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Fourth 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 (October 4, 2019) decided to:

- reduce the policy repo rate under the liquidity adjustment facility (LAF) by 25 basis points to 5.15 per cent from 5.40 per cent with immediate effect.

Consequently, the reverse repo rate under the LAF stands reduced to 4.90 per cent, and the marginal standing facility (MSF) rate and the Bank Rate to 5.40 per cent.

- The MPC also decided to continue with an accommodative stance as long as it is necessary to revive growth, 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.

Assessment

Global Economy

2. Since the MPC's last meeting in August 2019, global economic activity has weakened further. Heightened uncertainty emanating from trade and geo-political tensions continues to cloud the outlook. Among advanced economies (AEs), the slowdown in the US economy in Q2:2019 appears to have extended into Q3:2019, weighed down by softer industrial production. The Institute for Supply Management's index for September indicates that manufacturing slipped further into contraction to touch its lowest reading in a decade; hiring by the private sector also slowed down. In the Euro area too, incoming data suggest that activity may have moderated further in Q3, with retail sales declining and manufacturing PMI remaining in contraction for the eighth consecutive month in September. The UK economy decelerated in Q2; the contraction in industrial production and soft retail sales in July suggest that the loss of speed has continued into Q3 as well. In Japan, the loss of momentum in Q2 spilled over into Q3, *albeit* cushioned by a fiscal stimulus and frontloaded consumer spending ahead of a planned sales tax hike.

3. The macroeconomic performance of major emerging market economies (EMEs) was weighed down by a deteriorating global environment in Q3. The Chinese economy appears to have slowed down in Q3 as well, with both retail sales and industrial production growth weakening in July-August and exports contracting in August; attention is now focussed on the efficacy of fiscal and monetary policy stimuli in averting a sharper deceleration. In Russia, economic activity ticked up in Q2, though still subdued consumer sentiment and weak industrial production may restrain momentum, going forward. Economic activity in both South Africa and Brazil rebounded in Q2, emerging out of contraction in the previous quarter; however, this nascent recovery faces both domestic and external headwinds.

4. Crude oil prices were pulled down by softer demand, amidst adequate supplies in early August. Prices remained range bound until mid-September when supply disruptions on account of an escalating geo-political conflict resulted in a spike which has abated faster than expected. Gold prices remained elevated on safe haven demand. Central banks became

* Released on October 04, 2019.

more accommodative with inflation remaining below targets across major AEs and EMEs.

5. Global financial markets have remained unsettled since the MPC's early August meeting with bouts of volatility unleashed by protectionist policies and worsening global growth prospects. In the US, the equity market's August losses were recouped by early September – investor sentiment was buoyed by signs of an easing in US-China trade tensions. Stock markets in EMEs fell, as the strong US dollar led to capital outflows, though they recovered partially in September. Bond yields in the US continued easing till August on growth worries, before a slight uptick was triggered in early September by better than expected US retail sales data and hopes of conciliatory trade negotiations between the US and China. In the Euro area, bond yields sank further into negative territory, propelled by the cut in the deposit rate by the European Central Bank (ECB) to (-) 0.5 per cent and the reintroduction of quantitative easing. In EMEs, bond yields exhibited mixed movements, driven by country-specific factors. In currency markets, the US dollar strengthened against currencies of other AEs. EME currencies, which were trading with a depreciating bias in August, appreciated in early September on country-specific factors and a revival of global risk-on sentiment.

Domestic Economy

6. On the domestic front, growth in gross domestic product (GDP) slumped to 5.0 per cent in Q1:2019-20, extending a sequential deceleration to the fifth consecutive quarter. Of its constituents, private final consumption expenditure (PFCE) slowed down to an 18-quarter low. Gross fixed capital formation (GFCF) improved marginally on a sequential basis but remained muted as in the preceding quarter. Government final consumption expenditure (GFCE) cushioned the overall loss of momentum to some extent.

7. On the supply side, gross value added (GVA) growth decelerated to 4.9 per cent in Q1:2019-20, pulled down by manufacturing growth, moderating to 0.6 per cent. Agriculture and allied activities were lifted by higher production of wheat and oilseeds during the 2018-19 *rabi* season. Growth in the services sector was stalled by construction activity.

8. Turning to Q2:2019-20, the initial delay in the onset of the south-west monsoon rapidly caught up from July. By September 30, 2019, the cumulative all-India rainfall surpassed the long period average (LPA) by 10 per cent. The first advance estimates of major *kharif* crops for 2019-20 have placed production of foodgrains 0.8 per cent lower when compared with the last year's fourth advance estimates. Looking ahead at the *rabi* season, the live storage of water in major reservoirs was 115 per cent of the live storage of the corresponding period of the previous year on September 26, 2019 and 121 per cent of average storage level over the last ten years. Abundant rains in August and September have led to improved soil moisture conditions in most parts of the country, particularly central India, compared to the corresponding period of the last year. Overall, the prospects of agriculture have brightened considerably, positioning it favourably for regenerating employment and income, and the revival of domestic demand.

9. Industrial activity, measured by the index of industrial production (IIP), weakened in July 2019 (y-o-y), weighed down mainly by moderation in manufacturing. In terms of uses, the production of capital goods and consumer durables contracted. Consumer non-durables, led by edible oils, and intermediate goods, mainly mild steel slabs, posted sustained expansion and have emerged as potential growth drivers. Infrastructure/construction sector activity turned around to register a growth of 2.1 per cent *vis-à-vis* (-)1.9 per cent in the previous month. The output of eight core industries contracted in August, pulled down by coal, electricity, crude oil and cement. Capacity utilisation (CU) in the manufacturing sector, measured by the OBICUS (order books, inventory and capacity utilisation survey) of the Reserve Bank,

declined to 73.6 per cent in Q1:2019-20 from 76.1 per cent in the previous quarter. However, seasonally adjusted CU rose to 74.8 per cent in Q1:2019-20 from 74.5 per cent in Q4:2018-19. Manufacturing firms polled for the industrial outlook survey (IOS) expect capacity utilisation to moderate in Q2:2019-20. The Reserve Bank's business assessment index (BAI) fell in Q2:2019-20 due to a decline in new orders, contraction in production, lower capacity utilisation and fall in profit margins of the surveyed firms. The manufacturing purchasing managers' index (PMI) for September 2019 was unchanged at its previous month's level; new orders and employment improved, *albeit* marginally, and new export orders declined.

10. High frequency indicators suggest that services sector activity weakened in July-August. Indicators of rural demand, *viz.*, tractor and motorcycles sales, contracted. Of underlying indicators of urban demand, passenger vehicle sales contracted in July-August, while domestic air passenger traffic accelerated in August. The sales of commercial vehicles, a key indicator for the transportation sector, contracted by double digits in July-August. Of the two indicators of construction activity, finished steel consumption decelerated sharply in August and cement production contracted. The services PMI moved into contraction in September 2019, dragged down mainly by a decline in new business inflows.

11. Retail inflation, measured by y-o-y changes in the CPI, moved in a narrow range of 3.1- 3.2 per cent between June and August. While food inflation picked up, fuel prices moved into deflation. Inflation excluding food and fuel softened in August.

12. Food inflation in August was elevated by a spike in the rate of increase in vegetables prices, a pick-up in pulses inflation and persistently high meat and fish inflation. On the other hand, softer increases in prices of eggs, oils and fats, non-alcoholic beverages and prepared meals, and deflation in prices of fruits and sugar cushioned the rise in overall food inflation.

13. Deflation in the fuel group deepened in August largely due to the pass-through from a sharp decline in international prices of liquified petroleum gas (LPG). Subsidised kerosene prices, however, have been rising in a calibrated manner as oil marketing companies continued a gradual reduction in subsidies.

14. CPI inflation excluding food and fuel increased in July, but its roots were largely confined to prices of personal care and effects – mainly bullion prices, and transport and communication, reflecting rise in prices of petrol and diesel. By contrast, there was moderation in August, which was spread across most of the sub-groups; however, gold prices spiked further on global uncertainties.

15. The Reserve Bank's September 2019 round of inflation expectations survey indicates that households expect inflation to rise by 40 basis points over a 3-month ahead horizon and 20 basis points over a one-year ahead horizon, possibly responding adaptively to the rise in food prices in recent months. The Reserve Bank's consumer confidence survey shows weak consumer sentiment and tepid consumption demand, especially relating to non-essential items. Manufacturing firms see weakening of demand conditions in Q2:2019-20 and Q3 and expect their output prices to soften, going forward, as the cost of finance and salary outgoes remain muted.

16. Overall liquidity remained surplus in August and September 2019 despite expansion of currency in circulation and forex operations by the Reserve Bank draining liquidity from the system. Net daily average absorption under the LAF amounted to ₹1,40,497 crore in August, essentially on account of spending by the government, which resulted in availment of ways and means advances (WMA) and intermittent overdraft facilities from the beginning of the month (till August 25, 2019). In September, with a steady build-up of cash balances, particularly with advance tax inflows around September 15, surplus liquidity moderated, and the Reserve Bank undertook daily net

absorption of ₹1,22,392 crore in September. Reflecting easy liquidity conditions, the weighted average call rate (WACR) traded below the policy repo rate (on an average) by 8 basis points (bps) in August and by 6 bps in September.

17. Monetary transmission has remained staggered and incomplete. As against the cumulative policy repo rate reduction of 110 bps during February-August 2019, the weighted average lending rate (WALR) on fresh rupee loans of commercial banks declined by 29 bps. However, the WALR on outstanding rupee loans increased by 7 bps during the same period.

18. Net exports had contributed to aggregate demand in Q1:2019-20 on account of a deeper contraction in imports relative to exports. In Q2, merchandise exports remained weak in July and August 2019, caused by lower shipments of engineering goods, petroleum products, gems and jewellery and cotton yarn. Imports contracted faster during the period mainly due to lower international crude oil prices downsizing the oil import bill and a large fall in the volume of gold imports. Non-oil non-gold imports were pulled down into contraction by coal, pearls and precious stones and transport equipment. These developments led to a narrowing of the trade deficit during July-August 2019. Higher net services receipts and private transfer receipts helped contain the current account deficit to 2.0 per cent of GDP in Q1:2019-20 from 2.3 per cent a year ago. On the financing side, net foreign direct investment rose to US$ 17.7 billion in April-July 2019 from US$ 11.4 billion a year ago. Net foreign portfolio investment (excluding the voluntary retention route) was of the order of US$ 3.3 billion during April-September 2019 as against net outflow of US$ 11.5 billion in the same period of last year. Net disbursals of external commercial borrowings rose to US$ 8.2 billion during April-August 2019 as against net repayments of US$ 0.2 billion during the same period a year ago. India's foreign exchange reserves were at US$ 434.6 billion on October 1, 2019 – an increase of US$ 21.7 billion over end-March 2019.

Outlook

19. In the third bi-monthly resolution of August 2019, CPI inflation was projected at 3.1 per cent for Q2:2019-20, 3.5-3.7 per cent for H2:2019-20 and 3.6 per cent for Q1: 2020-21 with risks evenly balanced. The actual inflation outcomes for Q2 so far (July-August) at 3.2 per cent have been broadly in line with these projections.

20. Going forward, several factors are likely to shape the inflation trajectory. First, the outlook for food inflation has improved considerably since the August bi-monthly policy. *Kharif* production is estimated at close to last year's level, auguring well for the overall food supply situation. Vegetable prices may remain elevated in the immediate months but are likely to moderate as winter supplies enter the market. Prices of pulses are expected to remain contained by adequate buffer stocks. Secondly, forward looking surveys conducted by the Reserve Bank point to weak demand conditions persisting, with indications of softening of output prices in Q3:2019-20. Accordingly, price pressures in CPI excluding food and fuel are likely to be muted. Thirdly, crude oil prices may remain volatile in the near-term; while global demand is slowing down, the persisting geo-political uncertainties pose some upside risks to the inflation outlook. Fourthly, three-month and one-year ahead inflation expectations of households polled by the Reserve Bank have risen in the current round reflecting near-term price pressures. Finally, financial markets remain volatile with currencies of several emerging market economies trading with a depreciating bias in the recent period. Taking into consideration these factors and the impact of recent policy rate cuts, the CPI inflation projection is revised slightly upwards to 3.4 per cent for Q2:2019-20, while projections are retained at 3.5-3.7 per cent for H2:2019-20 and 3.6 per cent for Q1:2020-21, with risks evenly balanced (Chart 1).

21. Turning to the growth outlook, real GDP growth for 2019-20 in the August policy was projected at 6.9 per cent – in the range of 5.8-6.6 per cent for

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

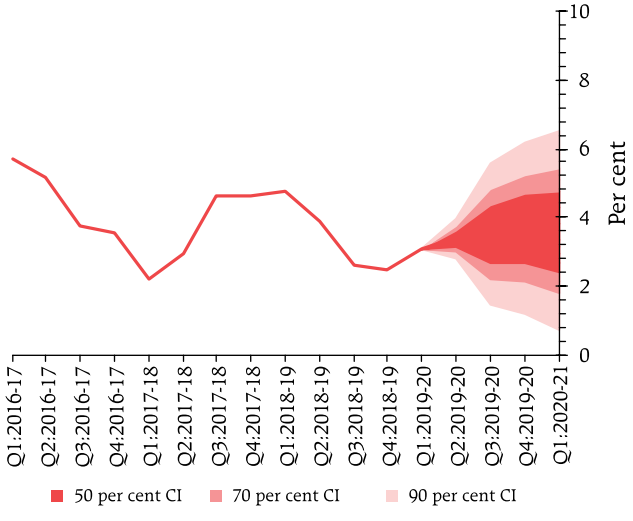
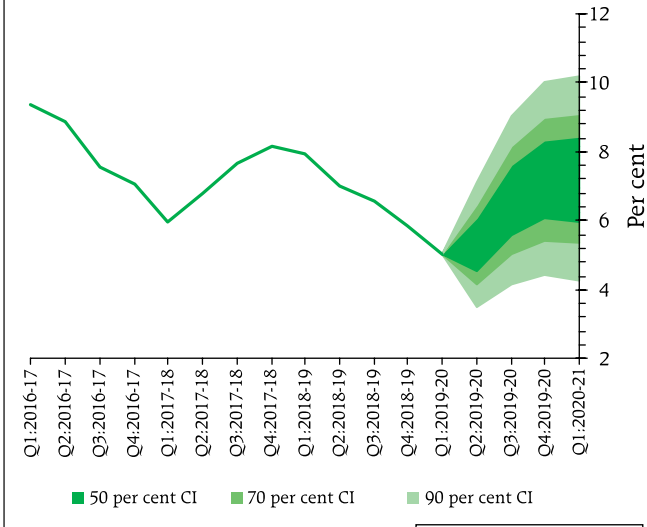


Chart 2: Quarterly Projection of Real GDP Growth (y-o-y)



H1:2019-20 and 7.3-7.5 per cent for H2 – with risks somewhat tilted to the downside; GDP growth for Q1:2020-21 was projected at 7.4 per cent. GDP growth for Q1:2019-20 was significantly lower than projected. Various high frequency indicators suggest that domestic demand conditions have remained weak. The business expectations index of the Reserve Bank's industrial outlook survey shows muted expansion in demand conditions in Q3. Export prospects have been impacted by slowing global growth and continuing trade tensions. On the positive side, however, the impact of monetary policy easing since February 2019 is gradually expected to feed into the real economy and boost demand. Several measures announced by the Government over the last two months are expected to revive sentiment and spur domestic demand, especially private consumption. Taking into consideration the above factors, real GDP growth for 2019-20 is revised downwards from 6.9 per cent in the August policy to 6.1 per cent – 5.3 per cent in Q2:2019-20 and in the range of 6.6-7.2 per cent for H2:2019-20 – with risks evenly balanced; GDP growth for Q1:2020-21 is also revised downwards to 7.2 per cent (Chart 2).

22. The MPC notes that the negative output gap has widened further. While the recent measures announced by the government are likely to help strengthen private consumption and spur private investment activity, the continuing slowdown warrants 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, there is policy space to address these growth concerns by reinvigorating domestic demand within the flexible inflation targeting mandate. It is in this context that the MPC decided to continue with an accommodative stance as long as it is necessary to revive growth, while ensuring that inflation remains within the target.

23. All members of the MPC voted to reduce the policy repo rate and to continue with the accommodative stance of monetary policy. Dr. Chetan Ghate, Dr. Pami Dua, Dr. Michael Debabrata Patra, Shri Bibhu Prasad Kanungo and Shri Shaktikanta Das voted to reduce the repo rate by 25 basis points. Dr. Ravindra H. Dholakia voted to reduce the repo rate by 40 basis points.

24. The minutes of the MPC's meeting will be published by October 18, 2019.

25. The next meeting of the MPC is scheduled during December 3-5, 2019.

Statement on Developmental and Regulatory Policies

This Statement sets out various developmental and regulatory policy measures for strengthening regulation and supervision; broadening and deepening financial markets; and improving the payment and settlement systems.

I. Regulation and Supervision

1. Non-Banking Financial Company – Micro Finance Institution (NBFC-MFI)

In the wake of the Andhra Pradesh micro finance crisis in 2010, a Sub-Committee of the Central Board of the Reserve Bank (Chairman: Shri Y. H. Malegam) was constituted to study issues and concerns in the MFI sector. Based on the recommendations of the Committee, it was decided to create a separate category of NBFC, *viz.*, Non-Banking Financial Company-Micro Finance Institution (NBFC-MFI) and a detailed regulatory framework for NBFC-MFIs was put in place in December 2011. The income and loan limits to classify an exposure as eligible asset were last revised in 2015. Taking into consideration the important role played by MFIs in delivering credit to those in the bottom of the economic pyramid and enable them to play their assigned role in a growing economy, it is proposed to revise these criteria as under:

i. Increase the household income limit for borrowers of NBFC-MFIs from the current level of ₹1.00 lakh for rural areas and ₹1.60 lakh for urban/semi urban areas to ₹1.25 lakh and ₹2.00 lakh, respectively.

ii. Raise the lending limit from ₹1.00 lakh to ₹1.25 lakh per eligible borrower.

Detailed guidelines in this regard will be issued shortly.

II. Financial Markets

2. Offshore Rupee Markets

The Task Force on Offshore Rupee Markets (Chairperson: Smt. Usha Thorat) in its report submitted on July 30, 2019 recommended several important measures to incentivize non-residents to access the onshore foreign exchange market. The Reserve Bank has examined the recommendations and it is proposed to accept the following recommendations:

i. Allowing domestic banks to freely offer foreign exchange prices to non-residents at all times, out of their Indian books, either by a domestic sales team or through their overseas branches; and

ii. Allowing rupee derivatives (with settlement in foreign currency) to be traded in International Financial Services Centres (IFSCs).

The directions for implementing the above two recommendations will be issued in consultation with the Central Government and other regulators. Other recommendations of the Committee are under consideration and the decision thereon will be announced in due course.

3. Non-resident Rupee Account – A Review of Policy

The Reserve Bank has been taking steps for popularising the cross-border transactions in Indian rupee (INR), especially in respect of external commercial borrowing (ECB), trade credit and exports and imports, thereby reducing the exchange risk for persons resident in India. Continuing these efforts, it has been decided, in consultation with the Government of India, to enhance the scope of non-interest bearing Special Non-resident Rupee (SNRR) Account by permitting persons resident outside India to open such accounts to facilitate rupee denominated ECB, trade credit and trade invoicing. Further, restriction on the tenure of SNRR account, which is currently 7 years, is also proposed to be removed for the aforesaid purposes. Guidelines in this regard would be issued within a month.

III. Payment and Settlement System

4. Liquidity Support for the Proposed 24x7 National Electronic Funds Transfer (NEFT) System

It was announced in the third bi-monthly Monetary Policy of August 7, 2019 that the Reserve Bank of India will make available the facility of National Electronic

Funds Transfer on 24x7 basis for members of public from December, 2019. In order to facilitate smooth settlement of these transactions in the accounts of the banks maintained with the Reserve Bank, it has been decided that the Reserve Bank will extend the collateralised liquidity support, which is currently available till 7.45 pm on NEFT working days, round the clock. This will help in better funds management by banks.

5. Internal Ombudsman by large non-bank Prepaid Payment Instrument (PPI) Issuers

In order to provide a robust mechanism for redressal of customer complaints, the Reserve Bank had set up an Ombudsman Scheme for Digital Transactions in January 2019 as announced in the Monetary Policy Statement of December 5, 2018. To further strengthen the grievance redressal mechanism at the entity level itself, it has been decided to institutionalise an internal ombudsman scheme at the large non-bank PPI issuers (entities who have more than 10 million pre-paid payment instruments outstanding). The internal ombudsman is intended to facilitate a swift and cost-effective complaint redressal mechanism within the entity and provide an additional tier for grievance redressal. Instructions in this regard will be issued by October 15, 2019.

6. Payment System Data Dissemination

The Reserve Bank publishes data (in the RBI Bulletin and on the RBI Website) on various payment and settlement system indicators. In line with the recommendation of the Committee on Deepening of Digital Payments (Chairperson: Shri Nandan Nilekani) and given the rapid developments in the digital payments space, it has been decided to disseminate more granular information on payment data covering the payment systems authorised by the Reserve Bank. With this, the entire gamut of payment systems data will be available in the RBI Bulletin/Website.

7. Acceptance Development Fund (ADF)

With the rapid growth in the issuance of cards in the country, there is a need to ensure growth of acceptance infrastructure across the country, especially in Tier III to Tier VI centres. In order to increase digitisation in these areas, as indicated in the Payment System Vision Document 2021 of RBI and also recommended by the Committee on Deepening of Digital Payments (Chairperson: Shri Nandan Nilekani), it has been decided to create an 'Acceptance Development Fund' (ADF) in consultation with the stakeholders. The framework will be operationalised by December 2019.

8. Expanding and Deepening of Digital Payments Ecosystem

With a view to expanding and deepening the digital payments ecosystem, it has been decided that State/ UT Level Bankers Committees (SLBCs/ UTLBCs) shall identify one district in their respective States/UTs on a pilot basis in consultation with banks and stakeholders. The identified district may be allocated to a bank with significant footprint which will endeavour to make the district 100 per cent digitally enabled. This would enable every individual in the district to make/receive payments digitally in a safe, secure, quick, affordable and convenient manner. Guidelines in this regard will be issued shortly.

I. Macroeconomic Outlook

The slowdown in domestic economic activity that started in 2018-19 extended into the first half of 2019-20. Headline consumer price index (CPI) inflation is projected to remain below target over the rest of 2019-20 and the early months of 2020-21. Real gross domestic product (GDP) growth is expected to recover in H2:2019-20, facilitated by favourable base effects and transmission of past monetary policy actions. A slew of measures by the government impart an upside to growth prospects. Intensification of global uncertainty around US-China trade tensions, a hard Brexit and geo-political tensions are key downside risks to the baseline growth path.

I.1 Key Developments since April 2019 MPR

Since the release of the Monetary Policy Report (MPR) of April 2019, global economic activity has weakened further. Several downside risks flagged in the April MPR appear to be materialising: escalation of trade tensions; growing probability of a disorderly *Brexit;* volatility in crude oil prices; and a risk-on risk-off sentiment in financial markets on tumultuous geo-political and economic events. In their wake, global growth has lost the momentum it had gathered in Q1:2019. Central banks across advanced economies (AEs) and emerging market economies (EMEs) are easing monetary policy in counter-cyclical defence. Global trade has sunk into contraction, with knock-on effects impacting investment and industrial production, especially manufacturing. Reflecting this, commodity prices slumped, with crude oil prices tumbling in August and gold prices surging on safe haven demand. Foreign exchange markets turned volatile, following the depreciation of the Chinese renminbi in early August. Crude oil prices were bolstered temporarily in mid-September by the attack on Saudi Arabian oil facilities and disruption to global oil supplies.

Domestically, the slowdown in economic activity that started in 2018-19 extended into the first half of 2019-20. Real GDP growth fell to a 25-quarter low in Q1:2019-20 on weak private consumption and investment and high frequency indicators for Q2 point to a slowdown in the various constituents of aggregate demand deepening. Some green shoots are emerging though in agriculture and allied activities. The initial delay and deficiency in the south-west monsoon has been mitigated by the resurgence of rains during July-September. Comfortable reservoir levels augur well for *rabi* sowing and foodgrains stocks above the buffer norms provide a cushion against potential inflationary pressures. Meanwhile, headline CPI inflation remains below target. While food inflation has edged up since March 2019, inflation excluding food and fuel has undergone a broad-based moderation.

Monetary Policy Committee: April-August 2019

During April-August 2019, the Monetary Policy Committee (MPC) met thrice in accordance with the bi-monthly schedule. In the April meeting, the MPC cut the repo rate by 25 basis points (bps) to 6.0 per cent (with a majority vote of 4-2) to strengthen domestic growth impulses by spurring private investment, while maintaining a neutral stance (with a majority vote of 5-1). With signs of weakening of growth impulses even further widening the negative output gap, and with headline inflation projected to remain below the target over the next 12 months, the MPC voted unanimously to reduce the repo rate by another 25 bps in its June 2019 meeting and changed the stance of monetary policy from neutral to accommodative.

In its August meeting, the MPC reduced the policy repo rate by a further 35 bps to 5.40 per cent on signs of accentuation of the slowdown in domestic

* Released on October 04, 2019.

activity amidst deteriorating global growth and escalating trade tensions posing downside risks to the outlook. With the inflation outlook projected to be benign and within the target over the forecast horizon, all members of the MPC voted unanimously to reduce the policy rate (4 members for a reduction of 35 bps and two for 25 bps) and to maintain an accommodative stance. The MPC was of the view that the standard 25 bps cut might prove to be inadequate in view of evolving global and domestic macroeconomic developments, while a 50 bps reduction might be excessive, especially taking into account the actions already undertaken. Overall, the MPC reduced the policy repo rate by a cumulative 85 bps during April-August, in addition to the reduction of 25 bps in February.

The MPC's voting pattern reflects the diversity in individual members' assessments, expectations and policy preferences, a feature that is reflected in voting patterns of the MPC in other central banks (Table I.1).

Macroeconomic Outlook

Chapters II and III analyse the macroeconomic developments during April-September 2019 and explain deviations of inflation and growth outcomes *vis-à-vis* staff's 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).

Table 1.1: Monetary Policy Committees and Voting Pattern

Country	Policy Meetings: April 2019 - September 2019		
	Total Meetings	Meetings with Full Consensus	Meetings with Dissents
Brazil	4	4	0
Chile	4	3	1
Czech Republic	4	2	2
Hungary	5	5	0
Israel	4	1	3
Japan	4	0	4
South Africa	3	2	1
Sweden	3	3	0
Thailand	4	3	1
UK	4	4	0
US	4	1	3

Sources: Central bank websites.

Table I.2: Baseline Assumptions for Near-Term Projections

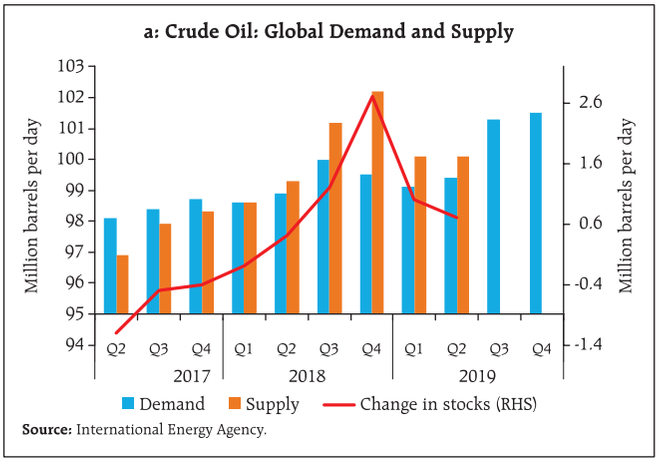
Indicator	MPR (April 2019)	Current MPR (October 2019)
Crude oil (Indian basket)	US$ 67.0 per barrel during 2019-20	US$ 62.6 per barrel
Exchange rate	₹69/US$	₹71.3/US$
Monsoon	Normal for 2019	10 per cent above long period average
Global growth	3.5 per cent in 2019 3.6 per cent in 2020	3.2 per cent in 2019 3.5 per cent in 2020
Fiscal deficit (per cent of GDP)	To remain within BE 2019-20 Centre: 3.4 Combined: 5.9	To remain within BE 2019-20 Centre: 3.3 Combined: 5.9
Domestic macroeconomic/ structural policies during the forecast period	No major change	No major change

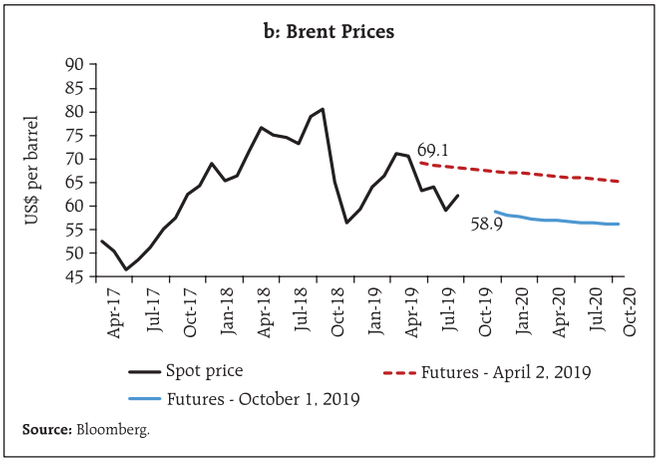
Notes:
1. The Indian basket of crude oil represents a derived numeraire comprising sour grade (Oman and Dubai average) and sweet grade (Brent) crude oil.
2. The exchange rate path assumed here is for generating staff's baseline growth and inflation projections and does not indicate any 'view' on the level of the exchange rate. The Reserve Bank is guided by the objective of containing excess volatility in the foreign exchange market and not by any specific level of and/or band around the exchange rate.
3. Global growth projections are from the World Economic Outlook (January and July 2019 Updates), International Monetary Fund (IMF).
4. BE: Budget estimates.
5. Combined fiscal deficit refers to that of the Centre and States taken together.

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

First, international crude oil prices declined between mid-May and mid-September reflecting weakness in global demand amidst excess supply conditions and large stockpiles, despite geo-political tensions and production cuts by the Organisation of the Petroleum Exporting Countries (OPEC) (Chart I.1). Crude oil prices hardened temporarily in the second half of September following disruptions to production in Saudi Arabia. Given the current demand-supply assessment, the baseline scenario assumes crude oil prices at an average of US$ 62.6 per barrel.

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





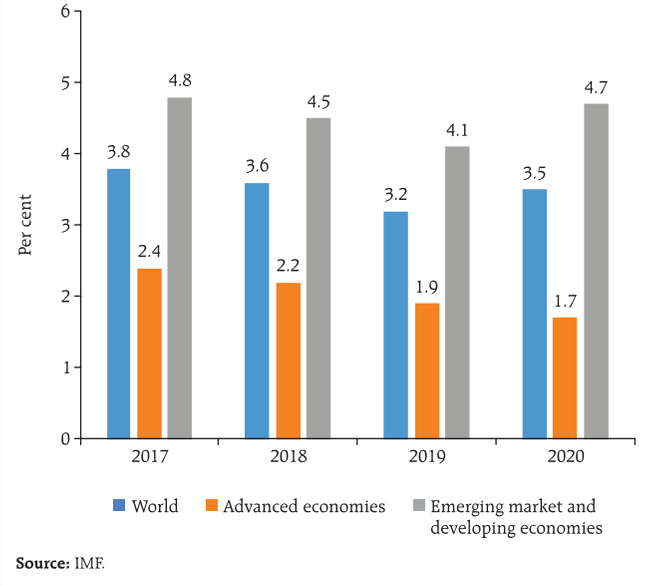
Second, the nominal exchange rate (Indian rupee, INR *vis-à-vis* the US dollar) has depreciated from its April level, especially during August, impacted by a drop in the Chinese renminbi below the psychological level of 7 yuan per US$ in the wake of an escalation in US-China trade actions. A generalised flight to safety towards the US dollar assets and portfolio capital outflows also amplified pressures on the rupee. The rupee came under renewed pressure in mid-September following the spike in crude oil prices but recovered in subsequent days following the announcement of various measures by the government to boost investment and growth and to stabilise the flow of funds into the capital market.

Third, the weakening of global economic activity and trade is confirmed by the global manufacturing purchasing managers' index (PMI) remaining in contraction zone in September 2019 at 49.7, the World Trade Organisation's *Goods Trade Barometer* indicating weakness in merchandise trade persisting in Q3:2019 and downgrades to global growth projections by various agencies. Against this backdrop, global growth for 2019 and 2020 is now expected to be below the April baseline (Table I.2 and Chart I.2).

I.2 The Outlook for Inflation

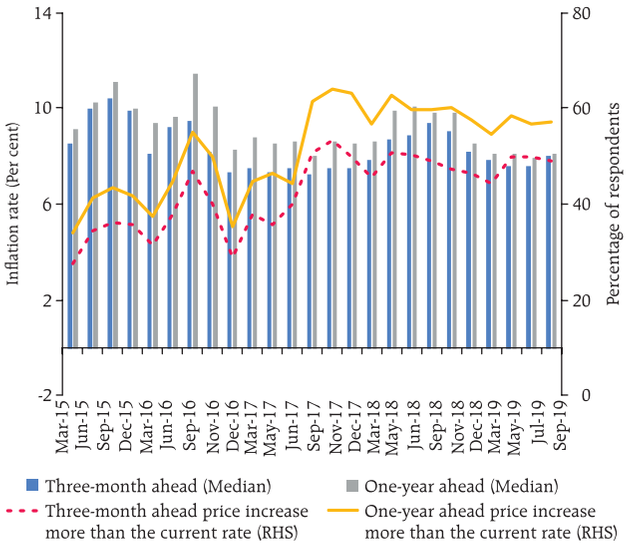
Headline CPI inflation has remained below target so far in 2019-20. Importantly, inflation excluding food and fuel has softened across major goods and services, reflecting the slowdown in domestic demand. Looking ahead, inflation expectations feed into future inflation through price and wage contracts. One-year ahead inflation expectations of urban households increased by 20 bps over the previous round in the September round of the survey conducted by the Reserve Bank; three-month ahead inflation expectations moved up by 40 bps during this period (Chart I.3).[1] According to the Reserve Bank's consumer confidence survey for September,

Chart I.2: Global GDP Growth



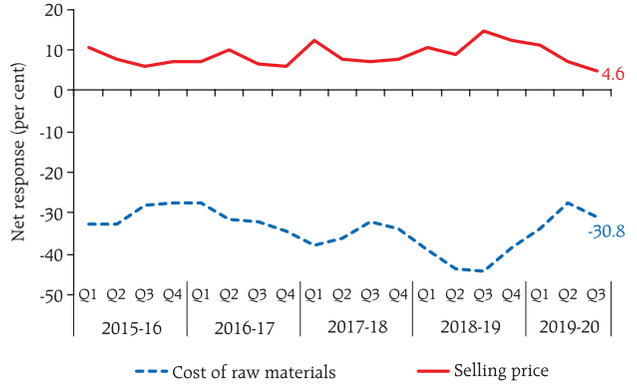
[1] The Reserve Bank's inflation expectations survey of households is conducted in 18 cities and results of the September 2019 survey are based on responses from 5,810 households.

Chart I.3: Inflation Expectations of Households



Source: Inflation Expectations Survey of Households, RBI.

Chart I.4: Expectations of 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.

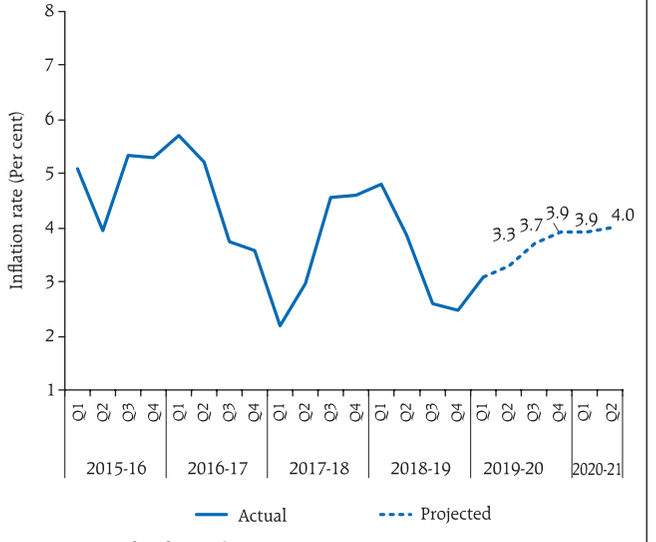
inflation expectations moderated from the previous round.

Manufacturing firms polled in the July-September 2019 round of the Reserve Bank's Industrial Outlook Survey (IOS) expected an increase in the cost of raw materials and muted selling prices in Q3:2019-20 (Chart I.4).[2] According to the purchasing managers' survey for manufacturing firms, input prices eased in September due to weak demand for raw materials and semi-finished items; output prices registered a marginal increase. Services sector firms reported lower input prices and higher output prices in August.

Professional forecasters surveyed by the Reserve Bank in September 2019 expected CPI inflation to increase from 3.2 per cent in August 2019 to 3.9 per cent in Q4:2019-20 and to 4.0 per cent in Q2:2020-21 (Chart I.5).[3]

Taking into account the initial conditions, the signals from forward-looking surveys and estimates from time-series and structural models, CPI inflation is projected at 3.4 per cent in Q2:2019-20, 3.5 per cent in Q3, and 3.7 per cent in Q4, with risks evenly balanced (Chart I.6). The 50 per cent and the 70 per cent confidence intervals for headline inflation in Q4:2019-20 are 2.7-4.7 per cent and 2.2-5.3 per cent, respectively. For 2020-21, assuming normal monsoon and no major exogenous or policy shocks, structural model estimates indicate that inflation will move in a range of 3.5-4.0 per cent. The 50 per cent and the 70

Chart I.5: Inflation Expectations of Professional Forecasters

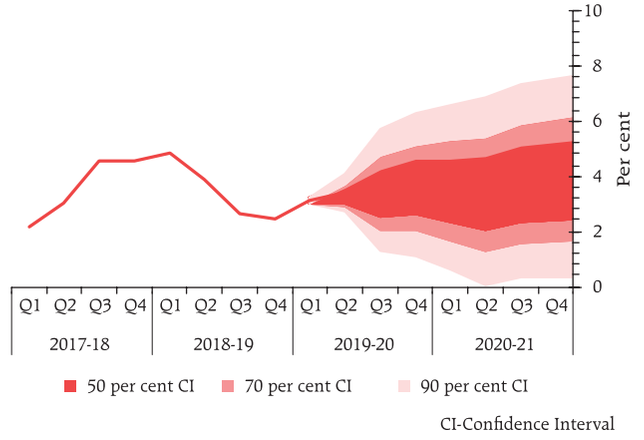


Source: Survey of Professional Forecasters, RBI.

[2] The results for the July-September round of the industrial outlook survey are based on responses from 481 companies.

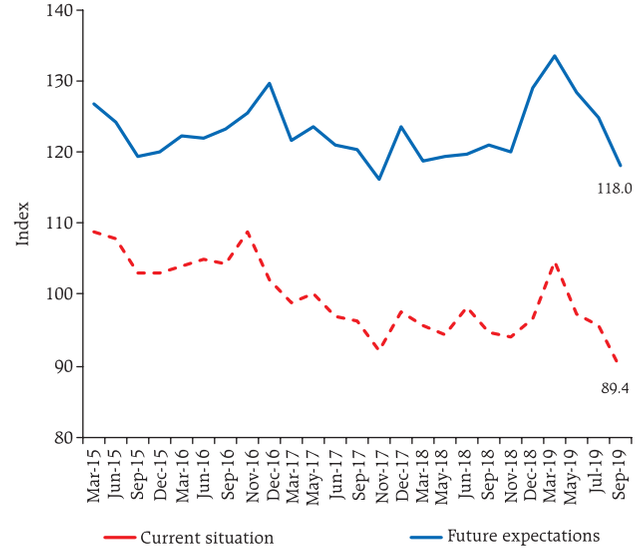
[3] 29 panelists participated in the September 2019 round of the Reserve Bank's survey of professional forecasters.

Chart I.6: Projection of CPI Inflation (y-o-y)



Note: The fan chart depicts uncertainty around the baseline projection path. The baseline projections are conditioned upon the assumptions set out in Table I.2. The thick red shaded area represents 50 per cent confidence interval, implying that there is 50 per cent probability that the actual outcome will be within the range given by the thick red shaded area. Like-wise, for 70 per cent and 90 per cent confidence intervals, there is 70 per cent and 90 per cent probability, respectively, that the actual outcomes will be in the range represented by the respective shaded areas.
Source: RBI staff estimates.

Chart I.7: Consumer Confidence



Source: Consumer Confidence Survey, RBI.

per cent confidence intervals for Q4:2020-21 are 2.5-5.4 per cent and 1.8-6.2 per cent, respectively.

There are both upside and downside risks to the baseline inflation forecasts. The upside risks include: volatility in international and domestic financial markets from trade tensions, *Brexit* and monetary policy stances of the major AEs; supply disruptions in the global crude oil market due to geo-political tensions; and, sudden spikes in the prices of perishable food items. Downside risks could emanate from more than assumed softening in crude oil and other commodity prices due to sluggish global demand, and weaker inflation excluding food and fuel domestically due to depressed domestic demand conditions.

I.3 The Outlook for Growth

As indicated earlier, domestic economic activity turned out to be weaker in H1:2019-20 *vis-à-vis* projections in the April 2019 MPR in an environment of global headwinds. The expected pick-up in both private consumption and investment failed to materialise, and exports lost momentum under the weight of the slump in world trade. Although the south-west monsoon turned out to be above long period average, its uneven progress – both temporal and spatial – could impinge upon the prospects for agriculture.

Turning to the outlook, consumer confidence for the year ahead moved lower in the May, July and September rounds of the Reserve Bank's survey, due to ebbing of sentiments on the general economic situation and the employment scenario (Chart I.7).[4]

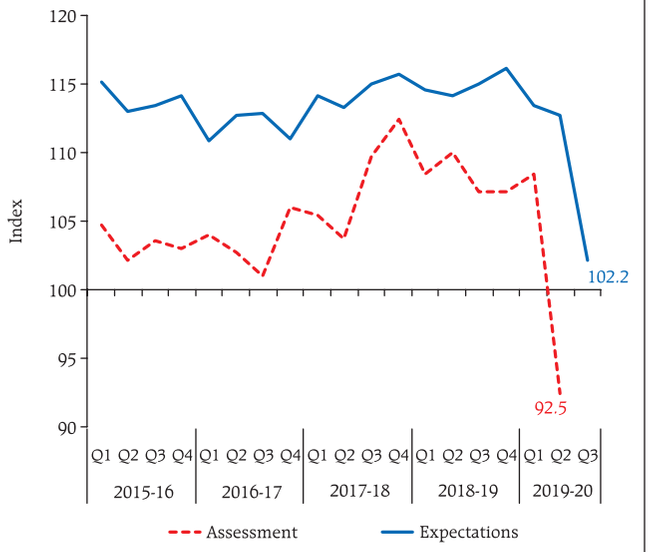
Sentiment in the manufacturing sector polled in the July-September 2019 round of the Reserve Bank's IOS dipped for the quarter ahead, reflecting moderation in expected production, order inflows, capacity utilisation, employment conditions and exports (Chart I.8).

Surveys by other agencies of future business expectations indicate a mixed picture (Table I.3). Firms in the manufacturing and services sectors polled in the Nikkei's purchasing managers' surveys were optimistic about one-year ahead output prospects.

In the September 2019 round of the Reserve Bank's survey, professional forecasters expected real GDP growth to recover from 5.0 per cent in Q1:2019-20 to

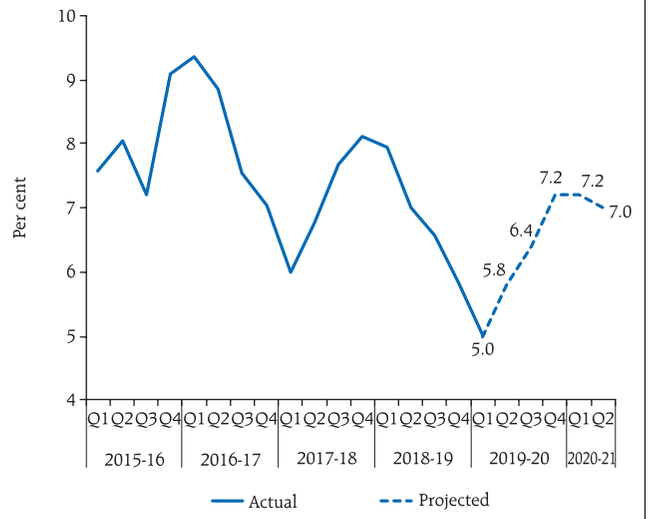
[4] The survey is conducted by the Reserve Bank in 13 major cities and the September 2019 round is based on responses from 5,192 respondents.

Chart I.8: Business Assessment and Expectations



Source: Industrial Outlook Survey, RBI.

Chart I.9: Professional Forecasters' Projection of Real GDP Growth



Source: Survey of Professional Forecasters, RBI.

7.2 per cent in Q4:2019-20 and then moderate to 7.0 per cent in Q2:2020-21 (Chart I.9).

Taking into account the baseline assumptions, survey indicators, the reductions in the policy repo rate since February 2019, the base effects and model forecasts, real GDP growth is projected at 6.1 per cent in 2019-20 – 5.3 per cent in Q2, 6.6 per cent in Q3, 7.2 per cent in Q4 – with risks evenly balanced (Table I.4). For 2020-21, the structural model estimates indicate real GDP growth at 7.0 per cent – quarterly growth rates in the range of 6.5-7.4 per cent – assuming a

Table I.3: Business Expectations Surveys

Item	NCAER Business Confidence Index (July 2019)	FICCI Overall Business Confidence Index (June 2019)	Dun and Bradstreet Composite Business Optimism Index (July 2019)	CII Business Confidence Index (September 2019)
Current level of the index	121.8	59.6	70.0	52.5
Index as per previous survey	115.4	60.3	78.4	59.6
% change, q-o-q	5.5	-1.2	-10.7	-11.9
% change, y-o-y	6.5	-16.1	-13.2	-19.1

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

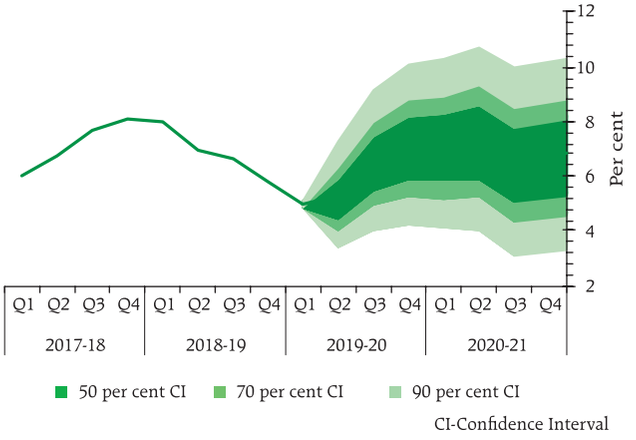
Table I.4: Projections - Reserve Bank and Professional Forecasters

(Per cent)

	2019-20	2020-21
Reserve Bank's Baseline Projection		
Inflation, Q4 (y-o-y)	3.7	4.0
Real GDP Growth	6.1	7.0
Median Projections of Professional Forecasters		
Inflation, Q4 (y-o-y)	3.9	4.0#
Real GDP growth	6.2	7.0
Gross domestic saving (per cent of GNDI)	30.1	30.5
Gross capital formation (per cent of GDP)	31.0	31.0
Credit growth of scheduled commercial banks	12.0	12.9
Combined gross fiscal deficit (per cent of GDP)	6.1	6.0
Central government gross fiscal deficit (per cent of GDP)	3.3	3.3
Repo rate (end-period)	5.0	-
Yield on 91-days treasury bills (end-period)	5.2	5.4
Yield on 10-year central government securities (end-period)	6.3	6.5
Overall balance of payments (US$ billion)	15.1	10.0
Merchandise exports growth	1.5	6.3
Merchandise imports growth	0.5	7.1
Current account balance (per cent of GDP)	-1.9	-2.0

Note: GNDI: Gross National Disposable Income.
#: Q2:2020-21.
Source: RBI staff estimates; and Survey of Professional Forecasters (September 2019).

Chart I.10: Projection of Growth in Real GDP (y-o-y)



Note: The fan chart depicts uncertainty around the baseline projection path. The baseline projections are conditioned upon the assumptions set out in Table I.2. The thick green shaded area represents 50 per cent confidence interval, implying that there is 50 per cent probability that the actual outcome will be within the range given by the thick green shaded area. Like-wise, for 70 per cent and 90 per cent confidence intervals, there is 70 per cent and 90 per cent probability, respectively, that the actual outcomes will be in the range represented by the respective shaded areas.

Source: RBI staff estimates.

normal monsoon, and no major exogenous or policy shocks.

There are upside as well as downside risks to the baseline growth scenario (Chart I.10). The measures announced by the government in August-September to boost growth and investment – policy reforms on foreign direct investment (FDI), upfront release of funds for recapitalisation of public sector banks (PSBs), merger of PSBs, incentives for exports and real estate, reduction in the corporate income tax rate – along with a faster resolution of stressed assets, and a faster pace of transmission of past repo rate cuts by banks to their lending rates impart an upward bias to the baseline growth projection path. However, further escalation of trade tensions, a hard or no-deal *Brexit* and increased volatility in global financial markets pose downside risks to the baseline growth path.

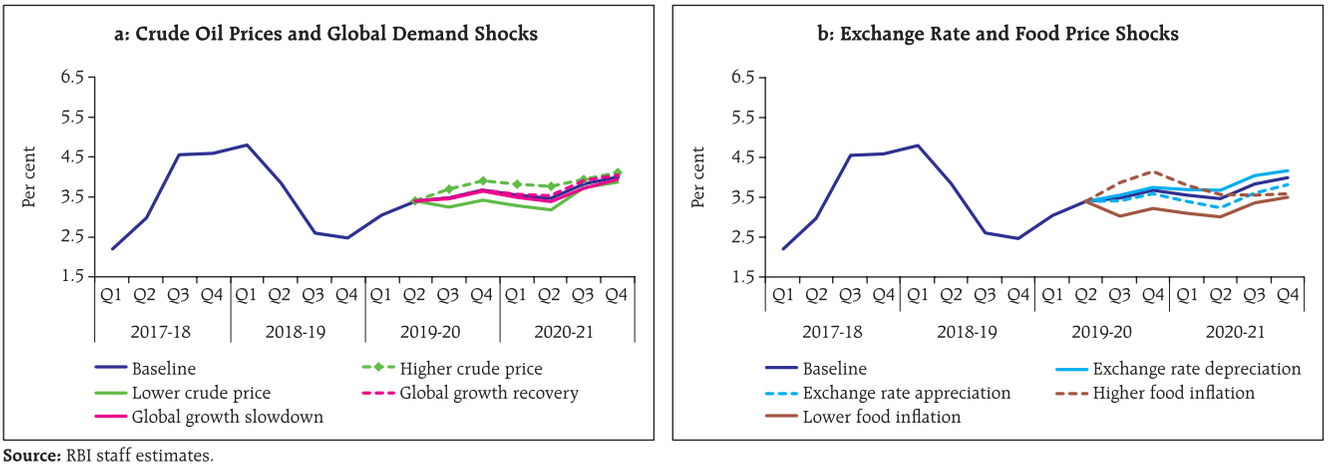
I.4 Balance of Risks

The baseline projections of inflation and growth in the preceding sections are conditional on the assumptions relating to the key variables set out in Table I.2. Uncertainties surrounding these assumptions could lead to upward and downward deviations from baseline projections. This section assesses the balance of risks to the baseline projections in plausible alternative scenarios.

(i) Global Growth Uncertainties

The baseline scenario assumes a slowdown in external demand in 2019 and 2020. Yield curve inversion in major AEs has raised concerns about the growth outlook (Box I.1). Global growth could turn out to be weaker if there is further escalation of trade tensions, a hard/no-deal *Brexit,* a greater-than-envisaged slowdown in some major economies like China, or a combination of these factors. In such a scenario, if global growth slips down by 50 bps *vis-à-vis* the baseline, domestic growth and inflation could be lower by around 20 bps and 10 bps, respectively, from their baseline trajectories (Charts I.11a and I.12a). Conversely, an expeditious and orderly resolution of trade tensions, and/or a

Chart I.11: Impact of Risk Scenarios on the Baseline Inflation Path



Source: RBI staff estimates.

Box I.1: Does Yield Spread Predict Output Growth?

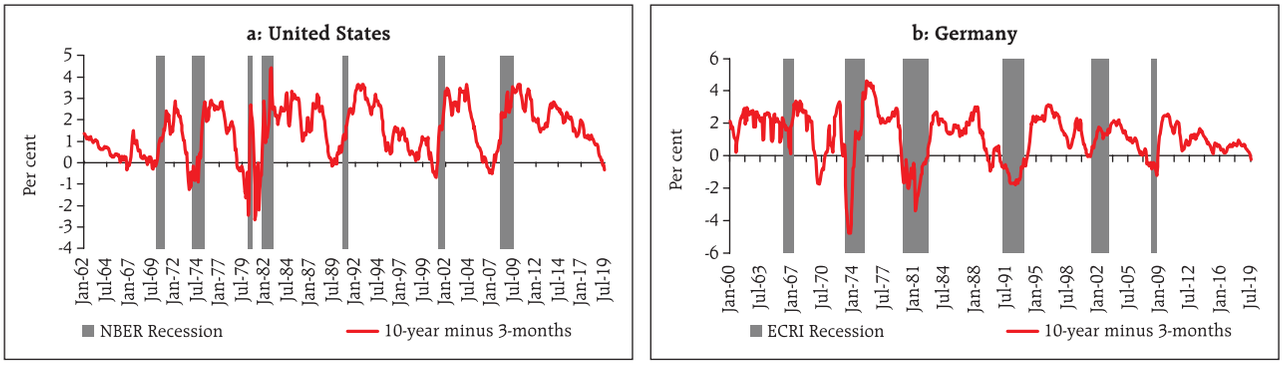
The spread between yields on the US 10-year and 3-month treasury securities – a closely watched metric for term spread – has inverted for the first time since 2007 and turned negative at 13 basis points (bps) in June 2019. The spread has remained in negative territory for the third consecutive month in August at 35 bps (from 83 bps a year ago).

Since the 1950s, US recessions have been preceded by sizeable inversions in the yield curve. The only occasion when the 3-month Treasury security yield exceeded the 10-year Treasury yield without the occurrence of a subsequent recession was in September 1966. Barring this, yield curve inversion has coincided with a recession in the following 18-24 months (Chart I.1.1a).

Inversion/narrowing of yield spreads has occurred in other AEs. Yields have flattened in Germany, the UK, Japan, Singapore and Australia, mirroring a slowdown in the global economy. In the case of Germany, the spread of the 10-year bond yield over the 3-month bond yield turned negative falling to 24 bps in August 2019 as compared with 61 bps a year ago. Germany experienced recessions beginning in 1966, 1973, 1980, 1991, 2001 and 2008. All recessions, except the 1966 recession, were preceded by a sharp decline in long-term Treasury security yields relative to short-term yields. The only inversion that was not followed by a recession was in 1970 (Chart I.1.1b).

According to the expectations hypothesis of the term structure, long-term interest rates equal the sum of current and expected future short-term interest rates plus a term premium. The term premium explains why the yield curve usually slopes upwards, *i.e.*, yields on long-term securities usually exceed those on short-term securities. The yield curve flattens or inverts/slopes downward when the public expects short-term interest rates to fall. In such a scenario, investors bid up the prices of longer-term securities causing a fall in long-term yields relative to yield on short-term securities. There is no unanimity, however, on the theoretical relationship between the term spread and economic activity. To a large extent, the usefulness of the spread for forecasting economic activity remains a "stylised fact in search of a theory" (Benati and Goodhart, 2008). Moreover, the predictive power of the term spread for output growth depends on monetary policy objectives and the reaction function used. In the case of monetary policy tightening for example, short-term rates are likely to rise more than long-term rates and cause the yield curve to flatten or possibly invert (Feroli, 2004). It is also argued that the term spread forecasts output growth better, the more responsive the monetary authority is to deviations of output from potential. The spread forecasts less accurately if monetary policy focusses exclusively on controlling

Chart I.1.1: Treasury Yield Spreads and Recession



Note: The term spread is calculated as the difference between the yields on 10-year and 3-month Treasury securities at constant maturities. Last data point is for August 2019. Shaded areas for the US denote periods of recession as identified by the National Bureau of Economic Research (NBER). Shaded areas for Germany denote periods of recession as identified by the Economic Cycle Research Institute (ECRI).

Sources: Federal Reserve Bank of St. Louis; ECRI and Bloomberg.

Table I.1.1: Correlation between GDP Growth and Yield Spreads

	Lagged Yield Spread							Future Yield Spread					
Country	**t-6**	**t-5**	**t-4**	**t-3**	**t-2**	**t-1**	**t**	**t+1**	**t+2**	**t+3**	**t+4**	**t+5**	**t+6**
US	0.136 (0.042)	0.192 (0.004)	0.218 (0.001)	0.213 (0.001)	0.229 (0.001)	0.154 (0.021)	0.041 (0.545)	-0.073 (0.278)	-0.166 (0.013)	-0.204 (0.002)	-0.231 (0.001)	-0.341 (0.000)	-0.360 (0.000)
Germany	0.268 (0.037)	0.272 (0.034)	0.307 (0.016)	0.291 (0.023)	0.322 (0.011)	0.119 (0.361)	-0.026 (0.843)	-0.207 (0.110)	-0.372 (0.003)	-0.385 (0.002)	-0.400 (0.001)	-0.418 (0.001)	-0.311 (0.015)

Notes: 1. Yield spread between 10-year and 3-month Treasury securities has been measured as the quarterly average of monthly observations.
2. Data for the US and Germany pertain to the period Q2:1962–Q2:2019 and Q4:2002–Q2:2019, respectively.
3. Figures in the parentheses represent *p*-values.

Sources: Bloomberg; and RBI staff estimates.

inflation. The consumption smoothing model derives a relationship between the slope of the yield curve and future economic activity by assuming that individuals prefer stable consumption rather than high consumption during periods of rising income and low consumption when income is falling (Harvey, 1988). If they expect a recession in the future, consumers sell short-term financial instruments and purchase bonds at a discount to generate income, resulting in a flattening or inversion of the yield curve.

The empirical literature suggests that the yield spread predicts output growth at a four-to-six-quarter horizon with considerable variation across countries and over time. However, the ability of the term spread to forecast output growth has declined since the mid-1980s (Wheelock and Wohar, 2009). On the other hand, probit models show that the yield spread outperforms in relation to other macroeconomic and financial variables while predicting the probability of recession (Estrella and Hardouvelis, 1991; Estrella and Mishkin, 1998).

The contemporaneous correlation between the yield spread and real GDP growth was found to be statistically insignificant for both the US and Germany (Table I.1.1). However, correlations between GDP growth and the yield spread lagged by one to six quarters were found to be positive and statistically significant for both the countries, except for the period t-1 for Germany, where it was found to be insignificant. These correlations suggest that the steeper is the yield curve – higher the yield on 10-year Treasury securities relative to that on 3-month Treasury securities – the higher is the future rate of GDP growth. Similarly, correlations between GDP growth and future yield spreads up to six quarters have been found to be negative and statistically significant for both countries, except for period t+1 where it is insignificant for both countries. Negative correlations between GDP growth and the lead terms of the yield spread suggest that higher the GDP growth in period t, less steep would be the yield curve in subsequent quarters (Sahoo and Gupta, 2019).

To sum up, the yield spread has been useful in predicting output growth and recessions at least up to one year in advance, particularly in major AEs, although its signalling value has somewhat blurred in the present environment of unconventional monetary policies. The current phase of negative yield spreads warrants that policymakers remain vigilant.

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smooth *Brexit* could boost confidence and provide support to global trade and demand. Should global growth surprise by 50 bps on the upside, domestic growth and inflation could edge higher by around 20 bps and 10 bps, respectively.

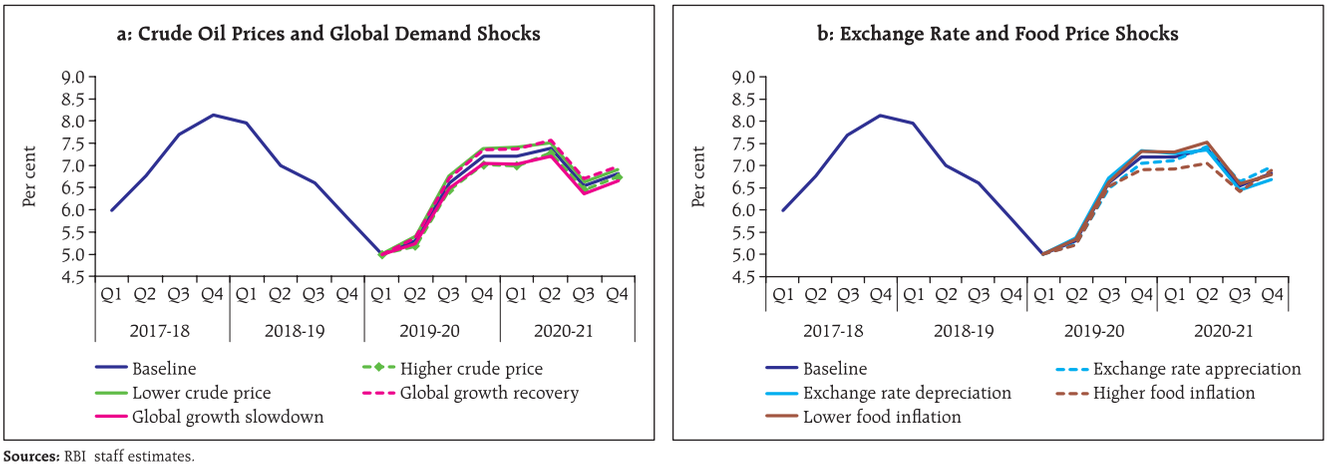
(ii) International Crude Oil Prices

The Indian basket of crude oil prices has exhibited high volatility in the first half of 2019-20 and the outlook remains uncertain. Upside risks to the baseline assumption can emanate from geo-political tensions. Assuming crude oil prices increase to US$ 73 per barrel, inflation could be higher by around 30 bps and growth weaker by around 20 bps from the baseline. Conversely, crude oil prices could soften further if global demand turns out to be weaker than expected. Should the price of the Indian basket of crude fall to US$ 53, inflation could ease by around 30 bps and growth could be higher by around 20 bps (Charts I.11a and I.12a).

(iii) Exchange Rate

The INR depreciated *vis-à-vis* the US dollar in August 2019, reflecting global developments. Looking ahead, rising trade protectionism, and slowing global trade and global output could increase volatility in international financial markets and exert further downward pressure on the currency. Should the INR depreciate by 5 per cent from the baseline, inflation could edge up by around 20 bps and boost net exports and GDP growth by around 15 bps. In contrast, a slew of measures taken by the government to boost output and investment, policy reforms in the FDI regime, and greater than expected monetary policy accommodation by the central banks in major AEs could attract increased capital inflows and lead to an appreciation of the INR. 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 (Charts I.11b and I.12b).

Chart I.12: Impact of Risk Scenarios on the Baseline Growth Path



Sources: RBI staff estimates.

(iv) Food Prices

Food prices picked up during April-August, mainly due to pressures from prices of vegetables and pulses. However, overall food inflation remains benign. The baseline path assumes that food inflation will firm up in the near term reflecting, *inter alia,* the seasonal pick-up in prices of vegetables and some pick-up in prices of pulses as the demand-supply balance stabilises. There are both upside and downside risks to the baseline. The strong revival of monsoon during July-September and the resultant catch-up in *kharif* sowing, large buffer stocks, and improved prospects for *rabi* crops from better reservoir levels could soften food inflation more than assumed, and consequently, headline inflation could be below the baseline by up to 50 bps. However, heavy rains and floods in some areas could exert some upward pressure on food inflation and accordingly, headline inflation could be higher by around 50 bps (Charts I.11b and I.12b).

I.5 Conclusion

Headline inflation is projected to remain below the medium-term target of 4 per cent over the rest of 2019-20 and the early months of 2020-21. Volatility in international and domestic financial markets, as well as global crude oil prices, and domestic prices of perishable food items pose upside risks to the baseline inflation path. On the other hand, the softer outlook on global commodity prices and large buffer stocks could keep headline inflation below the baseline.

Real GDP growth is expected to recover in H2:2019-20, facilitated by favourable base effects and transmission of past monetary policy actions. The measures announced by the government in August-September to boost growth – such as release of funds for recapitalisation of public sector banks, merger of public sector banks, reforms in the FDI regime, initiatives for exports and the real estate sector, reduction in the corporate income tax rate – and faster resolution of stressed assets could push growth above the baseline path. Intensification of global uncertainty around US-China trade tensions, a hard *Brexit* and geo-political tensions are key downside risks to the baseline growth path.

II. Prices and Costs

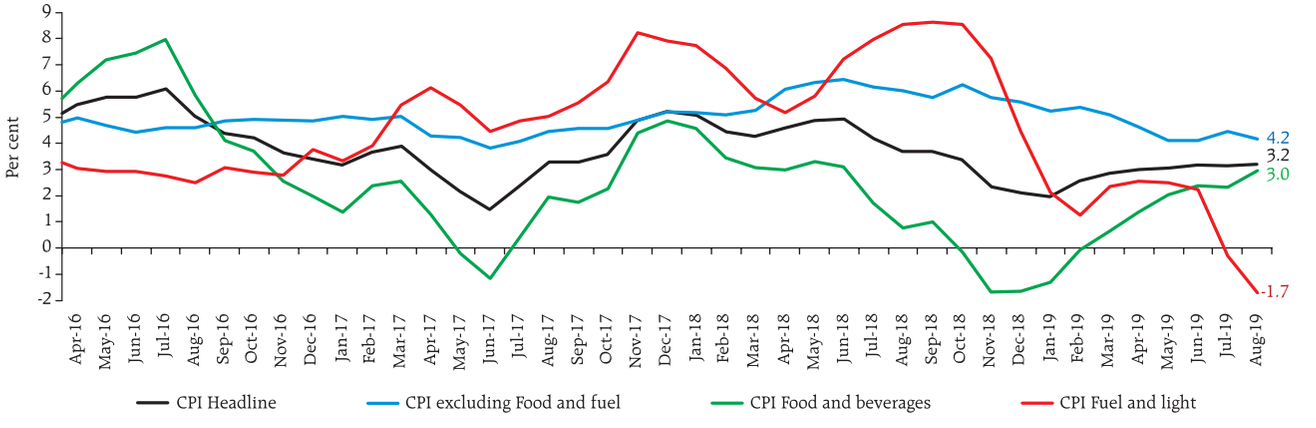
Consumer price inflation registered an uptick during March-August 2019, underpinned by a pick-up in food inflation, particularly in vegetables and protein-based items. Fuel group inflation moderated sequentially after April and moved into deflation in July and August 2019. Inflation excluding food and fuel has softened since March in a broad-based manner notwithstanding a sharp increase in gold prices. Nominal growth in rural wages, both for agricultural and non-agricultural labourers, remained subdued. Growth in organised sector staff costs showed divergent movements – rising for the manufacturing sector and remaining range bound for the services sector. Farm inputs and industrial raw materials price inflation has softened in 2019-20 so far.

Over the last six months *i.e.,* March-August 2019 consumer price index (CPI) inflation trailed below the target of 4.0 per cent averaging 3.1 per cent over this period.[1] Its key driver was food prices which emerged out of deflation in March 2019 and gradually firmed over the ensuing months in the usual summer season upturn. In contrast, prices of fuel and light items remained soft and slumped into deflation during July-August 2019. Excluding food and fuel, inflation ebbed by around 100 basis points between March-June 2019 and reached a 23-month low in June 2019, before registering some uptick during July-August (Chart II.1).

The RBI Act, 1934 (amended in 2016) enjoins the RBI to set out deviations of actual outcomes from projections, if any, and to explain the underlying reasons thereof. The Monetary Policy Report (MPR) of April 2019 had projected CPI inflation at 2.9 per cent for Q1:2019-20 and 3.0 per cent for Q2:2019-20. Actual inflation outcomes have, by and large, tracked these projections (Chart II.2).

While food prices moved out of deflation as anticipated, the summer rise in prices of vegetables this year was more pronounced than observed in recent history. Pulses prices moved out of two and a half years of deflation in May 2019. As a result, food inflation inched up by 230 basis points, larger than expected, between March and August 2019. Meanwhile, inflation excluding food and fuel softened more than anticipated, providing an offset. The Indian basket of crude oil prices eased unexpectedly – from an average of US$ 67 per barrel during 2019-20 (which was the baseline assumption in the April MPR) to below US$ 60 per barrel in August. Prices within the fuel group

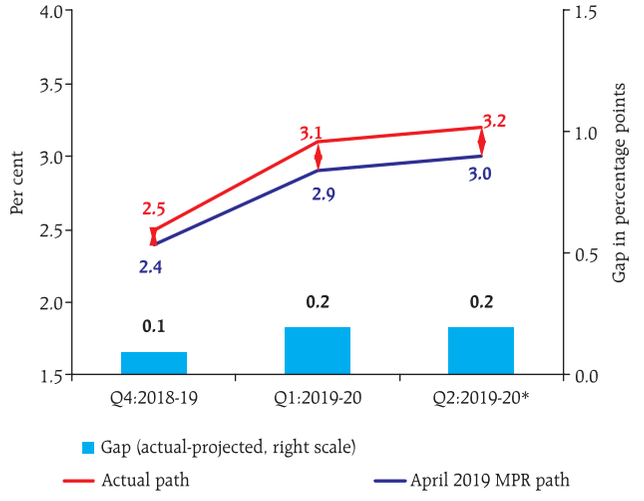
Chart II.1: CPI Inflation (y-o-y)



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



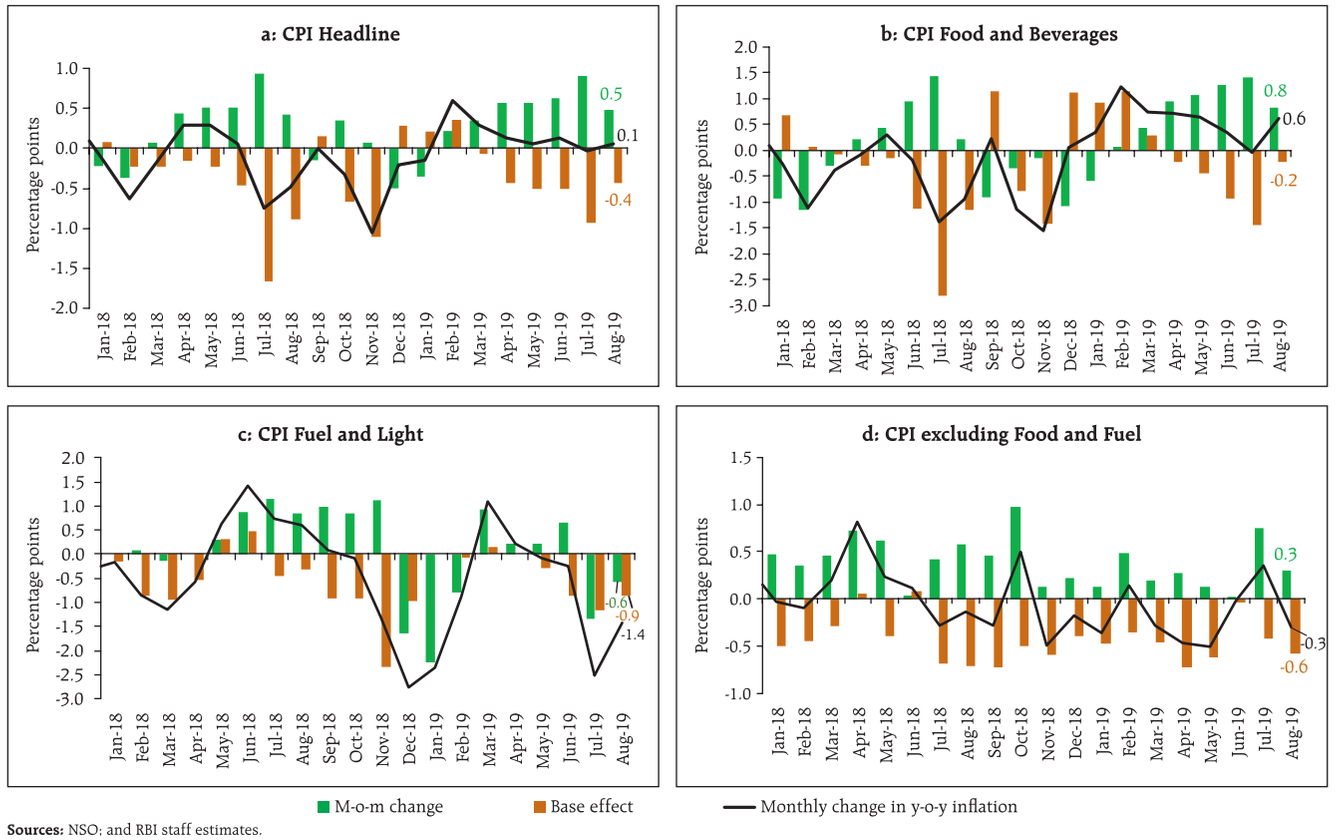
*: Projections for entire Q2:2019-20 *vis-à-vis* actual average inflation during Jul. - Aug. 2019.
Sources: NSO; and RBI staff estimates.

underwent substantial correction in respect of both rural items of consumption such as firewood and dung cake and those of urban usage such as liquefied petroleum gas (LPG). Consequently, the fuel group as a whole slipped into deflation during July-August. On the whole, these divergent movements caused CPI headline inflation outcomes to marginally overshoot inflation projections, *i.e.*, by 20 basis points each in Q1:2019-20 and Q2:2019-20 (July-August) (Chart II.2).

II.1 Consumer Prices

A decomposition of year-on-year (y-o-y) inflation shows that its rising trajectory during March to June 2019 was propelled by a sustained increase in price momentum (Chart II.3). In July, large favourable base effect helped moderate the high price momentum.[2] In August, however, the price momentum outweighed a low base effect and consequently, inflation edged

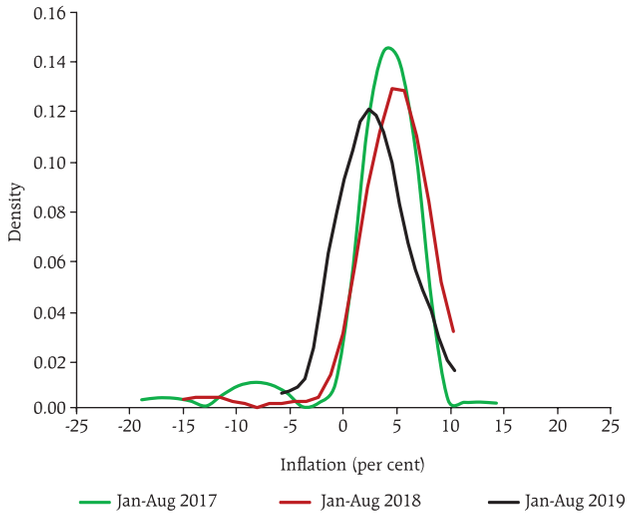
Chart II.3: CPI Inflation – Momentum and Base Effects



Sources: NSO; and RBI staff estimates.

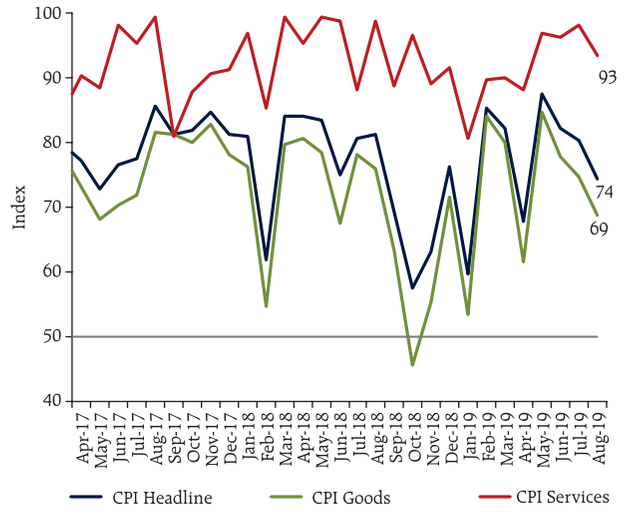
[2] Inflation (*i.e.*, the y-o-y change in CPI) in any given month arithmetically equals the previous month's inflation plus the difference between current month-on-month (m-o-m) change in the price index (momentum) and the m-o-m change in the price index 12 months earlier (base effect). See Box 1.1 of MPR, September 2014.

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



Sources: NSO; and RBI staff estimates.

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



Sources: NSO; and RBI staff estimates.

up marginally. The elevation in price momentum in H1:2019-20 was driven by the food group, mainly by prices of vegetables, pulses, meat and fish. In contrast, the momentum underlying fuel and light inflation collapsed during July-August under the weight of a broad-based decline in prices of items of rural and urban fuel consumption. The momentum of prices of items excluding food and fuel moderated during March-August 2019 and was completely overwhelmed by favourable base effects, barring July.

The distribution of inflation across CPI groups shows a considerable drop in median inflation rates – from 4.8 per cent in 2018 to 2.1 per cent in 2019 so far. Moreover, the negative skew in inflation in 2017 and 2018 resulting from food prices was absent in 2019, implying that a generalised moderation in inflation was underway this year (Chart II.4). Diffusion indices of month-on-month (m-o-m) price changes in CPI items on a seasonally adjusted basis moderated during June-August 2019 across both goods and services categories (Chart II.5).[3]

II.2 Drivers of Inflation

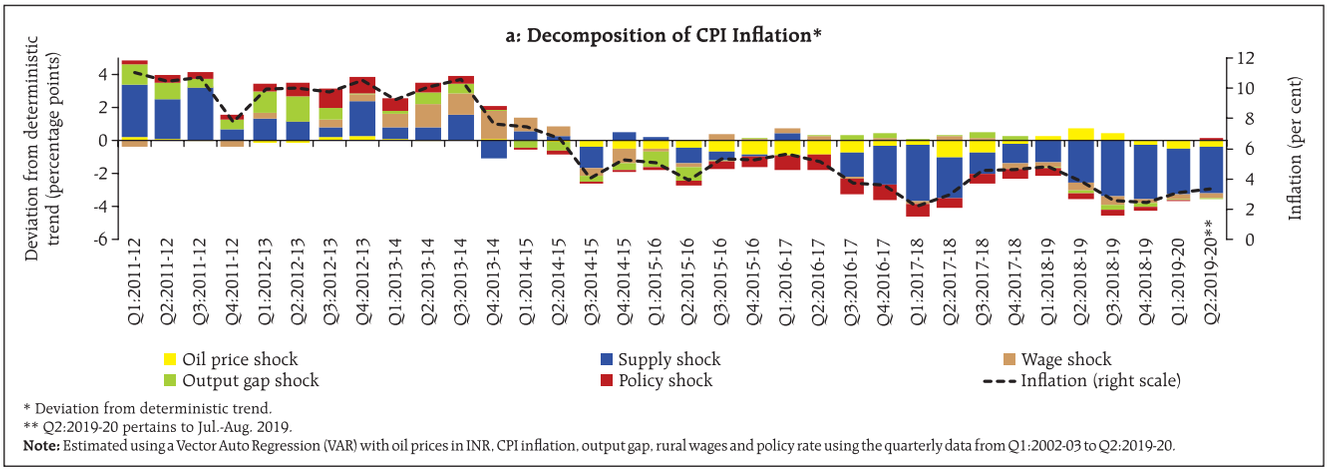
A historical decomposition of inflation shows that it was impacted by positive supply shocks in H1:2019-20, which, in conjunction with subdued domestic demand, kept headline inflation low and stable (Chart II.6a).[4]

The break-up of overall CPI inflation into goods and services components suggests that perishable goods (non-durable goods with 7-day recall) such as vegetables and fruits were the largest contributor to overall inflation during April-August (Chart II.6b). The contribution of less perishable goods (non-durable goods with 30-day recall) moderated due to deflation in prices of rice, petroleum products, LPG and electricity. The contribution of durable goods to overall inflation increased during June-August 2019, primarily on

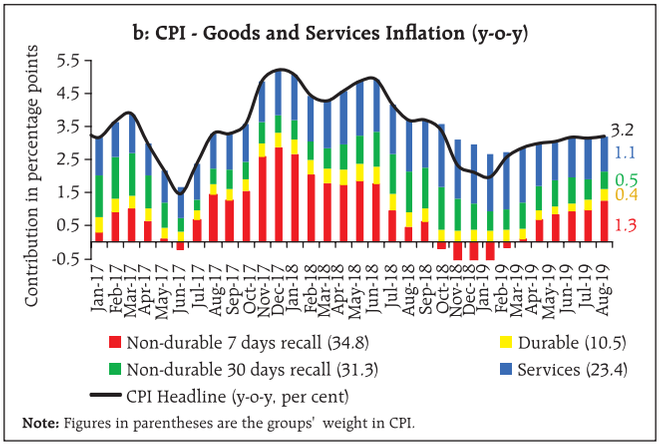
[3] The CPI diffusion index, a measure of dispersion of price changes, categorises items in the CPI basket according to whether their prices have risen, remained stagnant or fallen over the previous month. A reading above 50 for the diffusion index signals generalisation of price increases and a reading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

[4] 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.

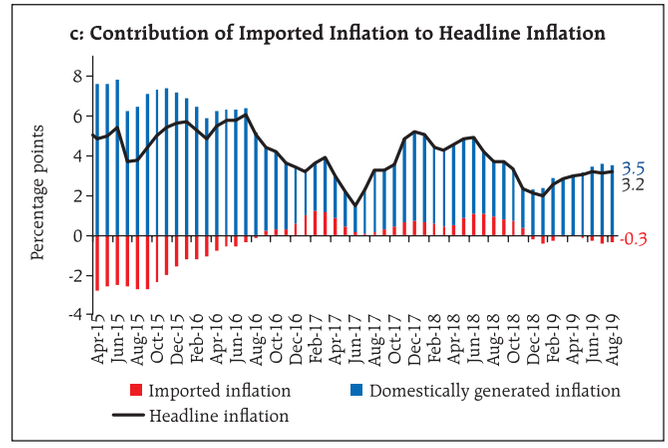
Chart II.6: Drivers of Inflation



* Deviation from deterministic trend.
** Q2:2019-20 pertains to Jul.-Aug. 2019.
Note: Estimated using a Vector Auto Regression (VAR) with oil prices in INR, CPI inflation, output gap, rural wages and policy rate using the quarterly data from Q1:2002-03 to Q2:2019-20.



Note: Figures in parentheses are the groups' weight in CPI.



Sources: NSO; and RBI staff estimates.

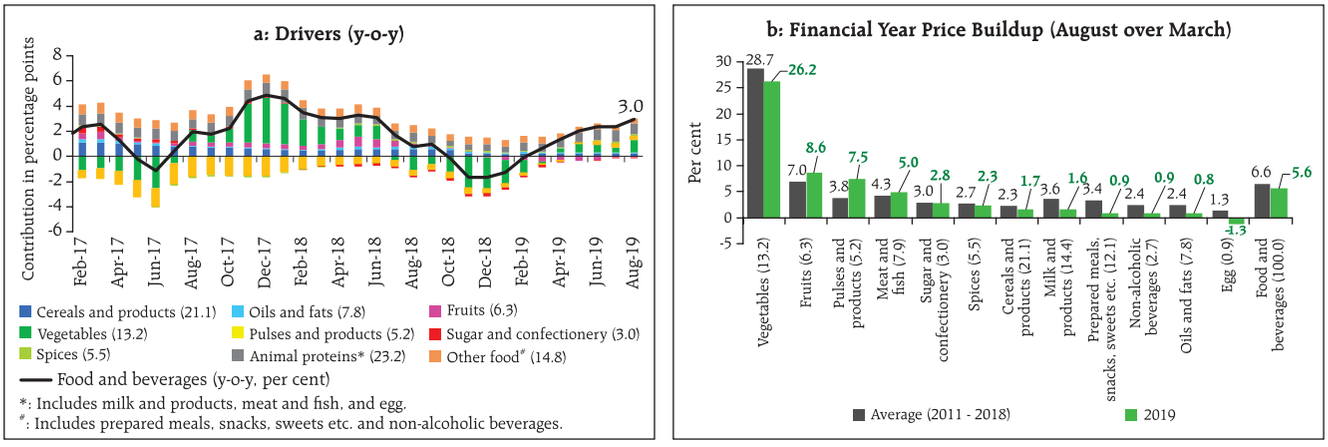
account of a sharp increase in prices of gold and to a lesser extent, in those of motor vehicles. Imported goods (petrol; diesel; LPG; kerosene; electronic goods; gold; silver; chemical and chemical products; metal and metal products; and refined vegetables oils) together contributed negatively to overall inflation in the recent period (Chart II.6c). The contribution of services to overall inflation moderated. However, services (with a weight of 23.4 per cent in overall CPI) contributed to about a third to overall inflation (Chart II.6b).

CPI Food Group

In terms of weighted contribution, the food and beverages group (weight: 45.9 per cent in CPI) contributed 32.9 per cent to overall inflation during April-August 2019 as compared with 25.0 per cent for the same period a year ago. Inflation in the food group turned positive beginning March 2019 – after remaining in the negative zone for five consecutive months during October 2018-February 2019 – and increased steadily thereafter driven by prices of vegetables, fruits and protein-rich items such as pulses, meat, fish and milk (Chart II.7a).

Within the food and beverages group, the price build-up during the financial year so far in the case of vegetables has been substantial, but close to historical summer price increases. In the case of fruits, pulses, meat and fish, the price build-up has been, in fact, larger than the historical average (2011-18). For all the other sub-groups within the food group, the build-up has been much lower than in the past (Chart II.7b).

Chart II.7: CPI Food Inflation



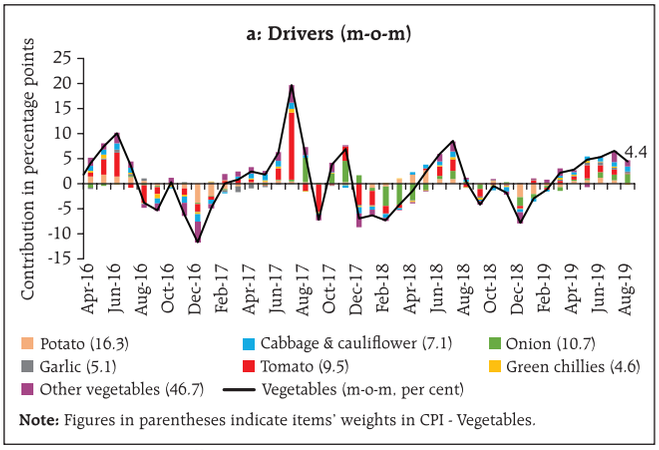
Note: Figures in parentheses indicate weights in CPI Food and beverages.
Sources: NSO; and RBI staff estimates.

Inflation in respect of cereals (weight of 9.7 per cent in CPI and 21.1 per cent in the food and beverages group) remained moderate during April-August 2019, with rice prices remaining in deflation, reflecting robust production and adequate stocks. As per the fourth advance estimates of foodgrain production, production of rice was at 1164 lakh tonnes in 2018-19, higher than 1128 lakh tonnes in 2017-18, which was until recently an all-time record. Exports of rice declined during April-July 2019 as the 5 per cent incentive provided by the government to rice exporters under the Merchandise Exports from India Scheme (MEIS) was withdrawn from April 1, 2019 and this resulted in higher domestic availability. Wheat inflation, however, remained high at an average of 6.8 per cent during April-August 2019 (3.4 per cent in 2018-19) due to a fall in imports following a hike in import duty to 40.0 per cent in April 2019 from 30.0 per cent in May 2018.

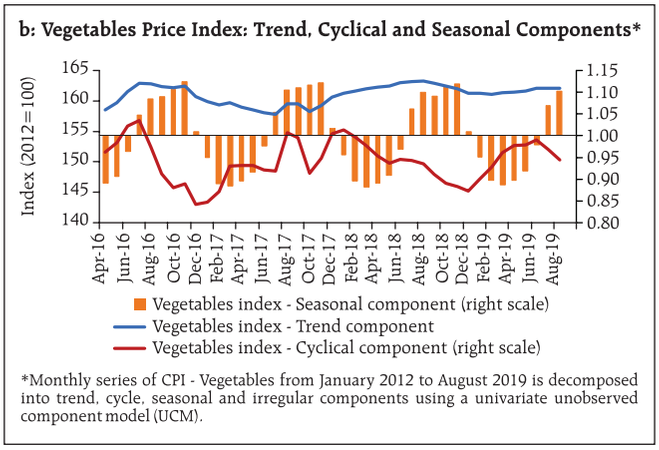
As regards vegetables (weight of 6.0 per cent in CPI and 13.2 per cent in the food and beverages group), a recovery in the prices of onions, tomatoes and potatoes (which account for 36.5 per cent of the total CPI vegetables) led the upturn in prices (Chart II.8a).

Potato price pressures picked up right from April 2019. First, untimely rains during February and March in West Bengal impacted the crop which was ready to be harvested. Second, *mandi* arrivals declined due to a sudden increase in temperature during summer months and thunderstorms in several parts of northern and north-eastern states that spoiled the produce in transit. Despite this firming up, potato prices moved into deflation beginning April 2019 on account of favourable base effects. Onion prices, which had declined during December 2018-March 2019, revived from April with a sharp uptick during June-August. A reduction in *rabi* onion acreage in Maharashtra, particularly in the major onion-producing district of Nashik due to drought-like conditions, led to a slump in *mandi* arrivals. Onion prices were also supported by procurement operations by the National Agricultural Cooperative Marketing Federation of India (NAFED) in Maharashtra. Excessive rainfall, coupled with floods in several parts of major onion-supplying states such as Maharashtra, Karnataka and Madhya Pradesh during July-August, also led to a reduction in supplies. Tomato prices began picking up from March 2019, with inflation in this item rising sharply to 70.1 per cent in May 2019 from (-) 52.2 per cent in November 2018. Delayed harvesting in Maharashtra as well as fungus damaged crops in Karnataka triggered the initial uptick in prices, which was exacerbated by supply disruptions due to incessant rains and flood-like situations in key supplier states – Karnataka, Maharashtra and Himachal Pradesh. Tomato inflation, however, eased to 28.4 per cent in July largely due to a favourable base effect, before hardening to 39.4 per cent in August on account of an adverse base effect.

Chart II.8: CPI Vegetables



Note: Figures in parentheses indicate items' weights in CPI - Vegetables.



*Monthly series of CPI - Vegetables from January 2012 to August 2019 is decomposed into trend, cycle, seasonal and irregular components using a univariate unobserved component model (UCM).

Sources: NSO; and RBI staff estimates.

A decomposition of CPI vegetables into trend, cyclical and seasonal components reveals that the cyclical upswing, starting from December 2018, was the key driver of the vegetables inflation during H1:2019-20 (till July 2019), with the trend component remaining flat. The seasonal uptick during the summer season tracked the pattern in previous years (Chart II.8b).

Prices of fruits (weight of 2.9 per cent in CPI and 6.3 per cent within the food and beverages group) moved into deflation in December 2018. Fruits prices began rising from February 2019 with sharp uptick in April and July. However, fruits remained in deflation up to August 2019. Price pressures were particularly evident in respect of bananas and apples, which together constitute around 35.6 per cent of the category of fruits. While banana prices were impacted by lower *mandi* arrivals, apple prices increased in the usual seasonal upturn. Apple prices were also supported by lower imports following the increase in import duty on apples from the US by 20.0 per cent in June 2019. However, price pressures in respect of both bananas and apples declined in August due to higher domestic arrivals in *mandis*.

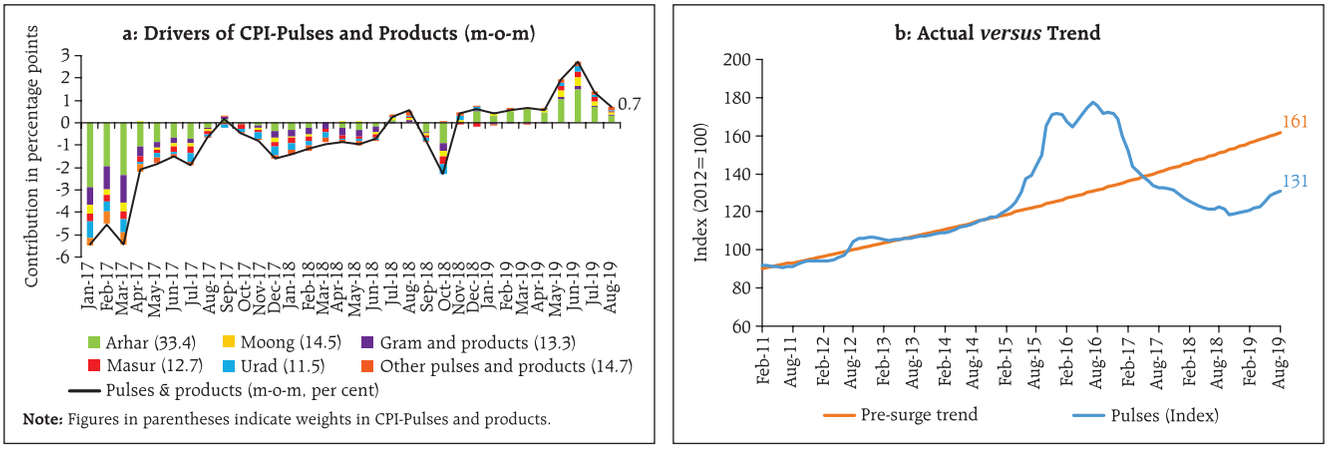
The rise in prices of vegetables and fruits during the summer months of 2019 was witnessed in urban as well as rural areas. A sectoral analysis suggests that there is no statistically significant difference between the m-o-m changes in prices of fruits and vegetables between rural and urban areas. There is, however, statistically significant higher volatility in m-o-m changes in prices of vegetables and fruits in urban areas than in rural areas[5].

CPI pulses (weight of 2.4 per cent in CPI and 5.2 per cent in the food and beverages group), driven by a sustained uptick in prices, emerged from 29 successive months of deflation in May 2019 to reach a 35-month high inflation of 6.9 per cent in August 2019 (Chart II.9a). Even so, the CPI pulses index remained below trend (Chart II.9b). Pulses production was lower at 234 lakh tonnes (as per the fourth advance estimates) in 2018-19 than 254 lakh tonnes in 2017-18. In addition, pulses imports declined from 57 lakh tonnes in 2017-18 to 26 lakh tonnes in 2018-19, reducing the domestic supply glut. A sizeable stock of pulses – at around 40 lakh tonnes – is available, which could be released in the market to contain price pressures.

Meat and fish prices also contributed to the pick-up in food inflation, partly reflecting the sustained rise in feed prices, particularly of maize. In fact, inflation in meat and fish prices was the highest in 62 months in July 2019. While egg prices moved in line with their historical pattern, those of milk and products hardened during May-August 2019, primarily reflecting an increase in retail milk prices by ₹2 per litre to ₹6 per litre due to pass-through of an increase in procurement prices of milk by ₹5-6 per litre by milk co-operatives.

[5] Based on a F-test and t-test framework. The robustness of the results was tested using both seasonally adjusted and unadjusted data.

Chart II.9: CPI Pulses



Note: Figures in parentheses indicate weights in CPI-Pulses and products.

Sources: NSO; and RBI staff estimates.

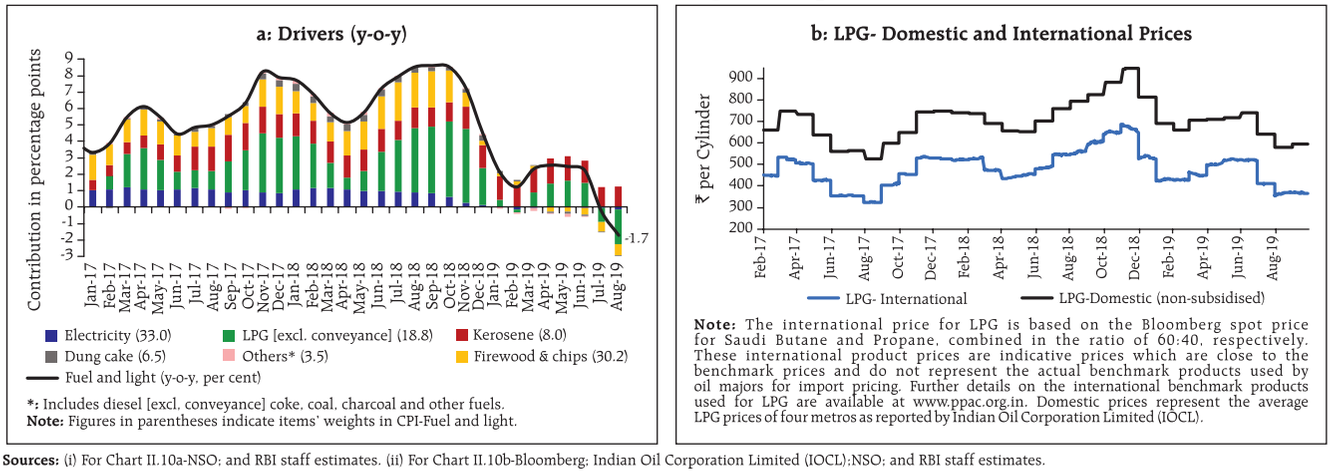
Prices of sugar emerged out of deflation in May 2019 after remaining in negative territory for 15 consecutive months. However, they slipped back into deflation during June-August 2019, reflecting domestic supply surpluses as well as favourable base effects. As per the Indian Sugar Mills Association (ISMA), the opening stock of sugar as on October 1, 2019 is expected to be at an all-time high of 145 lakh tonnes. International sugar prices, which were in deflation during May 2017-February 2019 due to persistent excess global supply, also returned to positive territory in March 2019. Some increase in sugar prices in the domestic market was observed in Q1:2019-20, possibly reflecting the increase in minimum selling prices of sugar by ₹2 per kilogram in February 2019.

Inflation in respect of oils and fats remained subdued at around 0.8 per cent during April-August 2019, with soft international prices and higher domestic production keeping prices under check. According to the fourth advance estimates, oilseeds production increased by 2.5 per cent in 2018-19; however, a decline in groundnut production during the year contributed to price pressures in groundnut oil during a major part of 2018-19 as well as in 2019-20 so far.

CPI Fuel Group

Fuel group inflation moderated sequentially after April up to June and sank into deflation in July and August 2019, with inflation in major constituents such as electricity, LPG, firewood and chips and dung cake all slipping into negative territory (Chart II.10a).

Chart II.10: CPI Fuel and Light Group Inflation



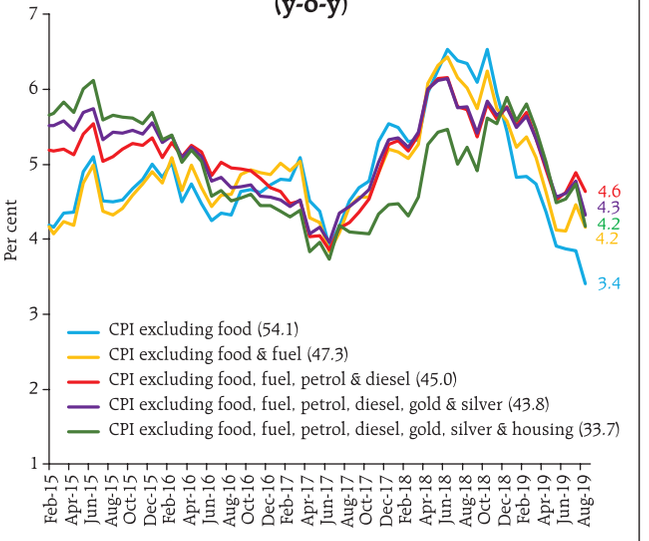
*: Includes diesel [excl. conveyance] coke, coal, charcoal and other fuels.
Note: Figures in parentheses indicate items' weights in CPI-Fuel and light.

Note: The international price for LPG is based on the Bloomberg spot price for Saudi Butane and Propane, combined in the ratio of 60:40, respectively. These international product prices are indicative prices which are close to the benchmark prices and do not represent the actual benchmark products used by oil majors for import pricing. Further details on the international benchmark products used for LPG are available at www.ppac.org.in. Domestic prices represent the average LPG prices of four metros as reported by Indian Oil Corporation Limited (IOCL).

Sources: (i) For Chart II.10a-NSO; and RBI staff estimates. (ii) For Chart II.10b-Bloomberg; Indian Oil Corporation Limited (IOCL);NSO; and RBI staff estimates.

After registering price increases between March-June, domestic LPG prices declined abruptly in July and August, following a collapse in international petroleum products prices (Chart II.10b). Electricity prices, which constitute around one-third of the fuel and light sub-group, have been in deflation for most of the months since January 2019. Prices of items of rural consumption such as firewood and chips, and dung cake have also remained in deflation since April 2019. This could partly be on account of increased LPG use in rural areas.[6] In contrast, administered kerosene prices registered calibrated increases as oil marketing companies (OMCs) raised administered prices to align them more closely with market prices so as to eventually phase out the subsidy on petroleum products.

Chart II.11: Exclusion-based CPI Inflation (y-o-y)



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

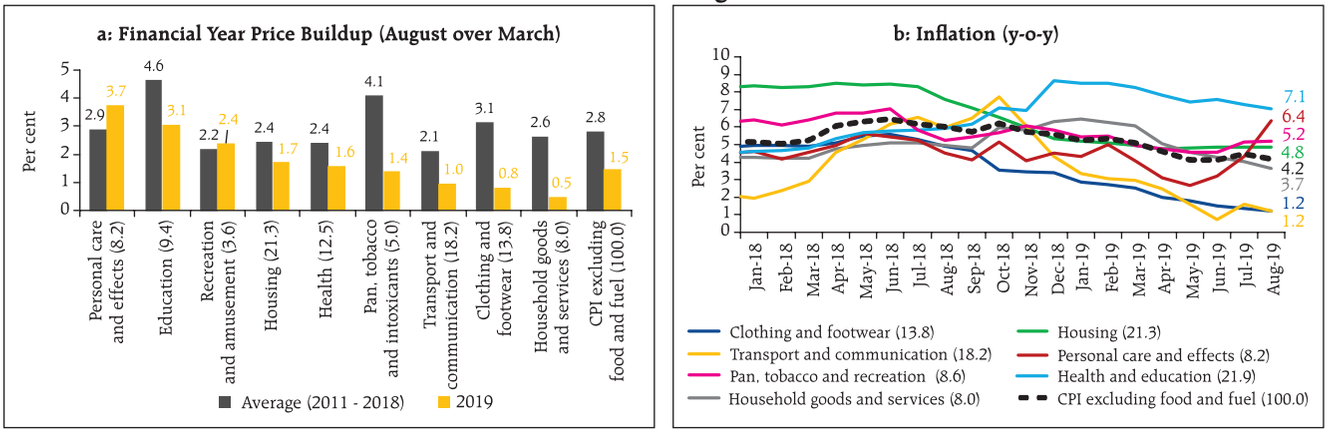
CPI excluding Food and Fuel

CPI inflation excluding food and fuel moderated by close to 100 bps between March and June 2019. Even excluding volatile components such as petroleum products, gold and silver, it moderated by around 70 bps, reflecting the broad-based nature of the disinflation in this group. Although inflation excluding food and fuel picked up by 35 bps in July 2019, it was not sustained and it moderated by about 30 bps in August (Chart II.11).

Within CPI excluding food and fuel, price increases during the financial year so far have been considerably lower than historical averages for most of the constituent sub-groups (Chart II.12).

Empirical evidence suggests that persistently low food inflation has spilled over to CPI excluding food and fuel (Box II.1).

Chart II.12: CPI excluding Food and Fuel



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

[6] Rural households were provided LPG connections under the Pradhan Mantri Ujjwala Yojana (PMUY), which significantly improved the LPG coverage (all India) from 62 per cent in 2015-16 to 94 per cent in 2018-19. Estimates suggest that this could have contributed to around 1.60 percentage points reduction in inflation in traditional sources of cooking fuels like firewood and chips and dung cakes.

Box: II.1: Time-varying Estimates of Spillovers from Food Inflation to Inflation excluding Food and Fuel

Movements in food inflation have direct and indirect effects on headline inflation – directly through the relative weight of food in the CPI basket, and indirectly by second round effects through changes in inflation expectations, wages and relative price adjustments (Cecchetti and Moessner, 2008). Empirical results based on cross-country evidence suggest that volatile and persistent food price shocks in economies having a large share of expenditure on food in the consumption basket are likely to have larger and longer effects of food inflation on non-food inflation (Walsh, 2011). These spillovers could be time dependent and conditioned by the state of the economy. A time-varying parameter vector autoregression with stochastic volatility (TVP-VAR), (Primiceri, 2005), was employed to estimate the time-varying pass-through coefficients. It is based on five variables, *viz.*, the output gap (deviation of output from its potential level, y_t); food inflation (π_t^f); inflation excluding food and fuel (π_t^c); the policy interest rate (i_t) (proxied by the call money rate, which is the operating target of monetary policy), and the exchange rate (Indian Rupees per US$) changes ($z_t$), over the sample period from Q1:1996-97 to Q1:2019-20.[7] The estimated model can be represented as follows:

Let Y_t denote a n ×1 vector $\{y_t, \pi_t^f, \pi_t^c, i_t, z_t\}$ of 5 variables at time t. Then,

$$Y_t = X_t \beta_t + A_t^{-1} \Sigma_t \varepsilon_t, \qquad t = s+1 \ldots . n. \qquad (1)$$

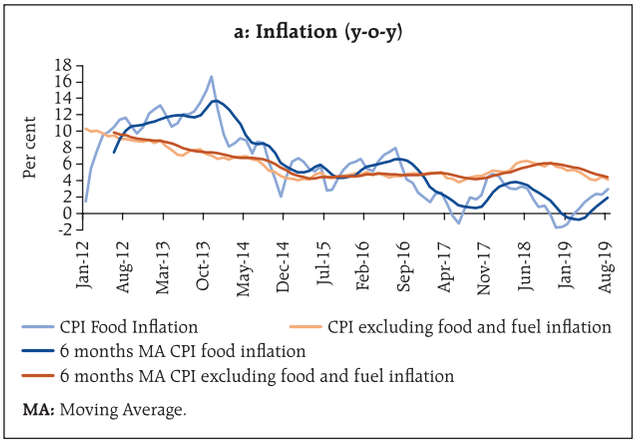
Where $X_t = Is \otimes (Y_{t-1}' \ldots Y_{t-s}')$; $a_t = (a_{21}, a_{31}, a_{32}, a_{41}, \ldots, a_{54})$ is a stacked vector of the lower-triangular elements in A_t; $h_t = (h_{1t}, \ldots, h_{kt})$ with $h_{jt} = \log\sigma^2_{jt}$ for $j = 1, \ldots, k$, $t = s+1, \ldots, n$ and β_t be the vector of coefficients. It is assumed that parameters in (1) follow a random walk process as in (2).

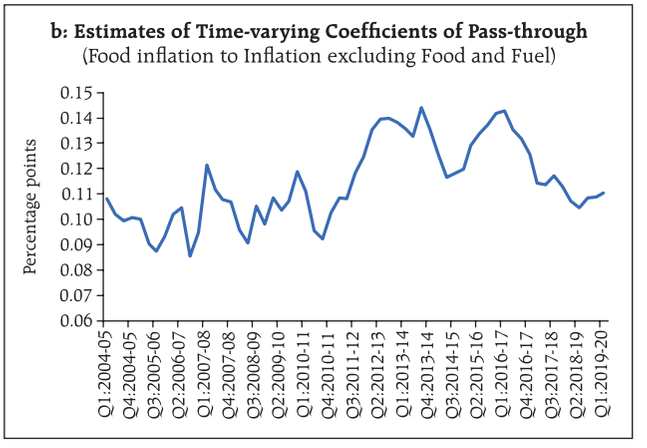
$$\begin{aligned} \beta_{t+1} &= \beta_t + u_{\beta t} \\ a_{t+1} &= a_t + u_{at} \\ h_{t+1} &= h_t + u_{ht} \end{aligned} \quad \text{with} \quad \begin{bmatrix} \varepsilon_t \\ u_{\hat{a}t} \\ u_{at} \\ u_{ht} \end{bmatrix} \sim N\left(0, \begin{bmatrix} I & 0 & 0 & 0 \\ 0 & \Sigma_\beta & 0 & 0 \\ 0 & 0 & \Sigma_a & 0 \\ 0 & 0 & 0 & \Sigma_h \end{bmatrix}\right) \quad (2)$$

for $t = s+1, \ldots, n$.

The empirical results suggest that (i) pass-through coefficients are time varying – ranging between 8 per cent and 14 per cent during Q3:2003-04 to Q1:2019-20; (ii) pass-through is high when food inflation is high and persistent, and low when food inflation is low. In the recent low food inflation scenario, the pass-through coefficient has moderated to around 10 per cent (Chart II.1.1a & b). In view of this asymmetric impact of food inflation on inflation excluding food

Chart II.1.1: Passthrough of CPI Food to CPI excluding Food and Fuel





(Contd.)

[7] CPI food price and CPI excluding food and fuel price indices, prior to 2011 were estimated using the corresponding indices of CPI Industrial Workers.

and fuel, maintaining low and stable food prices becomes critical to contain underlying inflation pressures. This would entail supply side reforms to ensure that food inflation remains under check.

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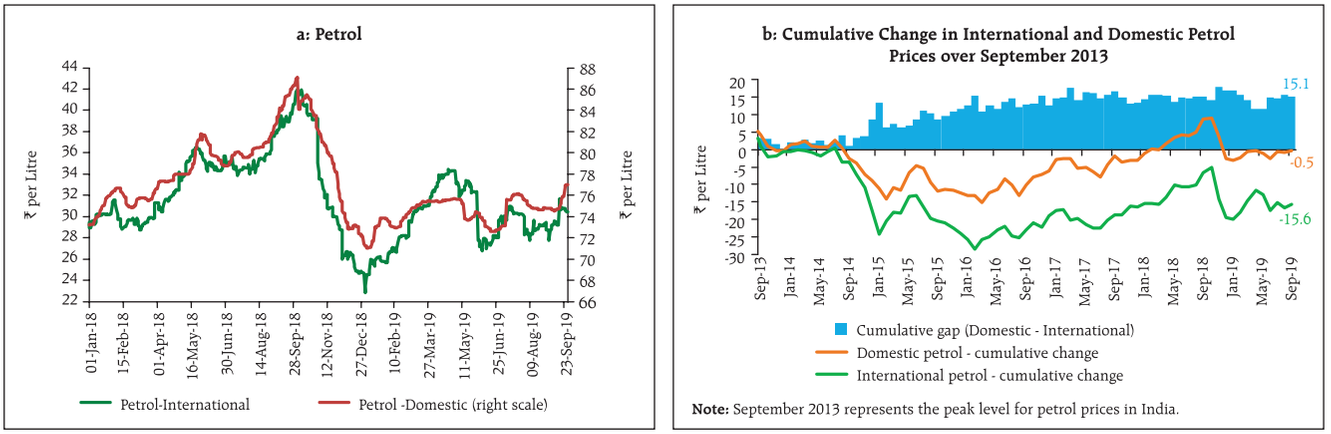
Inflation in the transport and communication sub-group moderated primarily due to a sustained deflation in petroleum product prices (Chart II.13a). However, the wedge between international and domestic prices remains considerable due to an incomplete pass-through (Chart II.13b).

An examination of the components of CPI excluding food, fuel, petrol and diesel inflation in terms of goods and services shows that while goods inflation saw phases of both moderation (February-May) and uptick (June-August), services inflation has fallen persistently (Chart II.14a & b). A key sub-group contributing to the downturn in goods inflation was clothing and footwear, mainly in rural areas. Other sub-groups contributing to the goods moderation were personal care items, particularly, gold; silver; and toiletries, and household goods and services items. The pick-up in goods inflation since June has almost entirely emanated from the personal care and effects sub-group, driven by a sharp pick-up in gold prices. Services inflation moderated from elevated levels in February 2019 to 4.9 per cent in August 2019 (Chart II.14b) in a broad-based manner across education services like tuition and coaching; transportation fares, particularly, bus fares; medical services; housing; and household services like sweeping and tailoring charges.

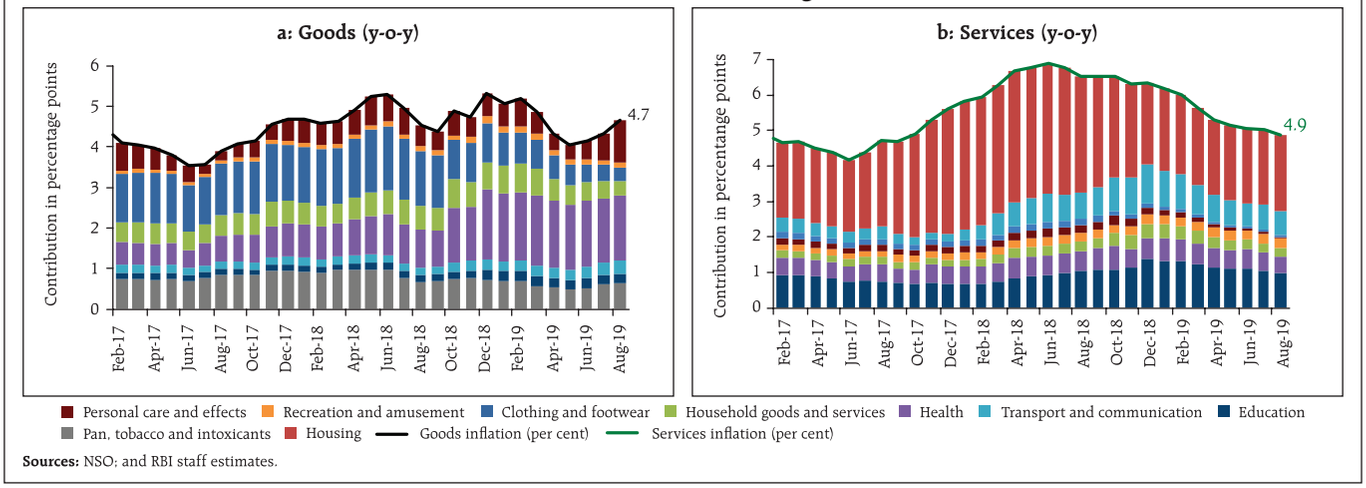
Chart II.13: Movements in International and Domestic Petroleum Product Prices



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

Note: International petrol prices denote the spot price of Singapore gasoline. Domestic prices represent the average pump prices of four metros of Indian Oil Corporation Limited (IOCL).
Sources: Bloomberg; IOCL; and RBI staff estimates.

Chart II.14: Contribution to CPI Inflation excluding Food, Fuel, Petrol and Diesel



Sources: NSO; and RBI staff estimates.

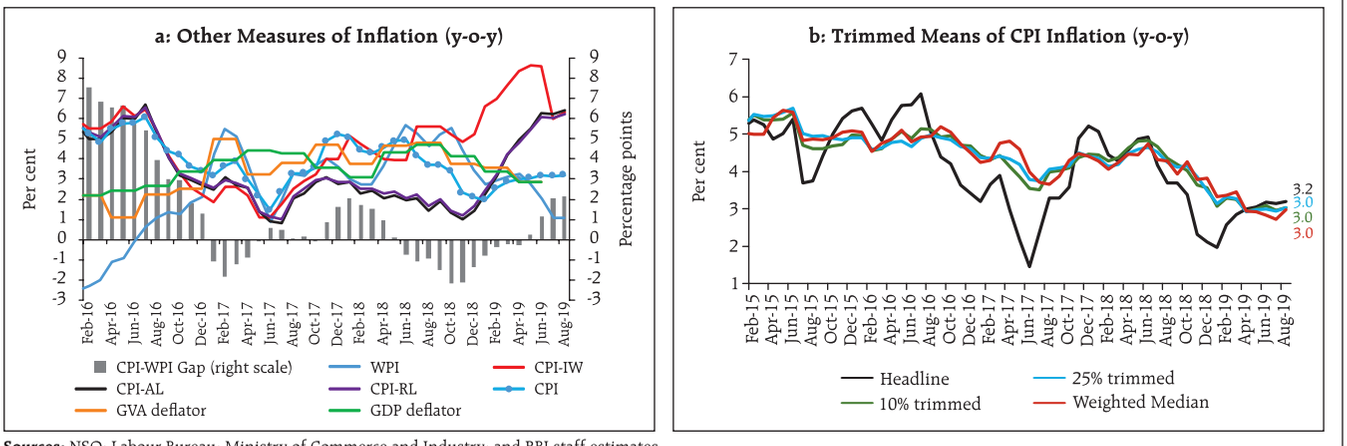
Other Measures of Inflation

Inflation in sectoral CPIs, *i.e.*, for industrial workers (CPI-IW), agricultural labourers (CPI-AL) and rural labourers (CPI-RL), rose rapidly between March and June 2019 compared with the muted uptick in CPI headline inflation. Inflation in food and fuel components of CPI-AL and CPI-RL was higher than that in headline CPI and was accentuated by the larger share of food in these indices. In the case of CPI-IW, a major source of divergence was the housing component. Following the increase in HRA under the 7th central pay commission (CPC), housing inflation in CPI-IW remained above 26 per cent during July 2018 to June 2019, pushing CPI-IW inflation to 8.7 per cent by May 2019. As the effect of increase in HRA waned, CPI-IW inflation declined to 6.3 per cent in August.

Inflation in wholesale price index (WPI) fell steadily in contrast to the sectoral CPIs to a low of 1.1 per cent in August 2019. On the one hand, fuel group inflation collapsed from 4.6 per cent in March to (-) 4.0 per cent in August 2019 tracking international petroleum product prices; inflation in non-food manufactured products also fell across the board and was in contraction in August. On the other hand, WPI food inflation showed an uptick from January and remained elevated till August, barring a fleeting correction in July. GDP and GVA deflators broadly remained in alignment with CPI inflation during the last six months (Chart II.15a).

Underlying inflation dynamics can be gauged from exclusion-based measures that remove volatile items/item groups or by statistical measures such as trimming, which adjust for positive and negative

Chart II.15: Alternative Measures of Inflation



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

skewness and chronic fat tails in the inflation distribution by removing outliers. By these measures, inflation have moved with a softening bias over the last six months (Chart II.11 & 15b).

II.3 Costs

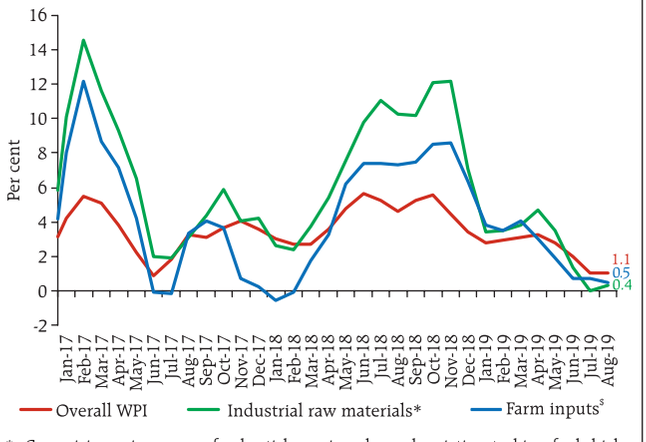
Developments in underlying cost conditions have largely been in sync with inflation in terms of the WPI (Chart II.16). Price inflation in farm inputs and industrial raw materials (extracted from the WPI) has fallen in 2019-20 so far. The moderation in global crude oil prices during 2019-20 has kept domestic price pressures under check in respect of inputs such as high-speed diesel, aviation turbine fuel, naphtha, furnace oil and petroleum coke. In addition, the contraction in mineral prices has also aided the fall in industrial input costs.

Among other industrial raw materials, domestic coal inflation has subsided significantly since the beginning of 2019-20, averaging around 0.7 per cent during April-August 2019. Domestic coal prices largely moved in line with international coal prices during the period. Inflation in paper and paper products has also moderated due to lower raw material costs including those of pulp and coal. In the case of fibres, inflation eased during June-August 2019, predominantly reflecting the easing in prices of raw jute and raw cotton.

Of farm sector inputs, price pressures in respect of fertilisers remained subdued, largely reflecting moderation in international prices, especially those of phosphate, di-ammonium phosphate and triple superphosphate. Inflation in respect of pesticides and other agrochemical products also softened considerably in Q1:2019-20 due to easing of international crude oil prices. The price of electricity, which carries a high weight in both industrial and farm inputs, moved into deflation during June-August 2019. However, inflation in fodder prices turned positive in January 2019, after remaining in deflation during August 2016-December 2018 (barring August 2017), to touch a 37-month high of 16 per cent in July 2019, before easing somewhat in August. Inflation in terms of agricultural machinery and implements costs has also remained elevated and sticky from H2:2018-19.

Growth in nominal rural wages, both for agricultural and non-agricultural labourers, remained subdued and sticky, hovering around 3.7 per cent and 3.8 per cent, respectively, during 2019-20 so far, reflecting the lagged impact of moderate rural inflation, low food prices and a slowdown in the construction sector (Chart II.17).

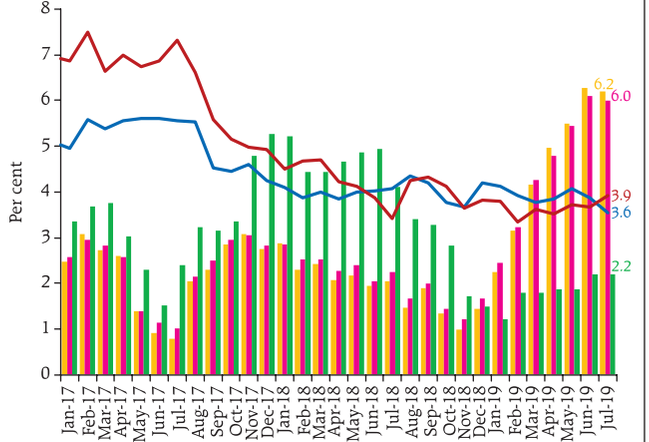
Chart II.16: Farm and Non-farm Input Cost Inflation (y-o-y)



*: 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.

Chart II.17: Wage Growth and Inflation in Rural Areas (y-o-y)



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

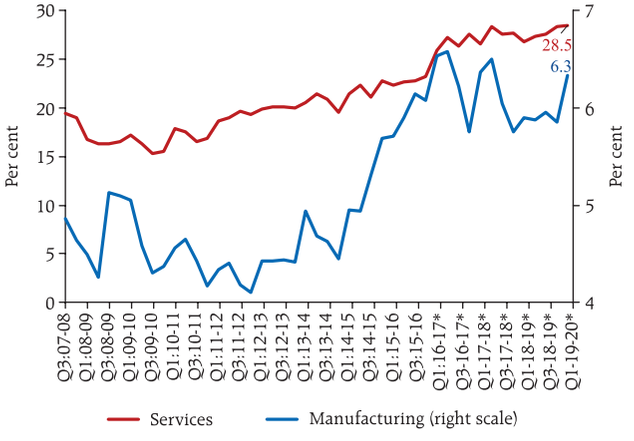
With inflation in CPI-AL and CPI-RL having picked up since February 2019, however, real rural wage growth, based on these price indices, turned negative since March 2019.

Growth in organised sector staff costs showed divergent movements for services and manufacturing firms. Unit labour costs for companies in the manufacturing sector fell marginally in Q4:2018-19 but rose thereafter in Q1:2019-20 to 6.3 per cent due to a decline in the value of production, coupled with increase in staff cost.[8] Unit labour cost for firms in the services sector increased marginally in the last quarter as higher growth in staff costs outpaced the growth in value of production (Chart II.18).

Manufacturing firms participating in the Reserve Bank's industrial outlook survey reported a fall in input costs in Q2:2019-20 on account of lower raw material costs. The cost of finance and salary outgoes are also expected to soften in Q2. The fall in input prices is likely to translate into a fall in selling prices in Q2.

Firms polled for the manufacturing purchasing managers' index (PMI) reported a decline in input costs and selling prices sequentially from Q2:2018-19 to Q1:2019-20. However, the rate of decline in selling prices in Q1:2019-20 was sharper than that of input costs. During Q2:2019-20, both input costs and selling prices firmed up. Input cost inflation reported by firms in the services sector PMI also softened gradually from Q2:2018-19 to Q1:2019-20 but increased during the first two months of Q2:2019-20.

Chart II.18: Labour Cost in Manufacturing and Services
Staff Cost Per Unit Value of Production



*: Listed companies with net worth more than ₹500 crore 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.

II.4 Conclusion

The inflation trajectory in 2019-20 so far has been characterised by rising food inflation, with price build-ups close to historical averages and well above levels observed in recent years, driven largely by a strong summer pick-up in prices of vegetables. Going forward, however, the build-up in vegetables prices is likely to reverse with arrivals of the *kharif* harvest and winter supplies. The catch-up in monsoon and sowing should help mitigate price pressures in cereals. Moreover, buffer stocks of cereals are well above prescribed norms. In the case of pulses, the arrival of fresh produce in the market along with buffer stocks are also likely to keep prices under check. Going forward, domestic fuel and petroleum product prices are subject to considerable uncertainty due to geo-political developments in the Middle East. A sudden spike in crude oil and petroleum products prices remains a major upside risk in spite of weak global demand. However, given the weak domestic demand and lower input costs, inflation in CPI excluding food and fuel is likely to remain moderate.

Forward looking surveys of the Reserve Bank point to weak consumer confidence and sagging demand, especially pertaining to non-essential items. Manufacturing firms see input prices as still soft and pricing power is yet to firm up as the cost of finance and salary outgoes remain muted. However, inflation expectations of households have risen somewhat. On the whole, headline CPI inflation is expected to remain within the Reserve Bank's target of 4.0 per cent during 2019-20.

[8] Unit labour cost is defined as the ratio of staff cost to value of production.

III. Demand and Output

Aggregate demand weakened in Q1, underpinned by a slowdown in private consumption. On the supply side, a sharp deceleration in manufacturing essentially reflected weaknesses in the organised sector. Services sector growth was pulled down by 'financial, real estate and professional services' and construction activity. The recent measures by the Government should help kickstart the capex cycle and lead to the strengthening of domestic demand.

Domestic economic activity suffered a sharp loss of pace in Q1:2019-20. Aggregate demand weakened in Q1:2019-20 by a slowdown in private consumption. On the supply side, manufacturing activity collapsed with the prolonged slowdown in the production of capital goods and consumer durables and in the services sector, construction activity slowed down markedly. Incoming data suggest that the slowdown persisted into Q2:2019-20.

III.1 Aggregate Demand

Measured by year-on-year (y-o-y) changes in real gross domestic product (GDP) at market prices, the deceleration in aggregate demand in Q4:2018-19 deepened to 5.0 per cent in Q1:2019-20, extending the sequential slowdown that set in during Q1:2018-19 to the fifth consecutive quarter (Table III.1 and Chart III.1a). Momentum, measured by quarter-on-quarter (q-o-q) seasonally adjusted annualised GDP growth rate (SAAR), also moderated to 4.4 per cent in Q1:2019-20 from 5.6 per cent in Q4:2018-19 (Chart III.1b).

Of the constituents of GDP, private final consumption expenditure (PFCE), the mainstay of aggregate demand, slumped, with its growth plummeting by over four percentage points in Q1:2019-20 to an eighteen-quarter low. Government final consumption expenditure (GFCE) cushioned the deceleration in aggregate demand. Excluding GFCE, real GDP growth would have slid down to 4.5 per cent in Q1:2019-20. Gross fixed capital formation (GFCF) remained weak in Q1:2019-20, with the capex cycle yet to gain traction. Export growth decelerated considerably in Q1:2019-20 in an uncertain external trading environment rendered hostile by trade tensions. With import growth reflecting domestic demand conditions and slowing more sharply, net exports made a positive contribution to growth after a gap of nine quarters.

Table III.1: Real GDP Growth (Per cent)

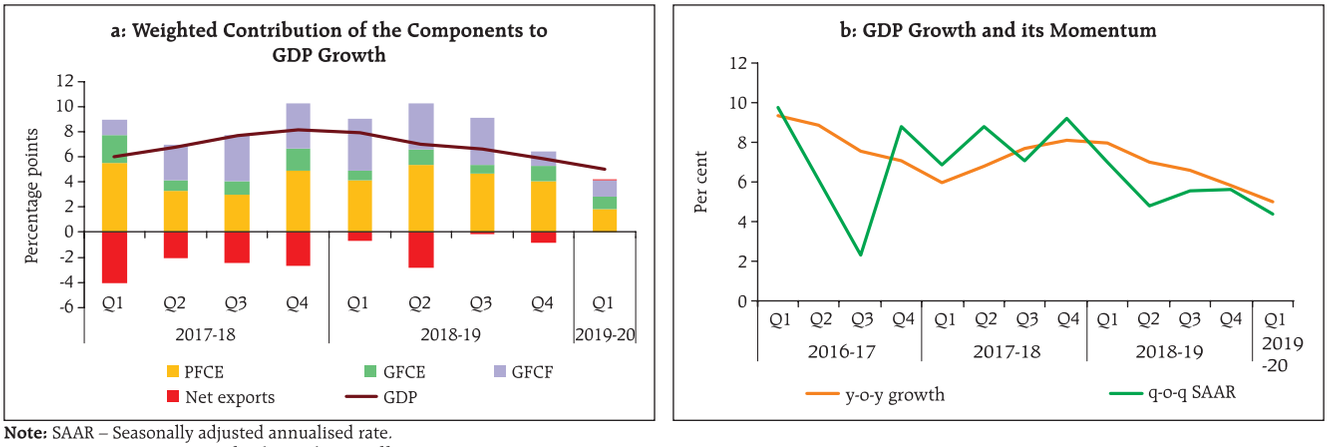
Item	2017-18 (FRE)	2018-19 (PE)	Weighted Contribution*		2017-18 (FRE)				2018-19 (PE)				2019-20
			2017-18	2018-19	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Private final consumption expenditure	7.4	8.1	4.2	4.5	10.1	6.0	5.0	8.8	7.3	9.8	8.1	7.2	3.1
Government final consumption expenditure	15.0	9.2	1.5	1.0	21.9	7.6	10.8	21.1	6.6	10.9	6.5	13.1	8.8
Gross fixed capital formation	9.3	10.0	2.9	3.1	3.9	9.3	12.2	11.8	13.3	11.8	11.7	3.6	4.0
Exports	4.7	12.5	1.0	2.5	4.9	5.8	5.3	2.8	10.2	12.7	16.7	10.6	5.7
Imports	17.6	15.4	3.8	3.6	23.9	15.0	15.8	16.2	11.0	22.9	14.5	13.3	4.2
GDP at Market Prices	**7.2**	**6.8**	**7.2**	**6.8**	**6.0**	**6.8**	**7.7**	**8.1**	**8.0**	**7.0**	**6.6**	**5.8**	**5.0**

FRE: First Revised Estimates; PE: Provisional Estimates.

*: 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: National Statistical Office (NSO), Government of India.

Chart III.1: GDP Growth and its Constituents



Note: SAAR – Seasonally adjusted annualised rate.
Sources: NSO, Government of India; and RBI staff estimates.

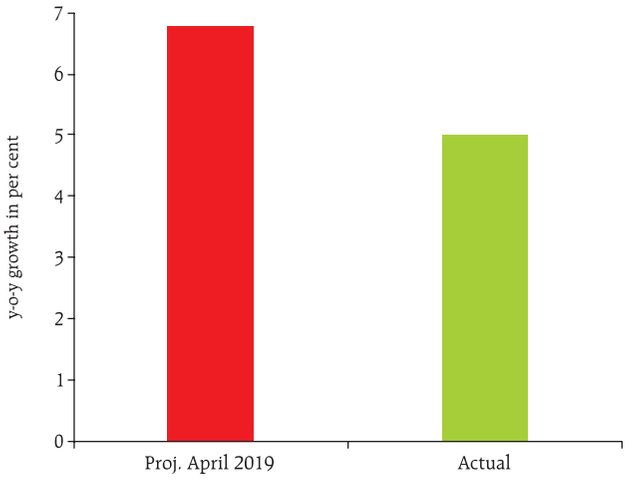
GDP Projections *versus* Actual Outcome

The April 2019 MPR had projected real GDP growth of 6.8 per cent for Q1:2019-20, with risks evenly balanced around the baseline path (Chart III.2). The actual outcome for the quarter undershot the projections by 180 basis points. First, the realised growth in private consumption demand surprised significantly on the downside, indicating that the April 2019 projection underestimated the broad-based slowdown in both rural and urban consumption. Second, GFCF growth also turned out lower than the projection on account of lower than expected capital goods production and their imports, and moribund activity in construction.

III.1.1 Private Final Consumption Expenditure

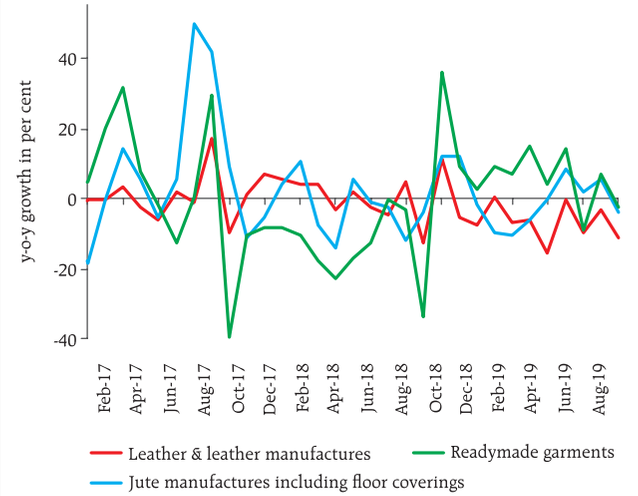
The unexpected slump in PFCE resulted in its share falling to 55.1 per cent in Q1:2019-20 from 56.1 per cent a year ago. The slowdown in private consumption was amplified by weak growth in some of the labour intensive export sectors such as readymade garments, leather manufactures and jute manufactures (Chart III.3).

Chart III.2: GDP Growth: Projected *versus* Actual (Q1:2019-20)



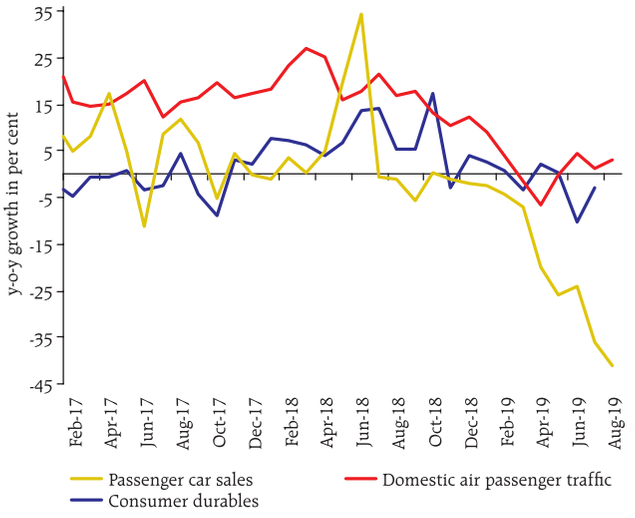
Sources: NSO, Government of India; and RBI staff estimates.

Chart III.3: Select Indicators – Export Demand in Labour-intensive Sectors



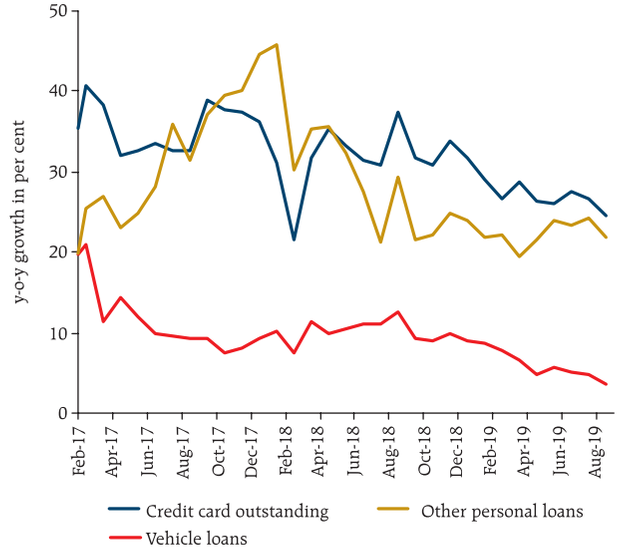
Source: Directorate General of Commercial Intelligence & Statistics (DGCI&S).

Chart III.4: High Frequency Indicators – Urban Demand



Sources: Airport Authority of India; Society of Indian Automobile Manufactures (SIAM); and NSO.

Chart III.5: Household Credit

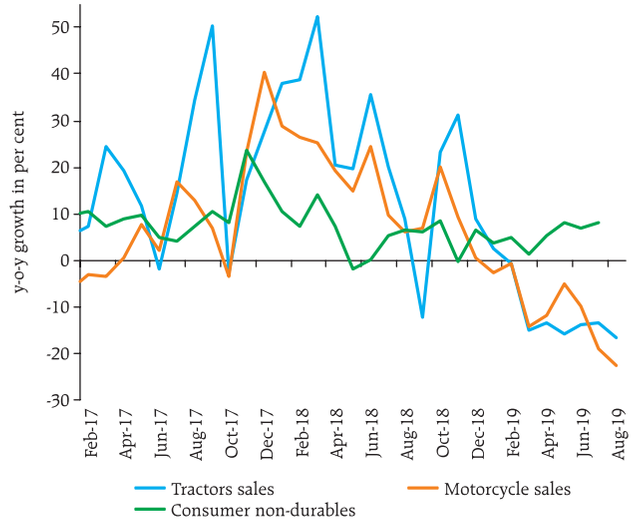


Source: RBI.

High frequency indicators of urban demand have weakened in recent months as reflected in contraction in sales of passenger vehicles and production of consumer durables (Chart III.4). Among them, passenger car sales have contracted by double digits every month since April 2019, resulting in major car producers suspending factory production intermittently. A combination of factors such as higher prices due to stricter safety norms, uncertainty caused by new emission norms and the proposed switching to electric vehicles have dented the sales of passenger vehicles (Box III.1). The growth in household credit for vehicles extended by banks also moderated (Chart III.5). Domestic air passenger traffic growth remained modest in July due to grounding of a private airline, which impacted air fares and dampened demand; however, it improved in August. Going forward, passenger vehicle sales could improve with the government's recent support for the sector such as permitting the operation of Bharat Stage (BS)-IV vehicles purchased till March 31, 2020, for the entire period of registration; withdrawal of a ban on the purchase of new vehicles by government departments; and deferring the implementation of hike in the one-time registration fee until June 2020.

Various indicators of rural demand have also remained weak (Chart III.6). Motorcycles and tractor sales contracted in July and August. Although the growth of consumer non-durables accelerated in July, it was driven mainly by sunflower oil. The sales growth of fast moving consumer goods (FMCG) companies, a sizeable part of which occurs in rural areas, has also been sluggish. The reasonably strong *kharif* foodgrains production in the first advance

Chart III.6: Select Indicators – Rural Demand



Sources: Tractor Manufactures Association; SIAM; and NSO.

Box III.1: Slowdown in the Automobile Sector

The downturn in the automobile sector in India, which could be attributed to several regulatory and institutional factors, was accentuated by a slowdown in demand. This has drawn considerable attention in view of the industry's role in economic activity[1].

An estimation framework using vector auto regressions with exogenous variables (Ludvigson, 1998) (VARX) was conducted to assess the underlying factors for the slump in the auto sector using quarterly data from Q1:2007-08 to Q1:2019-20. In the first VARX (1):

$$Y = A(L)Y + CX + U, \qquad \ldots.(1)$$

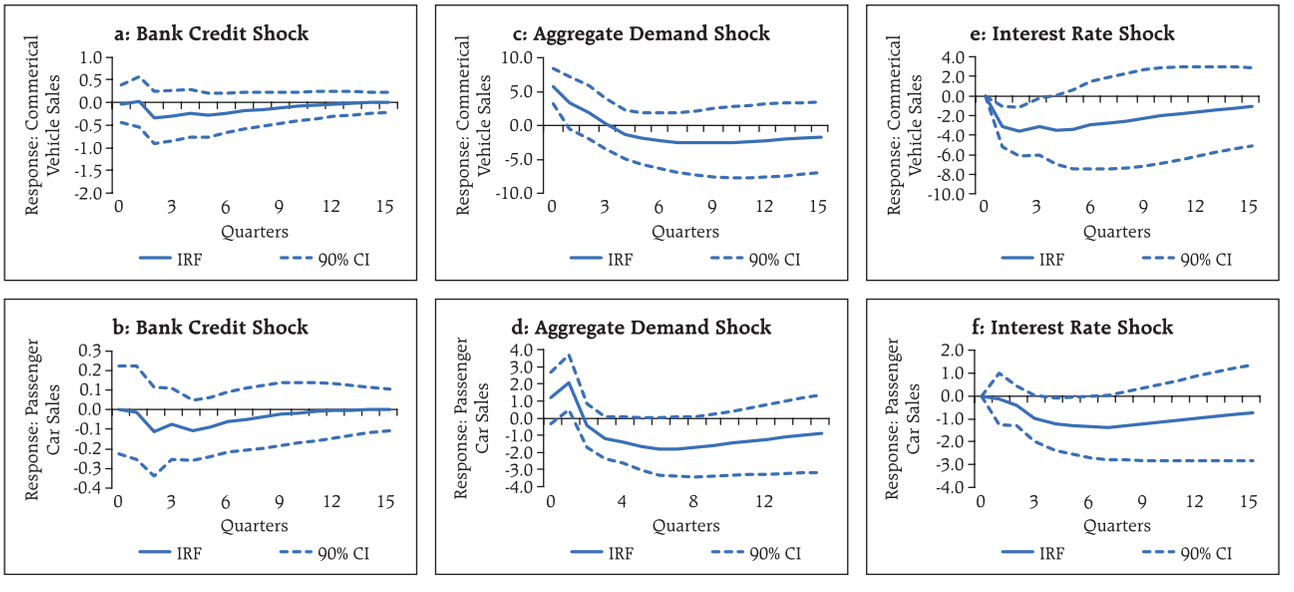
where $Y = [c_t, y_t, s_t, i_t]$ is a vector of variables endogenous to the simultaneous system of equations. c_t is the credit demand measured as a gap between the credit disbursed by scheduled commercial banks (SCBs) for automobile purchases from its long-term trend. s_t is the deviation of sales of commercial vehicles from its long-term trend. y_t is aggregate demand measured as the output gap and i_t is the weighted average lending rate of SCBs. A rise in aggregate demand and credit demand are expected to increase vehicle sales. On the other hand, an increase in interest rate is expected to moderate auto sales.

$X = [z_t, p_t, d_1, d_2]$ is a vector of exogenous variables determined from outside the simultaneous system of equations, z_t is the y-o-y change in INR/US$ exchange rate, p_t is the y-o-y change in diesel prices, d_1 is a dummy variable representing the implementation of BS-IV from April 2017. d_2 is a dummy variable representing three events which happened during the second half of 2018-19, *viz.*, liquidity issues faced by non-banking financial companies (NBFCs) post-IL&FS default, the announcement of axle load norms and implementation of insurance and safety norms. U_t is a vector of idiosyncratic errors.

A similar model was estimated by using the deviation of sales of passenger cars from its long-term trend instead of sales of commercial vehicles (s_t) in (1).

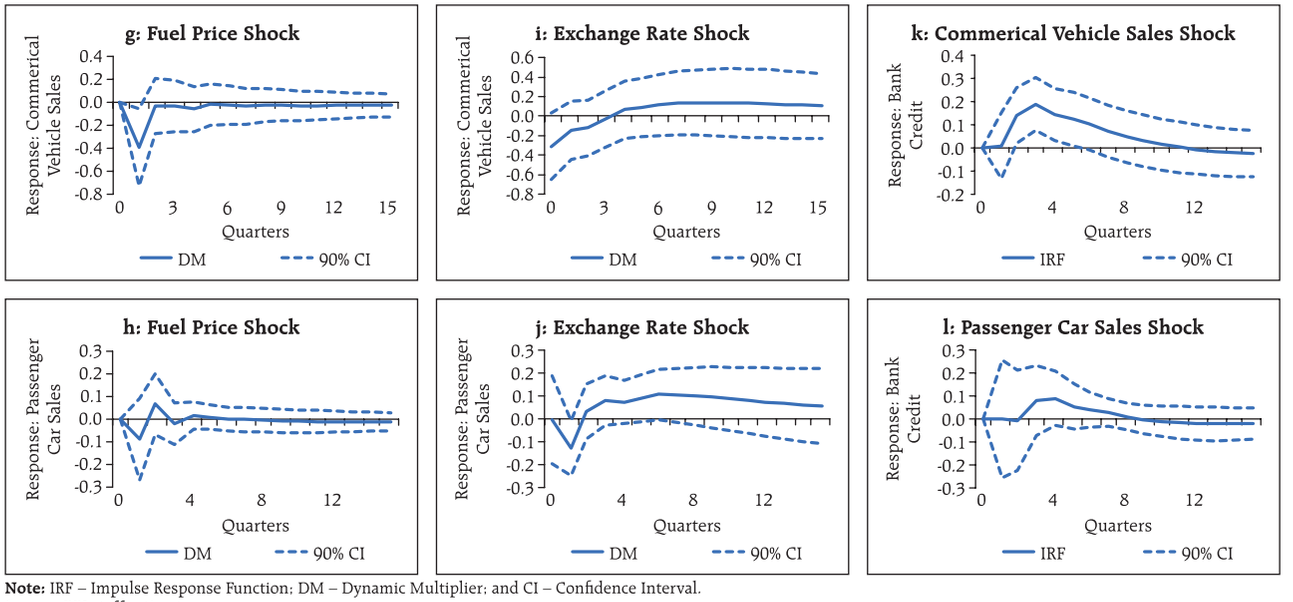
The key findings emerging from the impulse response functions (IRFs) from the two VARXs (Charts III.I.1) are:

Chart III.I.1: Impulse Response Functions



(Contd.)

[1] The share of "manufacture of transport equipment" was 12.0 per cent in manufacturing gross value added (GVA) and 2.1 per cent in overall GVA in 2017-18.



Note: IRF – Impulse Response Function; DM – Dynamic Multiplier; and CI – Confidence Interval.
Source: RBI staff estimates.

(i) both commercial vehicle and passenger car sales are sensitive to aggregate demand shocks;

(ii) both commercial vehicle and passenger car sales respond positively to a decline in interest rates;

(iii) fuel prices have a negative impact on commercial vehicle sales;

(iv) exchange rate depreciation affects auto sales negatively; and

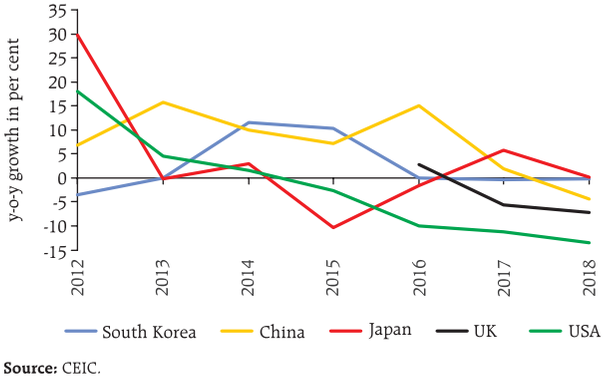
(v) bank credit does not have any significant impact on vehicle sales; however, the reverse causation is statistically significant, *i.e.*, sales of commercial vehicles positively impact bank credit flow to the automobile sector.

The dummy, representing three events (d_2) is statistically significant and explains 10 percentage points of the decline in commercial vehicle sales and 8 percentage points of the decline in passenger car sales.

Shocks like the slump in demand, liquidity crisis in the NBFC sector and measures to enhance safety and security norms, appear to have resulted in a downswing in the automobile sector.

A slowdown in passenger car sales was also observed in the US, the Euro area, China, South Korea and Japan for a variety of reasons (Chart III.1.2). These are: (i) stricter emission norms in China and the Euro area; (ii) mandatory sales of electric vehicles by car makers in the Euro area; (iii) tepid demand due to subdued global growth; and (iv) depressed consumer confidence from escalating US-China trade tensions.

Chart III.1.2: Passenger Car Sales - Global Trends



Source: CEIC.

Reference:

Ludvigson, S. (1998). "The Channel of Monetary Transmission to Demand: Evidence from the Market for Automobile Credit", *Journal of Money, Credit and Banking, 30(3)*, pp. 365–383.

estimates of the Ministry of Agriculture – only 0.8 per cent below last year's level – and bright prospects for the *rabi* season in view of soil moisture conditions and comfortable reservoir levels could buoy rural incomes and demand, going forward.

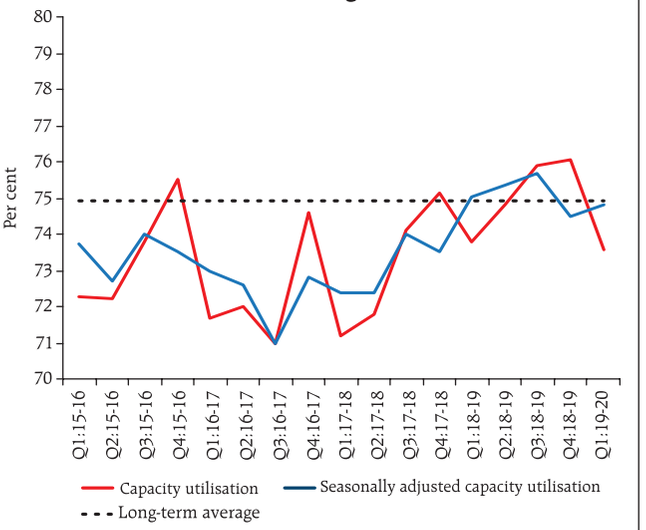
III.1.2 Gross Fixed Capital Formation

Growth in gross fixed capital formation (GFCF) moderated sharply in Q4:2018-19 and Q1:2019-20 after double digit growth in the five previous quarters. The share of GFCF in aggregate demand declined to 32.5 per cent in Q1:2019-20 from 32.8 per cent a year ago. High frequency indicators suggest that investment activity remained sluggish in Q2. Import of capital goods and production of capital goods contracted in July (Chart III.7). However, housing loans disbursed by scheduled commercial banks (SCBs) remained resilient, reflecting the policy push for the affordable housing sector.

Capacity utilisation (CU) in the manufacturing sector, measured by the order books, inventory and capacity utilisation survey (OBICUS) of the Reserve Bank, moderated to 73.6 per cent in Q1:2019-20 from 76.1 per cent in Q4:2018-19; seasonally adjusted CU, however, improved to 74.8 per cent in Q1:2019-20 from 74.5 per cent in Q4 (Chart III.8). The number of stalled projects in the private sector declined in Q1:2019-20, while there was some deterioration in stalled projects in the government sector in Q1 (Chart III.9).

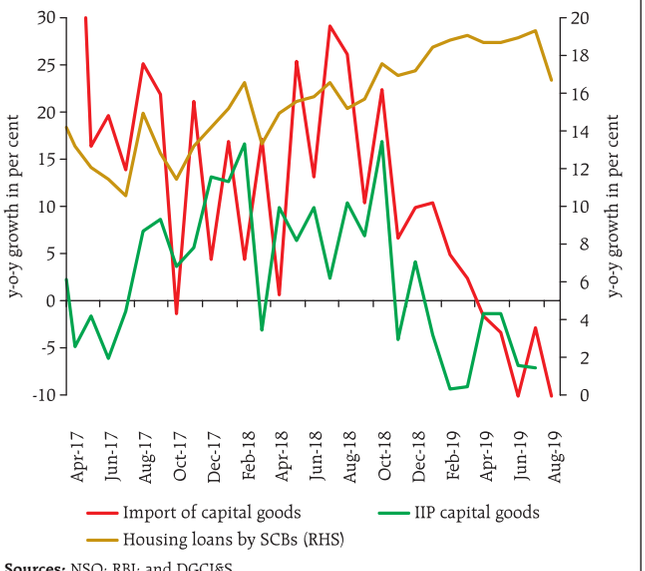
Gross capital formation has decelerated since 2011-12 due to a slowdown in investment by the private sector (Chart III.10). Underlying the latter is corporate deleveraging in select industries as reflected in improving interest coverage ratios (Chart III.11).

Chart III.8: Capacity Utilisation in Manufacturing Sector



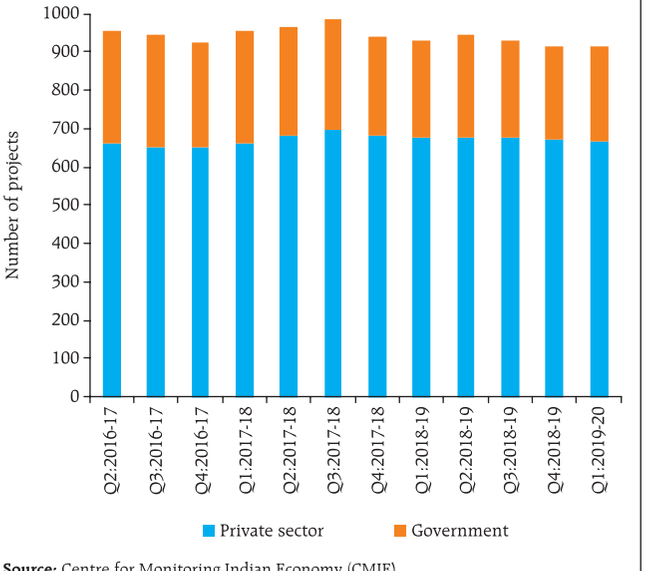
Source: RBI.

Chart III.7: Indicators of Investment Demand



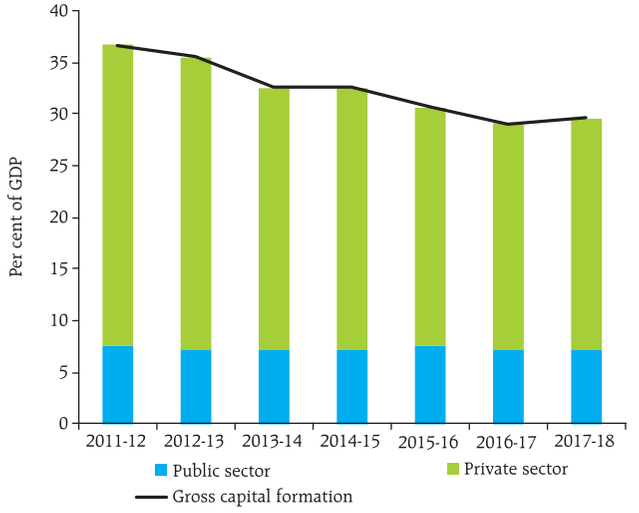
Sources: NSO; RBI; and DGCI&S.

Chart III.9: Stalled Projects



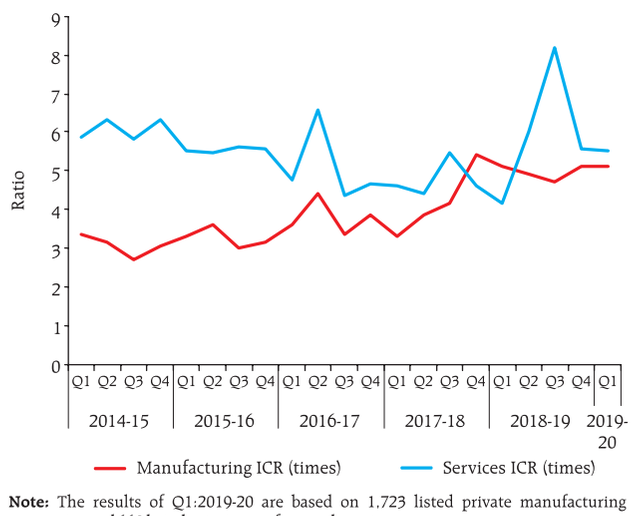
Source: Centre for Monitoring Indian Economy (CMIE).

Chart III.10: Gross Capital Formation – Institutional Sector Disaggregation



Note: Gross capital formation excludes valuables and errors & ommission.
Sources: NSO; and RBI staff estimates.

Chart III.11: Interest Coverage Ratio (ICR) in Manufacturing and Services Firms



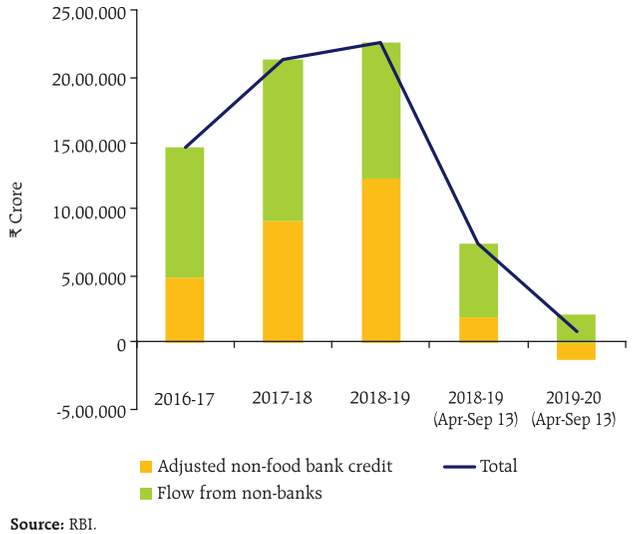
Note: The results of Q1:2019-20 are based on 1,723 listed private manufacturing companies and 660 listed private non-financial service companies.
Source: RBI staff estimates.

The slowdown in investment activity was also reflected in a decline in financial flows from banks and non-banks to the commercial sector (Chart III.12; see Chapter IV for details).

III.1.3 Government Expenditure

Government final consumption expenditure (GFCE) cushioned aggregate demand in Q4:2018-19 and Q1:2019-20, as pointed out earlier. During April-August 2019, the fiscal position of the central government strengthened as the gross fiscal deficit (GFD) and revenue deficit (RD) improved *vis-à-vis* the corresponding period of the previous year in terms of budget estimates (BE), mainly due to lower growth in expenditure (Table III.2). Total expenditure of the central government in the current fiscal year so far has been driven by revenue expenditure.

Chart III.12: Flow of Financial Resources to the Commercial Sector



Source: RBI.

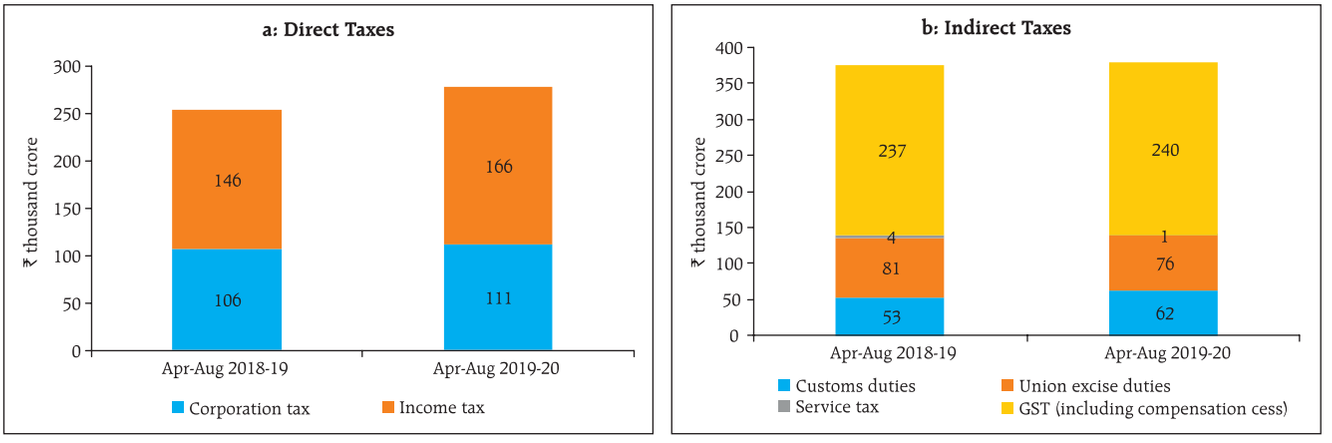
Table III.2: Key Fiscal Indicators – Central Government (April-Aug)

(Per cent)

Indicator	As a per cent of BE		y-o-y Growth
	2018-19	2019-20	2019-20
1. Revenue receipts	26.9	30.7	29.8
a. Tax revenue (Net)	24.7	24.5	10.5
b. Non-tax revenue	40.1	63.4	102.0
2. Total non-debt receipts	26.4	29.8	29.6
3. Revenue expenditure	43.8	42.5	10.7
4. Capital expenditure	44.0	40.2	3.0
5. Total expenditure	43.8	42.2	9.8
6. Gross fiscal deficit	94.7	78.7	-6.3
7. Revenue deficit	114.0	89.9	-8.1
8. Primary deficit	767.7	773.4	-10.0

BE: Budget Estimates.
Sources: Controller General of Accounts; and Union Budget Document, 2019-20.

Chart III.13: Tax Collections – April-August

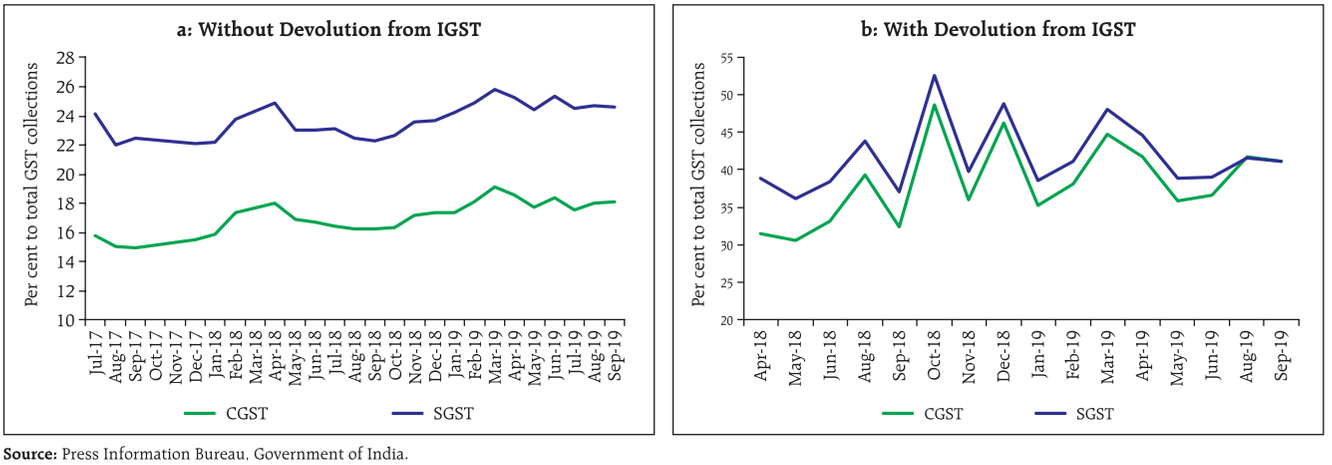


Source: Controller General of Accounts (CGA).

In order to meet expenditure commitments, revenue generation is critical. On the receipts side, income tax collections gained traction during April-August 2019 (Chart III.13).

Notwithstanding month-over-month fluctuations, the GST collections grew by 4.9 per cent (y-o-y) during April-September 2019. The share of State GST (SGST) collections in total GST revenue has been sizably higher than Central GST (CGST), attributable to the adjustment for input tax credit. After apportionment of integrated GST (IGST) collections, the share of CGST collections remained significantly lower than SGST collections during April-September 2018. They did move closer subsequently, before finally catching up in August 2019 (Chart III.14a and 14b). There have, however, been large inter-state variations in SGST collections, with a few states not requiring the GST compensation cess. Plugging loopholes and mitigating information technology (IT) glitches such as putting in place an invoice-matching system to facilitate a system validated input tax credit, overcoming operational deficiencies of the payment module, alignment of system validations with the GST Acts and Rules along with alleviating system design deficiencies may facilitate tapping of GST potential.[2]

Chart III.14: Share of CGST and SGST



Source: Press Information Bureau, Government of India.

[2] Report of Comptroller and Auditor General of India on Indirect Taxes – Goods and Services Tax for the year ended March 2018, Report No. 11, July, 2019.

Non-tax revenue has been an important source of finance for the central government. During April-August 2019, this component witnessed robust growth driven by the surplus transfer from the Reserve Bank. Resource mobilising efforts through disinvestment may also help garner revenues, going forward.

On the expenditure front, both revenue and capital expenditure of the central government witnessed some moderation in Q1:2019-20. However, after the declaration of election results, both revenue and capital expenditure picked up significantly during July-August 2019; almost 40 per cent of budgeted capital expenditure for roads and highways was incurred in the month of July 2019. Likewise, information available for 22 states indicates a slowdown in revenue expenditure in Q1:2019-20 though it picked up in July 2019.

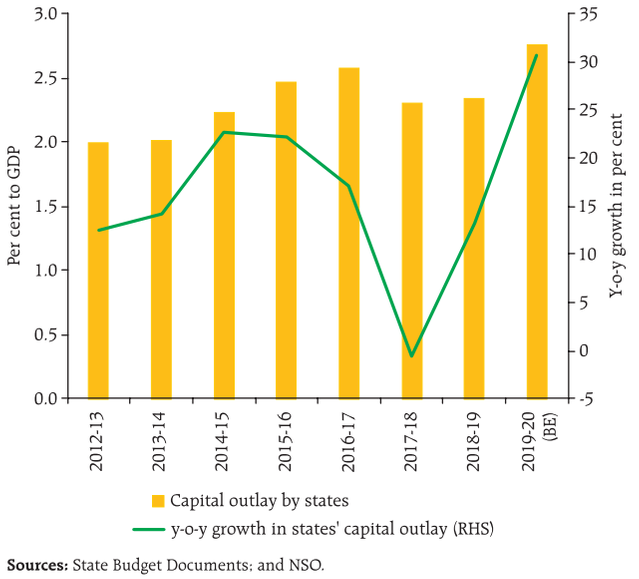
States have reduced their capital spending in order to adhere to fiscal deficit targets in the last few years (Chart III.15). This seems to have, in turn, affected investment adversely. Going forward, a pick-up in capital spending by both the centre and states is desirable given the growth augmenting property of the capital expenditure multiplier (RBI, 2019).[3] A major challenge for government finances in the remaining period of the current financial year is to adhere to the budgeted capital spending and revenue generation targets.

As regards direct taxes of states, stamp duty collections are highly correlated with construction activity (Chart III.16). Hence, a slowdown in the construction sector might impact stamp duty collections.

After remaining above 6 per cent of GDP between 2008-09 to 2016-17, the combined GFD of the centre and states dropped below 6 per cent in 2017-18. It is estimated at 6.2 per cent in 2018-19 (RE) and 5.9 per cent in 2019-20 (BE). Outstanding liabilities of the general government are budgeted to marginally decline to 69.6 per cent of GDP in 2019-20 from 69.8 per cent in 2018-19, driven by the centre, though states' debt is showing a rising trend. The debt servicing capacity of the general government has improved in 2018-19 with the interest payments as per cent to revenue receipts exhibiting a decline.

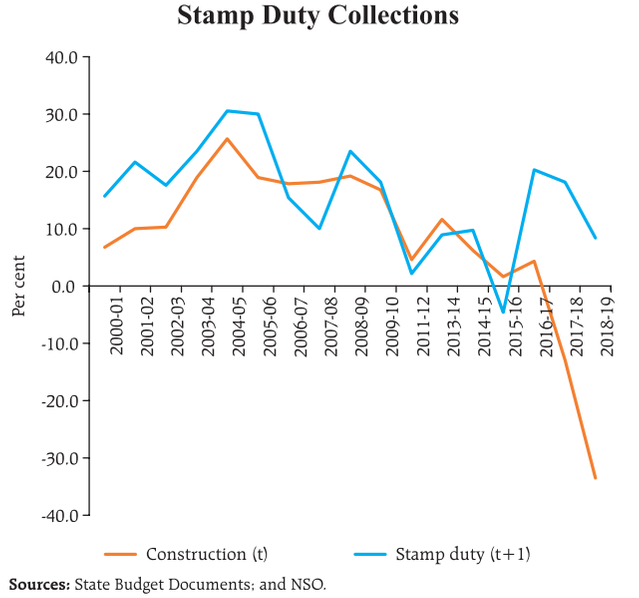
The Reserve Bank has managed the centre's market borrowing programme during 2019-20 so far as

Chart III.15: States' Capital Outlay



Sources: State Budget Documents; and NSO.

Chart III.16: Construction GVA and States' Stamp Duty Collections



Sources: State Budget Documents; and NSO.

[3] Reserve Bank of India (2019), "Estimable Fiscal Multipliers for India", Monetary Policy Report, pp. 35-37, April.

Table III.3: Government Market Borrowings

(₹ crore)

Item	2017-18			2018-19			2019-20 (September 30, 2019)		
	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	3,40,972	1,56,447	4,97,419
Gross borrowings	5,88,000	4,19,100	10,07,100	5,71,000	4,78,323	10,49,323	4,42,000	2,25,445	6,67,445

Sources: Government of India and RBI staff estimates.

per the planned issuance schedule. The budgeted gross market borrowing of the central government for 2019-20 at ₹7,10,000 crore is about 24.3 per cent higher than last year. The central government completed 62.3 per cent of its budgeted gross market borrowings as on September 30, 2019 (50.4 per cent in the corresponding period of 2018-19) (Table III.3). The Union Budget 2019-20 provides for consolidation measures like switching of securities budgeted at ₹50,000 crore, of which ₹40,109 crore worth of securities have already been switched. The states completed 35.6 per cent of their budgeted gross market borrowings till September 30, 2019 as compared with 27.6 per cent in the corresponding period of 2018-19. A major part of market borrowings by the states is expected to occur in H2:2019-20.

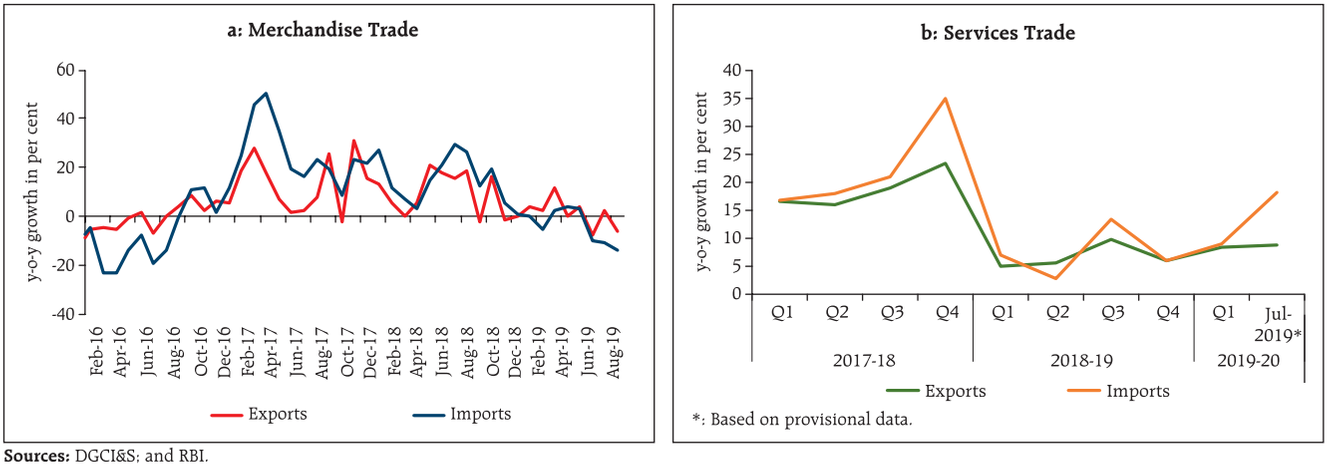
III.1.4 External Demand

Net exports contributed positively to aggregate demand in Q1:2019-20 for the first time after Q2:2016-17, as slowdown in import growth was more pronounced than that for exports.

The persisting loss of momentum in global trade impacted India's merchandise exports, which contracted during Q1:2019-20 and in July-August 2019-20 in both the petroleum, oil and lubricants (POL) and non-POL categories (Chart III.17a). The sectors which contributed to the overall decline included engineering goods, gems and jewellery and rice. POL exports declined mainly on account of a fall in international crude oil prices. In addition, routine maintenance-related shutdowns in major refineries adversely impacted exports in June 2019 (Chart III.18a).

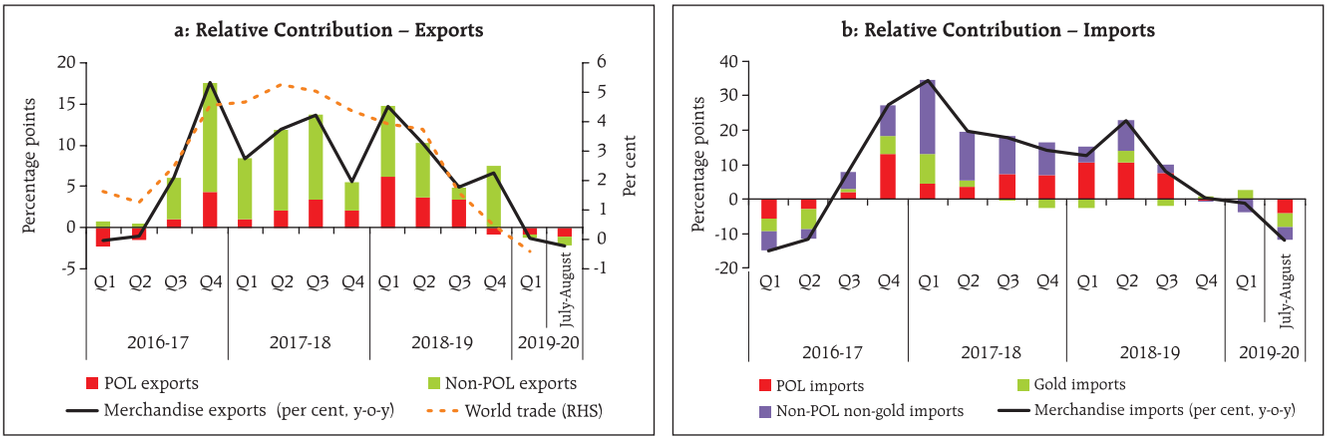
Imports also contracted in Q1:2019-20 due to deceleration in POL growth and decline in non-POL non-gold imports. Gold imports surged on the back of a decline in prices, wedding and festive season demand during Q1:2019-20 (Chart III.18b). The decline in non-

Chart III.17: Growth in Merchandise and Services Trade



Sources: DGCI&S; and RBI.

Chart III.18: Relative Contribution to Export and Import Growth



Source: RBI staff estimates.

POL non-gold imports was broad-based as imports of transport equipment, pearls and precious stones, metalliferous ores and vegetable oil contracted. Imports continued to contract in July-August 2019 in a broad-based manner. The trade deficit moderated from US$ 46.7 billion in Q1:2018-19 to US$ 46.2 billion in Q1:2019-20, although on a sequential basis, *i.e.*, Q1:2019-20 over Q4:2018-19, it expanded modestly. However, with imports declining faster than exports, the trade deficit narrowed from US$ 36.5 billion in July-August 2018-19 to US$ 26.9 billion in the corresponding period of 2019-20. While the current account deficit (CAD) mirrored the movements in the trade deficit, both on a y-o-y and sequential basis, CAD as per cent of GDP widened to 2 per cent in Q1:2019-20 from below one per cent in Q4:2018-19. More than 80 per cent of the trade deficit was financed through invisibles, *i.e.*, net export of services and remittances. Net services exports grew by 7.3 per cent in Q1:2019-20 on a y-o-y basis – primarily driven by software, travel and financial services (Chart III.17b). Revenue growth of major information technology (IT) companies making software exports, improved on a y-o-y basis in Q1:2019-20; an increase of 0.6 per cent in total global IT spending is projected in 2019. Remittances remained stronger in Q1:2019-20, though the net outgo of payments under income account increased due to higher dividends on foreign investment in Q1:2019-20.

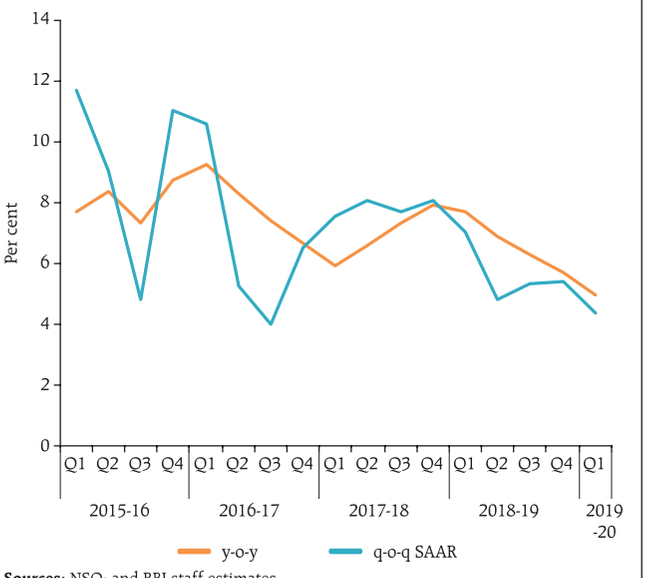
The CAD was comfortably met by a mix of foreign direct investment (FDI), foreign portfolio investment (FPI) and external commercial borrowings in Q1:2019-20 with net accretion to reserves to the tune of US$ 14.0 billion. Higher FPI flows, including under the voluntary retention route (VRR) introduced in March 2019, eased external financing conditions. Net inflows under external commercial borrowings to India stood at US$ 6.3 billion in Q1:2019-20 as against an outflow of US$ 1.5 billion a year ago. Net FDI flows at US$ 13.9 billion in Q1:2019-20 were higher than US$ 9.6 billion a year ago. Easing of norms for FDI in single brand retail, contract manufacturing, and coal mining are likely to give a push to FDI inflows and strengthen India's participation in the global value chain. Notwithstanding outflows from the equity segment in July and August 2019, net FPI purchases (excluding VRR) in the domestic capital market were at US$ 3.3 billion during April-September 2019 as against an outflow of US$ 11.5 billion a year ago. Net flows under non-resident deposits were robust in Q1:2019-20. India's forex exchange reserves were placed at US$ 434.6 billion on October 1, 2019 – an increase of US$21.7 billion over the level at end-March 2019.

III.2 Aggregate Supply

On the supply side, the gross value added (GVA) growth decelerated to 5.7 per cent in Q4:2018-19 and further to a twenty-one-quarter low of 4.9 per cent in Q1:2019-20 (Table III.4). GVA momentum, measured in terms of seasonally adjusted q-o-q annualised growth, also declined sharply in Q1 (Chart III.19).

The deceleration in GVA growth (y-o-y) was caused by a significant deceleration in services growth to 6.7 per cent in Q1:2019-20 from 8.2 per cent in Q4:2018-19, pulled down by construction and 'financial, real estate and professional services'. Manufacturing registered the second lowest growth in the 2011-12 series[4]. Despite some deceleration, public administration, defence and other services (PADO) grew at a healthy rate. Excluding PADO, the GVA growth would have slipped to 5.0 per cent in Q4:2018-19 and 4.5 per cent in Q1:2019-20 (Chart III.20). Growth in 'trade, hotels, transport, communication and services related to broadcasting' registered an uptick sequentially.

Chart III.19: GVA Growth- Y-o-Y and Q-o-Q SAAR



Sources: NSO; and RBI staff estimates.

III.2.1 Agriculture

In Q1:2019-20, value added in agriculture and allied activities recovered from contraction in the preceding quarter on the back of higher production of wheat and oilseeds during the *rabi* season. This was also supported by higher horticulture production by 0.7

Table III.4: Sector-wise Growth in GVA

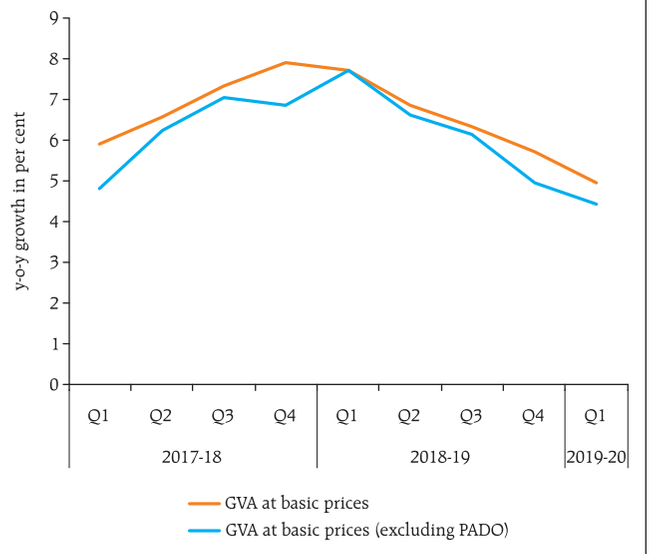
(y-o-y, per cent)

Sector	2017-18 (FRE)	2018-19 (PE)	Weighted Contribution		2017-18 (FRE)				2018-19 (PE)				2019-20
			2017-18	2018-19	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Agriculture, forestry and fishing	**5.0**	**2.9**	0.8	**0.4**	**4.2**	**4.5**	**4.6**	**6.5**	**5.1**	**4.9**	**2.8**	**-0.1**	**2.0**
Industry	**6.1**	**6.2**	**1.4**	**1.4**	**-0.1**	**7.7**	**8.0**	**8.6**	**9.9**	**6.1**	**6.0**	**3.4**	**1.7**
Mining and quarrying	5.1	1.3	0.2	0.0	2.9	10.8	4.5	3.8	0.4	-2.2	1.8	4.2	2.7
Manufacturing	5.9	6.9	1.1	1.2	-1.7	7.1	8.6	9.5	12.1	6.9	6.4	3.1	0.6
Electricity, gas, water supply and other utilities	8.6	7.0	0.2	0.2	8.6	9.2	7.5	9.2	6.7	8.7	8.3	4.3	8.6
Services	**7.8**	**7.7**	**4.8**	**4.8**	**8.6**	**6.5**	**8.0**	**8.0**	**7.5**	**7.5**	**7.6**	**8.2**	**6.7**
Construction	5.6	8.7	0.5	0.7	3.3	4.8	8.0	6.4	9.6	8.5	9.7	7.1	5.7
Trade, hotels, transport, communication	7.8	6.9	1.5	1.3	8.3	8.3	8.3	6.4	7.8	6.9	6.9	6.0	7.1
Financial, real estate and professional services	6.2	7.4	1.4	1.6	7.8	4.8	6.8	5.5	6.5	7.0	7.2	9.5	5.9
Public administration, defence and other services	11.9	8.6	1.5	1.1	14.8	8.8	9.2	15.2	7.5	8.6	7.5	10.7	8.5
GVA at basic prices	**6.9**	**6.6**	**6.9**	**6.6**	**5.9**	**6.6**	**7.3**	**7.9**	**7.7**	**6.9**	**6.3**	**5.7**	**4.9**

FRE: First Revised Estimates; PE: Provisional Estimates.
Source: NSO.

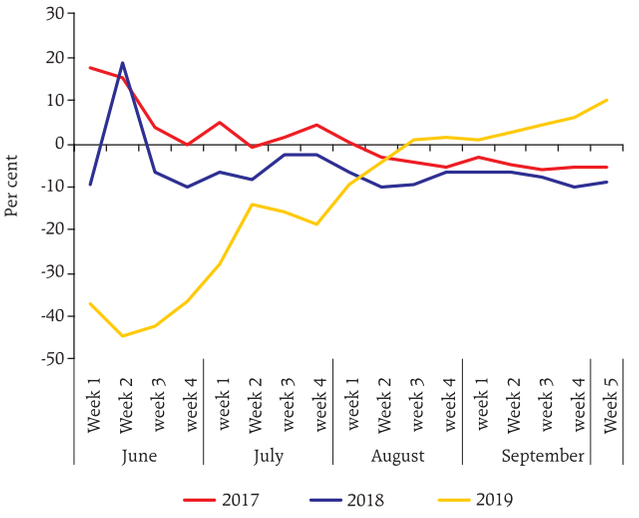
[4] The lowest growth in manufacturing was recorded in Q1:2017-18 possibly due to the transient impact of the implementation of the goods and services tax (GST).

Chart III.20: GVA Growth (excluding PADO)



Sources: NSO; and RBI staff estimates.

Chart III.21: Cumulative Weekly Progress of South-West Rainfall (per cent)



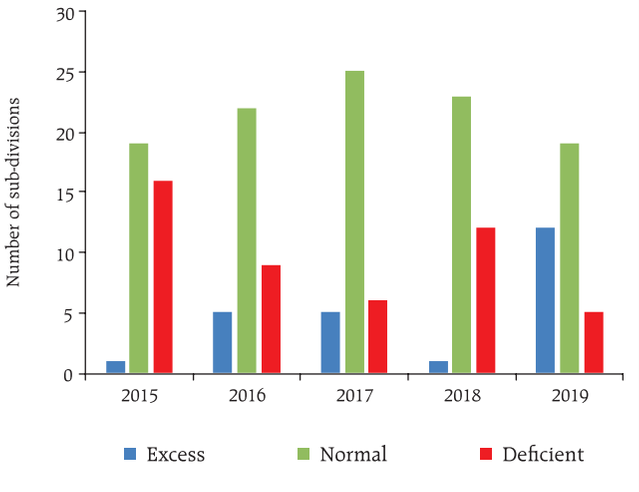
Source: India Meteorological Department (IMD).

per cent to a record of 3,138 lakh tonnes, as per the third advance estimates for 2018-19.

The fourth advance estimates of agricultural production for 2018-19 released in August placed foodgrains production at 2,850 lakh tonnes – same as the final estimate of 2017-18 for the previous year, but lower than the target of 2,903 lakh tonnes for the year. Poor performance of south-west and north-east monsoon impacted crop production during 2018-19, particularly in the *rabi* season with most of the crops missing their respective targets set for the year. Nevertheless, production of rice, wheat and sugarcane touched a record high in 2018-19.

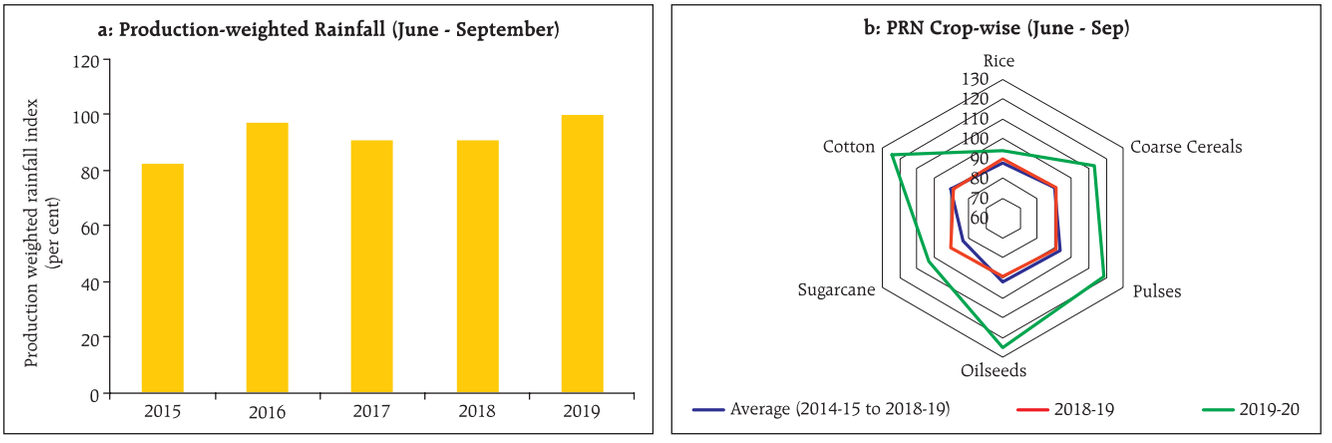
In 2019, the south-west monsoon started with a week's delay and its progress across southern and central India was hindered by cyclone *Vayu*. As a result, there was a rainfall deficit of 36 per cent below the Long Period Average (LPA) in June. The monsoon gained momentum from July. Heavy rainfall in the beginning of the month reduced the cumulative deficit to 9 per cent below the LPA by the end of the month (Chart III.21). The cumulative all-India rainfall as on September 30, 2019 was 10 per cent above the LPA in comparison with 9 per cent below the LPA last year. In terms of distribution, 12 sub-divisions (compared to 1 sub-division last year) received excess rainfall, 19 received normal rainfall (23 sub-divisions last year), and 5 suffered deficient rainfall (12 sub-divisions last year) (Chart III.22). Abundant rains between mid-August and September augmented the live storage available in 113 reservoirs (as on September 26, 2019)

Chart III.22. Sub-division-wise Rainfall Position (as on September 30, 2019)



Source: IMD.

Chart III.23: Production-weighted Rainfall Index (PRN) – Total and Crop-wise



Sources: IMD; and RBI staff estimates.

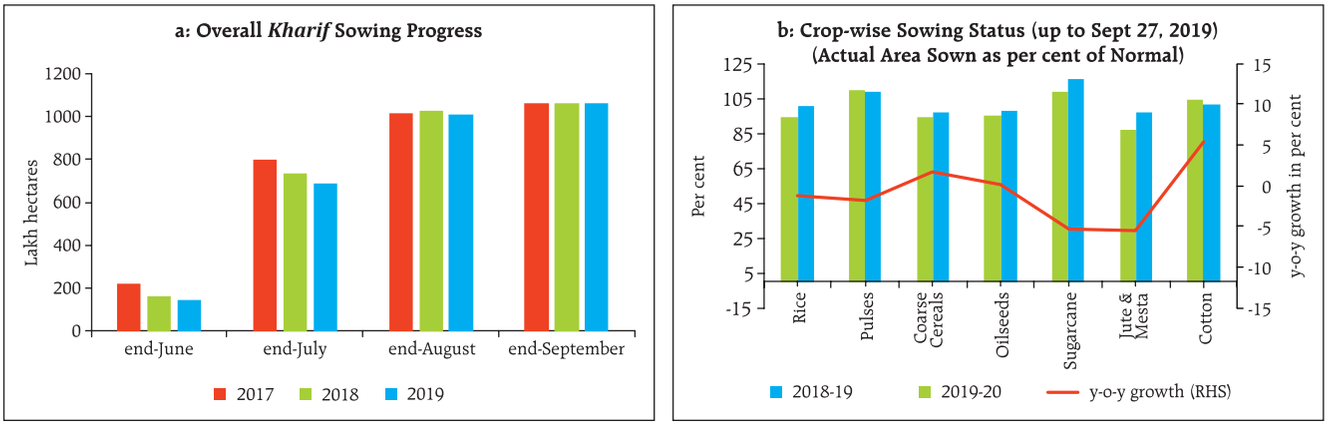
with the cumulative reservoir level at 115 per cent of the live storage in the corresponding period of the previous year.

The production weighted rainfall index[5] (PRN) was also higher than a year ago and was 'normal' or 'above normal' for all the major crops, barring rice (Chart III.23).

Reflecting the initial delay in the onset of the monsoon, *kharif* sowing started on a low note with acreage for most crops lagging behind the area sown last year. The total area sown under *kharif* crops was 9.5 per cent lower as on June 28, 2019 than a year ago. However, sowing recovered thereafter, with an improvement in precipitation across the country and announcement of minimum support prices (MSPs) for *kharif* crops. As a result, the total area sown caught up with last year's average as on September 27, 2019 (Chart III.24a). At a disaggregated level, sowing caught up across all crops, exceeding last year's levels in respect of cotton and pulses (Chart III.24b).

The first advance estimates of production of major *kharif* crops for 2019-20 have placed foodgrains production at 1,406 lakh tonnes, 0.8 per cent lower

Chart III.24: Sowing Progress of *Kharif* Crops



Source: Ministry of Agriculture and Farmers' Welfare, Government of India.

[5] The All India production-weighted rainfall index (PRN) for a crop (total foodgrains) is constructed as a ratio of the weighted averages of state-wise actual rainfall and IMD normal rainfall, expressed as a percentage. The weights used are based on five year average shares of the state-wise crop (total foodgrains) production.

than last year's level, reflecting the delayed onset of monsoon and intense rains and floods in various states. However, among the commercial crops, the production of oil seeds, cotton, jute and mesta has been estimated to be higher than last year's production.

The MSPs announced for the *kharif* season 2019-20 ensure a return of at least 50 per cent over the cost of production (as measured by A2 *plus* FL[6]) for all the crops (Table III.5). However, the growth in MSP in 2019-20 for *kharif* crops over last year's level of support price was modest (in the range of 1.1-9.2 per cent) as compared with a range of 3.7-52.5 per cent in 2018-19. While the highest increase in the MSP was for soyabean (9.2 per cent), followed by ragi (8.7 per cent), the lowest was for niger seeds and moong (1.1 per cent).

III.2.2 Industry

The slowdown in industrial activity that set in from Q2:2018-19 deepened further in Q1:2019-20 (Chart III.25). A sharp deceleration in manufacturing GVA in Q1:2019-20 essentially reflected weaknesses in the organised sector. In terms of the index of industrial production (IIP)[7], however, the performance of manufacturing improved in Q1:2019-20 from the previous quarter. In July, manufacturing output accelerated further (Chart III.26).

In terms of the use-based classification, the intermediate goods sector grew by double digits for the third consecutive month in July 2019, mainly driven by mild steel slabs. Consumer non-durables growth also accelerated, supported by sunflower oil production. However, the capital goods sector contracted for the

Table III.5. Minimum Support Price – *Kharif* Season Crops

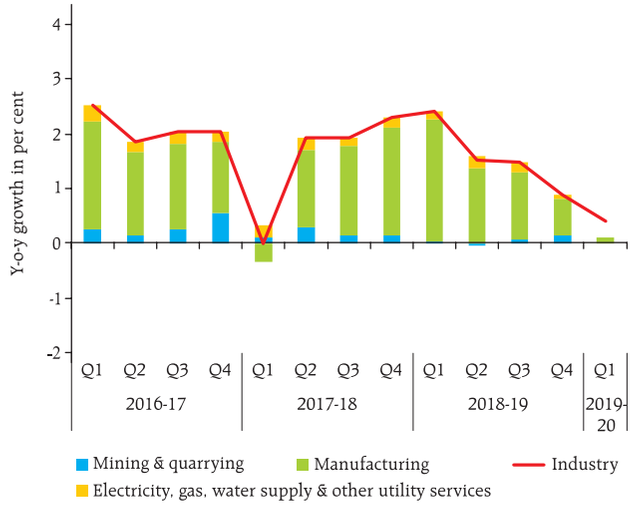
Crop	₹/Quintal			Growth Rate (per cent)		Return in 2018-19 over Cost (per cent)	Return in 2019-20 over Cost (per cent)
	2017-18	2018-19	2019-20	2018-19 over 2017-18	2019-20 over 2018-19		
Paddy common	1550	1750	1815	12.9	3.7	50.1	50.2
Paddy (F)/Grade'A'	1590	1770	1835	11.3	3.7	51.8	51.9
Jowar-Hybrid	1700	2430	2550	42.9	4.9	50.1	50.2
Jowar-Maldandi	1725	2450	2570	42.0	4.9	51.3	51.4
Bajra	1425	1950	2000	36.8	2.6	97.0	84.7
Ragi	1900	2897	3150	52.5	8.7	50.0	50.0
Maize	1425	1700	1760	19.3	3.5	50.3	50.3
Tur (Arhar)	5450	5675	5800	4.1	2.2	65.4	59.5
Moong	5575	6975	7050	25.1	1.1	50.0	50.0
Urad	5400	5600	5700	3.7	1.8	62.9	63.9
Groundnut	4450	4890	5090	9.9	4.1	50.0	50.0
Sunflower seed	4100	5388	5650	31.4	4.9	50.0	50.0
Soyabean yellow	3050	3399	3710	11.4	9.2	50.0	50.0
Sesamum	5300	6249	6485	17.9	3.8	50.0	50.0
Niger seed	4050	5877	5940	45.1	1.1	50.0	50.0
Medium staple cotton	4020	5150	5255	28.1	2.0	50.0	50.1
Long staple cotton	4320	5450	5550	26.2	1.8	58.8	58.5

Source: Ministry of Agriculture and Farmers' Welfare, Government of India.

[6] A2 *plus* FL includes all paid out costs such as expenses on hired labour, machines, rent paid for leased land, seeds, fertilisers, irrigation charges, depreciation as well as imputed value of family labour.

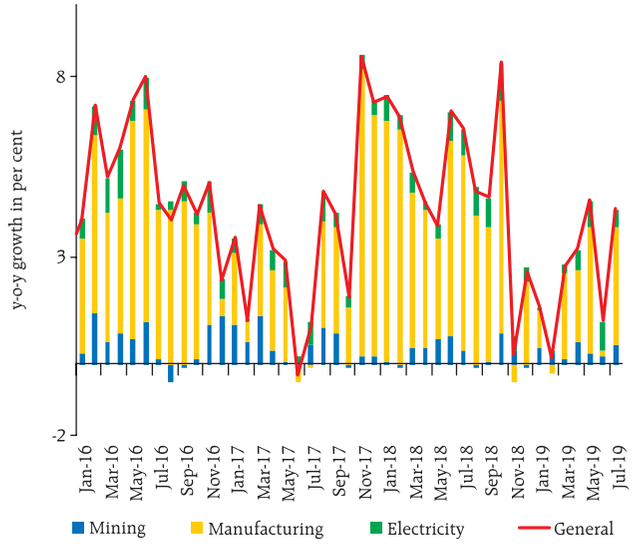
[7] IIP at the appropriate digit level is taken into account to represent the unorganised manufacturing sector in the quarterly GVA estimates.

Chart III.25: Weighted Contribution to Growth of Industry GVA



Sources: NSO; and RBI staff estimates.

Chart III.26: Sectoral Contribution to IIP Growth



Sources: NSO; and RBI staff estimates.

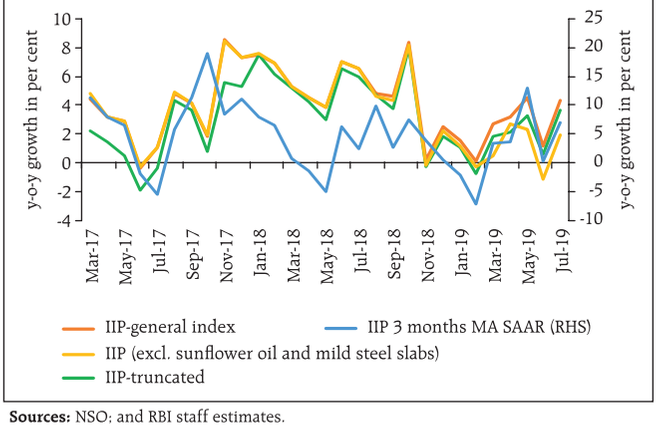
seventh successive month, caused by contraction in commercial vehicles, tractors and printing machinery. The consumer durables segment contracted for two consecutive months, pulled down by a decline in the production of passenger vehicles, auto components and two-wheelers (Chart III.27).

Electricity generation accelerated in Q1:2019-20 due to increased summer demand following the delayed onset of the monsoon. With the seasonal pressure abating, electricity generation from various sources was lower in July and August on a y-o-y basis (Charts III.28).

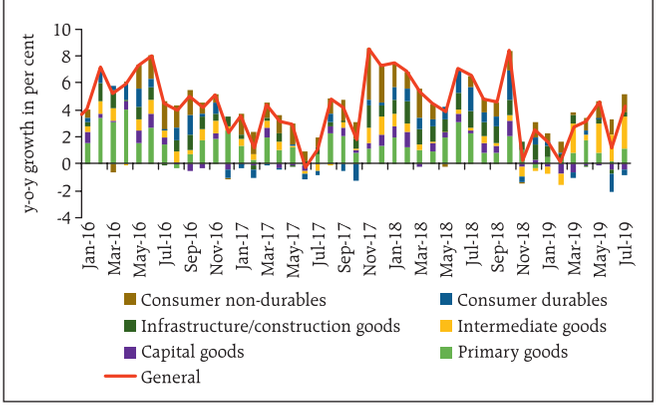
The deceleration in manufacturing GVA in Q1:2019-20 was also reflected in sales growth of manufacturing companies, pulled down mainly by lower sales of automobiles, petroleum, and iron and steel (Chart III. 29). The slowdown in sales also mirrored in a sharp decline in profit before tax (Chart III. 30). A silver lining was witnessed in the sales of cement, pharmaceuticals and chemical companies, which continued to grow in Q1:2019-20.

Chart III.27: IIP and Use-based Classification

a: Exclusion-based IIP

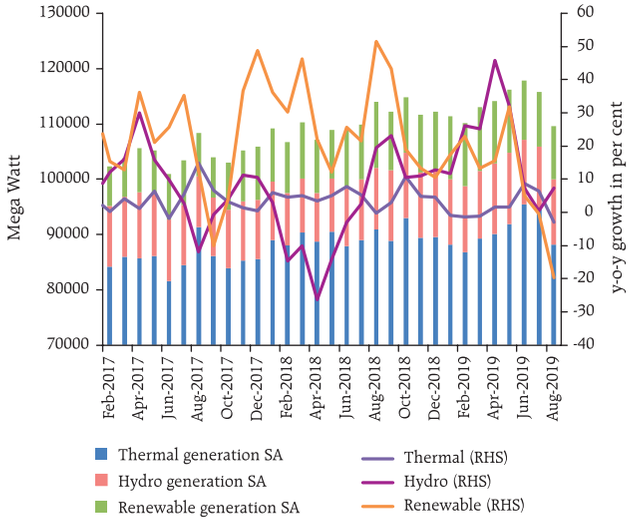


b: Use-based Weighted Contribution to IIP Growth



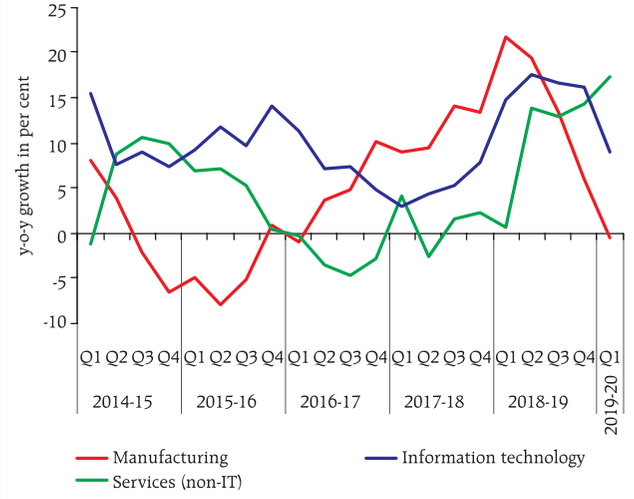
Sources: NSO; and RBI staff estimates.

Chart III.28: Electricity Generation by Different Sources



Source: Central Electricity Authority (CEA).

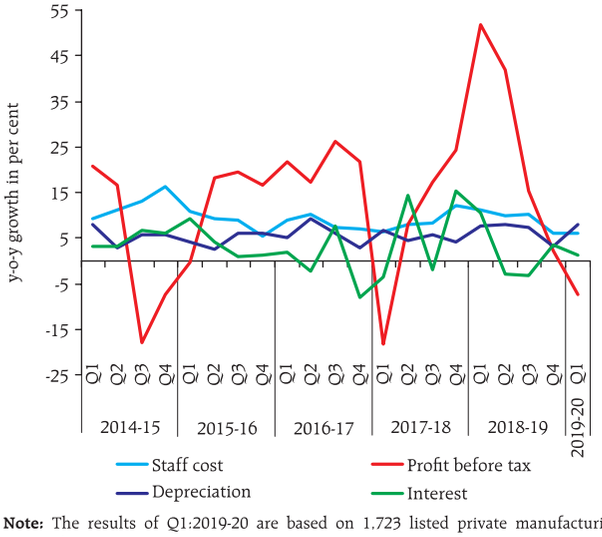
Chart III.29: Nominal Sales Growth in the Industrial and Services Sectors



Note: The results of Q1:2019-20 are based on 1,723 listed private manufacturing companies and 660 listed private non-financial service companies.
Source: RBI staff estimates.

Overall business sentiment in the Indian manufacturing sector has deteriorated recently. The business assessment index (BAI) fell to 92.5 in Q2:2019-20 (from 108.4 in Q1:2019-20) in the 87th round of the Reserve Bank's Industrial Outlook Survey (IOS) due to a decline in new orders, contraction in production, lower capacity utilisation and fall in profit margins of the surveyed firms. Business expectations index (BEI) also moderated to 102.2 in Q3:2019-20 (from 112.8 in Q2:2019-20). The manufacturing purchasing managers' index (PMI) for September 2019 was unchanged at its previous month level, while new orders and employment improved, *albeit*, marginally, new export orders declined.

Chart III.30: Components of Manufacturing GVA

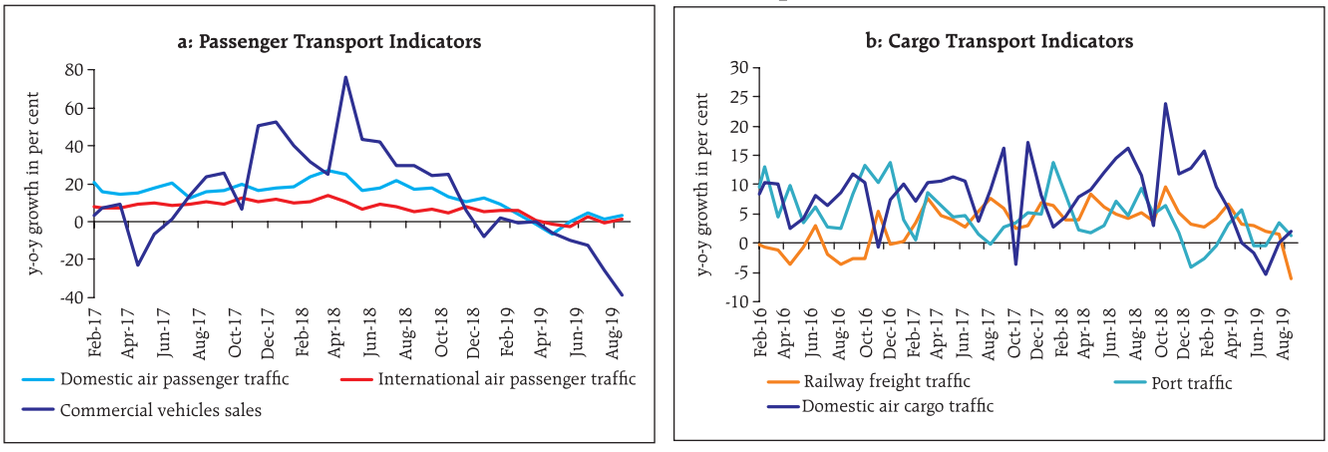


Note: The results of Q1:2019-20 are based on 1,723 listed private manufacturing companies.
Source: RBI staff estimates.

III.2.3 Services

In Q1:2019-20, services sector growth was the lowest in the last seven quarters, pulled down by financial, real estate and professional services, and construction activity. PADO grew at a healthy rate in Q1:2019-20 and cushioned the loss of pace of GVA from overall services. 'Trade, hotels, transport, communication and services related to broadcasting' maintained momentum, though transport services indicators have weakened significantly in the recent period. The sales of commercial vehicles, passenger vehicles, and two-wheelers contracted sharply in July-August. Growth in domestic air passenger traffic accelerated in August. While rail freight traffic contracted in July,

Chart III.31: Performance of Transport Indicators



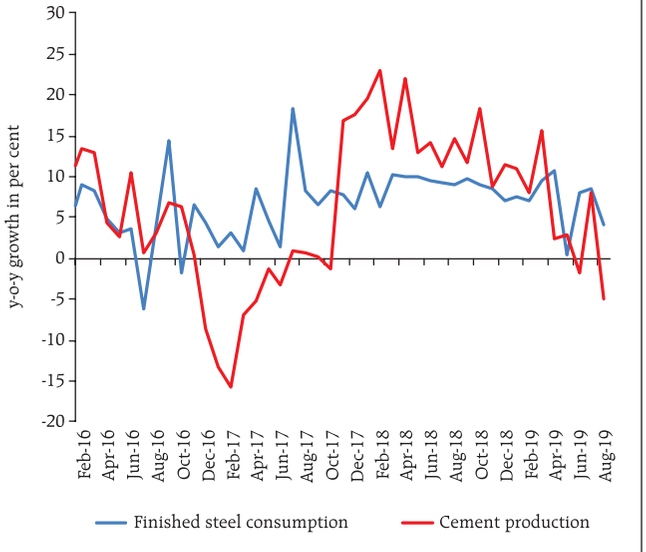
Sources: SIAM; Ministry of Railways; Indian Ports Association; and Airports Authority of India.

domestic air cargo traffic growth improved in August (Chart III.31a and b). The services PMI, however, expanded in July and August, reversing the contraction in June.

Of the two key indicators of construction activity, the production of cement accelerated sharply in July before contracting in August, while finished steel consumption moderated in July-August (Chart III.32). Softer domestic steel prices are likely to strengthen steel consumption, going forward.

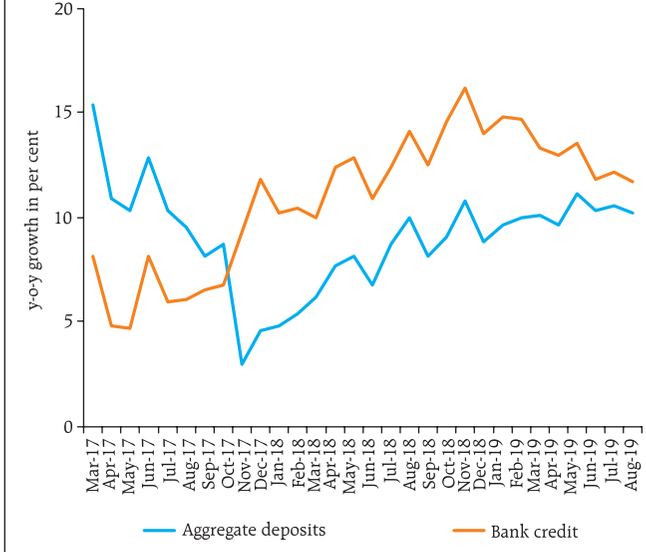
PADO growth moderated sequentially in Q1:2019-20, reflecting subdued revenue expenditure (net of interest payments and subsidies) of the union and the state governments ahead of elections. The growth of 'financial, real estate and professional services' decelerated in Q1:2019-20 mainly due to the poor performance by listed real estate companies notwithstanding a healthy growth in financial services (Chart III.33).

Chart III.32: Construction Indicators



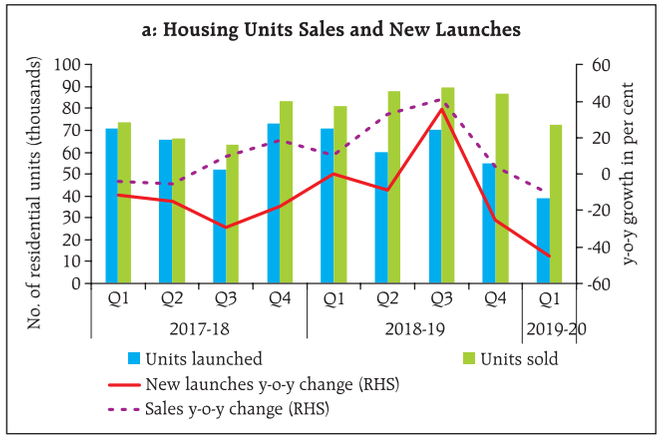
Sources: Joint Plant Committee; and Ministry of Commerce and Industry.

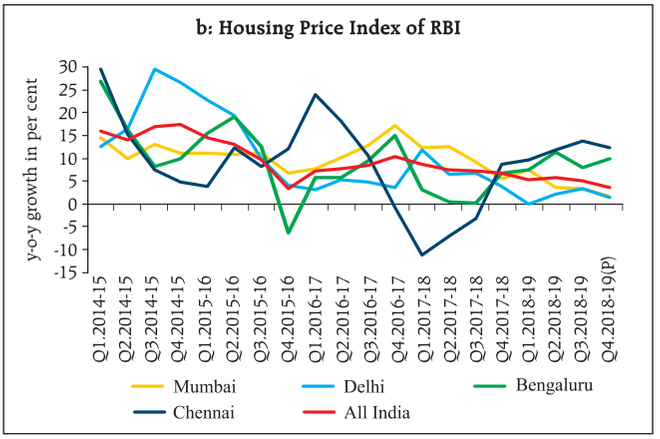
Chart III.33: Growth of Financial Services



Source: RBI

Chart III.34: Housing Sector – Launches, Sales and Prices





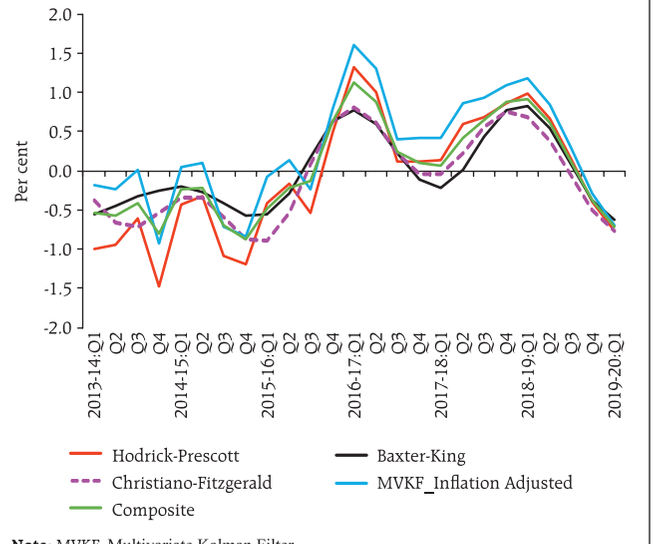
Sources: PropTiger; and RBI staff estimates.

In the residential real estate sector, both sales and new launches contracted in Q1:2019-20, indicating sluggish demand (Chart III.34a). With sales outpacing new launches, the inventory overhang has declined somewhat, though the large inventory overhang still has a moderating influence on residential house prices (Chart III.34b).

III.3. Output Gap

A detailed analysis of aggregate demand and aggregate supply in the above sections provides an assessment of the state of the economy in H1:2019-20. The output gap – measured by the deviation of actual output from its potential level and expressed as a ratio of potential output – provides a summary measure of demand-supply conditions in the economy. Since potential output and the output gap are both unobservable and their estimates can be sensitive to the choice of methodology and data availability, a pragmatic approach has been followed by applying several methods to estimate potential output. The methods followed are univariate filters such as the Hodrick-Prescott (HP) filter, the Baxter-King (BK) filter and the Christiano-Fitzgerald (CF) filter on the one hand, and multivariate Kalman filter (MVKF) taking into account inflation developments, on the other, to draw robust inferences on the state of the business cycle (Chart III.35). The composite estimate arrived by combining all these measures suggests that the output gap has turned more negative.

Chart III.35: Output Gap Estimates



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

III.4. Conclusion

A combination of domestic and global headwinds has depressed economic activity, especially in terms of aggregate demand. The near-term outlook of the Indian economy is fraught with several risks. First, private consumption, which all along supported economic activity, is now beginning to slow down due to a host of factors. In this context, the performance of large employment generating sectors such as automobile

and real estate remains less than satisfactory. Recent measures initiated such as the sharp cut in corporate tax rates, stressed assets funds for the housing sector, infrastructure investment funds, implementation of a fully electronic GST refund system and funds for export guarantee would be helpful. Second, bank credit growth has slowed down and overall fund flows to the commercial sector have declined, partly due to risk aversion and partly due to a slowdown in demand. The recent recapitalisation of public sector banks augurs well for improving credit flows, which are important for reviving private investment activity. Meanwhile, global uncertainties have weakened investment activity at home. Further escalation of trade tensions could adversely impact export prospects, besides delaying the investment upturn. The private corporate sector has not been adding new capacities even as existing capacity utilisation has risen close to its long-term average for several quarters. The recent measures should help kickstart the capex cycle so that new capacities can come on stream and lead to the strengthening of domestic demand in the short-term while boosting the medium-term growth potential of the economy.

IV. Financial Markets and Liquidity Conditions

Domestic financial market segments reacted to evolving domestic and global developments in a diverse manner in the first half of 2019-20. While money markets experienced swift and complete transmission of policy impulses, the government securities and foreign exchange market segments were impacted by domestic economic slowdown and global spillovers. The stock market intermittently scaled new highs amidst sell-off pressures from geo-political tensions. In the credit market, bank lending decelerated reflecting weak demand and risk aversion.

Global financial markets were on edge through the first half of 2019-20 (H1:2019-20) amidst sporadic bouts of turbulence around trade tensions, geo-political flashpoints, uncertainty surrounding a chaotic Brexit and a subdued global growth outlook, despite dovish monetary policy stances of leading central banks. Equity markets, in particular, experienced high volatility with stocks of emerging market economies (EMEs) undergoing sell-offs on fears of political unrest in Hong Kong and debt default concerns in Argentina. In bond markets, corporate credit spreads widened as global growth prospects dimmed; on the other hand, ebbing risk appetite coupled with accommodative monetary policy stances resulted in softening of sovereign yields across AEs and EMEs. In the currency market, the US dollar continued to appreciate against other major currencies, reflecting relatively stronger US macroeconomic fundamentals. EME currencies depreciated amidst mounting spillover risks arising from trade tensions and market turmoil.

IV.1 Domestic Financial Markets

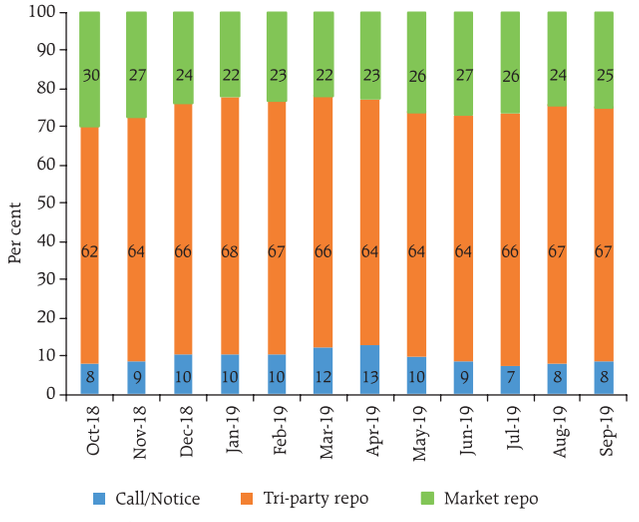
Various segments of the domestic financial market exhibited divergent movements in response to evolving domestic and global developments in H1:2019-20. While money markets witnessed swift and complete transmission, the moderation of yields in bond markets was interrupted by domestic and international factors in August. Equity markets made handsome gains in Q1, with the election related uncertainty coming to an end, but suffered losses on geo-political developments, poor corporate performance and weakness in macroeconomic indicators in Q2. Rising global uncertainty amidst geo-political tensions and domestic cyclical downturn in the economy adversely impacted the foreign exchange market. Overall flow of financial resources to the commercial sector moderated mainly due to reduced credit offtake from banks reflecting weak demand and risk aversion.

IV.1.1 Money Market

During H1:2019-20, various segments of the money market were impacted by the RBI's monetary policy actions, stance and liquidity conditions. In the overnight money market, the weighted average call rate (WACR) generally remained below the policy repo rate during H1:2019-20, trading with a downward bias (see Section IV.3 for details). The spread between the WACR and the policy repo rate widened from June, and averaged 6 bps in September. Other overnight money market rates in the collateralised segment, *i.e.*, the tri-party repo rate and the market repo rate, moved largely in tandem with the WACR. Both the tri-party repo rate and the market repo rate remained below the WACR by 7 bps during H1:2019-20 on an average.

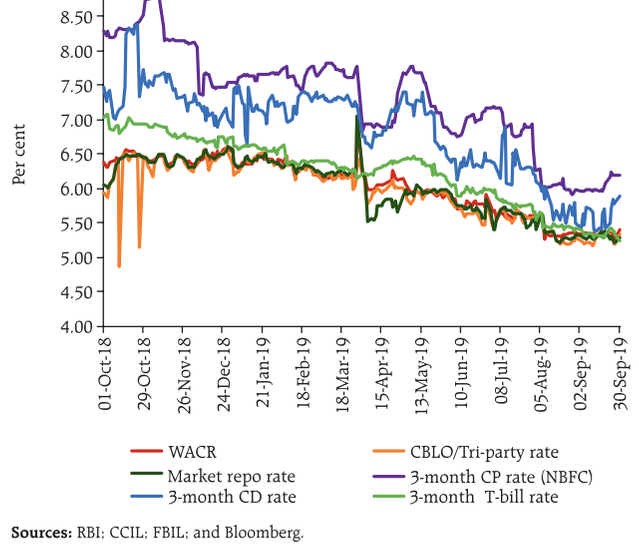
Volumes in the inter-bank money market shifted from the uncollateralised to the collateralised segment during H1:2019-20. The progressive easing of liquidity conditions led to a fall in the share of call money in total overnight money market volume.

Chart IV.1: Share in Overnight Money Market Volumes



Sources: RBI; and CCIL.

Chart IV.2: Money Market Rates



Sources: RBI; CCIL; FBIL; and Bloomberg.

Concomitantly, the share of tri-party repo and market repo in total money market volumes increased (Chart IV.1).[1]

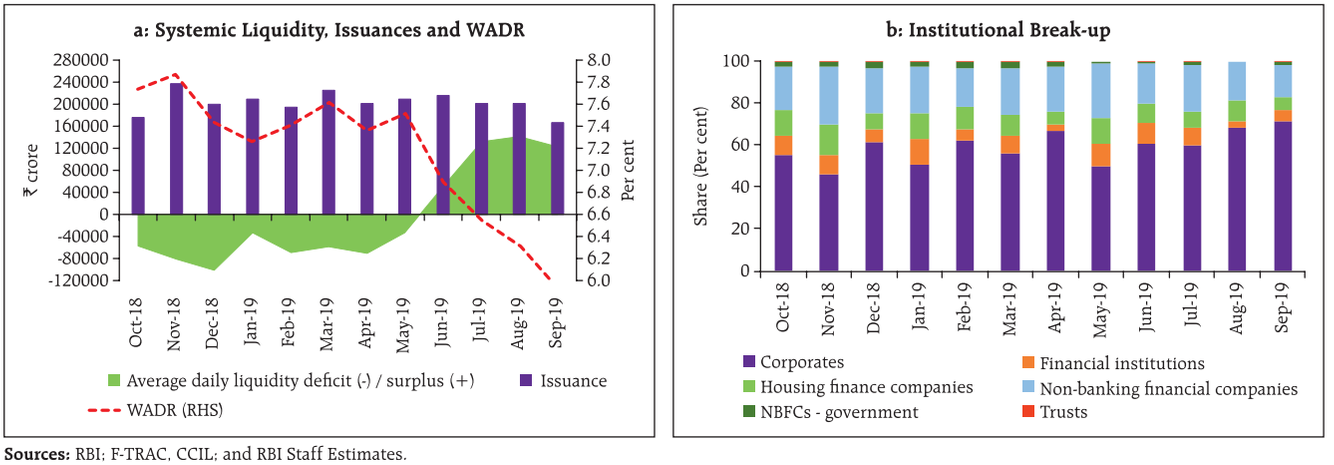
In terms of market microstructure, mutual funds (MFs) continued to be the major lenders in the tri-party repo and market repo segments, with average shares of 59 per cent and 39 per cent, respectively, in H1:2019-20. The major borrowers were public sector banks in the tri-party repo segment and primary dealers (PDs) in the market repo segment. Given deficit liquidity conditions in April and May, lending by MFs declined while borrowing by MFs increased in the collateralised segment during these two months. With systemic liquidity turning surplus since June, lending by MFs increased while borrowing declined marginally in the collateralised segment during June-September.

Interest rates on longer-term money market instruments such as certificates of deposit (CDs), commercial papers (CPs) and Treasury Bills (T-bills) of 3-month maturity responded in varying degrees to policy rate cuts and the shift in the policy stance from neutral to accommodative during H1:2019-20 (Chart IV.2). Interest rates on CPs moderated noticeably during H1, particularly those issued by non-banking financial companies (NBFCs), although CP rates traded above CD rates. In comparison, yields on 3-month T-bills moderated by a greater extent during the period.

In the wake of easy liquidity conditions in the banking system, fresh issuances of CDs declined to ₹1,75,305 crore during H1:2019-20 (up to September 13, 2019) as compared with ₹1,98,829 crore during the corresponding period of 2018-19. Primary issuances of CPs also declined to ₹11,92,277 crore during H1:2019-20 from ₹13,58,117 crore during H1:2018-19, with more than 99 per cent of the issuances by companies with A1+ rating. CP issuances moderated from July reflecting heightened risk aversion in view of downgrading of a few CP issuers in June and July 2019. Nevertheless, interest rates in the primary CP market – as reflected in the weighted average discount rate (WADR) – moderated sharply by 130 bps during H1:2019-20, facilitated by the easing of liquidity conditions (Chart IV.3a). During this period,

[1] In the call money market, participants include banks and primary dealers only, while other market participants such as mutual funds, insurance companies and other financial institutions are the key players in the tri-party repo and market repo segments.

Chart IV.3: Primary Issuances of Commercial Paper

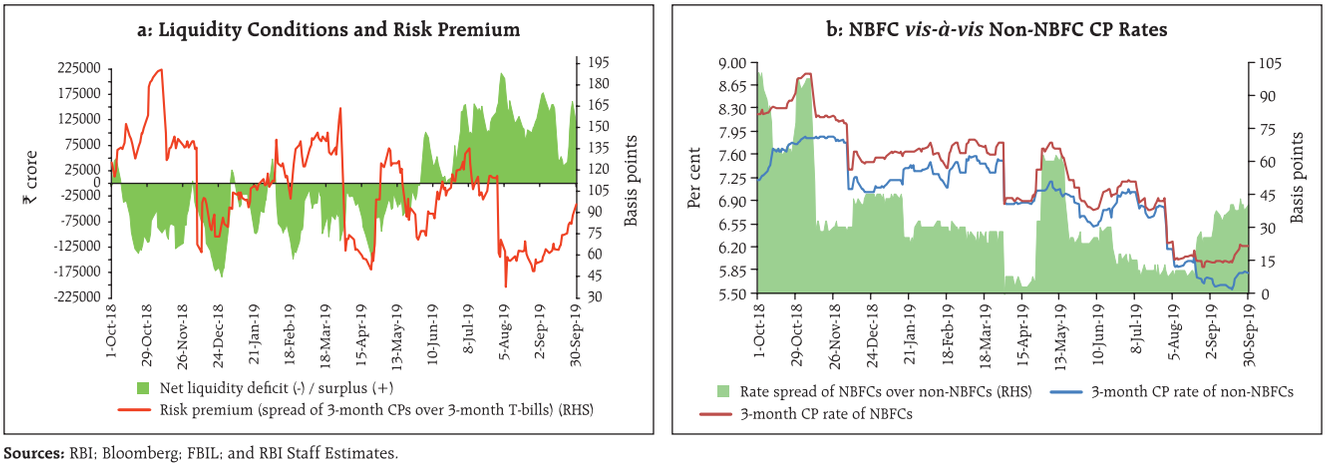


Sources: RBI; F-TRAC, CCIL; and RBI Staff Estimates.

non-financial corporates and NBFCs were the major issuers in the CP market (Chart IV.3b).

Risk premium in the money market (*i.e.*, spread between 3-month CPs and 3-month T-bills) remained high at an average of 99 bps during April-July reflecting the downgrading of some CP issuers in June-July and tight liquidity conditions during April-May (Chart IV.4a). The risk premium declined sharply to an average of 64 bps in August-September on account of (i) the *liquidity effect* emanating from the switch in liquidity conditions from deficit to surplus since the beginning of June 2019; (ii) the predominance of issuances by top rated issuers raising funds at competitive rates; and (iii) the measures taken by the government and the Reserve Bank to provide liquidity support to NBFCs.[2] The spread between 3-month CP rate of NBFCs and non-NBFCs narrowed (average of 23 bps in H1:2019-20 *vis-à-vis* 44 bps in H2:2018-19), notwithstanding some intermittent spikes (Chart IV.4b).

Chart IV.4: Risk Premium and Spread in CP Market



Sources: RBI; Bloomberg; FBIL; and RBI Staff Estimates.

[2] The Union Budget on July 5, 2019 announced that the government would provide a one-time partial credit guarantee to public sector banks to buy high-rated pooled assets worth ₹1 lakh crore from NBFCs. Moreover, the Reserve Bank in its bi-monthly monetary policy of August 2019 allowed bank lending to NBFCs for on-lending to agriculture, micro and small enterprises, and housing to be classified as priority sector lending, up to specified limits. The RBI also liberalised the external commercial borrowings framework, which facilitated NBFCs to raise funds for on-lending and repayment of rupee loans.

Table IV.1: Policy Transmission in the Money Market

(Basis points)

H1: 2019-20	Change in Rates						
	Repo	WACR	Tri-party Repo	Market Repo	3-month CD	91-day T-bill	3-month CP (NBFCs)
April 3 to June 4	-25	-32	-43	-37	-33	-16	-5
June 6 to August 6	-25	-24	-18	-25	-48	-44	-80
August 7 to September 30	-35	-23	-28	-32	-6	-38	20
Cumulative (April 3 - September 30)	**-85**	**-79**	**-89**	**-94**	**-87**	**-98**	**-65**

Sources: RBI; CCIL; FBIL; and Bloomberg.

During H1:2019-20, policy transmission was nearly complete in all segments of the money market. Of the three policy announcements during this period, the maximum impact was felt after the June policy – which signaled both a rate cut and a change in the stance from neutral to accommodative – particularly at the longer end of the money market spectrum (Table IV.1). Thus, both the *announcement effect* of repo rate cuts and the *liquidity effect* of surplus conditions were instrumental in securing policy transmission.

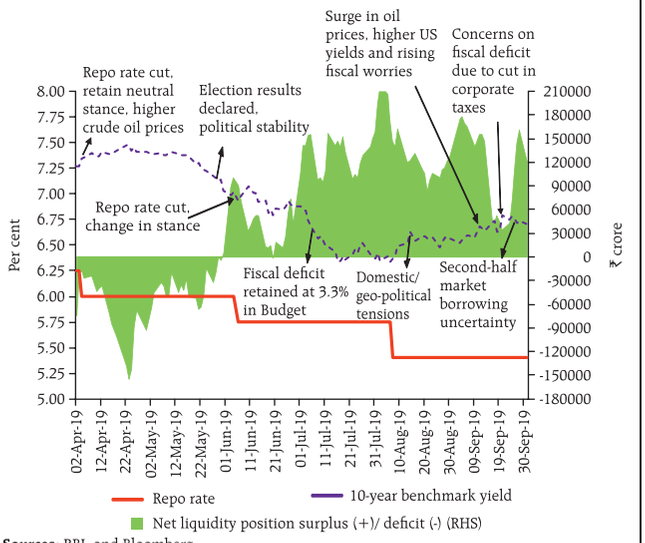
IV.1.2 Government Securities (G-Sec) Market

G-sec yields traded with a softening bias at the beginning of Q1:2019-20, taking cues from several positive developments during Q4:2018-19, *viz.*, monetary policy easing and a change in the policy stance from calibrated tightening to neutral; injection of durable liquidity; announcement of the voluntary retention route (VRR); and successive benign inflation prints. The softening of yields was, however, ephemeral and they started hardening in April 2019, partly due to (i) no change in the policy stance contrary to market expectation; (ii) sustained higher crude oil prices after the US announced stopping of imports from Iran and supply disruptions in Libya and Venezuela; and (iii) depreciation of the Indian rupee (INR). Consequently, the benchmark yield hardened by 6 bps during April 2019 despite injection of durable liquidity through a US dollar buy/sell swap.

Amidst heightened trade tensions, yields softened by 38 bps by during May in the wake of election results indicating political stability. This was aided by infusion of liquidity through open market operation (OMO) purchases and lower crude oil prices. The softening trend continued in June with the benchmark yield declining further by 15 bps during the month, as market sentiment was buoyed by a further reduction in the policy rate, a shift in the policy stance and continued OMO purchases by the RBI.

The moderation in yields extended into Q2 even as the market sentiment was unsettled by fears of excess supply of paper. In fact, G-Sec yields remained volatile through July 2019. Nonetheless, positive Budget announcements such as pegging of the fiscal deficit at 3.3 per cent of GDP and unchanged quantum of borrowing *vis-à-vis* the *Interim* Budget bolstered market sentiment. This was also reflected in renewed buying by foreign portfolio investors (FPIs) in the debt market. Moreover, benign inflation prints triggered market expectations of further rate cuts. All these factors resulted in the benchmark yield softening further by 50 bps during July, touching a low of 6.33 per cent on July 16, 2019 – its lowest level during H1:2019-20. Despite positive developments such as a larger than expected rate cut of 35 bps by the MPC, rollback of surcharge on FPIs, higher than expected surplus transfer by the RBI, the G-sec market remained wary in August on concerns over

Chart IV.5: 10-year Benchmark Yield, Repo Rate and Liquidity Conditions



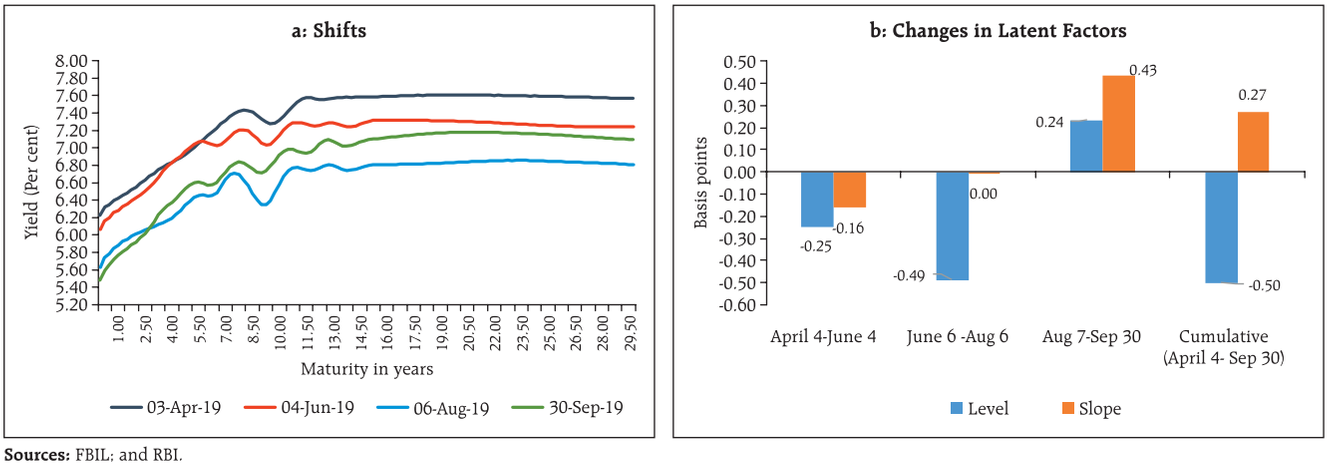
Sources: RBI; and Bloomberg.

fiscal slippage arising from anticipation of a stimulus, and domestic/geo-political tensions. Accordingly, the benchmark yield hardened by 19 bps during August 2019, paring previous gains (Chart IV.5).

The hardening bias of benchmark yield continued in September owing to (i) rising crude oil prices following the attack on Saudi oil refineries; (ii) lingering fiscal concerns; and (iii) surge in overnight indexed swap (OIS) rates fuelled by a rise in US bond yields. Subsequent reassurances by the Saudi authorities on restoring normalcy assuaged market apprehensions somewhat and softened crude prices thereafter. Moreover, large buying support from state owned banks, market expectation of a further rate cut and easing of limit on foreign investment in gilts softened yields towards the end of September. Overall, the benchmark yield softened by 65 bps during H1:2019-20, closing at 6.70 per cent on September 30, 2019.

The yield curve, which underwent shifts in H1:2019-20, is characterised by its level and slope (Chart IV.6a).[3] Since the April monetary policy announcement, the average level of yield has softened by 50 bps, driven down by: (i) cumulative policy easing by 85 bps, accompanied by a change in the monetary policy stance; (ii) build-up of surplus liquidity position aided by liquidity infusion through OMOs and forex buy/sell swaps; (iii) ongoing liquidity support measures to NBFCs; and (iv) benign domestic inflation prints. Since the August policy announcement (up to September 30, 2019), however, the average level has firmed up by 24 bps even as the yield curve has become steeper, reflecting *inter alia* fears of a large shortfall in government revenue after the announcement of corporate tax rate cuts by

Chart IV.6: G-Sec Yield Curve



Sources: FBIL; and RBI.

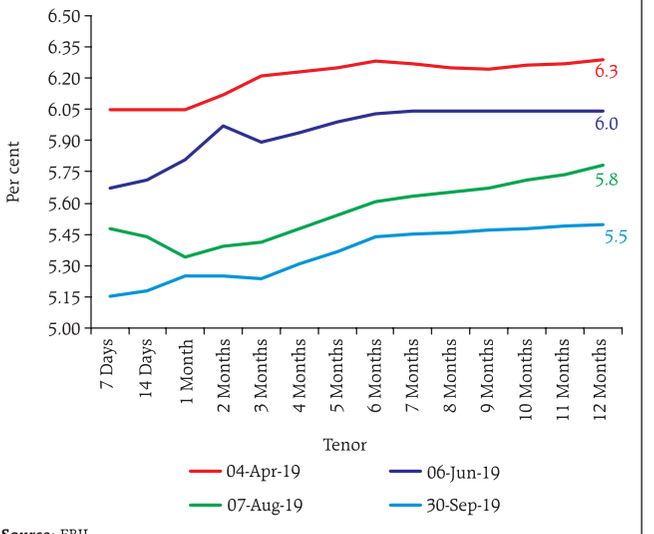
[3] While the level is the average of all yields across maturities, the slope is represented by the difference in yield between the longest and the shortest maturity (term spread).

the Government, apprehensions of crude oil supply disruption and heightened geo-political uncertainties/ financial market turmoil in some EMEs (Chart IV.6b).

The introduction of the VRR and increased investment limits for G-Sec boosted overseas investor interest in debt instruments at the beginning of 2019-20. With benign inflation prints, coupled with political stability arousing investors' appetite, FPIs remained net buyers in the G-Sec market during H1:2019-20, although they turned net sellers in September due to geo-political tensions and tepid domestic economic outlook (Chart IV.7). At the short end of the primary segment, T-bill yields softened during H1:2019-20 tracking the benchmark yield (Chart IV.8).

At the longer end, issuances of state development loans (SDLs) were moderate during H1:2019-20 as against the front-loading of issuances by the GoI. The weighted average cumulative spread of SDLs' cut-offs over the corresponding tenor G-sec at 52 bps in H1:2019-20 (as on September 30) was comparable to 54 bps in H1:2018-19 (Chart IV.9). During H1:2019-20, the average inter-state spread on securities of 10-year tenor at 4 bps remained identical to that recorded in H1:2018-19.

Chart IV.8: FBIL -T-Bill Benchmark
(Yield to Maturity)

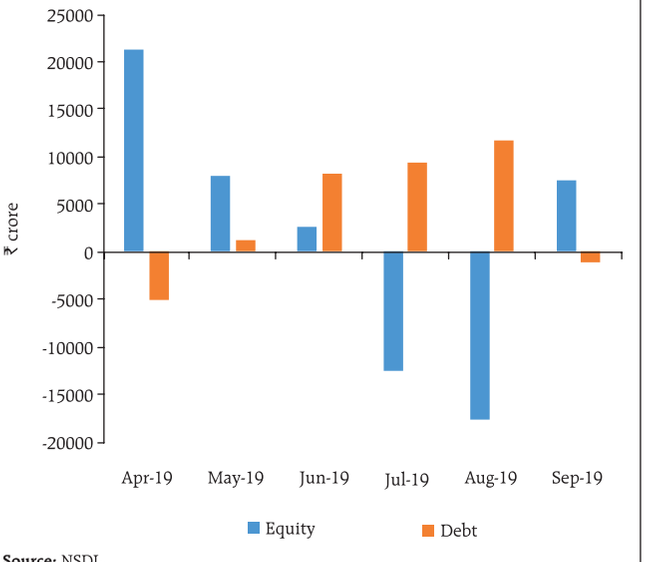


Source: FBIL.

IV.1.3 Corporate Bond Market

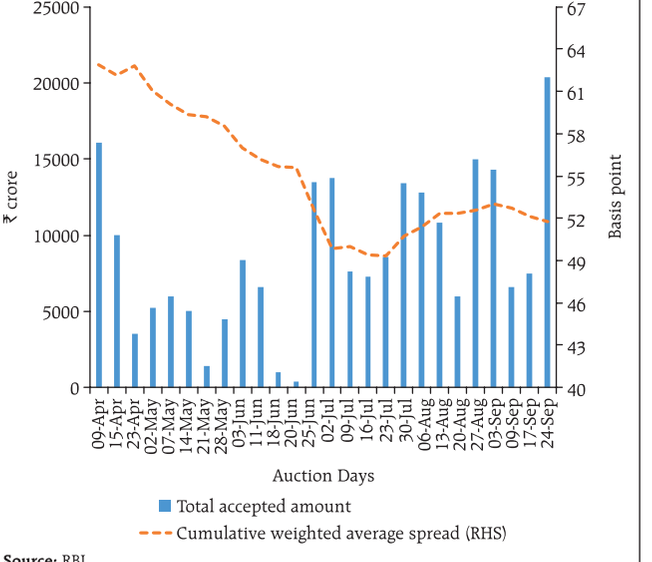
Corporate bond yields eased sharply during H1:2019-20, largely tracking G-sec yields and reflecting transmission of policy repo rate cuts (Chart IV.10a). During this period, 5-year AAA corporate bond yields softened by 66 basis points – from 8.10 per cent at end-March 2019 to 7.44 per cent at end-September 2019 – in response to the cumulative

Chart IV.7: FPI Investment in Equity and Debt



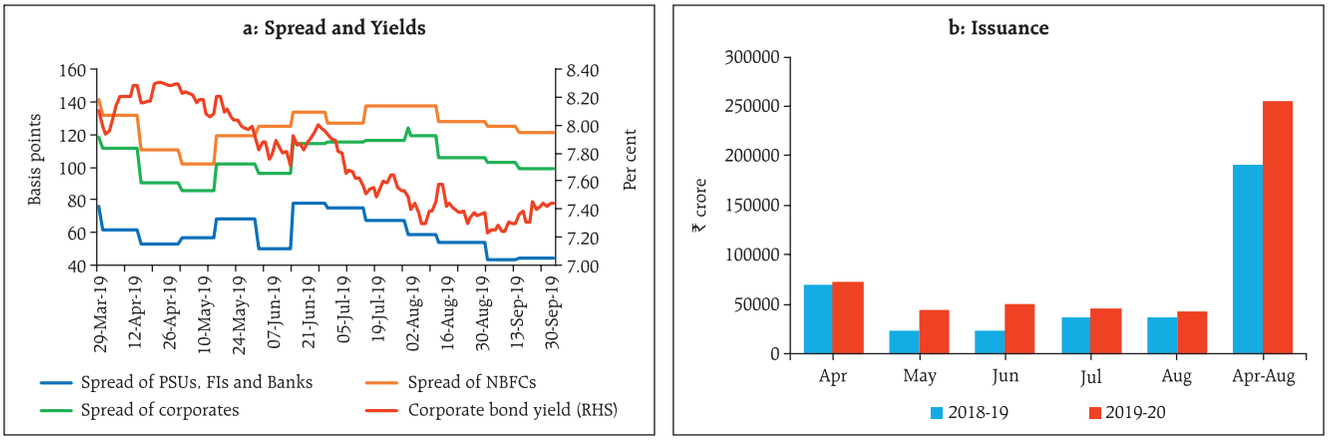
Source: NSDL.

Chart IV.9: SDLs – Amount Raised and the Spread



Source: RBI.

Chart IV.10: Corporate Bonds



Sources: Bloomberg; and SEBI.

policy rate reduction of 85 basis points (excluding the reduction in February 2019 during the current easing cycle). Moreover, easy liquidity conditions also led to a reduction in the risk premia. Illustratively, the yield spread (5-year AAA corporate bonds over 5-year G-sec) on bonds issued by public sector undertakings (PSUs), financial institutions (FIs) and banks, NBFCs, and corporates declined by 32 bps, 20 bps and 19 bps points, respectively, during this period. State Bank of India (SBI) and ICICI Bank 5-year credit default swap (CDS) spreads – which indicate credit default risk – also declined by 23 bps and 21 bps, respectively.

Resource mobilisation through issuances of corporate bonds in the primary market increased sharply by 34.4 per cent to ₹2.6 lakh crore during April-August 2019 from ₹1.9 lakh crore a year ago (Chart IV.10b). Almost the entire resource mobilisation in the corporate bond market (97.3 per cent) continued to be through the private placement route. Investments by FPIs in corporate bonds declined to ₹2.03 lakh crore at end-September 2019 from ₹2.19 lakh crore at end-March 2019. Consequently, FPIs' utilisation of the approved limit for investment in corporate bonds came down to 64.0 per cent at end-September 2019 from 75.9 per cent at end-March 2019. The average daily turnover in the corporate bond market increased to ₹8,261 crore during H1:2019-20 (up to September 27, 2019) from ₹7,131 crore during H1:2018-19.

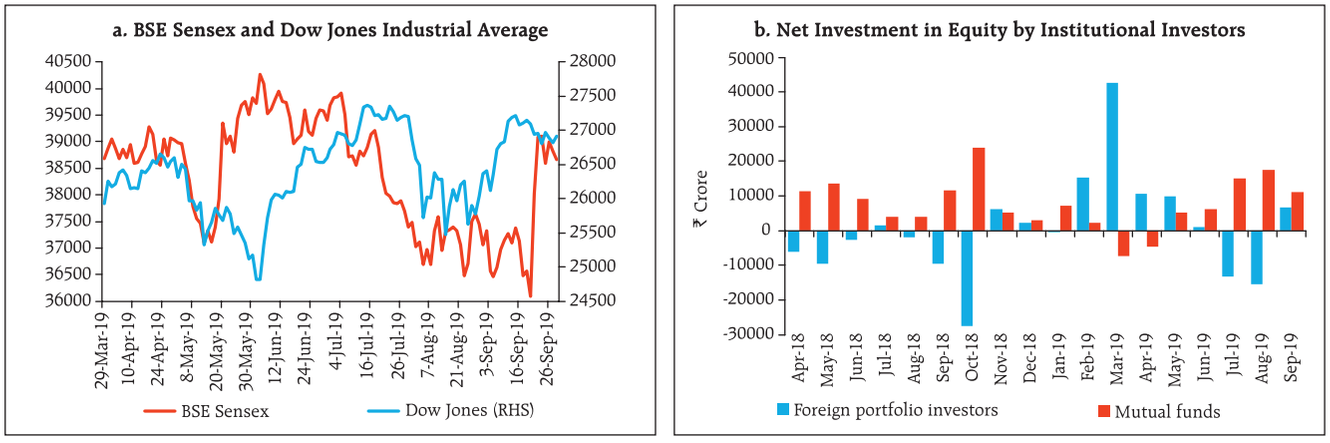
IV.1.4 Equity Market

Equity markets scaled records in the immediate aftermath of the 2019 general elections. Thereafter, they corrected during Q2:2019-20 due to a combination of domestic and global factors which dampened market sentiment, closing at about the same level as at the beginning of the year (Chart IV.11a).

The BSE Sensex registered modest gains in April 2019, aided by continued FPI inflows, the policy repo rate cut by the RBI and positive global cues, notwithstanding weak corporate earnings results. Markets witnessed a sharp downturn during early May 2019 as trade tensions between the US and China intensified. Investor sentiment, however, turned positive later in the month buoyed by the prospects of a stable government and expectations of further monetary easing by the RBI.

Market exuberance pushed the BSE Sensex to a record high of 40268 on June 3, 2019 but this rally proved transient as sentiment turned bearish after a default by a housing finance company triggered liquidity concerns in the NBFC sector. The downtrend deepened in July over some Budget proposals such as (i) tax on super rich; (ii) buyback tax; and (iii)

Chart IV.11: Stock Market Indices and Investment



Source: Bloomberg.

increase in minimum public shareholding in listed companies. Negative cues from global equity markets, reporting of a borrowing fraud in a public sector bank, concerns over lackluster corporate earnings results for Q1: 2019-20, slow progress of the monsoon and continued FPI outflows due to the proposed increase in tax surcharge for FPIs registered as non-corporates exacerbated the decline in July 2019.

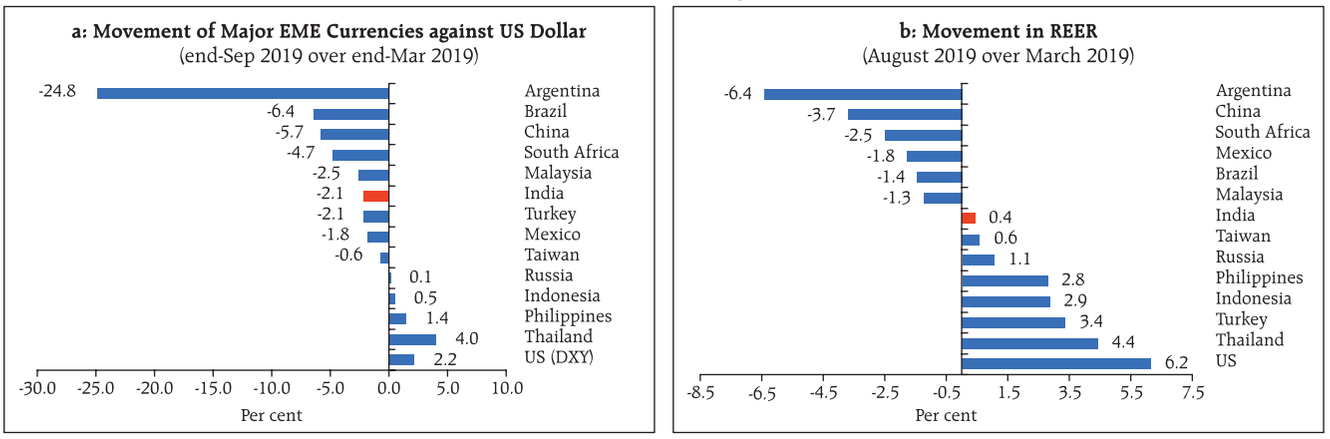
The equity market declined marginally in August 2019. Adverse domestic developments such as tepid corporate earnings results for Q1: 2019-20, lukewarm industrial activity and auto sales, and negative global cues, *viz.*, political unrest in Hong Kong, debt default in Argentina and uncertainty over the US-China trade negotiations completely nullified the positive impact of government measures like rollback of the super-rich tax on FPIs, frontloading of capitalisation of public sector banks and deferment of a hike in registration fees for automobiles. The BSE Sensex surged nearly 5 per cent on September 20 spurred by the reduction in the corporate tax rate – the biggest rally in over a decade. Subsequently, the BSE Sensex corrected on concerns about the health of the domestic banking sector and political uncertainty in the US. Overall, the BSE Sensex registered a gain of 3.6 per cent during September 2019.

While FPIs were net sellers to the tune of ₹605 crore in the equity market, domestic institutional investors, particularly MFs, made heavy purchases amounting to ₹50,316 crore during H1: 2019-20 (Chart IV.11b). In the primary segment of the equity market, resource mobilisation through public and rights issues grew nearly five times to ₹59,618 crore during April-August 2019 as compared with ₹12,028 crore in the corresponding period of the previous year.

IV.1.5 Foreign Exchange Market

Since April 2019, the INR traded with a depreciating bias, dipping to a low of ₹72.19 per US dollar (reference rate) on September 3, 2019. The fall in the INR was in line with many EME currencies experiencing depreciation *vis-à-vis* the US dollar, which was pronounced in August and September. Overall, the fall in the INR during April-September 2019 was due to equity sell-offs by FPIs and strengthening of the US dollar, triggered by rising risk aversion among investors on escalating US-China trade tensions and concerns over tepid global growth. While the INR depreciated by 2.1 per cent *vis-à-vis* the US dollar on September 30, 2019 over end-March 2019, it was modest in comparison with the depreciation of many of its EME peers such as the Malaysian ringgit, the South African rand, the Chinese yuan and the Brazilian real (Chart IV.12a).

Chart IV.12: Cross-currency Movements



Note: Depreciation (-) / Appreciation (+).
Sources: RBI; FBIL; IMF; Bloomberg; Thomson Reuters; and BIS.

In terms of the 36- and 6-currency nominal effective exchange rate (NEER), the INR appreciated by 0.4 per cent and 1.1 per cent, respectively, at end-September, 2019 over March (average) 2019. Similarly, the INR, in terms of both 36- and 6-currency real effective exchange rate (REER), appreciated during the same period (Table IV.2).

The appreciation in REER of the INR between March and August 2019 was modest as compared with that of the Taiwan dollar, the Russian ruble, the Philippine peso, the Indonesian rupiah, the Turkish lira, and the Thai baht (Chart IV.12b).

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

(Base: 2004-05 = 100)

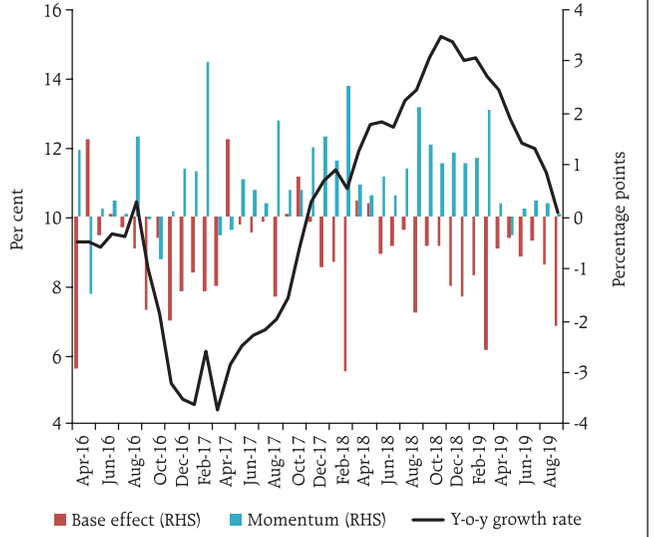
Item	Index: End-September 2019 (P)	Appreciation (+) / Depreciation (-) (Per cent)	
		End-September 2019 over March 2019	March 2019 over March 2018
36-currency REER	116.7	1.3	-1.2
36-currency NEER	73.9	0.4	-1.7
6-currency REER	126.6	2.7	-0.9
6-currency NEER	64.6	1.1	-1.9
₹/US$	70.69	-1.7	-6.4

P: Provisional.
Sources: RBI; and FBIL.

IV.1.6 Credit Market

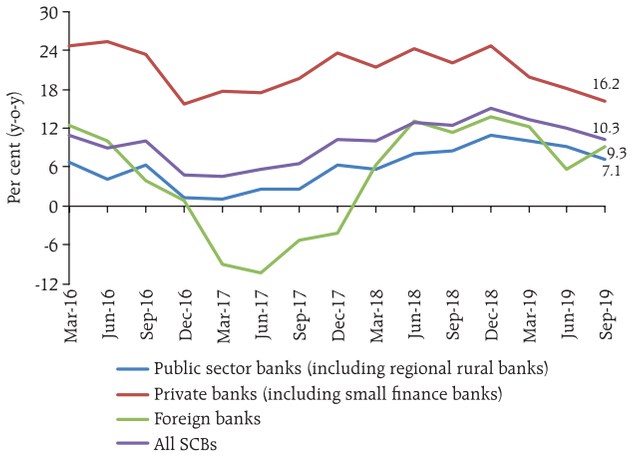
In the credit market, offtake during the year (up to mid-September) has been muted; both, low momentum and unfavourable base effects dragged down non-food credit growth (Chart IV.13). The seasonal decline in credit during Q1:2019-20 was more pronounced than in the corresponding quarter of the previous year. The offtake during Q2 (up to mid-September) has been subdued as compared with the corresponding quarter of the previous two years.

Chart IV.13: Non-food Credit Growth of SCBs (Monthly Average)



Source: RBI.

Chart IV.14: Bank Group-wise Credit Growth



Notes: 1. With re-categorisation of IDBI Bank, all growth rates from January 21, 2019 onwards include IDBI Bank as private sector bank. Therefore, IDBI Bank is removed from base period data of public sector banks and added to private sector banks for computing the growth rate thenceforth.
2. Data for September 2019 pertains to September 13, 2019 and is provisional.
Source: RBI.

The slowdown in credit growth was led by public sector banks and private sector banks, while credit growth of foreign banks continued to be modest, despite some uptick in the recent period (Chart IV.14).

While credit growth to agriculture and personal loans remained broadly unchanged in the last one year, credit growth to industry moderated in the last four months after accelerating continuously between August 2018 and April 2019. Credit growth to services has decelerated sharply since January 2019 (Chart IV.15a).

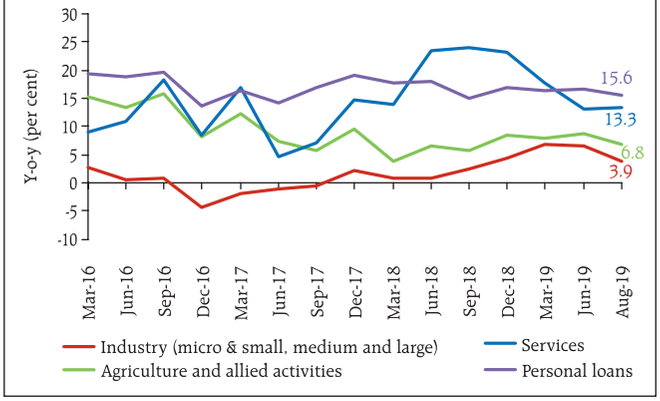
Of the incremental non-food credit flow during the year (August 2019 over August 2018), personal loans accounted for the largest share, followed by services and industry (Chart IV.15b). Within personal loans, credit offtake has been broadly concentrated in two segments, *viz.*, housing and credit card outstanding. Within industry, credit growth to beverages and tobacco, cement, engineering, vehicles, construction and infrastructure (*viz.*, power, telecommunications and roads) accelerated.

Credit quality has deteriorated with both the stressed assets ratio and the non-performing assets (NPA) ratio increasing marginally in June 2019 after four successive quarters of decline (Chart IV.16a). Sector-wise analysis indicates that the NPA ratio deteriorated for all sectors in June 2019, barring industry (Chart IV.16b).

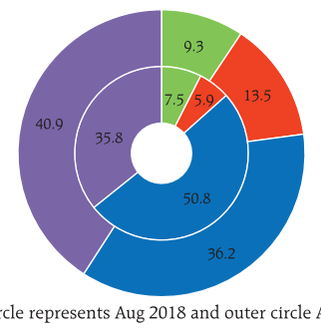
Banks have reduced their investment in the non-statutory liquidity ratio (SLR) portfolio by about ₹35,000 crore in 2019-20 (up to September 13). This is notwithstanding a marginal increase in exposure to CPs in contrast to a decline in H2:2018-19. With both non-SLR investment and non-food credit undergoing a decline, adjusted non-food credit[4] growth decelerated during the year so far (Chart IV.17).

Chart IV.15: Sectoral Deployment of Credit

a. Growth



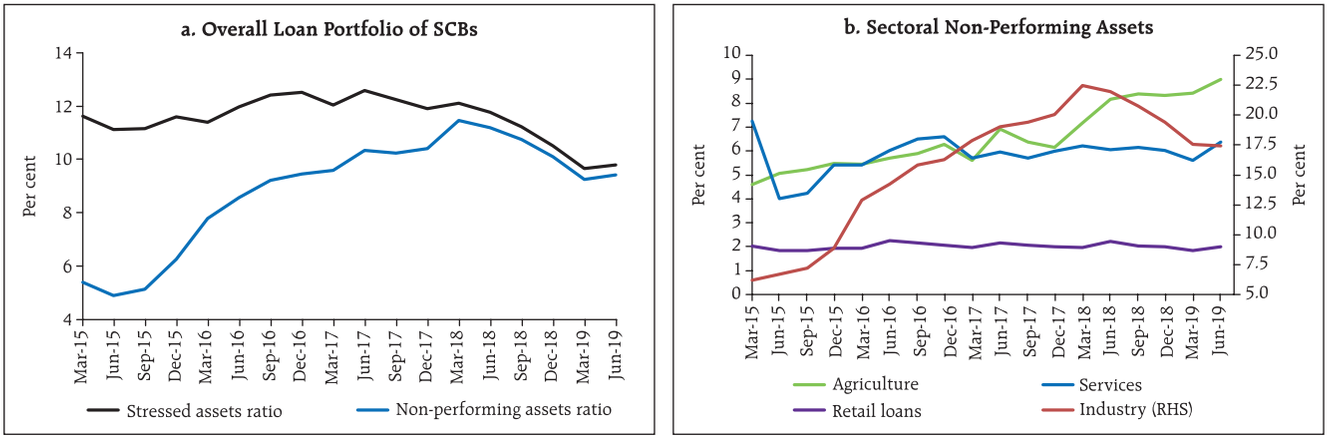
b. Share in Incremental Yearly Flow (Per cent)



Source: RBI.

[4] Includes non-food credit extended by scheduled commercial banks and their investment in commercial paper as also bonds/shares/debentures issued by private and public corporate sector.

Chart IV.16: Stressed Assets and Non-Performing Assets

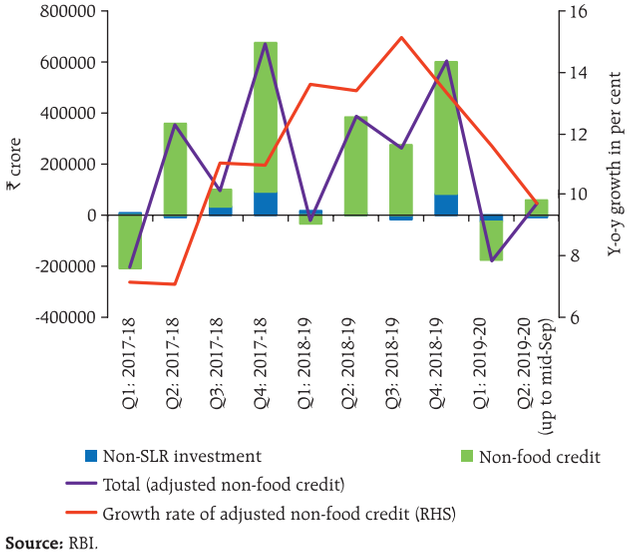


Source: RBI.

With muted credit offtake and decline in non-SLR investments, banks have augmented their SLR portfolios despite the reduction in SLR by RBI. Banks held excess SLR of 6.9 per cent of net demand and time liabilities (NDTL) on August 30, 2019 as compared with 6.3 per cent of NDTL at end-March 2019 (Chart IV.18).

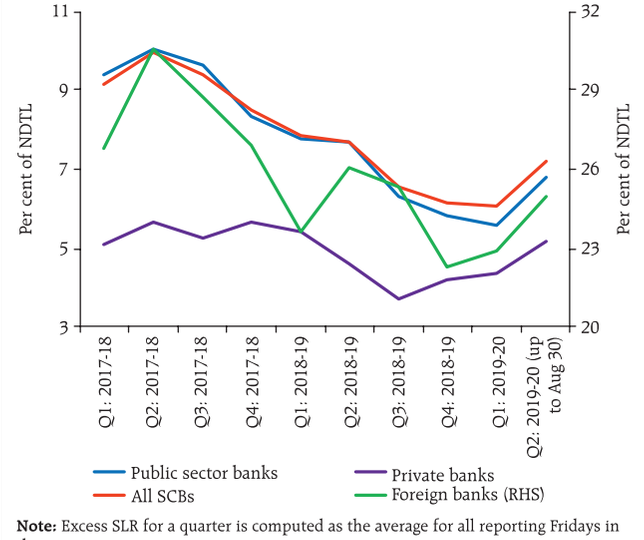
Overall, financial flows to the commercial sector in 2019-20 so far (up to mid-September) have been lower than in the same period last year due to a decline in funding from banks and lower funding from non-bank sources. Among domestic non-bank sources of funding, public issues of equity and private placement increased significantly. Among foreign sources, both external commercial borrowings and foreign direct investment (FDI) registered sharp increases (Table IV.3). Notably, a new framework for external commercial borrowings was announced in January 2019 to improve the ease of doing business; subsequently, end-use provisions were also rationalised in July 2019.

Chart IV.17: Adjusted Non-food Credit (Quarterly Variation)



Source: RBI.

Chart IV.18: Excess SLR of Banks



Note: Excess SLR for a quarter is computed as the average for all reporting Fridays in that quarter.
Source: RBI.

Table IV.3: Flow of Funds to the Commercial Sector

(Amount in ₹ crore)

Item	April to mid-Sep			
	2018-19		2019-20	
	Amount	Per cent to Total	Amount	Per cent to Total
A. Flow from banks, *i.e.*, Adjusted non-food credit (A1+A2)	**1,85,083**	**25.1**	**-1,28,760**	**-141.5**
A1. Non-food credit	*1,65,187*	*22.4*	*-93,688*	*-103.0*
A2. Non-SLR investment by scheduled commercial banks	*19,896*	*2.7*	*-35,072*	*-38.5*
B. Flow from non-banks (B1+B2)	**5,51,004**	**74.9**	**2,19,755**	**241.5**
B1. Domestic sources	*4,44,696*	60.4	*13,562*	14.9
1. Public issues by non-financial entities *	6,253	0.8	58,326	64.1
2. Gross private placement by non-financial entities *	47,379	6.4	62,495	68.7
3. Net issuance of CPs subscribed by non-banks	2,53,669	34.5	19,118	21.0
4. Net credit by housing finance companies $	52,181	7.1	-6,003	-6.6
5. Total accommodation by 4 RBI regulated AIFIs *	40,032	5.4	-4,774	-5.2
6. NBFCs-ND-SI and deposit taking NBFCs (net of bank credit) $	41,200	5.6	-1,25,600	-138.0
7. LIC's net investment in corporate debt, infrastructure and social sector ^	3,982	0.5	10,000	11.0
B2. Foreign sources	*1,06,308*	*14.4*	*2,06,193*	*226.6*
1. External commercial borrowings / FCCB *	-653	-0.1	54,073	59.4
2. Foreign direct investment to India ^	1,06,961	14.5	1,52,119	167.2
C. Total flow from banks and non-banks (A+B)	**7,36,087**	**100.0**	**90,995**	**100.0**

$: Up to Jun ^: Up to Jul *: Up to Aug.

Sources: RBI; SEBI; BSE; NSE; NHB; LIC and merchant banks.

IV.2 Monetary Policy Transmission

The response of deposit and lending rates of commercial banks to the cumulative reduction in the policy repo rate by 110 bps during the easing cycle of monetary policy starting from February 2019 has been muted so far (Table IV.4). While the weighted average lending rate (WALR) on fresh rupee loans decreased by only 29 bps (February-August 2019), the WALR on outstanding rupee loans, in contrast, increased by 7 bps over the same period. The inadequate transmission essentially reflects slow adjustment in bank term deposit rates. This, in turn, reflects the

Table IV.4: 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 - Outstanding Rupee Loans	WALR - Fresh Rupee Loans
Feb-Mar 2019	-25	-1	-2	-5	-3	-24
Apr-May 2019	-25	-6	0	0	7	13
Jun-Jul 2019	-25	-4	-4	-15	2	-9
Aug-Sep 2019*	-35	-15	2	-15	1	-9
Feb-Sep 2019*	**-110**	**-26**	**-4**	**-35**	**7**	**-29**

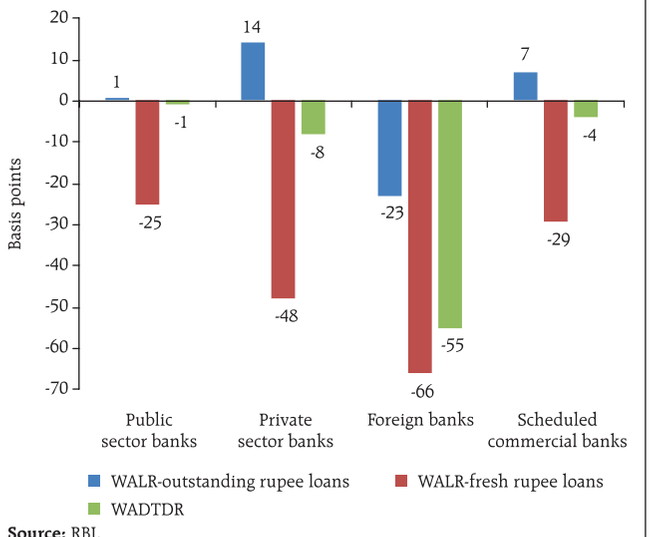
*: Latest data on WALR and WADTDR pertains to August 2019.

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

MCLR: Marginal Cost of Funds based Lending Rate.

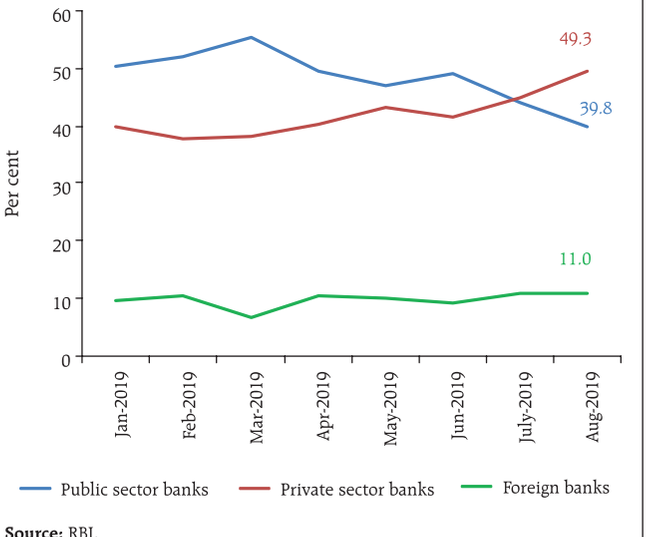
Source: RBI.

Chart IV.19: Variation in WALR and WADTDR (February-August 2019)



Source: RBI.

Chart IV.20: Bank Group-wise Share of Fresh Rupee Loans



Source: RBI.

long maturity profile of bank deposits at fixed interest rates.

The WALR on fresh rupee loans declined during February-August 2019 across bank groups, with the largest decline observed in foreign banks and the least in public sector banks (Chart IV.19).

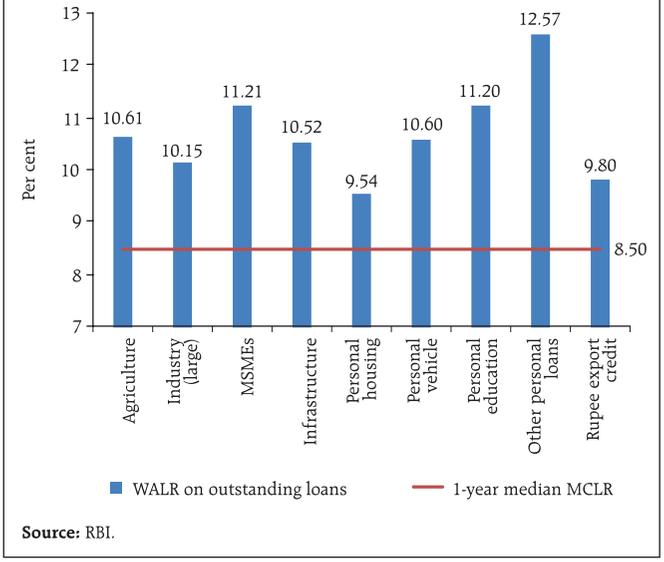
As the lending activity of public sector banks was constrained by higher NPAs and lower capital adequacy *vis-à-vis* private sector banks, the share of fresh rupee loans of private sector banks overtook that of PSBs in August 2019 (Chart IV.20).

Actual lending rates comprise marginal cost of funds based lending rate (MCLR) and a spread. Banks charged the lowest spread (WALR on outstanding rupee loans over 1-year MCLR) on housing loans during August 2019 reflecting (i) lower probability of default; (ii) availability of good collateral; and (iii) competition from NBFCs (Chart IV.21). At the other end of the spectrum, the spread charged on 'other personal loans' was the highest.

The spread between MCLR/WALR on fresh rupee loans/outstanding rupee loans and G-sec yields has risen sharply through 2019, reflecting complete transmission of policy rate to bond markets as against muted transmission to credit markets (Chart IV.22).

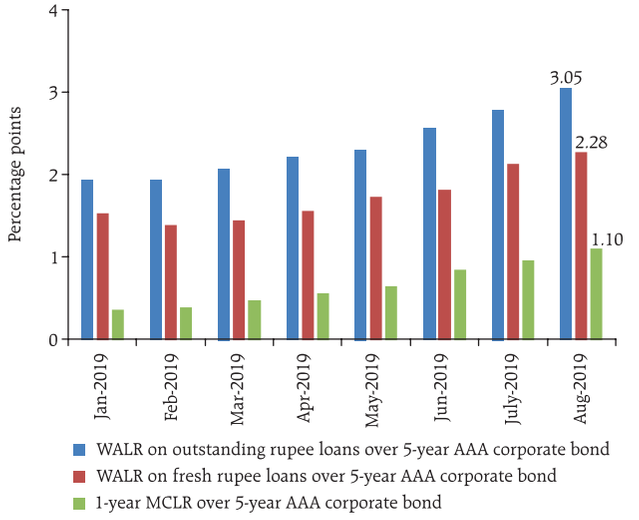
One of the important factors impeding monetary transmission is administered interest rates on small saving schemes set by the Government of India. These administered interest rates are linked to market interest rates on G-secs with a lag and are fixed on a quarterly basis at a spread ranging from

Chart IV.21: Sector-wise WALR Relative to 1-Year Median MCLR -August 2019



Source: RBI.

Chart IV.22: Spreads – Lending Rates over Corporate Bond Yields



Sources: RBI; and Bloomberg.

0-100 bps over and above G-sec rate of comparable maturities. Interest rates on small saving schemes were revised on June 28, 2019 for Q2: 2019-20, which came into effect from July 1, 2019 whereby the rates of interest on all small savings schemes (except savings deposit) were reduced by 10 bps. Even after the reduction, however, the small saving rates of various schemes continued to be higher by 18-62 bps in Q2:2019-20 than the formula-based interest rates. With the Government deciding to keep the interest rates on small savings unchanged for Q3:2019-20 notwithstanding a decline in G-sec yields in the reference period (June-August 2019), the wedge between the current small saving rates on various schemes and the formula-based rates for Q3:2019-20 has widened further to 70-110 bps (Table IV.5).

The MCLR system of pricing loans lacks transparency as it is internal to each bank and borrowers have no way of ascertaining as to how it has been arrived at. While it may not matter for new borrowers as they are able to compare overall lending rates across banks and take a decision in their best interest, it impacts existing borrowers as they cannot easily ascertain the factors that lead to the changes in MCLR. The MCLR

Table IV.5: Interest Rates on Small Savings Instruments – Q3:2019-20

Small Savings Scheme	Maturity (Years)	Spread (Percentage point)$	Average G-sec Yield (Per cent) of Corresponding Maturity (June 2019 to August 2019)	Formula-based Rate of Interest (Per cent) (applicable for October to December 2019)	Government Announced Rate of Interest (Per cent) in Q3	Difference (Basis points)
(1)	(2)	(3)	(4)	(5) = (3) + (4)	(6)	(7) = (6)-(5)
Savings Deposit	-				4.00	-
Public Provident Fund	15	0.25	6.81	7.06	7.90	84
Time Deposits						
1 Year	1	0	5.85	5.85	6.90	105
2 Year	2	0	6.01	6.01	6.90	89
3 Year	3	0	6.18	6.18	6.90	72
5 Year	5	0.25	6.50	6.75	7.70	95
Post Office Recurring Deposit Account	5	0	6.50	6.50	7.20	70
Post Office Monthly Income Scheme	5	0.25	6.47	6.72	7.60	88
Kisan Vikas Patra	113 Months	0	6.81	6.81	7.60	79
NSC VIII issue	5	0.25	6.66	6.91	7.90	99
Senior Citizens Savings Scheme	5	1.00	6.50	7.50	8.60	110
Sukanya Samriddhi Account Scheme	21	0.75	6.81	7.56	8.40	84

$: 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.

system also did not deliver effective transmission as banks were slow to adjust their deposit interest rates which, in turn, had a bearing on their lending rates.

To address these concerns, the Reserve Bank, in pursuance of the recommendations of an Internal Study Group (Chairman: Dr. Janak Raj), mandated that all scheduled commercial banks (excluding regional rural banks) should link all new floating rate personal or retail loans and floating rate loans to Micro and Small Enterprises (MSEs) to the policy repo rate or 3-month T-bill rate or 6-month T-bill rate or any other benchmark market interest rate published by Financial Benchmarks India Private Ltd. (FBIL), effective October 1, 2019. Banks are free to choose the spread over the benchmark rate, subject to the condition that the credit risk premium may undergo change only when the borrower's credit assessment undergoes a substantial change, as agreed upon in the loan contract. External benchmarks are transparent as they are available in the public domain and hence easily accessible to the borrowers. The external benchmark framework will improve transmission as (i) the lending rates will be referenced to one of the prescribed benchmark rates for new borrowers; and (ii) banks would need to reset the benchmark rate at least once in three months for existing borrowers.

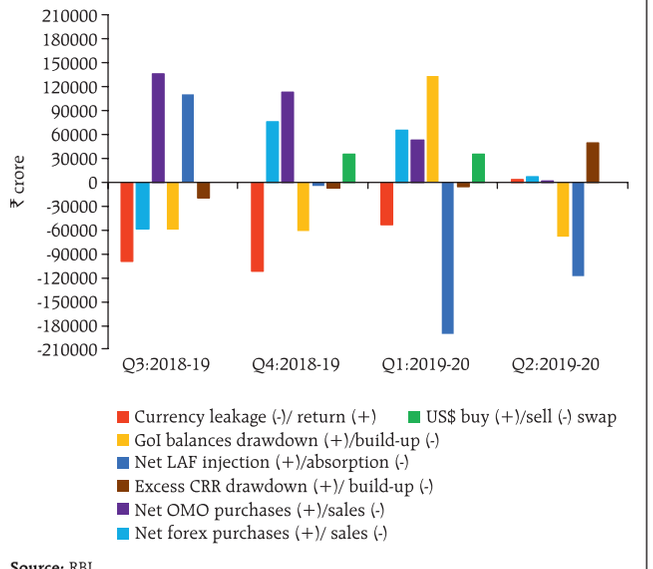
IV.3 Liquidity Conditions and the Operating Procedure of Monetary Policy

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 H1:2019-20, liquidity management operations by the RBI were conducted within the broad framework discussed in the Monetary Policy Reports of October 2018 and April 2019. In addition to regular operations during H1:2019-20, the RBI resorted to fine-tuning variable rate repo and reverse repo auctions. Liquidity amounting to ₹5,09,585 crore was injected through the regular 14-day repos, while liquidity amounting to ₹93,39,315 crore was absorbed through reverse repos of maturity ranging from overnight to 63 days. In addition, liquidity aggregating ₹47,128 crore was injected through variable rate repos of maturity ranging from 1 to 3 days. Four open market operation (OMO) purchase auctions and one US$ 5 billion buy/sell swap auction was conducted by the RBI during H1:2019-20. Furthermore, the SLR was cumulatively reduced by 50 bps during H1 – 25 bps each effective April 13 and July 6, respectively, – to 18.75 per cent of NDTL of banks, in accordance with the roadmap announced in December 2018 with a view to enabling banks to raise structural liquidity.

Drivers and Management of Liquidity

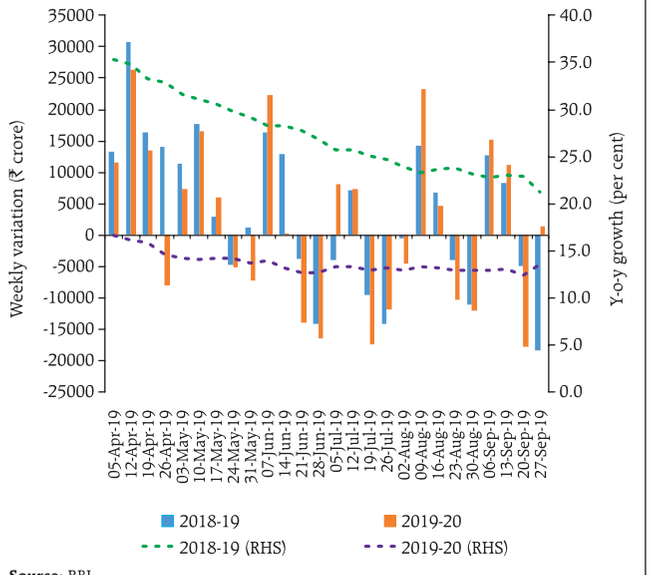
RBI's forex operations including US$ 5 billion buy/sell swap auction and net OMO purchases were the major drivers augmenting liquidity in H1:2019-20, which was absorbed through operations under the liquidity adjustment facility (LAF) by the RBI. This contrasts with H2:2018-19 when a large expansion in currency in circulation (CiC) resulted in a leakage of liquidity from the banking system, which had to be replenished through large scale open market purchase operations and liquidity injections under the LAF (Chart IV.23).

Chart IV.23: Drivers and Management of Liquidity



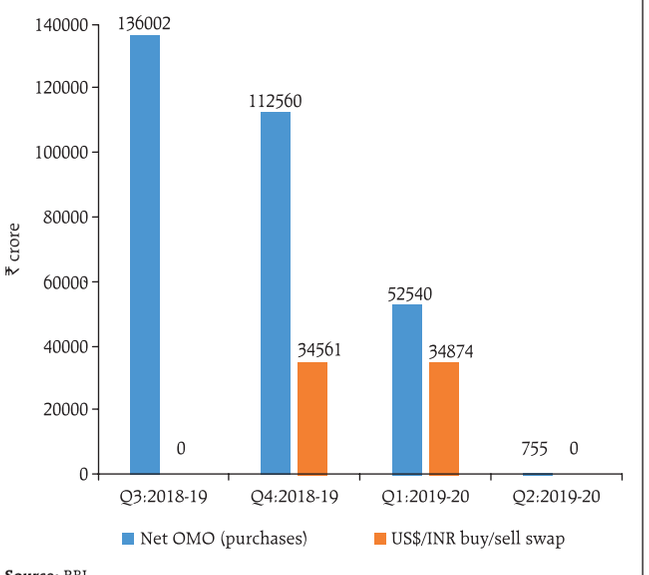
Source: RBI.

Chart IV.24: Currency in Circulation



Source: RBI.

Chart IV.25: Durable Liquidity Injections



Source: RBI.

During H1:2019-20, the increase in CiC at ₹49,378 crore (2.3 per cent) was muted in comparison with the significantly higher increase of ₹95,896 crore (5.2 per cent) in the corresponding period of 2018-19. As a result, growth in CiC (y-o-y) was consistently lower than in the previous year (Chart IV.24).

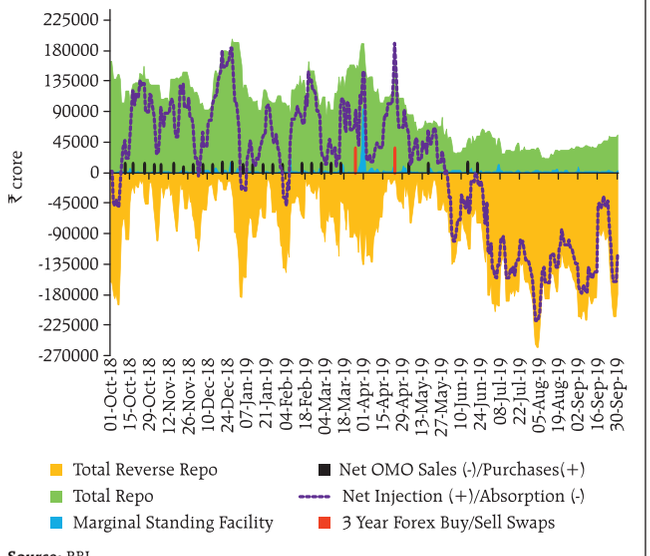
In April and May, liquidity conditions were in deficit due to restrained government spending and high demand for cash. The unwinding of GoI cash balances – a regular feature every year in April – was much lower in the current year due to the imposition of the model code of conduct during elections restricting government spending. Combined with rising currency demand, this caused liquidity tightness. Consequently, the RBI conducted a US$/INR buy/sell swap auction of US$ 5 billion (₹34,874 crore) for a tenor of 3 years in April and two OMO purchase auctions in May amounting to ₹25,000 crore to inject durable liquidity into the system. It also injected liquidity of ₹51,403 crore on a daily net average basis under the LAF during these two months.

The situation changed in June when liquidity conditions turned to surplus due to increased spending after government formation at the Centre, net forex purchases by the RBI and return of currency to the banking system post-elections. The RBI also conducted two OMO purchase auctions amounting to ₹27,500 crore. Consequently, total injection of durable liquidity in Q1:2019-20 – through both OMOs[5] and US$/INR swap auction – amounted to ₹87,414 crore (Chart IV.25). The RBI absorbed surplus liquidity of ₹51,710 crore on a daily net average basis under the LAF in June.

Surplus liquidity conditions persisted in July on account of (i) return of currency to the banking system; and (ii) the Reserve Bank's net forex purchase operations. Although liquidity continued to be in surplus in August, its drivers were distinctly different. First, currency expansion picked up, draining systemic liquidity. Second, increasing geo-political uncertainties in EMEs from political unrest in Hong Kong and meltdown of financial markets in Argentina resulted in capital outflows necessitating forex market (sales) intervention by the RBI. These pressures were, however, more than offset by a

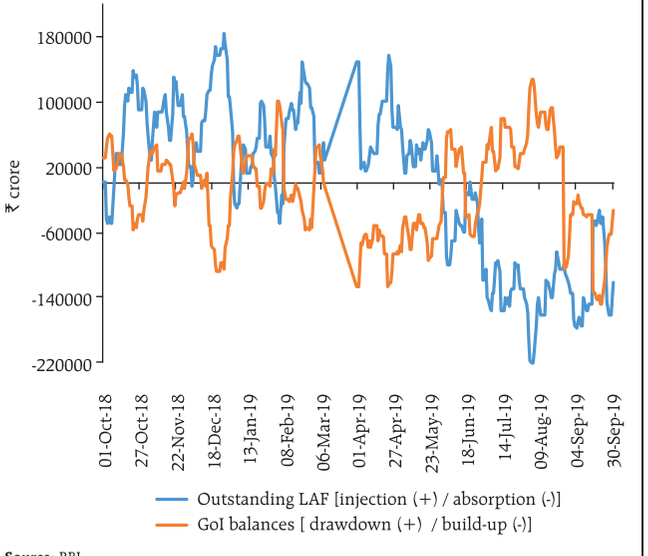
[5] OMOs include both purchases through auctions as well as transactions on the negotiated dealing system – order matching (NDS-OM) platform.

Chart IV.26: Liquidity Management



Source: RBI.

Chart IV.27: Net LAF and GoI Cash Balances



Source: RBI.

large drawdown of GoI balances, with the Central Government resorting to ways and means advances (WMA) for a major part of the month. In September, the surplus moderated with the build-up of large government cash balances, particularly with the receipt of advance taxes after September 15 (Chart IV.26). Nevertheless, absorption of liquidity on a daily net average basis under the LAF soared to ₹1,31,370 crore during Q2:2019-20 in contrast to a net injection of ₹17,409 crore in Q1. Simultaneously, transient liquidity needs were met through variable rate repos of smaller tenors (1-3 days) in addition to the regular 14-day term repos.

To sum up, the RBI's forex operations and currency expansion were the prime drivers of durable liquidity in the banking system in H1:2019-20, while government spending was the key driver of frictional liquidity movements. With the Reserve Bank injecting durable liquidity through OMOs and US$/INR buy/sell swap auction, net LAF positions mirrored movements in government cash balances (Chart IV.27). The temporary mismatches between receipts and payments of the government during H1:2019-20 were partly met through recourse to cash management bills (CMBs) on two occasions of maturity ranging 10-33 days aggregating ₹50,000 crore.

Fine-tuning operations through variable rate auctions continued to be the key feature of liquidity management during H1:2019-20. Liquidity injections were made through repo auctions of maturities ranging from overnight to 14 days, while reverse repos ranging from overnight to 7 days were frequently used for absorbing liquidity (Table IV.6).

Table IV.6: Fine-tuning Operations through Variable Rate Auctions in H1:2019-20

Operation	**Repo** (maturity in days)				**Reverse Repo** (maturity in days)						
	1	**2**	**3**	**14***	**1**	**2**	**3**	**4**	**7**	**14**	**63**
Frequency (number of times)	1	1	1	52	100	5	27	4	33	1	1
Average volume (₹ crore)	8,825	25,003	13,300	5,09,585	65,62,076	3,65,300	16,88,773	2,90,358	4,31,458	550	800

*: Regular 14-day variable rate repo operations

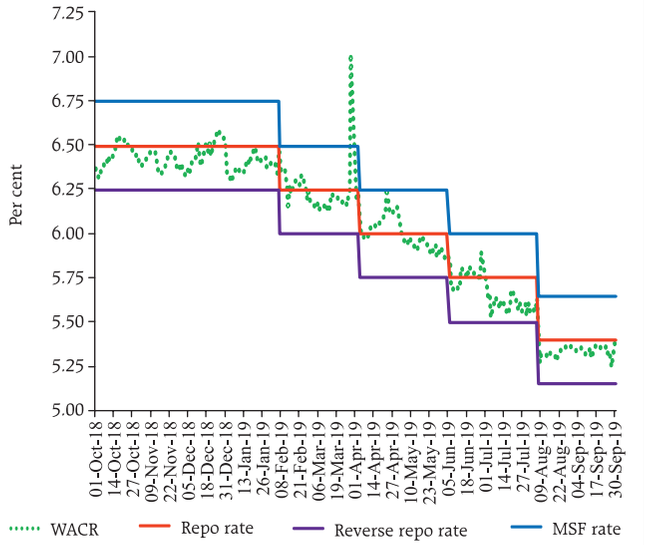
Source: RBI

Operating Target and Policy Rate

During H1, the WACR – the operating target of monetary policy – generally traded below the repo rate during May-September (Chart IV.28).

The objective of monetary policy is to keep the WACR aligned to the policy repo rate and contain volatility caused by exogeneous shocks within the interest rate corridor defined by the lower (reverse repo rate) and the upper (marginal standing facility rate) bounds. There are, however, instances when the WACR breached the corridor on account of: (i) uncertainty about liquidity conditions; (ii) market microstructure issues such as quarter-end or year-end liquidity tightness (due to advance tax payments or window dressing of balance sheet); (iii) structural changes in the monetary policy implementation framework (for instance, making the policy corridor non-symmetric by raising the MSF rate 300 bps above the policy repo rate in the aftermath of the taper tantrum episode); and (iv) banks' expectations of future interest rates. In this context, an empirical exercise identifies the factors contributing to the occurrence of such episodes (Box IV.1).

Chart IV.28: Policy Corridor and WACR



Source: RBI.

Box IV.1: WACR Breaching the Policy Corridor: Causes and Determinants

Determinants of the spread (WACR over the policy repo rate) include market expectations, risk measures, liquidity conditions, and market microstructure variables (Table IV.1.1). Liquidity conditions have been defined as the net LAF position on any day as a proportion of the average

Table IV.1.1: Description of Variables

Variable	Measured by	Expected impact[6]
Lagged spread	First lag of spread (where spread is defined as weighted average call money market rate *minus* repo rate)	increase
Within period expectation	14 day Mumbai Inter-Bank Outright Rate (MIBOR) rate *minus* repo rate	increase
Liquidity conditions	Net LAF position/ average daily cash reserve requirement	increase
Interest rate uncertainty	Uncertainty about interest rate at 2 week horizon: GARCH(1,1) conditional volatility of 14 day MIBOR rate	increase
Liquidity uncertainty	GARCH(1,1) conditional volatility of reserve fulfilment	increase
Liquidity distribution	Ratio of the volume in call money to total volume in overnight market	increase
Corridor width dummy	Corridor width as a dummy variable – it takes the value of 1 (if corridor width ≤ 100 bps) or 0 (if corridor width > 100 bps)	increase
Quarterly dummy	Quarter-end phenomenon – value 1 for quarter-end and 0 otherwise	increase

(Contd.)

[6] The expected impact is in terms of the increase (decrease) in the odds ratio. The odds ratio is defined as p/(1-p), where p is the probability of the WACR breaching the policy corridor.

daily CRR requirement. An increase (decline) in this ratio would signify tightening (easing) of liquidity conditions leading to an increase (reduction) in the spread under deficit liquidity conditions. Skewed distribution of central bank's liquidity among banks may impact the WACR spread adversely, *i.e.*, greater heterogeneity in distribution of liquidity (a few participants cornering a large part of central bank liquidity) is likely to increase the demand for funds in the call money market and increase the spread (Linzert and Schmidt, 2008; Kumar *et a*l, 2017). This variable has been approximated by the share of call market transactions in the total overnight market volume.

In addition to the above, two dummies are also used for the empirical exercise keeping in view the idiosyncratic factors witnessed during the sample period. First, a dummy for changes in the liquidity management implementation framework is introduced for the period when the MSF rate was raised by 300 bps above the repo rate, as part of the policy response to domestic financial market turmoil in the aftermath of the taper tantrum. Accordingly, a value of 1 is taken for each day from July 17 to October 28, 2013 representing the post taper tantrum period and 0 otherwise. Second, a value of 1 for the period November 9, 2016 to January 31, 2017 and 0 otherwise is considered for the post-demonetisation period when the return of currency to the banking system resulted in large surplus liquidity with the WACR breaching the lower bound of the corridor, *i.e.*, dropping below the reverse repo rate.

Following an empirical strategy used in the literature on regime shifts in capital flows (Forbes and Warnock, 2012), a logistic regression analysis (binary logit model) was undertaken to estimate the probability of the call rate breaching the interest rate corridor (Prabu and Bhattacharyya, 2019).

The following logit model was used:

$$L = \ln\left(\frac{P}{1-P}\right) = \beta_o + \beta_1 X_1 + \ldots\ldots + \beta_k X_k + \varepsilon$$

where p indicates the probability of the call money rate breaching the interest rate corridor. L is the logit function and Xs refers to the independent variables. The model is estimated based on daily data from May 2011 to June 2019 covering 1960 observations (Table IV.1.2).

The results suggest that an increase in skewness of liquidity distribution will increase the odds of the call rate breaching the interest rate corridor. Similarly, an increase in liquidity conditions (more injection by the RBI relative to the CRR requirement of banks) and an increase in interest rate uncertainty also increases the odds of the call rate lying outside the interest rate corridor.

Table IV.1.2: Logit Model – Results

Variables	Odds Ratio
1	2
Lagged spread	1.002 (0.587)
Within period expectation	1.001* (0.093)
Liquidity uncertainty	1.01 (0.856)
Liquidity distribution	1.05*** (0.000)
Interest rate uncertainty	1.01*** (0.005)
Liquidity conditions	1.001** (0.042)
Quarterly dummy	3.25** (0.022)
Post taper tantrum dummy	5.10** (0.050)
Corridor width dummy	4.39*** (0.000)
Demonetization dummy	0.301 (0.109)
Constant	0.01*** (0.000)
Diagnostic Checks	
LR chi^2 test	112.3 (0.00)
McFadden's R^2	0.140
No. of Observations	1960

*** p<0.01, ** p<0.05, * p<0.1.

Note : p-values are in parentheses.

(Contd.)

The quarterly dummy indicates that the odds of having the call rate lying beyond the corridor at quarter-end *ceteris paribus* are 3.25 times as large as the odds on non-quarter-end days. In a similar fashion, the post taper tantrum dummy indicates that the odds of having the call rate breaching the interest rate corridor on days of turmoil post taper tantrum were 5.1 times as large as against those days not affected by financial market turbulence. Finally, the corridor width dummy (corridor width ≤ 100 basis point is 1, 0 otherwise) indicates that the odds of the call rate exceeding the interest rate corridor when the corridor width is lower than 100 bps is 4.39 times as large as the odds when the corridor width is higher than 100 bps.

From a policy perspective, the empirical exercise provides useful insights for the liquidity management operations of the central bank. As the findings suggest, skewness in liquidity distribution may cause the WACR to deviate from the corridor; hence liquidity management operations and practices should endeavour to reduce liquidity concentration among a few market players. Similarly, forward guidance through better communication on the evolving liquidity conditions can reduce market uncertainty about interest rates and foster stability by anchoring market expectations. Finally, liquidity forecasting needs to be prescient, particulary in a narrow interest rate corridor regime, as large forecast errors enhance the probability of the call rate breaching the interest rate corridor in either direction.

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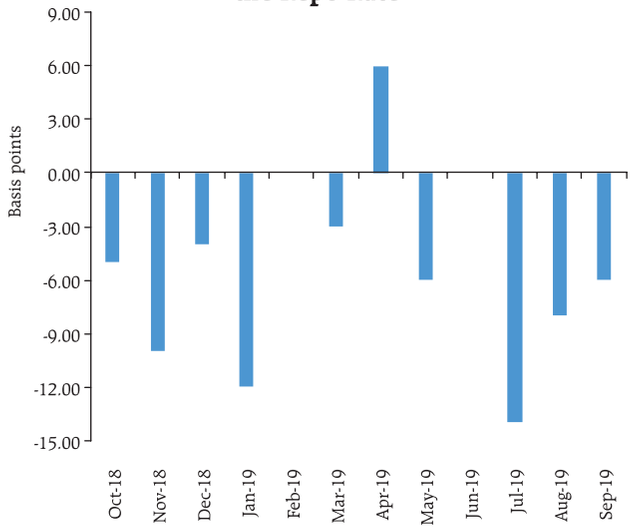
Chart IV.29: Average Spread of WACR over the Repo Rate



Source: RBI.

The WACR remained 6 bps above the policy repo rate (on an average) in April and below the policy repo rate by an identical margin in May. In June, however, it remained closely aligned with the policy repo rate (Chart IV.29). Subsequently, the WACR traded below the policy repo rate (on an average) by 14 bps in July, 8 bps in August and 6 bps in September. Overall, the WACR traded below the policy repo rate by 5 bps in H1:2019-20 as compared with 6 bps in H2:2018-19.

IV.4 Conclusion

Domestic financial markets remained vulnerable to global headwinds and geo-political uncertainties. After post-elections exuberance, equity markets turned risk averse reacting to global developments and slowdown in economic activity. Capital flows

turned volatile in August, exerting depreciation pressures on currencies. By contrast, the bond market rallied significantly, despite some correction in the recent period. Credit growth, however, has slowed down, reflecting subdued economic prospects. Going forward, liquidity conditions would be managed consistent with the stated policy objective of aligning the WACR with the policy repo rate and ensuring that durable liquidity needs of the economy are adequately met, consistent with the stance of monetary policy. Ensuring faster monetary transmission to banks' lending rates remains a key priority.

V. External Environment

Global economic activity has remained sluggish as major advanced economies (AEs) and emerging market economies (EMEs) slowed down in Q2:2019. Mounting trade and geo-political uncertainties continue to cloud the near-term outlook. Monetary policy has been easing across the world to support growth concerns as inflation remains benign. Financial markets remained volatile on still unfolding sequence of US tariff actions and lingering uncertainty surrounding Brexit.

Since the Monetary Policy Report (MPR) of April 2019, global economic activity has weakened and the near-term outlook remains clouded by trade and geo-political uncertainties. Most major AEs and EMEs slowed down in Q2:2019**.** Crude oil prices remained volatile on shifting demand-supply balances, most recently caused by supply disruptions in Saudi Arabia – the second largest oil exporter – estimated to be of the order of around 5 per cent of global oil supply. Other global commodity prices remained soft on subdued global demand. Central banks across the world eased monetary policy to support growth concerns as inflation remains benign. The calm that characterised global financial markets in the beginning of 2019 has been dispelled since May, with a combination of trade and geo-political tensions and the worsening global growth outlook imparting heightened volatility.

V.1 Global Economic Conditions

Economic activity has been losing pace across major AEs and EMEs. In the US, real GDP growth (q-o-q, annualised) decelerated in Q2:2019 to 2.0 per cent, after rebounding in Q1, on slumping exports and weak business fixed investment (Table V.1). Incoming data suggest that the slowdown may continue in Q3, as industrial production remains subdued and exports continue to decline. The Institute of Supply Management's manufacturing index declined further into the contraction zone in September marking its lowest reading in a decade. Nonetheless, strong consumer spending, as reflected in rising retail sales, is expected to moderate the pace of slowdown to some extent.

Euro area GDP growth slowed down in Q2:2019 as its major constituent economies lost steam amidst lingering uncertainties around Brexit and trade tensions. The German economy contracted in Q2 with a struggling auto industry amidst falling exports; it entered Q3 on a weak note as the manufacturing PMI in September remained in contraction zone, marking

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

(Per cent)

Country	Q2-2018	Q3-2018	Q4-2018	Q1-2019	Q2-2019	2019 (P)	2020 (P)
Advanced Economies							
Canada	2.5	2.1	0.3	0.5	3.7	1.8	1.7
Euro area	1.6	0.8	1.2	1.6	0.8	1.6	1.5
Japan	1.9	-1.9	1.8	2.2	1.3	0.2	1.4
South Korea	2.4	2.0	3.6	-1.6	4.0	2.6	2.8
UK	2.0	2.4	1.2	2.4	-0.8	1.2	1.6
US	3.5	2.9	1.1	3.1	2.0	2.3	1.9
Emerging Market Economies							
Brazil	-0.4	2.0	0.4	-0.4	1.6	1.3	2.5
China	6.8	6.4	6.0	5.6	6.4	6.1	5.9
Malaysia	2.4	6.0	5.2	4.4	4.0	4.6	4.8
Mexico	-0.8	2.0	0.3	-1.0	0.1	1.3	1.6
Russia*	2.2	2.2	2.7	0.5	0.9	2.0	1.0
South Africa	-0.5	2.6	1.4	-3.1	3.1	1.0	0.3
Thailand	4.3	-0.9	3.6	4.1	2.4	3.9	3.7
Memo:	**2018 (E)**			**2019 (P)**			**2020 (P)**
World Output	3.6			3.2			3.5
World Trade Volume	3.7			2.5			3.7

E: Estimate P: Projection *: y-o-y growth

Sources: Bloomberg; and International Monetary Fund (IMF).

the ninth consecutive month of decline in factory activity. GDP growth in Italy stagnated in Q2 as contraction in industry and agriculture activities was offset by an uptick in the services sector, though its high level of debt and ongoing political uncertainty are downside risks.

The Japanese economy grew at a slower pace in Q2 than in the preceding quarter as escalating US-China trade tensions and slackening global demand prompted a sharp downward revision in business spending. Combined with a scheduled sales tax hike, this has clouded the economic outlook for the rest of 2019. Nonetheless, fiscal stimulus and rushed purchases ahead of the sales tax hike are expected to support the economy in Q3.

Real GDP in the UK contracted in Q2 on the back of declining manufacturing activity due to planned early shutdowns of car plants in April following Brexit uncertainty. Risks from a potential hard Brexit deal and evolving global trading conditions cloud the near-term outlook.

Economic activity remained subdued in key EMEs, held down by weakening global economic conditions. The Chinese economy decelerated in Q2 (y-o-y) to its weakest pace in nearly 27 years, weighed down by the adverse impact of the prolonged and unresolved trade dispute with the US, and subdued global demand. Available high frequency indicators suggest that the downtrend may continue, going forward. Industrial production and retail sales have declined since July, while the manufacturing PMI remains subdued amidst weak demand. While the overall risk remains titled to the downside on rising internal and external headwinds, policy stimuli on both the fiscal and monetary fronts are expected to cushion the pace of the slowdown.

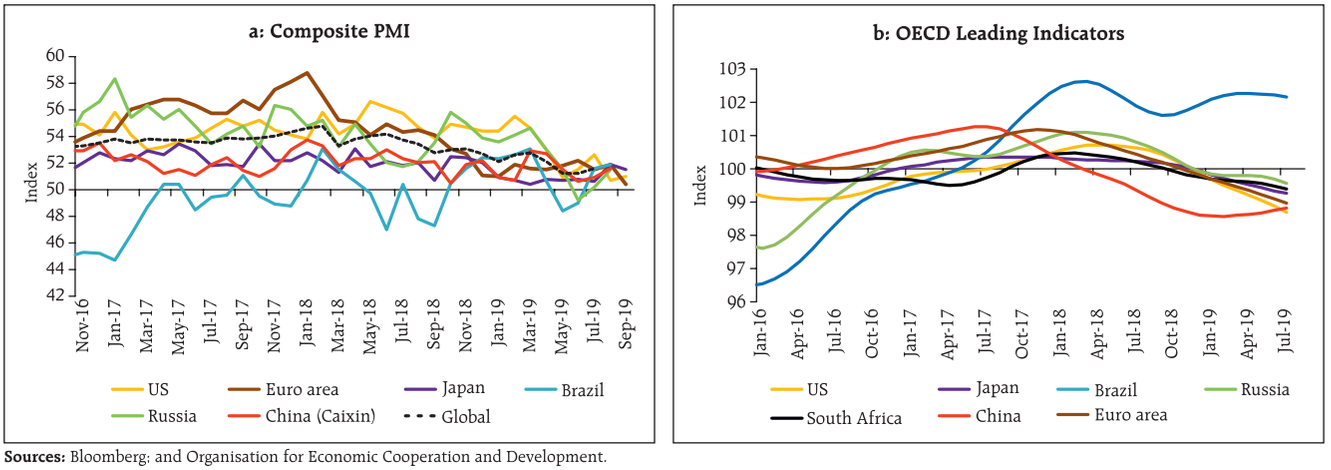
Among other BRICS economies, the Russian economy is struggling to regain momentum after undergoing a sharp deceleration in Q1. While economic activity showed a slight uptick in Q2, incoming data showed signs of weakness for Q3 as consumer sentiment remained subdued, with industrial production and retail sales weakening since July. Nonetheless, higher fiscal spending for national development projects may support aggregate demand, going ahead.

The economies of Brazil and South Africa rebounded in Q2, after witnessing a sluggish start to the year. Economic recovery in Brazil was largely supported by strong fixed investment and construction activity in Q2. While improved sentiment amidst accommodative monetary policy is expected to sustain the expansion, risks from both domestic and external challenges may contain the momentum. In South Africa, economic activity accelerated on robust growth in mining and manufacturing, thus recouping output losses witnessed in Q1. The consumption-led economic recovery, however, is expected to be gradual as the uncertain global outlook and debt-ridden domestic power utilities may continue to weigh on the overall prospects of the economy.

The Indonesian economy slowed down to 5.1 per cent (y-o-y) in each of the first two quarters of 2019, pulled down by subdued investment and declining exports, amidst global uncertainty. In Thailand, the downturn that had started in Q1 continued in Q2 (y-o-y), marking the slowest growth in nearly five years. The struggling farm sector, slowing exports and the weakening tourism sector resulted in the slowdown. The Turkish economy registered positive growth in the first half of 2019, recovering from last year's recession caused by a currency crisis. The recovery was underpinned by the stimulus provided in Q1 through high government spending and credit expansion.

The global composite PMI fell in August, after registering a marginal uptick in July, as slowing global trade weighed down on overall export growth (Chart

Chart V.1: Survey Indicators



Sources: Bloomberg; and Organisation for Economic Cooperation and Development.

V.1a). Among the major OECD economies, composite leading indicators (CLIs) point to a slowdown in growth momentum across major AEs and EMEs (Chart V.1b).

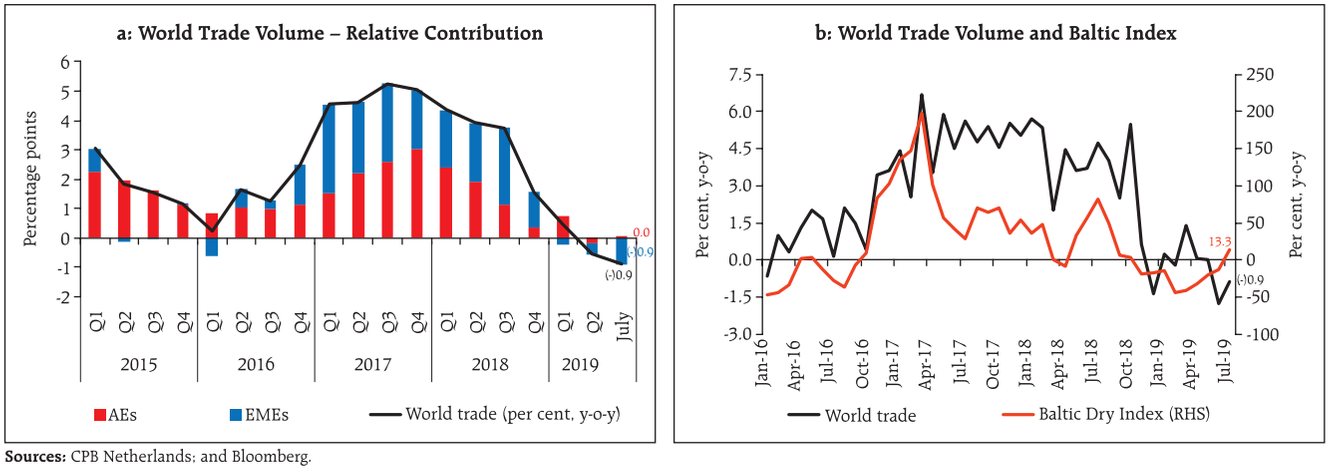
The slowdown in global trade, which began in the later half of 2018, has continued in 2019, with contribution from EMEs slipping into contraction in 2019 (Chart V.2a). Forward looking indicators suggest that world trade is likely to slow down further in 2019. The WTO's Goods Trade Barometer[1] remains below trend, driven by sluggish performance in all its constituent indices, especially international air freight, electronic components and automobile production. Movement in other indicators such as the Baltic Dry Index also remained sluggish, though with some signs of revival (Chart V.2b).

V.2 Commodity Prices and Inflation

Global commodity prices weakened as trade tensions intensified. The Bloomberg commodity price index declined by 4.1 per cent between April and September 2019.

The food price index of the Food and Agriculture Organisation (FAO) increased by 1.4 per cent during

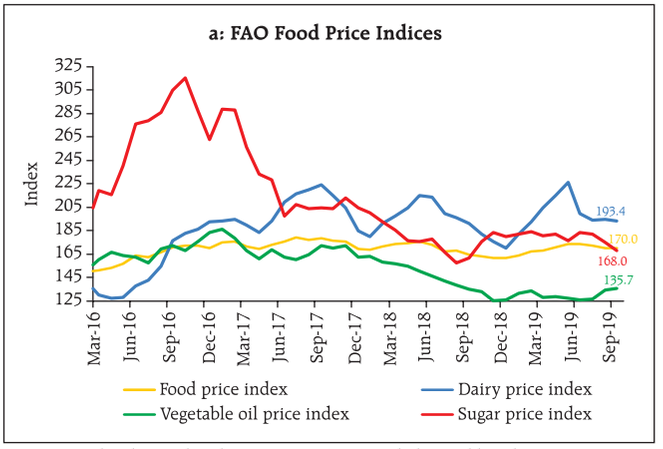
Chart V.2: World Trade Volume

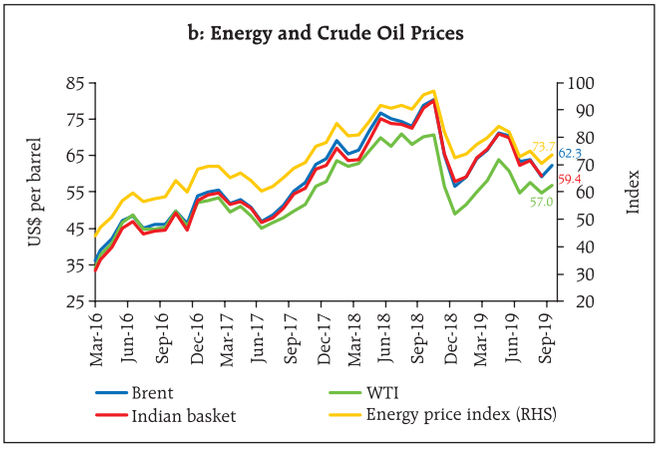


Sources: CPB Netherlands; and Bloomberg.

[1] WTO has replaced World Trade Outlook Indicator (WTOI) with Goods Trade Barometer.

Chart V.3: Commodity Prices





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

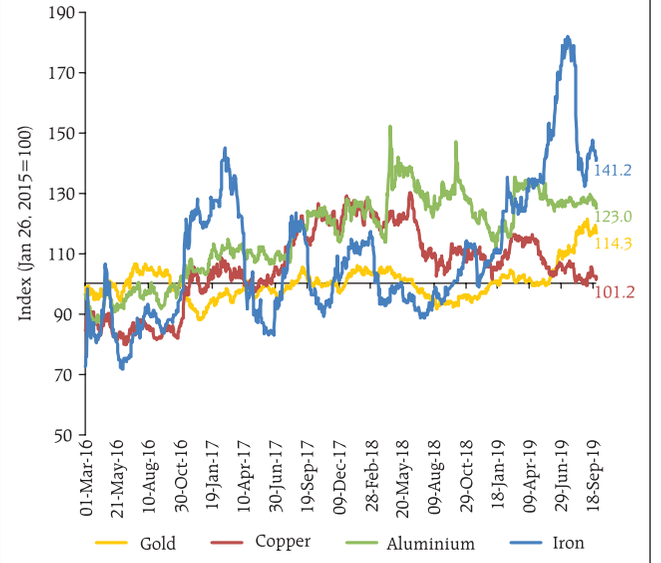
April-September 2019. Global food prices rose for the fifth consecutive month in May, driven by high dairy and maize prices resulting from tighter export supplies. They, however, slid marginally in June-July as dairy prices fell on weak demand. Global food prices moderated further in August due to a sharp decline in cereals and sugar prices. While cereal prices fell on ample export supplies, weakening Brazilian currency and prospects of larger shipments by India and Mexico kept sugar prices low (Chart V.3a). Movements in global food prices have implications for food price inflation in EMEs (Box V.1).

The stand-off between the US and Iran and agreement by key oil producers to extend supply cuts further by nine months exerted upward pressures on oil prices in early May. However, a decline in the expected demand for oil amidst adequate supplies eased market tightness and weighed on prices, before witnessing the biggest one-day gain on September 16, 2019, caused by supply disruptions to the world's largest oil processing facility in Saudi Arabia. However, it eased thereafter on expectations of supply restoration (Chart V.3b).

Base metal prices, measured by the Bloomberg base metal spot index, declined by 9.0 per cent between April and September 2019 on increased pessimism over the growth outlook and slowing global demand on persistent trade tensions. However, they recovered marginally in July on elevated supply concerns about iron ore and nickel by major exporters and have been trading side-ways thereafter, as the market awaits further developments on the trade front. Copper prices fell sharply on waning demand, triggered by trade uncertainties, with intermittent increases in June on a mine strike in Chile and weak Chinese refined copper output. Gold prices remained elevated on safe haven demand as global uncertainties increased (Chart V.4).

Inflation remained benign in major AEs and EMEs. Among AEs, CPI inflation in the US remained tepid despite tight labour markets, as the sensitivity

Chart V.4: Metal Price Indices



Source: Bloomberg.

Box V.1: International Food Prices – Pass-through to EMEs

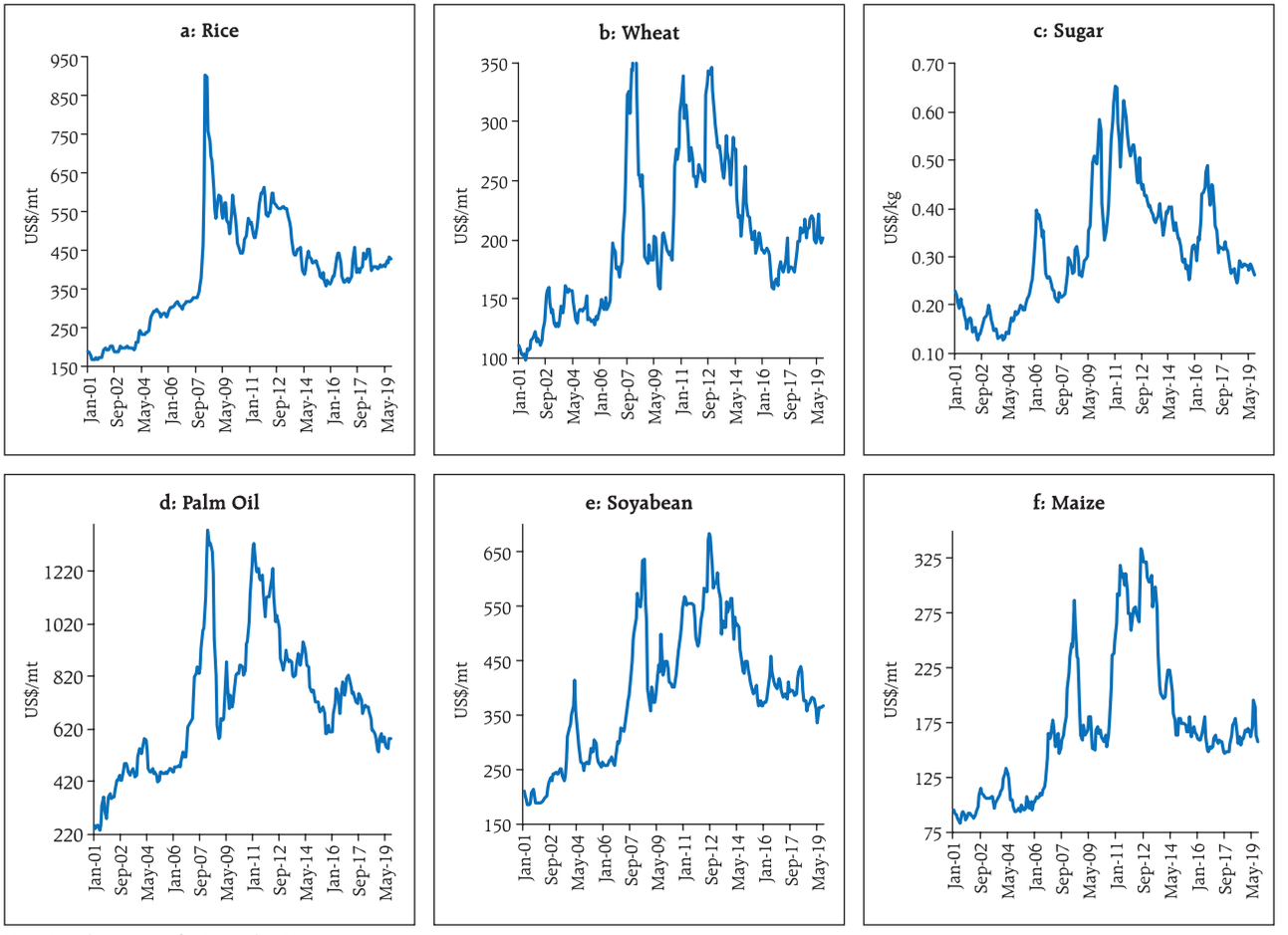
International food prices have been among the most significant sources of domestic food price variations in many EMEs, as the share of food in household expenditure is relatively high in these countries. The World Bank's food price index increased by 23.8 per cent in 2007, 33.5 per cent in 2008 and by 22.5 per cent in 2011, with unexpected spikes seen across all food groups. Although the magnitude of price increases in these episodes was almost the same, the affected commodities were different (Chart V.1.1). While rice, wheat, oil and cereal prices remained high during 2007-08, sugar prices remained low. Rice prices were the highest during the first episode but were lower than many other cereal products during the second episode.

According to the Law of One Price (LOP) (Ardeni, 1989; Barahona and Chulaphan, 2017), in efficient markets for a single homogenous commodity, assuming no transport costs or obstacles to trade, prices expressed in a common currency are equated according to the following equation:

$$P_d = ER*P_w \quad \ldots(1)$$

where ER is the exchange rate [unit(s) of domestic currency per unit of foreign currency], P_w is the world (foreign) food price and P_d is the domestic

Chart V.1.1: International Price of Major Food Items



Note: Last data point is for September 2019.
Source: The World Bank Pink Sheet Database.

food price. The estimable version of equation (1) can be modified as a weak LOP hypothesis which in natural logarithm form is as below:

$$\ln P_d = \alpha + \beta \ln P_w + \gamma \ln ER + e_t \quad \ldots(2)$$

P_w is implicitly assumed to be an exogenous variable, as EMEs are generally price takers and β is the long-term price transmission elasticity in the presence of a long-run relationship. The short-term price elasticity can be estimated from the error correction model (ECM) of the following form:

$$\Delta P_{d_t} = \delta + \sum_{i=1}^{k} \rho_i \Delta P_{d_{t-i}} + \sum_{i=1}^{l} \varphi_i \Delta P_{w_{t-i}} + \sum_{i=1}^{m} \gamma_i \Delta ER_{t-i} + \theta ECT_{t-1} + \epsilon_t \quad \ldots(3)$$

Where Δ is the first difference operator, ECT is the error correction term, φ and γ are the short-term transmission elasticities and ρ is the persistence parameter.

Against this backdrop, the pass-through of changes in world food prices to domestic food prices was examined for six EMEs, *viz.*, Brazil, China, India, Indonesia, Thailand and Turkey as these countries have a high share of food items in their consumer price indices (Sahoo *et al.*, 2019). Using monthly data from January 2007 to July 2019, it was found that each of the variables, *viz.*, global food price index, country-specific food price indices and exchange rates are integrated of order one, *i.e.*, I(1). Therefore, the existence of a cointegrating relationship was examined through vector error correction model (VECM). The lag length of each model was based on Akaike Information Criteria (AIC). The estimated VECM model for each country confirms that residuals are not serially correlated.

The estimated short-run and long-run transmission elasticities reveal that the magnitude of price transmission from world food prices to domestic food prices differs across countries (Table V.1.1).

Table V.1.1: Estimated World Food Price Pass-through Coefficients

Country	Long-run	Short-run
Brazil	1.136***	0.024*
China	0.179**	0.029*
India	0.038***	0.054*
Indonesia	0.355***	0.082***
Thailand	0.933***	0.040*
Turkey	0.055***	0.130***

Note: ***, ** and * denote 1 per cent, 5 per cent and 10 per cent level of significance, respectively.
Source: RBI staff estimates.

All the transmission elasticities are positive and different from zero and short-run elasticities are lower than the long-run elasticities, barring for Turkey and India. The short-run price transmission elasticity for food price in India is 0.05, implying that if world food price increases by one per cent, food CPI in India could increase by five basis points.

To summarise, volatile food prices pose a significant policy challenge across the world and have implications for domestic inflation in EMEs, especially those having high share of food imports.

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Sahoo, S., S. Kumar and B. Gupta (2019), "International Food Prices – Pass-through to EMEs", Reserve Bank of India *(Mimeo).*

of inflation to levels of resource utilisation remains low. However, it registered a modest uptick in July on recovering energy prices. While core personal consumption expenditure (PCE) – the Fed's preferred measure of inflation – has been picking up since June, it remains below the US Fed's 2 per cent target. In the Euro area, inflationary pressures have been easing on soft energy costs and weakening growth. In Japan, CPI inflation remained muted amidst falling food, transport and communication prices (Chart V.5a).

Inflation has been easing in many EMEs. In Russia, inflation edged lower since Q2 as consumer demand remained weak, while easing supplies on a strong harvest and appreciating ruble have added to disinflationary conditions. In Brazil, CPI inflation has been falling since April on the back of soft food and fuel prices; however, it picked up marginally in August on rising housing and transport prices. In South Africa, inflation eased in July, after remaining steady in Q2 on falling fuel prices. In August, however, it edged up on rising food and housing prices. Inflation in Turkey, which has been ebbing since April, registered a sharp drop in June, driven by a favourable base effect and softening of food prices. In July, however, it showed a slight uptick on high service prices resulting from increased municipal tariffs, before resuming its downward path in August (Chart V.5b).

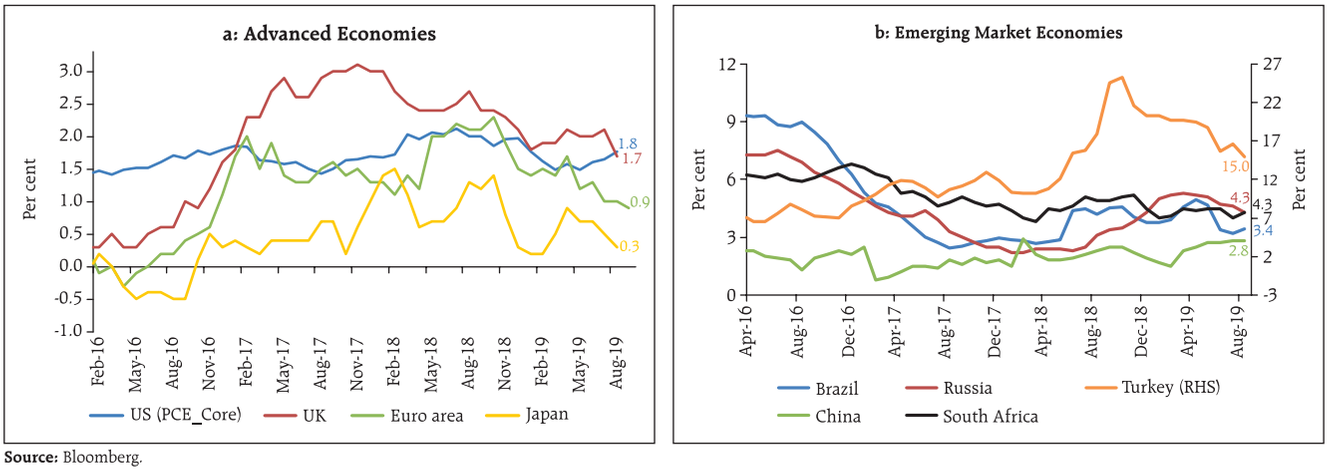
V.3 Monetary Policy Stance

Monetary policy has become accommodative across major AEs and EMEs. The US Fed has reduced its policy rate twice since July 2019 on concerns over lingering trade uncertainties and muted inflationary pressures (Chart V.6a). The European Central Bank (ECB) reduced the interest rate on deposit facility deeper into negative territory, while approving a fresh round of monetary stimulus in the form of bond purchases of 20 billion euros per month, beginning from November 2019. Ebbing inflation, waning business confidence and fears of Germany sliding into recession prompted the ECB to unveil another round of quantitative easing. The ECB has also indicated that rates will remain at present or lower levels until the inflation outlook converges to a level sufficiently close but below 2 per cent within its projection horizon.

The Bank of Japan (BoJ) continued with its ultra-loose monetary policy on mounting downside risks to the economy and signalled a ramping up of stimulus if growth momentum loses further. The UK and Canada kept their policy rates unchanged, while South Korea kept its policy rate unchanged in August, after reducing it by 25 bps in its July meeting on concerns over slowing growth.

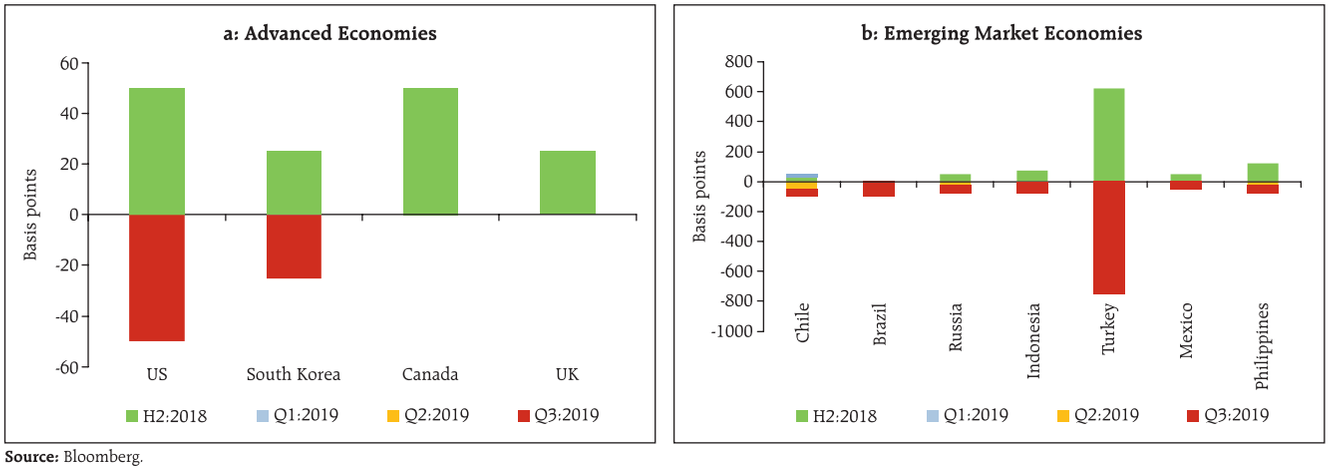
Central banks in EMEs have turned increasingly dovish in sync with their AE counterparts on easing

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



Source: Bloomberg.

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



Source: Bloomberg.

inflation conditions and weakening economic outlook. Among the BRICS, the People's Bank of China (PBOC) continued with its loose monetary policy stance, while indicating potential policy adjustments, going forward, as the domestic situation warrants. Moreover, with the aim of stimulating the economy *via* ample liquidity conditions, the PBOC provided liquidity support to small and medium sized banks by increasing rediscount quota and standing lending facility to RMB 200 billion and RMB 100 billion, respectively, in June. In order to support the development of the real economy and lower financing costs, the PBOC lowered the required reserve ratio for financial institutions by 50 bps in September 2019 (excluding finance companies, financial leasing companies and auto finance companies). In an effort to increase the support for micro and small businesses, it has also decided to lower the required reserve ratio by 50 bps each on October 15 and November 15, 2019 for rural commercial banks operating solely within provincial administrative regions. Furthermore, it reduced its loan prime rate for one year maturity by 5 bps in its September meeting.

Brazil cut its policy rate twice since July, attributing it to moderating inflationary pressures and weakening economic activity. Russia reduced its policy rate thrice in 2019 on falling inflation and weak demand. South Africa held its policy rate in September, while reducing it in July amidst ebbing inflation expectations. Among other EMEs, Turkey slashed its policy rate by 425 bps and 325 bps in July and September, respectively, exceeding market expectations, as the improving inflation outlook provided more space for policy easing. The Philippines reduced its policy rate for the third time in 2019 in its September meeting with a view to reviving business investment and supporting slowing economy. Mexico reduced its policy rate in September, making it the second consecutive cut since August. Chile has reduced its policy rate twice since June. Indonesia reduced its policy rate by 25 bps in its September meeting, making it the third consecutive cut in Q3:2019, for boosting economic growth amidst low inflation (Chart V.6b).

V.4 Global Financial Markets

Financial markets remained volatile as sentiment was repeatedly impacted by the still unfolding sequence of US tariff actions and lingering uncertainty surrounding Brexit. Global equity markets witnessed sharp sell-offs in May reversing the gains till April. However, markets recouped most of the losses in June-July as sentiment was buoyed by dovish guidance by major central banks and renewed hopes of trade truce, before declining again in August as unresolved and intensifying trade dispute triggered bearish sentiment. In September, positive signals on trade negotiations buoyed investors' risk appetite. Bond yields eased across major economies on safe haven demand, while currency markets remained volatile.

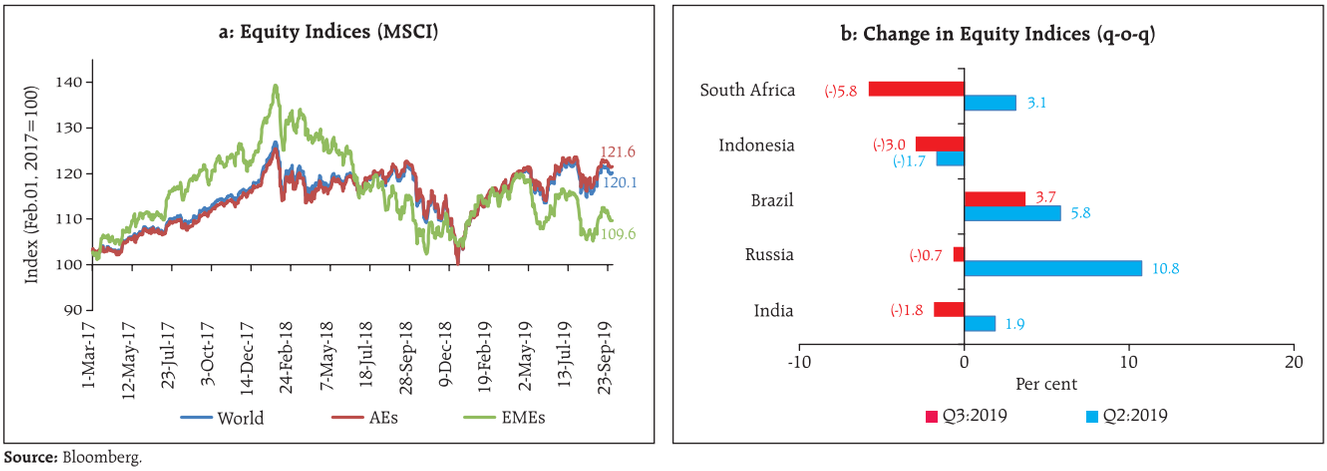
Among AEs, US equities gained in June-July, after correcting in May, driven by resilient corporate earnings data for Q1:2019 and rising expectations of monetary policy easing by the Fed in the coming months. In August, while increasing risk-off sentiment amidst intensifying trade tensions and growth worries led to large sell-offs, positive developments on the trade front revived market sentiment in September, as a result of which equity markets recovered most of its losses suffered in August. In the Euro area, equity markets tumbled in May in response to weak German data. However, they remained supported in June-July on expectations of monetary policy accommodation by the ECB and positive developments in earning expectations for non-financial corporations. Nonetheless, markets ended August on a soft note as growth worries resurfaced on weak German data and political turmoil in Italy. Japanese equity markets also firmed up in June-July after correcting in May. Markets maintained an uptrend in July as trade concerns receded, though they plunged in the middle of the month on appreciation of the Yen and concerns over deteriorating performance of some export-oriented companies. Equity markets in AEs entered September on a positive note as global investors' sentiment was lifted on reduced tensions in Hong Kong and renewed hopes of trade negotiations.

Stock markets in EMEs fell as the strong US dollar acted as a headwind leading to capital outflows. Weak South Korean equities following trade conflicts with Japan, political unrest in Hong Kong, crash in Argentina's financial markets and escalating trade tensions pulled down EME stocks further in August. However, some of the losses were recovered subsequently as market sentiments were boosted by postponement of tariff imposition and signals of stimulus for the Chinese economy (Chart V.7).

Bond yields have eased across major AEs and EMEs as investors looked for safe havens on waning risk appetite. US bond yields softened in May, after picking up in April on better GDP data for Q1. They have declined sharply since then, even falling below 2 per cent in August amidst heightened trade tensions and dovish stance of the US Fed. A sharp fall in long-term yields has led to a negative yield spread between 10-year and 3-month Treasury securities, as addressed in Box I.1 in chapter I.

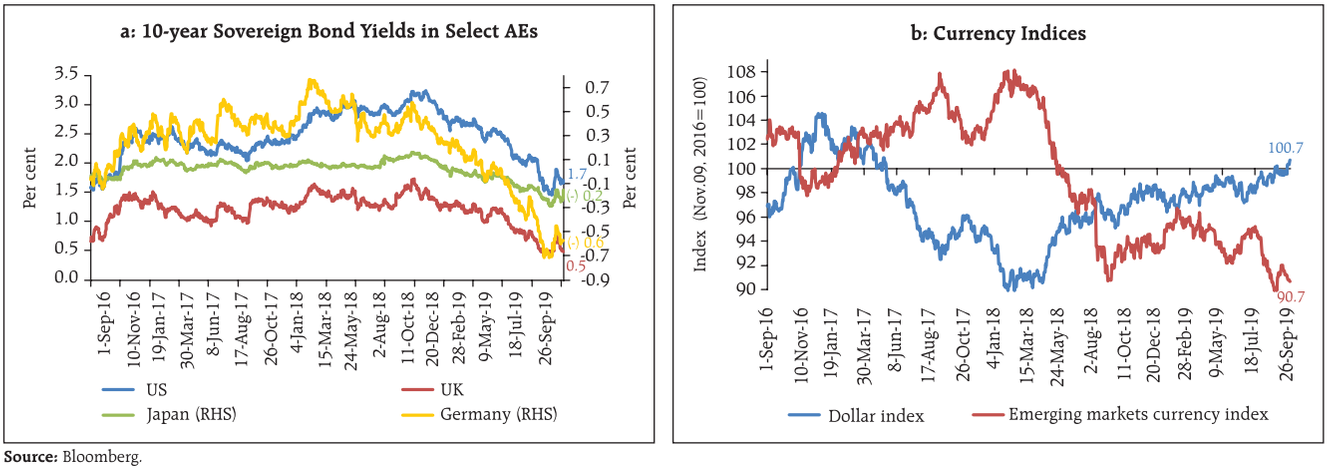
In the Euro area, bond yields plunged into negative territory in most of its constituent economies as expectations of dovish monetary policy stance by the ECB gained traction, amidst a weakening economic outlook. Lacklustre data for Germany and political uncertainties in Italy added further downward pressure. In Japan, bond yields continued to trade in negative territory on subdued risk appetite. In most EMEs, bond yields have been falling, with central banks becoming highly accommodative as benign

Chart V.7: Equity Markets



Source: Bloomberg.

Chart V.8: Bond Yields and Currency Movements



Source: Bloomberg.

inflation has freed up policy space to boost slackening economic growth (Chart V.8a).

In currency markets, the US dollar weakened against major currencies in June on dovish guidance by the US Fed but it has rebounded since July, recouping most of its losses made in Q1. Safe haven demand amidst weaker growth prospects in other AEs also strengthened the US dollar. The euro lost ground against the US dollar as the economy lost momentum, while higher probability of the ECB to stimulate the economy pulled the currency further down. The Japanese yen outperformed most of the major currencies as trade war induced uncertainties, coupled with worsening global growth conditions, played up investors' risk-off sentiments. Most of the EME currencies suffered losses against the strong US dollar and mounting spillover risks arising from trade tensions. Between April and September 2019, the MSCI Emerging Market Currency Index declined by 2.0 per cent (Chart V.8b).

V.5 Conclusion

In sum, global economic activity continues to lose momentum as prolonged uncertainties relating to geo-political developments dampened economic sentiment. With inflationary pressures remaining benign and market sentiment remaining fragile, risks to the global outlook remain on the downside. However, monetary and fiscal stimuli across the globe may help in containing the pace of slowdown and putting the global economy on a recovery path.

SPEECHES

Dimensions of India's External Sector Resilience
Shaktikanta Das

Regulatory and Supervisory Expectations on Compliance Function in Banks
M.K. Jain

*Dimensions of India's External Sector Resilience**

Shaktikanta Das

The international environment is clouded with very challenging conditions. Global growth is slowing down and central banks across the world are bracing up to counter it by easing monetary policy; but there is no recession as yet. Trade wars have pushed world trade into contraction and threaten to morph into tech and currency wars, with no evidence of any significant gains accruing to anyone. Meanwhile, global commodity prices have weakened, with collateral benefits to net commodity importers and terms of trade losses for commodity exporters. The developments emanating from drone strikes on Saudi oil facilities are, however, still playing out. Sporadic flights to safety are driving capital flows out of emerging markets into advanced economy assets; but the universe of negative yielding bonds is growing disconcertingly large, posing a potential threat to financial stability.

Strengths and Weaknesses

In this hostile environment, India's external sector has exhibited resilience and viability. The current account deficit has averaged 1.4 per cent of GDP over the last 5 years and remains comfortably financed in spite of global spillovers imparting risk-on-risk-off volatility to portfolio flows. The level of foreign exchange reserves was at US$ 429 billion on September 13, 2019, sufficient to cover close to 10 months of imports or 21 months of debt of residual maturity up to 1 year. The Indian economy remains a preferred habitat for foreign direct investment (FDI) and is among the top 10 destinations for greenfield projects[#]. Net FDI at US$ 18.3 billion in April-July 2019 was higher than US$ 11.4 billion in the corresponding period of 2018-19.

Significant progress has been made in external debt management since the external payment difficulties encountered in 1990 which triggered wide-ranging structural adjustments and reforms. The level of external debt at 19.7 per cent of GDP and the debt service ratio (principal repayments and interest payments as a ratio of current earnings) at 6.4 per cent of GDP are among the lowest in emerging market peers. This places India among the least externally indebted countries of the world, by the World Bank's classification. In terms of a broader measure of external liabilities – the net international investment position (NIIP) which includes both debt and equity liabilities, net of foreign assets – India's exposure declined to 15.9 per cent of GDP at end-March 2019 from a peak level of 18.3 per cent at end-March 2015. Foreign exchange reserves covered 76 per cent of external debt and 94.6 per cent of the NIIP at end-March 2019, up from 68.2 per cent and 89.3 per cent, respectively, at end-March 2014. Short-term debt by residual maturity declined to 57 per cent of foreign exchange reserves at end-March 2019 from a peak level of 59 per cent at end-March 2013. Short-term debt by original maturity constitutes barely 20 per cent of total external debt.

These healthy developments are underpinned by the innate strength of India's underlying fundamentals. The degree of openness of the economy, measured by the ratio of exports and imports of goods and services to GDP, has risen from 20 per cent in the first half of the 1990s to 44 per cent in the latest five-year period from 2014-19. The share of India's merchandise exports in world exports has gone up from 0.5 per cent in 1990 to 1.7 per cent in 2018.

In line with the expanding share of services in domestic output, India's services exports have grown rapidly over the past two decades. In fact, India's services exports have shown a higher degree of resilience to global shocks than merchandise exports.

* Shri Shaktikanta Das, Governor, Reserve Bank of India at the Bloomberg India Economic Forum 2019 in Mumbai on September 19, 2019.

[#] Source: FDI Report, Financial Times, 2018.

At US$ 81.9 billion, net services exports financed 45 per cent of India's trade deficit in 2018-19. In the area of traded services, India remains a world leader in software exports and information technology (IT) enabled services, accounting for around 12 per cent of world software exports. India's IT sector, which earned US$ 78 billion through net exports in 2018-19, is leapfrogging into new technologies including artificial intelligence, machine learning and robotics. The Indian diaspora is among the largest in the world and reflecting this, India currently receives the highest amount inward remittances in the world from Indians working abroad. Alongside, accretions to non-resident deposits have provided stable and reliable support to the balance of payments over the years. Financial openness, measured by the ratio of gross capital inflows and outflows to GDP, has increased three-fold from 15 per cent in the first half of the 1990s to 45 per cent during 2014-19.

Notwithstanding these achievements, there are several areas of concern as well which occupy centre-stage in the conduct of external sector management. First, merchandise exports have lost momentum under the weight of the slump in world trade. In spite of export volume growth averaging 4.2 per cent during 2013-18 (UNCTAD, 2019), India's export growth in US dollar terms has weakened – as in a host of emerging and advanced economies - to 2.2 per cent over the same period, as falling unit value realisations have taken their toll. The slowdown in global demand has affected our exports of petroleum products as well – they constitute 14 per cent of total merchandise exports. Second, the deceleration in domestic demand has pulled imports, especially non-oil non-gold imports, into contraction and this has reduced the inflow of intermediates, capital goods and technology that is vital for modernising our infrastructure and industry. Third, portfolio flows, which on average account for about 23 per cent of external financing in a normal year, have turned highly volatile, with net outflows of US$ 0.6 billion in 2018-19. During 2019-20 so far (up to September 13), portfolio equity outflows were of the order of US$ 1.4 billion but lower than US$ 2.9 billion in the corresponding period a year ago. Net inflows into the debt market of US$ 4.1 billion have, however, provided relief. Moreover, these portfolio capital movements have turned out to be conduits of global spillovers, impacting domestic equity, debt and forex markets, and asset prices. Nonetheless, the underlying resilience of India's external sector, anchored by the positive features I set out earlier, have cushioned these shocks and insulated the domestic economy.

Managing the External Sector

Against this backdrop, I would like to turn to several recent initiatives undertaken by the Reserve Bank of India and the Government of India to fortify India's external position and improve the capacity of the economy to deal with the headwinds that confront us in these testing times.

Exports

Exports hold the key to a sustainable balance of payments position. In the final analysis, liabilities in the form of debt and even equities cannot entirely substitute for foreign exchange earnings from exports of goods and services that create import purchasing power and liability servicing capacity. Over the years, the policy endeavour has been to secure a wide diversification in India's export profile in terms of both products and destinations. In particular, product diversification has enabled India to broaden its export basket relative to BRICS peers and reduce its vulnerability to trade shocks. Apart from diversification, India is now exporting sunrise products like electronics, chemicals and drugs and pharmaceuticals for which demand is expanding at the global level. In the smart phone segment of electronic goods, India has transformed itself from being a net importer to an exporter with the impetus from the phased manufacturing programme.

Looking ahead, several initiatives have been put in place and others are being launched on an ongoing basis to enable export industries to regain productivity

and cutting edge competitiveness. They include upgradation of export facilities, integration of Indian farmers and their products with global value chains, and trade facilitation measures. More recently, efforts are going into reimbursement of taxes and duties, including electronic refund of input tax credits in Goods and Services Tax (GST). An action plan for 12 'champion' services sectors, including IT, tourism and hospitality, and medical services has been developed since February 2018. The Reserve Bank and the Government are actively engaged in the promotion of e-commerce platforms that will boost the exports of both merchandise and services. All these steps seek to create a more conducive climate for exports.

Capital Flows

With regard to capital flows, India has adopted an approach marked by progressive liberalisation but calibrated to the realities of the domestic situation, including the evolution of financial markets. A diverse range of instruments for managing exchange rate risk for an expanding investor base has come into play. India's hierarchical policy approach – preferring equity flows over debt flows, and preferring FDI flows over portfolio flows within equity flows and long-term debt flows over short-term flows within total debt flows – has influenced the composition of capital flows.

Turning to equity flows, FDI policy has been progressively liberalised across various sectors in recent years to make India an attractive investment destination. Sectors that have been opened up in recent years include defence, construction development, trading, pharmaceuticals, power exchanges, insurance, pensions, financial services, asset reconstruction, broadcasting and civil aviation. 100 per cent FDI has also been allowed in insurance intermediaries. In August 2019, FDI norms in single-brand retail trade have been further liberalised. FDI up to 100 per cent has been permitted under the automatic route in contract manufacturing and coal mining.

With regard to foreign portfolio investment (FPI), several measures have been undertaken to create an investor-friendly regime and to put in place a more predictable policy environment. FPI limits are now being revised on a half yearly basis under the medium-term framework. FPI has been allowed in municipal bonds within the limits set for State Development Loans (SDLs).[1] Greater operational flexibility has been granted to FPIs under a Voluntary Retention Route (VRR) which facilitates investment in G-secs, SDLs, treasury bills and corporate bonds while allowing investors to dynamically manage their currency and interest rate risks. The initial response to the VRR scheme has been encouraging. The Union Budget 2019-20 proposed to ease Know Your Customer (KYC) norms for FPIs and also merge the Non-Resident Indians (NRI) portfolio route with the FPI route for seamless investment in stock markets. Outward direct and portfolio investment have also been progressively liberalised to give Indian entities a global scan and presence.

External borrowing norms have also been simplified under two tracks: foreign currency denominated External Commercial Borrowings (ECBs); and rupee denominated ECBs. The list of eligible borrowers has been expanded to include all entities eligible to receive FDI, registered entities engaged in microfinance activities, registered societies/trusts/cooperatives and non-government organisations. A rule-based dynamic limit for outstanding stock of ECBs at 6.5 per cent of GDP is in place. Rupee denominated bonds or Masala bonds under the ECB route offer an opportunity to domestic firms to borrow from international markets without the need for hedging exchange rate risk. ECBs up to US$ 750 million or equivalent per financial year are permitted under the automatic route. Recently, end-use restrictions relating to ECBs have also been relaxed for specific eligible borrowers for their working

[1] The limits for FPI investment in Central Government securities (G-secs), State Development Loans (SDLs) and corporate bonds are fixed currently at 6 per cent, 2 per cent and 9 per cent of respective outstanding stocks of securities for FY 2019-20.

capital requirements, general corporate purposes and repayment of rupee loans. The mandatory hedging requirement had earlier been reduced from 100 per cent to 70 per cent for ECBs with minimum average maturity period between 3 and 5 years in the infrastructure space. Net disbursement of ECBs rose to US$ 7.7 billion in April-July 2019, as against net repayments of US$ 0.8 billion in the corresponding period of 2018-19.

Exchange Rate

Before concluding, it is only fair to say a few words about the exchange rate of the rupee. Over the last couple of years, the exchange rate has seen large two-way movements with considerable volatility imparted mainly by global spillovers. During 2019-20 so far, the rupee has traded in a narrow range, with modest appreciation in Q1 giving way to some depreciation in August and the first half of September, accentuated by drone attacks on Saudi oil facilities on September 14, 2019. In its External Sector Report of July 2019, the International Monetary Fund (IMF) has employed a suite of models to assess the alignment of currencies with their fundamentals. For the rupee, the IMF estimates the REER gap to be zero, implying that the currency is fairly valued and broadly in line with fundamentals. India's exchange rate regime is flexible and market-driven, with the exchange rate being determined by the forces of demand and supply. The Reserve Bank has no target or band for the level of the exchange rate. Interventions are intended to manage undue volatility. This is reflected in the two-sided interventions conducted during the past two years – net purchases in 2017-18, followed by net sales in 2018-19. In fact, it is in recognition of this flexibility that the US Department of the Treasury has removed India from its watch list relating to currency manipulation.

Conclusion

Overall, the outlook for India's external sector is one of cautious optimism, *albeit* with some downside risks accentuated at this juncture. Among them, deepening of the global slowdown and escalation of trade and geopolitical tensions appear to be the most significant. Volatile international crude prices also continue to pose potential risks to the viability of the current account balance through trade and remittances channels. Yet, there are underlying strengths that can be built upon to buffer the external sector from these risks. The search for new export markets and new niches must go on so as to reap the benefits of changing dynamics of global value chains. Indian IT companies need to accelerate market diversification and invest in new skills and technologies to hone their comparative advantage. Remittances and non-resident deposits are likely to remain shock-absorbers over the medium term and need to be assiduously cultivated, including by ease of remitting/depositing and reducing transaction costs.

Ultimately, the strength of the external sector derives from domestic macro-fundamentals. Investors and markets need to be credibly assured of our ability to maintain macroeconomic and financial stability through continued focus on these areas. At the same time, we need to persevere with structural reforms in various sectors of the economy to unlock productivity and competitiveness gains. The overarching objective should be to keep the current account deficit within sustainable limits and financed by a prudent mix of debt and equity flows. As I stated earlier, the global environment is challenging, but it offers opportunities as well. By the IMF's assessment, India will account for a sixth of global growth in 2020. Trade wars are presenting new business relocation avenues that seem to be favourable to India from the point of view of the economies of scale and scope. Indian entrepreneurship, the rupee and our people are progressively but inexorably internationalising. Since 2018, India's working age population has grown larger than the dependent population, and this demographic advantage is expected to last till 2055. In this milieu, prudent external sector management with a close and continuous vigil on areas of external vulnerability assumes critical importance and will continue to receive RBI's close attention.

Thank you.

*Regulatory and Supervisory Expectations on Compliance Function in Banks**

M. K. Jain

Shri Sunil Mehta, Chairman – Indian Bank's Association (IBA), Chairmen and Chief Executive Officers of banks, other dignitaries and participants, Good Evening to all. This conference brings in the best minds from the Indian banking fraternity, the technology, knowledge and other service providers together to deliberate the latest developments and future agenda for banks in India. It is indeed a great pleasure to be amongst you here today.

The banking landscape of India is changing rapidly. With the evolution of technology, the entire industry has undergone a massive transformation that has changed the way financial procedures are carried out, and the way financial institutions operate. The collaboration between finance and technology has led to a radical change in several aspects of banking. Financial technology is said to be a disruptive force that in the future is expected to reshape the financial sector, business models and banking structures. This paradigm change has posed significant challenges to the banks as well as the regulators. One of the important challenges is 'compliance'; a very important aspect for sustainable success story for any banking and financial system. I am going to share my thoughts on this aspect today.

Compliance is defined as the act of following laws, rules, regulations, and various codes of conducts including the voluntary ones. Although most of these arise from external requirements, following the organisation's own internal rules, policies, and procedures, acting in accordance with ethical practices is equally important. A strong compliance culture should also ensure adherence to fair practice codes, manage conflicts of interests, and treat customers fairly, with the larger objective of delivering efficient customer service. Thus, compliance shall go beyond what is legally binding and embrace broader standards of integrity and ethical conduct.

Benefits of Good Compliance Culture

It is very important for banks to demonstrate a good compliance culture to maintain their reputation and win the trust of customers, investors and regulators. Such culture is important for banks to avoid poor conduct and loss of trust.

A good compliance culture can benefit banks in several ways[1]; which include: i) low organisational and individual risk; ii) low reputational risk; iii) less hesitance and more confidence among employees while performing their jobs; iv) helps attract and retain talent and ensure employee engagement; v) improved transparency which enables better decisions; vi) enhanced relationship with regulators and other stakeholders; and vii) enhanced valuation among investors.

In a stress tests survey conducted by banks, it was observed that compliance can have some business benefits. Over a third of bankers who have undergone the stress testing program indicated that top benefits of complying with stress testing principles are better informed capital planning decisions, and maintaining[2] a forward-looking view of the organisation's risks.

We, therefore, need to embrace compliance if we want customer satisfaction which eventually leads to better return on equity.

Costs of Poor Compliance Culture

Compliance risk is the risk of legal or regulatory sanctions, material financial loss, or loss to reputation

* Shri M. K. Jain, Deputy Governor, Reserve Bank of India at Financial Institution Benchmarking and Calibration (FIBAC) 2019 – the Annual Global Banking Conference organised by IBA and FICCI, Mumbai on August 20, 2019.

[1] *https://www.pm360online.com/silver-linings-10-business-benefits-of-your-compliance-program/*

[2] *https://www.forbes.com/sites/tomgroenfeldt/2014/08/19/compliance-efforts-can-bring-business-benefits-for-banks/#2b5b69f6772c*

a bank may suffer as a result of its failure to comply with laws, regulations, rules, related self-regulatory organisation standards, and codes of conduct applicable to its banking activities. On the other hand, an effective process would identify compliance risks in each business line, product and process, and devise ways to mitigate such risks. The processes and requirements should be properly documented with a list of do's and don'ts accompanying the same. The instances of failure to adhere to proper conduct should be converted into case studies and disseminated among the staff for education and entrenchment of desired attitudes.

Banks should eschew the tendency to treat compliance merely as cost and should recognise that proper conduct saves the bank from possible reputational loss and penalties – thus, generates hidden earnings which most banks do not quantify, and hence do not realise. A poor compliance culture may lead to heavy costs to the banks. Globally, from the beginning of the financial crisis and until 2020, penalties and fines on banks are expected to top US$ 400 billion. Quinlan and Associates, a Hong Kong-based financial services consultancy estimated that bad behaviour had erased $850 billion in profits for the top 50 global banks since the 2008 financial crisis in the form of write-downs, trading losses, fines and higher compliance costs[3]. From June 2018 to July 2019, the Reserve Bank has imposed monetary penalties on 76 occasions amounting to ₹122.9 crore on various commercial banks operating in India.

However, fear of fines and penalties will not be enough to keep up with the evolving nature of regulations. But a financial management system with built-in control makes compliance an everyday practice that enables the organisation to operate at greater efficiency. In addition, sound governance creates conducive environment for the values of compliance, integrity, trust, and respect for the law; to thrive in the organisation's culture. As a result, a bank can empower its entire organisation to operate with responsibility while maintaining the flexibility necessary to stay ahead of ever-evolving regulations and business challenges.

Compliance Culture – Indian Scenario

Reserve Bank had introduced a system of 'Compliance Officer" in banks way back in August 1992, based on recommendations by the Committee on Frauds and Malpractices in Banks (Ghosh Committee). The role of compliance officers came into sharper focus since 1995 when the General Manager in charge of Audit and Inspection was made responsible for the compliance functions, with a requirement for periodic reporting or certification on compliance functions directly to the Chief Managing Director. However, it was gradually recognised that the circumference of compliance functions in banks needed to be not only enlarged, but also clearly defined, especially in a scenario where successive Annual Financial Inspection Reports prepared by the banking supervisor highlighted a host of compliance deficiencies. The RBI's recognition for the need and importance of compliance functions received a further impetus after Basel Committee on Banking Supervision (BCBS) issued the High Level Paper on Compliance Risk and Compliance Function in Banks in April 2005. These principles formed the basis for our work on issuing rigors for compliance functions in banks, in the year 2007. Subsequent to the financial crisis, the focus on compliance has gone up significantly, especially in the area of conduct, Know Your Customer (KYC)/Anti Money Laundering (AML), suitability and appropriateness of banking products offered to a specific customer.

In this context, and acknowledging the benefits offered by a good compliance culture and costs of poor conduct, the compliance culture of Indian banks needs to be strengthened. During the course of the supervisory process, the Reserve Bank has observed various lacunae in the compliance culture of Indian banks. Some of the weaknesses and irregularities observed have been recurring in spite

[3] *https://in.reuters.com/article/banks-regulator-fines/u-s-eu-fines-on-banks-misconduct-to-top-400-billion-by-2020-report-idINKCN1C210D*

of the averments made by bank managements having carried out remediation. My expectation from the banks is that they make serious efforts towards overall improvement of their compliance function.

It will not be an exaggeration to say that some of the big losses suffered by banks on account of frauds could have been avoided if a good compliance culture was ingrained in respective banks. As defined earlier, compliance also includes adherence to internal policies and procedures of banks. In most cases of frauds, a common thread is non-adherence to internal policies and procedures by employees concerned. Increasing incidences of frauds in recent years, the quantum of amounts involved and also the complexities of modalities adopted highlight the importance of a strong compliance culture in the banks.

Compliance Risk Relating to Cybersecurity

On a specific note, in technology driven banking, compliance with cybersecurity guidelines is gaining importance. Generally, cyber resilience frameworks aim to address three broad issues – confidentiality breach (confidential data being stolen), availability breach (systems are intact, but services are made unavailable), and integrity breach (corruption of data or systems affecting the integrity of information and processing methods). Compliance risk relating to these breaches are gaining significance and needs to be addressed on a priority.

Minimum Supervisory Expectation on Compliance Culture

Compliance starts at the top. It may be recalled that, in February 2019, I had drawn attention of the CEOs of select banks, wherein the board of directors along with the senior management were urged to set the tone at the top and usher in a strong compliance culture in banks. Compliance should be an integral part of the culture of the organisation; it should not just be the responsibility of staff working in compliance function. It should be a shared responsibility of each staff member of the bank, and business unit of a bank should be equally responsible for any non-compliance. A bank should hold itself to high standards when carrying out business, and at all times strive to observe the spirit as well as the letter of the law. Failure to consider the impact of its actions on its shareholders, customers, employees and the markets may result in significant adverse publicity and reputational damage, even if no law has been broken.

Strong compliance culture is a pre-requisite for an effective compliance function.

If we may further delve into it, a robust compliance culture has the following essential elements.

Tone from the Top - Whether the value statements of Board members, senior management are in sync with value demonstration in actions. The Board's oversight over compliance function should not be limited to framing policies, and its periodic review. A bank's compliance policy will not be effective unless the Board of Directors promote values of honesty and integrity throughout the organisation. The Board should also formulate and maintain a quality assurance and improvement programme that covers all aspects of the compliance function.

Accountability: The bank's senior management is responsible for effective adherence to the compliance policy of the bank by the management and staff; and for ensuring that compliance risk is minimised. Culture of owning the responsibility individually and collectively by board; clear demarcation of accountability of senior management, functional head and operational head; role of business unit as first line of defence and role of internal audit as third level of defence in facilitating robust compliance culture are all important.

Communication: Clarity and transparency should be promoted by making a distinction between general standards for all staff members and rules that only apply to specific groups of staff. An effective compliance culture requires continuous

communication of expectations on risk and compliance and practices across the bank; compliance awareness channels for existing and new Board members, senior management and employees; process for containing conduct risk and whistle-blower mechanism.

Incentive Structure : An adequate incentive structure should be in-built in the bank's decision making systems and processes to achieve the desired compliance culture.

Ex Ante and Forward Looking : Compliance is distinct from other assurance functions *viz.*, risk management and internal audit. The focus of the compliance function should be preventive compliance. By definition, preventive compliance would assess the activities of the bank before hand and prevent non-compliant activities/transactions from being carried out. Compliance should be an *ex ante* activity and forward looking.

Compliance Organsiation, Authority and Resources : A bank should organise its compliance function and set priorities for managing its compliance risk in a way that is consistent with its own risk management strategy and structures. For instance, some banks may wish to organise their compliance function within their operational risk function, as there is a close relationship between compliance risk and certain aspects of operational risk. Others may prefer to have separate compliance and operational risk functions, but establish mechanisms requiring close cooperation between the two functions on compliance matters. Regardless of how the compliance function is organised within a bank, it should have sufficient authority, stature, independence, resources and access to the Board. Its responsibilities should be clearly specified, and its activities should be subject to periodic and independent review by the internal audit. Management should respect the independence of the compliance function and not interfere with their fulfilment.

Nevertheless, even at the cost of repetition, I would like to stress that compliance is a shared responsibility of each and every staff of the bank.

Importance of Corporate Governance

While feedback mechanisms are important in a bank to permeate a strong compliance culture, enabling environment in a bank that fosters such culture embedded with strong internal control has to emanate from the directions of the Board. Aspects with benefits to the bank not apparent has to be enforced through a top down approach.

Corporate governance determines the allocation of authority and responsibilities by which the business and affairs of a bank are carried out by its board and senior management, including how they align corporate culture, corporate activities and behaviour with the expectation that the bank will operate in a safe and sound manner, with integrity and in compliance with applicable laws and regulations. In this context, it may be noted that Board should adopt policies in accordance to each bank's size, complexity, risk appetites, business model and philosophy. Board approved policies should factor in entity specific vagaries. Also, mere adoption of policies does not solve anything. An effective implementation of Board approved policies is essential to percolate down the philosophy embedded in policy throughout the firm. A strong compliance culture has a significant role to play in this context.

Conclusion

Lot of improvement is needed in compliance culture across banks. As a supervisor of banks, the Reserve Bank has keen interest in sound corporate governance and compliance culture, as it is an essential element in the safe and sound functioning of a bank and if not followed effectively may adversely affect the bank's risk profile. Well governed banks contribute to an efficient and cost-effective supervisory process, as there is less need for supervisory intervention. Such sound culture would help in building organisations that are strong, resilient, disciplined and enjoy the benefits of sustained growth and customer confidence. It will also pre-empt several supervisory actions, and attendant reputational risk, that would follow in case transgressions are detected.

Role of compliance has been gaining wider attention across the globe and it has been acknowledged by the central banks and bankers alike that compliance warrants considerable attention. Regulators, supervisors and international standard setters have become increasingly cognizant of the fact that merely enacting rules and regulations is a futile exercise unless these are complied with, both in letter and spirit, by the regulated entities.

Sound corporate governance and compliance culture will permit the supervisor to place more reliance on the bank's internal processes. In this regard, supervisory experience underscores the importance of having appropriate levels of authority, responsibility, accountability, and checks and balances within each bank, including those of the board of directors, senior management and the assurance functions by way of risk, compliance and internal audit.

I am hopeful that deliberations over the past two days on emerging trends in banking, changes in global regulatory landscape, the new bankruptcy regime in India and technological innovations affecting the way banks do business would prepare banks to not only cope up with the emerging challenges, but also help banks to use the opportunity provided by the new paradigm to further the agenda of inclusive and compliance oriented banking in the country.

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ARTICLES

Supply Chain Dynamics and Food Inflation in India *

This article analyses data collected through a pan-India primary survey of farmers, traders and retailers to examine the role of mark-ups charged by different intermediaries in the agricultural markets in creating a wedge between farm gate prices and retail prices for 16 major food items covered in the Consumer Price Index-Combined (CPI-C) basket. The average share of farmers in the consumers' rupee is found to be in a range of 28 per cent and 78 per cent for different food items. Empirical results suggest that factors contributing to greater efficiency in the supply chain such as better road network, mandi infrastructure, tele-density to improve flow of information, irrigation facilities to reduce supply uncertainties, and increase in overall literacy levels in the country enabling greater consumer awareness can help reduce mark-ups.

Introduction

Food price inflation in India has witnessed a sharp and sustained moderation since 2014-15. Annual average food inflation based on CPI-C, which was 11.9 per cent in 2013-14 has declined over every successive year to less than 1 per cent in 2018-19. In 2019-20 so far (April-August), food inflation has averaged 2.2 per cent (2.4 per cent during the corresponding period of 2018-19). While excess supply condition relative to demand is highlighted as the key driving force behind this moderation in inflation (RBI, 2019), improvements in supply chain dynamics – wider road networks; low cost access to mobile phones enabling easier flow of information between deficit and surplus centres; speedier movement of shipments in a common market following the implementation of the goods and services tax (GST); financial inclusion and spread of micro-finance enabling easier access to working capital for small traders and retailers – may also have contributed to this moderation.

While a number of studies have examined factors like production costs, international food prices, dietary patterns of consumers and government policies for the farm sector, including supply management measures to study food inflation dynamics (Gokarn, 2011; Gulati and Saini, 2013; Bandara, 2013; Bhattacharya and Sen Gupta, 2017; Anand *et al.*, 2016), no study based on a comprehensive assessment of supply chain issues for the recent period is available. Primary survey based information nevertheless has been used in some studies to understand mark-ups charged at different levels from farm gate to retail shops, constituents of those mark-ups and inter-linkages between product and factor markets encompassing market participants (*viz.*, farmers, traders, retailers) in explaining food inflation and its volatility (Banerji and Meenakshi, 2004; Chengappa *et al.*, 2012; Minten *et al.*, 2012). Literature also highlighted the influence of mark-ups between farm gate and retail prices in explaining food inflation and its volatility (Bhattacharya, 2016). Further, another study concluded that in the absence of government interventions, traders and big retailers could take advantage and amplify the inflationary impact of a negative food supply shock (Lahiri and Ghosh, 2014).

Against this backdrop, to assess the key issues involved in the supply chain dynamics of agricultural markets in India and identify factors influencing mark-ups, a pan-India survey was conducted in December 2018[1]. Agricultural *mandis* across 16 states[2] were visited during the survey and information were sought on 16 major food crops. The survey covered around 9400 respondents including farmers, traders and retailers spread across both production and consumption centres, involving separate questionnaires for each of the respondent categories. This article presents an

* This article is prepared by Binod B. Bhoi, Sujata Kundu, Vimal Kishore and D. Suganthi of the Department of Economic and Policy Research (DEPR), Reserve Bank of India (RBI) and is based on data collected through a survey conducted by the staff of Regional Offices of DEPR, RBI, in collaboration with an outside agency, which was coordinated by Ramesh Golait, Assistant Adviser, DEPR. The authors are grateful to the officers of DEPR Regional Offices for their valuable contribution during the survey. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

[1] This was a one time survey conducted to elicit quick responses from farmers, traders and retailers who willingly participated in the survey. Consolidated findings reported in this article could be highly sensitive to sample coverage and timing of the survey.

[2] The survey covered 18 states but due to unavailability of farmers in select *mandis* for select crops in New Delhi and Himachal Pradesh, they were excluded from some of the analyses involving the farmers.

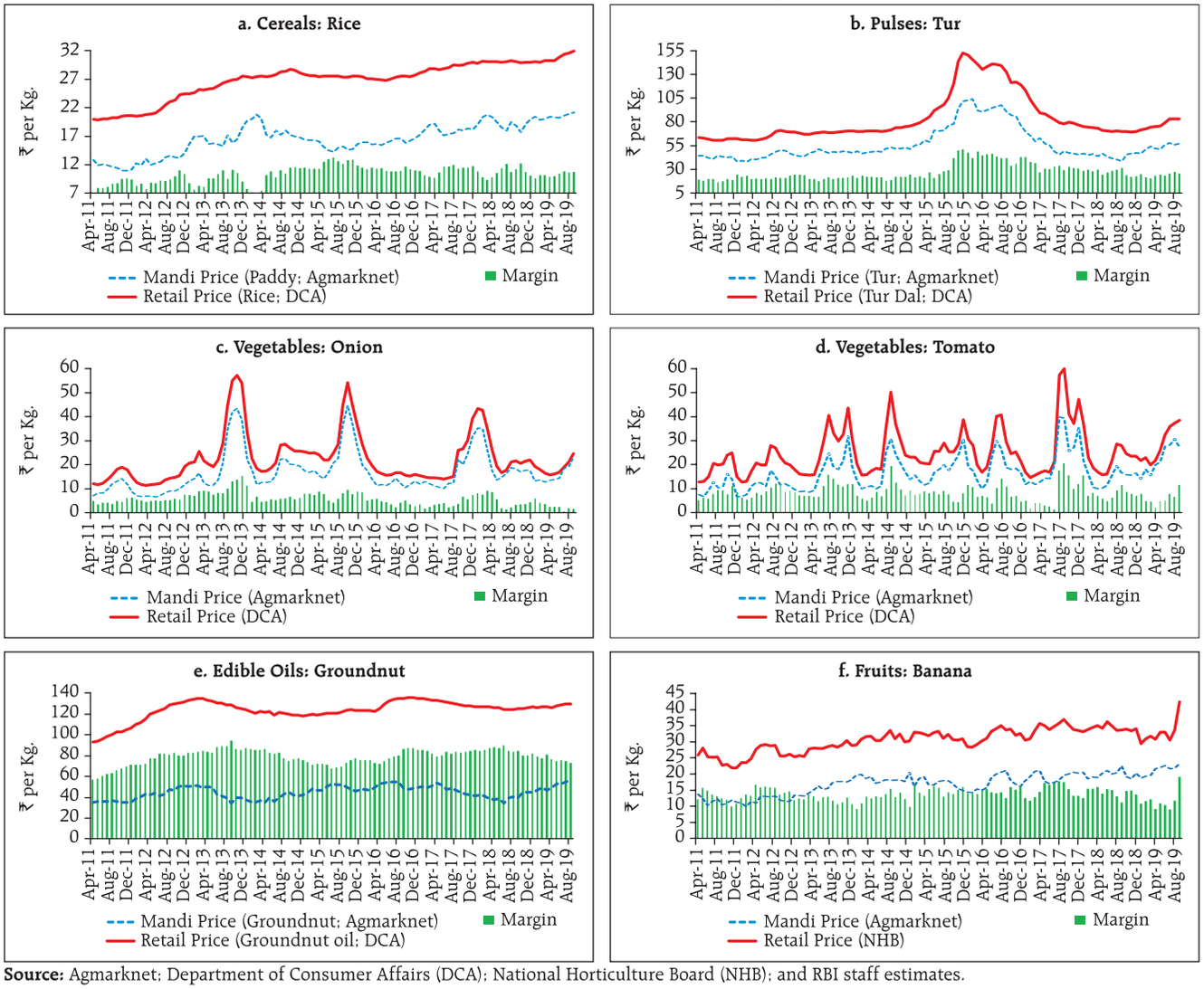
analysis of the key findings of this survey and also attempts to quantify the role of various supply chain factors in explaining the behaviour of multi-stage mark-ups.

The remainder of the article is structured into six sections. Section II presents stylised facts about mark-ups in the context of moderation in food inflation in the recent years. Section III provides a brief review of select theoretical and empirical literature on supply chain dynamics in agricultural markets in India, followed by survey objectives in section IV. Section V explains the survey methodology. The survey findings and empirical analysis are presented in section VI. Section VII provides the concluding observations.

II. Stylised Facts

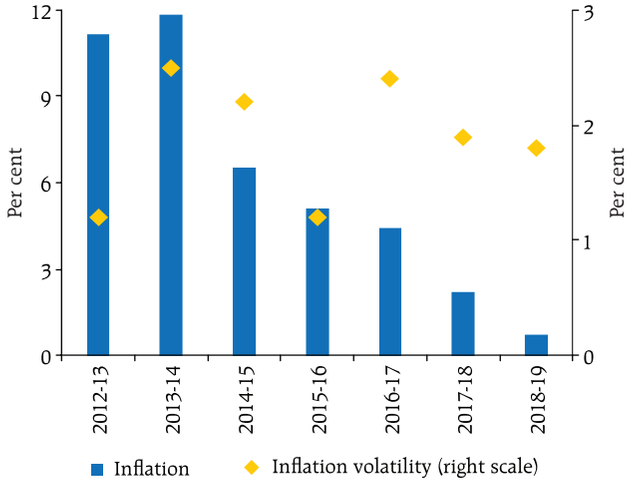
The difference between retail prices that consumers pay and *mandi* prices that farmers receive (*i.e.*, margins or mark-ups) could vary across crops due to a host of reasons such as transaction costs and transportation costs including crop wastage during transit. Additional factors that could influence mark-ups on farm gate prices include quality of products, *mandi* level competition, infrastructure facilities and *mandi* level charges (market fees, commission charges, weighing charges, labour charges and so on). Available secondary data on food prices reveal wide variations in margins across crops and over time (Chart 1).

Chart 1: *Mandi* Price *vs* Retail Price across Key Food Items



Source: Agmarknet; Department of Consumer Affairs (DCA); National Horticulture Board (NHB); and RBI staff estimates.

Chart 2: CPI-Food and Beverages: Inflation and Inflation Volatility



Note: Inflation volatility has been measured using standard deviation.
Source: NSO; and RBI staff estimates.

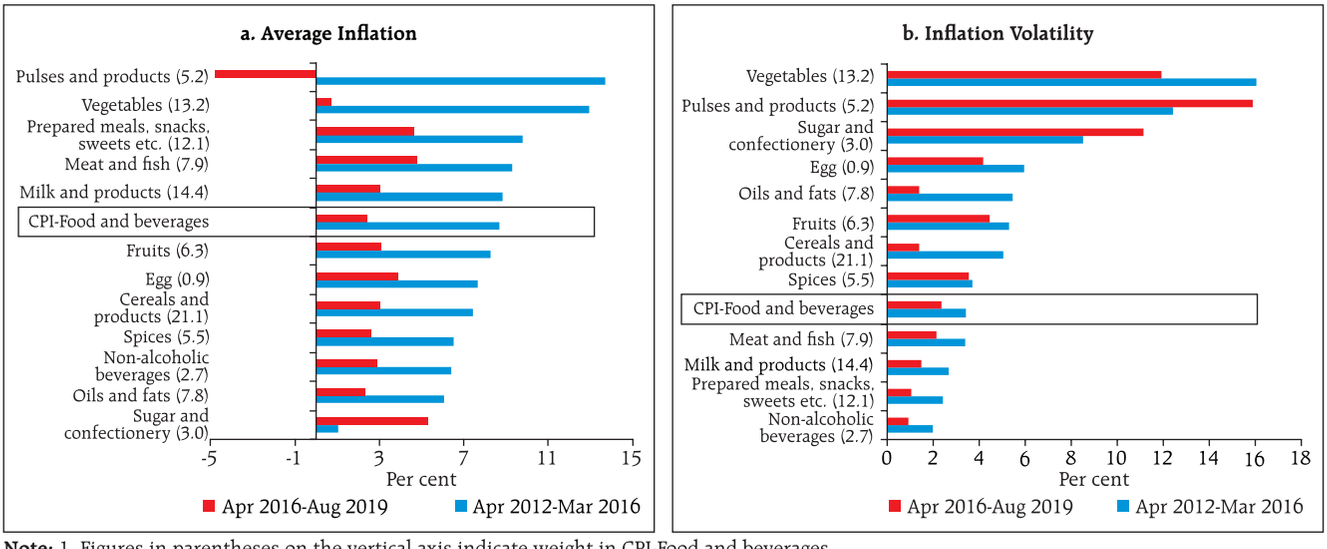
These aggregate margins, however, do not fully reflect the dynamics of margins at various stages of the supply chain (*i.e.*, traders' and retailers' margins) and between production centres and consumption centres, and therefore, hinder a proper analysis of the price build up from farm gate level to retail prices. The behaviour of mark-ups assumes particular importance because even as average food inflation has declined in the recent years, volatility continues to be high (Chart 2).

At a dis-aggregated level, the picture is more revealing with significant observed variations in inflation and inflation volatility across food components (Chart 3). For instance, while vegetables and pulses witnessed the maximum easing in average inflation during 2016-17 to 2019-20 (up to August) compared to 2012-13 to 2015-16, their inflation volatility remained elevated. In contrast, in the case of cereals and oils and fats, along with a fall in inflation, inflation volatility also came down significantly.

III. Literature Review

According to available literature on the subject, agriculture marketing in India is fraught with inefficiencies, as reflected in the wide wedge between the farm gate prices and prices paid by consumers. In this context, there are a few studies that have focused on the supply chain of various agricultural commodities using both secondary and primary data. For instance, a study on the dispersion between wholesale and retail prices of *arhar* in Mumbai market found that between 1999-00 and 2009-10, the price received by farmers increased by less than 5 per cent per year, whereas its wholesale and retail prices increased by more than 10 per cent (Chand, 2012). Studies using primary survey data have shown that farmers receive only a minimal share of the price paid by the consumers,

Chart 3: Inflation and Inflation Volatility in the Sub-groups of CPI-Food and Beverages



Note: 1. Figures in parentheses on the vertical axis indicate weight in CPI-Food and beverages.
2. Inflation volatility has been measured using standard deviation.
Source: NSO; and RBI staff estimates.

while multiple intermediaries get a large proportion of the consumers' rupee. Farmer's share in consumer's rupee over the last five decades have ranged between 30 per cent and 89 per cent across different crops in the country (Patel, 1971; Gandhi and Namboodiri, 2002; Sidhu *et al.*, 2011; Chengappa *et al.*, 2012; GoI, 2013). The farmer's share in consumer's rupee in the case of fruits and vegetables ranged between 32 - 68 per cent, while for non-perishables (paddy, wheat, coarse grains, pulses, oilseeds) it ranged between 40 - 89 per cent (GoI, 2013). Other studies have also shown substantial variations in market fees and commission agent fees charged across states and commodities, notably, higher for perishables as compared to staple grains (Gulati, 2009; GoI, 2013).

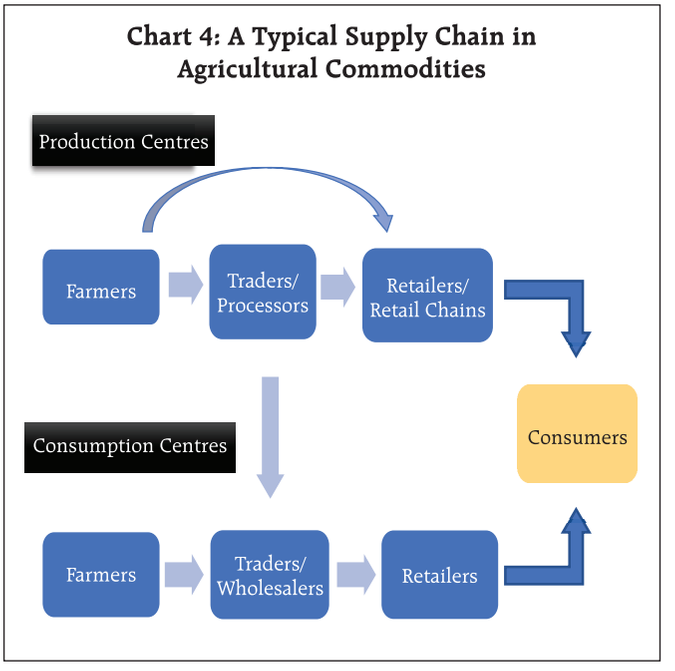
Empirical narratives on farm gate prices compensating farmers' costs of production generally focus on price realised by farmers in comparison to the corresponding minimum support price (MSP) (Chatterjee and Kapur, 2016; GoI, 2016; CRISIL, 2017). For instance, profit margins for pulses have fallen by 30 per cent for the farmers in 2016-17 (CRISIL, 2017). With a view to raising farm income, government has implemented several policy measures in the recent years, such as the launching of the National Agriculture Market (e-NAM), a pan-India electronic trading portal for creating a unified market for agricultural commodities and better price discovery, raising MSP by 1.5 times the cost of production for the 2018-19 *kharif* crops, and delisting of fruits and vegetables from the Agricultural Produce Market Committee (APMC) *mandis.* A study on the Karnataka model of e-NAM, Rashtriya eMarket Service (ReMS) found that farmers in Karnataka obtained a 13 per cent increase in average prices between 2013 and 2016 (Chand, 2017). On the other hand, based on the primary survey results of *mandis* across Karnataka, it was argued that infrastructure developments in terms of putting in place online trading platforms alone may not help farmers much unless the deeply entrenched farmer-agent-trader relationship is reformed by providing appropriate incentives to all the stakeholders (Aggarwal *et al.*, 2017). Another study that examined direct selling of fruits and vegetables by farmers to consumers (*Uzhavar Sandhai* in Tamil Nadu and *Rythu Bazaar* in Andhra Pradesh) found that farmers get 15-40 per cent more than wholesale prices and consumers pay 15-30 per cent less than retail prices (GoI, 2011). After the delisting of fruits and vegetables from *mandis*, direct sale arrangements have increased in the urban areas.

IV. Survey Objectives

A typical agricultural market supply chain functions as a part of the complex network involving various market agents like farmers, aggregators, traders/commission agents, wholesalers, processors and retailers. The agents are linked or connected to each other by virtue of some mechanism for sharing of information, transaction volume commitments or inter-personal/informal credit-driven relationships. Chart 4 portrays a simplified version of a typical agricultural supply chain network in India.

Taking into account this structure of a representative agricultural supply chain, the survey (mentioned earlier) was designed to understand the price formation process in food items and the factors that influence mark-ups on farm gate prices, the mode of transactions in *mandis* and the role of policy interventions in improving the supply chain so

Chart 4: A Typical Supply Chain in Agricultural Commodities



as to ensure more remunerative prices to the farmers while keeping food inflation low for the consumers. Accordingly, the survey had set the following five broad objectives:

(i) What is the share of producers (farmers) in retail prices?

(ii) What factors influence the mark-ups on farm gate prices – transportation, labour and storage costs; taxes/charges; number of intermediaries/middlemen; and commissions charged by agents?

(iii) What is the main medium of exchange used in transactions – cash, cheque, digital/ electronic payments and/or trade credit?

(iv) Whether farm gate prices compensate farmers for the costs of production? and,

(v) Whether and which government policies have been/will be helpful in better price realisation for farmers and stable prices for consumers?

As the supply chain dynamics were expected to be different in production centres (major producing centres of the selected commodities) *vis-à-vis* consumption centres (major cities), the survey was conducted in both select production and consumption centres separately.

V. Survey Methodology

The survey covered a total of 9,403 respondents comprising farmers (2,811), traders (3,184) and retailers (3,408) spread across the consumption and production centres (Table 1). The survey was conducted in 85 *mandis* spread across 16 states to gather detailed information on price formation in 16 major food crops (Annex 1). The survey involved separate questionnaires for farmers, traders and retailers, included both quantitative and qualitative questions, and covered information on buying price, selling price and margins.

In view of large heterogeneity in production, crop arrivals, prices and market practices across centres/ states, the entire dataset was cleaned to remove outliers. Trimming of outliers (5 per cent of the total quotations received on each side) was done to remove extreme values. The trimming was done on the calculated values of cost per kg, buying price per kg, selling price per kg and profit margin per kg for each commodity and for each group - farmers, traders and retailers - separately[3].

VI. Survey Findings and Empirical Analysis

Survey Findings

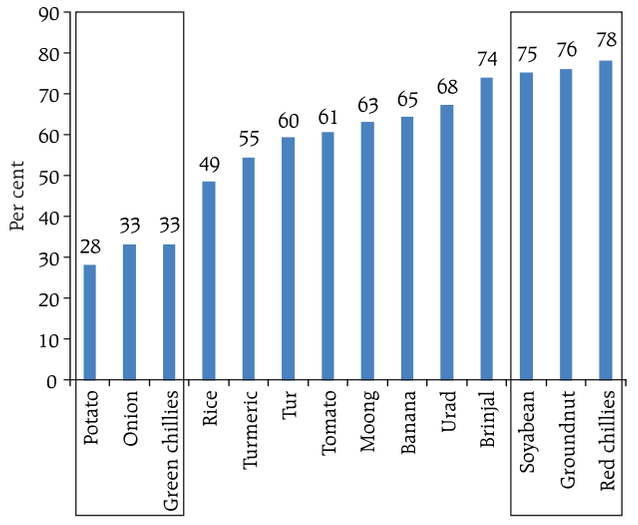
The first objective of the survey was to assess what price the farmers get as a proportion of the final price paid by the consumers, *i.e.*, the relative bargaining power of the farmers in the price formation process for each commodity *vis-a-vis* the traders and the retailers. The survey findings revealed that farmers' average share in retail prices vary between 28-78 per cent across the 14 crops[4] covered in the survey - with a lower share in the case of perishables (particularly, vegetables like potato and onion) and higher share

Table 1: Survey Coverage

***Mandi*/Centre**				**Group/Commodities**	
Respondents	Consumption Centres	Production Centres	Total	Cereals	Paddy/Rice
Farmers	1,147	1,664	2,811	Pulses	*Tur*, *Moong*, *Urad*, Bengal gram
Traders	2,176	1,008	3,184	Oilseeds	Groundnut, Soyabean
Retailers	2,356	1,052	3,408	Vegetables and fruits	Onion, Potato, Tomato, Green chillies, Brinjal, Apple, Banana, Coconut
Total	**5,679**	**3,724**	**9,403**	Spices	Turmeric, Red chillies

[3] A telephonic verification of select respondents was carried out to ensure the veracity of the captured data.
[4] Farmers' share in retail prices here are reported for only those crops where substantial data could be collected through the survey.

Chart 5: Farmers' Average Share in Retail Price



Source: Survey data; and RBI staff estimates.

in case of non-perishables (*e.g.*, oilseeds and spices) (Chart 5). These findings are broadly in line with studies conducted earlier by Patel (1971), Gandhi and Namboodiri (2002), and Sidhu *et al.* (2011). In order to validate these findings/check for the robustness of the survey results, another small sample survey was conducted in April 2019 (*i.e.*, in the summer season) covering a sample of 197 farmers, 321 retailers and 434 traders across 12 states. The findings from the repeat survey were broadly in line with the main survey results analysed in this article, with some commodity level variations attributed to seasonality and small sample coverage (Annex 2).

The second objective of the survey sought to find out the factors that influence the price formation process in agricultural commodities, *i.e.*, from the selling price received by the farmers to the selling price charged to the consumers by the retailers. The survey findings revealed that the mark-ups are influenced by a number of factors - commissions and *mandi* charges; loading/unloading charges; packing, weighing and assaying charges; transport costs; shop rentals and local taxes; storage costs and membership fees; and profit margins of traders and retailers. The sensitivity of mark-ups to these factors are often commodity and region/state specific, but the findings from the survey (presented in Table 2) are in line with the existing literature (Gandhi and Namboodiri, 2002; GoI, 2011; Gulati, 2009; Minten *et al.*, 2012).

Further, it was found that the mark-ups at the production and consumption centres for the traders and the retailers were different - retailers' margins were generally higher than the traders' margins in consumption centres across commodities, possibly due to significant product loss at the retail stage, particularly for perishables. There was, however, no such clear pattern observed in the production centres (Chart 6).

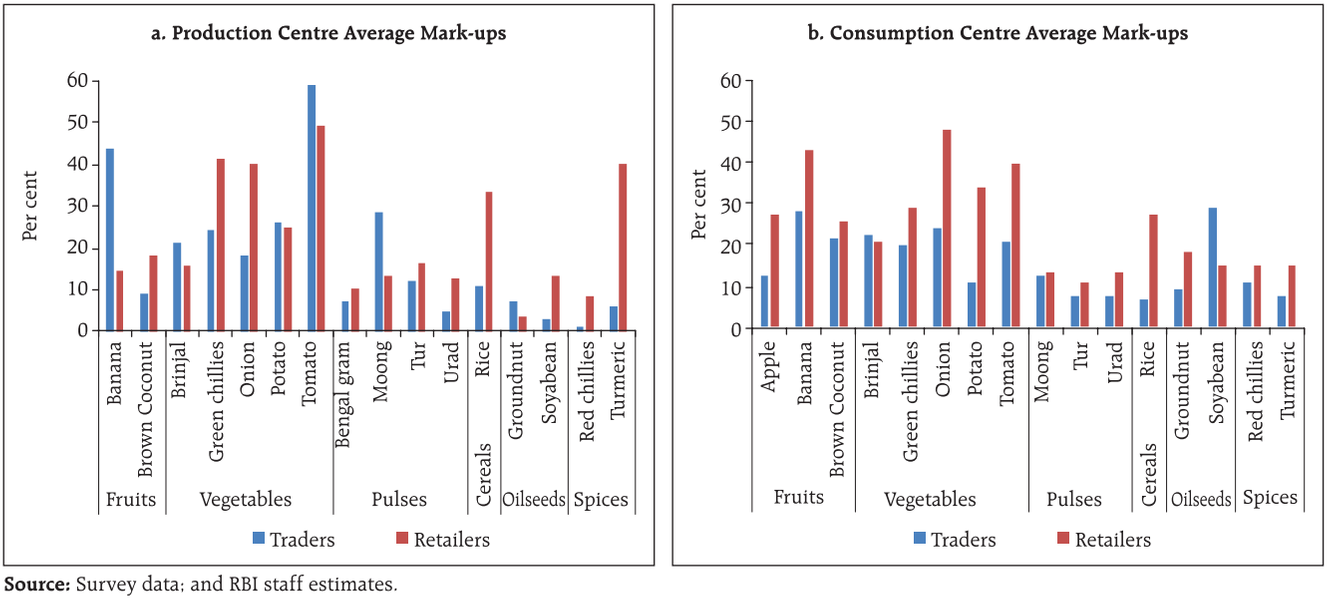
The third objective was to study which modes of payment - cash, electronic transfers, cheque, credit - are preferred for the transactions carried out at *mandis* and at the retail level. The survey findings highlighted cash to be the dominant mode of payment in the

Table 2: Factors Influencing Mark-ups

Farmers	Traders	Retailers
Mandi charges: 0.8 per cent Commissions: 1.3 per cent	Membership fee: ₹2412/year Shop rentals: ₹5106/month Cess/taxes: ₹0.7/kg	Shop rentals: ₹4206/month Local taxes: 1.2 per cent
Loading/Unloading charges: ₹0.4/kg	Labour charges: ₹0.4/kg	Labour charges: ₹1.4/kg
Packing: ₹0.5/kg Weighing: ₹0.3/kg Assaying: ₹0.3/kg	Transport cost: ₹1.0/kg Storage cost: ₹1.0/kg	Transport cost: range and per cent of retailers 0-5 per cent: 75 per cent 6-10 per cent: 21 per cent Above 10 per cent: 4 per cent

Note: These are sample averages for the commodities and markets covered.

Chart 6: Price Formation - Mark-ups



Source: Survey data; and RBI staff estimates.

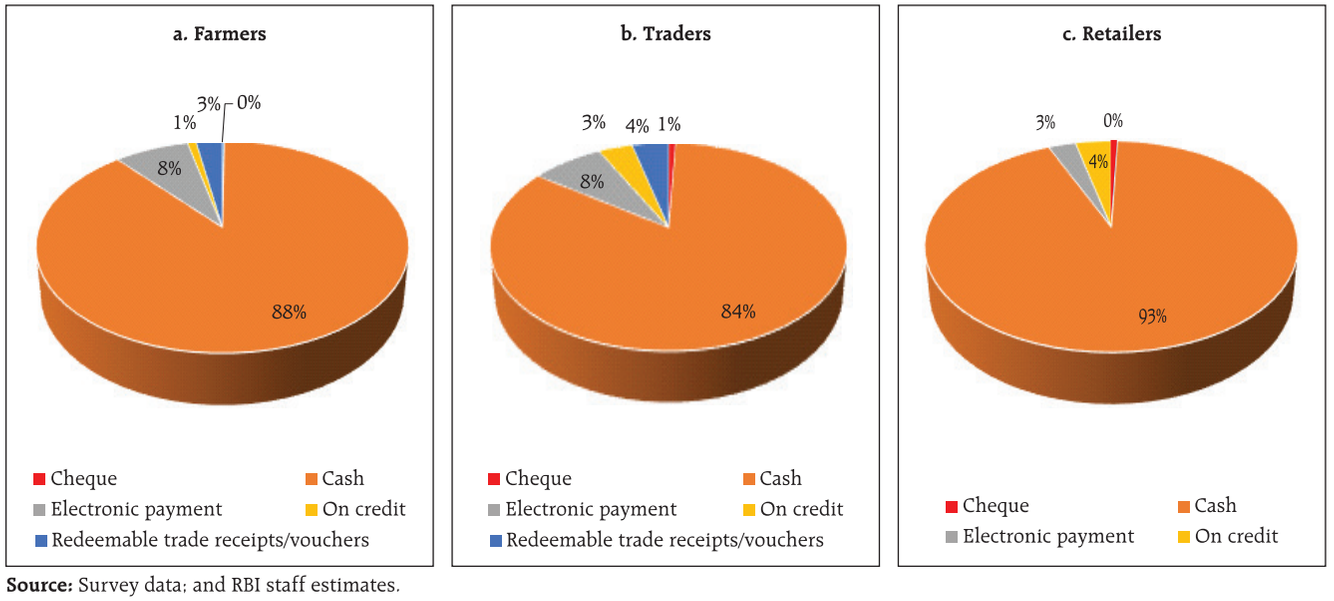
mandis at an aggregate level across commodities and states (Chart 7)[5].

The survey results further showed wide variations in the use of cash as a mode of payment across crops and by counter-parties (Chart 8).

The survey also sought information on lags in receiving payments by counter-parties. The survey findings showed that there is no significant delay in payments by counter-parties in the *mandis* as around 80 per cent of respondents reported that the payments are made within 2 days of the completion of physical transactions of the commodities (Chart 9).

The fourth objective sought to capture the farmers' views about profitability of their occupation,

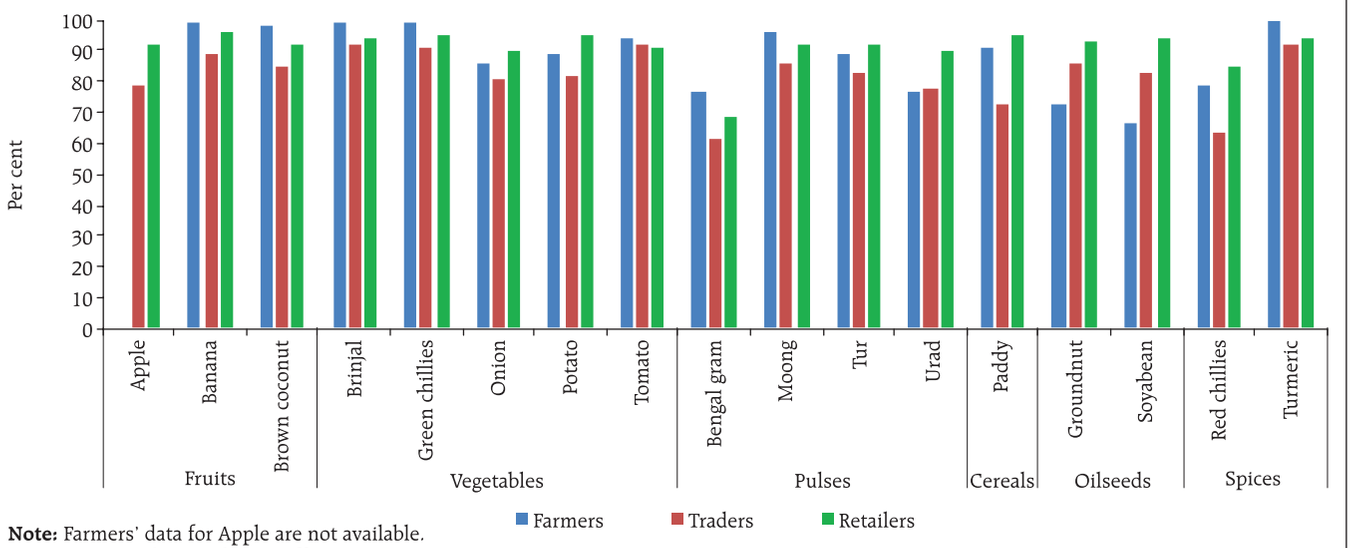
Chart 7: Mode of Payment



Source: Survey data; and RBI staff estimates.

[5]Other studies which mostly cover items for which MSPs are announced and government procurement takes place, however, found that cash is not the dominant mode of payment (GoI, 2016).

Chart 8: Share of Cash Transactions



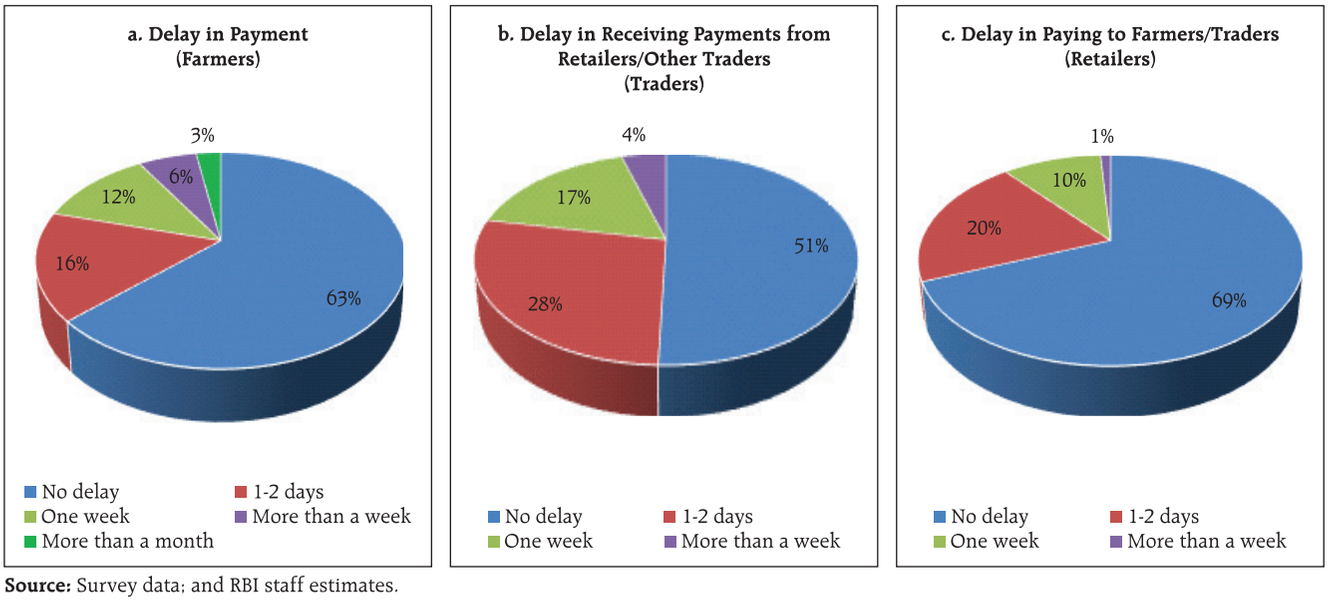
Note: Farmers' data for Apple are not available.
Source: Survey data; and RBI staff estimates.

i.e., whether they are able to recover their production and marketing costs. As per the qualitative responses at the aggregate level, a majority of the farmers (*i.e.*, 62 per cent) revealed that their selling prices were higher than their costs (Chart 10).

In addition, the survey findings indicated that the farmers' perceptions about their ability to recover costs varied across commodities – relatively lower for vegetables compared to other commodities (Chart 11).

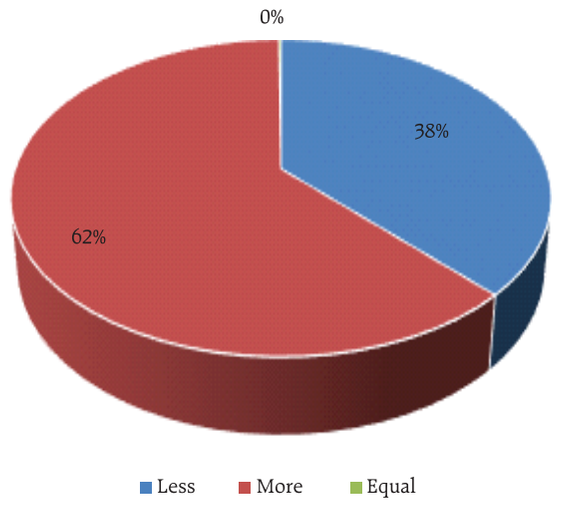
The fifth objective was to elicit the feedback of farmers, retailers and traders on the government policies which have helped them, or which can help them in the future, if implemented. A majority of the farmers were of the view that MSPs for crops and readily available market information

Chart 9: Delay in Payment



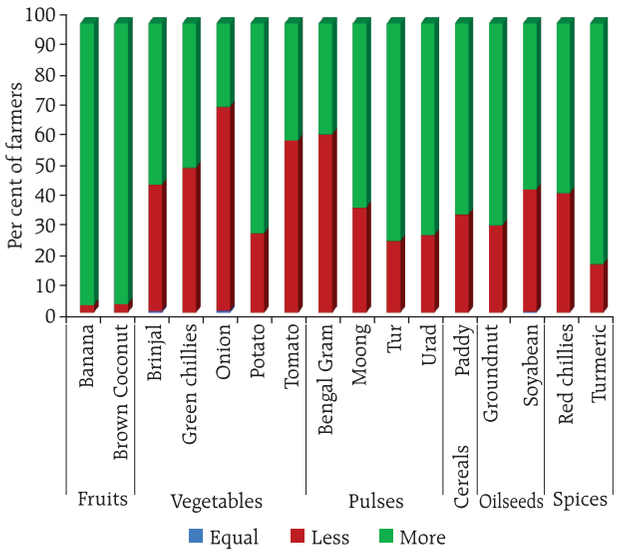
Source: Survey data; and RBI staff estimates.

Chart 10: Selling Price *vs* Cost - Aggregate Level



Source: Survey data; and RBI staff estimates.

Chart 11: Selling Price *vs* Cost - Across Crops



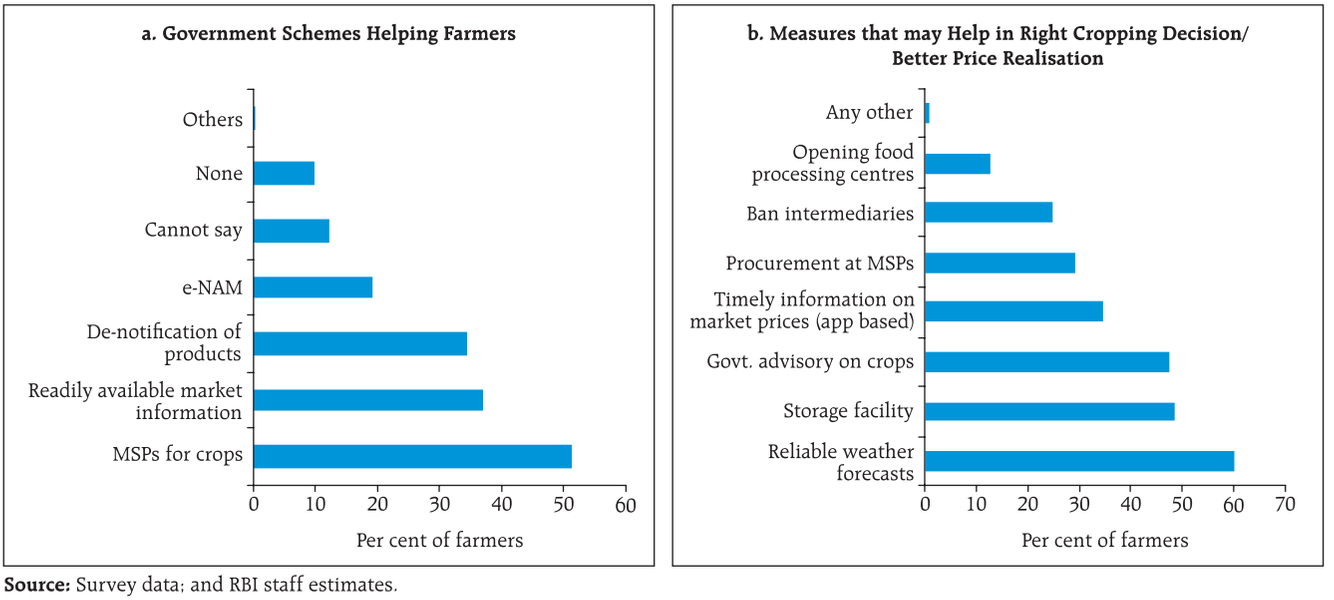
Source: Survey data; and RBI staff estimates.

are helpful in realising better prices. Farmers also revealed that reliable weather forecasts, improved storage facilities and government advisory on crops could help them take better cropping decisions (Chart 12).

On the availability of information regarding prevailing prices of commodities at *mandis*, a majority of farmers reported that they were aware of the prices before taking their produce to the *mandis* and the major source of this information is other farmers and traders in their contact group (Chart 13).

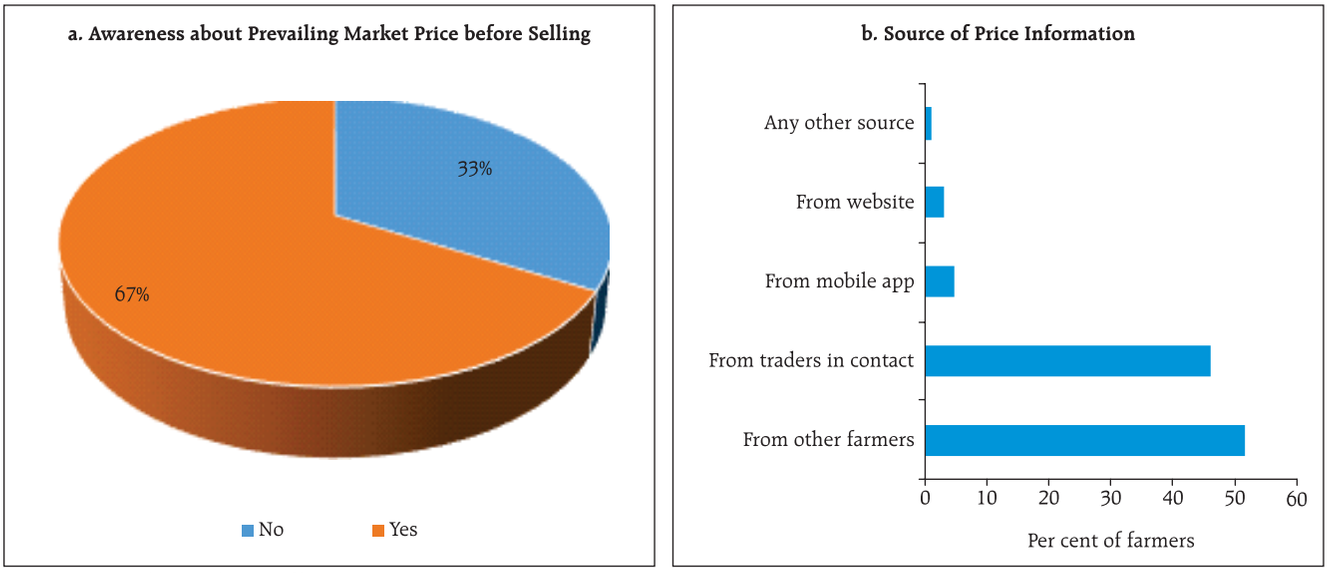
A majority of the traders reported that assaying of products and de-notification of certain products from APMC by the government have helped them and they were of the view that improving storage facilities at the *mandis* and allowing free trade could help them further (Chart 14).

Chart 12: Policies that Benefit Farmers - Farmers' View



Source: Survey data; and RBI staff estimates.

Chart 13: Price Awareness among Farmers

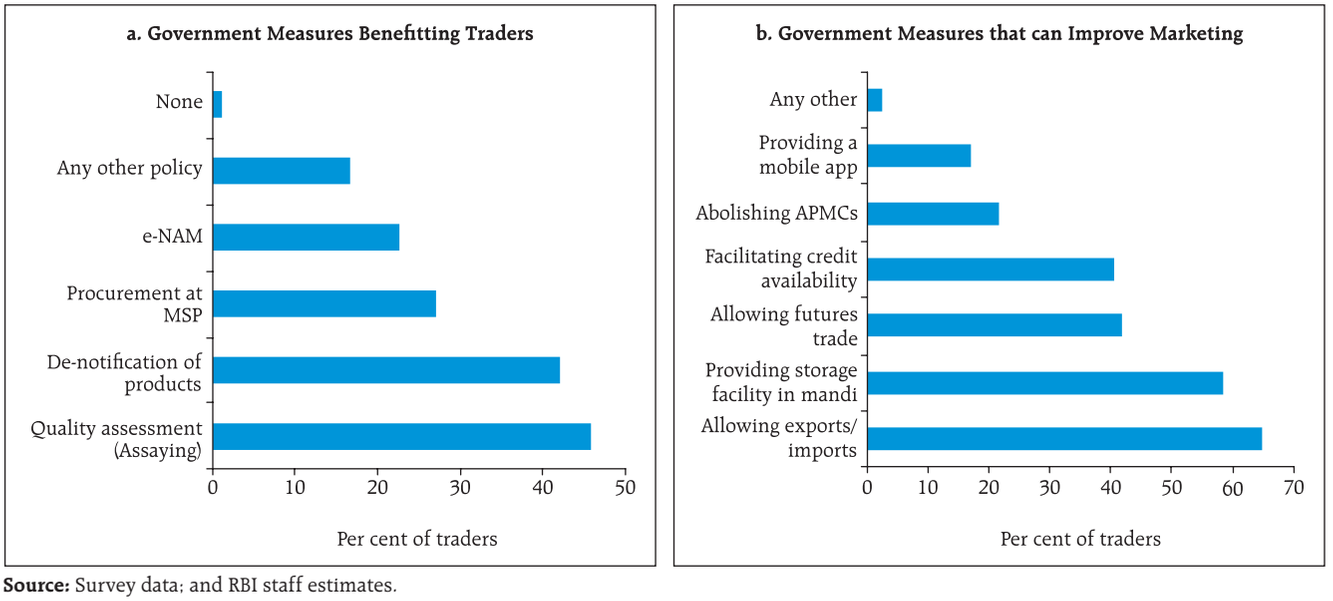


Source: Survey data; and RBI staff estimates.

A majority of the retailers surveyed were of the view that government's supply management measures and better availability of information on the supply-demand situation in the market could help in arresting price pressures (Chart 15).

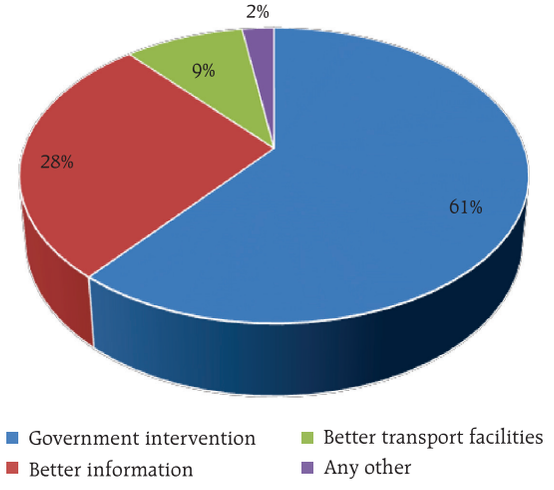
The retailers, while expressing their views on policies that generally help them as well as their customers, also presented their opinion on the factors that determine the final selling prices charged by them to the consumers (Chart 16). A majority of retailers viewed that prevailing market prices and the costs incurred in buying/delivery of products from farmers/ traders determine their selling prices. Further, prices paid and costs incurred are the two major factors that they consider while changing their selling prices to final consumers.

Chart 14: Policies that Benefit Traders - Traders' View



Source: Survey data; and RBI staff estimates.

Chart 15: Policies that may Help Control Prices - Retailers' View



Source: Survey data; and RBI staff estimates.

Empirical Analysis

An empirical exercise was attempted to study the factors that could influence the traders' and retailers' mark-ups using the survey data collected. The following multivariate regression equation was estimated using the Ordinary Least Squares (OLS) method, pooling data across crops and states:

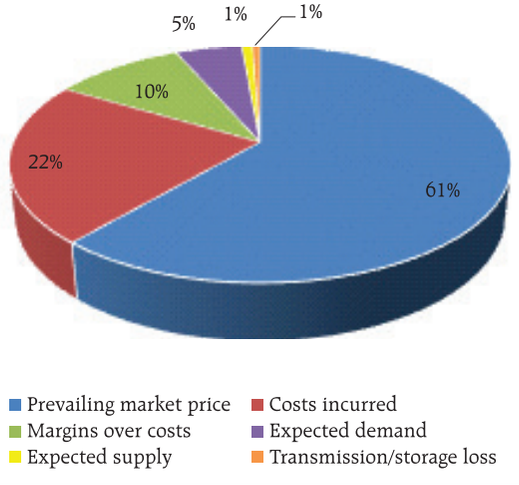
$$M_{ic} = \alpha + \beta_1 I_i + \beta_2 SocioEco_i + \beta_3 Agri_i + \beta_4 C_c + \beta_5 S_i + \varepsilon_{ic}$$

where, i and c represent 'state' and 'commodity', respectively. Here, M_{ic} is the mark-up, defined as selling price less cost price as a percentage of the cost price for traders and retailers. I_i represents infrastructure facilities at the state level, which include tele-density per 100 persons, ratio of number of agricultural markets to the total gross cropped area, ratio of cold storages available to the area under fruits and vegetables, ratio of length of roads to total gross cropped area and ratio of number of rural bank branches to total gross cropped area. $SocioEco_i$ indicates socio-economic characteristics of the states, represented by literacy rate and per capita income. $Agri_i$ indicates agricultural variables, which are percentage of irrigated area to the total cropped area and rainfall deviation from long period average (LPA) (dummy variable taking value '1' for negative deviation and '0' otherwise). C_c and S_i are the vectors of crop and state dummies, respectively, and ε_{ic} is the residual.

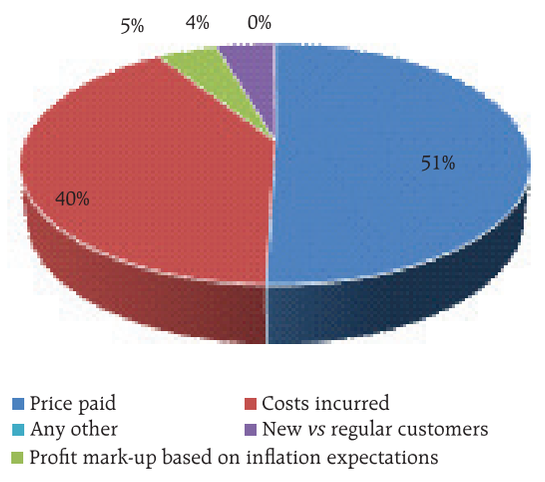
The main model regresses the trader's and retailers' mark-ups on infrastructure, socio-economic and agricultural variables, controlling for crop and state dummies. Since agriculture is a state subject, policies governing agricultural trade and *mandi* fees vary across states. State dummies were introduced

Chart 16: Factors Affecting Selling Prices - Retailers' View

a. Factors Determining Selling Price



b. Factors Changing Selling Price



Source: Survey data; and RBI staff estimates.

Table 3: Results of the Econometric Analysis

	Traders			Retailers		
Dependent variable: Mark-up	Full Sample	Perishable	Non-Perishable	Full Sample	Perishable	Non-Perishable
Tele-density	-1.27*** (0.49)	-1.85** (0.81)	-0.81 (0.62)	-0.36* (0.29)	-0.75* (0.42)	-0.36 (0.30)
Road density	-0.003* (0.002)	-0.006 (0.004)	-0.002 (0.001)	-0.001 (0.001)	-0.004*** (0.002)	-0.0007 (0.001)
Market density	-0.167** (.079)	-0.26* (0.15)	-0.09 (0.09)	-0.095* (0.05)	-0.17 (0.34)	-0.10** (0.05)
Per-capita income	0.63*** (0.18)	0.96*** (0.29)	0.38* (0.23)	0.08 (0.11)	0.32* (0.19)	0.05 (0.11)
Rainfall deviation Dummy when negative	10.3** (4.7)	19.83** (9.79)	3.74 (4.63)	1.97 (4.62)	5.8 (9.6)	6.78 (4.07)
Irrigation intensity	-1.21** (0.48)	-1.99** (0.94)	-0.63 (0.52)	-0.453 (0.31)	-0.55 (0.64)	0.37 (0.30)
Literacy rate	-0.74 (0.55)	-1.46 (1.01)	-0.28 (0.64)	-1.48*** (0.49)	-0.28 (0.83)	-1.74*** (0.45)
Commodity dummy	Yes	Yes	Yes	Yes	Yes	Yes
State dummy	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.42	0.38	0.39	0.54	0.28	0.31
Number of observations	199	79	120	206	78	128

***,** and * represent 1 per cent, 5 per cent and 10 per cent levels of significance, respectively.
Note: Figures in parentheses indicate robust standard errors.

to capture this source of variation. Further, separate models were estimated for perishable and non-perishable commodities.

The empirical results for the full sample indicate that availability of better infrastructure facilities, such as tele-density, all-weather roads and number of markets relative to gross cropped area reduces the mark-ups of both the traders and the retailers (Table 3). Improved infrastructure facilities not only provide direct market access to the farmers but also raise the degree of competition among traders and retailers, which in turn reduces their mark-ups. Agricultural variables like deficiency in rainfall positively influence the trader's mark-ups, while irrigation intensity (*i.e.,* the share of irrigated area in total cropped area) has a negative influence. Deficiency in water availability for irrigation has an adverse effect on yield and quality of the produce, which in turn leads to lower bargaining power of the farmers. While increase in per capita income influences traders' mark-up positively, literacy rate is negatively associated with retailers' mark-up. The negative influence of literacy rate on retailers' mark-up could possibly reflect increased consumer awareness about prevailing prices and alternative buying options like multiple retail outlets and online grocery markets.

In the case of perishable commodities, infrastructure facilities, such as tele-density, all-weather roads and the number of available markets to gross cropped area reduce the mark-ups of both the traders and the retailers. Agricultural variables, rainfall deviation and irrigation intensity influence the traders' mark-up for the perishable commodities but not for the non-perishable commodities. The possible reason could be the presence of government procurement of staple grains. Additionally, for perishables, increase in per capita income positively influences the mark-ups of both the traders and the retailers. Research has shown that an increase in per capita income drove the demand for high-value commodities, such as fruits, vegetables, meat and dairy products (Rao *et al.,* 2006). Better access to transportation, market

infrastructure and communication facilities has been highlighted as a factor behind improving farmer's price realisation in the case of rice and wheat (Chatterjee and Kapur, 2016; Negi *et al.*, 2018; Goyal, 2010). Using *mandi* level data[6] across states and district level procurement data, a study showed that geographies where the *mandi* concentration is higher, farmers are more likely to experience higher prices (Chatterjee and Kapur, 2016). Using data from the NSSO 70th Round and Census 2011 data[7], it was also found that access to information and better transportation network result in better prices for farmers (Negi *et al.,* 2018).

VII. Concluding Observations

Average food inflation in India has moderated significantly since 2013-14. Available macro-level data on drivers of food inflation – production, arrivals, exports/imports, stocks, MSPs, rainfall/sowing pattern, consumption pattern and demand, input costs and global food price trends – at times do not help explain large price differences between *mandis*/ wholesale markets and retail shops, warranting collection of survey based information on supply chain dynamics to understand the determinants of mark-ups, which influence both the level of as well as volatility in food inflation.

The empirical findings of this article based on data collected through a pan-India survey of farmers, traders and retailers provide useful insights on certain important aspects of supply chain dynamics in the agricultural markets in India. The survey findings revealed that farmers' average share in retail prices vary across crops between a range of 28 per cent and 78 per cent. The traders' and retailers' mark-ups were generally found to be higher for perishables than non-perishables. Further, it was observed that the margins for traders and retailers varied across production/ consumption centres, with the retailers' margins generally remaining higher than the traders' margins in consumption centres. Higher retailers' margins could be partly due to significant product loss in the retail marketing stages, particularly for perishables. Further, the mark-ups are influenced by a number of factors, which vary across market participants. For example, commissions and *mandi* charges comprise a major share of the costs borne by farmers, the others being loading/unloading charges and packing, weighing and assaying charges. Labour charges, transport costs, shop rentals and local taxes constitute some of the key cost components for traders and retailers, along with storage costs and membership fees in the case of traders. Cash was reported in the survey as the dominant mode of payments in *mandis.* As regards farmers' perceptions, 62 per cent of the farmers revealed that their selling prices were higher than their production costs. In addition, with regard to government policies, farmers stated that MSPs and readily available market information benefit them in realising better prices. Farmers also revealed that reliable weather forecasts, improved storage facilities and government advisory on crops could help them undertake better cropping decisions. On the other hand, majority of traders viewed that improving storage facility and allowing free trade would be helpful, while most retailers believed that government's supply management measures along with better availability of information would help check food price pressures.

Empirical results show that supply-side improvements like road network, market density, tele-density, irrigation facilities and overall literacy rate in the country help reduce mark-ups, while rainfall deficiency and increase in per-capita income push up mark-ups. Since multi-stage mark-ups across crops play an important role in determining the trajectory of food inflation and its volatility, primary survey based data collected to understand the formation of mark-ups, particularly during periods of supply shocks/behavioural shifts in consumption pattern can help improve the assessment of food inflation dynamics.

[6] Agmarknet provides *mandi* level data for various commodities across districts and states.

[7] Situation Assessment Survey of Agricultural Households, NSSO 70th Round, and Village Amenities Data of Census, 2011.

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Annex 1: List of States and Centres

State/ Union Territory	Consumption Centre	Production Centre
Andhra Pradesh	Visakhapatanam	Guntur, Kadapa, Kandukuru, Madanapalle, Vijayawada
Assam	Guwahati	Boko
Bihar	Gaya, Patna	Bihar Sharif, Patna Market
Gujarat	Ahmedabad, Gandhinagar	Anand, Bahadurpur, Bharuch, Deesa, Junagadh, Mahuva, Mehsana
Himachal Pradesh		Shimla
Jammu and Kashmir	Jammu	
Karnataka	Hubballi, Bengaluru	Bidar, Byadagi, Chintamani, Chitradurga, Gadag, Gulbarga
Kerala	Kochi, Thiruvananthapuram	Idukki, Kollam, Mallapuram
Madhya Pradesh	Bhopal, Indore	Chhatarpur, Chindwara, Dhar, Khandwa, Rajpur
Maharashtra	Mumbai, Nagpur, Pune	Jalgaon, Kolhapur, Lasalgaon, Neri
New Delhi	Azadpur	
Odisha	Bhubaneswar, Rourkela	Anandpur, Balanga, Baripada
Punjab	Amritsar, Chandigarh	Jalandhar, Sangrur
Rajasthan	Jaipur, Kota	Bhawani, Merta
Tamil Nadu	Chennai, Coimbatore	Erode, Tiruchirappalli, Ulundurpet, Vandavasi
Telangana	Hyderabad, Enumamula	Enumamula, Karimnagar, Nizamabad
Uttar Pradesh	Lucknow, Varanasi	Agra, Banda, Lalitpur, Shajahanpur
West Bengal	Asansol, Kolkata	Bhagawangola, Singur

Note: Although the sample covered 18 states, due to unavailability of farmers in select *mandis* in New Delhi and Himachal Pradesh, they were excluded from the analysis of farmers' share in consumer prices.

Annex 2: Major Findings of the Repeat Survey

Chart A1: Farmers' Average Share in Consumer Price - Repeat Survey *vs* Original Survey

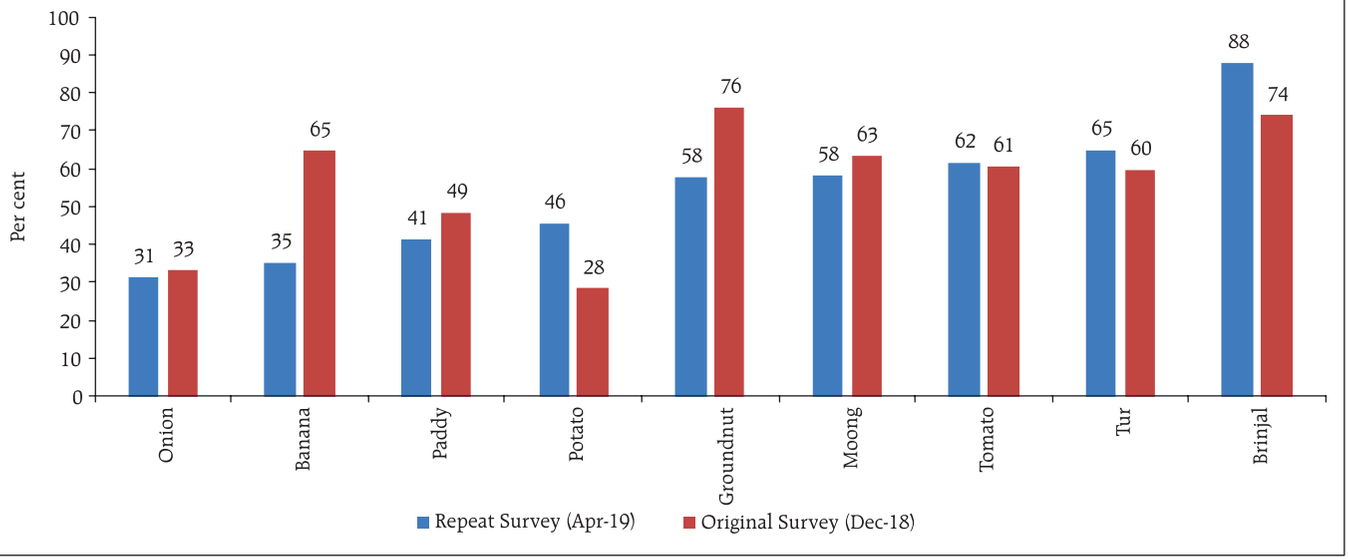
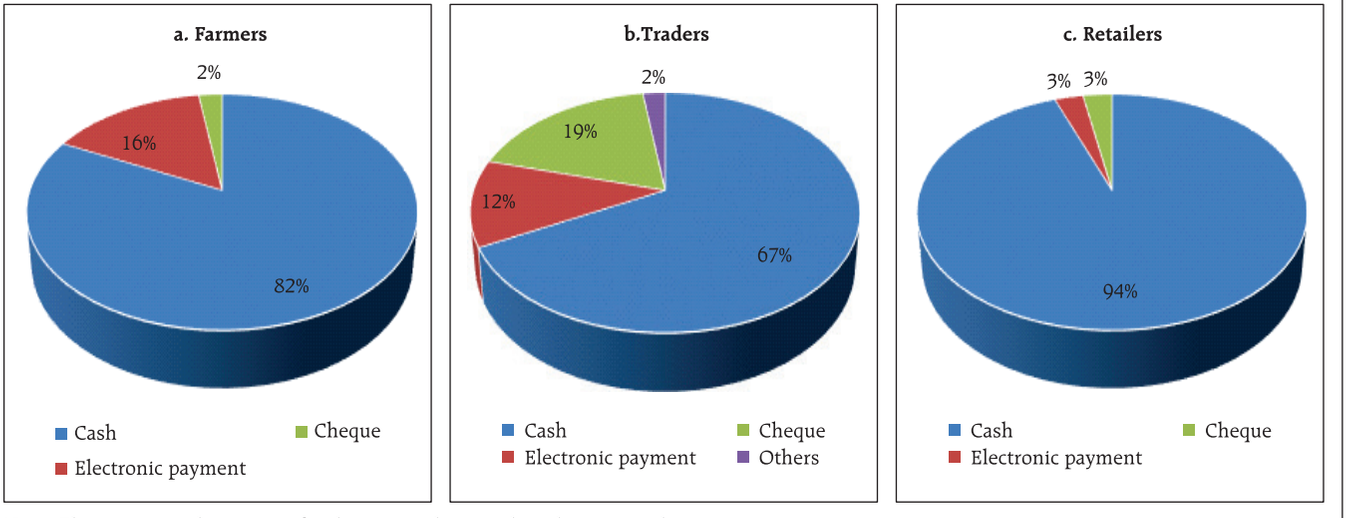


Table A1: Factors Influencing Mark-ups

Farmers	Traders	Retailers
Mandi charges: ₹3.7/Kg Commissions: ₹0.4/Kg	Membership fee: ₹1692/year Shop rentals: ₹8628/month Cess/taxes: ₹0.1/kg	Shop rentals: ₹3791/month Local taxes: ₹0.5/Kg
Loading/Unloading charges: ₹0.6/kg	Labour charges: ₹0.6/kg	Labour charges: ₹0.4/kg
Packing: ₹0.3/kg Weighing: ₹0.2/kg Assaying: ₹0.1/kg	Transport cost: ₹1.1/kg Storage cost: ₹0.5/kg	Transport cost: ₹0.6/Kg

Note: These are sample averages for the commodities and markets covered.

Chart A2: Mode of Payment



Note: These are sample averages for the commodities and markets covered.

Drivers of Credit Penetration in Eastern India *

This article highlights that the eastern region of India continues to lag behind other regions in harnessing the potential of bank credit as an instrument to promote growth and development, notwithstanding concerted policy efforts to further financial inclusion in the region. While enhancing access to credit remains critical to strengthen credit penetration in the region, empirical findings suggest that factors influencing demand for credit – per capita income, level of industrial activity and availability of infrastructure such as road network and power supply – also matter.

Introduction

Access to financial services, in particular credit, is a well-established harbinger of economic prosperity. At the sub-national level in India, banking outreach in terms of penetration of credit, however, remains quite heterogeneous. Southern and western regions have witnessed relatively stronger penetration of credit with credit to deposit (CD) ratio of 93.2 per cent and 90 per cent, respectively, as at end-March 2018 coinciding with higher per capita income and relatively better levels of industrialisation. The eastern area (EA)[1], especially the north-east, (with CD ratio of 44.1 per cent and 41 per cent, respectively) clearly lag behind, coterminous with their lower per capita income and weaker industrial base.

Constricted financial inclusion of the EA, especially the north-eastern region (NER) has for long engaged the attention of various committees set up by the Government of India and Reserve Bank of India (RBI) [such as the Financial Sector Plan for NER (2006); Committee on Financial Inclusion (2008); Committee on Comprehensive Financial Services for Small Businesses and Low-income Households (2014); and Committee on Medium-term Path on Financial Inclusion (2015)]. For improving branch penetration, the Reserve Bank relaxed the branch authorisation policy in December 2009, specifically for the north-eastern states and Sikkim, and allowed domestic scheduled commercial banks (SCBs) to open branches in rural, semi-urban and urban centres without having the need to take permission from the Reserve Bank in each case[2]. While this policy push has brought about a significant improvement in usage of deposit services, credit intermediation, which is crucial for fostering growth, remains inadequate in the region.

Against this backdrop, this article seeks to investigate empirically the factors influencing banking outreach in EA. Analysis suggests that relatively weaker credit penetration in the EA has coincided with its lower per capita income level, industrial activity as also inadequate availability of infrastructural facilities. Empirical estimation reveals that these factors have played a constraining influence on the extent of credit penetration in the region. This article uses a richer database for all states and 3 union territories.[3] Section II highlights how the banking outreach parameters of the region compare *vis-à-vis* other regions of the country. Section III describes data used for empirical analysis, while section IV presents empirical findings. Section V concludes.

II. Banking Outreach in the Eastern Area

Access and usage of banking services in the EA appear disproportionate relative to its share in the

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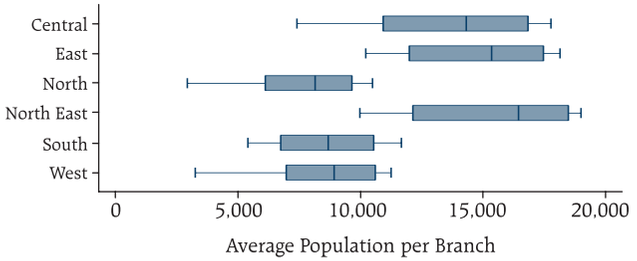
[1] Eastern Area (EA) comprises 12 states and one UT, which are distributed in two regions, *viz.*, eastern region (comprising the West Bengal, Bihar, Orissa, Jharkhand, and Andaman & Nicobar Islands) and north-eastern region (consisting of Assam, Manipur, Meghalaya, Mizoram, Arunachal Pradesh, Nagaland, Tripura, and Sikkim).

[2] https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=5398&Mode=0

[3] Kumar (2013) had used a database for 29 states and union territories in his analysis.

Chart 1: Region-wise Average Population Per Bank Branch



Notes: 1. The classification of states under various regions are: Central – Chhattisgarh, Madhya Pradesh, Uttar Pradesh, and Uttarakhand; East – Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha, and West Bengal; North East (N.E.) – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura; North – Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, and Rajasthan; South – Andhra Pradesh, Karnataka, Kerala, Puducherry, and Tamil Nadu; and West – Goa, Gujarat, and Maharashtra.

2. The vertical line that divides the box represents the median of the distribution of the variable for that region. The range of the values in the entire distribution is marked from the end-point of the left whisker to the terminal-point of the right whisker. The dimension of the box, per se, shows how widely the values are spread on both sides of the median.

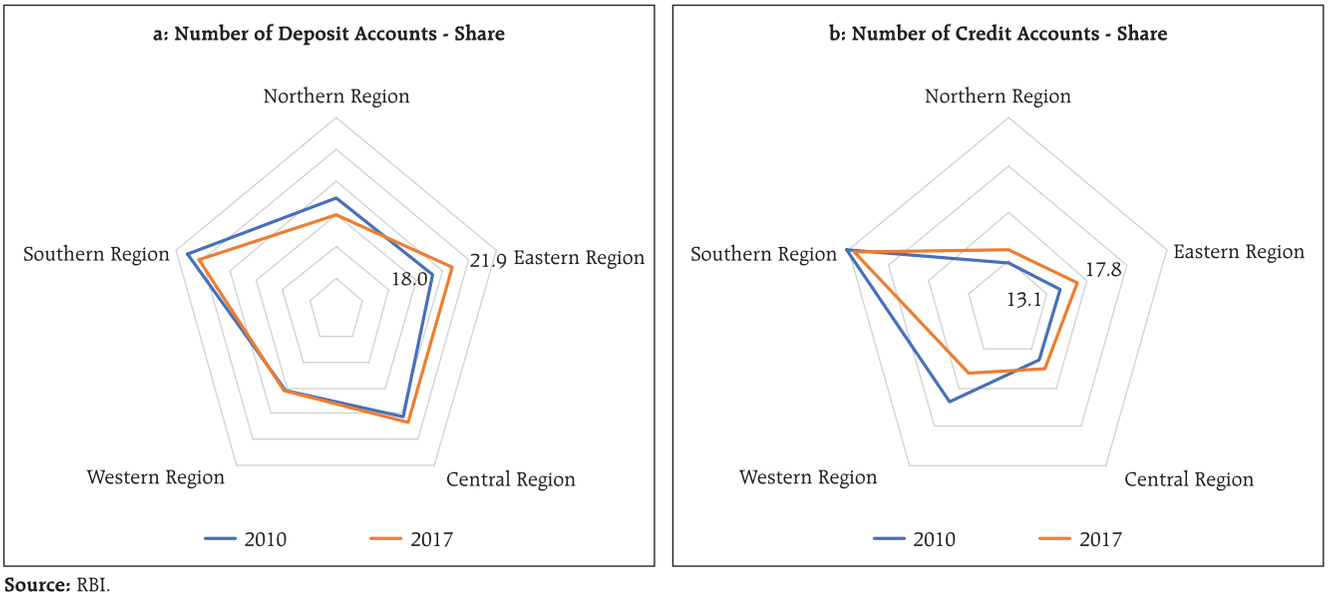
Source: Basic Statistical Returns of Scheduled Commercial Banks (SCBs) in India, RBI; National Statistical Office (NSO) and Authors' calculations.

population of the country and the geographical area.[4] The average population served per bank branch in the EA remains higher (Chart 1).

Between 2010 and 2017, the share of EA in total number of credit and deposit accounts in the country has improved significantly (Charts 2a and 2b). An analysis of distribution of the number of deposit and credit accounts per 1,000 population from 2005 also confirms a secular expansion in the usage of deposit and credit services during this period.[5] However, the analysis also lays bare the regional disparity in banking penetration. The east and north-east regions lag behind the south, west and north regions in terms of median usage of financial services (Charts 3a and 3b). Given its developmental challenges, financial inclusion efforts in the country cannot succeed unless due attention is bestowed to the EA.[6]

Banking activity in the EA remains tilted towards deposit mobilisation, which far outweighs credit disbursement. While the share of the EA in outstanding bank deposits stood at 15.1 per cent, it was lower at 8.1 per cent for bank credit as at end-March 2018. Accordingly, credit-intermediation (credit-deposit ratio) in the eastern region has remained significantly lower (Chart 4). Despite its

Chart 2: Share in the Number of Deposit and Credit Accounts (per cent)



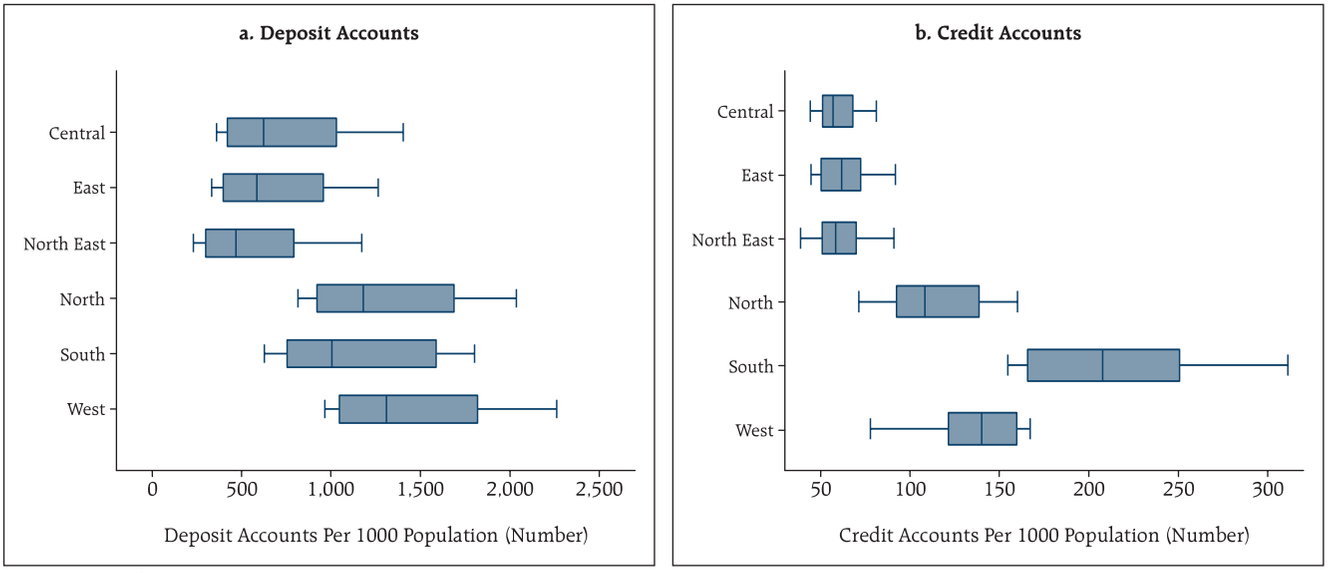
Source: RBI.

[4] The Eastern area accounts for about 31 per cent and 26 per cent of the total geographical area and population of the country, respectively.

[5] Typically, deposit and credit accounts follow an upward trend; hence, the expanse of boxes (from left whisker to the right) in the figure can be considered synonymous to their temporal movement during the period of analysis.

[6] Various committees [GoI (2008) and RBI (2015)] appointed to suggest measures to improve financial inclusion have highlighted the problem of financial exclusion in the eastern part of the country.

Chart 3: Regional Distribution of Deposit and Credit Accounts Per 1000 Population (Number)

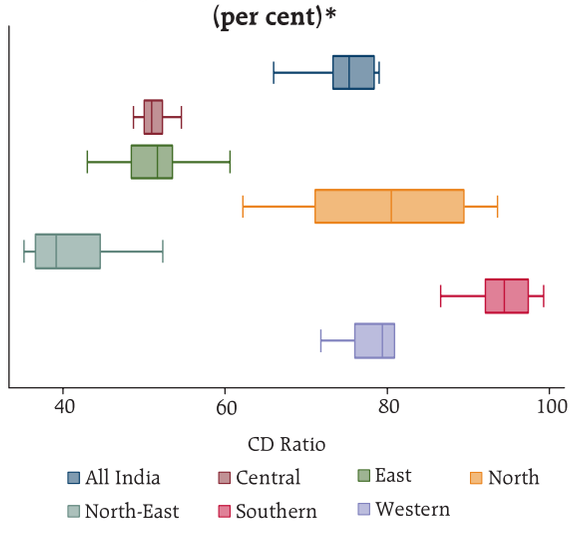


Source: RBI and NSO.

stronger agrarian orientation, not only does the region have the lowest share in agriculture credit disbursement, there has also been a slackening of pace in farm credit deployment by the SCBs in the last couple of years.

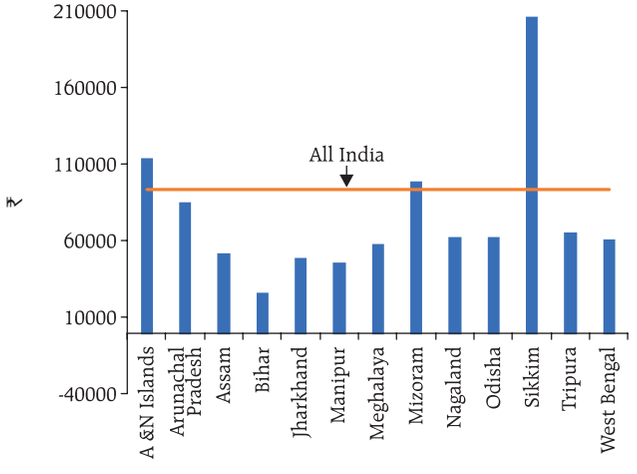
Empirical research on financial development suggests that while supply-oriented financial inclusion policies (like branch penetration) help foster the delivery of financial services (Burgess and Pande, 2005), demand dynamics, in turn, gets influenced by economic growth (Zang and Kim, 2007). Economic prosperity, in particular industrial development, plays a vital role in spurring the use of financial services in a region (Beck, *et al*, 2008; Rajan and Zingales, 1998). To this end, all the states of EA, barring Sikkim and Mizoram, are characterised by below national average per capita income (Chart 5).

Chart 4: Region-wise CD Ratio (at end-March) (per cent)*



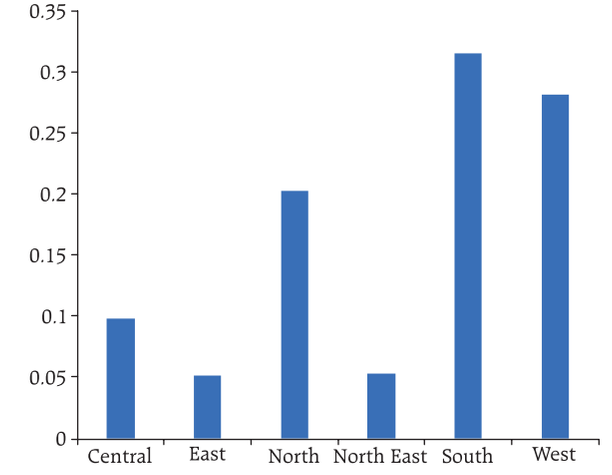
***:** Based on Utilisation.
Source: RBI.

Chart 5: Per Capita NSDP in the Eastern Area (2016-17)#



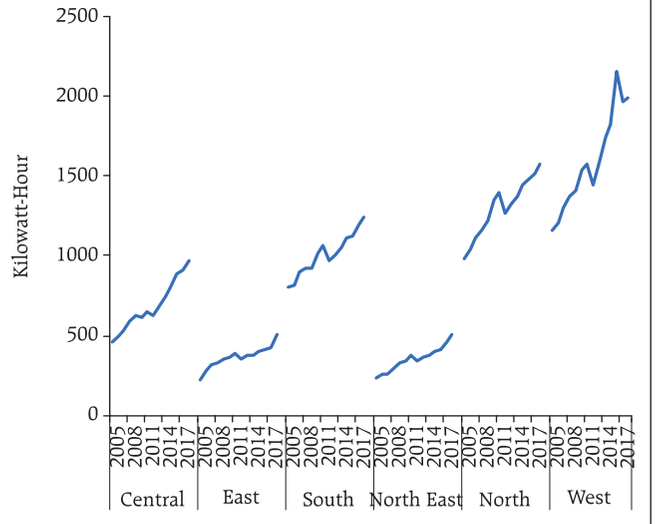
#: Data was not available for Assam, Nagaland, and A&N Islands for 2017-18 and therefore, the chart relates to data for 2016-17.
Source: NSO.

Chart 6: Average Number of Factories per 1000 Population@



@: Average from 2005 to 2017.
Source: NSO.

Chart 8: Per Capita Availability of Power (Kilowatt-Hour)

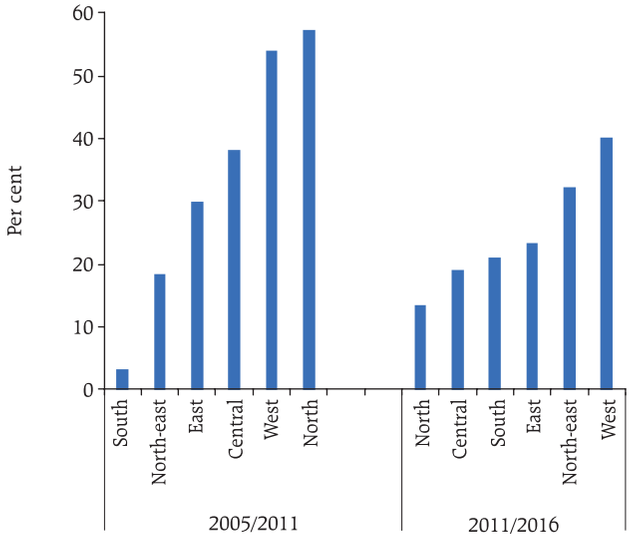


Source: RBI and Central Electricity Authority (CEA).

In terms of industrial development, lower figures for the number of factories per 1,000 population for the EA highlights the extent of gap that needs to be bridged for catching-up with the front-running regions (Chart 6).

Lower banking outreach of the EA could also be attributed to inadequate availability of physical infrastructure facilities such as roads and power, which create enabling conditions for boosting economic activity and thereby improve demand for banking services. Although road network has notably improved, situation remains less than satisfactory (Charts 7 and 8).

Chart 7: Growth in Road Networks



Source: RBI and NSO.

III. Data Description

Banking penetration does not mean mere availability of more bank branches, usage of its services is equally important as it is the latter, which ultimately brings the desired results in terms of growth and development. Access to banking services implies only the availability aspect, which can be assessed through an indicator such as the number of bank branches per thousand population. Usage of banking services, in turn, can be gauged through the number of deposit and credit accounts per 1,000 population. For the analysis in this article, data, both on the access and usage indicators of banking services have been used.

A rich sub-national annual database for 32 states and union territories (UTs) [excluding Lakshadweep, Dadra and Nagar Haveli, and Daman and Diu] for various indicators has been used (Table 1). The variables have been normalised appropriately. Per capita income captures the level of economic

Table 1: Description of Variables

Notations	Variables	Sources
CDU	Credit-deposit ratio (per cent)	RBI
CRAC	Number of credit accounts per thousand population	RBI and NSO
DPAC	Number of deposit accounts per thousand population	RBI and NSO
APPB	Average population per branch	RBI and NSO
POWER	Per capita power availability (Kilowatt-Hour)	RBI and CEA
ROAD	Road density (Length of road per square Km area)	RBI and NSO
LOGPCI	Logarithm of per capita income	RBI
FAC	Number of factories per '000 population	NSO
INVCAP	Invested capital in factories per '000 population (Rupees)	NSO
AGCR	Per capita agricultural credit (Rupees)	RBI and NSO

development of the state/ UT. Higher per capita income is expected to be associated with increased banking activity as people increasingly take recourse to financial transactions. Average population per bank branch (APPB) is the ratio of population to the total number of branches in the concerned state/ UT. A higher APPB implies greater population pressure on bank branches.

Number of factories per thousand population (FAC) is considered as a proxy for industrial activity. Pick-up in industrial activity is expected to foster banking transactions as salary disbursement, household savings and credit disbursals are made through deposit/credit accounts.

Better access to power is expected to foster not only availability of banking services in the present era of core banking but also provide a fillip to industrialisation, economic activity and thereby generate a higher demand for financial services. Empirical evidence suggests the critical role of infrastructure in influencing banking outreach in major states of India (Ghosh, 2015). Availability of denser road network is expected to provide better regional connectivity and transportation facilities and thereby boost economic activity, individual income levels and banking activity. Improved agricultural credit offtake is expected to boost economic activity in rural areas and through inter-linkages generate demand impulses in other sectors and thereby reinvigorate demand for banking services.

IV. Empirical Findings

Summary statistics of the variables used in estimation suggests that the eastern area states/ UTs fare poorly across all parameters *vis-à-vis* corresponding all India figures (Table 2). CD ratio remains very low. The number of credit accounts and deposit accounts per 1,000 population remain about 60 per cent of all India averages during the period of analysis. From the policy perspective, it is important to understand the dynamics as to what factors influence banking outreach in the EA so that appropriate policy interventions could be made.

Table 2: Summary Statistics of Variables (2005 to 2018)

Variables	Region	Mean	Std. Dev.	Min.	Max.	No. of Obs.
CDU	All India	58.8	25.0	23.2	133.7	448
CDU	Eastern Area	42.2	13.3	23.2	113.9	182
CDU	North-East	39.9	12.6	23.2	113.9	112
APPB	All India	11608.5	6259.6	0.0	34879.3	448
APPB	Eastern Area	14759.8	6908.1	0.0	34879.3	182
APPB	North-East	14695.3	7904.8	0.0	34879.3	112
CRAC	All India	104.7	74.5	20.3	522.0	432
CRAC	Eastern Area	62.0	25.3	20.3	205.3	174
CRAC	North-East	60.5	27.2	20.3	205.3	105
DPAC	All India	900.5	641.5	0.6	3805.8	432
DPAC	Eastern Area	541.9	342.8	0.6	1538.2	174
DPAC	North-East	521.4	309.9	115.7	1538.2	105
POWER	All India	825.0	578.8	78.0	3511.6	446
POWER	Eastern Area	358.3	172.3	78.0	798.1	180
POWER	North-East	354.2	165.2	134.4	798.1	111
ROAD	All India	2.7	4.7	0.1	25.7	384
ROAD	Eastern Area	1.4	1.2	0.2	4.2	156
ROAD	North-East	1.4	1.2	0.2	4.2	96
PCI	All India	10.6	0.5	9.0	12.2	342
PCI	Eastern Area	10.4	0.5	9.0	11.6	138
PCI	North-East	10.4	0.4	9.9	11.5	84
AGCR	All India	5124.6	6805.4	177.8	55182.6	415
AGCR	Eastern Area	1488.4	1027.4	177.8	6787.3	157
AGCR	North-East	1239.2	787.4	177.8	4380.3	95
FAC	All India	0.162	0.149	0.0	0.709	421
FAC	Eastern Area	0.054	0.037	0.0	0.146	164
FAC	North-East	0.056	0.043	0.0	0.146	95
INVCAP	All India	19988.9	24503.0	0.0	134302.9	432
INVCAP	Eastern Area	8763.6	17196.0	0.0	134302.9	172
INVCAP	North-East	6043.8	16358.4	0.0	134302.9	105

Using annual data for 2005 to 2018, a panel data regression was employed to investigate empirically the factors influencing the behavior of three variables of interest - deposit accounts per 1,000 population, credit accounts per 1,000 population, and the CD ratio. Separate estimations were carried out for all India and the EA. The explanatory variables included; branch penetration, basic infrastructure, economic condition, level of industrial activity and credit absorption by major sectors in the economy. The hypotheses to be tested derive weights from the relevant literature – relating to availability of basic infrastructure to economic growth (Rosenstein-Rodan, 1943; Nurkse, 1955; Hirschman, 1958; Rostow, 1965); and connecting economic development to finance (Robinson, 1952).

The Hausman test was found to favour fixed effects[7] over the random effects model. The static fixed effects model, however, could suffer from endogeneity problem of joint determination of the cause and effect variables. It also biases the estimates when the dynamic nature of the economic variables needs to be controlled for. Generalised Method of Moments (GMM) estimators are better suited for such conditions (Arellano and Bond, 1991; Arellano and Bover, 1995). The system GMM approach has been applied in the article as opposed to the difference GMM method because the former has been reported to be a more efficient and stable estimator when the autoregressive process of the dependent variable is highly persistent (Blundell and Bond, 1998). The two equations - in levels and in differences - in a system GMM are presented as below:

$$Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 X_{it} + (\alpha_i + \varepsilon_{it}) \quad (1)$$

$$\Delta Y_{it} = \beta_1 \Delta Y_{it-1} + \beta_2 \Delta X_{it} + \Delta\varepsilon_{it} \quad (2)$$

where Y_{it} represents the dependent variable of interest for the i^{th} state at the t^{th} period, X_{it} is the matrix of explanatory variables (average population per branch, per capita availability of power, per capita income, number of factories and invested capital per 1,000 population and agricultural credit absorption), α_i is the state-specific fixed effect parameter for capturing idiosyncratic features of state i and ε_{it} is the stochastic disturbance term distributed normally with mean 0 and variance σ^2.

System GMM estimation (which is suitable for a 'small T, large N' panel) was undertaken separately for broken time periods 2005-10 and 2011-18, respectively. Breaking of time periods was guided by the Chow break-point[8] test as also the introduction of the financial inclusion plan in April 2010, which provided a policy push for creation of a significant number of deposit and credit accounts. Results of the estimation are as follows.

For the EA as also at the all India level, improvement in income level and industrial activity were found to prop up number of deposit accounts per 1,000 population (Table 3). APPB is found to be positively related to the number of deposit accounts for both the EA as well all India until 2010. Post

Table 3: Dynamic Panel Estimation for Deposit Accounts

[Dependent Variable – Deposit Accounts (DPAC)]

	(1)	(2)	(3)	(4)
	EA (2005-10)	All India (2005-10)	EA (2011-18)	All India (2011-18)
$DPAC_{t-1}$	1.069*** (0.025)	0.792*** (0.047)	1.353*** (0.068)	0.968*** (0.016)
$LOGPCI_{t-1}$	56.88*** (15.66)	374.2*** (32.85)		
ΔLOGPCI			1795.3*** (204.6)	942.1*** (39.33)
$APPB_{t-1}$	0.003* (0.001)	0.008* (0.003)	0.008** (0.0025)	-0.016*** (0.002)
ΔFAC	592.1*** (99.23)	274.7*** (54.37)	2581.1*** (649.8)	482.5*** (69.55)
constant	-627.9*** (176.2)	-3849.2*** (321.2)	-343.7*** (71.95)	292.9*** (34.95)
Observations	60	155	43	114
AR(2) (p-value)	0.07	0.53	0.66	0.89
Sargan (p-value)	0.67	0.10	0.70	0.28

Notes: 1. Standard errors in parentheses.
2. $^{+}p< 0.10$, $^{*}p< 0.05$, $^{**}p< 0.01$, $^{***}p< 0.001$.

[7] Results, available on request, not reported here for the sake of brevity.

[8] Result not reported for the sake of brevity.

2010, however, at the all India level, it is found to be inversely related. At the all India level, the average number of deposit accounts per 1,000 population in 2017 was 8,492, while for the eastern area it was 2,418. Recent initiatives towards branch rationalisation by banks on the back of penetration of technology add weight to this finding. For the eastern area, on the contrary, the positive effect of APPB on the number of deposit accounts in the short-run seems to suggest the need for furthering financial inclusion through branch expansion in this region.

While during 2005-10, the level of per capita income was found to increase the number of deposit accounts directly, growth in income was found to expand it in recent times. Possibly, bank deposits have become more closely associated with economic activity from 2010-11 (Saxena and Sreejith, 2018). Growth in per capita income is found to translate into more deposit accounts per 1,000 population in the EA than at all India level given the lower per capita income level of the former. An increase in the number of factories and resultant higher income generating capacity leads to more deposit penetration in the (relatively underbanked) EA *vis-a-vis* all India. The above findings indicate that financial inclusion efforts would bear fruits for the EA if concerted efforts are made for augmenting per capita income as also industrial activity.

A rise in per capita income in the EA is also found to positively influence the number of credit accounts. Reflecting lower credit absorption capacity of the region - given its agrarian orientation and low industrial base - the impact of rising income on credit accounts was found to be significantly lower compared with estimates for all India during 2005-10 (Table 4).[9] However, during 2011-18, an increase in income is found to have propelled higher demand for credit accounts in the EA *vis-a-vis* all India.

[9] In terms of location of industries, the eastern area accounts for the lowest share of 10.4 per cent of the total number of factories at the all India level (as in 2016-17) among all regions.

Table 4: Dynamic Panel Estimation for Credit Accounts

[Dependent Variable – Credit Accounts (CRAC)]

	(1)	(2)	(3)	(4)
	EA (2005-10)	All India (2005-10)	EA (2011-18)	All India (2011-18)
$CRAC_{t-1}$	0.451*** (0.089)	0.343*** (0.0162)	0.436*** (0.108)	0.708*** (0.0237)
$LOGPCI_{t-1}$	9.214+ (4.894)	71.97*** (4.649)	52.06** (17.89)	41.34*** (4.099)
$INVCAP_{t-1}$	0.00012 (0.0002)	-0.00031*** (0.00005)	0.00076*** (0.0002)	-0.00047*** (0.00004)
ΔAGCR	0.006*** (0.0005)		0.006*** (0.0008)	
$POWER_{t-1}$		0.018*** (0.003)		0.0112*** (0.003)
constant	-65.73 (48.63)	-701.5*** (45.31)	-514.3** (181.3)	-404.7*** (41.35)
Observations	54	158	55	150
AR(2) (p-value)	0.06	0.15	0.82	0.35
Sargan (p-value)	0.99	0.22	0.73	0.29

Notes: 1. Standard errors in parentheses.
2. $^{+}p< 0.10$, $^{*}p< 0.05$, $^{**}p< 0.01$, $^{***}p< 0.001$.

Growth in the number of credit accounts in the EA is found to prop up credit to deposit ratio significantly and by a larger magnitude *vis-à-vis* all India (Table 5). Higher sensitivity of CD ratio during

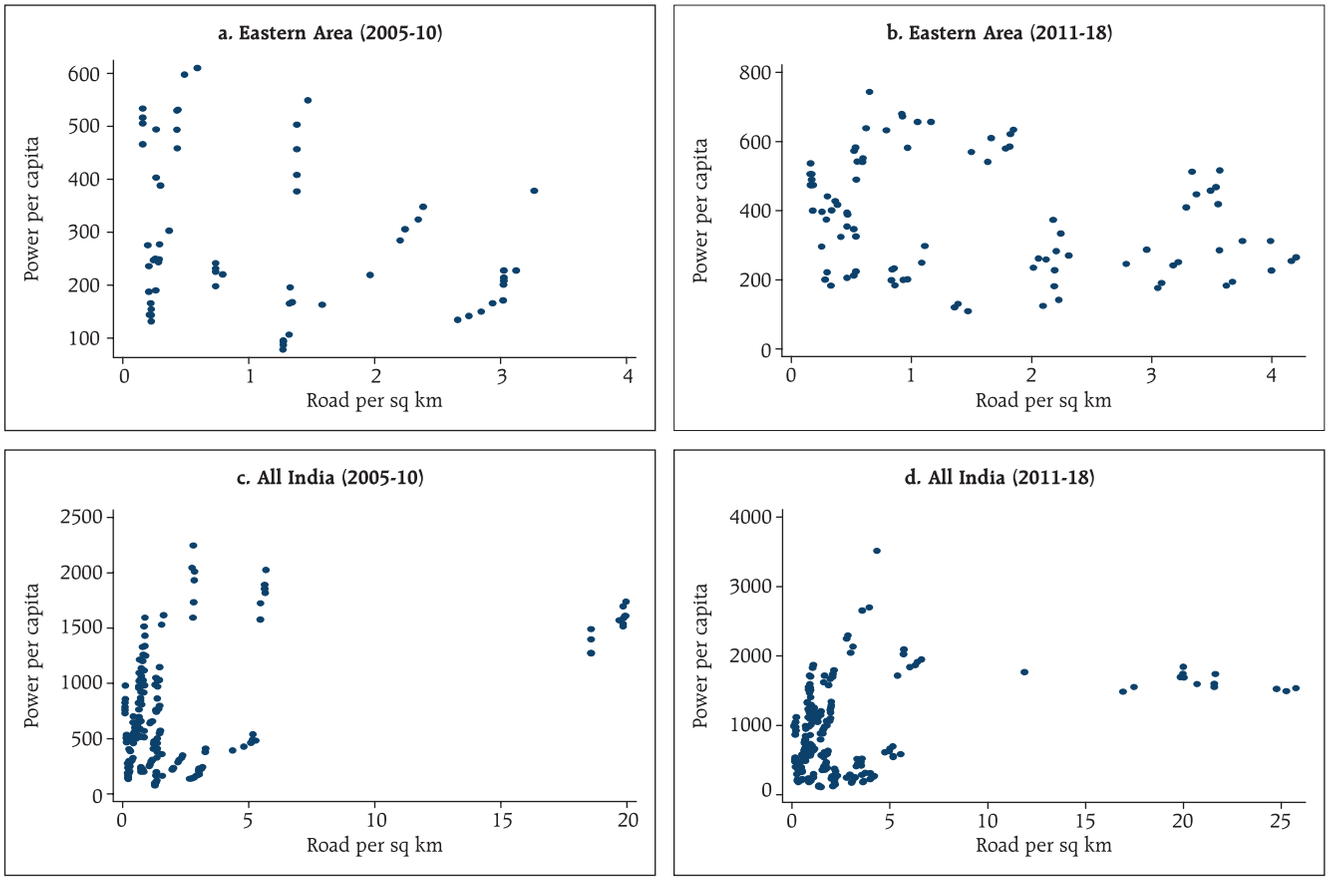
Table 5: Dynamic Panel Estimation for CD ratio

[Dependent Variable – CD ratio (CDU)]

	(1)	(2)	(3)	(4)
	EA (2005-10)	All India (2005-10)	EA (2011-18)	All India (2011-18)
CDU_{t-1}	0.789*** (0.096)	0.262*** (0.067)	-0.129*** (0.035)	0.421*** (0.007)
$DPAC_{t-1}$	-0.064*** (0.013)	-0.018* (0.008)	-0.017*** (0.003)	-0.004*** (0.0004)
$POWER_{t-1}$	0.051* (0.021)	0.010* (0.005)	0.0429*** (0.009)	0.003*** (0.0005)
ΔCRAC	1.847*** (0.554)	0.174*** (0.0488)	0.136** (0.0418)	0.033*** (0.003)
$ROAD_{t-1}$		2.301** (0.722)	4.295** (1.509)	1.642*** (0.055)
constant	12.71+ (7.257)	38.89*** (3.123)	31.98*** (4.329)	30.24*** (1.179)
Observations	63	158	77	191
AR(2) (p-value)	0.47	0.65	0.27	0.28
Sargan (p-value)	0.69	0.18	0.91	0.51

Notes: 1. Standard errors in parentheses.
2. $^{+}p< 0.10$, $^{*}p< 0.05$, $^{**}p< 0.01$, $^{***}p< 0.001$.

Chart 9: Scatter Plot for Road Density and Power in Eastern Area



Source: NSO, RBI and authors' calculations.

2005-10 in the EA may reflect high credit growth recorded during this period. The responsiveness of CD ratio to the number of credit accounts per 1,000 population during 2011-18 in EA, however, has been muted. As noted by CRISIL (2018), the mean number of credit accounts per 1,000 population increased sharply in India during 2011-18 because of proliferation of credit accounts in the eastern area, post Jan Dhan Yojana (JDY). This may reflect the effort to reach out than actual demand for credit. At the all India level, higher availability of power per capita and greater road density is found to have a significant positive impact on the amount of credit utilised per unit of deposit. In the EA, progress of power and roads did not move together during 2005-10 (Chart 9a). Nevertheless, when both power and roads improved during 2011-18 (Chart 9b), it had a favourable impact on the CD ratio in the EA. Lack of complementarity in development of related infrastructure facilities could hinder their individual effectiveness (Markard and Hoffman, 2016; OECD, 2007).

V. Concluding Observations

Given the limited outreach of the banking sector in the eastern area relative to other regions of the country, there remains a significant scope for the financial sector to play its due role in spurring growth and addressing socio-economic challenges. Rise in income level, a stronger industrial base and better infrastructural facilities (such as power availability and road network) are found to facilitate higher penetration of credit. Complementarity in the development of infrastructural facilities is also found to be crucial for promoting industrialisation and thereby increasing the demand for credit.

While recent financial inclusion initiatives such as JDY have succeeded in making available No Frills Accounts/ 'Basic Savings Bank Deposit Accounts' to households across the country, mere increase in deposit accounts per 1,000 population is not sufficient to realise the potential contribution of financial inclusion to economic growth. As the estimation results suggest, linking such bank accounts with credit is equally important, which might help improve the CD ratio. There is also a need for tailor-made policy interventions in individual states/ UTs of the eastern area for financial outreach efforts to be successful, given the marked heterogeneity in landscape, socio-economic conditions, agro-climatic regions, endowment of human resources and infrastructural conditions.

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PRESS RELEASE OF WORKING PAPER

Macroeconomic Forecasting in India: Does Machine Learning Hold the Key to Better Forecasts?

Macroeconomic Forecasting in India: Does Machine Learning Hold the Key to Better Forecasts?

The Reserve Bank of India today placed on its website a Working Paper titled "Macroeconomic Forecasting in India: Does Machine Learning Hold the Key to Better Forecasts?" under the Reserve Bank of India Working Paper Series[1]. The Paper is authored by Bhanu Pratap and Shovon Sengupta.

The paper reviews the paradigm of machine learning (ML) and applies it to forecast Consumer Price Index (CPI) based inflation for India. The study trains various machine learning algorithms and tests them against standard statistical models in forecasting headline, food, fuel and core measures of inflation. Main findings of the paper suggest that ML methods are generally able to outperform standard statistical models. Further, it finds that simple average-based forecast combinations generally outperform all individual models. Simple weight scheme also outperforms the complex weight method. Notwithstanding the debate on optimum combination method, these results suggest that forecast combination is a good practice to achieve better forecasts. The paper also compares the approaches of directly forecasting headline inflation versus separately forecasting its components and combining them to generate a forecast for headline inflation. It finds no meaningful gains in forecasting accuracy using the latter approach. The study concludes by noting that the field of machine learning offers a new paradigm with tools and methods to incorporate new data as well as more complex methods in a policymaker's forecasting toolkit.

[1] The Reserve Bank of India introduced the RBI Working Papers series in March 2011. These papers present research in progress of the staff members of the Reserve Bank and are disseminated to elicit comments and further debate. The views expressed in these papers are those of authors and not of the Reserve Bank of India. Comments and observations may kindly be forwarded to authors. Citation and use of such papers should take into account its provisional character.

CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

Contents

Notes: .. = Not available.

– = Nil/Negligible.

P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2018-19	2017-18	2018-19		2019-20
		Q4	Q1	Q4	Q1
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	6.6	7.9	7.7	5.7	4.9
1.1.1 Agriculture	2.9	6.5	5.1	-0.1	2.0
1.1.2 Industry	6.2	8.6	9.9	3.4	1.7
1.1.3 Services	7.7	8.0	7.5	8.2	6.7
1.1a Final Consumption Expenditure	8.3	10.4	7.2	8.1	4.1
1.1b Gross Fixed Capital Formation	10.0	11.8	13.3	3.6	4.0
	2018-19	**2018**		**2019**	
		Jul.	**Aug.**	**Jul.**	**Aug.**
	1	2	3	4	5
1.2 Index of Industrial Production	3.80	6.5	4.8	4.3	-
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	10.0	8.7	8.9	9.6	9.7
2.1.2 Credit	13.3	12.3	13.4	12.1	10.2
2.1.2.1 Non-food Credit	13.4	12.5	13.5	12.1	10.1
2.1.3 Investment in Govt. Securities	1.9	6.8	5.1	1.3	2.1
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	14.5	20.6	19.0	12.9	13.1
2.2.2 Broad Money (M3)	10.5	9.9	10.8	10.6	9.8
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.00	4.00	4.00	4.00	4.00
3.2 Statutory Liquidity Ratio	19.25	19.50	19.50	18.75	18.75
3.3 Cash-Deposit Ratio	5.1	4.7	4.7	4.8	4.9
3.4 Credit-Deposit Ratio	77.7	74.7	75.4	76.5	75.7
3.5 Incremental Credit-Deposit Ratio	99.9	-8.9	70.5	-186.1	-44.4
3.6 Investment-Deposit Ratio	26.9	30.0	30.1	27.7	28.0
3.7 Incremental Investment-Deposit Ratio	5.4	136.9	84.4	207.1	96.5
4 Interest Rates (%)					
4.1 Policy Repo Rate	6.25	6.25	6.50	5.75	5.40
4.2 Reverse Repo Rate	6.00	6.00	6.25	5.50	5.15
4.3 Marginal Standing Facility (MSF) Rate	6.50	6.50	6.75	6.00	5.65
4.4 Bank Rate	6.50	6.50	6.75	6.00	5.65
4.5 Base Rate	8.95/9.40	8.75/9.45	8.75/9.45	8.95/9.40	8.95/9.40
4.6 MCLR (Overnight)	8.05/8.55	7.90/8.05	7.90/8.05	8.00/8.40	7.90/8.40
4.7 Term Deposit Rate >1 Year	6.25/7.50	6.25/7.00	6.25/7.25	6.25/7.30	6.35/7.10
4.8 Savings Deposit Rate	3.50/4.00	3.50/4.00	3.50	3.25/3.50	3.25/3.50
4.9 Call Money Rate (Weighted Average)	6.35	6.21	6.36	5.59	5.36
4.10 91-Day Treasury Bill (Primary) Yield	6.31	6.69	6.81	5.65	5.41
4.11 182-Day Treasury Bill (Primary) Yield	6.35	6.97	7.02	5.88	5.63
4.12 364-Day Treasury Bill (Primary) Yield	6.39	7.27	7.33	5.94	5.72
4.13 10-Year G-Sec Par Yield (FBIL)	7.34	7.76	7.95	6.47	6.70
5 Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (Rs. Per Foreign Currency)	69.17	68.70	70.93	69.06	71.76
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	77.70	79.78	82.84	76.94	79.24
5.3 Forward Premia of US$ 1-month (%)	6.07	4.37	4.40	4.00	3.85
3-month (%)	4.80	4.37	4.34	4.09	4.18
6-month (%)	4.16	4.40	4.22	4.31	4.24
6 Inflation (%)					
6.1 All India Consumer Price Index	3.4	4.2	3.7	3.2	3.2
6.2 Consumer Price Index for Industrial Workers	5.4	5.6	5.6	6.0	6.3
6.3 Wholesale Price Index	4.3	5.3	4.6	1.1	1.1
6.3.1 Primary Articles	2.7	2.0	-0.1	5.0	6.4
6.3.2 Fuel and Power	11.5	18.1	17.7	-3.6	-4.0
6.3.3 Manufactured Products	3.7	4.5	4.4	0.3	0.0
7 Foreign Trade (% Change)					
7.1 Imports	10.4	29.7	26.8	-10.4	-13.4
7.2 Exports	8.7	16.1	19.7	2.0	-6.0

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						
	2018-19	2018	2019				
		Sep.	Aug. 30	Sep. 6	Sep. 13	Sep. 20	Sep. 27
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	2113764	1899547	2150382	2165588	2176743	2158831	2160124
1.1.2 Notes held in Banking Department	11	13	11	13	10	11	13
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**2113775**	**1899560**	**2150393**	**2165601**	**2176754**	**2158842**	**2160137**
1.2 Assets							
1.2.1 Gold Coin and Bullion	79481	72080	93095	92651	90984	90211	89945
1.2.2 Foreign Securities	2033559	1826575	2056512	2072173	2084996	2067861	2069429
1.2.3 Rupee Coin	735	905	785	777	774	770	763
1.2.4 Government of India Rupee Securities	–	–	–	–	–	–	–
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	806012	721022	838350	829279	817017	845225	882826
2.1.1.1 Central Government	101	100	101	101	100	100	101
2.1.1.2 Market Stabilisation Scheme							
2.1.1.3 State Governments	43	43	42	42	42	42	42
2.1.1.4 Scheduled Commercial Banks	565707	505127	538143	527551	519670	550002	532442
2.1.1.5 Scheduled State Co-operative Banks	4197	3576	4190	4172	4250	4307	4199
2.1.1.6 Non-Scheduled State Co-operative Banks	3494	2136	2651	2754	2791	2824	2743
2.1.1.7 Other Banks	32036	28571	30810	30546	30619	30656	30680
2.1.1.8 Others	199734	180020	262413	261208	258140	256241	311557
2.1.1.9 Financial Institution Outside India	700	1449		2904	1404	1054	1061
2.1.2 Other Liabilities	1087686	1129472	1104241	1114369	1083622	1085475	1064818
2.1/2.2 Total Liabilities or Assets	**1893698**	**1850494**	**1942591**	**1943648**	**1900638**	**1930701**	**1947644**
2.2 Assets							
2.2.1 Notes and Coins	11	13	11	13	10	11	13
2.2.2 Balances held Abroad	646640	927652	797721	797661	756128	775489	789658
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	–	–	–	–	–
2.2.3.2 State Governments	10	245	606	421	1462	64	459
2.2.3.3 Scheduled Commercial Banks	180688	179616	31140	34701	33667	44656	47478
2.2.3.4 Scheduled State Co-op.Banks		35	–	–	–	–	–
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	13463	5824	5633	5581	5673	6081	6139
2.2.3.9 Financial Institution Outside India	700	1449		5	5	720	5
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	–	–	–	–	–	–	–
2.2.4.2 Government Treasury Bills	–	–	–	–	–	–	–
2.2.5 Investments	923080	655879	1000909	999237	999268	1000064	1000116
2.2.6 Other Assets	129106	79781	106571	106028	104425	103615	103776
2.2.6.1 Gold	87169	72726	103784	103289	101430	100569	100272

* Data are provisional

No. 3: Liquidity Operations by RBI

(₹ Crore)

Date	Liquidity Adjustment Facility				MSF	Standing Liquidity Facilities	Market Stabilisation Scheme	OMO (Outright)		Net Injection (+)/ Absorption (-) (1+3+5+6+9-2-4-7-8)
	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo				Sale	Purchase	
	1	2	3	4	5	6	7	8	9	10
Aug. 1, 2019	3508	19673	-	141067	250	-	-	-	-	-156982
Aug. 2, 2019	3508	31601	2550	160775	2505	-	-	-	-	-183813
Aug. 3, 2019	3800	5950	-	-	500	-	-	-	-	-1650
Aug. 5, 2019	3539	21272	-	165491	375	-	-	-	-	-182849
Aug. 6, 2019	6430	19750	2510	151611	1350	-	-	-	-	-161071
Aug. 7, 2019	3504	8863	-	138003	50	-	-	-	-	-143312
Aug. 8, 2019	5444	10101	-	140022	1900	-	-	-	-	-142779
Aug. 9, 2019	3779	12908	8855	171524	1500	-	-	-	-	-170298
Aug. 13, 2019	4054	16432	8650	128874	-	-135	-	-	-	-132737
Aug. 14, 2019	3507	16885	-	131769	2325	135	-	-	-	-142687
Aug. 16, 2019	4080	26924	7550	139289	3611	–	-	-	-	-150972
Aug. 17, 2019	-	7609	-	-	304	–	-	-	-	-7305
Aug. 19, 2019	3819	23937	-	116237	-	–	-	-	-	-136355
Aug. 20, 2019	3754	13757	3000	124110	475	-200	-	-	-	-130838
Aug. 21, 2019	3815	10389	-	104552	601	-190	-	-	-	-110715
Aug. 22, 2019	5154	13364	-	116034	1	190	-	-	-	-124053
Aug. 23, 2019	3769	11368	9730	128775	2250	–	-	-	-	-124394
Aug. 26, 2019	4354	20296	-	112122	55	-339	-	-	-	-128348
Aug. 27, 2019	3854	14067	10375	129325	2	81	-	-	-	-129080
Aug. 28, 2019	5132	17108	-	130158	8	–	-	-	-	-142126
Aug. 29, 2019	3849	19336	-	135069	67	–	-	-	-	-150489
Aug. 30, 2019	3834	41664	7900	118834	55	–	-	-	-	-148709
Aug. 31, 2019	2815	11329	-	-	445	0	-	-	-	-8069

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

i) Operations in onshore/offshore OTC segment

Item	2018-19	2018	2019	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	-15377	-2323	-93	-4072
1.1 Purchase (+)	40804	3680	1592	615
1.2 Sale (–)	56181	6003	1685	4687
2 ₹ equivalent at contract rate (₹ Crores)	-111946	-17023	-1379	-29493
3 Cumulative (over end-March) (US $ Million)	-15377	-18631	9809	5737
(₹ Crores)	-111945	-128243	64906	35413
4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US $ Million)	-13774	5730	-8609	-7848

ii) Operations in currency futures segment

Item	2018-19	2018	2019	
		Aug.	Jul.	Aug.
	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	1350	327	1521
1.2 Sale (–)	13935	1350	327	1521
2 Outstanding Net Currency Futures Sales (–)/ Purchase (+) at the end of month (US $ Million)	0	-1135	249	-475

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

(US $ Million)

Item	As on August 31, 2019		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	295	660	-365
2. More than 1 month and upto 3 months	300	630	-330
3. More than 3 months and upto 1 year	6177	3805	2372
4. More than 1 year	890	10415	-9525
Total (1+2+3+4)	**7662**	**15510**	**-7848**

No. 5: RBI's Standing Facilities

(₹ Crore)

Item	As on the Last Reporting Friday							
	2018-19	2018	2019					
		Sep. 28	Apr. 26	May 24	Jun. 21	Jul. 19	Aug. 30	Sep. 27
	1	2	3	4	5	6	7	8
1 MSF	12882	4200	998	1615	1400	1151	55	48
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit	–	–	-	-	-	-	-	–
2.2 Outstanding	–	–	-	-	-	-	-	–
3 Liquidity Facility for PDs								
3.1 Limit	2800	2800	2800	2800	2800	2800	2800	2800
3.2 Outstanding	2678	1900	2348	2762	2453	2356	1879	2372
4 Others								
4.1 Limit	–	–	-	-	-	-	-	–
4.2 Outstanding	–	–	-	-	-	-	-	–
5 Total Outstanding (1+2.2+3.2+4.2)	15560	6100	3346	4377	3853	3507	1934	2420

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	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	2052234	1846844	2098713	2106299	2082639
1.1 Notes in Circulation	2110883	1901937	2161526	2172899	2150382
1.2 Circulation of Rupee Coin	25144	24954	25241	25258	25258
1.3 Circulation of Small Coins	743	743	743	743	743
1.4 Cash on Hand with Banks	84536	80790	88797	92600	93744
2 Deposit Money of the Public	1658051	1366714	1475859	1460925	1511661
2.1 Demand Deposits with Banks	1626309	1342044	1439850	1430405	1480679
2.2 'Other' Deposits with Reserve Bank	31742	24670	36009	30520	30982
3 M_1 (1 + 2)	**3710285**	**3213558**	**3574573**	**3567224**	**3594300**
4 Post Office Saving Bank Deposits	140599	120658	140599	140599	140599
5 M_2 (3 + 4)	**3850884**	**3334216**	**3715172**	**3707823**	**3734899**
6 Time Deposits with Banks	11720589	11057850	11993212	12031914	12082792
7 M_3 (3 + 6)	**15430874**	**14271408**	**15567784**	**15599138**	**15677092**
8 Total Post Office Deposits	367287	326675	367287	367287	367287
9 M_4 (7 + 8)	**15798161**	**14598083**	**15935071**	**15966425**	**16044379**

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	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
1 Net Bank Credit to Government	**4387788**	**4394706**	**4746771**	**4850296**	**4720649**
1.1 RBI's net credit to Government (1.1.1–1.1.2)	801951	683456	1054649	1089465	934922
1.1.1 Claims on Government	929686	683598	1054791	1089607	1000337
1.1.1.1 Central Government	928166	683153	1051651	1088008	999731
1.1.1.2 State Governments	1520	445	3140	1599	606
1.1.2 Government deposits with RBI	127735	142	142	142	65415
1.1.2.1 Central Government	127693	100	100	100	65373
1.1.2.2 State Governments	42	42	42	42	42
1.2 Other Banks' Credit to Government	3585837	3711250	3692122	3760831	3785727
2 Bank Credit to Commercial Sector	**10380180**	**9368994**	**10270651**	**10295103**	**10289165**
2.1 RBI's credit to commercial sector	15363	9537	7951	7805	7597
2.2 Other banks' credit to commercial sector	10364817	9359457	10262700	10287298	10281568
2.2.1 Bank credit by commercial banks	9769185	8780753	9658374	9682985	9680162
2.2.2 Bank credit by co-operative banks	585931	570157	590851	590196	590119
2.2.3 Investments by commercial and co-operative banks in other securities	9701	8547	13475	14117	11288
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**3070841**	**2957420**	**3172049**	**3270041**	**3273156**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	2848587	2833717	2949795	3047788	3050903
3.1.1 Gross foreign assets	2848800	2833931	2950003	3047997	3051112
3.1.2 Foreign liabilities	213	214	208	209	209
3.2 Other banks' net foreign exchange assets	222254	123702	222254	222254	222254
4 Government's Currency Liabilities to the Public	**25887**	**25697**	**25984**	**26001**	**26001**
5 Banking Sector's Net Non-monetary Liabilities	**2433823**	**2475408**	**2647671**	**2842302**	**2631880**
5.1 Net non-monetary liabilities of RBI	1058795	1060678	1108128	1237463	1106106
5.2 Net non-monetary liabilities of other banks (residual)	1375028	1414730	1539543	1604839	1525774
M_3 (1+2+3+4–5)	**15430874**	**14271408**	**15567784**	**15599138**	**15677092**

No. 8: Monetary Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2018-19	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1 + 1.2.1+1.3)	3710285	3213558	3574572	3567224	3594300
NM_2 (NM_1 + 1.2.2.1)	8910877	8116004	8894300	8902098	8951944
NM_3 (NM_2 + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	15645209	14470203	15748004	15779633	15844365
1 Components					
1.1 Currency with the Public	2052234	1846844	2098713	2106299	2082639
1.2 Aggregate Deposits of Residents	13183179	12236369	13261467	13285680	13386556
1.2.1 Demand Deposits	1626309	1342044	1439850	1430405	1480679
1.2.2 Time Deposits of Residents	11556870	10894325	11821617	11855275	11905877
1.2.2.1 Short-term Time Deposits	5200592	4902446	5319728	5334874	5357644
1.2.2.1.1 Certificates of Deposit (CDs)	284993	168856	217697	182499	174259
1.2.2.2 Long-term Time Deposits	6356279	5991879	6501889	6520401	6548232
1.3 'Other' Deposits with RBI	31742	24670	36009	30520	30982
1.4 Call/Term Funding from Financial Institutions	378054	362320	351815	357133	344189
2 Sources					
2.1 Domestic Credit	15656096	14623927	15914427	16028135	15887013
2.1.1 Net Bank Credit to the Government	4387788	4394706	4746771	4850296	4720649
2.1.1.1 Net RBI credit to the Government	801951	683456	1054649	1089465	934922
2.1.1.2 Credit to the Government by the Banking System	3585837	3711250	3692122	3760831	3785727
2.1.2 Bank Credit to the Commercial Sector	11268307	10229221	11167656	11177839	11166363
2.1.2.1 RBI Credit to the Commercial Sector	15363	9537	7951	7805	7597
2.1.2.2 Credit to the Commercial Sector by the Banking System	11252944	10219684	11159705	11170034	11158766
2.1.2.2.1 Other Investments (Non-SLR Securities)	879849	851073	889164	873456	868005
2.2 Government's Currency Liabilities to the Public	25887	25697	25984	26001	26001
2.3 Net Foreign Exchange Assets of the Banking Sector	2801726	2707106	2899819	2976414	3018164
2.3.1 Net Foreign Exchange Assets of the RBI	2848587	2833717	2949795	3047788	3050903
2.3.2 Net Foreign Currency Assets of the Banking System	-46861	-126611	-49975	-71374	-32739
2.4 Capital Account	2346743	2331824	2386574	2474953	2419473
2.5 Other items (net)	491757	554704	705652	775964	667339

No. 9: Liquidity Aggregates

(₹ Crore)

Aggregates	2018-19	2018	2019		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 NM_3	**15645209**	**14470202**	**15601556**	**15748004**	**15844365**
2 Postal Deposits	367287	326675	367287	367287	367287
3 L_1 (1 + 2)	**16012496**	**14796877**	**15968843**	**16115291**	**16211652**
4 Liabilities of Financial Institutions	2932	2932	2932	2932	2932
4.1 Term Money Borrowings	2656	2656	2656	2656	2656
4.2 Certificates of Deposit	31	31	31	31	31
4.3 Term Deposits	245	245	245	245	245
5 L_2 (3 + 4)	**16015428**	**14799809**	**15971775**	**16118223**	**16214584**
6 Public Deposits with Non-Banking Financial Companies	31905	..	31905	..	..
7 L_3 (5 + 6)	**16047333**	..	**16003680**	..	..

No. 10: Reserve Bank of India Survey

(₹ Crore)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2018-19	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	2136770	1927634	2187510	2198900	2176383
1.2 Bankers' Deposits with the RBI	601969	508658	570316	568915	575794
1.2.1 Scheduled Commercial Banks	558496	475461	533013	531335	538143
1.3 'Other' Deposits with the RBI	31742	24670	36009	30520	30982
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	2770481	2460962	2793835	2798334	2783158
2 Sources					
2.1 RBI's Domestic Credit	954802	662226	926184	962009	812361
2.1.1 Net RBI credit to the Government	801951	683456	1054649	1089465	934922
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	683053	1051551	1087908	934358
2.1.1.1.1 Loans and Advances to the Central Government	–	43992	65729	88332	–
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	927427	638238	985102	998882	998945
2.1.1.1.3.1 Central Government Securities	927427	638238	985102	998882	998945
2.1.1.1.4 Rupee Coins	739	923	820	794	786
2.1.1.1.5 Deposits of the Central Government	127693	100	100	100	65373
2.1.1.2 Net RBI credit to State Governments	1478	403	3098	1557	564
2.1.2 RBI's Claims on Banks	137488	-30767	-136416	-135261	-130158
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	137488	-30802	-136416	-135261	-130158
2.1.3 RBI's Credit to Commercial Sector	15363	9537	7951	7805	7597
2.1.3.1 Loans and Advances to Primary Dealers	2678	2388	2356	2337	1879
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	25887	25697	25984	26001	26001
2.3 Net Foreign Exchange Assets of the RBI	2848587	2833717	2949795	3047788	3050903
2.3.1 Gold	159585	143002	167502	192691	196879
2.3.2 Foreign Currency Assets	2689019	2690733	2782310	2855114	2854041
2.4 Capital Account	970265	1041550	956127	1049728	992582
2.5 Other Items (net)	88530	19128	152001	187735	113524

No. 11: Reserve Money - Components and Sources

(₹ Crore)

Item	2018-19	Outstanding as on March 31/ last Fridays of the month/ Fridays					
		2018	2019				
		Aug. 31	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30
	1	2	3	4	5	6	7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 + 2.4 + 2.5 – 2.6)	2770481	2460962	2757039	2772422	2798334	2776198	2783158
1 Components							
1.1 Currency in Circulation	2136770	1927634	2170944	2194302	2198900	2188501	2176383
1.2 Bankers' Deposits with RBI	601969	508658	555627	547573	568915	556860	575794
1.3 'Other' Deposits with RBI	31742	24670	30469	30548	30520	30838	30982
2 Sources							
2.1 Net Reserve Bank Credit to Government	801951	683456	1118383	1089146	1089465	1044878	934922
2.2 Reserve Bank Credit to Banks	137488	-30767	-220744	-166172	-135261	-109748	-130158
2.3 Reserve Bank Credit to Commercial Sector	15363	9537	7809	7805	7805	7856	7597
2.4 Net Foreign Exchange Assets of RBI	2848587	2833717	2970775	3032149	3047788	3065400	3050903
2.5 Government's Currency Liabilities to the Public	25887	25697	26001	26001	26001	26001	26001
2.6 Net Non- Monetary Liabilities of RBI	1058795	1060678	1145184	1216506	1237463	1258188	1106106

No. 12: Commercial Bank Survey

(₹ Crore)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2018-19	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	12408835	11482991	12478990	12503370	12603278
1.1.1 Demand Deposits	1511084	1229034	1324903	1315942	1365634
1.1.2 Time Deposits of Residents	10897751	10253957	11154087	11187428	11237644
1.1.2.1 Short-term Time Deposits	4903988	4614280	5019339	5034343	5056940
1.1.2.1.1 Certificates of Deposits (CDs)	284993	168856	217697	182499	174259
1.1.2.2 Long-term Time Deposits	5993763	5639676	6134748	6153086	6180704
1.2 Call/Term Funding from Financial Institutions	378054	362320	351815	357133	344189
2 Sources					
2.1 Domestic Credit	14028966	13136978	14039414	14117177	14129733
2.1.1 Credit to the Government	3378300	3503463	3487418	3554068	3578217
2.1.2 Credit to the Commercial Sector	10650666	9633515	10551996	10563109	10551516
2.1.2.1 Bank Credit	9769185	8780753	9658374	9682985	9680162
2.1.2.1.1 Non-food Credit	9727575	8731899	9592372	9617765	9617770
2.1.2.2 Net Credit to Primary Dealers	8542	9418	8103	9543	9456
2.1.2.3 Investments in Other Approved Securities	2053	1234	5317	6087	2855
2.1.2.4 Other Investments (in non-SLR Securities)	870886	842111	880202	864493	859043
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	-46861	-126611	-49975	-71374	-32739
2.2.1 Foreign Currency Assets	262383	164536	262389	236891	277568
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	163719	163525	171595	176639	176916
2.2.3 Overseas Foreign Currency Borrowings	145526	127622	140770	131626	133392
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	538079	577232	748448	749332	752190
2.3.1 Balances with the RBI	565707	475461	533013	531335	538143
2.3.2 Cash in Hand	74852	70969	79019	82736	83889
2.3.3 Loans and Advances from the RBI	102480	-30802	-136416	-135261	-130158
2.4 Capital Account	1352307	1266103	1406277	1401054	1402720
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	380987	476185	500805	533578	498996
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	397976	392929	358680	383697	398200
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	-48452	-43288	-52866	-46808	-54049

No. 13: Scheduled Commercial Banks' Investments

(₹ Crore)

Item	As on March 29, 2019	2018	2019		
		Aug. 31	Jul. 19	Aug. 16	Aug. 30
	1	2	3	4	5
1 SLR Securities	3381056	3504696	3492737	3560158	3581075
2 Commercial Paper	90362	128771	94922	98242	95964
3 Shares issued by					
3.1 PSUs	11535	11372	12040	11974	11951
3.2 Private Corporate Sector	69592	72650	67170	66043	66396
3.3 Others	6379	6133	5606	5586	5582
4 Bonds/Debentures issued by					
4.1 PSUs	134819	127044	129883	126458	125821
4.2 Private Corporate Sector	268783	224696	256179	249163	247318
4.3 Others	170047	119658	163168	161902	162734
5 Instruments issued by					
5.1 Mutual funds	20988	70812	60018	55891	52891
5.2 Financial institutions	98382	81582	90896	89235	90387

No. 14: Business in India - All Scheduled Banks and All Scheduled Commercial Banks

(Amount in ₹ Crore)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks				All Scheduled Commercial Banks			
	2018-19	2018	2019		2018-19	2018	2019	
		Aug.	Jul.	Aug.		Aug.	Jul.	Aug.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	222	223	215	218	147	149	139	142
1 Liabilities to the Banking System	**276350**	**240678**	**263876**	**271324**	**271426**	**234936**	**258259**	**266046**
1.1 Demand and Time Deposits from Banks	181651	153154	185400	185890	176828	148495	180398	180832
1.2 Borrowings from Banks	79487	71789	67474	72190	79459	70873	67025	72092
1.3 Other Demand and Time Liabilities	15212	15734	11002	13244	15139	15569	10836	13122
2 Liabilities to Others	**13835976**	**12843432**	**13842551**	**14012441**	**13495672**	**12529386**	**13489748**	**13655976**
2.1 Aggregate Deposits	12901579	11945888	12974287	13123280	12573772	11646516	12633527	12780195
2.1.1 Demand	1542554	1257331	1330254	1396129	1511287	1229034	1300077	1365634
2.1.2 Time	11359025	10688557	11644033	11727151	11062484	10417481	11333450	11414560
2.2 Borrowings	381864	367173	356127	347776	378254	362320	352570	344189
2.3 Other Demand and Time Liabilities	552533	530372	512137	541385	543646	520551	503652	531592
3 Borrowings from Reserve Bank	**180688**	**61696**	**29570**	**31140**	**180688**	**61661**	**29570**	**31140**
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	180688	61696	29570	31140	180688	61661	29570	31140
4 Cash in Hand and Balances with Reserve Bank	657555	560596	621410	637528	640584	546430	606416	622032
4.1 Cash in Hand	76554	72806	82242	85737	74877	70969	80508	83889
4.2 Balances with Reserve Bank	581001	487790	539168	551791	565707	475461	525908	538143
5 Assets with the Banking System	**372670**	**322707**	**366497**	**381547**	**327814**	**287642**	**315319**	**329551**
5.1 Balances with Other Banks	245880	212867	260055	262276	223048	195828	236186	237150
5.1.1 In Current Account	17216	12000	20795	17223	13329	9640	18253	14736
5.1.2 In Other Accounts	228663	200867	239261	245053	209719	186188	217933	222414
5.2 Money at Call and Short Notice	47047	45911	28498	39789	32252	31478	11892	26827
5.3 Advances to Banks	32950	34258	30160	30958	29635	33949	26892	25311
5.4 Other Assets	46793	29672	47784	48524	42879	26388	40349	40263
6 Investment	**3475607**	**3599169**	**3600192**	**3676380**	**3381056**	**3504696**	**3506704**	**3581072**
6.1 Government Securities	3467845	3592553	3590252	3667033	3379001	3503463	3502765	3578217
6.2 Other Approved Securities	7762	6616	9940	9347	2055	1234	3938	2855
7 Bank Credit	**10047125**	**9039378**	**9944498**	**9962773**	**9771722**	**8780753**	**9660517**	**9680162**
7a Food Credit	64636	71881	88137	89424	41610	48854	61104	62392
7.1 Loans, Cash-credits and Overdrafts	9792287	8819546	9723456	9745356	9521994	8565701	9443639	9466749
7.2 Inland Bills-Purchased	27641	21441	25697	24827	26223	19864	24687	23884
7.3 Inland Bills-Discounted	160984	138432	136518	135742	158296	135992	134252	133580
7.4 Foreign Bills-Purchased	24914	24352	23895	24132	24588	24135	23583	23823
7.5 Foreign Bills-Discounted	41299	35607	34932	32716	40622	35062	34356	32126

No. 15: Deployment of Gross Bank Credit by Major Sectors

(₹ Crore)

Item	Outstanding as on				Growth (%)	
	Mar. 29, 2019	2018	2019		Financial year so far	Y-o-Y
		Aug. 31	Jul. 19	Aug. 30	2019-20	2019
	1	2	3	4	5	6
1 Gross Bank Credit	**8674892**	**7819134**	**8561546**	**8594549**	**-0.9**	**9.9**
1.1 Food Credit	**41474**	**48754**	**65787**	**62182**	**49.9**	**27.5**
1.2 Non-food Credit	**8633418**	**7770380**	**8495759**	**8532367**	**–1.2**	**9.8**
1.2.1 Agriculture & Allied Activities	**1111300**	**1041879**	**1108988**	**1113027**	**0.2**	**6.8**
1.2.2 Industry	**2885778**	**2662066**	**2798360**	**2765215**	**–4.2**	**3.9**
1.2.2.1 Micro & Small	375505	366411	361608	358885	–4.4	-2.1
1.2.2.2 Medium	106395	105261	105214	104436	–1.8	-0.8
1.2.2.3 Large	2403878	2190394	2331538	2301894	–4.2	5.1
1.2.3 Services	**2415609**	**2074013**	**2312871**	**2350198**	**–2.7**	**13.3**
1.2.3.1 Transport Operators	138524	125613	140947	141245	2.0	12.4
1.2.3.2 Computer Software	18535	18332	18212	18761	1.2	2.3
1.2.3.3 Tourism, Hotels & Restaurants	39005	36994	39899	40221	3.1	8.7
1.2.3.4 Shipping	7748	6781	5879	5955	–23.1	-12.2
1.2.3.5 Professional Services	171517	158591	166562	169097	–1.4	6.6
1.2.3.6 Trade	528158	475076	513452	504278	–4.5	6.1
1.2.3.6.1 Wholesale Trade	250528	210472	229764	221053	–11.8	5.0
1.2.3.6.2 Retail Trade	277630	264604	283688	283225	2.0	7.0
1.2.3.7 Commercial Real Estate	202291	187220	208627	216388	7.0	15.6
1.2.3.8 Non-Banking Financial Companies (NBFCs)	641208	490160	636733	680360	6.1	38.8
1.2.3.9 Other Services	668623	575246	582558	573894	–14.2	-0.2
1.2.4 Personal Loans	**2220732**	**1992422**	**2275540**	**2303930**	**3.7**	**15.6**
1.2.4.1 Consumer Durables	6299	3193	5623	5484	–12.9	71.8
1.2.4.2 Housing	1160111	1041857	1199806	1214773	4.7	16.6
1.2.4.3 Advances against Fixed Deposits	82873	66825	64901	62607	–24.5	-6.3
1.2.4.4 Advances to Individuals against share & bond	6265	5843	5396	5087	–18.8	-12.9
1.2.4.5 Credit Card Outstanding	88262	78499	93974	97650	10.6	24.4
1.2.4.6 Education	67988	69766	67665	68457	0.7	-1.9
1.2.4.7 Vehicle Loans	202154	195499	201318	202662	0.3	3.7
1.2.4.8 Other Personal Loans	606780	530940	636857	647211	6.7	21.9
1.2A Priority Sector	**2739021**	**2563310**	**2716953**	**2721947**	**–0.6**	**6.2**
1.2A.1 Agriculture & Allied Activities	1104988	1035940	1102240	1105805	0.1	6.7
1.2A.2 Micro & Small Enterprises	1067175	988106	1047483	1048364	–1.8	6.1
1.2A.2.1 Manufacturing	375505	366411	361608	358884	–4.4	-2.1
1.2A.2.2 Services	691670	621695	685875	689479	–0.3	10.9
1.2A.3 Housing	432703	393556	441976	444823	2.8	13.0
1.2A.4 Micro-Credit	24101	21155	31593	31376	30.2	48.3
1.2A.5 Education Loans	53950	57766	53659	53983	0.1	-6.5
1.2A.6 State-Sponsored Orgs. for SC/ST	397	349	385	402	1.3	15.2
1.2A.7 Weaker Sections	662628	587136	678242	682231	3.0	16.2
1.2A.8 Export Credit	15566	20518	14155	13139	–15.6	-36.0

No. 16: Industry-wise Deployment of Gross Bank Credit

(₹ Crore)

Industry	Outstanding as on				Growth (%)	
	Mar. 29, 2019	2018	2019		Financial year so far	Y-o-Y
		Aug. 31	Jul. 19	Aug. 30	2019-20	2019
	1	2	3	4	5	6
1 Industry	**2885778**	**2662066**	**2798360**	**2765215**	**–4.2**	**3.9**
1.1 Mining & Quarrying (incl. Coal)	**41752**	**41417**	**40563**	**40938**	**–1.9**	**–1.2**
1.2 Food Processing	**157058**	**142661**	**150077**	**145210**	**–7.5**	**1.8**
1.2.1 Sugar	29705	26063	28582	27889	–6.1	7.0
1.2.2 Edible Oils & Vanaspati	21343	20594	19475	18929	–11.3	–8.1
1.2.3 Tea	4966	5269	5200	5356	7.9	1.7
1.2.4 Others	101044	90735	96820	93036	–7.9	2.5
1.3 Beverage & Tobacco	**14662**	**12949**	**14440**	**13857**	**–5.5**	**7.0**
1.4 Textiles	**203549**	**198059**	**191284**	**186307**	**–8.5**	**–5.9**
1.4.1 Cotton Textiles	97726	98152	90087	84473	–13.6	–13.9
1.4.2 Jute Textiles	2119	1935	2110	2117	–0.1	9.4
1.4.3 Man-Made Textiles	26748	23789	25452	25423	–5.0	6.9
1.4.4 Other Textiles	76956	74183	73635	74294	–3.5	0.1
1.5 Leather & Leather Products	**11071**	**11295**	**11211**	**11051**	**–0.2**	**–2.2**
1.6 Wood & Wood Products	**11968**	**11203**	**11701**	**11881**	**–0.7**	**6.1**
1.7 Paper & Paper Products	**30319**	**29847**	**29760**	**29864**	**–1.5**	**0.1**
1.8 Petroleum, Coal Products & Nuclear Fuels	**63136**	**53809**	**53085**	**51976**	**–17.7**	**–3.4**
1.9 Chemicals & Chemical Products	**191484**	**167292**	**173212**	**177006**	**–7.6**	**5.8**
1.9.1 Fertiliser	40043	29200	34419	35572	–11.2	21.8
1.9.2 Drugs & Pharmaceuticals	50500	51105	48195	48566	–3.8	–5.0
1.9.3 Petro Chemicals	46717	36809	37900	39987	–14.4	8.6
1.9.4 Others	54224	50178	52698	52881	–2.5	5.4
1.10 Rubber, Plastic & their Products	**45803**	**42978**	**45843**	**46501**	**1.5**	**8.2**
1.11 Glass & Glassware	**9887**	**10003**	**9652**	**9942**	**0.6**	**–0.6**
1.12 Cement & Cement Products	**55683**	**51351**	**57539**	**59223**	**6.4**	**15.3**
1.13 Basic Metal & Metal Product	**371564**	**384036**	**347995**	**348467**	**–6.2**	**–9.3**
1.13.1 Iron & Steel	282878	294673	265912	266309	–5.9	–9.6
1.13.2 Other Metal & Metal Product	88686	89363	82083	82158	–7.4	–8.1
1.14 All Engineering	**168621**	**154691**	**165038**	**166488**	**–1.3**	**7.6**
1.14.1 Electronics	37856	35083	37367	37284	–1.5	6.3
1.14.2 Others	130765	119608	127671	129204	–1.2	8.0
1.15 Vehicles, Vehicle Parts & Transport Equipment	**79859**	**75444**	**82728**	**83022**	**4.0**	**10.0**
1.16 Gems & Jewellery	**72014**	**69189**	**66066**	**66361**	**–7.8**	**–4.1**
1.17 Construction	**99473**	**87842**	**95384**	**95990**	**–3.5**	**9.3**
1.18 Infrastructure	**1055921**	**923695**	**1034716**	**1004811**	**–4.8**	**8.8**
1.18.1 Power	568966	529938	568247	558892	–1.8	5.5
1.18.2 Telecommunications	115585	90652	112215	109761	–5.0	21.1
1.18.3 Roads	186852	171222	188386	190895	2.2	11.5
1.18.4 Other Infrastructure	184518	131883	165868	145263	–21.3	10.1
1.19 Other Industries	**201954**	**194303**	**218066**	**216319**	**7.1**	**11.3**

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	2018	2019						
		Jul, 27	May, 31	Jun, 07	Jun, 21	Jun, 28	Jul, 05	Jul, 19	Jul, 26
	1	2	3	4	5	6	7	8	9
Number of Reporting Banks	32	31	31	31	31	31	31	31	30
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	**62003.4**	**54157.8**	**62344.8**	**61829.6**	**61051.4**	**63649.9**	**63016.6**	**63709.3**	**63046.8**
2 Demand and Time Liabilities									
2.1 Demand Liabilities	**18241.3**	**16895.3**	**17715.9**	**18400.1**	**18111.8**	**20235.9**	**18887.7**	**18049.0**	**18127.7**
2.1.1 Deposits									
2.1.1.1 Inter-Bank	5842.3	4754.6	4866.0	5838.0	5924.6	5967.4	5764.0	5231.8	5530.1
2.1.1.2 Others	9,808.6	8832.8	9906.2	9627.3	8976.4	10064.2	10036.7	9671.7	9777.3
2.1.2 Borrowings from Banks	0.0	371.9	70.0	0.0	0.0	1255.3	0.0	0.0	0.0
2.1.3 Other Demand Liabilities	2590.5	2936.0	2873.8	2934.8	3210.8	2949.1	3087.0	3145.4	2820.3
2.2 Time Liabilities	**98531.4**	**87100.7**	**99343.7**	**99374.6**	**100475.8**	**104584.1**	**102902.8**	**103751.6**	**105734.7**
2.2.1 Deposits									
2.2.1.1 Inter-Bank	45655.9	41046.1	46246.8	46503.5	47744.6	47559.4	49264.0	49066.4	51637.1
2.2.1.2 Others	52194.8	45325.0	52438.6	52202.4	52074.9	53585.7	52979.9	54037.6	53269.4
2.2.2 Borrowings from Banks	0.0	0.6	0.0	0.0	0.0	1265.3	0.0	0.0	0.0
2.2.3 Other Time Liabilities	680.7	729.1	658.3	668.7	656.3	2173.6	659.0	647.5	828.2
3 Borrowing from Reserve Bank	0.0	0.0	35.0	35.0	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	50375.4	43429.5	47096.2	46448.0	45612.6	45914.7	45329.2	45658.8	44603.4
4.1 Demand	16826.7	15715.8	14109.5	13706.0	13356.7	13687.7	13837.5	14211.5	14152.3
4.2 Time	33548.7	27713.6	32986.7	32741.9	32255.9	32227.0	31491.7	31447.3	30451.2
5 Cash in Hand and Balances with Reserve Bank	**5721.0**	**4548.6**	**4846.3**	**5096.3**	**5080.5**	**5290.0**	**5334.2**	**5181.0**	**5408.2**
5.1 Cash in Hand	319.1	294.6	339.2	289.9	310.9	334.7	291.7	322.5	302.6
5.2 Balance with Reserve Bank	5401.9	4254.0	4507.1	4806.5	4769.6	4955.4	5042.5	4858.5	5105.6
6 Balances with Other Banks in Current Account	**1543.2**	**856.0**	**960.1**	**853.5**	**796.5**	**2213.6**	**862.7**	**839.9**	**936.2**
7 Investments in Government Securities	**30885.3**	**53078.0**	**31103.6**	**30826.2**	**30656.7**	**30634.4**	**30542.5**	**30157.6**	**30332.3**
8 Money at Call and Short Notice	**16190.2**	**17355.3**	**15001.4**	**15802.0**	**16143.7**	**17580.3**	**17705.1**	**22900.7**	**19088.4**
9 Bank Credit (10.1+11)	**60089.8**	**54190.2**	**62530.9**	**63753.8**	**63824.0**	**63419.8**	**63812.5**	**63536.6**	**62462.4**
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	**60086.2**	**54187.8**	**62530.3**	**63753.2**	**63823.4**	**63419.3**	**63811.9**	**63536.1**	**62461.9**
10.2 Due from Banks	82610.9	69278.4	78346.8	77644.7	77866.6	77817.4	77563.1	77832.9	77427.1
11 Bills Purchased and Discounted	3.7	2.5	0.7	0.7	0.6	0.6	0.6	0.6	0.6

Prices and Production

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

Group/Sub group	2018-19			Rural			Urban			Combined		
	Rural	Urban	Combined	Aug. 18	Jul. 19	Aug. 19	Aug. 18	Jul. 19	Aug. 19	Aug. 18	Jul. 19	Aug. 19
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	**139.5**	**138.4**	**139.1**	**142.7**	**143.0**	**144.0**	**140.1**	**147.7**	**149.1**	**141.7**	**144.7**	**145.9**
1.1 Cereals and products	137.7	137.2	137.5	139.2	138.4	139.2	136.5	141.4	142.1	138.3	139.3	140.1
1.2 Meat and fish	149.5	147.5	148.8	148.8	164.0	161.9	146.4	160.2	158.3	148.0	162.7	160.6
1.3 Egg	137.3	137.3	137.3	139.1	138.4	137.1	136.6	142.5	140.8	138.1	140.0	138.5
1.4 Milk and products	142.7	141.3	142.2	143.5	143.9	144.5	141.2	144.1	144.8	142.6	144.0	144.6
1.5 Oils and fats	124.0	117.6	121.6	125.0	124.4	124.8	117.4	119.3	119.9	122.2	122.5	123.0
1.6 Fruits	146.8	143.4	145.2	154.4	146.4	145.6	146.3	154.7	153.9	150.6	150.3	149.5
1.7 Vegetables	141.4	142.1	141.6	156.3	150.1	156.1	157.3	180.1	189.3	156.6	160.3	167.4
1.8 Pulses and products	124.1	115.3	121.1	126.8	130.6	131.5	113.6	128.9	129.8	122.4	130.0	130.9
1.9 Sugar and confectionery	111.9	110.8	111.5	115.4	110.8	111.7	113.3	111.8	112.7	114.7	111.1	112.0
1.10 Spices	138.8	140.7	139.4	138.6	141.7	142.8	141.1	141.6	142.5	139.4	141.7	142.7
1.11 Non-alcoholic beverages	134.9	127.5	131.8	133.8	138.5	138.5	127.4	129.5	129.8	131.1	134.7	134.9
1.12 Prepared meals, snacks, sweets	155.3	151.3	153.4	155.2	156.7	156.9	150.4	155.6	156.2	153.0	156.2	156.6
2 Pan, tobacco and intoxicants	**159.4**	**162.9**	**160.4**	**156.4**	**164.5**	**165.1**	**162.1**	**167.2**	**167.9**	**157.9**	**165.2**	**165.8**
3 Clothing and footwear	**150.3**	**139.3**	**145.9**	**151.3**	**150.9**	**151.1**	**138.3**	**142.7**	**143.0**	**146.1**	**147.6**	**147.9**
3.1 Clothing	151.2	141.0	147.2	152.1	151.6	151.8	140.0	144.7	145.0	147.3	148.9	149.1
3.2 Footwear	145.2	129.5	138.7	145.8	146.6	146.6	129.0	131.9	132.2	138.8	140.5	140.6
4 Housing	**--**	**145.6**	**145.6**	**--**	**--**	**--**	**144.6**	**150.6**	**151.6**	**144.6**	**150.6**	**151.6**
5 Fuel and light	**147.0**	**129.3**	**140.3**	**147.7**	**146.8**	**146.4**	**129.8**	**127.0**	**125.5**	**140.9**	**139.3**	**138.5**
6 Miscellaneous	**138.6**	**131.1**	**134.9**	**136.6**	**144.2**	**144.9**	**131.0**	**134.5**	**135.3**	**133.9**	**139.5**	**140.2**
6.1 Household goods and services	145.9	134.8	140.6	143.8	150.0	150.2	134.4	137.7	138.1	139.4	144.2	144.5
6.2 Health	143.5	135.5	140.5	139.4	152.2	152.7	134.9	140.8	141.5	137.7	147.9	148.5
6.3 Transport and communication	128.5	120.3	124.2	128.3	131.2	131.4	120.7	120.6	120.8	124.3	125.6	125.8
6.4 Recreation and amusement	140.4	130.3	134.7	138.6	147.5	148.1	129.8	135.0	135.5	133.6	140.5	141.0
6.5 Education	149.4	144.5	146.5	146.9	159.1	159.7	145.3	150.4	151.5	146.0	154.0	154.9
6.6 Personal care and effects	132.6	129.9	131.5	131.3	136.1	138.7	128.3	135.1	137.9	130.1	135.7	138.4
General Index (All Groups)	**141.3**	**137.7**	**139.6**	**142.5**	**144.9**	**145.6**	**138.0**	**143.3**	**144.2**	**140.4**	**144.2**	**144.9**

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2018-19	2018	2019	
				Aug.	Jul.	Aug.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	300	301	319	320
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	907	907	958	965
3 Consumer Price Index for Rural Labourers	1986-87	–	915	915	965	972

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	2018	2019	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	31,193	29,644	34,522	37,356
2 Silver (₹ per kilogram)	38,404	37,374	39,099	43,747

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	2018	2019		
			Aug.	Jun.	Jul. (P)	Aug. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**119.8**	**120.1**	**121.5**	**121.2**	**121.4**
1.1 PRIMARY ARTICLES	**22.618**	**134.2**	**135.2**	**141.0**	**142.1**	**143.9**
1.1.1 FOOD ARTICLES	**15.256**	**143.7**	**144.8**	**152.2**	**153.7**	**155.9**
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	146.7	145.1	155.4	157.4	159.2
1.1.1.2 Fruits & Vegetables	3.475	147.3	155.8	166.8	175.6	180.2
1.1.1.3 Milk	4.440	143.1	143.7	145.5	143.6	145.4
1.1.1.4 Eggs,Meat & Fish	2.402	138.0	134.9	146.0	143.7	143.8
1.1.1.5 Condiments & Spices	0.529	129.6	131.3	133.9	136.0	141.5
1.1.1.6 Other Food Articles	0.948	144.4	141.3	144.2	142.6	142.8
1.1.2 NON-FOOD ARTICLES	**4.119**	**123.1**	**124.0**	**128.7**	**128.8**	**129.9**
1.1.2.1 Fibres	0.839	127.0	130.8	133.9	132.2	130.1
1.1.2.2 Oil Seeds	1.115	140.5	140.1	150.0	150.1	151.7
1.1.2.3 Other non-food Articles	1.960	107.3	108.7	106.1	106.6	105.8
1.1.2.4 Floriculture	0.204	164.1	155.3	208.3	211.8	241.0
1.1.3 MINERALS	**0.833**	**136.5**	**129.4**	**153.4**	**153.4**	**153.4**
1.1.3.1 Metallic Minerals	0.648	123.0	114.1	146.8	147.5	146.8
1.1.3.2 Other Minerals	0.185	183.5	183.2	176.6	174.0	176.6
1.1.4 CRUDE PETROLEUM & NATURAL GAS	**2.410**	**92.4**	**95.4**	**87.2**	**86.9**	**88.1**
1.2 FUEL & POWER	**13.152**	**104.1**	**104.9**	**102.2**	**100.6**	**100.7**
1.2.1 COAL	**2.138**	**123.3**	**123.0**	**124.0**	**124.0**	**124.0**
1.2.1.1 Coking Coal	0.647	132.9	132.0	133.9	133.9	133.9
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	129.9	129.9	129.9
1.2.2 MINERAL OILS	**7.950**	**96.7**	**98.3**	**94.0**	**91.4**	**91.5**
1.2.3 ELECTRICITY	**3.064**	**109.6**	**109.4**	**108.3**	**108.3**	**108.3**
1.3 MANUFACTURED PRODUCTS	**64.231**	**117.9**	**117.8**	**118.5**	**118.1**	**117.8**
1.3.1 MANUFACTURE OF FOOD PRODUCTS	**9.122**	**128.6**	**129.6**	**130.8**	**130.9**	**132.4**
1.3.1.1 Processing and Preserving of meat	0.134	136.7	137.5	140.5	140.2	137.3
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	132.1	137.9	132.3	132.6	134.0
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	114.3	113.9	115.6	113.9	114.4
1.3.1.4 Vegetable and Animal oils and Fats	2.643	117.6	118.8	112.4	112.3	113.7
1.3.1.5 Dairy products	1.165	136.2	136.1	139.8	140.7	142.9
1.3.1.6 Grain mill products	2.010	141.6	141.8	145.0	145.2	146.4
1.3.1.7 Starches and Starch products	0.110	116.6	110.6	136.0	136.8	137.3
1.3.1.8 Bakery products	0.215	129.3	129.1	132.2	132.4	132.4
1.3.1.9 Sugar, Molasses & honey	1.163	111.2	114.2	117.3	116.8	119.3
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	126.7	127.7	128.4	128.3	129.1
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	134.5	133.3	133.7	132.8	131.7
1.3.1.12 Tea & Coffee products	0.371	137.7	141.9	145.8	145.9	143.2
1.3.1.13 Processed condiments & salt	0.163	122.2	121.9	124.8	125.9	130.2
1.3.1.14 Processed ready to eat food	0.024	127.0	126.5	131.6	131.5	130.2
1.3.1.15 Health supplements	0.225	143.6	141.2	154.5	155.7	162.9
1.3.1.16 Prepared animal feeds	0.356	157.5	158.0	172.1	174.6	176.9
1.3.2 MANUFACTURE OF BEVERAGES	**0.909**	**120.7**	**120.0**	**123.3**	**123.2**	**124.0**
1.3.2.1 Wines & spirits	0.408	113.8	112.9	116.4	116.5	117.9
1.3.2.2 Malt liquors and Malt	0.225	120.5	121.3	124.8	126.9	126.6
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	131.2	129.5	132.5	129.9	130.8
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	**0.514**	**150.4**	**150.2**	**154.0**	**153.6**	**153.9**
1.3.3.1 Tobacco products	0.514	150.4	150.2	154.0	153.6	153.9
1.3.4 MANUFACTURE OF TEXTILES	**4.881**	**117.9**	**118.3**	**119.4**	**119.3**	**118.3**
1.3.4.1 Preparation and Spinning of textile fibres	2.582	110.6	111.4	110.7	110.5	109.5
1.3.4.2 Weaving & Finishing of textiles	1.509	127.3	126.7	130.7	130.7	129.2
1.3.4.3 Knitted and Crocheted fabrics	0.193	112.9	115.0	115.0	116.4	115.9
1.3.4.4 Made-up textile articles, Except apparel	0.299	130.3	131.3	135.2	134.9	135.3
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	138.7	138.0	139.4	140.3	140.4
1.3.4.6 Other textiles	0.201	118.3	117.8	118.2	117.3	116.1
1.3.5 MANUFACTURE OF WEARING APPAREL	**0.814**	**138.8**	**138.8**	**138.0**	**137.1**	**136.3**
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	139.4	139.6	139.3	137.7	136.7
1.3.5.2 Knitted and Crocheted apparel	0.221	137.0	136.7	134.6	135.4	135.0

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2018-19	2018	2019		
			Aug.	Jun.	Jul. (P)	Aug. (P)
	1	2	3	4	5	6
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	**0.535**	**121.8**	**121.5**	**118.6**	**118.3**	**119.3**
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	111.0	109.8	106.2	106.1	108.8
1.3.6.2 Luggage, HandbAgs, Saddlery and Harness	0.075	134.7	134.6	136.4	136.2	136.6
1.3.6.3 Footwear	0.318	123.5	123.6	120.0	119.5	119.8
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	**0.772**	**133.5**	**133.3**	**134.5**	**134.2**	**134.1**
1.3.7.1 Saw milling and Planing of wood	0.124	124.5	122.7	126.2	125.2	120.1
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	136.3	136.8	134.9	134.5	136.0
1.3.7.3 Builder's carpentry and Joinery	0.036	158.7	156.5	175.5	175.5	174.9
1.3.7.4 Wooden containers	0.119	124.1	122.6	129.2	129.5	128.4
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	**1.113**	**123.3**	**122.3**	**122.5**	**122.3**	**121.5**
1.3.8.1 Pulp, Paper and Paperboard	0.493	129.3	127.7	127.2	126.7	125.7
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	116.5	116.2	115.1	115.5	115.2
1.3.8.3 Other articles of paper and Paperboard	0.306	120.6	119.8	122.6	122.3	121.3
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	**0.676**	**146.6**	**148.7**	**148.0**	**150.1**	**151.0**
1.3.9.1 Printing	0.676	146.6	148.7	148.0	150.1	151.0
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	**6.465**	**119.1**	**118.8**	**119.0**	**118.8**	**118.3**
1.3.10.1 Basic chemicals	1.433	125.0	124.7	123.4	122.2	121.4
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	121.1	120.0	123.4	123.1	123.0
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	117.6	118.7	114.5	113.5	114.4
1.3.10.4 Pesticides and Other agrochemical products	0.454	120.2	119.1	121.9	125.0	123.6
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	112.7	111.4	116.4	116.1	115.1
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	116.8	116.4	119.5	119.6	118.8
1.3.10.7 Other chemical products	0.692	116.6	117.2	114.6	114.8	113.8
1.3.10.8 Man-made fibres	0.296	104.0	104.4	100.3	100.0	99.1
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	**1.993**	**123.5**	**123.0**	**125.7**	**126.2**	**125.4**
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	123.5	123.0	125.7	126.2	125.4
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	**2.299**	**109.6**	**109.5**	**109.3**	**109.2**	**108.2**
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	98.9	99.0	99.3	99.3	99.5
1.3.12.2 Other Rubber Products	0.272	91.7	92.0	94.2	93.1	94.0
1.3.12.3 Plastics products	1.418	117.6	117.3	116.5	116.5	114.7
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	**3.202**	**115.9**	**115.8**	**118.3**	**117.5**	**117.5**
1.3.13.1 Glass and Glass products	0.295	121.4	121.1	125.7	124.9	127.1
1.3.13.2 Refractory products	0.223	111.1	110.2	109.4	110.4	109.9
1.3.13.3 Clay Building Materials	0.121	98.0	100.2	100.7	102.5	101.9
1.3.13.4 Other Porcelain and Ceramic Products	0.222	112.7	112.3	114.5	114.5	114.5
1.3.13.5 Cement, Lime and Plaster	1.645	114.3	113.1	121.8	120.4	119.7
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	121.5	122.7	121.0	120.9	121.0
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	118.8	120.0	119.7	121.5	122.7
1.3.13.8 Other Non-Metallic Mineral Products	0.169	130.4	138.8	94.6	90.0	90.4
1.3.14 MANUFACTURE OF BASIC METALS	**9.646**	**112.2**	**111.6**	**108.7**	**107.3**	**104.8**
1.3.14.1 Inputs into steel making	1.411	113.0	112.6	105.0	100.9	96.9
1.3.14.2 Metallic Iron	0.653	117.8	117.3	113.5	112.6	104.7
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	99.5	99.5	96.2	95.0	93.7
1.3.14.4 Mild Steel -Long Products	1.081	110.2	108.2	108.4	106.5	104.9
1.3.14.5 Mild Steel - Flat products	1.144	119.6	119.8	113.7	111.6	108.4
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	111.7	112.8	107.4	105.7	100.7
1.3.14.7 Stainless Steel - Semi Finished	0.924	112.7	113.2	106.3	101.4	98.4
1.3.14.8 Pipes & tubes	0.205	126.6	125.8	129.7	127.3	125.1
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	112.2	112.1	106.9	107.6	107.4
1.3.14.10 Castings	0.925	109.8	109.5	113.5	115.6	113.2
1.3.14.11 Forgings of steel	0.271	126.8	115.1	143.5	145.6	146.9
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	**3.155**	**115.1**	**115.4**	**116.2**	**114.8**	**114.1**
1.3.15.1 Structural Metal Products	1.031	112.8	114.2	114.7	114.2	113.7
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	127.3	129.0	124.4	119.2	120.1
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	105.9	107.1	102.6	100.9	100.9
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	96.3	95.2	101.2	100.3	100.2
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	99.7	99.7	100.2	100.2	100.2
1.3.15.6 Other Fabricated Metal Products	0.728	123.1	121.6	126.1	126.3	123.2
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	**2.009**	**111.8**	**112.8**	**111.4**	**111.4**	**111.2**
1.3.16.1 Electronic Components	0.402	100.9	101.8	97.4	97.9	98.3
1.3.16.2 Computers and Peripheral Equipment	0.336	132.5	135.1	135.0	135.0	135.0

No. 21: Wholesale Price Index (Concld.)
(Base: 2011-12 = 100)

Commodities	Weight	2018-19	2018	2019		
			Aug.	Jun.	Jul. (P)	Aug. (P)
	1	2	3	4	5	6
1.3.16.3 Communication Equipment	0.310	116.7	116.2	116.7	116.9	117.2
1.3.16.4 Consumer Electronics	0.641	103.8	105.4	102.2	102.2	101.9
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	109.1	109.8	112.5	112.5	110.8
1.3.16.6 Watches and Clocks	0.076	137.9	137.4	138.7	136.6	138.7
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	103.2	101.5	104.2	104.2	100.3
1.3.16.8 Optical instruments and Photographic equipment	0.008	108.7	107.5	109.5	109.5	109.3
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	**2.930**	**111.7**	**111.8**	**110.9**	**111.3**	**111.1**
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	107.7	107.9	107.5	108.7	107.9
1.3.17.2 Batteries and Accumulators	0.236	117.7	118.5	117.6	117.5	117.2
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	126.1	127.0	113.6	118.4	109.5
1.3.17.4 Other electronic and Electric wires and Cables	0.428	111.2	110.0	109.3	108.8	110.1
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	108.6	108.7	111.4	107.6	112.2
1.3.17.6 Domestic appliances	0.366	121.6	121.8	120.4	120.5	120.5
1.3.17.7 Other electrical equipment	0.206	108.6	108.1	108.9	109.6	109.3
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	**4.789**	**111.3**	**111.2**	**113.2**	**113.5**	**113.1**
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	103.0	103.2	104.7	105.0	105.2
1.3.18.2 Fluid power equipment	0.162	118.2	118.7	119.3	119.6	120.1
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	108.9	107.1	111.6	112.2	110.9
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	111.2	112.9	110.2	110.5	112.3
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	78.2	77.4	79.3	79.3	79.8
1.3.18.6 Lifting and Handling equipment	0.285	110.4	110.2	110.6	110.6	110.6
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	130.2	133.7	132.2	132.3
1.3.18.9 Agricultural and Forestry machinery	0.833	116.9	116.7	119.7	120.0	120.6
1.3.18.10 Metal-forming machinery and Machine tools	0.224	101.8	102.5	107.4	108.2	108.0
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	75.7	75.8	74.5	76.6	74.5
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	124.7	121.3	125.3	125.3	122.6
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	119.9	120.8	120.8	121.8	118.7
1.3.18.14 Other special-purpose machinery	0.468	123.8	124.2	126.8	126.9	126.2
1.3.18.15 Renewable electricity generating equipment	0.046	67.3	67.0	66.6	66.6	66.6
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	**4.969**	**112.8**	**113.3**	**114.7**	**114.0**	**113.5**
1.3.19.1 Motor vehicles	2.600	113.3	113.9	115.7	115.2	114.1
1.3.19.2 Parts and Accessories for motor vehicles	2.368	112.2	112.5	113.5	112.7	112.7
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	**1.648**	**111.7**	**110.9**	**117.0**	**116.4**	**117.6**
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	103.9	106.6	106.7	106.6
1.3.20.3 Motor cycles	1.302	106.6	105.6	113.0	112.3	113.9
1.3.20.4 Bicycles and Invalid carriages	0.117	127.8	127.9	128.7	128.4	128.2
1.3.20.5 Other transport equipment	0.002	123.5	123.9	125.1	125.6	124.7
1.3.21 MANUFACTURE OF FURNITURE	**0.727**	**127.3**	**125.3**	**132.1**	**128.7**	**131.4**
1.3.21.1 Furniture	0.727	127.3	125.3	132.1	128.7	131.4
1.3.22 OTHER MANUFACTURING	**1.064**	**107.0**	**100.6**	**108.7**	**108.3**	**110.3**
1.3.22.1 Jewellery and Related articles	0.996	103.9	97.3	105.6	105.2	107.4
1.3.22.2 Musical instruments	0.001	174.1	174.3	177.2	175.9	173.4
1.3.22.3 Sports goods	0.012	127.4	127.4	128.1	128.5	128.7
1.3.22.4 Games and Toys	0.005	132.2	132.2	137.7	136.4	136.7
1.3.22.5 Medical and Dental instruments and Supplies	0.049	159.2	155.1	161.1	161.0	161.0
2 FOOD INDEX	**24.378**	**138.1**	**139.1**	**144.2**	**145.2**	**147.1**

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-July		July	
				2018-19	2019-20	2018	2019
	1	2	3	4	5	6	7
General Index	100.00	125.3	130.1	126.4	130.6	125.7	131.1
1 Sectoral Classification							
1.1 Mining	14.37	104.9	107.9	102.7	106.2	95.5	100.2
1.2 Manufacturing	77.63	126.6	131.5	127.4	131.0	127.6	132.9
1.3 Electricity	7.99	149.2	156.9	160.1	170.6	162.0	169.7
2 Use-Based Classification							
2.1 Primary Goods	34.05	121.8	126.1	124.9	128.3	123.6	127.9
2.2 Capital Goods	8.22	105.6	108.4	103.0	98.6	98.7	91.7
2.3 Intermediate Goods	17.22	125.1	126.2	121.7	134.9	121.4	138.3
2.4 Infrastructure/ Construction Goods	12.34	132.0	141.7	138.8	139.3	136.1	139.0
2.5 Consumer Durables	12.84	123.6	130.4	131.3	127.7	133.5	129.9
2.6 Consumer Non-Durables	15.33	139.9	145.5	133.8	143.4	135.1	146.3

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 - Aug			
	2019-20 (Budget Estimates)	2019-20 (Actuals)	2018-19 (Actuals)	Percentage to Budget Estimates	
				2019-20	2018-19
	1	2	3	4	5
1 Revenue Receipts	**1962761**	**603201**	**464548**	**30.7**	**26.9**
1.1 Tax Revenue (Net)	1649582	404580	366216	24.5	24.7
1.2 Non-Tax Revenue	313179	198621	98332	63.4	40.1
2 Non-Debt Capital Receipt	**119828**	**18260**	**15020**	**15.2**	**16.3**
2.1 Recovery of Loans	14828	5902	5596	39.8	45.9
2.2 Other Receipts	105000	12358	9424	11.8	11.8
3 Total Receipts (excluding borrowings) (1+2)	**2082589**	**621461**	**479568**	**29.8**	**26.4**
4 Revenue Expenditure	2447780	1039125	938641	42.5	43.8
4.1 Interest Payments	660471	219026	219111	33.2	38.1
5 Capital Expenditure	338569	136176	132218	40.2	44.0
6 Total Expenditure (4+5)	**2786349**	**1175301**	**1070859**	**42.2**	**43.8**
7 Revenue Deficit (4-1)	**485019**	**435924**	**474093**	**89.9**	**114.0**
8 Fiscal Deficit (6-3)	**703760**	**553840**	**591291**	**78.7**	**94.7**
9 Gross Primary Deficit (8-4.1)	**43289**	**334814**	**372180**	**773.4**	**767.7**

Source: Controller General of Accounts (CGA), Ministry of Finance, Government of India and Union Budget 2018-19.

No. 24: Treasury Bills – Ownership Pattern

(₹ Crore)

Item	2018-19	2018	2019					
		Aug. 31	Jul. 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	18521	40183	24102	22039	19676	20291	19702	19939
1.2 Primary Dealers	17878	20952	10211	8377	8030	8694	7287	7196
1.3 State Governments	26999	66535	44396	47146	50146	41646	53146	54141
1.4 Others	27747	69949	87786	89656	90464	87195	87650	85510
2 182-day								
2.1 Banks	31953	39358	55667	56979	62264	61894	64548	64410
2.2 Primary Dealers	38738	33855	53898	54118	49798	49556	45203	46639
2.3 State Governments	28036	33382	4504	2254	2340	2492	2492	2667
2.4 Others	18567	26013	25847	26199	27089	29424	33191	33619
3 364-day								
3.1 Banks	48811	37554	51756	53239	59979	61806	60856	59867
3.2 Primary Dealers	74170	74249	80333	78133	69970	67909	67475	68176
3.3 State Governments	18892	15792	17200	17200	17615	17615	17065	17745
3.4 Others	62393	55373	52741	53496	54828	55014	56781	57147
4 14-day Intermediate								
4.1 Banks								
4.2 Primary Dealers								
4.3 State Governments	165605	136153	115097	94450	78070	81157	138375	177224
4.4 Others	252	440	215	162	147	396	167	677
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	412704	513195	508440	508838	512198	503532	515394	517055

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

(₹ 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										
Jul. 31	7000	58	70201	5250	16	7000	5250	12250	98.61	5.6539
Aug. 7	7000	60	61631	12393	8	6997	12393	19390	98.66	5.4477
Aug. 14	7000	52	33390	2301	30	6999	2301	9300	98.65	5.4889
Aug. 21	7000	65	79641	19533	28	6997	19533	26530	98.66	5.4477
Aug. 28	7000	59	94060	4002	32	6998	4002	11000	98.67	5.4065
182-day Treasury Bills										
2019-20										
Jul. 31	5000	76	28869	0	17	5000	0	5000	97.15	5.8833
Aug. 7	5000	59	22632	0	14	5000	0	5000	97.24	5.6923
Aug. 14	5000	64	18399	1	25	4999	1	5000	97.26	5.6499
Aug. 21	5000	63	19917	8	29	4992	8	5000	97.27	5.6287
Aug. 28	5000	72	18372	0	40	5000	0	5000	97.27	5.6287
364-day Treasury Bills										
2019-20										
Jul. 31	4000	72	15529	0	23	4000	0	4000	94.41	5.9372
Aug. 7	4000	60	12916	500	34	4000	500	4500	94.49	5.8473
Aug. 14	4000	89	13908	0	28	4000	0	4000	94.56	5.7688
Aug. 21	4000	80	18415	305	26	3995	305	4300	94.59	5.7351
Aug. 28	4000	73	12442	850	37	4000	850	4850	94.60	5.7239

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
August 1, 2019	4.40-5.75	5.56
August 2, 2019	4.40-5.80	5.59
August 3, 2019	4.00-5.75	5.39
August 5, 2019	4.40-5.80	5.56
August 6, 2019	4.40-5.80	5.63
August 7, 2019	4.40-5.75	5.50
August 8, 2019	4.10-5.65	5.27
August 9, 2019	4.10-5.50	5.32
August 13, 2019	4.10-5.50	5.31
August 14, 2019	4.10-5.50	5.33
August 16, 2019	4.00-5.40	5.31
August 19, 2019	4.00-5.45	5.30
August 20, 2019	4.00-5.42	5.28
August 21, 2019	4.10-5.40	5.32
August 22, 2019	4.10-5.45	5.33
August 23, 2019	4.00-5.65	5.34
August 26, 2019	4.00-5.45	5.36
August 27, 2019	4.00-5.45	5.35
August 28, 2019	4.10-5.45	5.36
August 29, 2019	3.90-5.45	5.36
August 30, 2019	4.10-5.50	5.36
August 31, 2019	4.20-5.45	5.31
September 3, 2019	4.10-5.45	5.34
September 4, 2019	4.10-5.50	5.35
September 5, 2019	4.10-5.50	5.35
September 6, 2019	4.10-5.50	5.35
September 7, 2019	3.90-5.40	5.23
September 9, 2019	4.10-5.45	5.32
September 11, 2019	4.00-5.50	5.32
September 12, 2019	4.00-5.45	5.35
September 13, 2019	4.00-5.45	5.29

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2018	2019			
	Aug. 31	Jul. 19	Aug. 2	Aug. 16	Aug. 30
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	163975.02	224039.00	198141.00	178635.00	179455.00
1.1 Issued during the fortnight (₹ Crore)	24130.54	10406.96	13107.14	16349.46	15568.45
2 Rate of Interest (per cent)	6.95-8.90	5.86-7.36	5.66-7.09	5.43-7.19	5.40-7.22

No. 28: Commercial Paper

Item	2018	2019			
	Aug. 31	Jul. 15	Jul. 31	Aug. 15	Aug. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Crore)	632296.01	544981.40	509412.80	516900.55	497176.75
1.1 Reported during the fortnight (₹ Crore)	156116.00	81216.10	119806.65	123734.95	77603.30
2 Rate of Interest (per cent)	6.44-10.40	5.81-13.19	5.69-14.47	5.38-13.99	5.37-13.39

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Crore)

Item	2018-19	2018	2019					
		Aug. 24	Jul. 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30
	1	2	3	4	5	6	7	8
1 Call Money	31280	25444	24991	18197	23748	37362	36111	35391
2 Notice Money	4930	274	294	6450	314	348	428	10155
3 Term Money	740	854	570	792	608	900	695	697
4 CBLO/TRIPARTY REPO	213010	228992	253638	269919	242494	296266	315753	309833
5 Market Repo	200970	169760	165619	194213	193189	229721	211641	203504
6 Repo in Corporate Bond		613	120	1363	750	920	2376	1809
7 Forex (US $ million)	67793	68761	59156	71600	72485	67446	67473	78536
8 Govt. of India Dated Securities	65800	46319	106224	106743	135451	71713	106854	94875
9 State Govt. Securities	4320	2879	6809	7328	8317	3624	4684	6356
10 Treasury Bills								
10.1 91-Day	3380	4687	3734	2158	797	2769	2798	2604
10.2 182-Day	1450	826	2022	3901	4724	2626	4597	1735
10.3 364-Day	1620	252	4225	3892	9540	2772	3017	2665
10.4 Cash Management Bills	1400	2400			10036	7689	565	66
11 Total Govt. Securities (8+9+10)	77970	57364	123015	124022	168864	91194	122515	108301
11.1 RBI	–	17	5	145	49	371	96	98

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

(₹ Crore)

Security & Type of Issue	2018-19		2018-19 (Apr.-Aug.)		2019-20 (Apr.-Aug.)*		Aug. 2018		Aug. 2019*	
	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**	**68**	**11568**	**38**	**59140**	**11**	**1254**	**5**	**4149**
1A Premium	124	16083	66	11243	38	37667	10	1197	5	4118
1.1 Public	119	14606	64	10440	29	7955	11	1254	4	4047
1.1.1 Premium	115	14123	62	10194	29	7834	10	1197	4	4029
1.2 Rights	10	2149	4	1128	9	51185	–	–	1	102
1.2.1 Premium	9	1962	4	1049	9	29833	–	–	1	89
2 Preference Shares	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.1 Public	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Bonds & Debentures	**25**	**36680**	**7**	**21048**	**14**	**6970**	**–**	**–**	**3**	**2794**
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Public	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	25	36680	7	21048	14	6970	–	–	3	2794
3.2.1 Public	25	36680	7	21048	14	6970	–	–	3	2794
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Total(1+2+3)	**154**	**53434**	**75**	**32616**	**52**	**66110**	**11**	**1254**	**8**	**6943**
4.1 Public	144	51284	71	31488	43	14925	11	1254	7	6841
4.2 Rights	10	2149	4	1128	9	51185	–	–	1	102

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	2018	2019				
			Aug.	Apr.	May	Jun.	Jul.	Aug.
		1	2	3	4	5	6	7
1 Exports	₹ Crore	2307726	193397	180584	208548	173529	181114	185881
	US $ Million	330078	27808	26011	29889	24990	26321	26127
1.1 Oil	₹ Crore	325929	25836	24689	34780	18378	25052	23596
	US $ Million	46554	3715	3556	4985	2647	3641	3317
1.2 Non-oil	₹ Crore	1981797	167561	155896	173768	155151	156062	162285
	US $ Million	283525	24093	22454	24905	22344	22681	22810
2 Imports	₹ Crore	3585672	318044	293936	325136	284114	273582	281606
	US $ Million	512793	45731	41416	45358	40334	39760	39582
2.1 Oil	₹ Crore	986275	83032	80108	87788	77363	66057	77380
	US $ Million	140921	11939	11448	12478	11071	9600	10876
2.2 Non-oil	₹ Crore	2599397	235012	213828	237348	206751	207525	204226
	US $ Million	371872	33792	29967	32880	29263	30160	28705
3 Trade Balance	₹ Crore	-1277945	-124647	-113351	-116588	-110585	-92468	-95725
	US $ Million	-182714	-17923	-15405	-15468	-15344	-13439	-13455
3.1 Oil	₹ Crore	-660346	-57196	-55419	-53007	-58984	-41005	-53785
	US $ Million	-94367	-8224	-7892	-7493	-8424	-5959	-7560
3.2 Non-oil	₹ Crore	-617599	-67451	-57932	-63581	-51600	-51463	-41940
	US $ Million	-88347	-9699	-7513	-7975	-6920	-7479	-5895

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

No. 32: Foreign Exchange Reserves

Item	Unit	2018	2019					
		Sep. 21	Aug. 16	Aug. 23	Aug. 30	Sep. 6	Sep. 13	Sep. 20
		1	2	3	4	5	6	7
1 Total Reserves	**₹ Crore**	**2883110**	**3059903**	**3078248**	**3063055**	**3077688**	**3045361**	**3045895**
	US $ Million	**401790**	**430501**	**429051**	**428604**	**429608**	**428960**	**428572**
1.1 Foreign Currency Assets	₹ Crore	2709820	2831145	2849226	2829979	2845520	2817033	2819216
	US $ Million	377413	398327	397129	396005	397205	396795	396670
1.2 Gold	₹ Crore	144810	192691	192762	196880	195940	192414	190780
	US $ Million	20414	27111	26867	27550	27351	27103	26843
1.3 SDRs	SDRs Million	1054	1046	1046	1046	1046	1046	1046
	₹ Crore	10640	10221	10285	10242	10270	10167	10196
	US $ Million	1481	1438	1434	1433	1434	1432	1435
1.4 Reserve Tranche Position in IMF	₹ Crore	17840	25846	25975	25954	25958	25748	25703
	US $ Million	2483	3626	3621	3617	3619	3630	3623

No. 33: NRI Deposits

(US$ Million)

Scheme	Outstanding				Flows	
	2018-19	2018	2019		2018-19	2019-20
		Aug.	Jul.	Aug.	Apr.-Aug.	Apr.-Aug.
	1	2	3	4	5	6
1 NRI Deposits	**130,423**	**123,028**	**133,125**	**130,513**	**5,702**	**4,042**
1.1 FCNR(B)	23,170	22,623	23,975	23,895	597	725
1.2 NR(E)RA	92,017	86,507	93,211	91,136	4,119	2,496
1.3 NRO	15,236	13,899	15,938	15,482	986	820

No. 34: Foreign Investment Inflows

(US$ Million)

Item	2018-19	2018-19	2019-20	2018	2019	
		Apr.-Aug.	Apr.-Aug.	Aug.	Jul.	Aug.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	**30,712**	**13,368**	**19,388**	**1,987**	**3,673**	**1,824**
1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)	**43,302**	**18,476**	**24,155**	**2,544**	**4,570**	**2,732**
1.1.1.1 Gross Inflows/Gross Investments	**62,001**	**25,013**	**30,809**	**3,896**	**5,923**	**4,056**
1.1.1.1.1 Equity	45,055	18,304	23,630	2,564	4,529	2,609
1.1.1.1.1.1 Government (SIA/FIPB)	2,429	1,558	2,809	14	50	43
1.1.1.1.1.2 RBI	36,315	14,198	17,957	2,182	3,761	2,004
1.1.1.1.1.3 Acquisition of shares	5,622	2,272	2,589	311	661	506
1.1.1.1.1.4 Equity capital of unincorporated bodies	689	275	275	56	56	56
1.1.1.1.2 Reinvested earnings	13,672	5,457	5,422	1,115	1,115	1,115
1.1.1.1.3 Other capital	3,274	1,252	1,757	217	280	332
1.1.1.2 Repatriation/Disinvestment	**18,699**	**6,537**	**6,654**	**1,352**	**1,353**	**1,324**
1.1.1.2.1 Equity	18,452	6,417	6,621	1,298	1,341	1,323
1.1.1.2.2 Other capital	247	120	33	54	12	2
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	**12,590**	**5,108**	**4,767**	**557**	**896**	**908**
1.1.2.1 Equity capital	7,201	3,219	2,265	259	437	492
1.1.2.2 Reinvested Earnings	3,032	1,264	1,276	253	253	253
1.1.2.3 Other Capital	5,202	1,401	1,783	296	334	209
1.1.2.4 Repatriation/Disinvestment	2,845	776	557	250	127	45
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	**–618**	**–6,144**	**2,995**	**–2,831**	**–1,313**	**–534**
1.2.1 GDRs/ADRs	1,820	1,820	–	1,820	–	–
1.2.2 FIIs	–2,225	–9,446	3,847	–4,911	–708	–601
1.2.3 Offshore funds and others	–	–	–	–	–	–
1.2.4 Portfolio investment by India	213	–1,482	852	–261	605	–67
1 Foreign Investment Inflows	**30,094**	**7,224**	**22,383**	**–844**	**2,360**	**1,290**

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

(US$ Million)

Item	2018-19	2018	2019		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 Outward Remittances under the LRS	**13,787.6**	**1,426.9**	**1,407.5**	**1,691.6**	**1,875.8**
1.1 Deposit	455.9	32.2	37.4	49.6	33.7
1.2 Purchase of immovable property	84.5	6.6	3.9	6.5	6.8
1.3 Investment in equity/debt	422.9	47.2	28.6	30.1	25.5
1.4 Gift	1,370.2	116.3	130.9	151.2	177.2
1.5 Donations	8.7	2.4	0.9	1.1	10.3
1.6 Travel	4,803.8	533.6	595.9	653.5	784.7
1.7 Maintenance of close relatives	2,800.9	241.2	230.2	292.8	281.6
1.8 Medical Treatment	28.6	1.7	2.2	3.1	2.7
1.9 Studies Abroad	3,569.9	419.1	353.9	477.6	531.2
1.10 Others	242.2	26.7	23.5	26.2	22.2

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

Item	2017-18	2018-19	2018	2019	
			September	August	September
	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	70.94	73.33	73.22
1.2 REER	119.71	114.01	111.31	115.74	115.57
2 Export-Based Weights					
2.1 NEER	78.89	74.18	72.32	74.68	74.52
2.2 REER	121.94	116.32	113.38	118.30	118.05
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	67.91	63.07	61.35	63.67	63.80
1.2 REER	129.19	121.70	118.69	124.91	125.20
2 Base: 2017-18 (April-March) =100					
2.1 NEER	100.00	92.88	90.34	93.76	93.95
2.2 REER	100.00	94.20	91.88	96.69	96.92

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

(Amount in US$ Million)

Item	2018-19	2018	2019	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Automatic Route				
1.1 Number	999	90	90	115
1.2 Amount	28387	3685	3418	3167
2 Approval Route				
2.1 Number	21	4	3	1
2.2 Amount	13537	1141	1563	150
3 Total (1+2)				
3.1 Number	1020	94	93	116
3.2 Amount	41924	4827	4981	3317
4 Weighted Average Maturity (in years)	5	5	6	5
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.20	0.94	1.38	1.43
5.2 Interest rate range for Fixed Rate Loans	0.00-15.00	0.00-12.00	0.00-11.20	0.00-10.59

No. 38: India's Overall Balance of Payments

(US $ Million)

Item	Apr-Jun 2018			Apr-Jun 2019 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**286992**	**298331**	**-11338**	**302166**	**288182**	**13984**
1 CURRENT ACCOUNT (1.1+ 1.2)	**155749**	**171552**	**-15803**	**160686**	**175031**	**-14345**
1.1 MERCHANDISE	**83389**	**129140**	**-45751**	**82729**	**128941**	**-46212**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**72360**	**42413**	**29947**	**77957**	**46091**	**31867**
1.2.1 Services	48200	29524	18676	52197	32166	20031
1.2.1.1 Travel	6448	5914	534	6950	6203	747
1.2.1.2 Transportation	4863	4776	87	5344	6104	-760
1.2.1.3 Insurance	606	373	233	588	409	179
1.2.1.4 G.n.i.e.	170	278	-108	151	307	-155
1.2.1.5 Miscellaneous	36114	18183	17930	39164	19143	20021
1.2.1.5.1 Software Services	20121	1516	18605	22811	1812	20998
1.2.1.5.2 Business Services	9436	9479	-43	11475	11715	-239
1.2.1.5.3 Financial Services	1111	744	367	1287	519	769
1.2.1.5.4 Communication Services	522	232	290	700	284	415
1.2.2 Transfers	18803	1772	17031	19963	2012	17951
1.2.2.1 Official	41	225	-184	35	307	-272
1.2.2.2 Private	18763	1547	17216	19928	1705	18224
1.2.3 Income	5356	11117	-5760	5797	11913	-6116
1.2.3.1 Investment Income	4213	10514	-6301	4446	11274	-6829
1.2.3.2 Compensation of Employees	1144	603	541	1352	639	713
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**131243**	**126456**	**4787**	**141032**	**113150**	**27882**
2.1 Foreign Investment (2.1.1+2.1.2)	**77688**	**76261**	**1427**	**88393**	**69659**	**18734**
2.1.1 Foreign Direct Investment	17235	7663	9573	21215	7323	13891
2.1.1.1 In India	16960	3834	13126	20830	3976	16854
2.1.1.1.1 Equity	12914	3821	9093	16492	3957	12535
2.1.1.1.2 Reinvested Earnings	3228		3228	3193		3193
2.1.1.1.3 Other Capital	817	12	805	1145	19	1126
2.1.1.2 Abroad	276	3829	-3554	384	3347	-2963
2.1.1.2.1 Equity	276	2326	-2050	384	1336	-952
2.1.1.2.2 Reinvested Earnings	0	758	-758	0	770	-770
2.1.1.2.3 Other Capital	0	745	-745	0	1241	-1241
2.1.2 Portfolio Investment	60453	68598	-8145	67178	62335	4843
2.1.2.1 In India	59138	68244	-9106	67073	61916	5156
2.1.2.1.1 FIIs	59138	68244	-9106	67073	61916	5156
2.1.2.1.1.1 Equity	49357	52107	-2749	50491	47378	3112
2.1.2.1.1.2 Debt	9781	16137	-6356	16582	14538	2044
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	1315	354	961	105	419	-314
2.2 Loans (2.2.1+2.2.2+2.2.3)	**18774**	**23046**	**-4272**	**22450**	**12597**	**9853**
2.2.1 External Assistance	1876	1350	526	3021	1551	1470
2.2.1.1 By India	12	31	-19	5	30	-25
2.2.1.2 To India	1864	1319	545	3016	1521	1495
2.2.2 Commercial Borrowings	4749	6057	-1308	10001	3608	6393
2.2.2.1 By India	1718	1519	199	881	742	140
2.2.2.2 To India	3031	4538	-1507	9119	2866	6253
2.2.3 Short Term to India	12149	15639	-3490	9428	7438	1990
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	5613	15639	-10026	8028	7438	590
2.2.3.2 Suppliers' Credit up to 180 days	6536	0	6536	1400	0	1400
2.3 Banking Capital (2.3.1+2.3.2)	**28806**	**18745**	**10061**	**16877**	**20761**	**-3884**
2.3.1 Commercial Banks	28806	18231	10575	16877	20378	-3501
2.3.1.1 Assets	11158	5690	5468	5503	10076	-4573
2.3.1.2 Liabilities	17648	12541	5106	11375	10302	1072
2.3.1.2.1 Non-Resident Deposits	15578	12067	3512	10780	8026	2754
2.3.2 Others	0	513	-513	0	383	-383
2.4 Rupee Debt Service	0	23	-23	0	60	-60
2.5 Other Capital	5975	8381	-2406	13312	10073	3239
3 Errors & Omissions		**322**	**-322**	**447**	0	**447**
4 Monetary Movements (4.1+ 4.2)	**11338**	0	**11338**	0	**13984**	**-13984**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	11338	0	11338		13984	-13984

Note : P : Preliminary

No. 39: India's Overall Balance of Payments

(₹ Crore)

Item	Apr-Jun 2018			Apr-Jun 2019 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**1922549**	**1998504**	**-75956**	**2101454**	**2004201**	**97254**
1 CURRENT ACCOUNT (1.1+ 1.2)	**1043356**	**1149222**	**-105867**	**1117517**	**1217281**	**-99764**
1.1 MERCHANDISE	**558619**	**865100**	**-306482**	**575351**	**896736**	**-321385**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**484737**	**284122**	**200615**	**542166**	**320545**	**221621**
1.2.1 Services	322893	197782	125111	363010	223703	139307
1.2.1.1 Travel	43194	39615	3579	48335	43139	5196
1.2.1.2 Transportation	32574	31994	581	37162	42451	-5289
1.2.1.3 Insurance	4060	2497	1563	4089	2846	1243
1.2.1.4 G.n.i.e.	1138	1865	-727	1052	2133	-1081
1.2.1.5 Miscellaneous	241926	121810	120116	272372	133133	139238
1.2.1.5.1 Software Services	134790	10153	124636	158640	12604	146036
1.2.1.5.2 Business Services	63210	63496	-286	79808	81470	-1663
1.2.1.5.3 Financial Services	7446	4986	2460	8953	3608	5346
1.2.1.5.4 Communication Services	3496	1556	1940	4865	1976	2889
1.2.2 Transfers	125962	11871	114092	138837	13991	124846
1.2.2.1 Official	273	1508	-1235	242	2136	-1894
1.2.2.2 Private	125689	10363	115326	138595	11855	126740
1.2.3 Income	35882	74470	-38588	40319	82851	-42532
1.2.3.1 Investment Income	28220	70433	-42213	30918	78408	-47490
1.2.3.2 Compensation of Employees	7662	4037	3625	9401	4443	4958
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**879193**	**847122**	**32071**	**980828**	**786920**	**193908**
2.1 Foreign Investment (2.1.1+2.1.2)	520428	510868	9561	614739	484452	130287
2.1.1 Foreign Direct Investment	115458	51333	64126	147540	50932	96608
2.1.1.1 In India	113612	25681	87931	144867	27655	117212
2.1.1.1.1 Equity	86514	25598	60915	114698	27522	87176
2.1.1.1.2 Reinvested Earnings	21623	0	21623	22208	0	22208
2.1.1.1.3 Other Capital	5475	83	5392	7961	133	7828
2.1.1.2 Abroad	1847	25652	-23805	2673	23277	-20604
2.1.1.2.1 Equity	1847	15580	-13734	2673	9291	-6618
2.1.1.2.2 Reinvested Earnings	0	5078	-5078	0	5357	-5357
2.1.1.2.3 Other Capital	0	4993	-4993	0	8628	-8628
2.1.2 Portfolio Investment	404970	459535	-54565	467199	433520	33679
2.1.2.1 In India	396161	457162	-61000	466467	430607	35860
2.1.2.1.1 FIIs	396161	457162	-61000	466467	430607	35860
2.1.2.1.1.1 Equity	330642	349060	-18419	351144	329501	21644
2.1.2.1.1.2 Debt	65520	108102	-42582	115323	101107	14216
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	8809	2374	6435	732	2913	-2181
2.2 Loans (2.2.1+2.2.2+2.2.3)	**125766**	**154384**	**-28619**	**156133**	**87608**	**68525**
2.2.1 External Assistance	12567	9043	3524	21010	10790	10221
2.2.1.1 By India	81	209	-128	36	211	-174
2.2.1.2 To India	12486	8834	3652	20974	10579	10395
2.2.2 Commercial Borrowings	31814	40576	-8762	69552	25089	44463
2.2.2.1 By India	11511	10176	1335	6131	5157	974
2.2.2.2 To India	20303	30400	-10097	63421	19932	43489
2.2.3 Short Term to India	81385	104766	-23381	65571	51730	13841
2.2.3.1 Buyers' credit & Suppliers' Credit >180 days	37600	104766	-67165	55835	51730	4105
2.2.3.2 Suppliers' Credit up to 180 days	43784	0	43784	9737	0	9737
2.3 Banking Capital (2.3.1+2.3.2)	**192971**	**125569**	**67401**	**117376**	**144387**	**-27011**
2.3.1 Commercial Banks	192971	122132	70839	117376	141724	-24348
2.3.1.1 Assets	74749	38118	36631	38270	70077	-31806
2.3.1.2 Liabilities	118221	84013	34208	79106	71648	7458
2.3.1.2.1 Non-Resident Deposits	104358	80835	23523	74973	55820	19153
2.3.2 Others	0	3438	-3438	0	2662	-2662
2.4 Rupee Debt Service	0	154	-154	0	418	-418
2.5 Other Capital	40028	56146	-16118	92580	70054	22525
3 Errors & Omissions	0	**2160**	**-2160**	**3109**	0	**3109**
4 Monetary Movements (4.1+ 4.2)	**75956**	0	**75956**	0	**97254**	**-97254**
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	75956	0	75956	0	97254	-97254

Note : P: Preliminary

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

(US $ Million)

Item	Apr-Jun 2018			Apr-Jun 2019 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**155748**	**171530**	**-15782**	**160686**	**175002**	**-14316**
1.A Goods and Services (1.A.a+1.A.b)	**131589**	**158664**	**-27074**	**134926**	**161107**	**-26181**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**83389**	**129140**	**-45751**	**82729**	**128941**	**-46212**
1.A.a.1 General merchandise on a BOP basis	84567	120697	-36129	82205	117492	-35287
1.A.a.2 Net exports of goods under merchanting	-1178	0	-1178	524	0	524
1.A.a.3 Nonmonetary gold		8443	-8443		11449	-11449
1.A.b Services (1.A.b.1 to 1.A.b.13)	**48200**	**29524**	**18676**	**52197**	**32166**	**20031**
1.A.b.1 Manufacturing services on physical inputs owned by others	25	10	15	33	18	14
1.A.b.2 Maintenance and repair services n.i.e.	40	207	-167	45	413	-368
1.A.b.3 Transport	4863	4776	87	5344	6104	-760
1.A.b.4 Travel	6448	5914	534	6950	6203	747
1.A.b.5 Construction	1010	649	361	754	754	0
1.A.b.6 Insurance and pension services	606	373	233	588	409	179
1.A.b.7 Financial services	1111	744	367	1287	519	769
1.A.b.8 Charges for the use of intellectual property n.i.e.	228	2087	-1859	319	2091	-1771
1.A.b.9 Telecommunications, computer, and information services	20746	1882	18864	23604	2207	21397
1.A.b.10 Other business services	9436	9479	-43	11475	11715	-239
1.A.b.11 Personal, cultural, and recreational services	496	565	-69	532	631	-99
1.A.b.12 Government goods and services n.i.e.	170	278	-108	151	307	-155
1.A.b.13 Others n.i.e.	3021	2561	461	1114	796	318
1.B Primary Income (1.B.1 to 1.B.3)	**5356**	**11117**	**-5760**	**5797**	**11913**	**-6116**
1.B.1 Compensation of employees	1144	603	541	1352	639	713
1.B.2 Investment income	3563	10337	-6774	3230	11074	-7844
1.B.2.1 Direct investment	1789	4391	-2602	1590	4634	-3044
1.B.2.2 Portfolio investment	34	2361	-2326	46	2503	-2457
1.B.2.3 Other investment	210	3574	-3363	163	3922	-3758
1.B.2.4 Reserve assets	1530	12	1518	1431	15	1415
1.B.3 Other primary income	650	177	472	1216	200	1016
1.C Secondary Income (1.C.1+1.C.2)	**18803**	**1750**	**17053**	**19963**	**1982**	**17981**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	18763	1547	17216	19928	1705	18224
1.C.1.1 Personal transfers (Current transfers between resident and/	18172	1141	17031	19303	1217	18086
1.C.1.2 Other current transfers	591	406	184	625	487	138
1.C.2 General government	40	203	-163	34	278	-243
2 Capital Account (2.1+2.2)	**111**	**94**	**17**	**87**	**910**	**-824**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	66	16	51	11	824	-813
2.2 Capital transfers	45	78	-33	76	86	-10
3 Financial Account (3.1 to 3.5)	**142471**	**126384**	**16087**	**140946**	**126253**	**14692**
3.1 Direct Investment (3.1A+3.1B)	**17235**	**7663**	**9573**	**21215**	**7323**	**13891**
3.1.A Direct Investment in India	16960	3834	13126	20830	3976	16854
3.1.A.1 Equity and investment fund shares	16142	3821	12321	19685	3957	15728
3.1.A.1.1 Equity other than reinvestment of earnings	12914	3821	9093	16492	3957	12535
3.1.A.1.2 Reinvestment of earnings	3228		3228	3193		3193
3.1.A.2 Debt instruments	817	12	805	1145	19	1126
3.1.A.2.1 Direct investor in direct investment enterprises	817	12	805	1145	19	1126
3.1.B Direct Investment by India	276	3829	-3554	384	3347	-2963
3.1.B.1 Equity and investment fund shares	276	3084	-2808	384	2106	-1722
3.1.B.1.1 Equity other than reinvestment of earnings	276	2326	-2050	384	1336	-952
3.1.B.1.2 Reinvestment of earnings		758	-758		770	-770
3.1.B.2 Debt instruments	0	745	-745	0	1241	-1241
3.1.B.2.1 Direct investor in direct investment enterprises		745	-745		1241	-1241
3.2 Portfolio Investment	**60453**	**68598**	**-8145**	**67178**	**62335**	**4843**
3.2.A Portfolio Investment in India	59138	68244	-9106	67073	61916	5156
3.2.1 Equity and investment fund shares	49357	52107	-2749	50491	47378	3112
3.2.2 Debt securities	9781	16137	-6356	16582	14538	2044
3.2.B Portfolio Investment by India	1315	354	961	105	419	-314
3.3 Financial derivatives (other than reserves) and employee stock options	**3631**	**5113**	**-1482**	**6703**	**5182**	**1521**
3.4 Other investment	**49813**	**45010**	**4803**	**45850**	**37429**	**8421**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	15578	12580	2998	10780	8409	2371
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	513	-513	0	383	-383
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	15578	12067	3512	10780	8026	2754
3.4.2.3 General government						
3.4.2.4 Other sectors						
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	19853	13572	6281	19119	17511	1608
3.4.3.A Loans to India	18122	12021	6101	18232	16739	1493
3.4.3.B Loans by India	1730	1550	180	887	772	115
3.4.4 Insurance, pension, and standardized guarantee schemes	102	635	-533	46	176	-131
3.4.5 Trade credit and advances	12149	15639	-3490	9428	7438	1990
3.4.6 Other accounts receivable/payable - other	2132	2585	-453	6477	3894	2582
3.4.7 Special drawing rights						
3.5 Reserve assets	**11338**	0	**11338**	0	**13984**	**-13984**
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)	11338	0	11338	0	13984	-13984
4 Total assets/liabilities	**142471**	**126384**	**16087**	**140946**	**126253**	**14692**
4.1 Equity and investment fund shares	70823	65114	5709	77415	59219	18196
4.2 Debt instruments	58178	58685	-507	57054	49156	7898
4.3 Other financial assets and liabilities	13470	2585	10885	6477	17878	-11402
5 Net errors and omissions		**322**	**-322**	**447**		**447**

Note : P : Preliminary

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

(₹ Crore)

Item	Apr-Jun 2018			Apr-Jun 2019 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**1043352**	**1149073**	**-105721**	**1117515**	**1217075**	**-99561**
1.A Goods and Services (1.A.a+1.A.b)	**881511**	**1062882**	**-181371**	**938361**	**1120439**	**-182078**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**558619**	**865100**	**-306482**	**575351**	**896736**	**-321385**
1.A.a.1 General merchandise on a BOP basis	566511	808541	-242030	571705	817114	-245409
1.A.a.2 Net exports of goods under merchanting	-7893	0	-7893	3646	0	3646
1.A.a.3 Nonmonetary gold	0	56559	-56559	0	79622	-79622
1.A.b Services (1.A.b.1 to 1.A.b.13)	**322893**	**197782**	**125111**	**363010**	**223703**	**139307**
1.A.b.1 Manufacturing services on physical inputs owned by others	165	67	98	227	127	100
1.A.b.2 Maintenance and repair services n.i.e.	270	1385	-1116	312	2872	-2560
1.A.b.3 Transport	32574	31994	581	37162	42451	-5289
1.A.b.4 Travel	43194	39616	3579	48335	43139	5196
1.A.b.5 Construction	6767	4346	2421	5245	5244	1
1.A.b.6 Insurance and pension services	4060	2497	1563	4089	2846	1243
1.A.b.7 Financial services	7446	4986	2460	8953	3608	5346
1.A.b.8 Charges for the use of intellectual property n.i.e.	1528	13981	-12453	2221	14539	-12318
1.A.b.9 Telecommunications, computer, and information services	138980	12609	126370	164159	15349	148809
1.A.b.10 Other business services	63210	63496	-286	79808	81470	-1663
1.A.b.11 Personal, cultural, and recreational services	3322	3786	-465	3700	4390	-690
1.A.b.12 Government goods and services n.i.e.	1138	1865	-727	1052	2133	-1081
1.A.b.13 Others n.i.e.	20239	17153	3086	7746	5534	2213
1.B Primary Income (1.B.1 to 1.B.3)	**35882**	**74470**	**-38588**	**40319**	**82851**	**-42532**
1.B.1 Compensation of employees	7662	4037	3625	9401	4443	4958
1.B.2 Investment income	23869	69247	-45378	22464	77019	-54555
1.B.2.1 Direct investment	11985	29417	-17433	11059	32231	-21172
1.B.2.2 Portfolio investment	229	15813	-15585	321	17407	-17086
1.B.2.3 Other investment	1408	23939	-22531	1136	27274	-26138
1.B.2.4 Reserve assets	10248	78	10170	9949	107	9842
1.B.3 Other primary income	4351	1186	3165	8454	1389	7065
1.C Secondary Income (1.C.1+1.C.2)	**125959**	**11722**	**114237**	**138835**	**13785**	**125049**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	125689	10363	115326	138595	11855	126740
1.C.1.1 Personal transfers (Current transfers between resident and/	121733	7642	114090	134248	8465	125782
1.C.1.2 Other current transfers	3957	2721	1236	4347	3390	957
1.C.2 General government	270	1359	-1089	239	1930	-1691
2 Capital Account (2.1+2.2)	**746**	**629**	**117**	**603**	**6331**	**-5728**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	444	104	340	76	5731	-5655
2.2 Capital transfers	302	525	-224	527	600	-72
3 Financial Account (3.1 to 3.5)	**954406**	**846641**	**107765**	**980227**	**878048**	**102179**
3.1 Direct Investment (3.1A+3.1B)	**115458**	**51333**	**64126**	**147540**	**50932**	**96608**
3.1.A Direct Investment in India	113612	25681	87931	144867	27655	117212
3.1.A.1 Equity and investment fund shares	108137	25598	82538	136906	27522	109384
3.1.A.1.1 Equity other than reinvestment of earnings	86514	25598	60915	114698	27522	87176
3.1.A.1.2 Reinvestment of earnings	21623	0	21623	22208	0	22208
3.1.A.2 Debt instruments	5475	83	5392	7961	133	7828
3.1.A.2.1 Direct investor in direct investment enterprises	5475	83	5392	7961	133	7828
3.1.B Direct Investment by India	1847	25652	-23805	2673	23277	-20604
3.1.B.1 Equity and investment fund shares	1847	20659	-18812	2673	14649	-11976
3.1.B.1.1 Equity other than reinvestment of earnings	1847	15580	-13734	2673	9291	-6618
3.1.B.1.2 Reinvestment of earnings	0	5078	-5078	0	5357	-5357
3.1.B.2 Debt instruments	0	4993	-4993	0	8628	-8628
3.1.B.2.1 Direct investor in direct investment enterprises	0	4993	-4993	0	8628	-8628
3.2 Portfolio Investment	**404970**	**459535**	**-54565**	**467199**	**433520**	**33679**
3.2.A Portfolio Investment in India	396161	457162	-61000	466467	430607	35860
3.2.1 Equity and investment fund shares	330642	349060	-18419	351144	329501	21644
3.2.2 Debt securities	65520	108102	-42582	115323	101107	14216
3.2.B Portfolio Investment by India	8809	2374	6435	732	2913	-2181
3.3 Financial derivatives (other than reserves) and employee stock options	**24326**	**34253**	**-9927**	**46618**	**36037**	**10581**
3.4 Other investment	**333696**	**301521**	**32176**	**318871**	**260305**	**58565**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	104358	84273	20086	74973	58482	16490
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	3438	-3438	0	2662	-2662
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	104358	80835	23523	74973	55820	19153
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)	132993	90915	42078	132966	121783	11183
3.4.3.A Loans to India	121401	80531	40870	126799	116416	10383
3.4.3.B Loans by India	11592	10385	1208	6167	5367	799
3.4.4 Insurance, pension, and standardized guarantee schemes	681	4252	-3571	318	1226	-908
3.4.5 Trade credit and advances	81385	104766	-23381	65571	51730	13841
3.4.6 Other accounts receivable/payable - other	14279	17315	-3036	45043	27084	17959
3.4.7 Special drawing rights	0	0	0	0	0	0
3.5 Reserve assets	**75956**	**0**	**75956**	**0**	**97254**	**-97254**
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)	75956	0	75956	0	97254	-97254
4 Total assets/liabilities	**954406**	**846641**	**107765**	**980227**	**878048**	**102179**
4.1 Equity and investment fund shares	474441	436196	38245	538390	411846	126544
4.2 Debt instruments	389731	393130	-3399	396793	341864	54930
4.3 Other financial assets and liabilities	90235	17315	72920	45043	124338	-79295
5 Net errors and omissions	**0**	**2160**	**-2160**	**3109**	**0**	**3109**

Note : P: Preliminary

No. 42: International Investment Position

(US$ Million)

Item	As on Financial Year /Quarter End							
	2018-19		2018		2019			
			Jun.		Mar.		Jun.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1 Direct Investment Abroad/in India	169964	399218	160927	372276	169964	399218	172926	417272
1.1 Equity Capital and Reinvested Earnings	111122	382105	106542	356524	111122	382105	112844	399381
1.2 Other Capital	58841	17113	54385	15752	58841	17113	60082	17891
2 Portfolio Investment	4699	260313	3070	254254	4699	260313	5012	267073
2.1 Equity	590	147479	1941	144433	590	147479	1806	151162
2.2 Debt	4109	112834	1129	109821	4109	112834	3206	115912
3 Other Investment	54538	419296	41343	391991	54538	419296	54511	429581
3.1 Trade Credit	924	105191	1357	99584	924	105191	2140	107224
3.2 Loan	9884	168129	7034	156573	9884	168129	9765	173982
3.3 Currency and Deposits	25158	130644	16294	124506	25158	130644	24169	133846
3.4 Other Assets/Liabilities	18574	15332	16658	11328	18574	15332	18437	14529
4 Reserves	412871		405740		412871		429837	
5 Total Assets/ Liabilities	642072	1078827	611079	1018521	642072	1078827	662287	1113926
6 IIP (Assets - Liabilities)		-436755		-407441		-436755		-451640

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Lakh)				Value (₹ Crore)			
	2018-19	2019			2018-19	2019		
		Jun.	Jul.	Aug.		Jun.	Jul.	Aug.
	1	2	3	4	5	6	7	8
1 RTGS	**1366.30**	**118.26**	**127.45**	**118.79**	**171552061**	**15299131**	**16004194**	**14842138**
1.1 Customer Transactions	1332.96	115.99	125.07	116.56	118436812	10177608	10886126	9829147
1.2 Interbank Transactions	33.07	2.24	2.35	2.21	17251375	1824135	1690930	1694482
1.3 Interbank Clearing	0.267	0.024	0.027	0.024	35863874	3297389	3427138	3318509
2 CCIL Operated Systems	**36.17**	**3.10**	**3.62**	**3.34**	**116551038**	**10918363**	**11683806**	**10510799**
2.1 CBLO	1.30	–	–	–	18140463	–	–	–
2.2 Govt. Securities Clearing	11.11	1.48	1.78	1.30	50931587	6828452	7518962	6471125
2.2.1 Outright	8.06	1.11	1.36	0.93	9355007	1507446	1766292	1292195
2.2.2 Repo	2.162	0.205	0.229	0.186	27124989	2441204	2562517	2162777
2.2.3 Tri-party Repo	0.89	0.17	0.19	0.18	14451590	2879802	3190152	3016154
2.3 Forex Clearing	23.76	1.62	1.84	2.05	47478988	4089910	4164844	4039674
3 Paper Clearing	**11237.61**	**839.64**	**937.63**	**878.22**	**8246065**	**635798**	**687403**	**637093**
3.1 Cheque Truncation System (CTS)	11116.69	836.46	934.80	875.55	8153592	633018	685224	635055
3.2 MICR Clearing	–	–	–	–	–	–	–	–
3.2.1 RBI Centres	–	–	–	–	–	–	–	–
3.2.2 Other Centres	–	–	–	–	–	–	–	–
3.3 Non-MICR Clearing	120.92	3.18	2.83	2.67	92473	2781	2179	2039
4 Retail Electronic Clearing	**71132.50**	**6436.48**	**6887.21**	**7297.54**	**25874543**	**2058081**	**2114124**	**2136636**
4.1 ECS DR	9.25	0.27	0.22	0.04	1258	9	4	7
4.2 ECS CR (includes NECS)	53.57	3.30	2.82	3.38	13235	924	968	914
4.3 EFT/NEFT	23188.87	1991.40	2194.19	2212.60	22793608	1749645	1784264	1796153
4.4 Immediate Payment Service (IMPS)	17529.09	1713.25	1892.76	2001.40	1590257	173019	182021	188886
4.5 National Automated Clearing House (NACH)	30351.71	2728.27	2797.21	3080.12	1476184	134484	146867	150676
5 Cards	**160462.56**	**13760.24**	**14203.09**	**14234.95**	**4512210**	**398120**	**400652**	**405503**
5.1 Credit Cards	17723.61	1640.46	1792.82	1804.31	607946	57317	60025	60011
5.1.1 Usage at ATMs	97.71	8.12	8.66	8.58	4533	388	409	410
5.1.2 Usage at POS	17625.90	1632.33	1784.16	1795.73	603413	56928	59616	59601
5.2 Debit Cards	142738.96	12119.79	12410.27	12430.65	3904264	340803	340626	345492
5.2.1 Usage at ATMs	98596.15	8004.84	8160.15	8142.95	3310789	283403	282133	287452
5.2.2 Usage at POS	44142.81	4114.94	4250.12	4287.70	593475	57400	58494	58040
6 Prepaid Payment Instruments (PPIs)	**46072.29**	**3898.19**	**4075.89**	**4070.66**	**213324**	**17764**	**18437**	**18324**
6.1 m-Wallet	41419.42	3347.01	3471.32	3493.36	183902	15471	15949	15693
6.2 PPI Cards	4652.33	551.17	604.57	577.31	29335	2293	2488	2631
6.3 Paper Vouchers	0.54	0.00	0.00	0.00	87	–	–	–
7 Mobile Banking	**62003.19**	**8486.06**	**9111.82**	**10157.79**	**2958407**	**497543**	**563140**	**328043**
8 Cards Outstanding	**9717.19**	**8865.40**	**8908.80**	**9033.26**	–	–	–	–
8.1 Credit Card	470.89	496.48	502.64	517.65	–	–	–	–
8.2 Debit Card	9246.30	8368.92	8406.16	8515.60	–	–	–	–
9 Number of ATMs (in actuals)	**221703**	**226839**	**227629**	**228170**	–	–	–	–
10 Number of POS (in actuals)	**3722229**	**4068954**	**4252850**	**4409250**	–	–	–	–
11 Grand Total (1.1+1.2+2+3+4+5+6)	**290307.16**	**25055.89**	**26234.87**	**26603.49**	**291085366**	**26029868**	**27481479**	**25231983**

Note : Data for latest 12 month period is provisional.
Mobile Banking - 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.
2.1: With effect from November 05, 2018, CCIL has discontinued CBLO.
2.2.3: Tri-party Repo under the Securities segment has been operationalised from November 05, 2018.

Occasional Series

No. 44: Small Savings

(₹ Crore)

Scheme		2017-18	2018		2019	
			Feb.	Dec.	Jan.	Feb.
		1	2	3	4	5
1 Small Savings	**Receipts**	**72,898.00**	**5,921.00**	**10,415.00**	**8,567.00**	**9,839.00**
	Outstanding	**803,971.00**	**791,997.00**	**880,698.00**	**889,396.00**	**899,191.00**
1.1 Total Deposits	**Receipts**	**58,332.00**	**4,620.00**	**8,579.00**	**6,358.00**	**7,130.00**
	Outstanding	**527,310.00**	**519,772.00**	**593,432.00**	**599,790.00**	**606,920.00**
1.1.1 Post Office Saving Bank Deposits	Receipts	17,145.00	1,511.00	2,915.00	2,318.00	2,360.00
	Outstanding	109,210.00	106,694.00	130,185.00	132,503.00	134,863.00
1.1.2 MGNREG	Receipts	0.00	0.00	0.00	0.00	0.00
	Outstanding	0.00	0.00	0.00	0.00	0.00
1.1.3 National Saving Scheme, 1987	Receipts	–162.00	–19.00	–30.00	–21.00	–19.00
	Outstanding	3,138.00	3,032.00	2,917.00	2,896.00	2,877.00
1.1.4 National Saving Scheme, 1992	Receipts	5.00	–68.00	–1.00	4.00	0.00
	Outstanding	–43.00	–46.00	–12.00	–8.00	–8.00
1.1.5 Monthly Income Scheme	Receipts	1,625.00	527.00	1,036.00	966.00	928.00
	Outstanding	181,691.00	180,801.00	189,759.00	190,725.00	191,653.00
1.1.6 Senior Citizen Scheme 2004	Receipts	12,264.00	1,039.00	1,232.00	1,190.00	1,184.00
	Outstanding	41,718.00	40,590.00	52,072.00	53,262.00	54,446.00
1.1.7 Post Office Time Deposits	Receipts	19,633.00	1,500.00	2,317.00	2,508.00	2,451.00
	Outstanding	99,292.00	97,390.00	116,728.00	119,236.00	121,687.00
1.1.7.1 1 year Time Deposits	Outstanding	59,818.00	59,068.00	67,662.00	68,920.00	70,179.00
1.1.7.2 2 year Time Deposits	Outstanding	4,597.00	4,559.00	5,617.00	5,734.00	5,824.00
1.1.7.3 3 year Time Deposits	Outstanding	6,140.00	6,036.00	6,860.00	6,888.00	6,910.00
1.1.7.4 5 year Time Deposits	Outstanding	28,737.00	27,727.00	36,589.00	37,694.00	38,774.00
1.1.8 Post Office Recurring Deposits	Receipts	7,868.00	130.00	1,110.00	–607.00	215.00
	Outstanding	92,320.00	91,357.00	101,799.00	101,192.00	101,407.00
1.1.9 Post Office Cumulative Time Deposits	Receipts	–45.00	0.00	0.00	0.00	11.00
	Outstanding	–37.00	–68.00	–37.00	–37.00	–26.00
1.1.10 Other Deposits	Receipts	–1.00	0.00	0.00	0.00	0.00
	Outstanding	21.00	22.00	21.00	21.00	21.00
1.2 Saving Certificates	**Receipts**	**7,943.00**	**790.00**	**1,500.00**	**1,623.00**	**1,732.00**
	Outstanding	**206,676.00**	**205,953.00**	**215,815.00**	**217,569.00**	**219,257.00**
1.2.1 National Savings Certificate VIII issue	Receipts	–65.00	583.00	1,124.00	1,159.00	1,262.00
	Outstanding	87,174.00	86,205.00	92,374.00	93,533.00	94,795.00
1.2.2 Indira Vikas Patras	Receipts	–956.00	–1.00	5.00	9.00	3.00
	Outstanding	–71.00	1,104.00	288.00	297.00	300.00
1.2.3 Kisan Vikas Patras	Receipts	–15,592.00	–1,280.00	–1,895.00	–1,655.00	–1,609.00
	Outstanding	37,981.00	38,877.00	24,496.00	22,841.00	21,232.00
1.2.4 Kisan Vikas Patras - 2014	Receipts	24,588	1,489	2,259	2,095	2,065
	Outstanding	70,612	68,783.00	87,154.00	89,249.00	91,314.00
1.2.5 National Saving Certificate VI issue	Receipts	–29.00	0.00	7.00	15.00	12.00
	Outstanding	–140.00	–145.00	–74.00	–59.00	–47.00
1.2.6 National Saving Certificate VII issue	Receipts	–3.00	–1.00	0.00	0.00	–1.00
	Outstanding	–64.00	–64.00	–81.00	–81.00	–82.00
1.2.7 Other Certificates	Outstanding	11,184.00	11,193.00	11,658.00	11,789.00	11,745.00
1.3 Public Provident Fund	**Receipts**	**6,623.00**	**511.00**	**336.00**	**586.00**	**977.00**
	Outstanding	**69,985.00**	**66,272.00**	**71,451.00**	**72,037.00**	**73,014.00**

Note: The data on receipts from April 2017 are net receipts, i.e., gross receipts minus gross payments.
Source: Accountant General, Post and Telegraphs.

No. 45: Ownership Pattern of Central and State Governments Securities

(Per cent)

Central Government Dated Securities					
Category	2018			2019	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(A) Total (in ₹ Crore)	**5455681**	**5602830**	**5758103**	**5921026**	**6072243**
1 Commercial Banks	41.84	41.41	40.51	40.28	39.05
2 Non-Bank PDs	0.33	0.37	0.33	0.31	0.36
3 Insurance Companies	24.24	24.61	24.57	24.34	24.88
4 Mutual Funds	1.13	1.41	0.64	0.35	0.64
5 Co-operative Banks	2.59	2.51	2.38	2.29	2.17
6 Financial Institutions	0.93	0.97	1.01	1.05	1.05
7 Corporates	1.09	1.01	1.05	0.97	0.99
8 Foreign Portfolio Investors	3.84	3.65	3.60	3.22	3.27
9 Provident Funds	5.79	5.71	5.54	5.47	5.35
10 RBI	11.63	11.76	13.81	15.27	15.67
11. Others	6.58	6.58	6.55	6.46	6.57
11.1 State Governments	1.97	1.99	1.97	2.00	2.02

State Governments Securities					
Category	2018			2019	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(B) Total (in ₹ Crore)	**2495461**	**2566833**	**2669393**	**2777229**	**2826935**
1 Commercial Banks	35.02	34.66	34.00	33.87	32.57
2 Non-Bank PDs	0.75	0.58	0.60	0.58	0.75
3 Insurance Companies	34.24	33.74	33.90	33.04	33.94
4 Mutual Funds	1.20	1.05	1.23	1.20	1.24
5 Co-operative Banks	4.79	4.75	4.67	4.55	4.65
6 Financial Institutions	0.35	0.43	0.37	0.42	0.44
7 Corporates	0.16	0.17	0.22	0.29	0.32
8 Foreign Portfolio Investors	0.15	0.10	0.09	0.09	0.08
9 Provident Funds	20.34	21.04	21.29	22.15	21.88
10 RBI	0.00	0.00	0.00	0.00	0.06
11. Others	2.99	3.48	3.64	3.81	4.08
11.1 State Governments	0.06	0.07	0.07	0.11	0.14

Treasury Bills					
Category	2018			2019	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(C) Total (in ₹ Crore)	**528007**	**565750**	**529826**	**412704**	**524618**
1 Commercial Banks	55.30	47.84	53.76	57.56	53.60
2 Non-Bank PDs	1.41	1.86	2.06	2.68	1.85
3 Insurance Companies	3.66	4.55	4.74	6.61	5.13
4 Mutual Funds	7.03	10.69	5.65	2.78	13.00
5 Co-operative Banks	1.29	1.20	1.21	2.48	2.54
6 Financial Institutions	2.36	1.67	1.88	2.49	2.14
7 Corporates	1.88	6.67	1.86	2.23	1.67
8 Foreign Portfolio Investors	0.00	0.00	0.09	0.00	0.00
9 Provident Funds	0.21	0.01	0.02	0.08	0.07
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	26.87	25.50	28.72	23.10	19.99
11.1 State Governments	23.11	21.36	24.04	17.91	15.59

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 August-2019					
		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	629	4	-	-	-	-
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	-	-	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	72	11	-	-	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	-	-	-	-	-	-
9	Himachal Pradesh	-	-	-	-	-	-
10	Jammu & Kashmir	-	-	524	16	-	-
11	Jharkhand	-	-	-	-	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	248	12	377	10	-	-
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	86	17	74	11	-	-
17	Meghalaya	-	-	-	-	-	-
18	Mizoram	-	-	-	-	-	-
19	Nagaland	133	7	-	-	-	-
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	104	19	427	16	-	-
23	Rajasthan	-	-	-	-	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	851	20	-	-	-	-
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	248	21	-	-	-	-
29	West Bengal	1087	11	-	-	-	-

Notes: 1. SDF is availed by State Governments against the collateral of Consolidated Sinking Fund (CSF), Guarantee Redemption Fund (GRF) & Auction Treasury Bills (ATBs) balances and other investments in government securities.
2. WMA is advance by Reserve Bank of India to State Governments for meeting temporary cash mismatches.
3. OD is advanced to State Governments beyond their WMA limits.
4. Average Availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.
5. - : Nil.

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Crore)

Sr. No	State/Union Territory	As on end of August 2019			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	7692	759	2	0
2	Arunachal Pradesh	1090	1	--	0
3	Assam	3940	48	--	4000
4	Bihar	6563	--	--	16600
5	Chhattisgarh	3969	--	1	0
6	Goa	554	278	--	0
7	Gujarat	12668	445	--	0
8	Haryana	1931	1109	--	0
9	Himachal Pradesh	--	--	--	0
10	Jammu & Kashmir	--	--	--	0
11	Jharkhand	--	--	--	0
12	Karnataka	3917	--	--	1500
13	Kerala	1990	--	--	0
14	Madhya Pradesh	--	858	--	0
15	Maharashtra	36296	275	--	19000
16	Manipur	350	93	--	0
17	Meghalaya	569	28	9	0
18	Mizoram	512	30	--	0
19	Nagaland	1447	31	--	0
20	Odisha	12420	1346	78	18895
21	Puducherry	298	--	--	925
22	Punjab	223	--	8	0
23	Rajasthan	--	--	129	1800
24	Tamil Nadu	6157	--	45	11833
25	Telangana	5177	1055	1	0
26	Tripura	305	5	--	0
27	Uttar Pradesh	2786	73	--	0
28	Uttarakhand	--	--	180	0
29	West Bengal	10249	493	214	0
	Total	**121101**	**6925**	**666**	**74552**

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	
						June		July		August			
		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	3104	2521	2974	1808	3000	1834	16078	11062
2	Arunachal Pradesh	888	703	719	693	261	261	-	-	-	-	472	472
3	Assam	7760	6797	10595	8089	-	-	500	500	1200	1200	1700	1700
4	Bihar	10000	8908	14300	10903	-	-1000	3600	3600	4000	4000	7600	6600
5	Chhattisgarh	8100	8100	12900	12900	-	-	-	-	1000	1000	1000	1000
6	Goa	1800	1400	2350	1850	200	100	200	200	300	100	900	600
7	Gujarat	24000	15785	36971	27457	2000	1000	3700	2200	2300	600	13300	9100
8	Haryana	16640	15840	21265	17970	-	-700	3501	3501	3000	3000	8501	7801
9	Himachal Pradesh	4600	2551	4210	2108	-	-	500	500	500	500	1600	1600
10	Jammu & Kashmir	6200	3974	6684	4927	249	249	1000	1000	400	400	2749	2210
11	Jharkhand	6000	4807	5509	4023	1500	1500	-	-	-	-474	1500	508
12	Karnataka	22098	17348	39600	31383	-	-	2000	1000	2000	1000	4000	2000
13	Kerala	20500	16203	19500	14784	729	129	3000	3000	2453	2453	11682	11082
14	Madhya Pradesh	15000	13125	20496	14971	2000	2000	1000	1000	1000	1000	6000	6000
15	Maharashtra	45000	36480	20869	3117	2000	2000	4500	1500	-	-2000	12500	7500
16	Manipur	525	278	970	667	400	400	-	-	200	200	803	803
17	Meghalaya	1116	920	1122	863	-	-50	200	200	150	150	350	300
18	Mizoram	424	277	0	-123	-	-	-	-	100	100	258	258
19	Nagaland	1135	766	822	355	-	-	-	-	-	-	100	-160
20	Odisha	8438	8438	5500	4500	-	-	1000	1000	-	-	2000	2000
21	Puducherry	825	488	825	475	-	-	-	-	-	-	-	-
22	Punjab	17470	13349	22115	17053	1900	1400	3420	2120	2200	900	10820	6620
23	Rajasthan	24914	16777	33178	20186	5995	3183	2387	1887	2000	1000	15882	11070
24	Sikkim	995	745	1088	795	213	213	-	-	-	-	213	213
25	Tamil Nadu	40965	36023	43125	32278	4000	4000	4615	4615	4000	4000	19615	19615
26	Telangana	24600	21828	26740	22183	3300	2883	3000	2166	2500	1666	12800	9216
27	Tripura	1137	1137	1543	1387	-	-	-	-	450	450	450	450
28	Uttar Pradesh	41600	37178	46000	33307	-	-500	4000	2500	7000	5500	11000	6000
29	Uttarakhand	6660	5830	6300	5289	-	-	500	200	300	300	1300	700
30	West Bengal	36911	25304	42828	30431	2000	2000	5010	3010	4500	2500	11510	1510
	Grand Total	419100	340281	478323	348643	29851	21589	50606	37506	44553	31379	176682	127830

- : 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 in column Nos. (4) & (5) are Provisional.

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

1.3: Pertain to multilateral net settlement batches.
3.1: Pertain to three centres – Mumbai, New Delhi and Chennai.
3.3: Pertain to clearing houses managed by 21 banks.
6: Available from December 2010.
7: Include IMPS transactions.
9: Includes ATMs deployed by Scheduled Commercial banks and White Label ATMs (WLA). WLA are included from April 2014 onwards.
Mobile Banking - 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.

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**.

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11. Reserve Bank of India Occasional Papers Vol. 40, No. 1, 2019	₹200 per copy (over the counter) ₹250 per copy (inclusive of postal charges)	US$ 18 per copy ((inclusive of air mail courier charges)
12. Perspectives on Central Banking Governors Speak (1935-2010) Platinum Jubilee	₹1400 per copy (over the counter)	US$ 50 per copy (inclusive of air mail courier charges)

Notes:

1. Many of the above publications are available at the RBI website (www.rbi.org.in).
2. Time Series data are available at the Database on Indian Economy (http://dbie.rbi.org.in).
3. The Reserve Bank of India History 1935-1997 (4 Volumes), Challenges to Central Banking in the Context of Financial Crisis and the Regional Economy of India: Growth and Finance are available at leading book stores in India.

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7. **Kindly send your subscription number, name, address, and email id to spsdepr@rbi.org.in enabling us to communicate with you in an efficient manner.**