74 | 5.1266 |
| Feb. 5 | 4000 | 69 | 17187 | 1408 | 26 | 3992 | 1408 | 5400 | 98.74 | 5.1241 |
| Feb. 12 | 4000 | 81 | 27124 | 712 | 10 | 3988 | 712 | 4700 | 98.75 | 5.0949 |
| Feb. 18 | 4000 | 93 | 22466 | 2034 | 20 | 3998 | 2034 | 6031 | 98.76 | 5.0566 |
| Feb. 26 | 4000 | 68 | 9041 | 2258 | 51 | 3982 | 2258 | 6240 | 98.75 | 5.0793 |
| **182-day Treasury Bills** | | | | | | | | | | |
| **2019-20** | | | | | | | | | | |
| Jan. 29 | 6000 | 82 | 16002 | 7 | 61 | 5993 | 7 | 6000 | 97.45 | 5.2396 |
| Feb. 5 | 6000 | 65 | 21886 | 5 | 23 | 5995 | 5 | 6000 | 97.45 | 5.2398 |
| Feb. 12 | 6000 | 71 | 21652 | 11503 | 23 | 5997 | 11503 | 17500 | 97.47 | 5.1997 |
| Feb. 18 | 6000 | 63 | 16816 | 0 | 28 | 6000 | 0 | 6000 | 97.49 | 5.1695 |
| Feb. 26 | 5000 | 66 | 9854 | 25 | 48 | 4975 | 25 | 5000 | 97.48 | 5.1845 |
| **364-day Treasury Bills** | | | | | | | | | | |
| **2019-20** | | | | | | | | | | |
| Jan. 29 | 3000 | 67 | 9308 | 0 | 35 | 3000 | 0 | 3000 | 94.99 | 5.2890 |
| Feb. 5 | 3000 | 61 | 9648 | 12 | 35 | 2988 | 12 | 3000 | 94.96 | 5.3221 |
| Feb. 12 | 3000 | 84 | 16401 | 10 | 5 | 2990 | 10 | 3000 | 95.03 | 5.2397 |
| Feb. 18 | 3000 | 68 | 10519 | 0 | 20 | 3000 | 0 | 3000 | 95.07 | 5.1999 |
| Feb. 26 | 3000 | 98 | 15958 | 0 | 11 | 3000 | 0 | 3000 | 95.10 | 5.1649 |

# 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 |
| February 1, 2020 | 4.25-5.25 | 4.90 |
| February 3, 2020 | 3.70-5.25 | 4.93 |
| February 4, 2020 | 3.70-5.25 | 4.98 |
| February 5, 2020 | 3.70-5.40 | 4.93 |
| February 6, 2020 | 3.70-5.25 | 4.99 |
| February 7, 2020 | 3.60-5.25 | 5.03 |
| February 10, 2020 | 3.70-5.30 | 5.02 |
| February 11, 2020 | 3.70-5.25 | 5.00 |
| February 12, 2020 | 3.70-5.25 | 4.92 |
| February 13, 2020 | 3.70-5.25 | 4.95 |
| February 14, 2020 | 3.50-5.25 | 5.01 |
| February 15, 2020 | 4.25-5.05 | 4.81 |
| February 17, 2020 | 3.70-5.25 | 4.93 |
| February 18, 2020 | 3.70-5.25 | 4.95 |
| February 20, 2020 | 3.70-5.25 | 5.05 |
| February 24, 2020 | 3.70-5.25 | 5.03 |
| February 25, 2020 | 3.70-5.25 | 4.94 |
| February 26, 2020 | 3.70-5.25 | 4.93 |
| February 27, 2020 | 3.70-5.25 | 4.90 |
| February 28, 2020 | 3.70-5.25 | 4.98 |
| February 29, 2020 | 4.05-5.25 | 5.06 |
| March 2, 2020 | 3.60-5.25 | 4.95 |
| March 3, 2020 | 3.60-5.25 | 4.91 |
| March 4, 2020 | 3.60-5.25 | 4.95 |
| March 5, 2020 | 3.70-5.25 | 4.93 |
| March 6, 2020 | 3.70-5.20 | 4.94 |
| March 7, 2020 | 4.05-5.10 | 4.83 |
| March 9, 2020 | 3.70-5.20 | 4.96 |
| March 11, 2020 | 3.70-5.15 | 4.95 |
| March 12, 2020 | 3.70-5.15 | 4.93 |
| March 13, 2020 | 3.50-5.20 | 4.96 |

**Note:** Includes Notice Money.

## No. 27: Certificates of Deposit

| Item | 2019 | 2020 | | | |
|---|---|---|---|---|---|
| | Feb. 15 | Jan. 17 | Jan. 31 | Feb. 14 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Amount Outstanding (₹ Crore) | 200250.80 | 181344.00 | 181309.00 | 186042.00 | 185932.00 |
| 1.1 Issued during the fortnight (₹ Crore) | 33384.18 | 7692.49 | 16507.91 | 18874.41 | 16537.00 |
| 2 Rate of Interest (per cent) | 6.44-8.90 | 5.10-6.86 | 5.20-7.50 | 5.22-7.16 | 5.22-6.76 |

## No. 28: Commercial Paper

| Item | 2019 | 2020 | | | |
|---|---|---|---|---|---|
| | Feb. 28 | Jan. 15 | Jan. 31 | Feb. 15 | Feb. 29 |
| | 1 | 2 | 3 | 4 | 5 |
| 1 Amount Outstanding (₹ Crore) | 520811.05 | 434895.30 | 421988.85 | 435803.25 | 400200.25 |
| 1.1 Reported during the fortnight (₹ Crore) | 90081.20 | 37801.80 | 72673.75 | 84356.40 | 56287.50 |
| 2 Rate of Interest (per cent) | 6.36-11.74 | 4.75-14.29 | 5.12-13.05 | 5.11-12.53 | 5.11-13.45 |

## No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

| Item | 2018-19 | 2019 | 2020 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Mar. 1 | Jan. 24 | Jan. 31 | Feb. 7 | Feb. 14 | Feb. 21 | Feb. 28 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 Call Money | 31280 | 41140 | 16270 | 14691 | 22212 | 19869 | 28262 | 27447 |
| 2 Notice Money | 4930 | 9366 | 805 | 8821 | 870 | 10944 | 1051 | 8014 |
| 3 Term Money | 740 | 969 | 511 | 964 | 895 | 798 | 742 | 973 |
| 4 CBLO/TRIPARTY REPO | 213010 | 329012 | 325737 | 362137 | 283432 | 308513 | 259355 | 360008 |
| 5 Market Repo | 200970 | 228157 | 201848 | 249932 | 227651 | 299777 | 221702 | 297486 |
| 6 Repo in Corporate Bond | | 1940 | 1554 | 3235 | 4886 | 1818 | 1210 | 80 |
| 7 Forex (US $ million) | 67793 | 81741 | 56489 | 72057 | 69523 | 66967 | 59151 | 83533 |
| 8 Govt. of India Dated Securities | 65800 | 56365 | 61839 | 60694 | 119431 | 109426 | 133831 | 117379 |
| 9 State Govt. Securities | 4320 | 4402 | 4644 | 4535 | 6911 | 5512 | 6413 | 6094 |
| 10 Treasury Bills | | | | | | | | |
| 10.1 91-Day | 3380 | 2277 | 2059 | 2049 | 2077 | 3071 | 6176 | 2315 |
| 10.2 182-Day | 1450 | 771 | 1267 | 1705 | 2128 | 1564 | 1608 | 863 |
| 10.3 364-Day | 1620 | 768 | 1018 | 597 | 1323 | 1182 | 1815 | 840 |
| 10.4 Cash Management Bills | 1400 | 5603 | 3206 | 2179 | 17260 | 3010 | 2687 | 4596 |
| 11 Total Govt. Securities (8+9+10) | 77970 | 70186 | 74033 | 71760 | 149132 | 123765 | 152530 | 132087 |
| 11.1 RBI | – | 2624 | 2594 | 37 | 128 | 19 | 267 | 211 |

**Note :** Collateralised Borrowing and Lending Obligation (CBLO) segment of the money market has been discontinued and replaced with Triparty Repo with effect from November 05, 2018.

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

(Amount in ₹ Crore)

| Security & Type of Issue | 2018-19 | | 2018-19 (Apr.-Feb.) | | 2019-20 (Apr.-Feb.) * | | Feb. 2019 | | Feb. 2020 * | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 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** | **129** | **16754** | **120** | **16603** | **65** | **64536** | **6** | **53** | **2** | **14** |
| 1A Premium | 124 | 16085 | 115 | 15961 | 63 | 42888 | 4 | 33 | 2 | 10 |
| 1.1 Public | 119 | 14605 | 111 | 14479 | 53 | 9851 | 5 | 27 | 2 | 14 |
| 1.1.1 Premium | 115 | 14123 | 107 | 14021 | 51 | 9425 | 3 | 16 | 2 | 10 |
| 1.2 Rights | 10 | 2149 | 9 | 2124 | 12 | 54685 | 1 | 26 | – | – |
| 1.2.1 Premium | 9 | 1962 | 8 | 1940 | 12 | 33463 | 1 | 18 | – | – |
| **2 Preference Shares** | **–** | **–** | **–** | **–** | **–** | **–** | **–** | **–** | **–** | **–** |
| 2.1 Public | – | – | – | – | – | – | – | – | – | – |
| 2.2 Rights | – | – | – | – | – | – | – | – | – | – |
| **3 Bonds & Debentures** | **25** | **36680** | **22** | **33844** | **32** | **14659** | **2** | **1286** | **2** | **498** |
| 3.1 Convertible | – | – | – | – | – | – | – | – | – | – |
| 3.1.1 Public | – | – | – | – | – | – | – | – | – | – |
| 3.1.2 Rights | – | – | – | – | – | – | – | – | – | – |
| 3.2 Non-Convertible | 25 | 36680 | 22 | 33844 | 32 | 14659 | 2 | 1286 | 2 | 498 |
| 3.2.1 Public | 25 | 36680 | 22 | 33844 | 32 | 14659 | 2 | 1286 | 2 | 498 |
| 3.2.2 Rights | – | – | – | – | – | – | – | – | – | – |
| **4 Total(1+2+3)** | **154** | **53433** | **142** | **50447** | **97** | **79195** | **8** | **1340** | **4** | **512** |
| 4.1 Public | 144 | 51284 | 133 | 48323 | 85 | 24510 | 7 | 1313 | 4 | 512 |
| 4.2 Rights | 10 | 2149 | 9 | 2124 | 12 | 54685 | 1 | 26 | – | – |

**Note :** Since April 2018, monthly data is compiled on the basis of closing date of issues as against the earlier practice of compilation on the basis of opening date.

**Source :** Securities and Exchange Board of India.

* : Data is Provisional

# External Sector

## No. 31: Foreign Trade

| Item | Unit | 2018-19 | 2019 | | | | 2020 | |
|---|---|---|---|---|---|---|---|---|
| | | | Feb. | Oct. | Nov. | Dec. | Jan. | Feb. |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 Exports | ₹ Crore | 2307726 | 191345 | 186934 | 185483 | 194919 | 185219 | 197646 |
| | US $ Million | 330078 | 26866 | 26314 | 25959 | 27379 | 25972 | 27647 |
| 1.1 Oil | ₹ Crore | 325929 | 21960 | 25061 | 28669 | 27711 | 23555 | 24265 |
| | US $ Million | 46554 | 3083 | 3528 | 4012 | 3892 | 3303 | 3394 |
| 1.2 Non-oil | ₹ Crore | 1981797 | 169385 | 161873 | 156814 | 167208 | 161664 | 173382 |
| | US $ Million | 283525 | 23783 | 22786 | 21947 | 23487 | 22669 | 24253 |
| 2 Imports | ₹ Crore | 3594675 | 260603 | 269507 | 275336 | 282124 | 293440 | 268064 |
| | US $ Million | 514078 | 36590 | 37938 | 38535 | 39628 | 41148 | 37497 |
| 2.1 Oil | ₹ Crore | 986275 | 67048 | 68763 | 79090 | 76110 | 92503 | 76894 |
| | US $ Million | 140921 | 9414 | 9680 | 11069 | 10691 | 12971 | 10756 |
| 2.2 Non-oil | ₹ Crore | 2608400 | 193555 | 200744 | 196246 | 206014 | 200938 | 191170 |
| | US $ Million | 373158 | 27176 | 28258 | 27466 | 28938 | 28177 | 26741 |
| 3 Trade Balance | ₹ Crore | -1286948 | -69258 | -82573 | -89854 | -87205 | -108221 | -70418 |
| | US $ Million | -184000 | -9724 | -11624 | -12575 | -12249 | -15175 | -9850 |
| 3.1 Oil | ₹ Crore | -660346 | -45088 | -43702 | -50421 | -48399 | -68948 | -52629 |
| | US $ Million | -94367 | -6331 | -6152 | -7057 | -6798 | -9668 | -7362 |
| 3.2 Non-oil | ₹ Crore | -626602 | -24170 | -38870 | -39433 | -38806 | -39274 | -17788 |
| | US $ Million | -89633 | -3394 | -5472 | -5519 | -5451 | -5507 | -2488 |

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

## No. 32: Foreign Exchange Reserves

| Item | Unit | 2019 | 2020 | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Mar. 15 | Feb. 7 | Feb. 14 | Feb. 21 | Feb. 28 | Mar. 6 | Mar. 13 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **1 Total Reserves** | **₹ Crore** | **2812180** | **3378130** | **3398212** | **3410238** | **3475030** | **3592435** | **3565980** |
| | **US $ Million** | **405638** | **473001** | **476092** | **476122** | **481540** | **487237** | **481892** |
| 1.1 Foreign Currency Assets | ₹ Crore | 2614690 | 3136686 | 3154503 | 3161973 | 3217272 | 3326272 | 3310406 |
| | US $ Million | 377774 | 439186 | 441949 | 441458 | 445823 | 451135 | 447358 |
| 1.2 Gold | ₹ Crore | 166650 | 205541 | 207871 | 212456 | 221398 | 228567 | 218050 |
| | US $ Million | 23408 | 28779 | 29123 | 29662 | 30680 | 31000 | 29467 |
| 1.3 SDRs | SDRs Million | 1049 | 1046 | 1045 | 1045 | 1045 | 1045 | 1045 |
| | ₹ Crore | 10110 | 10259 | 10207 | 10216 | 10331 | 10666 | 10722 |
| | US $ Million | 1461 | 1436 | 1430 | 1426 | 1432 | 1447 | 1449 |
| 1.4 Reserve Tranche Position in IMF | ₹ Crore | 20730 | 25644 | 25631 | 25593 | 26028 | 26931 | 26801 |
| | US $ Million | 2995 | 3599 | 3590 | 3575 | 3606 | 3656 | 3618 |

*** Difference,if any, is due to rounding off.**

## No. 33: NRI Deposits

(US$ Million)

| Scheme | Outstanding | | | | Flows | |
|---|---|---|---|---|---|---|
| | 2018-19 | 2019 | 2020 | | 2018-19 | 2019-20 |
| | | Feb. | Jan. | Feb. | Apr.-Feb. | Apr.-Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 NRI Deposits** | **130423** | **125599** | **133565** | **132502** | **8269** | **6697** |
| 1.1 FCNR(B) | 23170 | 21623 | 24408 | 24233 | -402 | 1063 |
| 1.2 NR(E)RA | 92017 | 89183 | 92838 | 92049 | 6795 | 3972 |
| 1.3 NRO | 15236 | 14792 | 16319 | 16220 | 1876 | 1661 |

## No. 34: Foreign Investment Inflows

(US$ Million)

| Item | 2018-19 | 2018-19 | 2019-20 | 2019 | 2020 | |
|---|---|---|---|---|---|---|
| | | Apr.-Feb. | Apr.-Feb. | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1.1 Net Foreign Direct Investment (1.1.1–1.1.2)** | **30712** | **29923** | **40625** | **1949** | **5668** | **2873** |
| **1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)** | **43302** | **40063** | **52090** | **2503** | **6742** | **4533** |
| **1.1.1.1 Gross Inflows/Gross Investments** | **62001** | **56871** | **69908** | **4394** | **8494** | **6285** |
| 1.1.1.1.1 Equity | 45055 | 41393 | 46864 | 2926 | 5631 | 3422 |
| 1.1.1.1.1.1 Government (SIA/FIPB) | 2429 | 2152 | 3077 | 22 | 24 | 26 |
| 1.1.1.1.1.2 RBI | 36315 | 33787 | 36361 | 2490 | 4751 | 3149 |
| 1.1.1.1.1.3 Acquisition of shares | 5622 | 4826 | 6262 | 353 | 795 | 186 |
| 1.1.1.1.1.4 Equity capital of unincorporated bodies | 689 | 628 | 1165 | 61 | 61 | 61 |
| 1.1.1.1.2 Reinvested earnings | 13672 | 12455 | 12836 | 1217 | 1217 | 1217 |
| 1.1.1.1.3 Other capital | 3274 | 3023 | 10209 | 251 | 1646 | 1646 |
| **1.1.1.2 Repatriation/Disinvestment** | **18699** | **16809** | **17818** | **1890** | **1752** | **1752** |
| 1.1.1.2.1 Equity | 18452 | 16573 | 17645 | 1879 | 1748 | 1748 |
| 1.1.1.2.2 Other capital | 247 | 235 | 173 | 12 | 4 | 4 |
| **1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)** | **12590** | **10140** | **11465** | **554** | **1074** | **1660** |
| 1.1.2.1 Equity capital | 7201 | 6235 | 5916 | 458 | 810 | 501 |
| 1.1.2.2 Reinvested Earnings | 3032 | 2780 | 2869 | 253 | 253 | 253 |
| 1.1.2.3 Other Capital | 5202 | 3572 | 4891 | 242 | 223 | 1118 |
| 1.1.2.4 Repatriation/Disinvestment | 2845 | 2447 | 2210 | 398 | 212 | 212 |
| **1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)** | **-618** | **-9241** | **15954** | **1175** | **-227** | **1033** |
| 1.2.1 GDRs/ADRs | 1820 | 1820 | – | – | – | – |
| 1.2.2 FIIs | -2225 | -11525 | 16300 | 1852 | -127 | 1133 |
| 1.2.3 Offshore funds and others | – | – | – | – | – | – |
| 1.2.4 Portfolio investment by India | 213 | -464 | 346 | 678 | 100 | 100 |
| **1 Foreign Investment Inflows** | **30094** | **20682** | **56579** | **3124** | **5441** | **3906** |

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

(US$ Million)

| Item | 2018-19 | 2019 | | 2020 | |
|---|---|---|---|---|---|
| | | Feb. | Dec. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 |
| **1 Outward Remittances under the LRS** | **13787.58** | **1046.51** | **1563.72** | **1804.50** | **1686.70** |
| 1.1 Deposit | 455.94 | 33.23 | 42.38 | 55.94 | 50.17 |
| 1.2 Purchase of immovable property | 84.53 | 4.56 | 4.85 | 6.67 | 7.59 |
| 1.3 Investment in equity/debt | 422.90 | 24.55 | 27.57 | 26.20 | 29.68 |
| 1.4 Gift | 1370.24 | 103.65 | 150.90 | 158.44 | 196.77 |
| 1.5 Donations | 8.67 | 0.58 | 0.89 | 1.10 | 1.16 |
| 1.6 Travel | 4803.81 | 366.36 | 620.32 | 712.56 | 539.74 |
| 1.7 Maintenance of close relatives | 2800.88 | 199.84 | 276.74 | 310.83 | 342.58 |
| 1.8 Medical Treatment | 28.59 | 1.63 | 2.68 | 2.59 | 4.02 |
| 1.9 Studies Abroad | 3569.87 | 296.71 | 420.45 | 510.26 | 496.87 |
| 1.10 Others | 242.15 | 15.40 | 16.93 | 19.90 | 18.10 |

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

| Item | 2017-18 | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|---|
| | | | March | February | March |
| | 1 | 2 | 3 | 4 | 5 |
| **36-Currency Export and Trade Based Weights (Base: 2004-05=100)** | | | | | |
| 1 Trade-Based Weights | | | | | |
| 1.1 NEER | 76.94 | 72.64 | 73.64 | 72.87 | 71.22 |
| 1.2 REER | 119.71 | 114.01 | 115.25 | 119.20 | 116.51 |
| 2 Export-Based Weights | | | | | |
| 2.1 NEER | 78.89 | 74.18 | 75.22 | 73.91 | 72.09 |
| 2.2 REER | 121.94 | 116.32 | 117.63 | 122.13 | 119.12 |
| **6-Currency Trade Based Weights** | | | | | |
| 1 Base: 2004-05 (April-March) =100 | | | | | |
| 1.1 NEER | 67.91 | 63.07 | 63.88 | 63.37 | 60.81 |
| 1.2 REER | 129.19 | 121.70 | 123.30 | 126.38 | 121.39 |
| 2 Base: 2017-18 (April-March) =100 | | | | | |
| 2.1 NEER | 100.00 | 92.88 | 94.06 | 93.32 | 89.55 |
| 2.2 REER | 100.00 | 94.20 | 95.44 | 97.83 | 93.97 |

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

(Amount in US$ Million)

| Item | 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|
| | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 |
| 1 Automatic Route | | | | |
| 1.1 Number | 999 | 88 | 110 | 84 |
| 1.2 Amount | 28387 | 2812 | 5869 | 1159 |
| 2 Approval Route | | | | |
| 2.1 Number | 21 | - | 4 | 7 |
| 2.2 Amount | 13537 | - | 2532 | 3017 |
| 3 Total (1+2) | | | | |
| 3.1 Number | 1020 | 88 | 114 | 91 |
| 3.2 Amount | 41924 | 2812 | 8401 | 4175 |
| 4 Weighted Average Maturity (in years) | 5.20 | 5.80 | 7.10 | 8.66 |
| 5 Interest Rate (per cent) | | | | |
| 5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans | 1.20 | 1.56 | 1.24 | 2.01 |
| 5.2 Interest rate range for Fixed Rate Loans | 0.00-15.00 | 1.20-10.50 | 0.00-11.10 | 0.00-11.00 |

## No. 38: India's Overall Balance of Payments

(US $ Million)

| Item | Oct-Dec 2018(PR) | | | Oct-Dec 2019(P) | | |
|---|---|---|---|---|---|---|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **Overall Balance of Payments(1+2+3)** | **285511** | **289806** | **-4296** | **314908** | **293307** | **21601** |
| **1 CURRENT ACCOUNT (1.1+ 1.2)** | **162792** | **180544** | **-17752** | **162579** | **163995** | **-1417** |
| **1.1 MERCHANDISE** | **83082** | **132363** | **-49281** | **81232** | **115856** | **-34625** |
| **1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)** | **79710** | **48181** | **31529** | **81347** | **48139** | **33208** |
| 1.2.1 Services | 55075 | 33397 | 21678 | 55158 | 33278 | 21880 |
| 1.2.1.1 Travel | 7372 | 4865 | 2508 | 8545 | 5569 | 2977 |
| 1.2.1.2 Transportation | 4807 | 5231 | -424 | 5448 | 6411 | -963 |
| 1.2.1.3 Insurance | 689 | 419 | 271 | 617 | 549 | 67 |
| 1.2.1.4 G.n.i.e. | 144 | 289 | -145 | 157 | 218 | -62 |
| 1.2.1.5 Miscellaneous | 42062 | 22594 | 19469 | 40391 | 20531 | 19860 |
| 1.2.1.5.1 Software Services | 21148 | 1254 | 19895 | 23760 | 2305 | 21455 |
| 1.2.1.5.2 Business Services | 9978 | 10135 | -156 | 11889 | 12027 | -138 |
| 1.2.1.5.3 Financial Services | 1324 | 992 | 332 | 1183 | 550 | 633 |
| 1.2.1.5.4 Communication Services | 673 | 284 | 390 | 757 | 308 | 449 |
| 1.2.2 Transfers | 18976 | 1552 | 17424 | 20627 | 1935 | 18693 |
| 1.2.2.1 Official | 102 | 237 | -134 | 50 | 290 | -240 |
| 1.2.2.2 Private | 18874 | 1316 | 17558 | 20577 | 1645 | 18932 |
| 1.2.3 Income | 5658 | 13231 | -7573 | 5562 | 12926 | -7364 |
| 1.2.3.1 Investment Income | 4295 | 12639 | -8344 | 4122 | 12232 | -8110 |
| 1.2.3.2 Compensation of Employees | 1363 | 592 | 771 | 1440 | 694 | 746 |
| **2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)** | **122719** | **108948** | **13770** | **151666** | **129312** | **22355** |
| **2.1 Foreign Investment (2.1.1+2.1.2)** | **73237** | **68038** | **5199** | **94408** | **76606** | **17802** |
| 2.1.1 Foreign Direct Investment | 16130 | 8820 | 7309 | 19713 | 9740 | 9973 |
| 2.1.1.1 In India | 15505 | 5139 | 10366 | 19085 | 5856 | 13229 |
| 2.1.1.1.1 Equity | 11002 | 5101 | 5901 | 11033 | 5747 | 5286 |
| 2.1.1.1.2 Reinvested Earnings | 3450 | | 3450 | 3590 | | 3590 |
| 2.1.1.1.3 Other Capital | 1052 | 38 | 1014 | 4462 | 109 | 4354 |
| 2.1.1.2 Abroad | 625 | 3681 | -3056 | 628 | 3884 | -3256 |
| 2.1.1.2.1 Equity | 625 | 1817 | -1192 | 628 | 1804 | -1176 |
| 2.1.1.2.2 Reinvested Earnings | 0 | 758 | -758 | 0 | 788 | -788 |
| 2.1.1.2.3 Other Capital | 0 | 1106 | -1106 | 0 | 1293 | -1293 |
| 2.1.2 Portfolio Investment | 57107 | 59218 | -2111 | 74695 | 66866 | 7829 |
| 2.1.2.1 In India | 56733 | 58921 | -2188 | 71761 | 63627 | 8133 |
| 2.1.2.1.1 FIIs | 56733 | 58921 | -2188 | 71761 | 63627 | 8133 |
| 2.1.2.1.1.1 Equity | 45530 | 47949 | -2419 | 56356 | 50342 | 6014 |
| 2.1.2.1.1.2 Debt | 11203 | 10972 | 231 | 15405 | 13285 | 2119 |
| 2.1.2.1.2 ADR/GDRs | 0 | | 0 | 0 | | 0 |
| 2.1.2.2 Abroad | 374 | 297 | 77 | 2934 | 3239 | -304 |
| **2.2 Loans (2.2.1+2.2.2+2.2.3)** | **20492** | **17554** | **2938** | **23041** | **19910** | **3131** |
| 2.2.1 External Assistance | 2960 | 1278 | 1682 | 2511 | 1243 | 1268 |
| 2.2.1.1 By India | 11 | 29 | -18 | 2 | 28 | -26 |
| 2.2.1.2 To India | 2949 | 1249 | 1700 | 2509 | 1215 | 1294 |
| 2.2.2 Commercial Borrowings | 10468 | 8466 | 2002 | 11007 | 7774 | 3233 |
| 2.2.2.1 By India | 3337 | 3346 | -9 | 2692 | 2687 | 5 |
| 2.2.2.2 To India | 7131 | 5120 | 2011 | 8315 | 5087 | 3228 |
| 2.2.3 Short Term to India | 7064 | 7809 | -745 | 9523 | 10893 | -1370 |
| 2.2.3.1 Buyers' credit & Suppliers' Credit >180 days | 4433 | 7809 | -3377 | 9523 | 10129 | -606 |
| 2.2.3.2 Suppliers' Credit up to 180 days | 2631 | 0 | 2631 | 0 | 764 | -764 |
| **2.3 Banking Capital (2.3.1+2.3.2)** | **21193** | **16279** | **4913** | **21012** | **23336** | **-2324** |
| 2.3.1 Commercial Banks | 21193 | 16095 | 5098 | 21012 | 23279 | -2266 |
| 2.3.1.1 Assets | 5964 | 1763 | 4202 | 5753 | 7260 | -1507 |
| 2.3.1.2 Liabilities | 15228 | 14332 | 896 | 15259 | 16019 | -760 |
| 2.3.1.2.1 Non-Resident Deposits | 13298 | 13159 | 139 | 14407 | 13579 | 828 |
| 2.3.2 Others | 0 | 185 | -185 | 0 | 58 | -58 |
| **2.4 Rupee Debt Service** | | 0 | 0 | | 0 | 0 |
| **2.5 Other Capital** | 7797 | 7077 | 720 | 13205 | 9460 | 3745 |
| **3 Errors & Omissions** | | **314** | **-314** | **663** | | **663** |
| **4 Monetary Movements (4.1+ 4.2)** | **4296** | 0 | **4296** | 0 | **21601** | **-21601** |
| 4.1 I.M.F. | 0 | 0 | 0 | | | |
| 4.2 Foreign Exchange Reserves (Increase - / Decrease +) | 4296 | 0 | 4296 | 0 | 21601 | -21601 |

**Note : P : Preliminary PR: Partially Revised**

# No. 39: India's Overall Balance of Payments

(₹ Crore)

| Item | Oct-Dec 2018(PR) | | | Oct-Dec 2019(P) | | |
|---|---|---|---|---|---|---|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **Overall Balance of Payments(1+2+3)** | **2057747** | **2088707** | **-30960** | **2243026** | **2089165** | **153861** |
| **1 CURRENT ACCOUNT (1.1+ 1.2)** | **1173282** | **1301224** | **-127943** | **1158014** | **1168105** | **-10091** |
| **1.1 MERCHANDISE** | **598791** | **953970** | **-355179** | **578595** | **825220** | **-246625** |
| **1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)** | **574491** | **347254** | **227236** | **579419** | **342885** | **236534** |
| 1.2.1 Services | 396941 | 240704 | 156237 | 392878 | 237033 | 155845 |
| 1.2.1.1 Travel | 53135 | 35060 | 18075 | 60866 | 39664 | 21202 |
| 1.2.1.2 Transportation | 34647 | 37704 | -3057 | 38802 | 45662 | -6860 |
| 1.2.1.3 Insurance | 4967 | 3016 | 1950 | 4395 | 3914 | 481 |
| 1.2.1.4 G.n.i.e. | 1039 | 2086 | -1047 | 1116 | 1555 | -438 |
| 1.2.1.5 Miscellaneous | 303153 | 162837 | 140316 | 287699 | 146238 | 141461 |
| 1.2.1.5.1 Software Services | 152422 | 9037 | 143385 | 169238 | 16420 | 152819 |
| 1.2.1.5.2 Business Services | 71917 | 73043 | -1126 | 84680 | 85666 | -986 |
| 1.2.1.5.3 Financial Services | 9541 | 7149 | 2392 | 8427 | 3917 | 4510 |
| 1.2.1.5.4 Communication Services | 4854 | 2046 | 2808 | 5390 | 2194 | 3196 |
| 1.2.2 Transfers | 136768 | 11188 | 125580 | 146924 | 13780 | 133143 |
| 1.2.2.1 Official | 738 | 1705 | -967 | 358 | 2066 | -1708 |
| 1.2.2.2 Private | 136030 | 9483 | 126547 | 146566 | 11714 | 134852 |
| 1.2.3 Income | 40781 | 95362 | -54581 | 39617 | 92072 | -52455 |
| 1.2.3.1 Investment Income | 30957 | 91096 | -60139 | 29362 | 87129 | -57766 |
| 1.2.3.2 Compensation of Employees | 9824 | 4266 | 5558 | 10255 | 4943 | 5312 |
| **2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)** | **884465** | **785218** | **99247** | **1080286** | **921060** | **159227** |
| 2.1 Foreign Investment (2.1.1+2.1.2) | 527835 | 490368 | 37468 | 672447 | 545645 | 126802 |
| 2.1.1 Foreign Direct Investment | 116250 | 63571 | 52680 | 140410 | 69373 | 71037 |
| 2.1.1.1 In India | 111745 | 37038 | 74707 | 135938 | 41710 | 94229 |
| 2.1.1.1.1 Equity | 79294 | 36764 | 42530 | 78585 | 40936 | 37649 |
| 2.1.1.1.2 Reinvested Earnings | 24868 | 0 | 24868 | 25569 | | 25569 |
| 2.1.1.1.3 Other Capital | 7583 | 274 | 7309 | 31784 | 774 | 31011 |
| 2.1.1.2 Abroad | 4505 | 26532 | -22027 | 4472 | 27664 | -23192 |
| 2.1.1.2.1 Equity | 4505 | 13097 | -8592 | 4472 | 12846 | -8375 |
| 2.1.1.2.2 Reinvested Earnings | 0 | 5464 | -5464 | | 5611 | -5611 |
| 2.1.1.2.3 Other Capital | 0 | 7971 | -7971 | 0 | 9207 | -9207 |
| 2.1.2 Portfolio Investment | 411585 | 426797 | -15212 | 532037 | 476272 | 55765 |
| 2.1.2.1 In India | 408890 | 424658 | -15768 | 511136 | 453204 | 57933 |
| 2.1.2.1.1 FIIs | 408890 | 424658 | -15768 | 511136 | 453204 | 57933 |
| 2.1.2.1.1.1 Equity | 328145 | 345579 | -17434 | 401412 | 358574 | 42838 |
| 2.1.2.1.1.2 Debt | 80746 | 79080 | 1666 | 109725 | 94630 | 15095 |
| 2.1.2.1.2 ADR/GDRs | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.1.2.2 Abroad | 2695 | 2139 | 556 | 20901 | 23068 | -2168 |
| **2.2 Loans (2.2.1+2.2.2+2.2.3)** | **147693** | **126518** | **21175** | **164114** | **141812** | **22303** |
| 2.2.1 External Assistance | 21334 | 9213 | 12121 | 17887 | 8856 | 9031 |
| 2.2.1.1 By India | 81 | 209 | -128 | 14 | 201 | -187 |
| 2.2.1.2 To India | 21253 | 9004 | 12249 | 17873 | 8655 | 9218 |
| 2.2.2 Commercial Borrowings | 75446 | 61020 | 14425 | 78398 | 55370 | 23028 |
| 2.2.2.1 By India | 24052 | 24119 | -67 | 19175 | 19136 | 39 |
| 2.2.2.2 To India | 51394 | 36901 | 14493 | 59224 | 36234 | 22990 |
| 2.2.3 Short Term to India | 50913 | 56284 | -5372 | 67829 | 77586 | -9757 |
| 2.2.3.1 Buyers' credit & Suppliers' Credit >180 days | 31949 | 56284 | -24335 | 67829 | 72147 | -4318 |
| 2.2.3.2 Suppliers' Credit up to 180 days | 18964 | 0 | 18964 | 0 | 5439 | -5439 |
| **2.3 Banking Capital (2.3.1+2.3.2)** | **152740** | **117328** | **35412** | **149666** | **166220** | **-16553** |
| 2.3.1 Commercial Banks | 152740 | 115997 | 36743 | 149666 | 165808 | -16142 |
| 2.3.1.1 Assets | 42987 | 12706 | 30281 | 40978 | 51709 | -10731 |
| 2.3.1.2 Liabilities | 109753 | 103292 | 6461 | 108688 | 114099 | -5411 |
| 2.3.1.2.1 Non-Resident Deposits | 95839 | 94838 | 1001 | 102621 | 96723 | 5898 |
| 2.3.2 Others | 0 | 1331 | -1331 | 0 | 411 | -411 |
| **2.4 Rupee Debt Service** | 0 | 0 | 0 | 0 | 0 | 0 |
| **2.5 Other Capital** | 56197 | 51005 | 5192 | 94059 | 67383 | 26675 |
| **3 Errors & Omissions** | 0 | **2264** | **-2264** | **4725** | 0 | **4725** |
| **4 Monetary Movements (4.1+ 4.2)** | **30960** | 0 | **30960** | 0 | **153861** | **-153861** |
| 4.1 I.M.F. | 0 | 0 | 0 | | | |
| 4.2 Foreign Exchange Reserves (Increase - / Decrease +) | 30960 | 0 | 30960 | 0 | 153861 | -153861 |

Note : P: Preliminary PR: Partially Revised

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

(US $ Million)

| Item | Oct-Dec 2018(PR) | | | Oct-Dec 2019(P) | | |
|---|---|---|---|---|---|---|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 Current Account (1.A+1.B+1.C)** | **162786** | **180523** | **-17738** | **162576** | **163968** | **-1391** |
| **1.A Goods and Services (1.A.a+1.A.b)** | **138157** | **165760** | **-27603** | **136389** | **149134** | **-12745** |
| **1.A.a Goods (1.A.a.1 to 1.A.a.3)** | **83082** | **132363** | **-49281** | **81232** | **115856** | **-34625** |
| 1.A.a.1 General merchandise on a BOP basis | 82438 | 125275 | -42837 | 80294 | 108605 | -28311 |
| 1.A.a.2 Net exports of goods under merchanting | 643 | 0 | 643 | 938 | | 938 |
| 1.A.a.3 Nonmonetary gold | | 7087 | -7087 | | 7252 | -7252 |
| **1.A.b Services (1.A.b.1 to 1.A.b.13)** | **55075** | **33397** | **21678** | **55158** | **33278** | **21880** |
| 1.A.b.1 Manufacturing services on physical inputs owned by others | 99 | 13 | 87 | 76 | 9 | 67 |
| 1.A.b.2 Maintenance and repair services n.i.e. | 64 | 376 | -313 | 64 | 207 | -143 |
| 1.A.b.3 Transport | 4807 | 5231 | -424 | 5448 | 6411 | -963 |
| 1.A.b.4 Travel | 7372 | 4865 | 2508 | 8545 | 5569 | 2977 |
| 1.A.b.5 Construction | 865 | 618 | 247 | 734 | 570 | 164 |
| 1.A.b.6 Insurance and pension services | 689 | 419 | 271 | 617 | 549 | 67 |
| 1.A.b.7 Financial services | 1324 | 992 | 332 | 1183 | 550 | 633 |
| 1.A.b.8 Charges for the use of intellectual property n.i.e. | 182 | 2173 | -1990 | 184 | 2197 | -2013 |
| 1.A.b.9 Telecommunications, computer, and information services | 21907 | 1629 | 20278 | 24592 | 2712 | 21880 |
| 1.A.b.10 Other business services | 9978 | 10135 | -156 | 11889 | 12027 | -138 |
| 1.A.b.11 Personal, cultural, and recreational services | 459 | 583 | -124 | 535 | 757 | -222 |
| 1.A.b.12 Government goods and services n.i.e. | 144 | 289 | -145 | 157 | 218 | -62 |
| 1.A.b.13 Others n.i.e. | 7183 | 6075 | 1108 | 1134 | 1502 | -367 |
| **1.B Primary Income (1.B.1 to 1.B.3)** | **5658** | **13231** | **-7573** | **5562** | **12926** | **-7364** |
| 1.B.1 Compensation of employees | 1363 | 592 | 771 | 1440 | 694 | 746 |
| 1.B.2 Investment income | 3438 | 12472 | -9035 | 3312 | 12078 | -8767 |
| 1.B.2.1 Direct investment | 1668 | 6495 | -4827 | 1369 | 5760 | -4391 |
| 1.B.2.2 Portfolio investment | 35 | 2311 | -2277 | 28 | 2435 | -2408 |
| 1.B.2.3 Other investment | 204 | 3653 | -3449 | 138 | 3871 | -3733 |
| 1.B.2.4 Reserve assets | 1531 | 14 | 1517 | 1777 | 12 | 1764 |
| 1.B.3 Other primary income | 857 | 167 | 690 | 811 | 154 | 657 |
| **1.C Secondary Income (1.C.1+1.C.2)** | **18970** | **1532** | **17438** | **20625** | **1907** | **18718** |
| 1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs | 18874 | 1316 | 17558 | 20577 | 1645 | 18932 |
| 1.C.1.1 Personal transfers (Current transfers between resident and/ | 18200 | 987 | 17213 | 19862 | 1189 | 18673 |
| 1.C.1.2 Other current transfers | 674 | 329 | 345 | 715 | 455 | 260 |
| 1.C.2 General government | 96 | 216 | -120 | 48 | 262 | -214 |
| **2 Capital Account (2.1+2.2)** | **71** | **147** | **-76** | **108** | **258** | **-150** |
| 2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets | 5 | 42 | -36 | 19 | 108 | -89 |
| 2.2 Capital transfers | 66 | 106 | -40 | 89 | 150 | -61 |
| **3 Financial Account (3.1 to 3.5)** | **126950** | **108822** | **18128** | **151560** | **150683** | **878** |
| **3.1 Direct Investment (3.1A+3.1B)** | **16130** | **8820** | **7309** | **19713** | **9740** | **9973** |
| 3.1.A Direct Investment in India | 15505 | 5139 | 10366 | 19085 | 5856 | 13229 |
| 3.1.A.1 Equity and investment fund shares | 14452 | 5101 | 9351 | 14623 | 5747 | 8875 |
| 3.1.A.1.1 Equity other than reinvestment of earnings | 11002 | 5101 | 5901 | 11033 | 5747 | 5286 |
| 3.1.A.1.2 Reinvestment of earnings | 3450 | | 3450 | 3590 | | 3590 |
| 3.1.A.2 Debt instruments | 1052 | 38 | 1014 | 4462 | 109 | 4354 |
| 3.1.A.2.1 Direct investor in direct investment enterprises | 1052 | 38 | 1014 | 4462 | 109 | 4354 |
| 3.1.B Direct Investment by India | 625 | 3681 | -3056 | 628 | 3884 | -3256 |
| 3.1.B.1 Equity and investment fund shares | 625 | 2575 | -1950 | 628 | 2591 | -1963 |
| 3.1.B.1.1 Equity other than reinvestment of earnings | 625 | 1817 | -1192 | 628 | 1804 | -1176 |
| 3.1.B.1.2 Reinvestment of earnings | | 758 | -758 | | 788 | -788 |
| 3.1.B.2 Debt instruments | 0 | 1106 | -1106 | 0 | 1293 | -1293 |
| 3.1.B.2.1 Direct investor in direct investment enterprises | | 1106 | -1106 | | 1293 | -1293 |
| **3.2 Portfolio Investment** | **57107** | **59218** | **-2111** | **74695** | **66866** | **7829** |
| 3.2.A Portfolio Investment in India | 56733 | 58921 | -2188 | 71761 | 63627 | 8133 |
| 3.2.1 Equity and investment fund shares | 45530 | 47949 | -2419 | 56356 | 50342 | 6014 |
| 3.2.2 Debt securities | 11203 | 10972 | 231 | 15405 | 13285 | 2119 |
| 3.2.B Portfolio Investment by India | 374 | 297 | 77 | 2934 | 3239 | -304 |
| **3.3 Financial derivatives (other than reserves) and employee stock options** | **5859** | **5362** | **497** | **7328** | **7194** | **134** |
| **3.4 Other investment** | **43559** | **35422** | **8137** | **49825** | **45282** | **4542** |
| 3.4.1 Other equity (ADRs/GDRs) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.2 Currency and deposits | 13298 | 13343 | -46 | 14407 | 13637 | 770 |
| 3.4.2.1 Central bank (Rupee Debt Movements; NRG) | 0 | 185 | -185 | 0 | 58 | -58 |
| 3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits) | 13298 | 13159 | 139 | 14407 | 13579 | 828 |
| 3.4.2.3 General government | | | | | | |
| 3.4.2.4 Other sectors | | | | | | |
| 3.4.3 Loans (External Assistance, ECBs and Banking Capital) | 21323 | 12681 | 8642 | 20123 | 18716 | 1407 |
| 3.4.3.A Loans to India | 17975 | 9305 | 8670 | 17429 | 16001 | 1428 |
| 3.4.3.B Loans by India | 3348 | 3376 | -27 | 2694 | 2715 | -21 |
| 3.4.4 Insurance, pension, and standardized guarantee schemes | 29 | 207 | -179 | 190 | 660 | -469 |
| 3.4.5 Trade credit and advances | 7064 | 7809 | -745 | 9523 | 10893 | -1370 |
| 3.4.6 Other accounts receivable/payable - other | 1845 | 1381 | 464 | 5581 | 1377 | 4205 |
| 3.4.7 Special drawing rights | | | | | | 0 |
| **3.5 Reserve assets** | **4296** | 0 | **4296** | 0 | **21601** | **-21601** |
| 3.5.1 Monetary gold | | | | | | 0 |
| 3.5.2 Special drawing rights n.a. | | | | | | 0 |
| 3.5.3 Reserve position in the IMF n.a. | | | | | | 0 |
| 3.5.4 Other reserve assets (Foreign Currency Assets) | 4296 | 0 | 4296 | 0 | 21601 | -21601 |
| **4 Total assets/liabilities** | **126950** | **108822** | **18128** | **151560** | **150683** | **878** |
| 4.1 Equity and investment fund shares | 66869 | 61491 | 5378 | 82059 | 69772 | 12287 |
| 4.2 Debt instruments | 53940 | 45950 | 7991 | 63920 | 57933 | 5988 |
| 4.3 Other financial assets and liabilities | 6141 | 1381 | 4759 | 5581 | 22978 | -17396 |
| **5 Net errors and omissions** | | **314** | **-314** | **663** | | **663** |

**Note : P : Preliminary PR: Partially Revised**

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

(₹ Crore)

| Item | Oct-Dec 2018(PR) | | | Oct-Dec 2019(P) | | |
|---|---|---|---|---|---|---|
| | Credit | Debit | Net | Credit | Debit | Net |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 Current Account (1.A+1.B+1.C)** | **1173236** | **1301076** | **-127839** | **1157998** | **1167908** | **-9910** |
| **1.A Goods and Services (1.A.a+1.A.b)** | **995732** | **1194674** | **-198942** | **971473** | **1062253** | **-90780** |
| **1.A.a Goods (1.A.a.1 to 1.A.a.3)** | **598791** | **953970** | **-355179** | **578595** | **825220** | **-246625** |
| 1.A.a.1 General merchandise on a BOP basis | 594154 | 902892 | -308738 | 571916 | 773569 | -201652 |
| 1.A.a.2 Net exports of goods under merchanting | 4637 | 0 | 4637 | 6679 | 0 | 6679 |
| 1.A.a.3 Nonmonetary gold | 0 | 51078 | -51078 | 0 | 51652 | -51652 |
| **1.A.b Services (1.A.b.1 to 1.A.b.13)** | **396941** | **240704** | **156237** | **392878** | **237033** | **155845** |
| 1.A.b.1 Manufacturing services on physical inputs owned by others | 716 | 91 | 626 | 543 | 63 | 480 |
| 1.A.b.2 Maintenance and repair services n.i.e. | 460 | 2713 | -2254 | 456 | 1477 | -1021 |
| 1.A.b.3 Transport | 34647 | 37704 | -3057 | 38802 | 45662 | -6860 |
| 1.A.b.4 Travel | 53135 | 35060 | 18075 | 60866 | 39664 | 21202 |
| 1.A.b.5 Construction | 6235 | 4455 | 1781 | 5227 | 4057 | 1170 |
| 1.A.b.6 Insurance and pension services | 4967 | 3016 | 1950 | 4395 | 3914 | 481 |
| 1.A.b.7 Financial services | 9541 | 7149 | 2392 | 8427 | 3917 | 4510 |
| 1.A.b.8 Charges for the use of intellectual property n.i.e. | 1314 | 15658 | -14344 | 1312 | 15650 | -14338 |
| 1.A.b.9 Telecommunications, computer, and information services | 157892 | 11741 | 146151 | 175162 | 19318 | 155844 |
| 1.A.b.10 Other business services | 71917 | 73043 | -1126 | 84680 | 85666 | -986 |
| 1.A.b.11 Personal, cultural, and recreational services | 3311 | 4203 | -892 | 3813 | 5395 | -1582 |
| 1.A.b.12 Government goods and services n.i.e. | 1039 | 2086 | -1047 | 1116 | 1555 | -438 |
| 1.A.b.13 Others n.i.e. | 51768 | 43785 | 7982 | 8079 | 10696 | -2617 |
| **1.B Primary Income (1.B.1 to 1.B.3)** | **40781** | **95362** | **-54581** | **39617** | **92072** | **-52455** |
| 1.B.1 Compensation of employees | 9824 | 4266 | 5558 | 10255 | 4943 | 5312 |
| 1.B.2 Investment income | 24777 | 89892 | -65115 | 23588 | 86031 | -62443 |
| 1.B.2.1 Direct investment | 12022 | 46809 | -34787 | 9753 | 41027 | -31274 |
| 1.B.2.2 Portfolio investment | 250 | 16658 | -16408 | 199 | 17347 | -17148 |
| 1.B.2.3 Other investment | 1471 | 26327 | -24857 | 982 | 27570 | -26588 |
| 1.B.2.4 Reserve assets | 11034 | 97 | 10936 | 12655 | 88 | 12567 |
| 1.B.3 Other primary income | 6180 | 1204 | 4976 | 5774 | 1097 | 4677 |
| **1.C Secondary Income (1.C.1+1.C.2)** | **136723** | **11039** | **125684** | **146908** | **13584** | **133324** |
| 1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs | 136030 | 9483 | 126547 | 146566 | 11714 | 134852 |
| 1.C.1.1 Personal transfers (Current transfers between resident and/ | 131173 | 7113 | 124060 | 141473 | 8471 | 133002 |
| 1.C.1.2 Other current transfers | 4857 | 2370 | 2487 | 5093 | 3243 | 1850 |
| 1.C.2 General government | 693 | 1556 | -864 | 342 | 1869 | -1527 |
| **2 Capital Account (2.1+2.2)** | **512** | **1063** | **-550** | **770** | **1837** | **-1068** |
| 2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets | 39 | 299 | -260 | 132 | 768 | -636 |
| 2.2 Capital transfers | 473 | 763 | -290 | 637 | 1069 | -432 |
| **3 Financial Account (3.1 to 3.5)** | **914958** | **784305** | **130653** | **1079533** | **1073281** | **6253** |
| **3.1 Direct Investment (3.1A+3.1B)** | **116250** | **63571** | **52680** | **140410** | **69373** | **71037** |
| 3.1.A Direct Investment in India | 111745 | 37038 | 74707 | 135938 | 41710 | 94229 |
| 3.1.A.1 Equity and investment fund shares | 104162 | 36764 | 67398 | 104154 | 40936 | 63218 |
| 3.1.A.1.1 Equity other than reinvestment of earnings | 79294 | 36764 | 42530 | 78585 | 40936 | 37649 |
| 3.1.A.1.2 Reinvestment of earnings | 24868 | 0 | 24868 | 25569 | 0 | 25569 |
| 3.1.A.2 Debt instruments | 7583 | 274 | 7309 | 31784 | 774 | 31011 |
| 3.1.A.2.1 Direct investor in direct investment enterprises | 7583 | 274 | 7309 | 31784 | 774 | 31011 |
| 3.1.B Direct Investment by India | 4505 | 26532 | -22027 | 4472 | 27664 | -23192 |
| 3.1.B.1 Equity and investment fund shares | 4505 | 18561 | -14056 | 4472 | 18457 | -13985 |
| 3.1.B.1.1 Equity other than reinvestment of earnings | 4505 | 13097 | -8592 | 4472 | 12846 | -8375 |
| 3.1.B.1.2 Reinvestment of earnings | 0 | 5464 | -5464 | 0 | 5611 | -5611 |
| 3.1.B.2 Debt instruments | 0 | 7971 | -7971 | 0 | 9207 | -9207 |
| 3.1.B.2.1 Direct investor in direct investment enterprises | 0 | 7971 | -7971 | 0 | 9207 | -9207 |
| **3.2 Portfolio Investment** | **411585** | **426797** | **-15212** | **532037** | **476272** | **55765** |
| 3.2.A Portfolio Investment in India | 408890 | 424658 | -15768 | 511136 | 453204 | 57933 |
| 3.2.1 Equity and investment fund shares | 328145 | 345579 | -17434 | 401412 | 358574 | 42838 |
| 3.2.2 Debt securities | 80746 | 79080 | 1666 | 109725 | 94630 | 15095 |
| 3.2.B Portfolio Investment by India | 2695 | 2139 | 556 | 20901 | 23068 | -2168 |
| **3.3 Financial derivatives (other than reserves) and employee stock options** | **42225** | **38642** | **3583** | **52196** | **51239** | **957** |
| **3.4 Other investment** | **313938** | **255295** | **58642** | **354890** | **322535** | **32355** |
| 3.4.1 Other equity (ADRs/GDRs) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.2 Currency and deposits | 95839 | 96169 | -330 | 102621 | 97135 | 5486 |
| 3.4.2.1 Central bank (Rupee Debt Movements; NRG) | 0 | 1331 | -1331 | 0 | 411 | -411 |
| 3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits) | 95839 | 94838 | 1001 | 102621 | 96723 | 5898 |
| 3.4.2.3 General government | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.2.4 Other sectors | 0 | 0 | 0 | 0 | 0 | 0 |
| 3.4.3 Loans (External Assistance, ECBs and Banking Capital) | 153680 | 91392 | 62288 | 143331 | 133310 | 10020 |
| 3.4.3.A Loans to India | 129547 | 67064 | 62483 | 124142 | 113973 | 10168 |
| 3.4.3.B Loans by India | 24133 | 24328 | -195 | 19189 | 19337 | -148 |
| 3.4.4 Insurance, pension, and standardized guarantee schemes | 207 | 1494 | -1287 | 1355 | 4699 | -3344 |
| 3.4.5 Trade credit and advances | 50913 | 56284 | -5372 | 67829 | 77586 | -9757 |
| 3.4.6 Other accounts receivable/payable - other | 13298 | 9955 | 3343 | 39755 | 9805 | 29949 |
| 3.4.7 Special drawing rights | 0 | 0 | 0 | 0 | 0 | 0 |
| **3.5 Reserve assets** | **30960** | **0** | **30960** | **0** | **153861** | **-153861** |
| 3.5.1 Monetary gold | | | | | | |
| 3.5.2 Special drawing rights n.a. | | | | | | |
| 3.5.3 Reserve position in the IMF n.a. | | | | | | |
| 3.5.4 Other reserve assets (Foreign Currency Assets) | 30960 | 0 | 30960 | 0 | 153861 | -153861 |
| **4 Total assets/liabilities** | **914958** | **784305** | **130653** | **1079533** | **1073281** | **6253** |
| 4.1 Equity and investment fund shares | 481939 | 443179 | 38761 | 584489 | 496972 | 87516 |
| 4.2 Debt instruments | 388761 | 331171 | 57590 | 455289 | 412642 | 42648 |
| 4.3 Other financial assets and liabilities | 44258 | 9955 | 34302 | 39755 | 163666 | -123912 |
| **5 Net errors and omissions** | **0** | **2264** | **-2264** | **4725** | **0** | **4725** |

Note : P: Preliminary PR: Partially Revised

## No. 42: International Investment Position

(US$ Million)

| Item | As on Financial Year /Quarter End | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018-19 | | 2018 | | 2019 | | | |
| | | | Dec. | | Sep. | | Dec. | |
| | Assets | Liabilities | Assets | Liabilities | Assets | Liabilities | Assets | Liabilities |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 Direct Investment Abroad/in India | 169964 | 399229 | 166594 | 386172 | 175438 | 417137 | 178694 | 426928 |
| 1.1 Equity Capital and Reinvested Earnings | 111122 | 382105 | 109875 | 369544 | 114340 | 398819 | 116303 | 404393 |
| 1.2 Other Capital | 58841 | 17124 | 56719 | 16628 | 61099 | 18318 | 62392 | 22536 |
| 2 Portfolio Investment | 4699 | 260313 | 2666 | 245842 | 4541 | 260001 | 4845 | 266707 |
| 2.1 Equity | 590 | 147479 | 1386 | 138091 | 2344 | 144039 | 2619 | 148859 |
| 2.2 Debt | 4109 | 112834 | 1280 | 107752 | 2197 | 115962 | 2226 | 117848 |
| 3 Other Investment | 54538 | 419092 | 41550 | 401165 | 55406 | 428901 | 54006 | 430301 |
| 3.1 Trade Credit | 924 | 105192 | 252 | 103657 | 1707 | 106581 | 2286 | 105214 |
| 3.2 Loan | 9884 | 167924 | 6553 | 160322 | 7895 | 174838 | 6183 | 177286 |
| 3.3 Currency and Deposits | 25158 | 130644 | 17211 | 125997 | 27563 | 133105 | 27099 | 133331 |
| 3.4 Other Assets/Liabilities | 18574 | 15332 | 17534 | 11190 | 18240 | 14378 | 18438 | 14469 |
| 4 Reserves | 412871 | | 395591 | | 433707 | | 459863 | |
| 5 Total Assets/ Liabilities | 642072 | 1078634 | 606401 | 1033179 | 669092 | 1106039 | 697409 | 1123937 |
| **6 IIP (Assets - Liabilities)** | | -436563 | | -426779 | | -436947 | | -426528 |

# Payment and Settlement Systems

## No.43: Payment System Indicators

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

| System | Volume (Lakh ) | | | | Value (₹ Crore) | | | |
|---|---|---|---|---|---|---|---|---|
| | FY 2018-19 | 2019 | 2020 | | FY 2018-19 | 2019 | 2020 | |
| | | Feb. | Jan. | Feb. | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **A. Settlement Systems** | | | | | | | | |
| **Financial Market Infrastructures (FMIs)** | | | | | | | | |
| **1 CCIL Operated Systems (1.1 to 1.3)** | – | – | 3.01 | 2.80 | – | – | 12826782 | 10821111 |
| 1.1 Govt. Securities Clearing (1.1.1 to 1.1.3) | – | – | 1.09 | 1.17 | – | – | 8442926 | 6868007 |
| 1.1.1 Outright | – | – | 0.66 | 0.82 | – | – | 957188 | 1209395 |
| 1.1.2 Repo | – | – | 0.21 | 0.19 | – | – | 2999019 | 2604693 |
| 1.1.3 Tri-party Repo | – | – | 0.22 | 0.16 | – | – | 4486719 | 3053919 |
| 1.2 Forex Clearing | – | – | 1.88 | 1.59 | – | – | 4083916 | 3603514 |
| 1.3 Rupee Derivatives @ | – | – | 0.05 | 0.04 | – | – | 299940 | 349590 |
| **B. Payment Systems** | | | | | | | | |
| **I Financial Market Infrastructures (FMIs)** | – | – | – | – | – | – | – | – |
| **1 Credit Transfers - RTGS (1.1 to 1.2)** | – | – | 137.29 | 133.16 | – | – | 9880821 | 8990097 |
| 1.1 Customer Transactions | – | – | 135.09 | 131.07 | – | – | 8558049 | 7718135 |
| 1.2 Interbank Transactions | – | – | 2.20 | 2.08 | – | – | 1322772 | 1271962 |
| **II Retail** | | | | | | | | |
| **2 Credit Transfers - Retail (2.1 to 2.7)** | – | – | 21194.27 | 20409.50 | – | – | 2454422 | 2396212 |
| 2.1 AePS (Fund Transfers) @ | – | – | 0.76 | 0.74 | – | – | 37 | 40 |
| 2.2 APBS $ | – | – | 1511.41 | 1400.59 | – | – | 9427 | 8889 |
| 2.3 ECS Cr | – | – | 0.09 | 0.00 | – | – | 43 | – |
| 2.4 IMPS | – | – | 2595.26 | 2477.98 | – | – | 216811 | 214566 |
| 2.5 NACH Cr $ | – | – | 1431.01 | 789.68 | – | – | 82398 | 79707 |
| 2.6 NEFT | – | – | 2605.55 | 2483.57 | – | – | 1929464 | 1870494 |
| 2.7 UPI @ | – | – | 13050.19 | 13256.93 | – | – | 216243 | 222517 |
| 2.7.1 of which USSD @ | – | – | 0.78 | 0.70 | – | – | 14 | 12 |
| **3 Debit Transfers and Direct Debits (3.1 to 3.4)** | – | – | 812.33 | 827.05 | – | – | 73506 | 73479 |
| 3.1 BHIM Aadhaar Pay @ | – | – | 9.36 | 9.67 | – | – | 141 | 149 |
| 3.2 ECS Dr | – | – | 0.00 | 0.00 | – | – | – | – |
| 3.3 NACH Dr $ | – | – | 777.36 | 789.31 | – | – | 73316 | 73277 |
| 3.4 NETC (linked to bank account) @ | – | – | 25.61 | 28.07 | – | – | 49 | 53 |
| **4 Card Payments (4.1 to 4.2)** | – | – | 6654.46 | 6264.71 | – | – | 151147 | 142375 |
| 4.1 Credit Cards (4.1.1 to 4.1.2) | – | – | 2017.27 | 1882.94 | – | – | 66573 | 62148 |
| 4.1.1 PoS based $ | – | – | 1160.35 | 1072.50 | – | – | 35124 | 33446 |
| 4.1.2 Others $ | – | – | 856.92 | 810.44 | – | – | 31449 | 28701 |
| 4.2 Debit Cards (4.2.1 to 4.2.1 ) | – | – | 4637.19 | 4381.77 | – | – | 84575 | 80227 |
| 4.2.1 PoS based $ | – | – | 2587.38 | 2455.92 | – | – | 38907 | 36258 |
| 4.2.2 Others $ | – | – | 2049.81 | 1925.85 | – | – | 45667 | 43968 |
| **5 Prepaid Payment Instruments (5.1 to 5.2)** | – | – | 5237.05 | 5026.37 | – | – | 18286 | 17296 |
| 5.1 Wallets | – | – | 3876.23 | 3782.82 | – | – | 15408 | 14461 |
| **5.2 Cards (5.2.1 to 5.2.2)** | – | – | 1360.82 | 1243.55 | – | – | 2878 | 2836 |
| 5.2.1 PoS based $ | – | – | 128.35 | 115.30 | – | – | 997 | 1116 |
| 5.2.2 Others $ | – | – | 1232.47 | 1128.25 | – | – | 1880 | 1719 |
| **6 Paper-based Instruments (6.1 to 6.2)** | – | – | 887.17 | 884.95 | – | – | 662399 | 659458 |
| 6.1 CTS (NPCI Managed) | – | – | 886.39 | 884.58 | – | – | 661741 | 659157 |
| 6.2 Others | – | – | 0.78 | 0.37 | – | – | 658 | 301 |
| **Total - Retail Payments (2+3+4+5+6)** | – | – | 34785.27 | 33412.57 | – | – | 3359760 | 3288820 |
| **Total Payments (1+2+3+4+5+6)** | – | – | 34922.56 | 33545.73 | – | – | 13240581 | 12278916 |
| **Total Digital Payments (1+2+3+4+5)** | – | – | 34035.39 | 32660.78 | – | – | 12578182 | 11619458 |

## PART II - Payment Modes and Channels

| System | Volume (Lakh ) | | | | Value (₹ Crore) | | | |
|---|---|---|---|---|---|---|---|---|
| | FY 2018-19 | 2019 | 2020 | | FY 2018-19 | 2019 | 2020 | |
| | | Feb. | Jan. | Feb. | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **A. Other Payment Channels** | | | | | | | | |
| **1 Mobile Payments (mobile app based) (1.1 to 1.2)** | – | – | 14402.70 | 14284.28 | – | – | 521368 | 525845 |
| 1.1 Intra-bank $ | – | – | 1304.45 | 1304.52 | – | – | 107648 | 108332 |
| 1.2 Inter-bank $ | – | – | 13098.24 | 12979.75 | – | – | 413720 | 417513 |
| **2 Internet Payments (Netbanking / Internet Browser Based) @ (2.1 to 2.2)** | – | – | 2749.95 | 2837.88 | – | – | 3162106 | 2881819 |
| 2.1 Intra-bank @ | – | – | 612.52 | 630.85 | – | – | 1641898 | 1313016 |
| 2.2 Inter-bank @ | – | – | 2137.43 | 2207.03 | – | – | 1520208 | 1568803 |
| **B. ATMs** | | | | | | | | |
| **3 Cash Withdrawal at ATMs $ (3.1 to 3.3)** | – | – | 6568.95 | 6203.24 | – | – | 298514 | 286006 |
| 3.1 Using Credit Cards $ | – | – | 8.53 | 7.97 | – | – | 399 | 379 |
| 3.2 Using Debit Cards $ | – | – | 6531.99 | 6167.30 | – | – | 297116 | 284652 |
| 3.3 Using Pre-paid Cards $ | – | – | 28.43 | 27.96 | – | – | 999 | 974 |
| **4 Cash Withdrawal at PoS $ (4.1 to 4.2)** | – | – | 102.47 | 65.97 | – | – | 177 | 194 |
| 4.1 Using Debit Cards $ | – | – | 92.41 | 59.42 | – | – | 163 | 132 |
| 4.2 Using Pre-paid Cards $ | – | – | 10.06 | 6.55 | – | – | 14 | 63 |
| **5 Cash Withrawal at Micro ATMs @** | – | – | 400.77 | 386.44 | – | – | 11109 | 11201 |
| 5.1 AePS @ | – | – | 400.77 | 386.44 | – | – | 11109 | 11201 |

## PART III - Payment Infrastructures (Lakh)

| System | FY 2018-19 | 2019 | 2020 | |
|---|---|---|---|---|
| | | Feb. | Jan. | Feb. |
| | 1 | 2 | 3 | 4 |
| **Payment System Infrastructures** | | | | |
| **1 Number of Cards (1.1 to 1.2)** | – | – | 8725.30 | 8801.81 |
| 1.1 Credit Cards | – | – | 561.20 | 571.58 |
| 1.2 Debit Cards | – | – | 8164.10 | 8230.23 |
| **2 Number of PPIs @ (2.1 to 2.2)** | – | – | 17574.74 | 18000.38 |
| 2.1 Wallets @ | – | – | 16575.31 | 16809.60 |
| 2.2 Cards @ | – | – | 999.43 | 1190.78 |
| **3 Number of ATMs (3.1 to 3.2)** | – | – | 2.33 | 2.34 |
| 3.1 Bank owned ATMs $ | – | – | 2.10 | 2.11 |
| 3.2 White Label ATMs $ | – | – | 0.23 | 0.23 |
| **4 Number of Micro ATMs @** | – | – | 2.56 | 2.64 |
| **5 Number of PoS Terminals** | – | – | 49.47 | 51.00 |
| **6 Bharat QR @** | – | – | 17.79 | 18.96 |

@: New inclusion w.e.f. November 2019
$ : Inclusion separately initiated from November 2019 - would have been part of other items hitherto.

**Note :** 1. Data is provisional.
2. The data for November 2019 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.
3. Only domestic financial transactions are considered. The new format captures e-commerce transactions; transactions using FASTags; digtal 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 | | 2018-19 | 2018 | 2019 | | |
|---|---|---|---|---|---|---|
| | | | Nov. | Sep. | Oct. | Nov. |
| | | 1 | 2 | 3 | 4 | 5 |
| **1 Small Savings** | **Receipts** | **115714** | **8671** | **-432** | **9717** | **14106** |
| | **Outstanding** | **918459** | **870336** | **974938** | **985145** | **999208** |
| **1.1 Total Deposits** | **Receipts** | **91108** | **7262** | **-2412** | **7874** | **10876** |
| | **Outstanding** | **618418** | **584853** | **662945** | **670819** | **681695** |
| 1.1.1 Post Office Saving Bank Deposits | Receipts | 31037 | 1650 | -9655 | 1704 | 1881 |
| | Outstanding | 140247 | 127270 | 143422 | 145126 | 147007 |
| 1.1.2 MGNREG | Receipts | | | | | |
| | Outstanding | | | | | |
| 1.1.3 National Saving Scheme, 1987 | Receipts | -31 | 38 | -19 | -12 | 80 |
| | Outstanding | 3107 | 2947 | 2947 | 2935 | 3015 |
| 1.1.4 National Saving Scheme, 1992 | Receipts | 53 | -2 | -2 | -5 | 823 |
| | Outstanding | 10 | -11 | -9 | -14 | 809 |
| 1.1.5 Monthly Income Scheme | Receipts | 10967 | 938 | 1246 | 1086 | 1584 |
| | Outstanding | 192658 | 188723 | 199037 | 200123 | 201707 |
| 1.1.6 Senior Citizen Scheme 2004 | Receipts | 13990 | 1197 | 1521 | 1408 | 1706 |
| | Outstanding | 55708 | 50840 | 64280 | 65688 | 67394 |
| 1.1.7 Post Office Time Deposits | Receipts | 25000 | 2089 | 3229 | 2606 | 3625 |
| | Outstanding | 124292 | 114411 | 142095 | 144701 | 148326 |
| 1.1.7.1 1 year Time Deposits | Outstanding | 71534 | 66578 | 81128 | 82377 | 84270 |
| 1.1.7.2 2 year Time Deposits | Outstanding | 5910 | 5478 | 6451 | 6531 | 6637 |
| 1.1.7.3 3 year Time Deposits | Outstanding | 6901 | 6792 | 7155 | 7193 | 7262 |
| 1.1.7.4 5 year Time Deposits | Outstanding | 39947 | 35563 | 47361 | 48600 | 50157 |
| 1.1.8 Post Office Recurring Deposits | Receipts | 10081 | 1352 | 1268 | 1087 | 1177 |
| | Outstanding | 102401 | 100689 | 111177 | 112264 | 113441 |
| 1.1.9 Post Office Cumulative Time Deposits | Receipts | 11 | 0 | 0 | 0 | 0 |
| | Outstanding | -26 | -37 | -25 | -25 | -25 |
| 1.1.10 Other Deposits | Receipts | 0 | 0 | 0 | 0 | 0 |
| | Outstanding | 21 | 21 | 21 | 21 | 21 |
| **1.2 Saving Certificates** | **Receipts** | **16067** | **1223** | **2230** | **1634** | **2580** |
| | **Outstanding** | **221517** | **214368** | **232925** | **235049** | **237586** |
| 1.2.1 National Savings Certificate VIII issue | Receipts | 11318 | 962 | 1304 | 905 | 1717 |
| | Outstanding | 98492 | 91250 | 105156 | 106061 | 107778 |
| 1.2.2 Indira Vikas Patras | Receipts | 334 | 0 | -53 | -1 | 0 |
| | Outstanding | 263 | 283 | -288 | -289 | -289 |
| 1.2.3 Kisan Vikas Patras | Receipts | -18678 | -1669 | -1135 | -822 | -1090 |
| | Outstanding | 19303 | 26391 | 9665 | 8843 | 7753 |
| 1.2.4 Kisan Vikas Patras - 2014 | Receipts | 23018 | 1915 | 2120 | 1552 | 1953 |
| | Outstanding | 93630 | 84895 | 107743 | 109295 | 111248 |
| 1.2.5 National Saving Certificate VI issue | Receipts | 93 | 15 | -6 | 0 | 0 |
| | Outstanding | 2 | -81 | -179 | -179 | -179 |
| 1.2.6 National Saving Certificate VII issue | Receipts | -18 | 0 | 0 | 0 | 0 |
| | Outstanding | -80 | -81 | -82 | -82 | -82 |
| 1.2.7 Other Certificates | Outstanding | 9907 | 11711 | 10910 | 11400 | 11357 |
| **1.3 Public Provident Fund** | **Receipts** | **8539** | **186** | **-250** | **209** | **650** |
| | **Outstanding** | **78524** | **71115** | **79068** | **79277** | **79927** |

**Source:** Accountant General, Post and Telegraphs.

**Note :** Data on receipts fron April 2017 are net receipts, *i.e.*, gross receipt minus gross payment.

## No. 45 : Ownership Pattern of Central and State Governments Securities

(Per cent)

| Central Government Dated Securities | | | | | |
|---|---|---|---|---|---|
| Category | 2018 | 2019 | | | |
| | Dec. | Mar. | Jun. | Sep. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| **(A) Total** (in ₹. Crore) | **5758103** | **5921026** | **6072243** | **6314426** | **6512659** |
| 1 Commercial Banks | 40.51 | 40.28 | 39.05 | 39.66 | 39.05 |
| 2 Non-Bank PDs | 0.33 | 0.31 | 0.36 | 0.42 | 0.39 |
| 3 Insurance Companies | 24.57 | 24.34 | 24.88 | 24.86 | 24.90 |
| 4 Mutual Funds | 0.64 | 0.35 | 0.64 | 0.77 | 1.53 |
| 5 Co-operative Banks | 2.38 | 2.29 | 2.17 | 2.01 | 1.97 |
| 6 Financial Institutions | 1.01 | 1.05 | 1.05 | 1.15 | 1.14 |
| 7 Corporates | 1.05 | 0.97 | 0.99 | 0.92 | 0.84 |
| 8 Foreign Portfolio Investors | 3.60 | 3.22 | 3.27 | 3.31 | 3.33 |
| 9 Provident Funds | 5.54 | 5.47 | 5.35 | 4.87 | 4.93 |
| 10 RBI | 13.81 | 15.27 | 15.67 | 14.99 | 14.72 |
| 11. Others | 6.55 | 6.46 | 6.57 | 7.05 | 7.23 |
| 11.1 State Governments | 1.97 | 2.00 | 2.02 | 1.99 | 1.97 |

| State Governments Securities | | | | | |
|---|---|---|---|---|---|
| Category | 2018 | 2019 | | | |
| | Dec. | Mar. | Jun. | Sep. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| **(B) Total** (in ₹. Crore) | **2669393** | **2777229** | **2826935** | **2905169** | **3047353** |
| 1 Commercial Banks | 34.00 | 33.87 | 32.57 | 32.53 | 32.46 |
| 2 Non-Bank PDs | 0.60 | 0.58 | 0.81 | 0.72 | 0.64 |
| 3 Insurance Companies | 33.90 | 33.04 | 33.94 | 33.39 | 32.50 |
| 4 Mutual Funds | 1.23 | 1.20 | 1.24 | 1.12 | 1.20 |
| 5 Co-operative Banks | 4.67 | 4.55 | 4.65 | 4.24 | 4.16 |
| 6 Financial Institutions | 0.37 | 0.42 | 0.44 | 0.33 | 0.31 |
| 7 Corporates | 0.22 | 0.29 | 0.32 | 0.28 | 0.31 |
| 8 Foreign Portfolio Investors | 0.09 | 0.09 | 0.08 | 0.05 | 0.04 |
| 9 Provident Funds | 21.29 | 22.15 | 21.88 | 22.36 | 23.66 |
| 10 RBI | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11. Others | 3.64 | 3.81 | 4.08 | 4.98 | 4.73 |
| 11.1 State Governments | 0.07 | 0.11 | 0.14 | 0.16 | 0.17 |

| Treasury Bills | | | | | |
|---|---|---|---|---|---|
| Category | 2018 | 2019 | | | |
| | Dec. | Mar. | Jun. | Sep. | Dec. |
| | 1 | 2 | 3 | 4 | 5 |
| **(C) Total** (in ₹. Crore) | **529826** | **412704** | **524618** | **538041** | **514588** |
| 1 Commercial Banks | 53.76 | 57.56 | 53.60 | 50.81 | 45.19 |
| 2 Non-Bank PDs | 2.06 | 2.68 | 1.85 | 1.92 | 2.07 |
| 3 Insurance Companies | 4.74 | 6.61 | 5.13 | 5.55 | 5.76 |
| 4 Mutual Funds | 5.65 | 2.78 | 13.00 | 14.08 | 20.42 |
| 5 Co-operative Banks | 1.21 | 2.48 | 2.54 | 2.55 | 2.07 |
| 6 Financial Institutions | 1.88 | 2.49 | 2.14 | 1.82 | 2.12 |
| 7 Corporates | 1.86 | 2.23 | 1.67 | 1.57 | 1.66 |
| 8 Foreign Portfolio Investors | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 Provident Funds | 0.02 | 0.08 | 0.07 | 0.01 | 0.01 |
| 10 RBI | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11. Others | 28.81 | 23.10 | 19.99 | 21.70 | 20.70 |
| 11.1 State Governments | 24.04 | 17.91 | 15.59 | 17.91 | 16.36 |

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

(₹ Crore)

| Item | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 RE | 2019-20 BE |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| **1 Total Disbursements** | **3285210** | **3760611** | **4265969** | **4515946** | **5516932** | **6071777** |
| 1.1 Developmental | 1872062 | 2201287 | 2537905 | 2635110 | 3344948 | 3660857 |
| 1.1.1 Revenue | 1483018 | 1668250 | 1878417 | 2029044 | 2543965 | 2830634 |
| 1.1.2 Capital | 332262 | 412069 | 501213 | 519356 | 694352 | 732102 |
| 1.1.3 Loans | 56782 | 120968 | 158275 | 86710 | 106630 | 98121 |
| 1.2 Non-Developmental | 1366769 | 1510810 | 1672646 | 1812455 | 2089516 | 2315637 |
| 1.2.1 Revenue | 1269520 | 1379727 | 1555239 | 1741432 | 2002766 | 2204742 |
| 1.2.1.1 Interest Payments | 584542 | 648091 | 724448 | 814757 | 901783 | 1009776 |
| 1.2.2 Capital | 94687 | 127306 | 115775 | 69370 | 85375 | 109030 |
| 1.2.3 Loans | 2563 | 3777 | 1632 | 1654 | 1375 | 1865 |
| 1.3 Others | 46379 | 48514 | 55417 | 68381 | 82469 | 95284 |
| **2 Total Receipts** | **3189737** | **3778049** | **4288432** | **4528422** | **5364245** | **6003162** |
| 2.1 Revenue Receipts | 2387693 | 2748374 | 3132201 | 3376416 | 4205473 | 4653758 |
| 2.1.1 Tax Receipts | 2020728 | 2297101 | 2622145 | 2978134 | 3512454 | 3910428 |
| 2.1.1.1 Taxes on commodities and services | 1212348 | 1440952 | 1652377 | 1853859 | 2186529 | 2399337 |
| 2.1.1.2 Taxes on Income and Property | 805176 | 852271 | 965622 | 1121189 | 1323113 | 1506912 |
| 2.1.1.3 Taxes of Union Territories (Without Legislature) | 3204 | 3878 | 4146 | 3086 | 2812 | 4179 |
| 2.1.2 Non-Tax Receipts | 366965 | 451272 | 510056 | 398282 | 693019 | 743330 |
| 2.1.2.1 Interest Receipts | 39622 | 35779 | 33220 | 34224 | 36739 | 33619 |
| 2.2 Non-debt Capital Receipts | 60955 | 59827 | 69063 | 142433 | 136636 | 170056 |
| 2.2.1 Recovery of Loans & Advances | 22072 | 16561 | 20942 | 42213 | 56398 | 63131 |
| 2.2.2 Disinvestment proceeds | 38883 | 43266 | 48122 | 100219 | 80238 | 106926 |
| **3 Gross Fiscal Deficit [ 1 - ( 2.1 + 2.2 ) ]** | **836563** | **952410** | **1064704** | **997097** | **1174823** | **1247962** |
| **3A Sources of Financing: Institution-wise** | | | | | | |
| 3A.1 Domestic Financing | 823630 | 939662 | 1046708 | 989167 | 1179716 | 1250914 |
| 3A.1.1 Net Bank Credit to Government | -37476 | 231090 | 617123 | 144792 | 386389 | ... |
| 3A.1.1.1 Net RBI Credit to Government | -334185 | 60472 | 195816 | -144847 | 325987 | ... |
| 3A.1.2 Non-Bank Credit to Government | 861106 | 708572 | 429585 | 844375 | 793327 | ----- |
| 3A.2 External Financing | 12933 | 12748 | 17997 | 7931 | -4893 | -2952 |
| **3B Sources of Financing: Instrument-wise** | | | | | | |
| 3B.1 Domestic Financing | 823630 | 939662 | 1046708 | 989167 | 1179716 | 1250914 |
| 3B.1.1 Market Borrowings (net) | 664058 | 673298 | 689821 | 794856 | 831554 | 959294 |
| 3B.1.2 Small Savings (net) | -56580 | -78515 | -105038 | -163222 | -217165 | -208528 |
| 3B.1.3 State Provident Funds (net) | 34339 | 35261 | 45688 | 42351 | 42703 | 42482 |
| 3B.1.4 Reserve Funds | 5109 | -3322 | -6436 | 18423 | -14577 | -871 |
| 3B.1.5 Deposits and Advances | 27545 | 13470 | 17792 | 25138 | 16011 | 13706 |
| 3B.1.6 Cash Balances | 95474 | -17438 | -22463 | -12476 | 152688 | 68615 |
| 3B.1.7 Others | 53684 | 316908 | 427343 | 284095 | 368504 | 376216 |
| 3B.2 External Financing | 12933 | 12748 | 17997 | 7931 | -4893 | -2952 |
| *4 Total Disbursements as per cent of GDP* | *26.3* | *27.3* | *27.8* | *26.4* | *29.0* | *28.8* |
| *5 Total Receipts as per cent of GDP* | *25.6* | *27.4* | *27.9* | *26.5* | *28.2* | *28.5* |
| *6 Revenue Receipts as per cent of GDP* | *19.2* | *20.0* | *20.4* | *19.8* | *22.1* | *22.1* |
| *7 Tax Receipts as per cent of GDP* | *16.2* | *16.7* | *17.1* | *17.4* | *18.5* | *18.5* |
| *8 Gross Fiscal Deficit as per cent of GDP* | *6.7* | *6.9* | *6.9* | *5.8* | *6.2* | *5.9* |

…: 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 February-2020 | | | | | |
|---|---|---|---|---|---|---|---|
| | | 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 | 1490 | 26 | 871 | 19 | 73 | 3 |
| 2 | Arunachal Pradesh | - | - | - | - | - | - |
| 3 | Assam | - | - | - | - | - | - |
| 4 | Bihar | - | - | - | - | - | - |
| 5 | Chhattisgarh | - | - | - | - | - | - |
| 6 | Goa | 94 | 5 | - | - | - | - |
| 7 | Gujarat | - | - | - | - | - | - |
| 8 | Haryana | - | - | - | - | - | - |
| 9 | Himachal Pradesh | - | - | - | - | - | - |
| 10 | Jammu & Kashmir | - | - | 546 | 26 | 76 | 4 |
| 11 | Jharkhand | - | - | - | - | - | - |
| 12 | Karnataka | - | - | - | - | - | - |
| 13 | Kerala | 312 | 26 | 796 | 22 | 1017 | 8 |
| 14 | Madhya Pradesh | - | - | - | - | - | - |
| 15 | Maharashtra | - | - | - | - | - | - |
| 16 | Manipur | 81 | 24 | 120 | 14 | 46 | 6 |
| 17 | Meghalaya | - | - | - | - | - | - |
| 18 | Mizoram | - | - | - | - | - | - |
| 19 | Nagaland | 420 | 29 | 124 | 6 | - | - |
| 20 | Odisha | - | - | - | - | - | - |
| 21 | Puducherry | - | - | - | - | - | - |
| 22 | Punjab | 225 | 14 | 621 | 12 | 131 | 5 |
| 23 | Rajasthan | - | - | - | - | - | - |
| 24 | Tamil Nadu | - | - | - | - | - | - |
| 25 | Telangana | 1282 | 23 | - | - | - | - |
| 26 | Tripura | - | - | - | - | - | - |
| 27 | Uttar Pradesh | - | - | - | - | - | - |
| 28 | Uttarakhand | 564 | 29 | 215 | 9 | - | - |
| 29 | West Bengal | 792 | 13 | - | - | - | - |

**Source:** Reserve Bank of India.

## No. 48: Investments by State Governments

(₹ Crore)

| Sr. No | State/Union Territory | As on end of February 2020 | | | |
|---|---|---|---|---|---|
| | | Consolidated Sinking Fund (CSF) | Guarantee Redemption Fund (GRF) | Government Securities | Auction Treasury Bills (ATBs) |
| | 1 | 2 | 3 | 4 | 5 |
| 1 | Andhra Pradesh | 7973 | 784 | -- | - |
| 2 | Arunachal Pradesh | 1300 | 1 | -- | - |
| 3 | Assam | 4233 | 50 | -- | 1000 |
| 4 | Bihar | 7618 | -- | -- | - |
| 5 | Chhattisgarh | 4253 | -- | 1 | 5500 |
| 6 | Goa | 572 | 288 | -- | - |
| 7 | Gujarat | 13122 | 462 | -- | - |
| 8 | Haryana | 2004 | 1153 | -- | - |
| 9 | Himachal Pradesh | -- | -- | -- | - |
| 10 | Jammu & Kashmir | -- | -- | -- | - |
| 11 | Jharkhand | -- | -- | -- | - |
| 12 | Karnataka | 4064 | -- | -- | 7500 |
| 13 | Kerala | 2065 | -- | -- | - |
| 14 | Madhya Pradesh | -- | 882 | -- | - |
| 15 | Maharashtra | 39544 | 413 | -- | - |
| 16 | Manipur | 364 | 96 | -- | - |
| 17 | Meghalaya | 640 | 29 | 9 | - |
| 18 | Mizoram | 530 | 38 | -- | - |
| 19 | Nagaland | 1575 | 32 | -- | - |
| 20 | Odisha | 12872 | 1398 | 81 | 23670 |
| 21 | Puducherry | 281 | -- | -- | 900 |
| 22 | Punjab | 232 | -- | 8 | - |
| 23 | Rajasthan | -- | -- | 129 | 1800 |
| 24 | Tamil Nadu | 6379 | -- | 40 | 8632 |
| 25 | Telangana | 5454 | 1188 | -- | - |
| 26 | Tripura | 317 | 5 | -- | - |
| 27 | Uttar Pradesh | -- | -- | 180 | - |
| 28 | Uttarakhand | 3029 | 76 | -- | - |
| 29 | West Bengal | 10616 | 512 | 214 | - |
| | **Total** | **129037** | **7407** | **661** | **49002** |

## No. 49: Market Borrowings of State Governments

(₹ Crore)

| Sr. No. | State | 2017-18 | | 2018-19 | | 2019-20 | | | | | | Total amount raised, so far in 2019-20 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | December | | January | | February | | | |
| | | 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 | 22800 | 18922 | 30200 | 23824 | 513 | 222 | 5000 | 4708 | 3928 | 3345 | 37895 | 29730 |
| 2 | Arunachal Pradesh | 888 | 703 | 719 | 693 | - | - | - | -79 | 87 | 87 | 559 | 480 |
| 3 | Assam | 7760 | 6797 | 10595 | 8089 | 1900 | 1900 | 1500 | 1500 | 1000 | -910 | 10100 | 8190 |
| 4 | Bihar | 10000 | 8908 | 14300 | 10903 | - | -607 | 4000 | 4000 | 1959 | 1959 | 20601 | 17601 |
| 5 | Chhattisgarh | 8100 | 8100 | 12900 | 12900 | 2000 | 2000 | 2000 | 2000 | - | - | 6000 | 5300 |
| 6 | Goa | 1800 | 1400 | 2350 | 1850 | 300 | 200 | 381 | 381 | 175 | 175 | 2256 | 1756 |
| 7 | Gujarat | 24000 | 15785 | 36971 | 27457 | 2500 | 1500 | 8000 | 6500 | 2500 | 1700 | 33400 | 23100 |
| 8 | Haryana | 16640 | 15840 | 21265 | 17970 | 2000 | 1000 | 2500 | 2500 | 1500 | 1100 | 20501 | 17201 |
| 9 | Himachal Pradesh | 4600 | 2551 | 4210 | 2108 | - | -900 | 1500 | 1200 | 1500 | 1500 | 5000 | 3800 |
| 10 | Jammu & Kashmir | 6200 | 3974 | 6684 | 4927 | 309 | 309 | 600 | 600 | 600 | 57 | 6192 | 5110 |
| 11 | Jharkhand | 6000 | 4807 | 5509 | 4023 | 500 | 500 | - | - | 1000 | 1000 | 3000 | 1156 |
| 12 | Karnataka | 22098 | 17348 | 39600 | 31383 | 7700 | 7700 | 7000 | 7000 | 6000 | 6000 | 42100 | 37350 |
| 13 | Kerala | 20500 | 16203 | 19500 | 14784 | - | -500 | 920 | 920 | 1000 | -480 | 16602 | 11146 |
| 14 | Madhya Pradesh | 15000 | 13125 | 20496 | 14971 | 2000 | 440 | 3000 | 1447 | 3000 | 3000 | 15000 | 10327 |
| 15 | Maharashtra | 45000 | 36480 | 20869 | 3117 | 3000 | 3000 | 6000 | 5000 | 11998 | 9498 | 43498 | 29998 |
| 16 | Manipur | 525 | 278 | 970 | 667 | - | - | - | - | 400 | 86 | 1203 | 700 |
| 17 | Meghalaya | 1116 | 920 | 1122 | 863 | 295 | 295 | - | -50 | 150 | 150 | 895 | 621 |
| 18 | Mizoram | 424 | 277 | 0 | -123 | 92 | 92 | - | - | 90 | 90 | 540 | 439 |
| 19 | Nagaland | 1135 | 766 | 822 | 355 | 250 | 150 | - | - | 150 | 22 | 800 | 223 |
| 20 | Odisha | 8438 | 8438 | 5500 | 4500 | - | - | 500 | 500 | 1000 | 1000 | 5500 | 5500 |
| 21 | Puducherry | 825 | 488 | 825 | 475 | 200 | -300 | 100 | 100 | 100 | 100 | 800 | 300 |
| 22 | Punjab | 17470 | 13349 | 22115 | 17053 | 2035 | 1570 | 2800 | 2600 | 1300 | 1300 | 23955 | 15070 |
| 23 | Rajasthan | 24914 | 16777 | 33178 | 20186 | 1000 | - | 3750 | 2750 | 2500 | 2326 | 32582 | 22326 |
| 24 | Sikkim | 995 | 745 | 1088 | 795 | - | - | 142 | 142 | - | -188 | 593 | 405 |
| 25 | Tamil Nadu | 40965 | 36023 | 43125 | 32278 | 8000 | 6000 | 8000 | 6000 | 5500 | 5500 | 58890 | 47690 |
| 26 | Telangana | 24600 | 21828 | 26740 | 22183 | 1324 | 1116 | 3000 | 2792 | 2000 | 1583 | 28124 | 22289 |
| 27 | Tripura | 1137 | 1137 | 1543 | 1387 | - | -100 | 400 | 400 | 470 | 370 | 2550 | 2200 |
| 28 | Uttar Pradesh | 41600 | 37178 | 46000 | 33307 | 5500 | 3922 | 7500 | 7500 | 7750 | 4679 | 49750 | 34819 |
| 29 | Uttarakhand | 6660 | 5830 | 6300 | 5289 | 750 | 750 | - | - | 750 | 750 | 3100 | 2500 |
| 30 | West Bengal | 36911 | 25304 | 42828 | 30431 | 5000 | 4000 | 6000 | 6000 | 7250 | 6450 | 46260 | 30150 |
| | Grand Total | 419100 | 340281 | 478323 | 348643 | 47168 | 34258 | 74593 | 66411 | 65657 | 52250 | 518246 | 387478 |

- : Nil.

**Source :** Reserve Bank of India.

**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 (including RRBs) and for column Nos. (4) & (5) data are Provisional (excluding RRBs)

**Table No. 14**

Data in column Nos. (4) & (8) are Provisional.

**Table No. 15 & 16**

Data are provisional and relate to select 41 scheduled commercial banks, accounting for about 90 per cent of total non-food credit extended by all scheduled commercial banks (excludes ING Vysya which has been merged with Kotak Mahindra since April 2015).

Export credit under priority sector relates to foreign banks only.

Micro & small under item 2.1 includes credit to micro & small industries in manufacturing sector.

Micro & small enterprises under item 5.2 includes credit to micro & small enterprises in manufacturing as well as services sector.

Priority Sector is as per old definition and does not conform to FIDD Circular FIDD.CO.Plan.BC.54/04.09.01/2014-15 dated April 23, 2015.

**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 2016-17 is a moving one, which gets updated every year. REER figures are based on Consumer Price Index (combined). Methodological details are available in December 2005 and April 2014 issues of the 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 2018-19 pertains to the Provisional Estimates of National Income released by Central Statistics Office on 31st May 2019. GDP for 2019-20 is from Union Budget 2019-20.
Data for 2017-18 onwards also includes NCT of Delhi and Puducherry.
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: Includes borrowings through dated securities.
3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).
3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.
3B.1.7: Include Treasury Bills, loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

**Table No. 47**

SDF is availed by State Governments against the collateral of Consolidated Sinking Fund (CSF), Guarantee Redemption Fund (GRF) & Auction Treasury Bills (ATBs) balances and other investments in government securities.
WMA is advance by Reserve Bank of India to State Governments for meeting temporary cash mismatches.
OD is advanced to State Governments beyond their WMA limits.
Average amount Availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.
- : Nil.

**Table No. 48**

CSF and GRF are reserve funds maintained by some State Governments with the Reserve Bank of India.
ATBs include Treasury bills of 91 days, 182 days and 364 days invested by State Governments in the primary market.
--: Not Applicable (not a member of the scheme).

The concepts and methodologies for Current Statistics are available in Comprehensive Guide for Current Statistics of the RBI Monthly Bulletin **(https://rbi.org.in/Scripts/PublicationsView.aspx?id=17618)**

Time series data of 'Current Statistics' is available at https://dbie.rbi.org.in.
Detailed explanatory notes are available in the relevant press releases issued by RBI and other publications/releases of the Bank such as **Handbook of Statistics on the Indian Economy**.

## Recent Publications of the Reserve Bank of India

| Name of Publication | Price | |
|---|---|---|
| | India | Abroad |
| 1. Reserve Bank of India Bulletin 2020 | ₹300 per copy (over the counter)<br>₹350 per copy (inclusive of postage)<br>₹4,200 (one year subscription - inclusive of postage)<br>₹3,150 (one year concessional rate*)<br>₹3,360 (one year subscription - inclusive of postage@)<br>₹2,520 (one year concessional rate@) | US$ 15 per copy (inclusive of postage)<br>US$ 180 (one-year subscription)<br>(inclusive of air mail courier charges) |
| 2. Handbook of Statistics on the Indian States 2018-19 | ₹650 (Normal)<br>₹700 (inclusive of postage) | US$ 24<br>(inclusive of air mail courier charges) |
| 3. Handbook of Statistics on the Indian Economy 2018-19 | ₹600 (Normal)<br>₹650 (inclusive of postage)<br>₹450 (concessional)<br>₹500 (concessional with postage) | US$ 50<br>(inclusive of air mail courier charges) |
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