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Monetary Policy Report – April 2018

*First Bi-monthly Monetary Policy Statement, 2018-19 Resolution of the Monetary Policy Committee (MPC) Reserve Bank of India**

On the basis of an assessment of the current and evolving macroeconomic situation[1] at its meeting today, the Monetary Policy Committee (MPC) decided to:

- keep the policy repo rate under the liquidity adjustment facility (LAF) unchanged at 6.0 per cent.

Consequently, the reverse repo rate under the LAF remains at 5.75 per cent, and the marginal standing facility (MSF) rate and the Bank Rate at 6.25 per cent.

The decision of the MPC is consistent with the neutral stance of monetary policy 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

2. Since the MPC's last meeting in February 2018, global economic activity has gathered further momentum, both in advanced and emerging market economies, though financial market volatility and potential trade wars pose a threat to the outlook. Among advanced economies (AEs), the US economy, which ended 2017 on a slightly weak note, appeared to have bounced back in Q1:2018; the unemployment rate remains low with hiring around multi-month highs. In the Euro Area, economic activity remained buoyant, although consumer spending and factory activity slowed down due to the strengthening of the euro, but a consistently falling unemployment rate and elevated consumer confidence continued to underpin the strength of the economy. The Japanese economy registered eight straight quarters of growth till Q4:2017; available data for 2018 point to a slower start to the year with weak machinery orders and an easing manufacturing Purchasing Manager's Index (PMI) in February-March.

3. Economic activity remained robust in emerging market economies (EMEs) in Q1:2018. The Chinese economy started the year on a strong note; retail sales picked up pace indicating robust consumption, while industrial production also registered a strong increase in Q1:2018 on improved mining and manufacturing activity. In Brazil, economic activity is gaining momentum, driven by higher commodity prices. The Russian economy continued to recover in Q1; industrial production expanded in January-February, after two months of contraction, while exports grew at a robust pace. In South Africa, leading indicators, *viz.*, the manufacturing PMI and business confidence, improved in Q1.

4. World trade volume growth is expected to have been robust in Q1, as gauged from the data on container trade throughput, air freight and export orders. Crude oil prices have become volatile in the recent period. After softening in February from multi-year highs on increased production in the US, crude prices hardened in the second half of March, driven by rebalancing of supply by OPEC and Russia, and drawdown of US inventories. Metal prices have come under selling pressure, with copper touching a three-month low in March on uncertainty stemming from global trade protectionism and US monetary policy. Gold prices, which touched a two-month low in March, have recently witnessed some uptick on fears of intensification of a trade war. Inflation remains below target in many key AEs and EMEs.

5. Financial markets turned volatile in February-March, triggered by uncertainty regarding the pace of

* Released on April 05, 2018.

[1] From this resolution onwards, growth in gross domestic product (GDP) will be used as the headline measure of economic activity.

normalisation of US monetary policy, and concerns surrounding global trade. Equity markets globally have shed most of the gains of the previous quarter in a heavy sell off in February-March, caused by optimistic US job reports and the US imposition of new tariffs on Chinese goods. Yields in the US traded sideways on weaker than expected inflation pressures and the anticipated rate hike by the Fed. Yields in other major AEs have fallen, while among EMEs, they have remained divergent on country-specific factors. In currency markets, the US dollar, which recovered somewhat in early March on an optimistic outlook of the economy, shed most of its gains in the latter part of the month on a less hawkish stance of the Fed and on anxieties surrounding a possible trade war. Among other major currencies, the euro continued to appreciate on an improving growth outlook for the region. Most EME currencies have retreated in the wake of the recent market volatility and the improving US economic outlook, though investors continued to discriminate on country-specific factors.

6. Turning to the domestic economy, the Central Statistics Office (CSO) released its second advance estimates for 2017-18 on February 28, revising India's real gross domestic product (GDP) growth marginally upward to 6.6 per cent from 6.5 per cent in the first advance estimates released on January 5. GDP growth in 2017-18 at 6.6 per cent was lower than 7.1 per cent in 2016-17 and the deceleration was broad-based, but each component revealed intra-year turning points. Private consumption growth – whose contribution to GDP growth in 2017-18 was 68 per cent – moderated in the second half. Goods and services tax (GST) implementation had an adverse, even if transient, effect on urban consumption through loss of output and employment in the labour-intensive unorganised sector. Government expenditure provided sustained support to aggregate demand, with a pick-up in pace in the second half. Gross fixed capital formation turned around in Q2 and accelerated in the second half – markedly so in Q3 – reflecting the first signs of a sustained expansion in capital goods production and a modest revival of construction activity. Net exports dragged down aggregate demand in 2017-18 due to a surge in imports and deceleration in exports in Q3, the latter being driven in part by GST-related working capital disruptions.

7. For Q4, high frequency indicators point to a further strengthening of demand conditions. Private consumption seems to be improving on the back of strong growth in domestic air passenger traffic and foreign tourist arrivals, rising sales growth of passenger vehicles and a strong upturn in the production of consumer durables. The growth in sales of two-wheelers and tractors reflects buoyant rural consumption. Capital goods production registered a 19-month high growth in January 2018, indicative of the likely traction in investment demand. Housing loans extended by banks have increased significantly, which is a positive for residential investment. External demand remains a weak link. Merchandise import growth has slowed because of gold imports; simultaneously export growth has also weakened.

8. Turning to the supply side at a disaggregated sectoral level, the *kharif* foodgrains production for 2017-18 has been revised upward by 2.8 per cent in the second advance estimates released in February 2018 as compared with the first advance estimates released in September 2017. Total foodgrains production for 2017-18 is estimated at 277.5 million tonnes, up by 0.9 per cent from the level of 2016-17, with the production of rice, pulses and coarse cereals estimated to reach a record high. Wheat production is estimated to be lower than last year due to a decline in acreage and low soil moisture, but imports of 1.6 million tonnes and comfortable buffer stocks should cushion potential adverse effects. Horticulture production touched a new peak of 305.4 million tonnes in 2017-18, up by 1.6 per cent from last year.

9. For the year 2017-18 as a whole, the CSO estimates that value added in industry decelerated in relation to the previous year; in terms of quarterly performance, however, expansion set in by Q2 and was built upon in Q3 and Q4. This was mainly driven by the rebound

in manufacturing. The manufacturing PMI remained in an expansionary mode for the eighth consecutive month in March, although there was some moderation in Q4. Assessment of overall business sentiment for manufacturing also improved in Q4 as reflected in the Reserve Bank's Industrial Outlook Survey, driven by increasing output and new orders. Growth of value added in the services sector accelerated through the year, driven by trade, hotels, transport and communication and a significant pick-up in construction activity. Other high frequency indicators of services sector activity such as domestic air passenger traffic, international freight traffic, port traffic and commercial vehicles sales also expanded at a fair pace. The services PMI moved out of contraction and stabilised in March on a renewed increase in new business and strengthening expectations.

10. Retail inflation, measured by the year-on-year change in the CPI, fell from a high of 5.1 per cent in January to 4.4 per cent in February due to a decline in inflation in food and fuel. Excluding the estimated impact of an increase in the house rent allowances (HRA) for central government employees under the 7th central pay commission (CPC), the headline inflation for February was at 4.1 per cent. Food inflation declined by 120 bps in February, pulled down by a sharp decline in vegetable prices, especially of onions and tomatoes, along with continuing deflation in pulses. The fall in prices was also observed in other food components such as eggs, sugar, meat and fish, oils, spices, cereals and milk.

11. In the fuel and light group, inflation in respect of liquefied petroleum gas declined in line with international price movements. Furthermore, the rate of increase in prices of firewood and chips, and dung cake moderated.

12. CPI inflation excluding food and fuel remained unchanged at 5.2 per cent for the third consecutive month in February, after rising from its trough in June 2017. Among its constituents, housing group inflation rose significantly, reflecting the HRA increase for central government employees. Excluding the HRA impact, inflation in this group was estimated markedly lower at 4.4 per cent. Inflation in the transport and communication group increased in February on account of the rise in petroleum product prices and transportation fares. Inflation either eased or remained at a low level in February in other major sub-groups such as household goods and services, recreation and amusement, education, and personal care and effects.

13. Households' inflation expectations, measured by the March 2018 round of the Reserve Bank's survey of households, edged up for both three-month and one-year ahead horizons. Manufacturing firms covered in the Reserve Bank's Industrial Outlook Survey reported input price pressures and an increase in selling prices in Q4:2017-18, which are expected to continue in Q1:2018-19. Manufacturing and services firms polled by PMI also showed a rise in input and output prices in Q4.

14. Liquidity in the system moved between surplus and deficit during February-March 2018. From a daily net average surplus of ₹272 billion during February 1-11, 2018, liquidity moved into deficit during February 12-March 1, reflecting a slowdown in government spending and large tax collections. After turning into surplus during March 2-15, the system moved into deficit again during March 16-22 mainly on account of quarterly advance tax outflows. Anticipating the seasonal tightening of liquidity at the end of March, the Reserve Bank conducted four additional longer tenor (24-31 days) variable rate repo operations aggregating ₹1 trillion, apart from the regular repo operations. In mid-March, additional liquidity of ₹1 trillion got released into the system through redemption of Treasury Bills issued under the Market Stabilisation Scheme (MSS) in April and May 2017. On the whole, the Reserve Bank injected ₹60 billion and ₹213 billion on a net daily average basis in February and March, respectively. The weighted average call rate (WACR) inched closer to the policy repo rate from 12 basis points below the policy rate in January to 7 bps in February, and 5 bps in March.

15. Merchandise export growth decelerated in January and February 2018, pulled down by a slowdown in exports of gems and jewellery, readymade garments and engineering goods. Import growth also moderated in February due to a decline in gold imports, lower growth in non-oil non-gold imports, and contraction in imports of transport equipment, vegetable oils and pulses. As import growth continued to exceed export growth in January-February, the trade deficit widened. The current account deficit increased in Q3:2017-18, primarily on account of the higher trade deficit. Net foreign direct investment moderated in April-January 2017-18 *vis-à-vis* the level a year ago. Foreign portfolio investors made net purchases in 2017-18, despite net sales in the wake of a global sell-off in February. India's foreign exchange reserves were at US$ 424.4 billion on March 30, 2018.

Outlook

16. The Sixth bi-monthly resolution of 2017-18 in February projected CPI inflation at 5.1 per cent in Q4:2017-18; and in the range of 5.1-5.6 per cent in H1:2018-19 and 4.5-4.6 per cent in H2, including the HRA impact, with risks tilted to the upside. Actual inflation outcomes in January-February averaged 4.8 per cent, largely reflecting the sharp decline in vegetable prices and significant moderation in fuel group inflation. The available information suggests that vegetable prices continued to moderate in March as well. Accordingly, inflation in Q4:2017-18 is now projected at 4.5 per cent.

17. Several factors are likely to influence the inflation outlook. First, with the sharp moderation in food prices in February-March, the inflation trajectory in H1:2018-19 is expected to be lower than the projection in the February statement, despite a likely reversal in food prices in H1. Overall food inflation should remain under check on the assumption of a normal monsoon and effective supply management by the Government. Second, international crude oil prices have become volatile in the recent period, with a distinct hardening bias in the second half of March, even as the increase in shale production was more than expected. This has adversely impacted the outlook for crude oil prices. Third, on current assessment, Indian domestic demand is expected to strengthen during the course of the year. Fourth, the statistical impact of an increase in HRA for central government employees under the 7th CPC will continue till mid-2018, and gradually dissipate thereafter.

18. Taking these factors into consideration, projected CPI inflation for 2018-19 is revised to 4.7-5.1 per cent in H1:2018-19 and 4.4 per cent in H2, including the HRA impact for central government employees, with risks tilted to the upside (Chart 1). <u>Excluding the impact of HRA revisions, CPI inflation is projected at 4.4-4.7 per cent in H1:2018-19 and 4.4 per cent in H2.</u>

19. Turning to the growth outlook, several factors are expected to accelerate the pace of economic activity in 2018-19. First, there are now clearer signs of revival in investment activity as reflected in the sustained expansion in capital goods production and still rising imports, *albeit* at a slower pace than in January. Second, global demand has been improving, which should encourage exports and boost fresh investment. On the

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

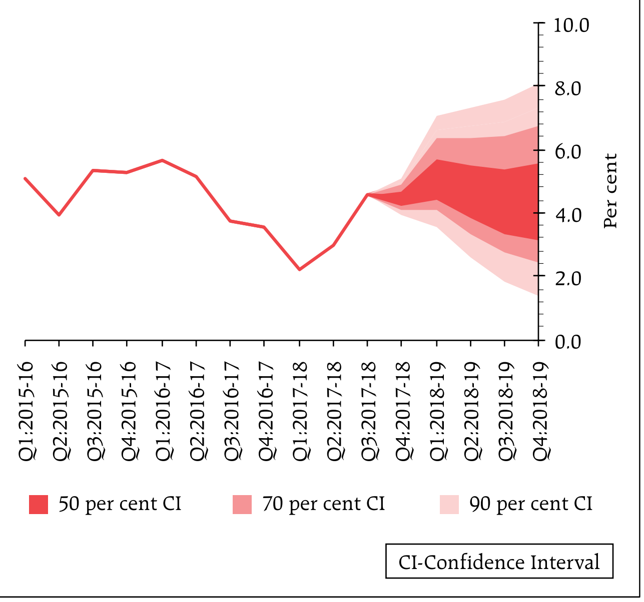
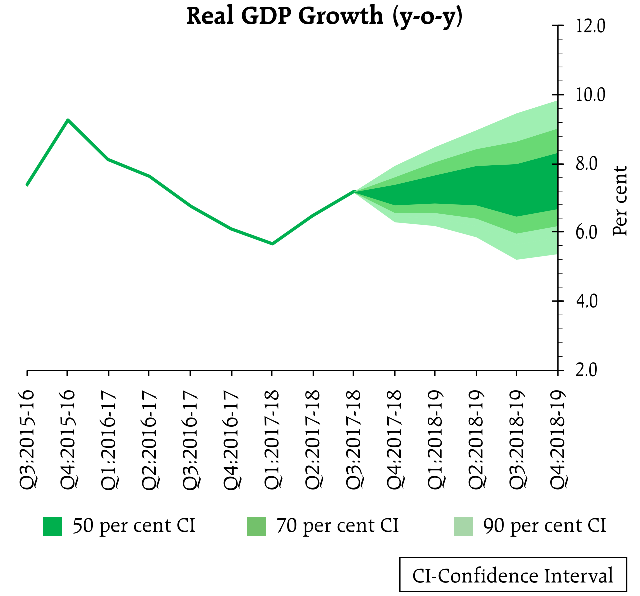


Chart 2: Quarterly Projection of Real GDP Growth (y-o-y)



whole, GDP growth is projected to strengthen from 6.6 per cent in 2017-18 to 7.4 per cent in 2018-19 – in the range of 7.3-7.4 per cent in H1 and 7.3-7.6 per cent in H2 – with risks evenly balanced (Chart 2).[2]

20. The MPC notes that there are several uncertainties surrounding the baseline inflation path. First, the revised formula for MSP as announced in the Union Budget 2018-19 for *kharif* crops may have an impact on inflation, although the exact magnitude will be known only in the coming months. Second, the staggered impact of HRA revisions by various state governments may push headline inflation up. While the statistical impact of the HRA revisions will be looked through, there is a need to watch out for any second round effects. Third, in case there is any further fiscal slippage from the Union Budget estimates for 2018-19 or the medium-term path, it could adversely impact the outlook on inflation. There are also risks to inflation from fiscal slippages at the level of states on account of higher committed revenue expenditure. Fourth, should the monsoon turn deficient temporally and/or spatially, it may have a significant bearing on food inflation. Fifth, firms polled in the Reserve Bank's Industrial Outlook Survey expect input and output prices to rise, going forward. Sixth, recent volatility in crude prices has imparted considerable uncertainty to the near-term outlook.

21. Against the above backdrop, the MPC decided to keep the policy repo rate on hold and continue with the neutral stance. The MPC reiterates its commitment to achieving the medium-term target for headline inflation of 4 per cent on a durable basis.

22. The MPC notes that growth has been recovering and the output gap is closing. This is also reflected in a pick-up in credit offtake in recent months. The large mobilisation of resources from the primary capital market should support investment activity further. While the domestic cyclical recovery is underway, the long-term growth potential is also expected to be reinforced by various structural reforms introduced in the recent past. On the downside, the deterioration in public finances risks crowding out private financing and investment. Furthermore, even as global growth and trade have been strengthening, rising trade protectionism and financial market volatility could derail the ongoing global recovery. In this unsettling global environment, it is especially important that domestic macroeconomic fundamentals are strengthened, deleveraging of distressed corporates and rebuilding of bank balance sheets persisted with, and the risk-sharing markets deepened.

23. Dr. Chetan Ghate, Dr. Pami Dua, Dr. Ravindra H. Dholakia, Dr. Viral V. Acharya and Dr. Urjit R. Patel voted in favour of the monetary policy decision. Dr. Michael Debabrata Patra voted for an increase in the policy rate of 25 basis points. The minutes of the MPC's meeting will be published by April 19, 2018.

The next meeting of the MPC is scheduled on June 5 and 6, 2018.

[2] The implicit GDP growth projection in the 6th bi-monthly monetary policy statement was 7.4 per cent for 2018-19 – in the range of 7.4-7.5 per cent in H1 and 7.3-7.4 per cent in H2.

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; improving currency management; promoting financial inclusion and literacy; and, facilitating data management.

I. Regulation and Supervision

1. Mandatory Loan Component in Working Capital Finance

With a view to promoting greater credit discipline among working capital borrowers, it is proposed to stipulate a minimum level of 'loan component' in fund based working capital finance for larger borrowers. Draft Guidelines are being issued for feedback in this regard.

2. Countercyclical Capital Buffer

The framework on countercyclical capital buffer (CCCB) was put in place by the Reserve Bank in terms of guidelines issued on February 5, 2015 wherein it was advised that the CCCB would be activated as and when the circumstances warranted, and that the decision would normally be pre-announced with a lead time of four quarters. The framework envisages the credit-to-GDP gap as the main indicator, which may be used in conjunction with other supplementary indicators, *viz.*, the Credit-Deposit (C-D) ratio for a moving period of three years (given its correlation with the credit-to-GDP gap and GNPA growth), industrial outlook (IO) assessment index (with due note of its correlation with GNPA growth), and interest coverage ratio (noting its correlation with the credit-to-GDP gap). Based on the review and empirical testing of CCCB indicators, it has been decided that it is not necessary to activate CCCB at this point in time.

3. Deferment of Indian Accounting Standards (Ind AS) implementation

Scheduled Commercial Banks (SCBs), excluding Regional Rural Banks (RRBs), were required to implement Indian Accounting Standards (Ind AS) from April 1, 2018 vide our Circular dated February 11, 2016. However, necessary legislative amendments – to make the format of financial statements, prescribed in the Third Schedule to Banking Regulation Act 1949, compatible with accounts under Ind AS – are under consideration of the Government. In view of this, as also the level of preparedness of many banks, it has been decided to defer implementation of Ind AS by one year by when the necessary legislative changes are expected.

4. Storage of Payment System Data

In recent times, the payment ecosystem in India has expanded considerably with the emergence of new payment systems, players and platforms. Ensuring the safety and security of payment systems data by adoption of the best global standards and their continuous monitoring and surveillance is essential to reduce the risks from data breaches while maintaining a healthy pace of growth in digital payments.

It is observed that at present only certain payment system operators and their outsourcing partners store the payment system data either partly or completely in the country. In order to have unfettered access to all payment data for supervisory purposes, it has been decided that all payment system operators will ensure that data related to payment systems operated by them are stored only inside the country within a period of 6 months. Detailed instructions will be issued in this regard within one week.

II. Financial Markets

5. Access for Non-residents into the IRS Market

Rupee Interest Rate Swap (IRS) market, while it is the most liquid among interest rate derivative markets, still lacks depth to enable large banks to manage risks. Thin participation and consequent absence of divergence of views result in pricing inefficiencies, which further discourages participation. At the same time, it is understood that there is an active market for Rupee interest rate swaps offshore. Also, Indian market has witnessed increasing participation from non-resident players like FPIs in debt. With a view to develop a deep IRS market that accommodates divergent participants, it is proposed to permit non-residents access to the Rupee IRS market in India. Detailed draft regulation will be issued for public comments by end of May 2018.

6. Introduction of Rupee Swaptions

In December 2016, RBI introduced Rupee Interest Rate Options (IRO), following the recommendations of the P.G. Apte Working Group. Only plain vanilla Interest Rate Options were allowed initially. Subsequently, market participants including corporates have expressed the need for swaptions to effectively manage interest rate risk. Fixed Income Money Market and Derivatives Association of India (FIMMDA) has conveyed a similar request on behalf of its members. It is, therefore, proposed to permit interest rate swaptions in Rupees so as to enable better timing flexibility for those seeking to hedge interest rate risk. The directions will be issued by end of April 2018.

7. Review of Separate Trading of Registered Interest and Principal Securities (STRIPS) directions

The Reserve Bank introduced the Separate Trading of Registered Interest and Principal Securities (STRIPS) in Government Securities in April, 2010. After some initial interest, the product did not find much favour with the market. With a view to encouraging trading in STRIPS by making it more aligned with market requirements and to meet the diverse needs of the investors, it is proposed to review these guidelines. The revised directions will be issued by end of April 2018.

8. Legal Entity Identifier (LEI) for Non-individual Market Participants

The Legal Entity Identifier (LEI) code has been conceived as a key measure to improve the quality and accuracy of financial data systems for better risk management post the Global Financial Crisis. The LEI is a 20-character unique identity code assigned to entities who are parties to a financial transaction. RBI has already implemented the LEI code for all market participants in Over-the-Counter (OTC) derivative products in interest rate, currency and credit markets. It was also made applicable for large corporate borrowers. Continuing with this endeavour to improve transparency in financial markets, it is proposed to implement the LEI mechanism for all financial market transactions undertaken by non-individuals, in interest rate, currency or credit markets. Draft directions will be issued by end of April 2018.

9. Introduction of Single Master Form for Reporting of Foreign Direct Investment in India

Foreign Direct Investment in India, on a repatriable basis, is made by non-residents through eligible instruments such as Equity Shares, Compulsory Convertible Preference shares, Compulsorily Convertible Debentures, Share Warrants etc., issued by the investee company or by contributing to the capital of a Limited Liability Partnership (LLP). At present, the reporting of the above transactions resulting in foreign investment are in a disintegrated manner across various platforms/modes. The Reserve Bank plans to introduce an online reporting by June 30, 2018 *via* a Single Master Form which would subsume all reporting requirements, irrespective of the instrument through which the foreign investment is made.

10. Reporting by Authorised Dealers

Currently, transactions under Liberalised Remittance Scheme (LRS) are being permitted by Authorised Dealer (AD) banks based on the declaration made by the remitter. As such, it is difficult for the AD banks to monitor/ensure that a remitter has not breached the prescribed limit by approaching multiple AD banks. With the objective of improved monitoring and ensuring compliance with the LRS ceilings, it has been decided to put in place a system for daily reporting of individual transactions by banks. This will, *inter alia*, enable the AD Banks to view the remittances already sent by an individual before allowing further remittance thus obviating the possibility of a remitter breaching the LRS limit by approaching multiple AD banks. Detailed instructions in this regard will be issued shortly.

III. Currency Management

11. Norms for Cash-in-Transit (CIT) Industry and Promotion of Self-Regulatory Organisation by CIT Industry

In the Statement on Developmental and Regulatory Policies of February 7, 2018, the Reserve Bank had announced a time frame to implement the recommendations of the two high level inter-agency committees constituted by it to suggest measures for improvement of currency management, including security of movement of treasure. The Committees, *inter alia*, had recommended stipulation of minimum standards for cash logistics industry and promotion of a Self-Regulatory Organisation (SRO) for the industry.

i) Under the 'Guidelines on Managing Risks and Code of Conduct in Outsourcing of Financial Services' issued by the Reserve Bank in November 2006, cash management and logistics at the bank level has largely been outsourced to Cash-in-Transit (CIT) companies and Cash Replenishment Agencies (CRAs). There is, however, no regulation or supervision for this industry at present. With a view to promote healthy growth of the sector and mitigate risks associated with movement of currency through these agencies, Reserve Bank will require the banks to ensure that the CIT companies/CRAs engaged by them meet minimum prescribed standards. The instructions to the banks in this regard will be issued within a month.

ii) In order to ensure compliance with minimum standards for the CIT industry and other applicable laws, the Bank will encourage the cash management industry to promote a Self-Regulatory Organisation (SRO) for undertaking development work along with self-regulation of the industry, till such time that an appropriate legislative structure is put in place.

12. Central Bank Digital Currency

Rapid changes in the landscape of the payments industry along with factors such as emergence of private digital tokens and the rising costs of managing fiat paper/metallic money have led central banks around the world to explore the option of introducing fiat digital currencies. While many central banks are still engaged in the debate, an inter-departmental group has been constituted by the Reserve Bank to study and provide guidance on the desirability and feasibility to introduce a central bank digital currency. The Report will be submitted by end-June 2018.

13. Ring-fencing regulated entities from virtual currencies

Technological innovations, including those underlying virtual currencies, have the potential to improve the efficiency and inclusiveness of the financial system. However, Virtual Currencies (VCs), also variously referred to as crypto currencies and crypto assets, raise concerns of consumer protection, market integrity and money laundering, among others.

Reserve Bank has repeatedly cautioned users, holders and traders of virtual currencies, including Bitcoins, regarding various risks associated in dealing with such virtual currencies. In view of the associated risks, it has been decided that, with immediate effect, entities regulated by RBI shall not deal with or provide services to any individual or business entities dealing with or settling VCs. Regulated entities which already provide such services shall exit the relationship within a specified time. A circular in this regard is being issued separately.

IV. Financial Inclusion and Literacy

14. Tailored Financial Literacy Content

A 'one size fits all' approach for imparting financial education to various target groups is sub-optimal. Financial education contents sought to be delivered to diverse target groups need to be customized to meet their typical target groups. The Reserve Bank is in the process of developing tailored financial literacy contents for five specified target groups' *viz.* Farmers, Small entrepreneurs, School children, Self Help Groups and Senior Citizens, that can be used by the trainers. The contents in the form of five booklets will be released within 15 days.

15. Revamping of the Lead Bank Scheme

The Lead Bank Scheme was started to ensure economic development of the districts/states by establishing coordination between the banks and government agencies. The Scheme was last reviewed by a 'High Level Committee' under Smt Usha Thorat, erstwhile Deputy Governor of Reserve Bank of India, as the Chairperson in 2009. In view of several changes that have taken place in the financial sector over the years, Reserve Bank of India had constituted a 'Committee of Executive Directors' of the Bank to study the efficacy of the Scheme and suggest measures for its improvement. The Committee has since submitted its recommendations and it has been decided to realign the Lead Bank Scheme based on the recommendations to make it more relevant. Instructions on the revised scheme would be issued to the banks within 15 days.

V. Data Management

16. Creation of RBI Data Sciences Lab

It is critical for a full-service Central Bank, such as the RBI, with diverse responsibilities –inflation management, currency management, debt management, reserves management, banking regulation and supervision, financial inclusion, financial market intelligence and analysis, and overall financial stability – to employ relevant data and apply the right filters for improving its forecasting, nowcasting, surveillance and early-warning detection abilities that all aid policy formulation. In the backdrop of ongoing explosion in information gathering, computing capability and analytical toolkits, policy making benefits not only from data collected through regulatory returns and surveys but also from large volumes of structured and unstructured real-time information sourced from consumer interactions in the digital world. Accordingly, it has been decided to gainfully harness the power of Big Data analytics by setting up a Data Sciences Lab within the RBI that will comprise experts and budding analysts, internal as well as lateral, who are trained *inter alia* in Computer Science, Data Analytics, Statistics, Economics, Econometrics and/or Finance. It is envisaged that the unit will become operational by December 2018.

I. Macroeconomic Outlook

Inflation is expected to firm up during the first quarter of 2018-19 before moderating in the remaining part of 2018-19 as the direct impact of the increase in house rent allowances for central government employees fades away, which has to be looked through. Economic activity is expected to accelerate with the strengthening of investment activity, supported by consumption demand and robust credit growth.

The Monetary Policy Report (MPR) of October 2017 flagged significant shifts underway in the macroeconomic environment. Some of them have gained traction since then while others are incipiently in motion. Global economic activity has continued to strengthen and is becoming increasingly synchronised across regions. Global trade is outpacing demand after lagging behind for two years. Oil prices have firmed up again on the edge of a delicate demand-supply balance. Generally buoyant global financial markets have been interrupted by bouts of volatility triggered by several event-specific announcement effects, and most recently by reassessments of the pace of monetary policy normalisation in the US. Renewed fears of protectionism, retaliatory actions and trade wars pose a major challenge to the global economy, with implications for emerging market economies (EMEs), including India, that are participating in open international trade and relying on foreign capital flows to realise their developmental aspirations.

After languishing for five consecutive quarters, economic activity in India is quickening, as estimates and high frequency as well as survey-based indicators etch out for the second half of 2017-18. Growth is strengthening and several elements are coming together to nurture this nascent acceleration: expectations of a record foodgrains output; strong sales growth by corporations; depleting finished goods inventories; and, restart of investment in fixed assets by corporations pointing to renewal of the capex cycle. Several services sectors, including the information technology sector in terms of its international competitiveness, have shown resilience. These are some of the developments that support brighter prospects for the Indian economy in 2018-19. A significant development has been that this time around, the step-up in growth is propelled by a revival of investment on the demand side and manufacturing on the supply side. This outlook will be lifted by tailwinds from remonetisation and implementation of Goods and Services Tax (GST).

The path of inflation will likely be influenced by effects of the increase in house rent allowances (HRAs) for central government employees, which is purely statistical and has to be looked through to gauge true inflation developments. As this effect wanes, inflation could moderate in the remaining part of 2018-19 from an upturn in Q1 under the baseline assumptions.

Fiscal slippages for 2017-18 and 2018-19, along with the postponement of the medium-term adjustment path, are a key risk to the growth and inflation outlook.

Monetary Policy Committee: October 2017-February 2018

The Monetary Policy Committee (MPC) met in December 2017 and February 2018 in accordance with the pre-announced bi-monthly schedule. The MPC voted to keep the policy rate on hold in these meetings, maintaining its neutral stance of the fourth bi-monthly resolution of October 2017. The MPC's resolutions as well as individual minutes and voting patterns reflected concerns about the changing inflation trajectory – upside risks to the inflation outlook from food and fuel prices, rising input cost conditions, fiscal slippages, and volatile global financial markets in its December resolution; and increase in HRAs by state governments, crude oil and other commodity prices, revisions to minimum support prices (MSPs) and fiscal slippages in its February resolution. The seasonal moderation in prices of vegetables and fruits, subdued capacity utilisation, and moderate rural real wage growth were seen as mitigating factors.

Table I.1 Monetary Policy Committees and Voting Patterns

Country	Number of Policy Meetings: October 2017-March 2018		
	Total Meetings	Meetings With Full Consensus	Meetings With Dissents
Brazil	4	4	0
Chile	5	5	0
Colombia	5	1	4
Czech Republic	4	3	1
Hungary	5	5	0
Israel	4	3	1
Japan	4	0	4
South Africa	3	1	2
Sweden	3	2	1
Thailand	4	3	1
UK	4	2	2
US	4	3	1

Source: Central bank websites.

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

Indicator	October 2017 MPR	Current (April 2018) MPR
Crude Oil (Indian Basket)	US$ 55 per barrel during 2017-18: H2	US$ 68 per barrel during 2018-19
Exchange rate	₹ 65/US$	Current level
Monsoon	5 per cent below LPA in 2017	Normal for 2018
Global growth	3.5 per cent in 2017 3.6 per cent in 2018	3.9 per cent in 2018 3.9 per cent in 2019
Fiscal deficit	To remain within BE 2017-18 (3.2 per cent of GDP)	To remain within BE 2018-19 (3.3 per cent of GDP)
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 processed in Indian refineries in the ratio of 72:28.
2. The exchange rate path assumed here is for the purpose of 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/band around the exchange rate.
3. Global growth projections are from the World Economic Outlook (July 2017 and January 2018 Updates), International Monetary Fund (IMF).
4. BE: Budget Estimates.
5. LPA: Long period average (average rainfall during 1951-2000).

Against this backdrop, the MPC voted in December by a majority of 5-1 to maintain *status quo* on the policy rate, while continuing with a neutral stance. As in the October meeting, one member voted for a rate cut to support economic activity. In February, the MPC persevered with *status quo* on the policy rate with a vote of 5-1 and a neutral stance, while reiterating its commitment to keep headline inflation close to 4 per cent on a durable basis. In view of several drivers of inflation firing at the same time and the upper tolerance band of inflation target under threat, one member voted for a 25 basis points (bps) increase in the policy rate to commence the withdrawal of accommodation. These subtle variations in voting patterns reflecting individual members' views on the current and evolving macroeconomic outlook as well as policy preferences on the weights they assign to deviations of inflation and output from target/ potential are also observed in recent experiences of the MPCs in other countries (Table I.1).

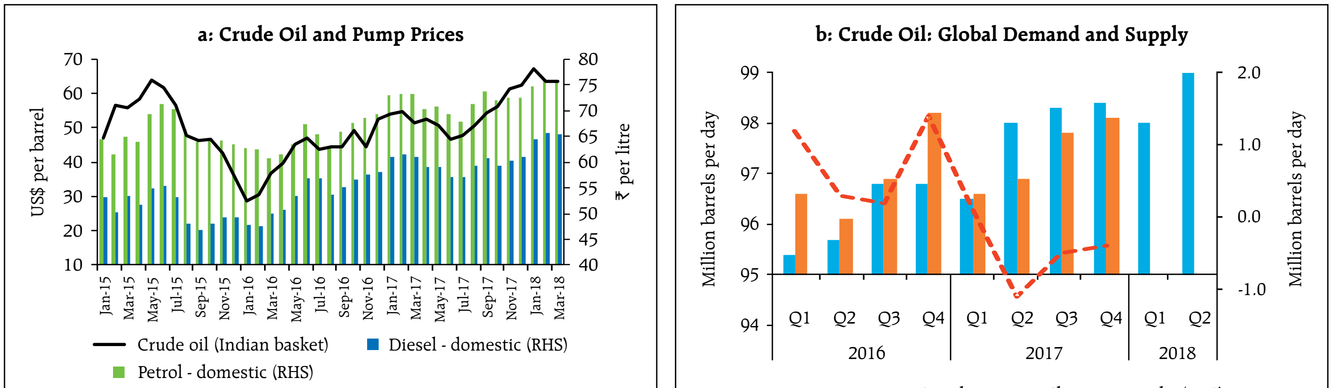
Macroeconomic Outlook

Chapters II and III present macroeconomic developments during October 2017–March 2018 and also explain the reasons for deviations of actual outcomes of inflation and growth from staff's projections in the October 2017 MPR. Turning to the outlook, the recent evolution of domestic and global macroeconomic developments warrant revisions in the baseline assumptions (Table I.2).

First, crude oil prices (Indian basket) firmed up from US$ 56 a barrel in October 2017 to US$ 67 a barrel in January 2018 (Chart I.1). Thereafter, they have fluctuated between US$ 60 and US$ 67. With the Organisation of the Petroleum Exporting Countries (OPEC) extending production cuts through the end of 2018 and the drawdown of inventories to meet increasing demand, being buffeted somewhat by the response of US shale oil production, the baseline scenario assumes crude oil prices (Indian basket) to average around US$ 68 a barrel in 2018-19.

Second, the exchange rate (Indian rupee *vis-à-vis* the US dollar) has exhibited two-way movements since October 2017. It appreciated till the early part of January 2018 on buoyant capital inflows and weakening of the US dollar. Subsequently, it depreciated from early February, following the release of stronger than expected US non-farm payrolls

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



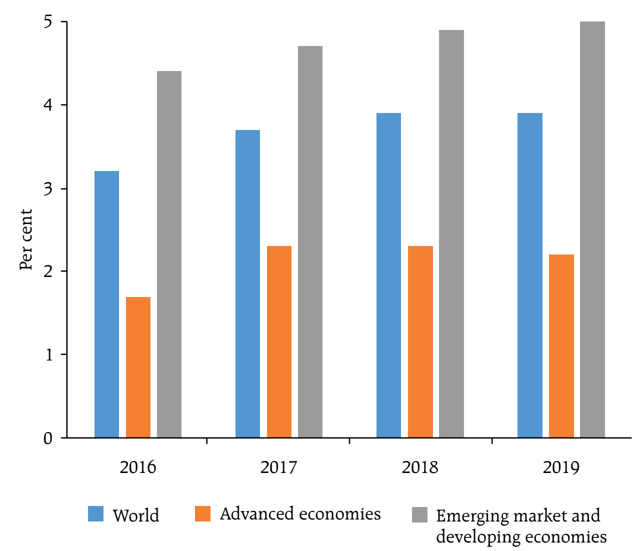
Note: Domestic prices represent the average pump prices of four metros.
Sources: Bloomberg; Petroleum Planning and Analysis Cell; and Indian Oil Corporation Limited.

Source: International Energy Agency.

and wages data that fuelled expectations of a faster pace of interest rate increases by the US Federal Reserve and over concerns of the impact of higher crude oil prices on India's trade deficit. By March, the exchange rate of the rupee was close to its October 2017 level.

Third, the pace of global economic activity in 2017 turned out to be stronger than expected due to robust growth in the advanced economies (AEs) and significantly stronger growth in EMEs. Global growth is expected to accelerate further in 2018, benefitting from the boost to investment demand in the US from corporate tax cuts, robust recovery in the euro area and generally improved growth outlook in EMEs (Chart I.2). The sharp recovery in world trade is expected to sustain in 2018 and enlarge the prospects of another year of strong and resilient global activity.

Chart I.2: Global GDP Growth (y-o-y)



Source: IMF.

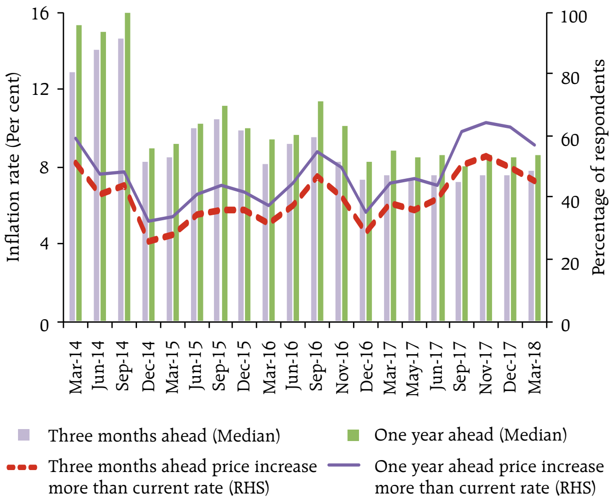
I.1 The Outlook for Inflation

Headline CPI inflation reached a peak of 5.2 per cent in December 2017 (4.9 per cent, excluding the estimated impact of HRA for central government employees), reflecting an unseasonal spike in the prices of vegetables and the full impact of the central government implementing the 7th Central Pay Commission's (CPC's) HRA award. The delayed setting in of the seasonal food prices moderation took down headline inflation to 4.4 per cent in February (4.1 per cent, excluding the estimated impact of HRA for central government employees). It is likely that this softening will keep the reading for March benign before it reverses in April. The incidence and strength of this reversal will condition monetary policy responses in 2018-19.

Turning to the outlook, inflation expectations of urban households remain elevated, according to the March 2018 round of the Reserve Bank's survey.[1] Inflation expectations three months ahead and a year ahead increased by 30 bps and 10 bps, respectively, from the

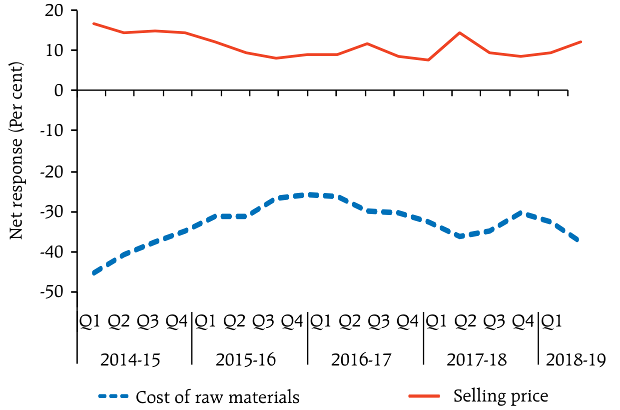
[1] The Reserve Bank's inflation expectations survey of households is conducted in 18 cities and the results of the March 2018 survey are based on responses from 5,150 households.

Chart I.3: Inflation Expectations of Households



Source: Inflation Expectations Survey, 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. The increase/decrease in selling price is optimistic/pessimistic, while the increase/decrease in the cost of raw material is pessimistic/optimistic from the view point of respondent firms. Therefore, higher negative values for the cost of raw material indicate higher input price pressures and vice versa.

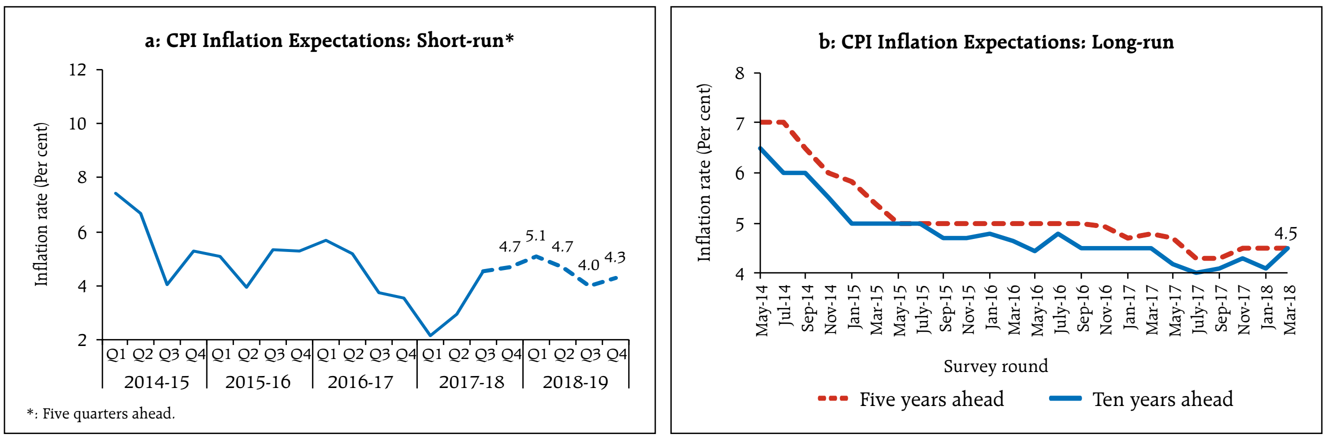
Source: Industrial Outlook Survey, RBI.

previous round (December) to 7.8 per cent and 8.6 per cent, respectively. The proportion of respondents expecting the general price level to increase by more than the current rate declined for both three months and one year horizons (Chart I.3).

Manufacturing firms polled in the Reserve Bank's industrial outlook survey (March 2018) expected higher input price pressures in Q1:2018-19 due to rising cost of raw materials (higher negative values for cost of raw materials indicate higher input price pressures) (Chart I.4).[2] Selling prices are also expected to increase, but not sufficient to protect profit margins. The Nikkei's purchasing managers' survey also indicates both input and output price pressures for manufacturing (March 2018) as well as services (February 2018) sectors.

Professional forecasters surveyed by the Reserve Bank in March 2018 expect CPI inflation to firm up to 5.1 per cent in Q1:2018-19 and moderate thereafter to 4.3 per cent in Q4:2018-19 (Chart I.5).[3] Their medium-term inflation expectations (5 years ahead) remained

Chart I.5: Inflation Expectations of Professional Forecasters



Source: Survey of Professional Forecasters, RBI.

[2] The March 2018 round results are based on responses from 1,250 companies.

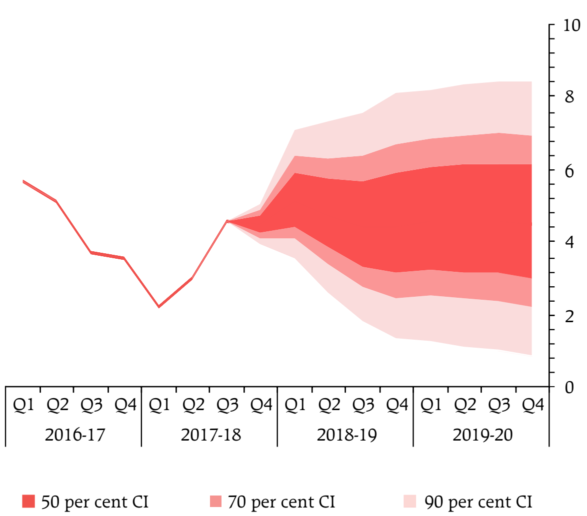
[3] 25 forecasters participated in the March 2018 round of the Reserve Bank's survey of professional forecasters.

unchanged at 4.5 per cent, while longer-term inflation expectations (10 years ahead) increased by 40 bps to 4.5 per cent.

Taking into account the initial conditions, signals from the forward looking surveys and estimates from structural and other models, CPI inflation is projected to pick up from 4.4 per cent in February 2018 to 5.1 per cent in Q1:2018-19 due to unfavourable base effects and then moderate to 4.7 per cent in Q2, and 4.4 per cent in Q3 and Q4, with risks tilted to the upside (Chart I.6). It may be noted that the direct impact of the increase in the HRA announced by the Central Government fades away fully by December 2018. The 50 per cent and the 70 per cent confidence intervals for inflation in Q4:2018-19 are 3.2-5.9 per cent and 2.5-6.7 per cent, respectively. Excluding the estimated impact of HRA for central government employees, CPI inflation would pick up from 4.1 per cent in February 2018 to 4.7 per cent in Q1:2018-19 and then moderate to 4.4 per cent in Q2, Q3 and Q4.

For 2019-20, assuming a normal monsoon and no major exogenous/policy shocks, structural model estimates indicate that inflation will move in a range of 4.5-4.6 per cent. The 50 per cent and the 70 per cent confidence intervals for Q4:2019-20 are 3.0-6.1 per cent and 2.2-7.0 per cent, respectively.

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



Source: RBI staff estimates. CI-Confidence Interval

There are a number of upside risks to the baseline forecasts. Although the direct impact on headline inflation is statistical and should be looked through for policy purposes, second order effects of the expected increases in HRA, including by state governments, can impact inflation expectations. Other major risks to the inflation outlook are crude oil and other commodity prices, the proposed revisions to MSPs for *kharif* crops, and fiscal slippage at both the central and state levels.

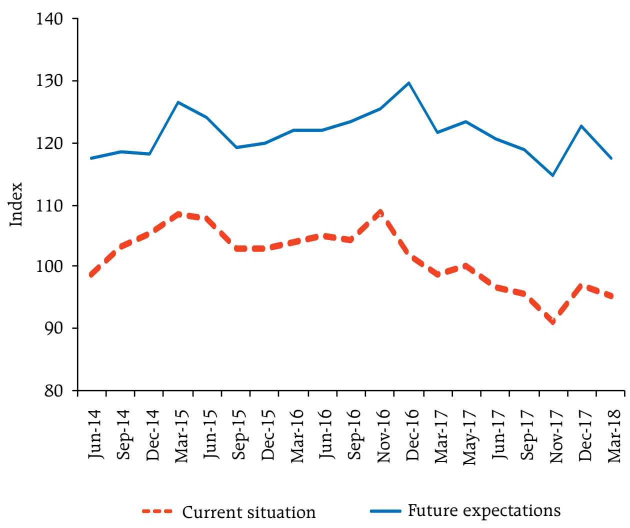
I.2 The Outlook for Growth

Going forward, economic activity is expected to gather pace in 2018-19, benefitting from a conducive domestic and global environment. First, the teething troubles relating to implementation of the GST are receding. Second, credit off-take has improved in the recent period and is becoming increasingly broad-based, which portends well for the manufacturing sector and new investment activity. Third, large resource mobilisation from the primary market could strengthen investment activity further in the period ahead. Fourth, the process of recapitalisation of public sector banks and resolution of distressed assets under the Insolvency and Bankruptcy Code (IBC) may improve the business and investment environment. Fifth, global trade growth has accelerated, which should encourage exports and reduce the drag from net exports. Sixth, the thrust on rural and infrastructure sectors in the Union Budget could rejuvenate rural demand and also crowd in private investment.

Notwithstanding these salubrious developments, consumer confidence dipped in the March 2018 round of the Reserve Bank's survey, with the respondents expecting a moderation over the year ahead in general economic conditions, employment situation and their income (Chart I.7).[4] Overall sentiment in the manufacturing sector a quarter ahead also fell in the March 2018 round of the Reserve Bank's industrial outlook survey under the weight of weaker prospects

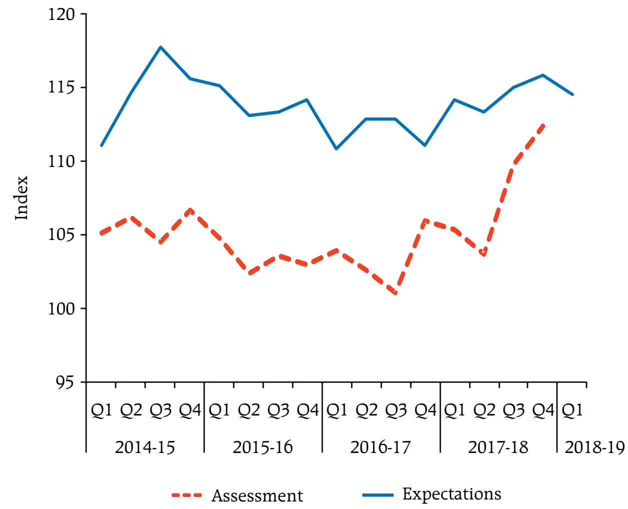
[4] The survey is conducted by the Reserve Bank in six metropolitan cities and the March 2018 round elicited responses from 5,297 respondents.

Chart I.7: Consumer Confidence



Source: Consumer Confidence Survey, RBI.

Chart I.8: Business Assessment and Expectations



Source: Industrial Outlook Survey, RBI.

for production, order books, capacity utilisation, employment and profit margins (Chart I.8).

However, surveys conducted by other agencies indicate an improvement in business confidence (Table I.3). Manufacturing and services sector firms in the Nikkei's purchasing managers' surveys (March 2018 and February 2018, respectively) are optimistic about the outlook a year ahead, driven by expansion plans and expected improvement in demand conditions.

Table I.3: Business Expectations Surveys

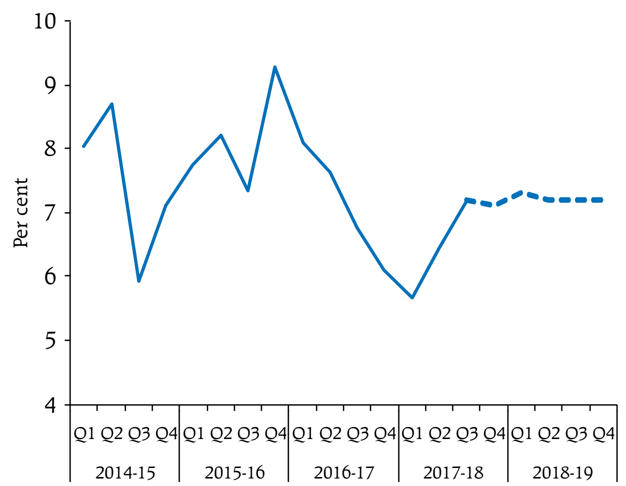
Item	NCAER Business Confidence Index (January 2018)	FICCI Overall Business Confidence Index (February 2018)	Dun and Bradstreet Composite Business Optimism Index (January 2018)	CII Business Confidence Index (December 2017)
Current level of the index	129.3	71.6	91.0	59.7
Index as per previous Survey	118.5	65.6	76.7	58.3
% change (q-o-q) sequential	9.1	9.1	18.6	2.4
% change (y-o-y)	15.4	23.0	39.1	5.7

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

In the March 2018 round of the Reserve Bank's survey, professional forecasters expected real gross domestic product (GDP) growth to pick up marginally from 7.2 per cent in Q3:2017-18 to 7.3 per cent in Q1:2018-19 and remain at 7.2 per cent in Q2-Q4 (Chart I.9 and Table I.4).

Taking into account the baseline assumptions, survey indicators and model forecasts, real GDP growth is projected to improve from 6.6 per cent in 2017-18 to 7.4 per cent in 2018-19 – 7.3 per cent in

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



Source: Survey of Professional Forecasters, RBI.

Table I.4: Reserve Bank's Baseline and Professional Forecasters' Median Projections

(Per cent)

	2017-18	2018-19	2019-20
Reserve Bank's Baseline Projections			
Inflation, Q4 (y-o-y)	4.5	4.4	4.5
Inflation excluding the estimated impact of HRA for central government employees, Q4 (y-o-y)	4.2	4.4	4.5
Real GDP Growth	6.6	7.4	7.7
Assessment of Survey of Professional Forecasters@			
Inflation, Q4 (y-o-y)	4.7	4.3	
Real GDP Growth	6.6	7.3	
Gross Domestic Saving (per cent of GNDI)	30.2	30.5	
Gross Fixed Capital Formation (per cent of GDP)	28.5	29.0	
Credit Growth of Scheduled Commercial Banks	10.0	11.3	
Combined Gross Fiscal Deficit (per cent of GDP)	6.5	6.3	
Central Government Gross Fiscal Deficit (per cent of GDP)	3.5	3.3	
Repo Rate (end-period)	6.00	6.00	
Yield of 91-days Treasury Bills (end-period)	6.2	6.3	
Yield of 10-years Central Government Securities (end-period)	7.6	7.5	
Overall Balance of Payments (US$ billion)	27.1	11.3	
Merchandise Exports Growth	9.0	9.4	
Merchandise Imports Growth	18.0	10.9	
Current Account Balance (per cent of GDP)	-1.9	-2.1	

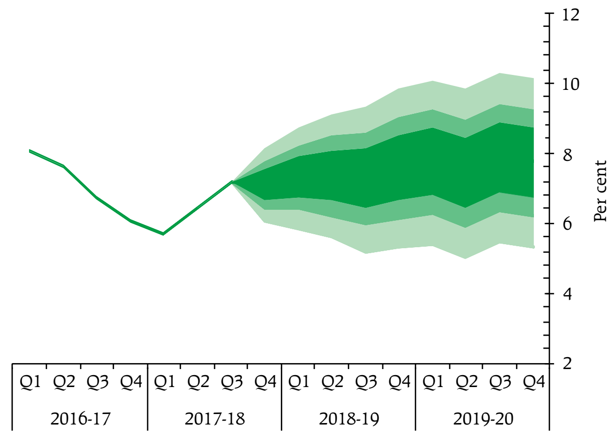
@: Median forecasts; GNDI: Gross National Disposable Income.
Source: RBI staff estimates; and Survey of Professional Forecasters (March 2018).

Q1, 7.4 per cent in Q2, 7.3 per cent in Q3 and 7.6 per cent in Q4 – with risks evenly balanced around this baseline path.[5] For 2019-20, the structural model estimates indicate real GDP growth at 7.7 per cent, with quarterly growth rates in the range of 7.4-7.9 per cent, assuming a normal monsoon, and no major exogenous/policy shocks (Chart I.10).

Risks to the baseline growth scenario need to be monitored carefully. First, the uncertainty associated with the pace and timing of normalisation of monetary policy in the US and other major AE central banks has led to recurrent bouts of volatility in international financial markets which may have an adverse impact

[5] From this MPR onwards, growth in gross domestic product (GDP) will be used as the headline measure of economic activity.

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



Source: RBI staff estimates. CI-Confidence Interval

on capital flows and overall investment sentiment, including for EMEs through the "finance" channel. Second, protectionist measures in the US and the generalised threat of a trade war can exacerbate volatility in global financial markets, with spillovers to domestic financial markets and adverse implications for the growth outlook. Large revisions in past data on national accounts statistics also pose a challenge to forecasts (Box I.1).

I.3 Balance of Risks

The baseline projections of growth and inflation presented in the preceding sections are based on assumptions set out in Table I.2. However, there are large uncertainties around these baseline assumptions, posing risks to the baseline projections. The projected paths of growth and inflation under plausible alternative scenarios are discussed below.

(i) International Crude Oil Prices

The dynamics of oil prices over the past six months highlight the volatility associated with the oil market. The baseline scenario assumes crude oil prices (Indian basket) to average around US$ 68 a barrel during 2018-19. Global growth has surprised on the upside in recent quarters. If these conditions persist, global

Box I.1: National Accounts Data Revisions in India

With the advancement of first advance estimates (FAE) of national accounts data by the Central Statistics Office (CSO) to the first week of January, the issue of large revisions in data has come to the fore. The first advance estimates are based on limited information, which get addressed gradually in successive revisions. An analysis of revisions of annual growth rates of major components of GDP in India between the first release and the latest available release shows a generally upward bias.

On the production side, an analysis based on annual data (2003-04 onwards) and quarterly data (2002-03 onwards) reveals that the CSO revised annual real gross value added (GVA) growth estimates relative to advance estimates upwards in ten years (on an average of about 70 basis points), and downwards in the remaining four years (on an average of about 27 basis points) (Table I.1.1). In the case of real GDP, advance estimates were revised up in twelve years (an average of 81 basis points), and revised downwards only in two years (an average of 204 basis points). An analysis of GVA components shows that significant revisions were mainly in three sectors, *viz.* 'mining and quarrying', 'manufacturing' and 'financial, real estate and professional services'.

Table I.1.1: First and Last Estimates of Real GVA Growth: Mean and Median of Differences (in percentage points)

Variable	Annual Growth Rate (14 years)		Quarterly Growth Rate (60 quarters)	
	Mean	Median	Mean	Median
GVA	0.43	0.37	0.55 ***	0.54 ***
Agriculture, forestry and fishing	0.84	0.99	0.34	0.74 *
Mining and quarrying	2.34	1.18	1.97 ***	0.58 ***
Manufacturing	2.06	1.75	2.09 ***	1.13 ***
Electricity, gas, water supply and other utility services	-0.20	-0.36	0.35	0.45 *
Construction	1.34	0.51	0.75	0.60
Trade, hotels, transport, communication and services related to broadcasting	0.47	0.87	0.34	0.64
Financial, real estate and professional services	0.49	0.43	1.08 ***	1.23 ***
Public administration, defence and other services	-1.31	-0.81	-0.46	-1.10

Notes: 1. ***, ** and * indicates statistical significance at 1%, 5% and 10%, respectively.
2. Wilcoxon sign rank test has been performed for median.
3. The null hypothesis is that there is no difference in parameters for two or more sets of population.

From the expenditure side, the analysis of annual data from 2007-08 onwards and for quarterly data from 2009-10 onwards shows that private final consumption expenditure (PFCE), and exports and imports of goods and services were revised significantly (Table I.1.2).

The analysis also reveals that during periods of rising growth, initial estimates were revised upwards in successive revisions, while during the periods of slackening of growth, revisions were in the downward direction – initial estimates understate in magnitude both upswings and downswings. Advance estimates of GDP/GVA growth may, therefore, need to be supplemented with high frequency indicators to arrive at a realistic assessment of the state of the economy (Prakash *et al,* 2018).

Reference:

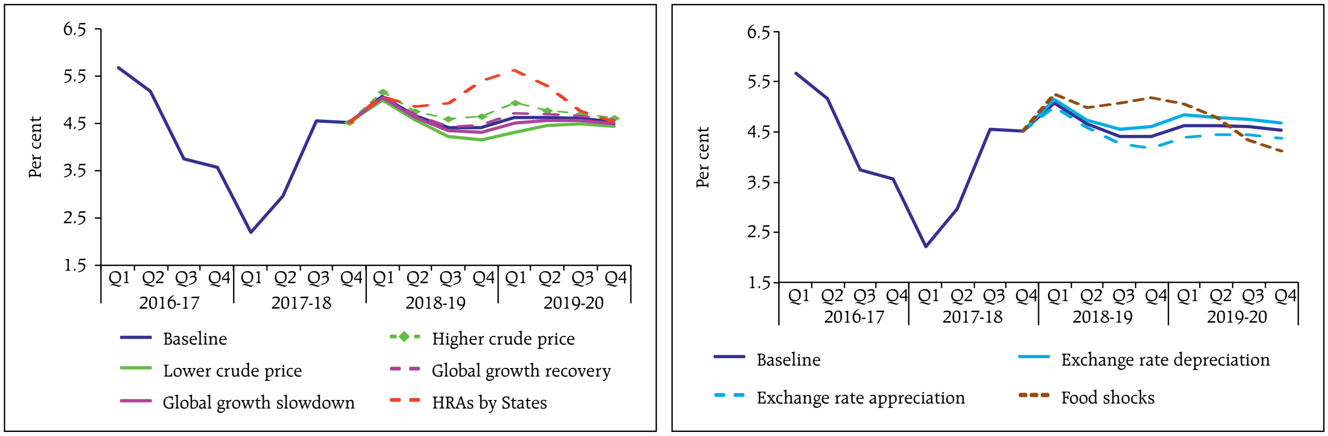
Prakash, Anupam, A. K. Shukla, A. P. Ekka and K. Priyadarshi (2018), "Examining Gross Domestic Product Data Revisions in India", Mint Street Memo (forthcoming), Reserve Bank of India.

Table I.1.2: First and Last Estimates of Real GDP Growth-Expenditure Side: Mean and Median of Differences (in percentage points)

Variable	Annual Growth Rate (10 years)		Quarterly Growth Rate (32 quarters)	
	Mean	Median	Mean	Median
GDP	0.38	0.56	0.71**	0.36**
Private final consumption expenditure	1.56	1.14	1.31**	1.19**
Government final consumption expenditure	-0.92	0.41	-0.12	2.49
Gross fixed capital formation	1.96	1.91	2.89*	0.80
Exports of goods and services	1.97	1.29	3.59*	2.04*
Imports of goods and services	2.99	2.43	15.33	2.67**

Notes: Please see notes to Table I.1.1.

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



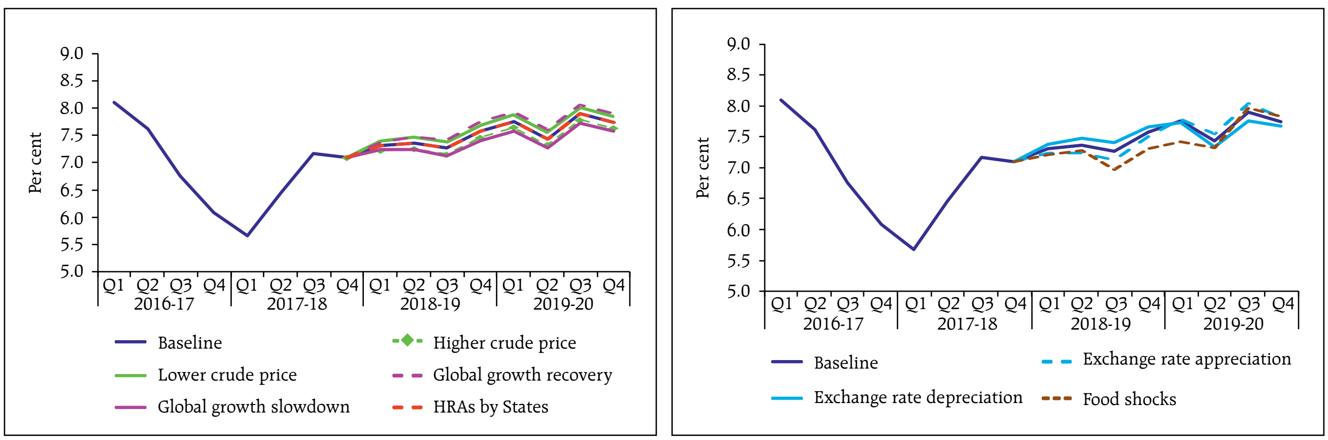
Source: RBI staff estimates.

crude oil demand and hence prices could edge higher. Assuming crude oil prices average around US$ 78 in this scenario, inflation could be higher by 30 bps over the baseline and growth weaker by around 10 bps. On the other hand, there could be downward pressures on international crude prices if global economic activity were to turn weaker than expected (for a variety of factors discussed later) or shale gas output is ramped up further in response to elevated crude oil prices or OPEC members produce more than their agreed shares. Should the Indian basket crude price fall to US$ 58 per barrel in this scenario, inflation could ease by around 30 bps below the baseline, with a boost of around 10 bps to real GDP growth (Charts I.11 and I.12).

(ii) Global Growth

The baseline scenario assumes global growth to gain upward momentum during 2018, buoyed by the boost to US investment demand from corporate tax cuts, strong activity in the euro area supported by accommodative monetary policy and improvement in growth prospects of EMEs. There are upside risks to the baseline with the synchronised cyclical rebound, revival of global trade and easy financing conditions reinforcing each other. If global growth turns out to be 50 bps over the baseline, it could strengthen domestic growth by 20 bps above the baseline and raise domestic inflation by around 10 bps.

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



Source: RBI staff estimates.

On the other hand, protectionist policies, continuing uncertainty associated with the pace and timing of normalisation of monetary policy in the US and other systemic central banks, and higher crude oil prices pose downside risks to global demand. In such a scenario, if global demand weakens by 50 bps *vis-à-vis* the baseline, domestic growth and inflation could be 20 bps and around 10 bps, respectively, below the baseline.

(iii) House Rent Allowances – Implementation by States

The increase in the HRA by the central government for its employees is reflected in the inflation data since July 2017. There remains uncertainty, however, about the magnitude and timing of implementation of the HRA award by the state governments for their employees and these are, therefore, not included in the baseline inflation path. Assuming that all state governments implement increases in pay and allowances of the same order as the central government during the course of 2018-19, CPI inflation could turn out to be around 100 bps above the baseline on account of the direct statistical effect of higher HRAs, with additional indirect effects emanating from higher demand and increase in inflation expectations. As noted earlier, monetary policy should look through the direct statistical effects, while being vigilant about indirect effects working through inflation expectations.

(iv) Exchange Rate

The exchange rate of the Indian rupee *vis-à-vis* the US dollar has moved in both directions in recent months. Changing market perceptions about the pace and timing of monetary policy normalisation in the US, along with domestic inflation, fiscal slippage and current account balance developments, have been important factors driving exchange rate movements in the recent period and are likely to remain so in the near-term. With economic activity gathering pace in the euro area, uncertainty surrounding normalisation plans of the European Central Bank is likely to add to financial market volatility. The US macroeconomic policy mix – easy fiscal policy in an environment when monetary accommodation is being withdrawn – can accentuate market volatility. Assuming a depreciation of the Indian rupee by around 5 per cent relative to the baseline, inflation could edge higher by around 20 bps and the boost to net exports could increase growth by around 15 bps. On the other hand, with growth picking up in recent months, sound domestic fundamentals and the various initiatives taken by the Government to boost investment, India may continue to be an attractive destination for foreign investment, which could put upward pressures on the currency. An appreciation of the Indian rupee by 5 per cent in this scenario could soften inflation by around 20 bps and reduce growth by around 15 bps in 2018-19.

(v) Risks to Food Inflation

The baseline projections of growth and inflation assume a normal south-west monsoon, which is supported by early signals of likely ENSO (El Nino – Southern Oscillation) neutral conditions. The India Meteorological Department (IMD) is yet to release its forecast on the south-west monsoon season for 2018. Given the sensitivity of the agricultural sector to rainfall conditions, the actual growth and inflation dynamics would critically depend on the progress of the monsoon. A deficient monsoon could lower overall GDP growth by around 20-30 bps in 2018-19. Furthermore, the Union Budget has proposed revised guidelines for arriving at the MSPs for *kharif* crops, although the details are not yet fully available. If the monsoon is deficient and the budget proposals on MSPs lead to higher food prices, headline inflation could rise above the baseline by around 80 bps.

(vi) Fiscal Slippage

The Central Government's fiscal deficit for 2017-18 and 2018-19 is likely to be above initial expectations and the medium-term adjustment path has also been postponed. An empirical assessment presented in the MPR of October 2017 suggests that: (a) in India, causality runs from fiscal deficits to inflation; and (b) the impact of fiscal deficits on inflation is non-linear, *i.e.*, higher the initial levels of the fiscal deficit and inflation, higher is the impact of an increase in the fiscal deficit on inflation. Given the present levels of the combined (centre and states) fiscal deficit, an increase in the fiscal deficit to GDP ratio by 100 bps could lead to an increase of about 50 bps in inflation. Apart from its direct impact on inflation, fiscal slippage has broader macro-financial implications, notably on economy-wide costs of borrowing which have already started to rise. These may feed into inflation and elevate it further.

I.4 Conclusion

To summarise, aggregate demand is expected to improve in 2018-19, supported, *inter alia*, by the improving GST implementation, the recapitalisation of public sector banks and the resolution of distressed assets under the IBC. Rural and infrastructure sectors are identified as thrust areas in the Union Budget, which could energise aggregate demand. With the acceleration in global trade, the Indian economy could benefit from buoyant external demand. In addition to the usual monsoon related uncertainty, inflation faces upside risks from a variety of other sources, especially due to the oil prices, the fiscal slippage, and (the statistical effect from) the expected increases in HRAs by the state governments, The purely direct statistical impact of the HRA adjustment on CPI will be looked through while formulating monetary policy. Uncertainty over the pace and timing of monetary policy normalisation by the systemic central banks in advanced economies, protectionist tendencies and fears of a trade war pose significant risks to the baseline inflation and growth paths.

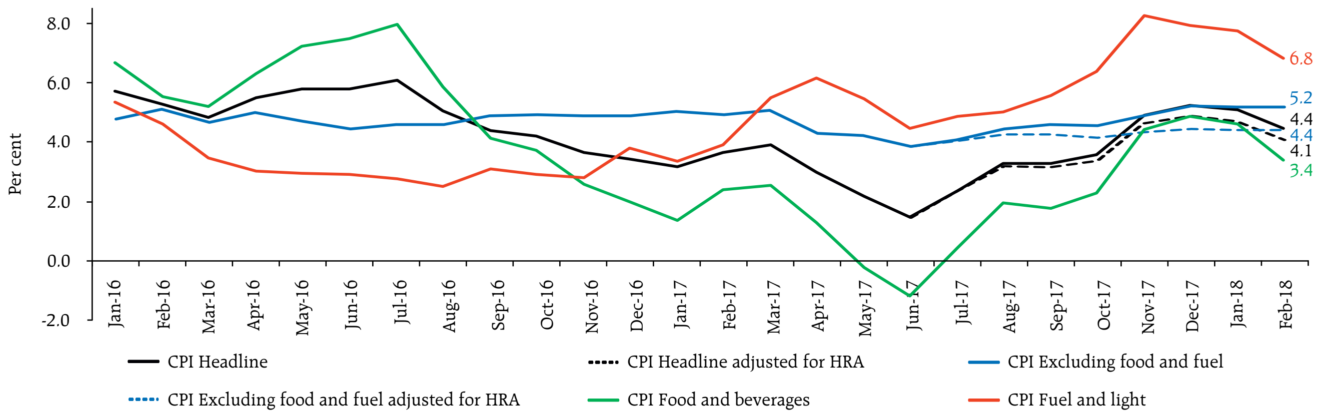
II. Prices and Costs

Consumer price inflation rose sharply in Q3:2017-18, driven up by a spike in food prices and by the disbursement of enhanced house rent allowance (HRA) for central government employees, the latter alone contributing an estimated 35 basis points. It moderated somewhat in Q4 on a delayed seasonal easing of prices of vegetables. Industrial input costs increased through H2:2017-18, tracking movements in international commodity prices. Wage pressures have remained moderate in both the organised and rural sectors.

The course of consumer price index (CPI) inflation in Q3 was significantly influenced by house rent allowance (HRA) increase for central government employees from July 2017, following the recommendations of the 7th central pay commission (CPC).[1] The HRA impact contributed 35 basis points to the rise in headline inflation to its recent peak of 5.2 per cent in December, following the chain base method of compilation of the housing index in the CPI.[2] Adjusted for the estimated HRA impact, headline inflation was 4.9 per cent in December. The HRA impact on inflation excluding food and fuel was even larger at around 75 basis points, adjusting for which it would have been lower at 4.4 per cent in December. Food inflation rose sharply in Q3 pushed by the unseasonal pick-up in prices of vegetables; and fuel inflation accelerated due to an uptick in inflation in liquefied petroleum gas (LPG), kerosene, coke and electricity. In Q4, headline inflation eased to 4.4 per cent by February 2018 with the seasonal softening in prices of vegetables. Excluding the HRA impact, headline inflation was 4.1 per cent and inflation excluding food and fuel remained unchanged at 4.4 per cent (Chart II.1).

The MPR of October 2017 had projected CPI inflation to increase to 4.2 per cent in Q3 of 2017-18 and further to 4.6 per cent in Q4, based on a prognosis of unfavourable base effects and the play-out of the increase in HRA for central government employees. Actual inflation outcomes in Q3 were in alignment with the direction of the projected trajectory, but in levels, they turned out to be 35 basis points *higher* than forecast due to a combination of shocks. First, an unseasonal spike in the prices of onions and tomatoes during October-November 2017 caused prices of vegetables to soar, propelling inflation in this category to close to 30 per cent in December. Second, fuel inflation rose sharply during October-November on the back of an escalation in LPG prices. Third, international crude oil prices started firming up further from October. By end-December 2017, they were US$ 10 per barrel above the

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



HRA: House Rent Allowance.
Sources: Central Statistics Office (CSO); and RBI staff estimates.

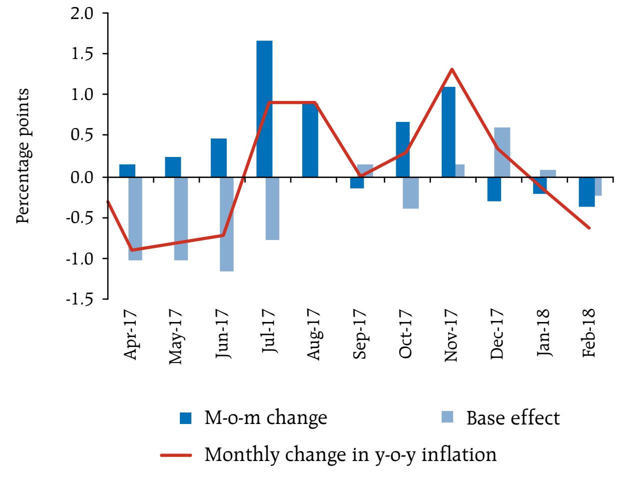
[1] Headline inflation is measured by year-on-year changes in all-India CPI Combined (Rural + Urban).
[2] Das. P. (2018), "Impact of Increase in House Rent Allowance on CPI Inflation", *Mint Street Memo (forthcoming).*

baseline assumption of US$ 55 per barrel. The pass-through to CPI inflation was, however, muted in Q3 due to excise duty cuts in early October and lagged mark-ups by oil marketing companies (OMCs). In Q4, most of the factors imposing these upward price pressures reversed. The winter downturn in prices of vegetables accentuated in January. Domestic LPG prices also eased in February, tracking international prices. As a result, the deviation between the actual and the projected inflation narrowed in Q4 to 15 bps (Chart II.2).

II.1 Consumer Prices

The increase in HRA for central government employees, which became effective from July 2017 and continued to accumulate till December 2017, shaped the path of headline inflation during Q3, with unseasonal hardening of prices of vegetables, accentuating a spike to 4.9 per cent in November. While prices of vegetables did undergo a shallower than usual moderation in December, an unfavourable base effect came into play, pulling up inflation to a peak of 5.2 per cent in December. In Q4, headline inflation moderated with a fall in momentum due to a delayed but steep reversal in prices of vegetables (Chart II.3).

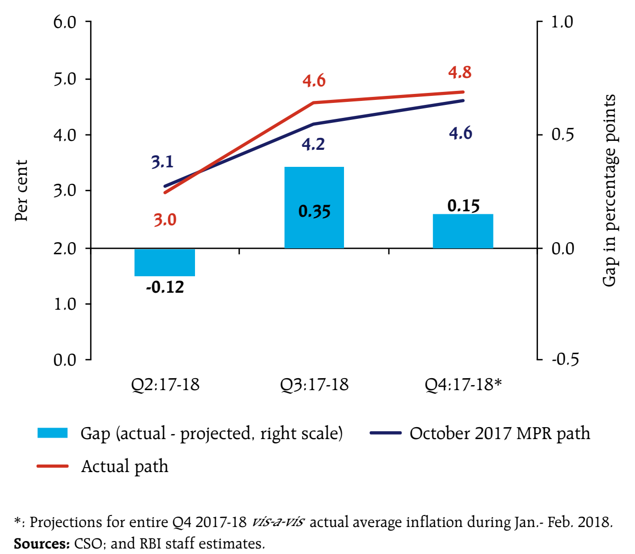
Chart II.3: CPI Headline Inflation – Momentum and Base Effects



Sources: CSO; and RBI staff estimates.

The distribution of inflation across CPI groups in 2017-18 had striking similarities as well as divergences with last year's experience. While median and modal inflation were similar, the continuing deflation in pulses gave the inflation distribution a considerable negative skew this year in contrast to the positive skew generated by high sugar and pulses inflation during 2016-17 (Chart II.4). Diffusion indices[3] of price changes in CPI items suggest that on a seasonally adjusted basis, after an uptick in Q3:2017-18, the situation reversed in January-February, with the prices of a number of goods, particularly of food items, registering decline (Chart II.5).

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



*: Projections for entire Q4 2017-18 *vis-a-vis* actual average inflation during Jan.- Feb. 2018.
Sources: CSO; and RBI staff estimates.

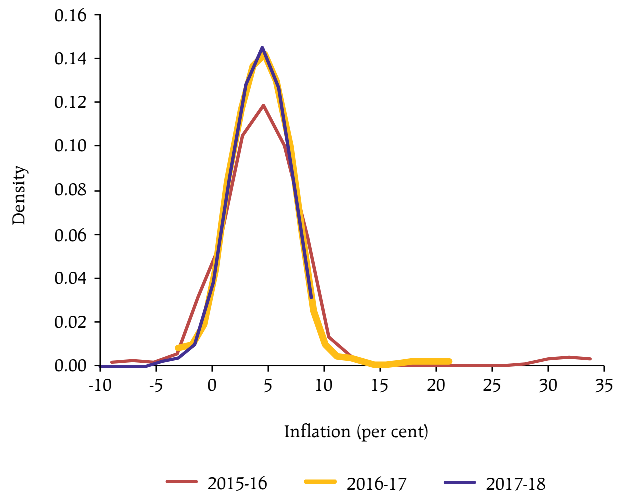
II.2 Drivers of Inflation

A historical decomposition[4] of inflation shows that the persistent effect of favourable supply shocks, especially on food prices, provided a cushion in the

[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 a broad expansion or the extent of generalisation of price increases and a reading below 50 signals a broad-based decline in prices.

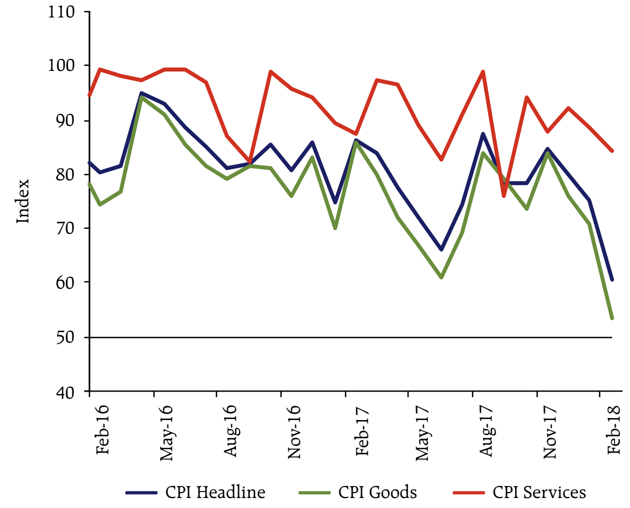
[4] Historical decompositions are used to estimate the individual contribution of each shock to the movements in inflation over the sample period based on a Vector Auto Regression (VAR) with the following variables (represented as the vector Y_t) - annual growth rate in crude oil prices in Indian Rupees, inflation, output gap measured using Hodrick–Prescott filter, annual growth rate in rural wages and the policy repo rate. The VAR can be written in companion 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 a deterministic trend and sum of all the shocks e_t. This formulation allows to decompose the deviation of inflation from the deterministic trend as the sum of contributions from various shocks.

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



Sources: CSO; and RBI staff estimates.

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



Sources: CSO; and RBI staff estimates.

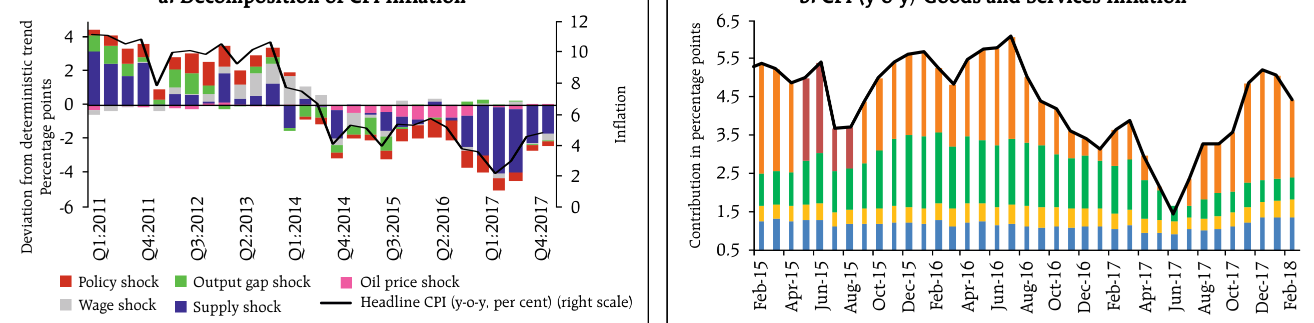
first half of 2017-18. However, the positive supply shocks waned in the second half of the year *vis-á-vis* the first half. The lagged impact of the still negative output gap and moderation in nominal rural wages also contributed to lower inflation during this period, while the firming up of crude oil prices imparted upward pressure (Chart II.6a).

Decomposing inflation into its goods and services components reveals that the pick-up in inflation from June to December 2017 and its reversal from January 2018 largely emanated from prices of non-durables, particularly perishables; while those of services registered a sustained increase, primarily due to increase in housing inflation from 4.7 per cent in June to 8.2 per cent in December and further to 8.4 per cent in February, reflecting the statistical effect of the HRA (Chart II.6b). Housing alone contributed over 90 per cent of the observed increase in services inflation during this period.

Turning to the drivers of food inflation in the second half of the year, the food and beverages sub-group contributed around 40 per cent to overall inflation, up from just 12 per cent during the first half. Adequate buffer stocks kept inflation in cereals generally under check. With cereals inflation under check, the pick-up in food inflation was largely on account of prices

Chart II.6: Drivers of Inflation

a: Decomposition of CPI Inflation* **b: CPI (y-o-y)-Goods and Services Inflation**

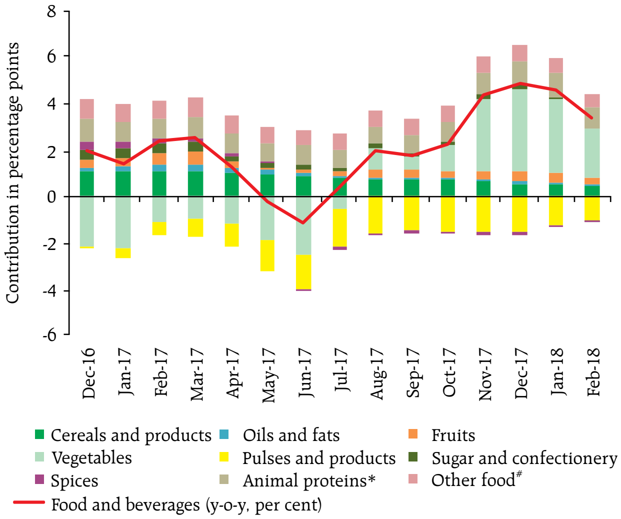


*: Deviation from deterministic trend.
Note: Estimated using a Vector Auto Regression with oil prices in INR, CPI inflation, output gap, rural wages and policy rate using the quarterly data from calendar quarter Q1:2002 to Q1:2018.

Note: Figures in parentheses are the group's weight in CPI.

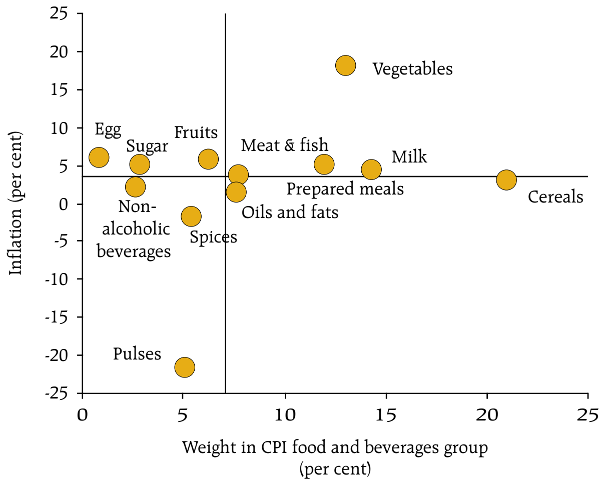
Sources: CSO; and RBI staff estimates.

Chart II.7: Drivers of Food Inflation (y-o-y)



*: Includes milk and products, meat and fish and egg.
#: includes prepared meals, snacks, sweets etc. and non-alcoholic beverages.
Sources: CSO; and RBI staff estimates.

Chart II.8: Food Inflation Dynamics: H2 of 2017-18 (September 2017 - February 2018)



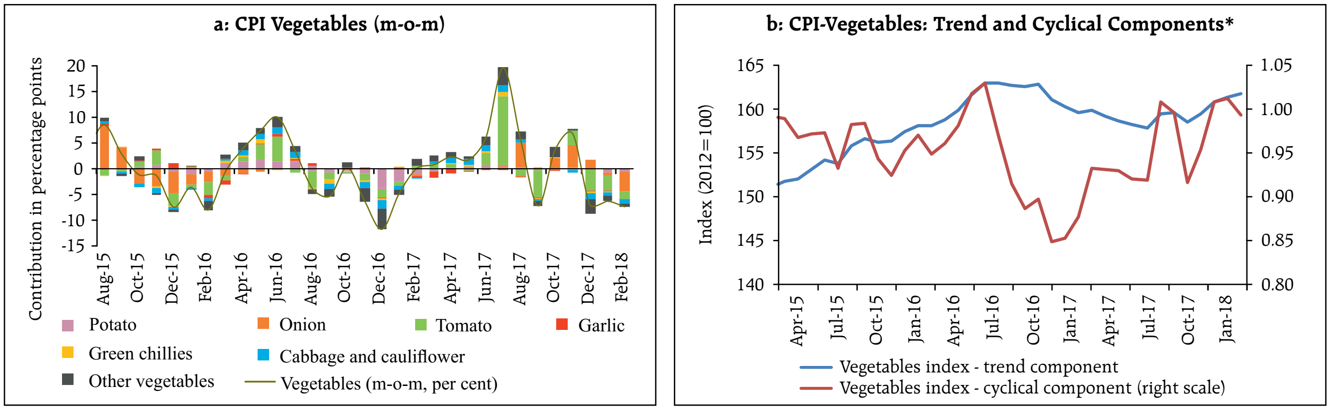
The vertical line represents the median weight among food group (7 per cent) and horizontal line represents the average food inflation (3.5 per cent).
Sources: CSO; and RBI staff estimates.

of vegetables – specifically tomato and onion – and intermittent uptick in prices of animal protein-rich food items. Continued decline in prices of pulses exerted a strong downward pull. Inflation in processed food products also moderated due to, *inter alia*, downward revision in GST rates (Charts II.7 and II.8).

Vegetables, which account for 13 per cent of the food group in CPI, were the principal drivers of food inflation. Price pressures in vegetables started building up from June 2017 following a fall in *mandi* arrivals, especially in onions and tomatoes (Chart II.9a). In the case of tomatoes, the upsurge in prices was so sharp that inflation in this category went up from (-)41 per cent in June 2017 to 119 per cent in November 2017 due to supply disruptions caused by adverse weather conditions – high temporal and spatial variability and delayed withdrawal of monsoon – and farmers' agitation in parts of Maharashtra and Madhya Pradesh. While tomato prices recorded some contraction during August-September, the extended South-West monsoon in October in several important tomato-producing centres, especially in states like Karnataka, Andhra Pradesh, Telengana, Madhya Pradesh and Odisha, led to severe crop losses and tomato prices shot up again in November.

Another driver was the inflation in onions, which rose from (-)14 per cent in April 2017 to 159 per cent in December. Again, while unfavourable weather

Chart II.9: CPI Vegetables



*: Monthly series of CPI-Vegetables from January 2012 to June 2018 is decomposed into trend, cycle, seasonal and irregular components using a univariate unobserved components model (UCM). The Bai-Perron test indicates two statistically significant breaks in August 2016 and June 2017.
Sources: CSO; and RBI staff estimates.

was a factor, large procurement of onions by a few state governments was the principal cause of the price spike. Post-November 2017, onion and tomato prices plunged with the arrival of fresh winter crops. Supply management measures by the government, especially in case of onions, helped in easing prices. The minimum export price (MEP), which is the key supply management measure used by the government to contain onion price surges, was re-implemented during the year in November and set at US$ 850 per tonne. The State-owned canalising agency *viz.*, Metals and Minerals Trading Corporation of India (MMTC), imported 2,000 tonnes of onions, while other agencies such as National Agricultural Cooperative Marketing Federation of India (NAFED) procured around 10,000 tonnes of onions directly from the farmers, and the Small Farmers' Agri-Business Consortium (SFAC) bought around 2,000 tonnes of onions locally and supplied to the consumers. The central government also advised states to take measures by way of licensing, imposition of stock limits and movement restrictions to balance supplies. In response, onion prices softened and the government brought down the MEP to US$ 700 per tonne in January 2018 before withdrawing it completely in February 2018.

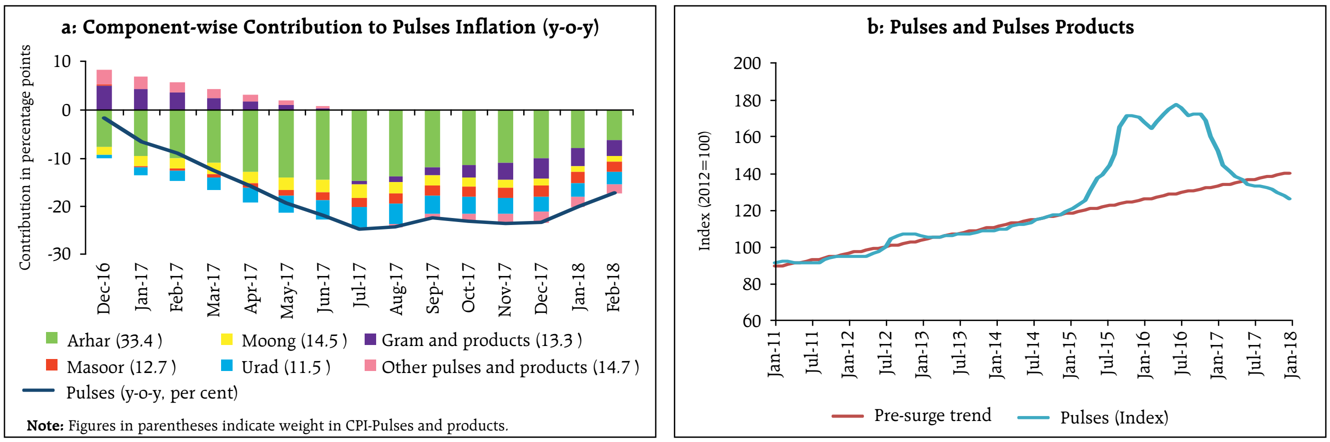
In case of potatoes, delayed sowing in West Bengal – a key growing state – due to extended monsoon showers in October, induced price pressures. However, carry-over stocks from the previous crop reined them in.

Analysis based on CPI data suggests that there is no significant difference in the m-o-m changes of prices of vegetables in urban and rural areas – the spike in prices of vegetables uniformly impacted rural and urban India[5]. Most of the demonetisation-induced fall in prices of vegetables reversed as is evident from the trend and cyclical components of CPI-Vegetables (Chart II.9b).

The other food components that recorded uptick in prices, *albeit* unevenly, were protein-rich items such as egg, meat and fish. Inflation in egg prices jumped from 0.8 per cent in October to 9.3 per cent in December, pushed up by tighter supply conditions on account of reduced egg production by poultry farms at the time of the usual increase in winter demand.

Pulses, with a weight of 5 per cent in the food group, contributed significantly to food inflation dynamics during the year. The contribution of pulses to overall inflation shifted from 6.0 per cent during 2016-17 to (-)19.0 per cent in 2017-18. At a granular level, the contribution of *arhar* in overall pulses inflation declined consistently from July 2017, while the contribution of gram prices, turned increasingly negative month after month till December 2017. With the production for pulses during 2017-18, as per the second advanced estimates, being marginally higher at 23.95 million tonnes (23.13 million tonnes in 2016-17), pulses prices have now fallen significantly below trend levels (Charts II.10a & b).

Chart II.10: CPI Pulses

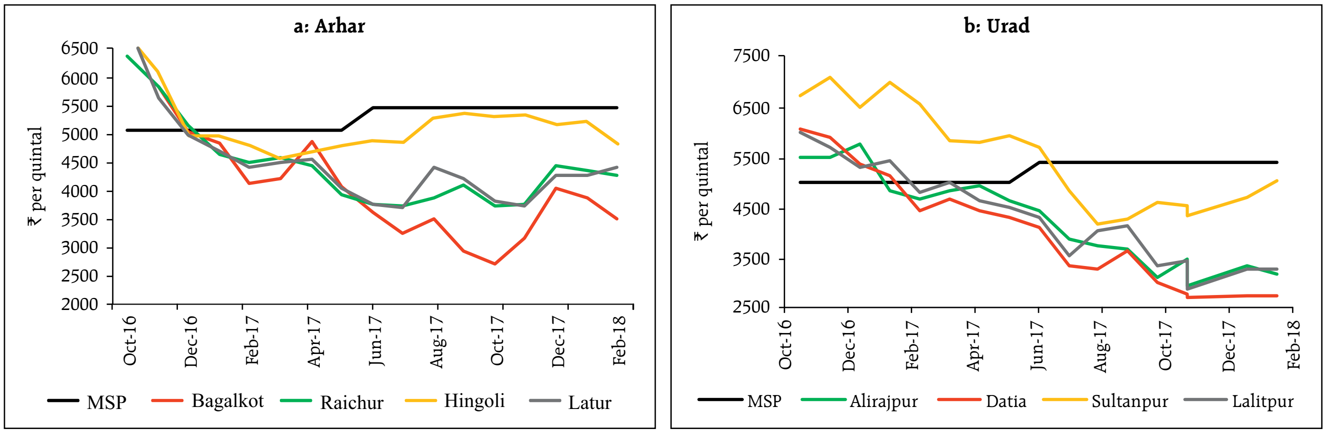


Note: Figures in parentheses indicate weight in CPI-Pulses and products.

Sources: CSO; and RBI staff estimates.

[5]Based on a *t*-test framework.

Chart II.11: Pulses - *Mandi* Prices and MSP



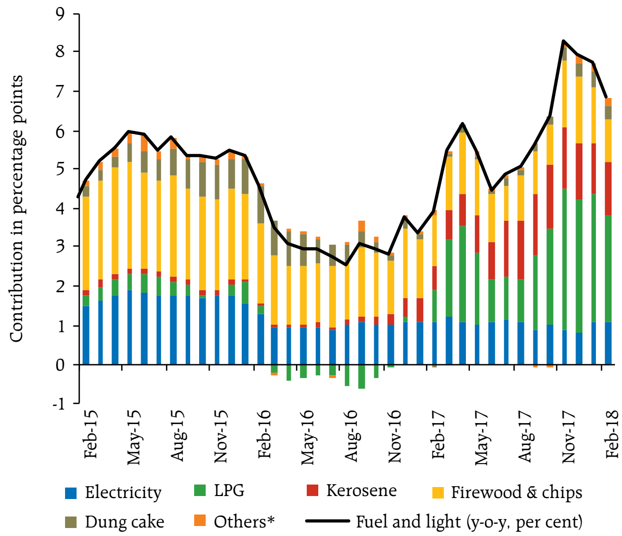
Note: *Mandis* are from the major producing states for these pulses.
Sources: Commission for Agricultural Costs & Prices (CACP) and Agmarknet.

Arhar and *urad* prices remain below their minimum support prices (MSPs) at the *mandi* level in the major producing states *viz.*, Maharashtra, Madhya Pradesh, Gujarat, Uttar Pradesh and Karnataka reflecting the large gap in procurement relative to supply (Chart II.11). Corrective measures were initiated by the government during the course of the year such as removal of export ban on all pulses and an imposition of 60 per cent import duty on gram and 30 per cent import duty on *masoor* in order to support prices and provide some relief to farmers.

Sugar and spices are the other items which played an important role in the overall moderation of food inflation. Inflation in sugar and confectionery, which was in double digits all through 2016-17 (averaging about 20 per cent), declined significantly during the year, largely due to measures facilitating imports and on expectations of higher domestic production (the sugarcane production for 2017-18, as per the second advanced estimates, is 353.2 million tonnes as against 306.1 million tonnes in 2016-17). With sugar prices easing rapidly, however, the central government has again raised the import duty on sugar to 100 per cent and re-imposed stockholding limits on sugar sales for February and March 2018. Prices of spices have moved into deflation since June 2017 on account of a fall in prices of dry chillies, turmeric, *dhania*, and black pepper.

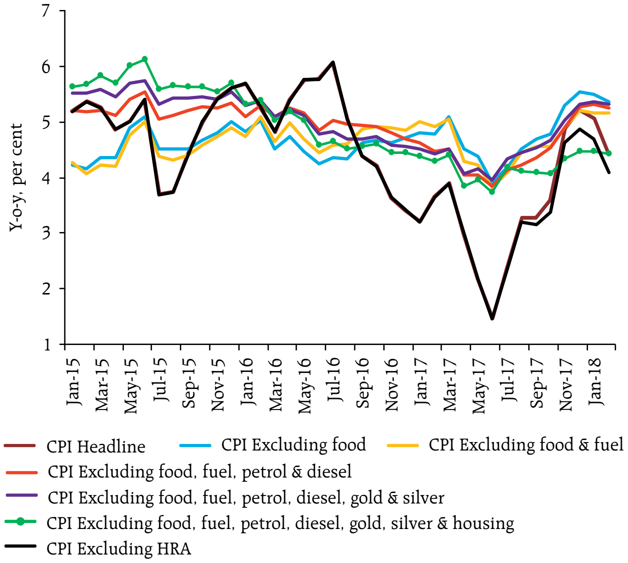
Fuel and light inflation, which was at 5.0 per cent in August 2017, touched 8.2 per cent in November 2017, the highest since September 2013 (Chart II.12) largely on account of a sustained increase in domestic prices of LPG – tracking rising international product prices – as well as due to rural fuel consumption items such as dung cake. Since the migration of subsidy payments on LPG to banks under the direct benefit transfer scheme, LPG prices track international prices closely. Administered kerosene also registered sustained price increases as OMCs raised prices in a calibrated manner. Fuel and light inflation since December has eased driven by the downturn in LPG inflation, reflecting international price movements, as well as on account of moderation in firewood and chips and dung cake inflation.

Chart II.12: Drivers of Fuel Group Inflation



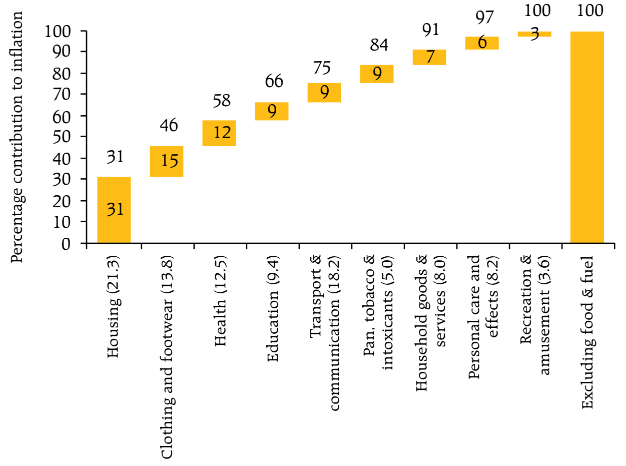
*: Includes diesel (litre) [excl. conveyance], coke, coal, charcoal and other fuel.
Sources: CSO; and RBI staff estimates.

Chart II.13: Exclusion-based CPI



Sources: CSO; and RBI staff estimates.

Chart II.14: CPI Excluding Food and Fuel Inflation: Contribution by Major Sub-groups (Jul. 17 - Feb. 18)



Note: The bars represent the percentage contribution of each sub-group to CPI excluding food and fuel inflation. The figures above the bars represent the cumulative percentage contribution. Figures in parentheses are the weights of the sub-groups in CPI excluding food and fuel group.

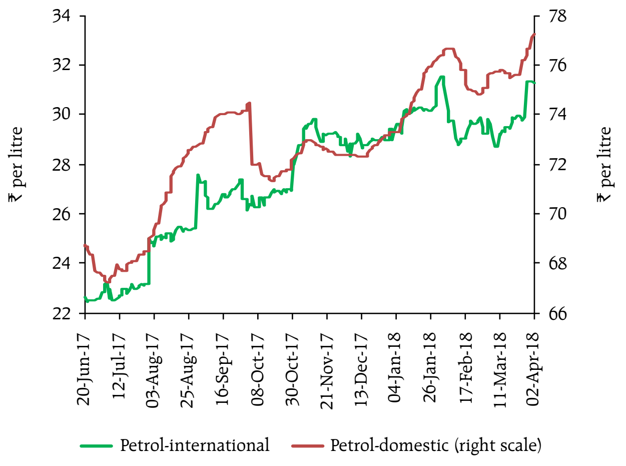
Sources: CSO; and RBI staff estimates.

Turning to the underlying inflation dynamics, CPI inflation excluding food and fuel edged up from the June 2017 trough of 3.8 per cent to 5.2 per cent in December and remained at that level during January-February 2018 – an increase of around 130 basis points between June and February (Chart II.13). The substantial increase largely reflected an increase in housing inflation (Chart II.14). Netting out the HRA impact, CPI inflation excluding food and fuel would have been 4.4 per cent – around 75 basis points lower than the observed print – during December 2017 to February 2018.

Inflation in CPI excluding food and fuel, as also petrol and diesel, increased from June 2017 by 140 basis points to 5.3 per cent in February 2018. While the HRA impact explained much of this increase, petrol and diesel initially in Q3, had a dampening effect as much of the pass-through of surge in international crude oil price to domestic prices was delayed to the second half of January 2018. Furthermore, the excise duty cuts in early October 2017 by ₹2 per litre each for petrol and diesel also helped cushion the incremental impact of rising international crude prices (Chart II.15). Further, excluding the four volatile items – petrol, diesel, gold and silver – and housing, the inflation in February was 70 basis points lower at 4.4 per cent, and reflected the underlying inflation momentum in the second half of 2017-18.

In H2:2017-18, both goods and services in CPI excluding food and fuel exhibited a rising inflation trajectory, notwithstanding some softening in case of goods in the recent months. For goods, inflation picked up across commodity groups: medicines under the health sub-group; clothing and footwear; pan, tobacco

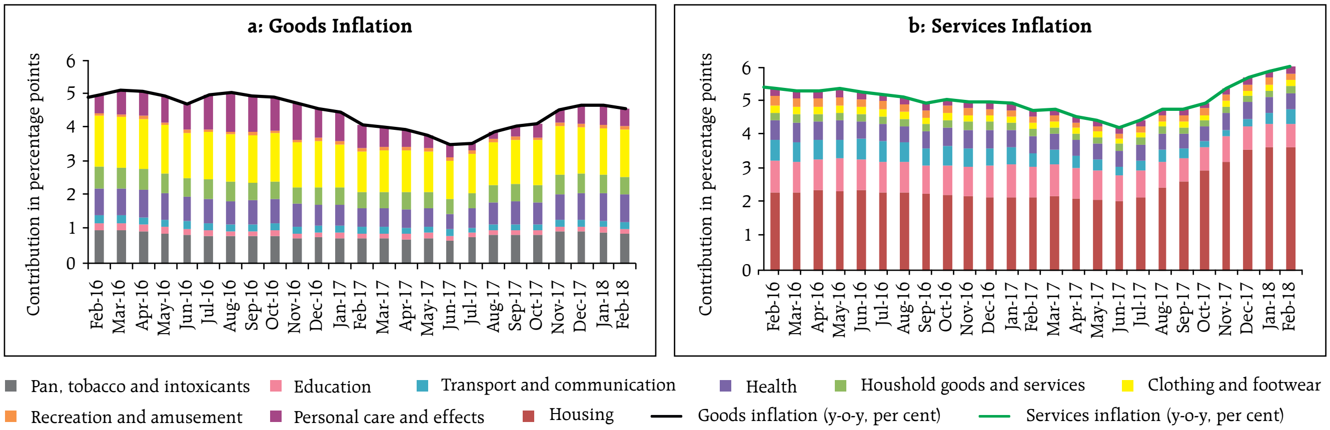
Chart II.15: Petrol – Domestic and International Prices



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

Sources: Bloomberg and IOCL.

Chart II.16: Contribution to Inflation Excluding Food, Fuel, Petrol and Diesel



Sources: CSO; and RBI staff estimates.

and intoxicants; and gold under the personal care and effects sub-group (Chart II.16a). Services inflation increased by 177 basis points over June (Chart II.16b), driven by housing sub-group due to the release of HRA from July 2017 under the recommendations of the 7th CPC. The contribution of transport services also edged up in recent months, as fuel prices were transmitted to increase in transportation fares. In contrast, communication services inflation has remained muted due to low cellular services inflation.

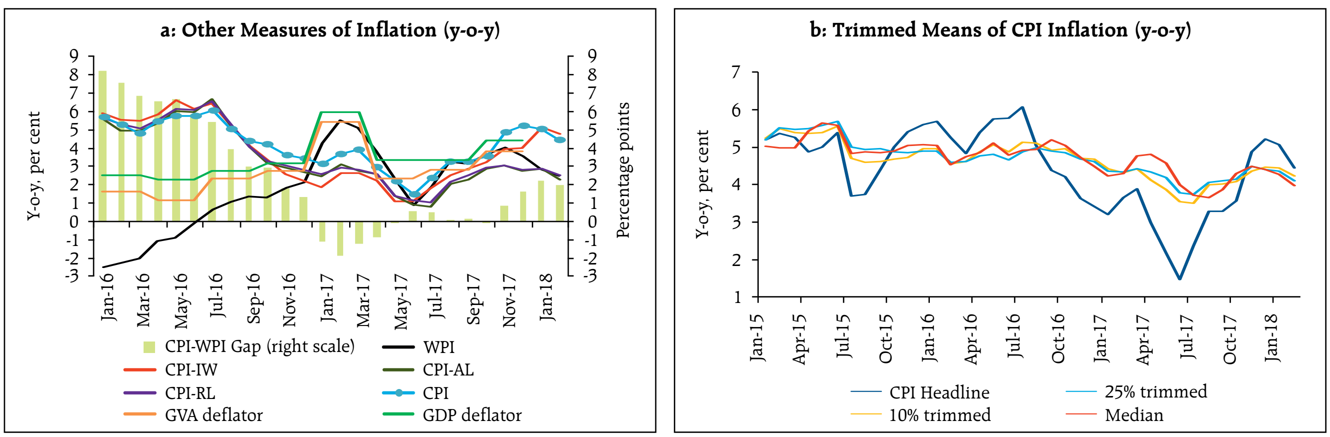
Other Measures of Inflation

Measures of inflation other than CPI remained moderate in Q3 and Q4:2017-18. Inflation in wholesale price index (WPI) that does not include services, the CPI for rural labourers (RL) and the agricultural labourers (AL), which do not have housing components, moved in tandem with headline CPI up to October.

The gap between inflation in terms of the CPI for industrial workers (CPI-IW) and the headline CPI, which was wide since July 2017 after HRA was implemented, closed in January 2018. CPI-IW adjusts its housing index only twice a year – in January and July. Thus, the HRA impact was reflected only in January 2018. GDP and GVA deflators also remained lower than CPI in Q3 (Chart II.17a).

After the June 2017 trough, inflation measured by trimmed means in the CPI hardened for the rest of 2017. Thereafter, all trimmed means, including the weighted median, edged down, reflecting, *inter alia*, the broad-based softening of food prices (Chart II.17b).

Chart II.17: Measures of Inflation



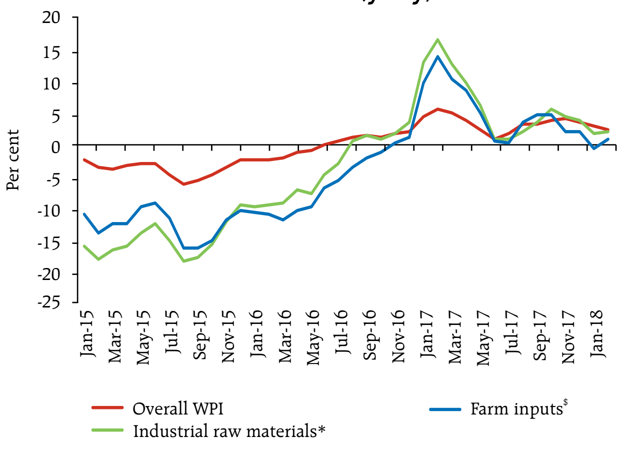
Sources: CSO, Labour Bureau, Ministry of Commerce and Industry; and RBI staff estimates.

II.3 Costs

Underlying cost conditions have mostly co-moved with measures of inflation, ticking up in H2:2017-18, notwithstanding some moderation in Q4. Y-o-y growth in farm input costs slipped temporarily into negative territory in January 2018 (Chart II.18). The rise in global crude oil prices and the hardening of metal prices fuelled the rise in input costs from August 2017 onwards and contributed to the turnaround in domestic non-farm input costs as they got passed on to inputs such as high speed diesel, aviation turbine fuel, naptha, bitumen, furnace oil and lube oils.

Among other industrial raw materials, domestic coal inflation generally remained high during the year, tracking the surge in international coal prices and domestic supply shortages. However, inflation in other inputs depicted a mixed behaviour. In the case of oilseeds, inflation picked up during H2:2017-18, whereas in the case of fibres and paper and pulp, inflation moderated during the same period. Inflation in electricity, which carries a high weight in both industrial and farm inputs, rose during September-October 2017, but turned negative thereafter. Among other farm sector inputs, diesel prices increased sharply from August 2017, mirroring international prices, while prices of inputs such as tractors and fodder

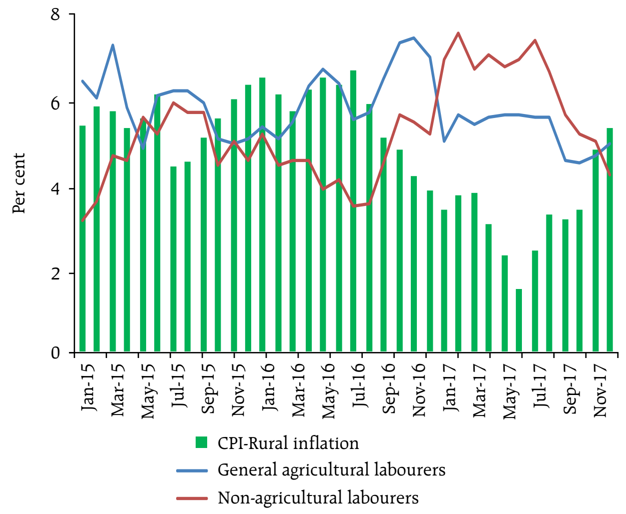
Chart II.18: Farm and Non-farm Input Cost Inflation (y-o-y)



*: Comprises primary non-food articles, minerals, coal, aviation turbine fuel, high speed diesel, electricity, naphtha, bitumen, furnace oil, lube oils, cotton yarn, paper and pulp from WPI.
$: Comprises high speed diesel, fertilizers, pesticides, agricultural machinery & implements and electricity from WPI.

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

Chart II.19: Wage Growth and Inflation in Rural Areas (y-o-y)



Sources: CSO, Labour Bureau; and RBI staff estimates.

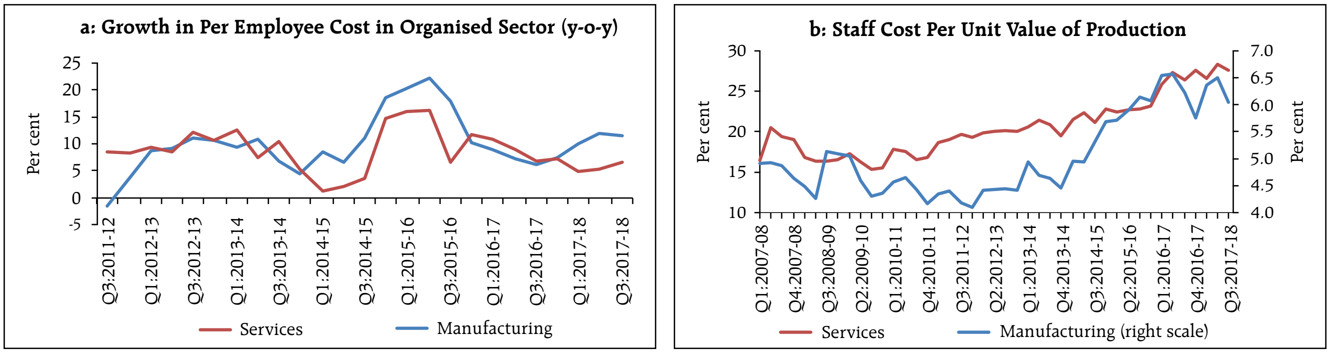
increased sharply in February 2018 after contracting in the preceding months. Fertiliser prices also recorded some upward pressure during December-February.

Growth in rural wages largely moderated since August 2017 (Chart II.19). In general, nominal rural wages and inflation tend to move together. However, large supply shocks have caused a divergence between the two in the recent period (Box II.1).

Staff costs in the organised manufacturing sector rose between Q3:2016-17 and Q2:2017-18, but moderated during Q3:2017-18. The y-o-y growth in per employee cost for the manufacturing sector moderated to 11.6 per cent during Q3:2017-18. Staff costs in the services sector continued to decelerate from Q4:2015-16 till Q1:2017-18 and rose thereafter to 6.6 per cent in Q3:2017-18 (Chart II.20).

Based on responses of manufacturing firms covered in the Reserve Bank's industrial outlook survey, the cost of raw materials is assessed to increase significantly in Q4:2017-18 in relation to the previous quarter. Firms expect the cost of raw materials to rise further in Q1:2018-19, and pass them on to selling prices due to pressure on their margins. The manufacturing purchasing managers' index (PMI) suggests that input costs accelerated in the second half of 2017-

Chart II.20: Labour Cost in Manufacturing and Services



Note: 1) Per employee cost=Total employee cost/total number of employees. Per employee cost is worked out based on total number of employees as of end-March of the previous year.
2) Quarterly earnings statement for listed companies include 'Staff Cost' as an expenditure item. The number of employees is reported by some of these companies in their annual reports. The figures from Q1:2016-17 are as per the new Indian Accounting Standards and hence, may also be reflective of the change due to revision in accounting procedures. Listed companies having net worth more than 5 billion were to adopt the new accounting standards 'Ind-AS' by Q1:2016-17 and rest of the listed companies were also to adopt the same by Q1:2017-18 as mandated by the Ministry of Corporate Affairs. The impact of transition appears muted at the aggregate level in terms of the growth rates, although the same may not hold for the ratios. Data for Q3:2017-18 is provisional.
Source: Capitaline database and RBI staff estimates.

Box II.1: Relationship among Rural Wages, Inflation and Economic Activity: Recent Evidence

Rural wages and inflation have moderated since early 2015, but with considerable divergence in their trajectories, particularly since July 2016 (Chart II.19). Historically, nominal wage growth and inflation tended to move together with inflation generally leading nominal wage growth, though with a slow speed of adjustment to disturbances (Kundu, 2018).

An important issue that arises in this context is whether evolving economic activity has affected rural wages and inflation differently. Drawing on Knotek *et al.* (2014), two different Phillips curve specifications were estimated and compared to understand the differential impact of the output gap on rural wage growth and rural inflation.

In the first specification, a wage Phillips curve with rural wage inflation as the dependent variable and economic activity measured by output gap (*OG*)[6] as the independent variable was estimated:

$$wg^r_{t,s,o} = \mu^1 + \alpha^1_t + \beta^1_s + \gamma^1_o + \delta^1 * OG_{t-1,s} + (u^1_{s,o} + \varepsilon^1_{t,s,o}) \quad (1)$$

where $wg^r_{t,s,o}$ is the rural wage growth of the t^{th} year, s^{th} state and o^{th} occupation; α^1_t is the year fixed effect, β^1_s is the state fixed effect and γ^1_o is the occupation fixed effect and $OG_{t-1,s}$ is the output gap at *t-1 for* s^{th} state, $u^1_{s\,o}$ is the panel specific random effect and $\varepsilon^1_{t,s,o}$ is the residual.

The second specification consisted of a price Phillips curve with CPI rural price inflation as the dependent variable and economic activity measured by *OG* as the independent variable:

$$\pi^h_{t,s,g} = \mu^2 + \alpha^2_t + \beta^2_s + \gamma^2_g + \delta^2 * OG_{t-1,s} + (u^2_{s,g} + \varepsilon^2_{t,s,g}) \quad (2)$$

where $\pi^h_{t,s,g}$ is the headline rural inflation of the t^{th} year, s^{th} state and g^{th} group; α^2_t is the year fixed effect, β^2_s is the state fixed effect and γ^2_g is the group level fixed effect and $OG_{t-1,s}$ is the output gap at *t-1 for* s^{th} state, $u^2_{s,g}$ is the panel specific random effect and $\varepsilon^2_{t,s,g}$ is the residual.

Both specifications were estimated for the period 2015 to 2017 for 15 major states. In the case of the rural wage Phillips curve, nine occupations[7] were considered, while the CPI-Rural inflation Phillips curve was estimated with five major groups[8].

The regression results (Table II.1.1: Columns 1 and 2) show that while the rural wage Phillips curve holds for the recent period, *i.e.*, economic activity is able to explain wage inflation, the price Phillips curve does not hold, *i.e.* economic activity is not able to explain CPI-Rural inflation[9]. However, in order to further analyse whether the price Phillips curve holds for a

(contd.)

[6] The state level output gap measure is as in Behera *et al.* (2017).
[7] Ploughing/Tilling workers, Sowing, Harvesting/Winnowing/Threshing workers, General agricultural labourers including watering & irrigation workers etc., Carpenter, Electrician, Construction workers, LMV & Tractors drivers, Non-agricultural labourers (including porters, loaders).
[8] Food, pan, tobacco and intoxicants, fuel, clothing and footwear and miscellaneous.
[9] Wage inflation exhibited no statistically significant difference across different occupations and states expect for few cases. Similarly, price inflation also did not witness any stark heterogeneity across states, barring a few exceptions. However, the price inflation in all different sub-groups were significantly different. Both price inflation and wage inflation were significantly lower in 2016 and 2017 in comparison with 2015.

measure of underlying inflation rather than the overall inflation, which is often subject to large supply shocks from food and fuel prices, an alternate specification with CPI-Rural inflation *excluding food and fuel* as the dependent variable was also estimated:

$$\pi^{x}_{t,s,g} = \mu^3 + \alpha^3_t + \beta^3_s + \gamma^3_g + \delta^3 * OG_{t-1,s} + (u^3_{s,g} + \varepsilon^3_{t,s,g}) \quad (3)$$

where $\pi^{x}_{t,s,g}$ is rural inflation excluding food and fuel of the t^{th} year, s^{th} state and g^{th} group; α^3_t is the year fixed effect, β^3_s is the state fixed effect and γ^3_g is the group level fixed effect and $OG_{t-1,s}$ is the output gap at *t-1 for* s^{th} state, $u^3_{s,g}$ is the panel specific random effect and $\varepsilon^3_{t,s,g}$ is the residual. (Table II.11, Column 3).

Table II.1.1: Empirical Phillips Curves

Independent Variables	Dependent Variable		
	Wage Inflation	CPI-Rural Inflation	CPI-Rural Excluding Food and Fuel Inflation
	(1)	(2)	(3)
OG(-1)	0.2709 (0.052)	0.0860 (0.436)	0.2712 (0.007)
State fixed effects	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes
Group fixed effects	Yes	Yes	Yes
No. of observations	405	225	135

Note: p-values in brackets.
Hausman test and Breusch and Pagan Lagrangian multiplier test suggest a random effect model. Regression equations are estimated using generalised least squares regression with AR(1) disturbances to overcome the presence of autocorrelation. Pesaran's cross-sectional dependence test suggests that residuals are uncorrelated across panels.

In this case, *OG* is found to be statistically significant and of broadly the same magnitude as in the wage Phillips curve.

Taken together, these results suggest that economic activity is a significant determinant of movements in both rural wages and CPI-Rural excluding food fuel inflation but not the overall CPI-Rural inflation (which includes both food and fuel). Rural food inflation since 2015 gyrated in a wide range of (-)0.8 per cent to 7.9 per cent, pointing to the outsized role of supply side shocks in driving recent food inflation trajectory that masks the underlying association between prices and economic activity. In other words, the recent divergence in rural wage growth and inflation could be explained by large supply side shocks affecting rural food inflation (Chart II.6a).

References:

Behera, H., Wahi, G., & Kapur, M. (2017), "Phillips Curve Relationship in India: Evidence from State-Level Analysis", *RBI Working Paper Series No. 08/2017.*

Knotek II, E. S., & Zaman, S. (2014), "On the Relationships between Wages, Prices, and Economic Activity", *Economic Commentary*, Federal Reserve Bank of Cleveland, August.

Kundu, S. (2018), "Rural Wage Dynamics in India: What Role does Inflation Play?", *mimeo.*

18, registering their highest level in February in the past 12 months before edging down in March. The co-movement of output prices with input prices suggests that pricing power is returning. In PMI services, there was a sharp acceleration in input prices in Q3, with the input services price index reaching its highest level of 55.0 since October 2013. The prices of services continued to increase in Q3 and Q4, though its momentum moderated with the downward revision in GST rates for many services.

II.4 Conclusion

Going forward, a key risk to the inflation outlook is the risk of fiscal slippages in a scenario of rising aggregate demand. As noted in the MPC resolution of February 2018, apart from the direct impact on inflation, the fiscal risks could also engender a broader weakening of macro-financial conditions. The revised guidelines for arriving at the MSPs for *kharif* crops proposed in the Union Budget 2018-19, along with proposed increase in customs duty on a number of items, is likely to push-up inflation over the year. In addition, how various state governments implement and disburse HRA increases would have a considerable bearing on CPI housing inflation and consequently on the headline inflation trajectory, *albeit* statistically, during 2018-19; therefore, the latter should be looked through for monetary policy purposes, other than for their second-round effects. Although the central government's HRA effects on CPI inflation would gradually wane from July 2018, this moderating impact could be more than offset if several state governments simultaneously implement HRA increases in H2:2018-19 (Chapter 1).

III. Demand and Output

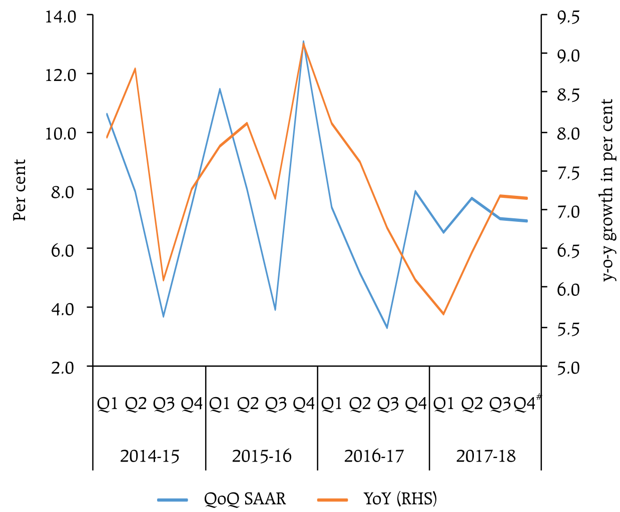
Aggregate demand growth accelerated in H2:2017-18, supported mainly by an investment upturn, while consumption remained resilient. Aggregate supply conditions were buoyed by the robust performance of the manufacturing sector and the improvement in activity in the agriculture and services sectors.

Domestic economic activity shrugged off the loss of speed that had characterised the period Q1:2016-17 to Q1:2017-18 and a turning point appears to have taken hold in Q2-Q3, with lead indicators pointing to further acceleration in Q4. In terms of aggregate demand, the drivers around this inflexion are shifting, with consumption-led growth of the recent past handing over the baton to investment, which had restrained growth since Q3:2016-17. At the same time, the strong impetus from fiscal spending during Q3:2016-17 to Q1:2017-18 appears to be waning and the rapid pace of import growth is sapping net external demand. On the supply side, the pick-up in industrial output from Q2:2017-18 and the strengthening of construction activity in the services sector from Q1 are noteworthy. Meanwhile, agriculture and allied activities have turned out to be resilient to temporary weather disruptions in both *kharif* and *rabi* sowing seasons and going by recent estimates of foodgrains production, the outlook appears better than before.

III.1 Aggregate Demand

Aggregate demand appears to have regained traction in H2:2017-18 after a prolonged slackening that stretched up to a 13-quarter low in Q1:2017-18. Measured by y-o-y changes in real GDP at market prices, it accelerated to 7.2 per cent in H2:2017-18 from 6.1 per cent in the preceding half of the year and 6.4 per cent a year ago. The turnaround in Q2:2017-18 and the steady gathering of speed

Chart III.1: GDP Growth



#: Implicit growth.

Sources: Central Statistics Office (CSO) and RBI staff estimates.

thereafter are largely benefitting from a favourable base effect – a low base level a year ago – rather than a quickening of momentum, since q-o-q seasonally adjusted annualised growth rate (SAAR) slowed in Q3 and flattened in Q4 (Chart III.1). For the year 2017-18 as a whole, however, the second advance estimates (February 2018) of the Central Statistics Office (CSO) indicate that the pace of expansion of aggregate demand is still slower than in the preceding year.

Turning to the underlying drivers, there are small but noteworthy shifts underway. In terms of weighted contributions, the support to aggregate demand from private consumption is waning, supplanted by the burgeoning strength of capital formation after a prolonged hiatus (Table III.1). This is significant since the historical experience has been that changes in capital accumulation are associated with level and/or slope shifts in India's growth cycle. A surge in imports led to a higher negative contribution of net exports, which dragged down the overall demand. These developments are discussed in detail in the rest of this chapter.

Table III.1: Real GDP Growth

(Per cent)

Item	2016-17 (FRE)	2017-18 (SAE)	Weighted Contribution*		2016-17 (FRE)				2017-18 (SAE)			
			2016-17	2017-18	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4#
Private Final Consumption Expenditure	7.3	6.1	4.1	3.4	8.3	7.5	9.3	4.2	6.6	6.6	5.6	5.6
Government Final Consumption Expenditure	12.2	10.9	1.2	1.1	8.3	8.2	12.3	22.5	17.1	2.9	6.1	19.6
Gross Fixed Capital Formation	10.1	7.6	3.1	2.4	15.9	10.5	8.7	6.0	1.6	6.9	12.0	9.9
Net Exports	–	–	0.1	-1.2	–	–	–	–	–	–	–	–
Exports	5.0	4.4	1.0	0.9	3.6	2.4	6.7	7.0	5.9	6.5	2.5	3.0
Imports	4.0	9.9	0.9	2.1	0.1	-0.4	10.1	6.6	16.0	5.4	8.7	10.0
GDP at Market Prices	**7.1**	**6.6**	**7.1**	**6.6**	**8.1**	**7.6**	**6.8**	**6.1**	**5.7**	**6.5**	**7.2**	**7.1**

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

*: Component-wise contributions to growth do not add up to GDP growth in this table because changes in stocks, valuables and discrepancies are not included.

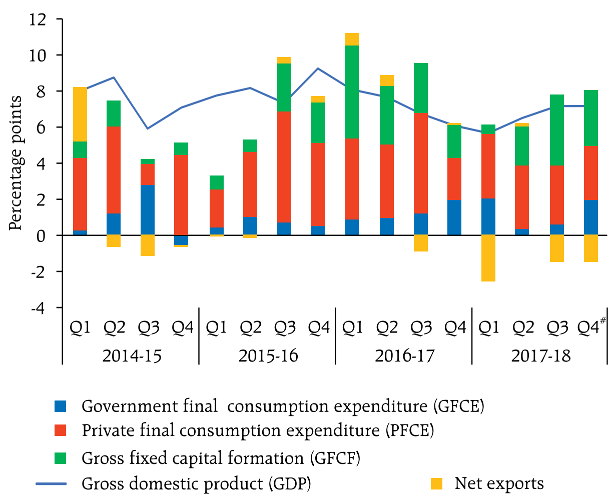
Source: Central Statistics Office (CSO).

III.1.1 Private Final Consumption Expenditure

Private final consumption expenditure (PFCE) constituted 56.6 per cent of domestic demand in H2:2017-18, down from 57.5 per cent a year ago (Chart III.2). Short-term adverse effects of demonetisation and the implementation of the GST have taken their toll on output and employment in the unorganised sector, most vividly reflected in significant slowdown in exports of labour-intensive goods such as leather goods, textiles, jute manufactures, readymade garments, and sports goods (Chart III.3). Rise in global crude oil prices also appears to have contributed to the slowdown in private consumption.

High frequency indicators of urban consumption present a mixed picture. While consumer durables production remained subdued during the larger part of 2017-18, domestic air passenger traffic, and passenger cars and utility vehicles sales showed robust growth (Chart III.4a). Going forward, urban consumption is expected to strengthen with the likely implementation of the award on salaries and allowances at the level of states and other public sector entities. A sharp growth in personal loan portfolios of commercial banks and

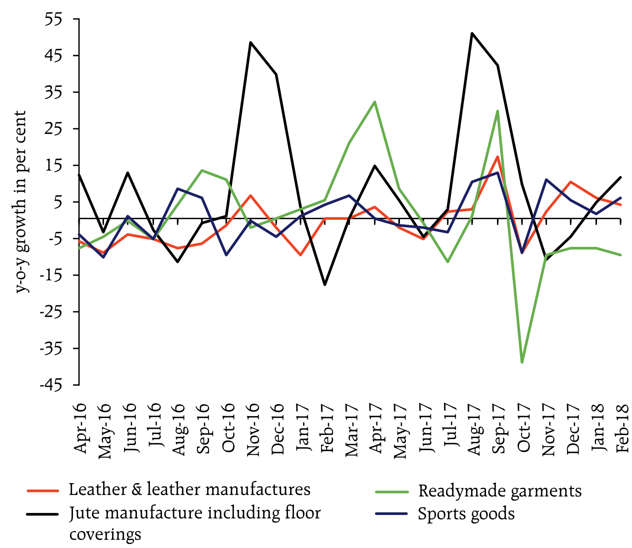
Chart III.2: Weighted Contribution of Components to GDP Growth



#: Based on implicit growth.

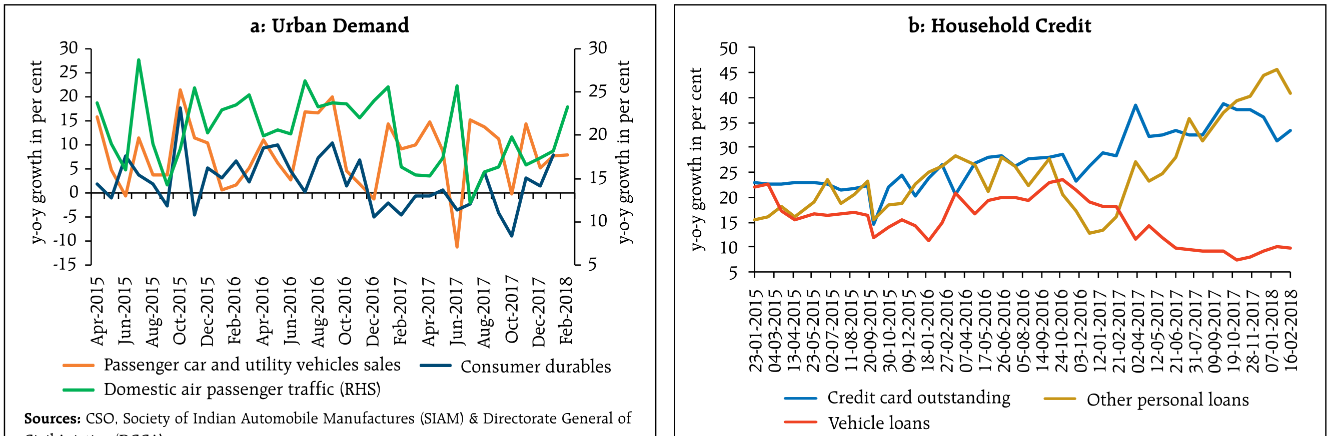
Sources: CSO and RBI staff estimates.

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



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

Chart III.4: Select High Frequency Consumption Demand Indicators



Sources: CSO, Society of Indian Automobile Manufactures (SIAM) & Directorate General of Civil Aviation (DGCA).

Source: RBI.

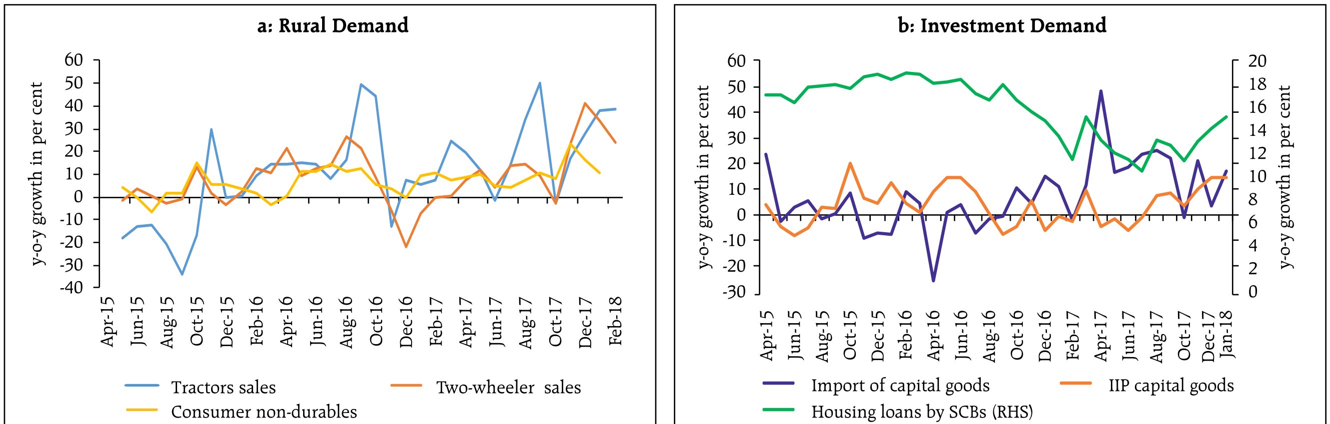
the recent pick-up in vehicle loans also augur well for urban consumption (Chart III.4b). The turnaround in construction activity – an employment-intensive sector in H2:2017-18 (as detailed later in the chapter) should support rural consumption. Indicators of rural demand, *viz.*, growth in sales of two-wheelers and tractors remained strong, particularly from Q2. The production of consumer non-durables has also recovered markedly (Chart III.5a).

III.1.2 Gross Fixed Capital Formation

A stark feature of India's recent growth experience has been the protracted downturn in investment, however, a turnaround set in during Q2:2017-18. Gross fixed capital formation (GFCF) strengthened further to touch a six-quarter high in Q3. The share of gross fixed capital formation in GDP, which was trapped in a downturn from a high of 34.3 per cent in 2011-12 to 30.3 per cent in 2015-16, broke free and increased to 31.4 per cent in 2017-18.

As alluded to earlier, this pick-up in the investment rate could be signalling a turning point in the cyclical component of growth oscillations in India and if sustained by a determined policy push, it could produce a level shift in the trajectory of the Indian economy (Box III.1). Capital goods production – a key element of investment demand – turned around in August 2017 and clocked a 19-month high in terms of growth rates in January 2018 (Chart III.5b). During 2017-18 so far (up to December), the construction of highway projects is on the rise and is expected to have improved further in Q4.

Chart III.5: Select High Frequency Indicators of Consumption and Investment Demand



Sources: SIAM and CSO.

Sources: CSO, DGCI&S and RBI.

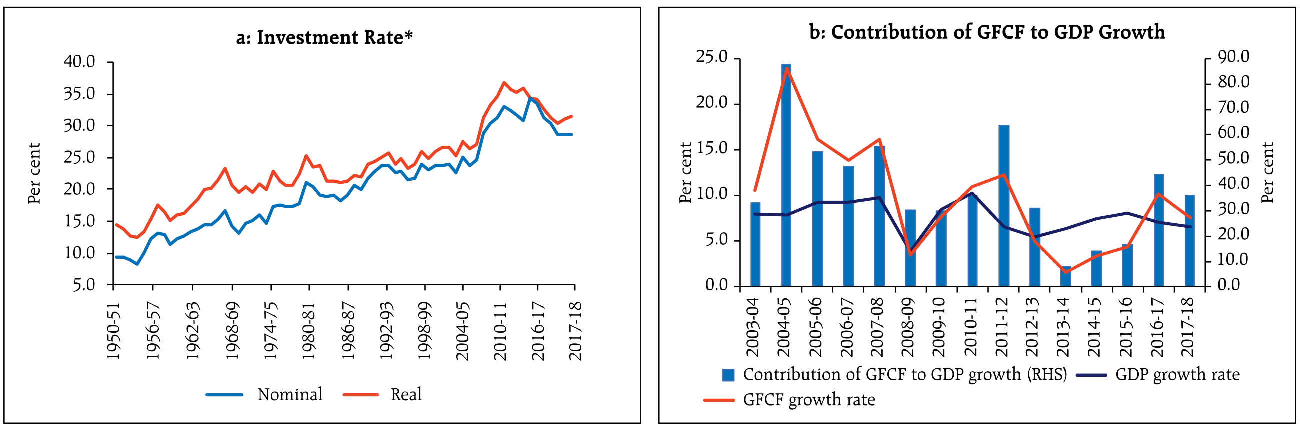
Box III.1: India's Investment Cycle - Is It Turning?

The slowdown in India's growth over the past two years and the coincident slump in capital formation has generated significant concerns. The investment rate in real terms has slowed down after 2010-11 (Chart III.1.1a). With real GFCF growing at a slower rate, its contribution to real GDP growth declined from 44.4 per cent in 2016-17 to 36.1 per cent in 2017-18 (Chart III.1.1b).

As changes in the rate of investment have been historically associated with turning points in the growth path, the trend and cyclical components of the investment rate and its duration of cycle were estimated by applying Hodrick-Prescott (HP) and Band-Pass (BP) filters. While there has been a moderation in the trend component of the investment rate since 2010-11, the cyclical component has shown an upward movement from the year 2016-17, suggesting that the recent improvement in investment activity is largely driven by cyclical factors (Chart III.1.2).

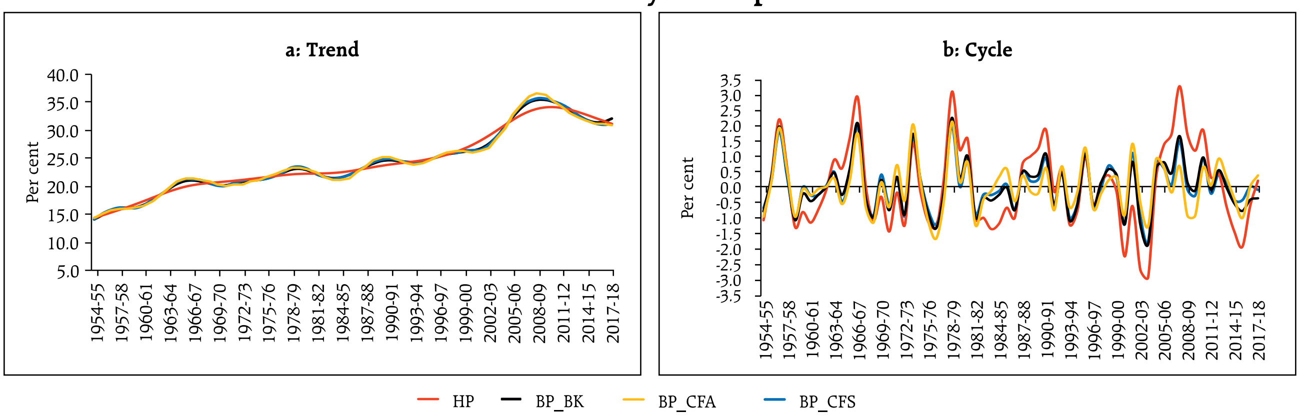
While there are two broad approaches for the measurement of business cycles, *viz.*, the dating procedure and the production function approach, the first one is preferred and widely used in view of inherent problems associated with measurement of technology shocks through a production function framework. In this context, the business cycle and the growth cycle approaches developed by the National Bureau of

Chart III.1.1: Investment Rate



*: Gross fixed capital formation as percentage of GDP.
Sources: CSO and RBI staff estimates.

Chart III.1.2: Trend and Cycle Components of GFCF



HP: Hodrick-Prescott; BP_BK: Band-Pass Baxter and King; BP_CFA: Band-Pass Christiano and Fitzgerald asymmetric; BP_CFS: Band-Pass Christiano and Fitzgerald symmetric
Source: RBI staff estimates.

(contd...)

Table III.1.1: Duration of Investment Cycle

Cycle Reference Year		Duration (in Years)			
Peak	Trough	Contraction	Expansion	Cycle	
		Peak to Trough	*Previous Trough to this Peak*	*Trough from previous Trough*	*Peak from previous Peak*
-	1950-51	-	-	-	-
1951-52	1953-54	2	1	3	-
1956-57	1958-59	2	3	5	5
1959-60	1960-61	1	1	2	3
1963-64	1964-65	1	3	4	4
1966-67	1968-69	2	2	4	3
1969-70	1970-71	1	1	2	3
1971-72	1972-73	1	1	2	2
1973-74	1976-77	1	1	2	2
1978-79	1979-80	1	2	3	3
1980-81	1981-82	1	1	2	2
1982-83	1983-84	1	3	4	4
1985-86	1986-87	1	2	3	3
1987-88	1989-90	1	1	2	2
1990-91	1991-92	1	1	2	2
1992-93	1993-94	1	1	2	2
1995-96	1996-97	1	2	3	3
1999-00	2000-01	1	3	4	4
2001-02	2003-04	2	2	4	3
2004-05	2006-07	2	1	3	3
2007-08	2009-10	2	1	3	3
2010-11	2011-12	1	1	2	3
2012-13	2015-16	3	1	4	2
2017-18	-	-	2	2	5
Average		**1.4**	**1.6**	**3.0**	**3.0**

Source: RBI staff estimates.

Economic Research (NBER) are commonly used for the dating procedure. In the first method (Burns and Mitchell, 1946), the business cycle is measured by absolute changes in the general level of production in two steps: (i) identification of cyclical peaks and troughs in the observed economic variables; and (ii) determining whether these changes are common across all the observed series. In the second approach, a growth cycle is defined as the ups and downs in the deviations of the actual growth rate of the economy from the long-run trend growth rate (Zarnowitz, 1992).

As the real GFCF rate has declined in levels on many occasions during the post-1950 period, identification of cyclical peaks and troughs in the observed levels of the economic variables based on the business cycle methodology, which is followed by NBER, is more suitable than the growth rate approach. For the purpose of measurement of the duration of investment cycle, the cyclical factor measured by Christiano and Fitzgerald asymmetric Band-Pass filter was used as it assigns variable weights and does not exclude end points. Following the business cycle approach of the NBER, it is observed that investment rate in India has gone through cycles of three-year (Table III.1.1).

These results, when extrapolated, suggest that the upturn in the investment rate that commenced in Q3:2016-17 has approximately nine more quarters to fully play out. Policy efforts such as improving ease of doing business, speedy resolution of corporate distress, quickly addressing the remaining issues relating to the implementation of the Goods and Services Tax (GST) and speeding up of the stalled projects, among others, will help ride this phase of the investment cycle to its peak and produce accelerating impulses for the growth trajectory. Timely and measured interventions hold the key to realise the investment-led growth.

References:

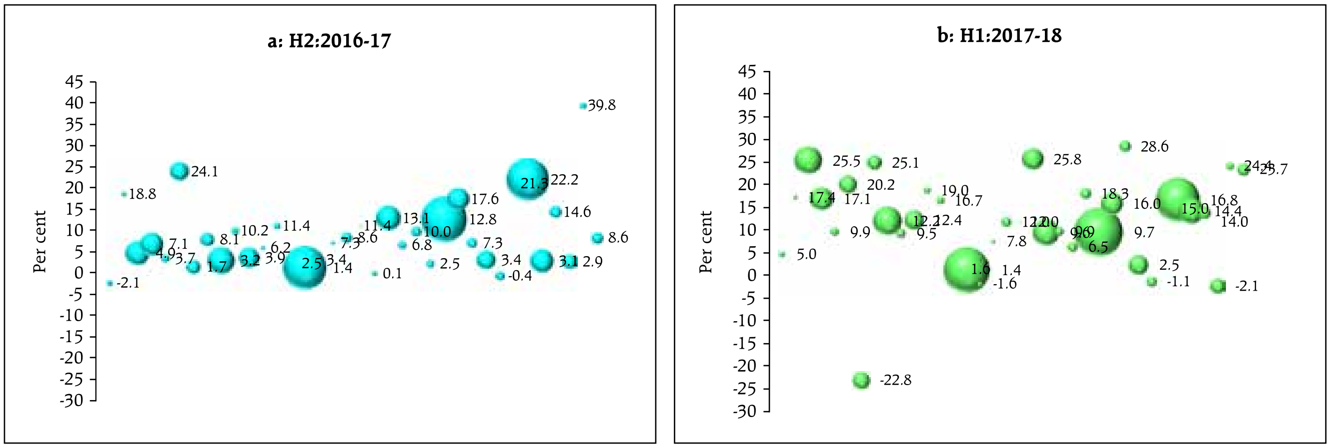
Burns, A.F. and W.C. Mitchell (1946), *Measuring Business Cycles*, National Bureau of Economic Research, New York.

Raj, Janak, Satyananda Sahoo and Shiv Shankar (2018), "India's Investment Cycle – Is It Turning?", *Mimeo*.

Zarnowitz, V. (1992), *Business Cycles Theory, History, Indicators and Forecasting*, University of Chicago Press.

Corporate financial results are also mirroring these underlying shifts. The results of listed non-government non-financial (NGNF) companies suggest that manufacturing companies reduced current assets and increased fixed assets in H1:2017-18 *vis-à-vis* a year ago, possibly pointing to the long-awaited revival in the capex cycle. Nominal capex growth across 38 sub-sectors covering industrial and services sectors underwent a broad-based recovery in H1:2017-18 *vis-à-vis* H2:2016-17 (Charts III.6a and III.6b). A sharp pick-up in housing loans by scheduled commercial banks also augurs well

Chart III.6: Capex Formation of the Listed NGNF Corporate Sector



Source: RBI staff estimates based on Capitaline Database.

Notes: 1. The bubbles representing sub-sectors include Agriculture and Related Activities, Business Support Services, Cement and Cement Products, Chemicals and Chemical Products, Computer and Electronic Equipments, Computer and Related Activities, Construction, Electrical Machinery and Apparatus, Electricity and Gas – Supply, Fabricated Metal Products, Food Products and Beverages, Glass and Glass Products, Hospital Services, Hotel and Restaurant, Iron and Steel, Jewellery and Related Articles, Leather, Machinery and Machine Tools, Medical Precision and Other Scientific Equipments, Mining and Quarrying, Motor Vehicles and Other Transport Equipments, Other Manufacturing, Other Services, Paper and Paper Products, Petroleum Products, Pharmaceuticals and Medicines, Plastic Products, Precious and Non-Ferrous Metals, Real Estate, Rubber and Rubber Products, Telecommunication, Textiles, Tobacco Products, Transport and Storage Services, Video and Television Programming and Broadcasting, Wholesale and Retail Trade, Wood Products, Others.

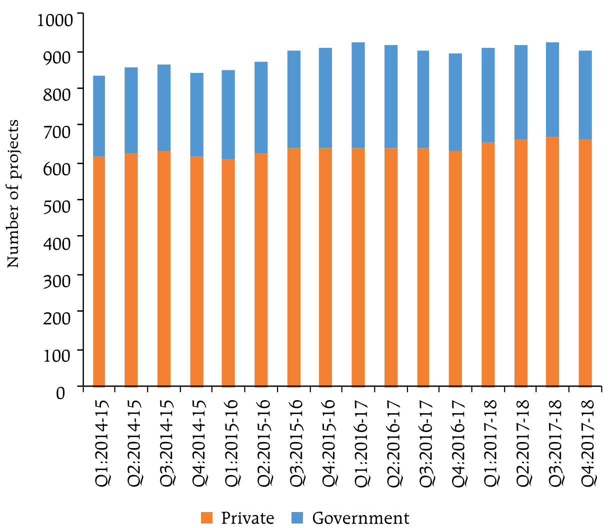
2. Bubble size represents relative fixed net asset level of a sub-sector in the corresponding half year.

for investment in dwellings. The implementation of stalled projects showed modest improvement (Chart III.7).

Based on the CSO's second advance estimates, gross fixed capital formation grew by 7.6 per cent in 2017-18 on top of 10.1 per cent in 2016-17. Seasonally adjusted capacity utilisation [CU(SA)], which remained below average since Q1:2013-14 due to overhang of excess capacity created during 2009-14, exhibited noticeable pick-up in Q3:2017-18 (Chart III.8).

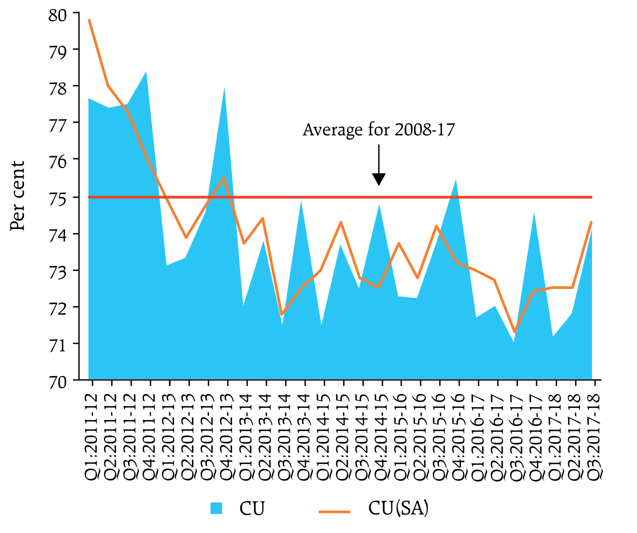
Going forward, large resource mobilisation from the primary capital market and accelerating non-food

Chart III.7: Stalled Projects



Source: Centre for Monitoring Indian Economy (CMIE).

Chart III.8: Capacity Utilisation



Note: CU: Capacity Utilization, and CU(SA): Seasonally Adjusted CU.
Source: RBI.

credit growth (Chapter IV) indicate that investment activity could strengthen further if fiscal pre-emptions do not crowd out private investment demand.

III.1.3 Government Expenditure

Government final consumption expenditure (GFCE) provided sustained support to aggregate demand in H2:2017-18, picking up in Q3:2017-18 on top of the front-loading of expenditure by the central government in Q1:2017-18. GFCE will likely continue to augment aggregate demand going forward into 2018-19, in view of the deviation of 0.3 per cent of GDP from the path of fiscal consolidation announced in the Union Budget (Table III.2). The gross fiscal deficit (GFD) target of 3.0 per cent of GDP has been deferred to 2020-21.

In 2017-18 (April-February), there was a deterioration in the fiscal position of the central government on account of a sharp increase in expenditure combined with a decline in non-tax revenue relative to budget estimates. Revenue expenditure has evolved as budgeted, although payments under food and petroleum subsidies have been higher than a year ago. In the revised estimates for 2017-18, the outgo on account of major subsidies was estimated at 1.4 per cent of GDP, up from 1.3 per cent in 2016-17.

Various categories of revenue expenditure take the form of committed payments with little room for cutbacks. Meanwhile, capital expenditure rose by 38.3 per cent up to February and constituted 108.6 per cent of the revised estimates (which were revised downwards from the budget estimates for the year). Accordingly, to meet the revised estimates, budgetary adjustments in the remaining part of the year might not involve any capex reduction, which has been stepped up over a wide area comprising civil aviation, defence, heavy industry, petroleum & natural gas, railways, shipping and road transport, including highways.

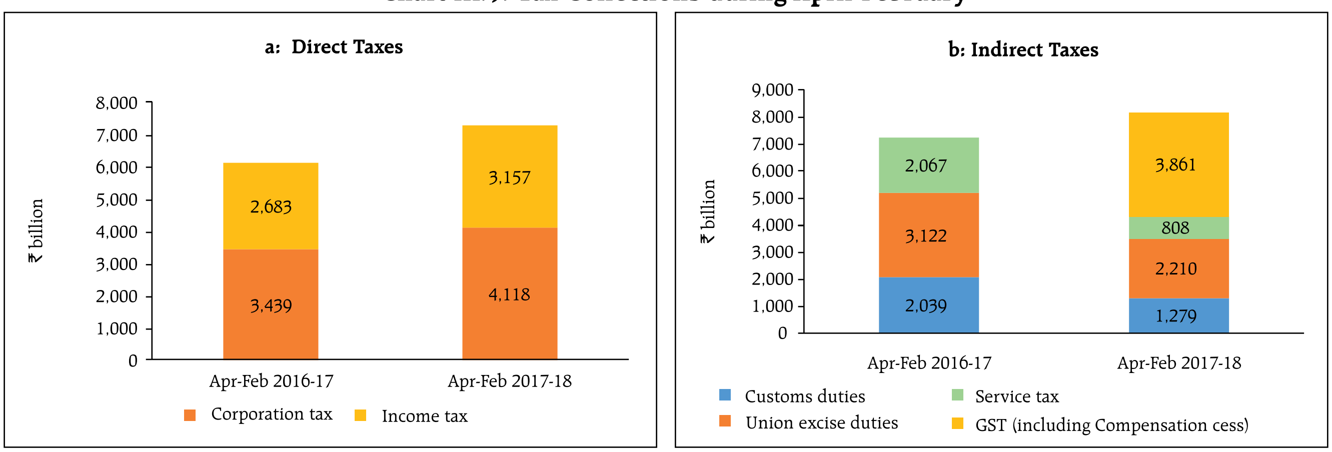
Table III.2: Key Fiscal Indicators - Central Government Finances

Indicator	Per cent to GDP		
	2017-18 (BE)	2017-18 (RE)	2018-19 (BE)
1. Revenue Receipts	9.0	9.0	9.2
a. Tax Revenue (Net)	7.3	7.6	7.9
b. Non-Tax Revenue	1.7	1.4	1.3
2. Non Debt Capital Receipts	0.5	0.7	0.5
3. Revenue Expenditure	10.9	11.6	11.4
4. Capital Expenditure	1.8	1.6	1.6
5. Total Expenditure	12.8	13.2	13.0
6. Gross Fiscal Deficit	3.2	3.5	3.3
7. Revenue Deficit	1.9	2.6	2.2
8. Primary Deficit	0.1	0.4	0.3

Note: BE: Budget Estimates, RE: Revised Estimates.
Source: Union Budget, 2018-19.

Both gross and net tax collections were marginally higher than their budgeted levels, mainly on account of buoyant direct tax revenues under corporation tax (Chart III.9a). The budgeted buoyancies for all tax categories of direct taxes are higher in 2018-19 than the average of the preceding eight years (2010-

Chart III.9: Tax Collections during April-February



Source: Controller General of Accounts, Ministry of Finance, Government of India.

11 to 2017-18), suggesting that revenue mobilisation would be a major challenge. Indirect tax collection during Apr-Feb. 2017-18 were higher by 12.9 per cent than their level a year ago (Chart III.9b). As per the Union Budget 2018-19, total revenue under GST for 2017-18 (RE) aggregated ₹4,446 billion. Collections under Centre GST (CGST) and integrated GST (IGST) were ₹2,214 billion and ₹1,619 billion, respectively. Non-tax revenues fell short of the budget target by 18.3 per cent due to lower receipts from dividends and profits as well as deferment of spectrum auctions. Total non-debt capital receipts were higher than the budget estimates (BE) by ₹330 billion on account of disinvestment proceeds, which exceeded the target of ₹725 billion.

State finances have a significant bearing on the overall fiscal position of the general government. The latest available data for 21 States suggest a slippage in the combined GFD to gross state domestic product (GSDP) ratio to 3.0 per cent in 2017-18 (RE) as against 2.6 per cent budgeted (Table III.3). Revenue expenditures of states have shown significant divergences from budget estimates of 2017-18 so far, resulting from several factors such as implementation of the recommendations of states' pay commissions, farm loan waiver in some states and rising interest burden (Chart III.10). This poses a challenge for overall fiscal consolidation. Though the budgeted fiscal deficit for 2018-19 for 21 states is placed lower at 2.5 per cent of GSDP, it is likely to come under pressure due to several factors such as upcoming state elections, likely farm debt waiver, and implementation of pay commission awards by some states.

The borrowing programme of the Centre for 2017 -18 was conducted at levels higher (1.4 per cent) than in the overall budgeted strategy, while States, at the aggregate level, borrowed less (13.4 per cent) than budgeted (Table III.4). A strategy of debt consolidation was undertaken through buybacks and switches to the extent of ₹416 billion and ₹581 billion, respectively. Gross market borrowings of the central government through dated securities for 2018-19 have been budgeted at ₹6,055 billion and net market borrowings at ₹4,621 billion.

Table III.3: Major Deficit Indicators – State Governments

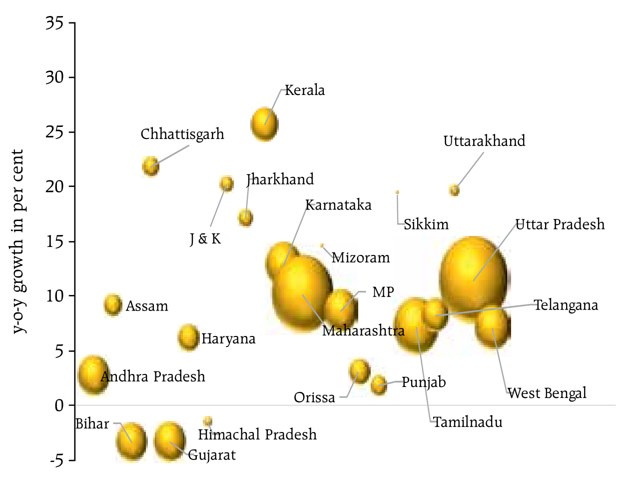
(Per cent to GSDP)

Item	2016-17	2017-18 BE	2017-18 RE	2018-19 BE
Revenue Deficit	0.4	0.0	0.4	-0.1
Gross Fiscal Deficit	3.4	2.6	3.0	2.5
Primary Deficit	1.7	0.9	1.3	0.9

Notes: 1. Negative (-) sign indicates surplus.
2. Data pertain to 21 out of 29 States.
Source: Budget Documents of State Governments.

The Centre's gross fiscal deficit target of 3.2 of GDP for 2017-18 was exceeded by 0.3 percentage points of GDP. A slippage of the same magnitude has also been observed for states. Slippages in key deficit indicators have raised questions about the credibility of fiscal consolidation. In addition, higher fiscal deficits crowd out productive private sector investment. It is also worrying that revenue expenditure of the Centre for 2018-19 is budgeted to grow at a higher rate (10.2 per cent) than capital expenditure (9.9 per cent). In this context, even as the increase in outlays on agriculture and infrastructure proposed in the Union Budget for 2018-19 is welcome, concerted efforts need to be made to improve revenues. While disinvestment proceeds

Chart III.10: Revenue Expenditure Growth Across States (Apr-Jan 2017-18)



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

Table III.4: Government Market Borrowings

(₹ billion)

Item	2015-16			2016- 17			2017- 18		
	Centre	States	Total	Centre	States	Total	Centre	States	Total
Net Borrowings	4,406	2,594	7,000	4,082	3,426	7,508	4,484	3,403	7,887
Gross Borrowings	5,850	2,946	8,796	5,820	3,820	9,640	5,880	4,191	10,071

Source: RBI.

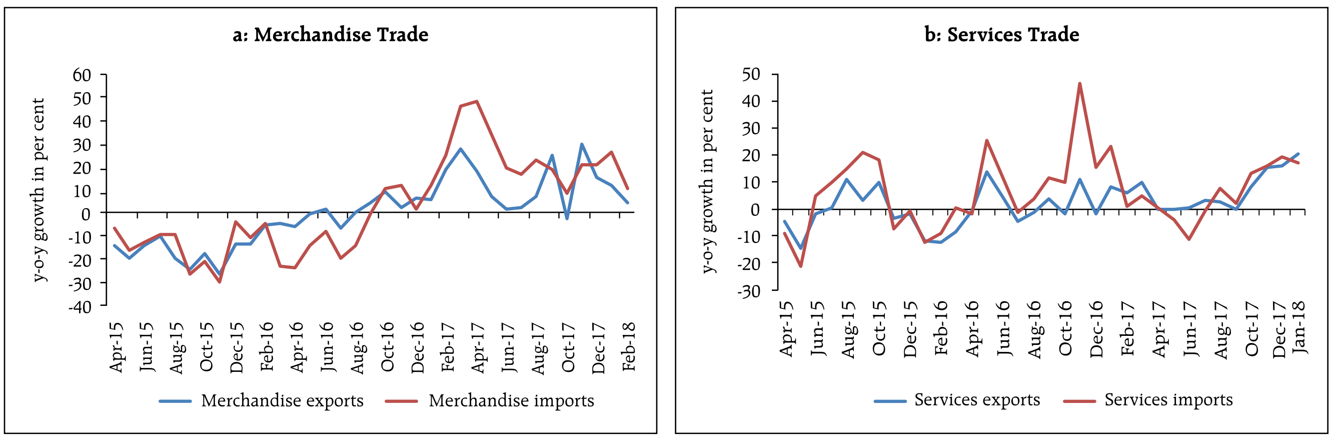
helped contain the fiscal deficit in 2017-18, they are contingent upon market conditions. It is important that tax revenues are maximised by expanding coverage and compliance, rationalising exemptions and building innate buoyancy so that the fiscal deficit budgeted for 2018-19 is adhered to without compromising the quality of the fiscal adjustment process.

III.1.4 External Demand

Net exports continued to act as a drag on aggregate demand in H2:2017-18 with rapid import expansion outpacing exports (Charts III.11a and 11b). Although export growth slowed down to less than 3 per cent in H2:2017-18 from 6.2 per cent in H1:2017-18, there was a bounce-back in November and December with the easing of implementation hurdles associated with the GST. In Q4, however, there has been a sequential loss of pace, pointing to underlying weaknesses in the domestic supply response to rising external demand, especially in labour-intensive categories such as readymade garments, and gems and jewellery. Non-oil exports constitute a significant part of India's exports, with engineering goods, and chemicals being consistent contributors through 2017-18 (up to January) (Chart III.12a). In line with trends in global trade, advanced economies (AEs) accounted for a larger share of the increase in India's exports than emerging market economies (EMEs).

Turning to imports, a large part of the strong growth was accounted for by non-oil non-gold imports during 2017-18 so far, attesting to the growing strength of domestic demand (Chart III.12b). Pearls and precious stones, electronic goods and coal[1] were major contributors. Restocking by power plants and the growing requirements of the Indian steel sector led to an increase in coal imports in Q3:2017-18 to US$ 6.1 billion (56.8 million tonnes) from US$ 4.2 billion (44.8 million tonnes) in Q3:2016-17. Firming international crude oil prices on account of the Organization of the Petroleum Exporting Countries (OPEC) persisting with production cuts caused POL import bill to rise. Gold imports increased – both in value and volume terms – in December after declining

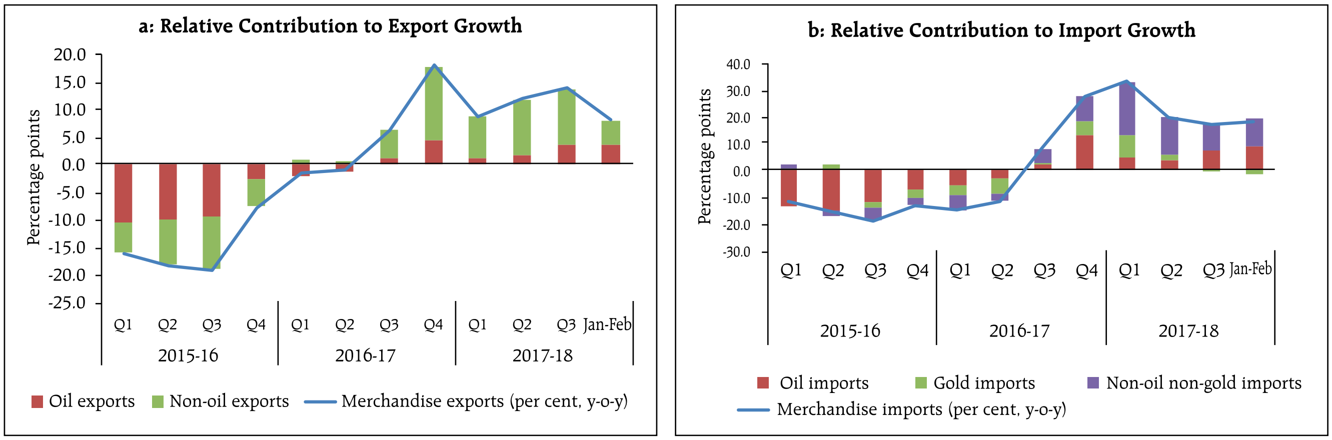
Chart III.11: Growth in Merchandise and Services Trade



Source: DGCI&S and RBI.

[1] Refers to 'Coal, Coke and Briquettes, *etc.*'

Chart III.12: Relative Contribution to Export and Import Growth



Source: RBI staff estimates based on DGCI&S data.

in the preceding three months, but declined again in January 2018 due to the postponement of purchases in anticipation of reduction in customs duty on imports. Overall, merchandise import growth, which had largely declined sequentially up to October, started increasing strongly from November 2017, pushing the April-February trade deficit to a five-year high of US$ 143 billion.

India's net services exports picked up in Q3:2017-18, mainly on account of improvement in exports of software and travel services. Despite the uncertainty relating to visa policies in the US and potential adverse effect of Brexit looming large, India's software services recovered in key markets. The turnaround in global IT spending in 2017 also supported demand in this segment. The increase in net exports of travel services reflected the noteworthy rise in tourist arrivals in India. By contrast, increase in imports of services due to higher payments for travel, transport and business services partly offset the rise in export earnings.

Remittances, which augment disposable income of households, also improved significantly in Q3, reflecting demand conditions in source countries. Even as global growth and trade accelerated in the recent period, the outlook is clouded by fears of rising trade protectionism. The direct impact of the recently announced tariffs by the US on India is likely to be modest; however, the increase in US tariffs may lead to a supply glut in non-US markets and push prices down, resulting in lower export realisation for India. The larger risk, however, is a possible escalation in trade protectionism around the world as the affected countries retaliate and protect domestic markets. This is already evident in the announcement of retaliatory tariffs on select US products by China after the US announced tariffs on Chinese goods. These actions may lead to global trade slowdown with hysteresis and diminished welfare, especially for countries looking to leverage on trade to meet their growth aspirations.

The current account deficit (CAD) increased to 2.0 per cent of GDP (US$ 13.5 billion) in Q3:2017-18 from 1.4 per cent of GDP (US$ 8.0 billion) a year ago. The widening of CAD on a y-o-y basis was primarily on account of higher trade deficit (US$ 44.1 billion).

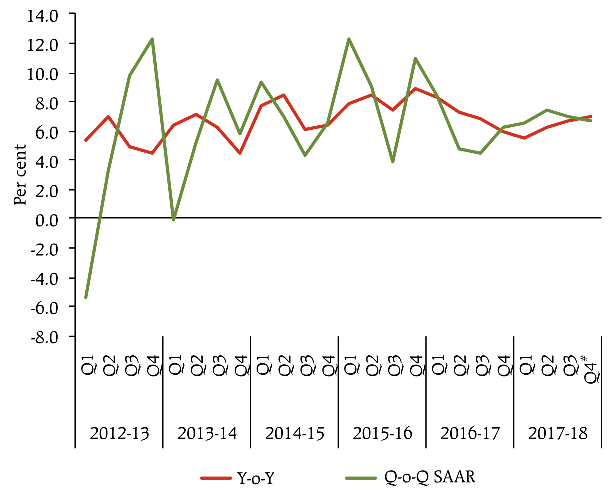
All major components of capital flows, *viz.*, foreign direct investments (FDI), foreign portfolio investments (FPI), non-resident Indian (NRI) deposits and external commercial borrowings (ECBs), recorded net inflows during Q3:2017-18. Gross as well as net FDI flows to India slowed in Q3 relative to preceding quarters. However, investors continued to prefer manufacturing and computer services, with Mauritius and Singapore remaining important sources. After bringing in robust inflows over the greater part of the year, foreign portfolio investors turned net sellers in the Indian equity and debt markets from the second week of

February to the second week of March 2018, initially on anxieties relating to capital gains taxation proposals in the Union Budget and subsequently, in reaction to global sell-offs on fears of trade protectionism and faster pace of normalisation of US monetary policy. Going forward, these all factors may continue to impact portfolio flows to EMEs, although India's resilient fundamentals and healthy level of foreign exchange reserves – at US$ 422.5 billion as on March 23, 2018 – should continue to provide buffers against global spillovers.

III.2 Aggregate Supply

Output growth in terms of gross value added (GVA) at basic prices accelerated to 6.8 per cent in H2:2017-18 from 5.9 per cent in H1 and 6.4 per cent a year ago, as the effects of demonetisation and teething troubles with the implementation of GST diminished gradually (Table III.5). GVA momentum, measured in terms of Q-o-Q SAAR, flattened in H2:2017-18 indicating that the acceleration of y-o-y growth in this period was due to a low base (Chart III.13).

Chart III.13: GVA Growth: Y-o-Y and Q-o-Q SAAR



#: Implicit growth.
Source: RBI staff estimates using CSO data.

The turnaround in y-o-y GVA growth was underpinned by a sharp acceleration in industrial output, driven by manufacturing. Despite shortfalls in south-west and north-east monsoons, the growth in agricultural production picked up in comparison with H1:2017-18 and going by advance estimates of food grains, output scaled a record in 2017-18. Nevertheless, growth in agricultural activity slowed down relative to a year ago. Services sector activity, however, remained resilient. Significantly, GVA growth remained robust even after excluding public administration, defense and other services (PADO) (Chart III.14).

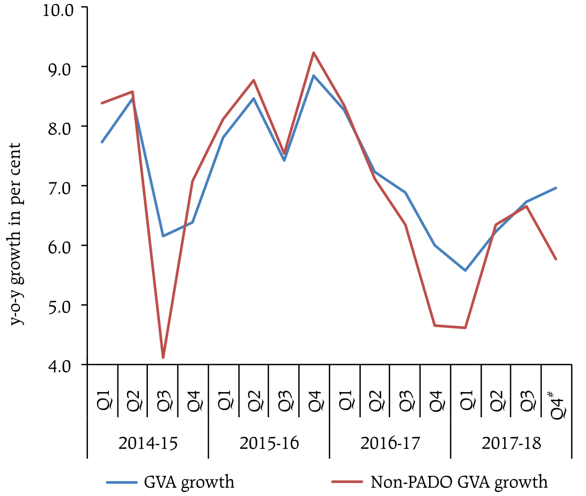
Table III.5: Sector-wise Growth in GVA

(Per cent)

Sector	2016-17 (FRE)	2017-18 (SAE)	Weighted Contribution 2017-18	2016-17 (FRE)				2017-18 (SAE)			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4#
Agriculture, forestry and fishing	**6.3**	**3.0**	**0.5**	**4.3**	**5.5**	**7.5**	**7.1**	**2.7**	**2.7**	**4.1**	**1.9**
Industry	**8.7**	**5.0**	**1.2**	**10.2**	**7.8**	**8.8**	**8.1**	**-0.4**	**7.0**	**6.8**	**6.8**
Mining and quarrying	13.0	3.0	0.1	10.5	9.1	12.1	18.8	1.8	7.1	-0.1	3.9
Manufacturing	7.9	5.1	0.9	9.9	7.7	8.1	6.1	-1.8	6.9	8.1	7.2
Electricity, gas, water supply and other utilities	9.2	7.3	0.2	12.4	7.1	9.5	8.1	7.1	7.7	6.1	8.4
Services	**6.7**	**7.8**	**4.8**	**8.5**	**7.4**	**6.0**	**4.9**	**8.6**	**6.6**	**7.6**	**8.3**
Construction	1.3	4.3	0.3	3.0	3.8	2.8	-3.9	1.5	2.8	6.8	6.1
Trade, hotels, transport, communication	7.2	8.3	1.6	8.9	7.2	7.5	5.5	8.4	9.3	9.0	6.7
Financial, real estate and professional services	6.0	7.2	1.6	10.5	8.3	2.8	1.0	8.9	6.4	6.7	6.6
Public administration, defence and other services	10.7	10.1	1.3	7.7	8.0	10.6	16.4	13.2	5.6	7.2	15.0
GVA at Basic Prices	**7.1**	**6.4**	**6.4**	**8.3**	**7.2**	**6.9**	**6.0**	**5.6**	**6.2**	**6.7**	**6.9**

FRE: First Revised Estimates; SAE: Second Advance Estimates; #: Implicit.
Source: Central Statistics Office (CSO).

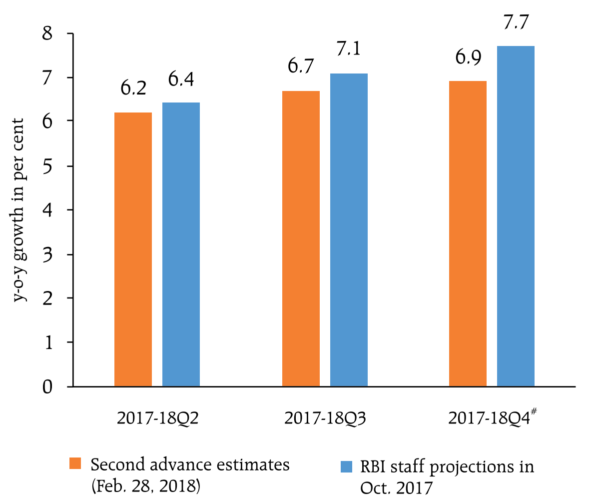
Chart III.14: GVA Growth excluding PADO



#: Implicit growth.
PADO: Public administration, defence and other services.
Source: RBI staff estimates using CSO data.

The October 2017 MPR had projected GVA growth of 6.4 per cent in Q2 and 7.4 per cent in H2 of 2017-18, with risks evenly balanced around the baseline path (Chart III.15). Actual outcomes in terms of the second advance estimates (SAE) of the CSO released on February 28, 2018 fell below these projections by 20 and 60 basis points, respectively. The deviation of SAE from the forecast for Q2 was primarily due to more than anticipated moderation in services sector

Chart III.15: GVA Growth – Actual versus Projected



#: Implicit growth.
Source: RBI staff estimates.

activity, while in H2 it was accentuated by industrial activity also slowing down relative to expectations. Within industry, mining sector output contracted in Q3. Services sector growth slowed down due to an unanticipated contraction in sales growth in the real estate sector, following the implementation of the Real Estate (Regulation and Development) Act (RERA). Keeping these developments in mind, the GVA forecast for 2017-18 was revised downwards to 6.6 per cent in the MPC's fifth bi-monthly statement of December 2017.

The advancement in the release of first advance estimates (FAE) of national accounts data by the CSO by more than a month in sync with the Union Budget has raised concerns about the firmness of GVA estimates, in view of the large gaps in data availability. Analysis of both production and expenditure-based estimates of national accounts suggests that during periods of rising growth, initial estimates were revised up in successive revisions, while during all periods of slackening of growth, they were revised down (see Box I.1 in Chapter I). Therefore, advance estimates of GDP/ GVA growth need to be supplemented with high frequency indicators to arrive at a realistic assessment of the state of the economy.

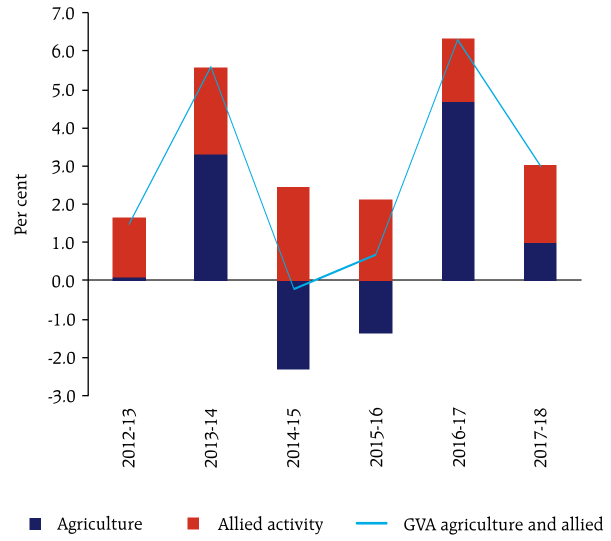
III.2.1 Agriculture

On a y-o-y basis, gross value added in agriculture and allied activities accelerated to 3.1 per cent in H2:2017-18 from 2.7 per cent in H1:2017-18, but decelerated significantly relative to H2:2016-17. The prolonged south west monsoon, better precipitation in the north-east monsoon (October-December 2017) relative to the preceding year, and comfortable water levels in major reservoirs ensured good soil moisture conditions for *rabi* sowing. However, delayed sowing, stubble burning, cold conditions and low prices hindered full acreage in the season, keeping it 0.8 per cent below last year's coverage, mainly under wheat and oilseeds (mustard, rapeseeds).

Consequent upon the release of the second advance estimates (SAE) of crop production for 2017-18, which indicated significant upward revision in the production of *kharif* crops and a better than expected *rabi* harvest, agricultural GVA growth for the year was revised upward to 3.0 per cent from 2.1 per cent in the FAE. *Kharif* foodgrains production for 2017-18 as per the SAE released in February 2018 was revised upwards by 2.8 per cent over the FAE released in September 2017. The SAE 2017-18 estimated foodgrains production at 277.5 million tonnes, 0.9 per cent higher than the previous record achieved in 2016-17 (275.1 million tonnes). The production of rice, pulses and coarse cereals touched new highs during the year, but wheat production declined (Table III.6). Going forward, average temperature in the central and eastern Pacific Ocean was in negative territory up to mid-February 2018 and turned positive since then, though the chances of an *El Nino* occurrence remain low.

Horticulture production touched a record level of 305.4 million tonnes in 2017-18 as per the FAE, registering a growth of 1.6 per cent over final estimate of 2016-17. Subdued growth in fruits, vegetables, plantation and spices due to uneven spread of rainfall across major states held down a bigger supply response. Allied activities, which include forestry and fishing – contributing to around 41 per cent of total value addition in agriculture – grew by 5.1 per cent in FY 2017-18 (Chart III.16).

Chart III.16: Contribution of Allied Activities



Sources: CSO and RBI staff calculations.

III.2.2 Industrial Sector

Gross value added in the industrial sector at basic prices accelerated to 6.8 per cent in H2:2017-18 from 3.2 per cent in the preceding half, with the turnaround occurring in Q2, but was lower than the growth registered a year ago (Chart III.17). The slowdown in H2:2017-18 (so far) was due to a sharp deceleration in mining and quarrying (Chart III.18). In the mining sector, contraction was on account of slowdown in its key constituents such as coal and natural gas production, and decline in crude oil output (Chart III.19a). The growth of manufacturing, on the

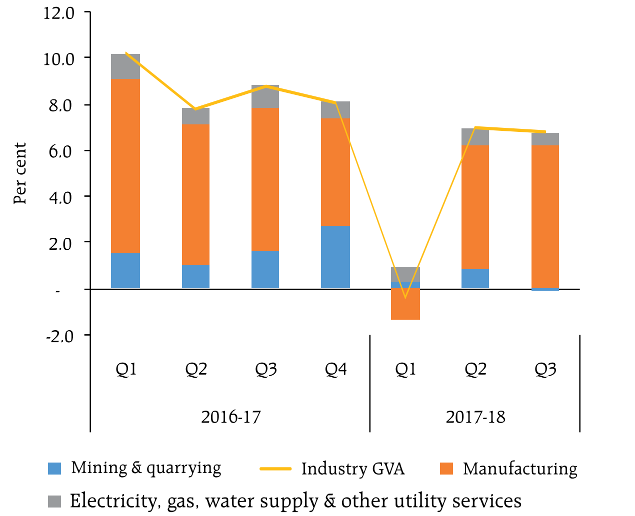
Table III.6: Agricultural Production 2017-18 (Second Advance Estimates)

(Million Tonnes)

Crop	2016-17		2017-18		2017-18 Variation (Per cent)		
	SAE	Final Estimates	Target	SAE	Over SAE 2016-17	Over Final 2016-17	Over Target
Foodgrains	272.0	275.1	274.6	277.5	2.0	0.9	1.1
Rice	108.9	109.7	108.5	111.0	2.0	1.2	2.3
Wheat	96.6	98.5	97.5	97.1	0.5	-1.4	-0.4
Pulses	22.1	23.1	23.0	24.0	8.2	3.5	3.5
Oilseeds	33.6	31.3	35.5	29.9	-11.0	-4.4	-15.8
Cotton #	32.5	32.6	35.5	33.9	4.3	3.7	-4.5
Jute & Mesta ##	10.1	11.0	11.7	10.5	4.3	-4.2	-10.3
Sugarcane (Cane)	310.0	306.1	355.0	353.2	13.9	15.4	-0.5

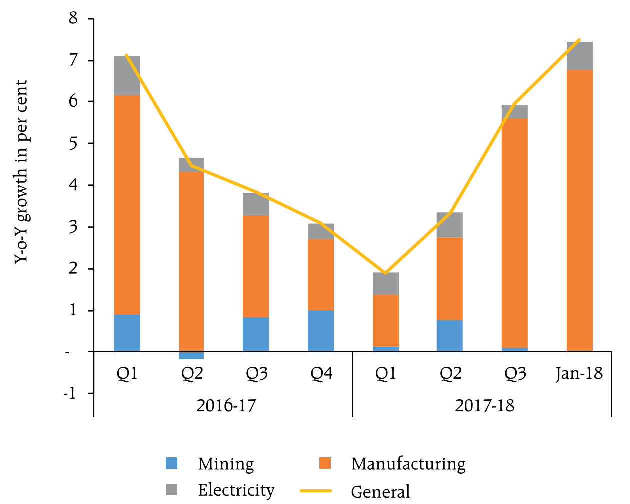
#: Million bales of 170 kgs. each: # #: Million bales of 180 kgs. each.
SAE : Second Advance Estimates.
Source: Ministry of Agriculture and Farmers Welfare.

Chart III.17: Weighted Contribution to Industry GVA Growth



Sources: CSO and RBI staff calculations.

Chart III.18: IIP Growth and Components' Contribution



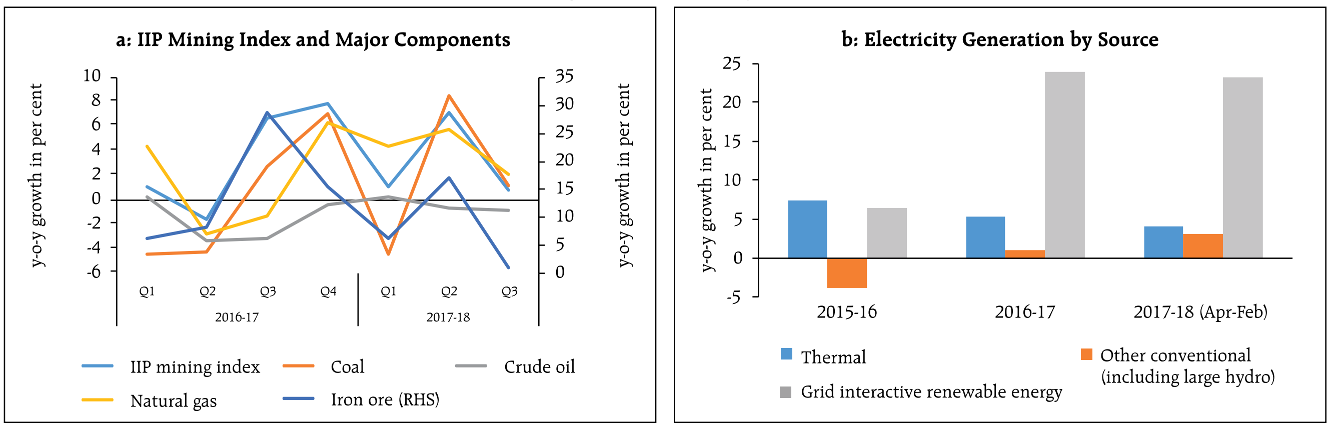
Sources: CSO and RBI staff calculations.

other hand, improved with the waning of the transient effects of GST to a five-quarter high of 8.1 per cent in Q3:2017-18.

GVA in the electricity sector moderated marginally in H2:2017-18 in comparison with H1. Growth in power generation during 2017-18 (April-February) was affected by lacklusture activity in thermal power plants (coal, diesel and gas-based plants), while hydro and nuclear power plants posted higher growth (Chart III.19b). The power sector is facing several handicaps such as coal shortages in thermal power plants; debt overhang of power distribution companies (DISCOMs); reluctance of some states to honour power purchase agreements, rendering projects unviable; and lower demand and pricing pressure being faced by thermal power plants in the wake of competitive pricing[2] and rising popularity of renewable energy sources.

The strong performance of the manufacturing sector in Q3 was facilitated by robust sales growth that took the sector's GVA growth to 10.9 per cent in nominal terms, while increasing raw materials costs were a drag. Of

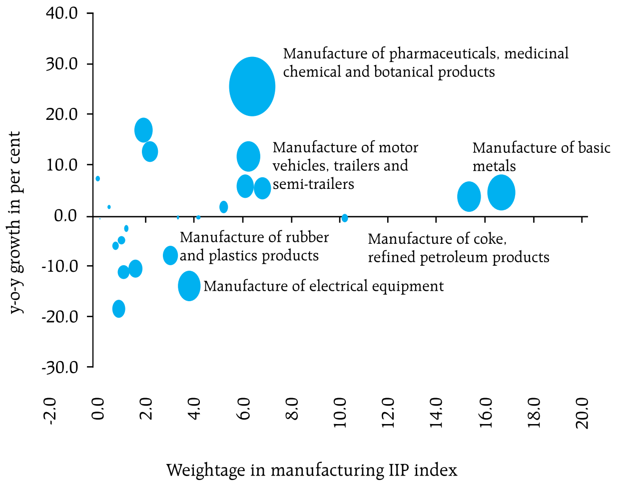
Chart III.19: Mining and Electricity Sector Assessment



Source: CSO, Central Electricity Authority, and Office of Economic Adviser.

[2] In recent times, tariffs from solar and wind-based power plants have fallen significantly, which could have a positive impact on power costs, but might undermine pricing power of thermal power plants.

Chart III.20: Weighted Contribution of 23 Manufacturing Industry Groups (Apr-Jan 2017-18)



Note: Size of the bubble indicates relative contribution
Sources: CSO and RBI staff calculations.

the 23 industry groups that form the manufacturing sector, production in 16 industries expanded during November-January 2017-18, indicating a wider base of output recovery. Among the major industry groups, the performance of coke and refined petroleum, chemical and chemical products, food products, machinery and equipment and other non-metallic mineral products turned around. Pharmaceuticals registered the highest growth (driven by digestive enzymes and antacids items), while electrical equipment remained in contraction mode throughout 2017-18 (April-January) (Chart III.20).

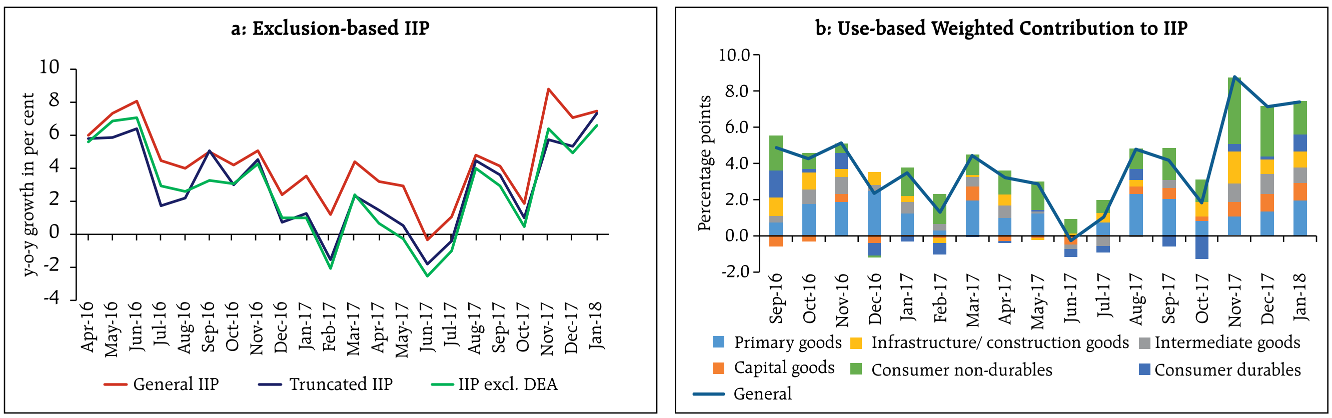
Exclusion-based measures, *viz.*, truncated IIP and IIP excluding digestive enzymes and antacids (DEA), tracked overall IIP growth (Chart III.21a). In terms of weighted contributions, the acceleration was led by consumer non-durables, followed by capital goods (Chart III.21b). The latter could be indicative of a revival in investment demand that was reflected in disaggregated GDP data analysed in Section III.1.2.

III.2.3 Services

Activity in the services sector picked up and became broad-based in H2:2017-18, buoyed by a sharp acceleration in construction activity and support from PADO (Chart III.22a). The recovery in the construction sector was also reflected in the robust growth in steel consumption and cement production (Chart III.22b).

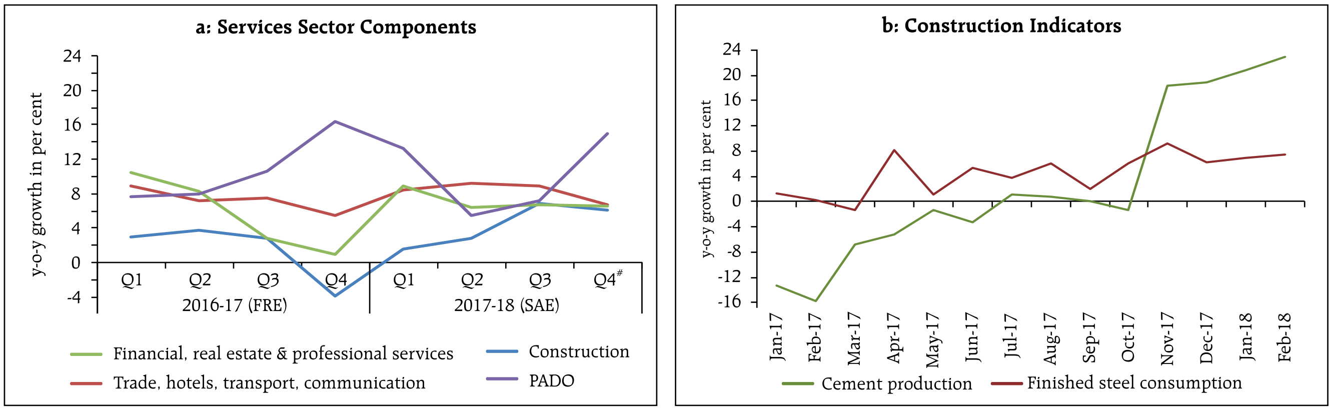
The growth of financial, real estate and professional services, which had decelerated in Q2, improved marginally in Q3 but on the whole, growth decelerated in H2:2017-18 in comparison with H1. Though deposit growth remained muted, higher growth of credit pulled up overall financial services (Chart III.23a). Trade, hotels, transport and communication services continued to show robust performance in H2:2017-18. Lead indicators in the transport sub-segment – commercial vehicle sales, port cargo and air cargo traffic – showed an uptick in recent months (Chart III.23b). Similarly, indicators of

Chart III.21: IIP and Use-based Classification



DEA: Digestive enzymes and antacids
Sources: CSO and RBI staff calculations.

Chart III.22: Services Sector Components and Construction Indicators



#: Implicit growth for Q4.
PADO: Public administration, defence and other services
Sources: CSO, Office of the Economic Adviser, Joint Plant Committee and RBI staff estimates.

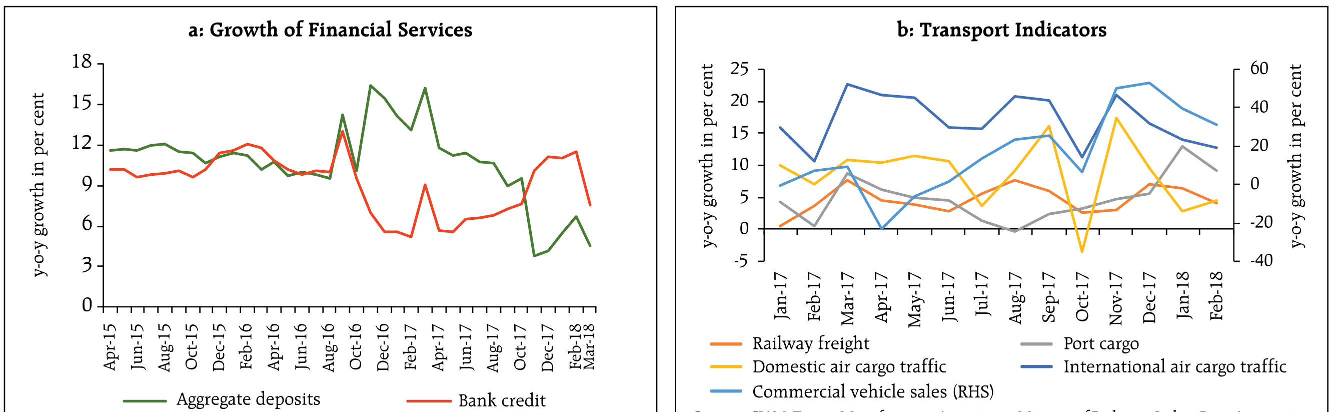
the hotels sub-segment – foreign tourist arrivals and air passenger traffic, and communication – telephone and broadband subscribers, continued to grow strongly. The growth in PADO accelerated in H2:2017-18, and especially in Q4, in the absence of cutbacks in expenditure by the central government.

Indicators for real estate activity as reflected in sales and housing units launched, continued to decline across major cities as this sector is in the process of consolidation after the implementation of the RERA Act (Charts III.24a and III.24b). Developers are focusing more on completing and delivering existing projects rather than launching new projects. Weak demand and a large overhang of unsold inventory are other retarding factors. Listed real estate companies' sales growth contracted by (-) 7.7 per cent in Q3 post-RERA.

III.3 Output Gap

An analysis of demand-supply conditions, which are important drivers of inflation, is an important input for monetary policy formulation. Apart from direct survey-based indicators such as measures of capacity utilisation, an estimate of demand-supply conditions is also made through an assessment of the output gap (*i.e.*, deviation of actual output from its potential level and expressed as a proportion of potential output). Since potential output and the output gap are unobservable variables, and their estimates can be sensitive to the selected methodological approach, a variety of alternative approaches are used for assessing them. These include univariate filters such as the Hodrick-Prescott filter, the Baxter-King filter

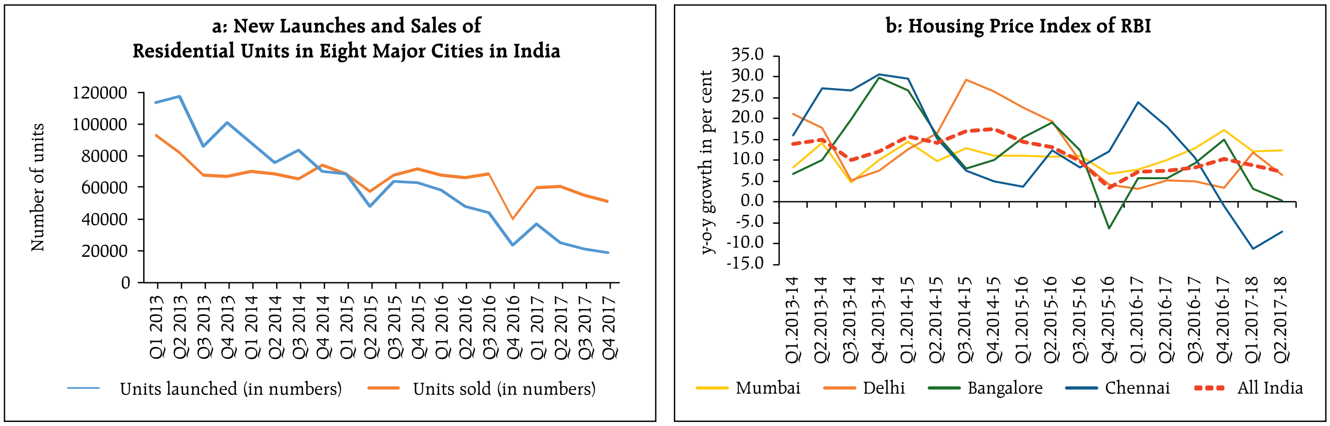
Chart III.23: Services Sector Indicators - Financial Services and Transport



Source: RBI.

Sources: SIAM, Tractor Manufacturers Association, Ministry of Railways, Indian Ports Association, Airports Authority of India and RBI staff estimates.

Chart III.24: Housing Sector - Launches, Sales and Prices



Sources: Knight Frank Research and RBI.

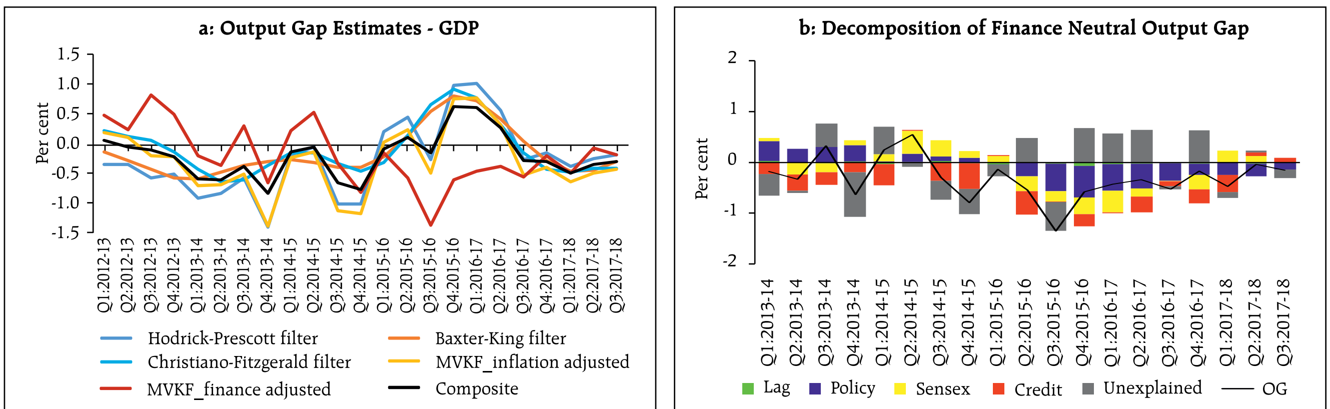
and the Christiano-Fitzgerald filter on the one hand, and multivariate Kalman filters on the other, that take into account inflation developments and/ or financial conditions to draw robust inferences on the state of the business cycle.

The composite estimate of the output gap, obtained by using principal component analysis on the various alternative estimates, indicates that the output gap is closing on account of strengthening of economic activity since Q2:2017-18 (Chart III.25a). This is consistent with a pick-up in domestic demand as reflected in rising capacity utilisation. The decomposition of the finance-adjusted output gap estimate shows that credit growth, supported by recapitalisation of public sector banks and deleveraging by the corporates under the Insolvency and Bankruptcy Code, and asset price growth, measured by Sensex, are contributing to the closing of the finance-adjusted output gap (Chart III.25b).

III.4 Conclusion

Economic activity, which was impacted on account of demonetisation and the implementation of GST, is recovering on the strength of an upturn in investment. A significant pick-up in credit off-take and larger resource mobilisation by the private sector in the recent period augur well for a fuller expansion of the investment cycle. Consumption demand remains robust and the focus of the Union Budget on the rural and infrastructure sectors should further support rural demand and investment. Global demand is

Chart III.25: Output Gap



MVKF: Multivariate Kalman Filter.

OG: Output Gap.

Source: RBI staff estimates.

also improving, which bodes well for India's exports. The performance of manufacturing in the recent period has indeed been encouraging, especially as starting troubles relating to GST no longer bind. However, some concerns remain, which may have a bearing on growth prospects. First, the deterioration in public finances has the potential to crowd out private investment and potentially risks cutbacks on public capital expenditure. Second, recent firming up of international crude oil prices may reduce net external demand and also adversely impact profitability of domestic firms by raising input costs. Third, financial markets have become volatile in the recent period due mainly to global factors, and especially the uncertainty relating to trade protectionism and the pace of normalisation of monetary policy in advanced economies. Although global trade has been now growing faster than global growth, the fear of a trade war looms large and it has the potential to derail the ongoing global recovery. Therefore, the need to strengthen domestic macro-fundamentals assumes critical importance.

IV. Financial Markets and Liquidity Conditions

Financial market conditions in the second half of 2017-18 were marked by the weighted average call money rate (WACR) moving closer to the policy repo rate as surplus liquidity moderated; stock markets scaling new highs before undergoing some corrections; firming up of bond yields; and, the foreign exchange market switching from buoyant to ebbing portfolio flows. As credit offtake picked up, monetary policy transmission gained further traction for new loans.

Global financial markets generally remained buoyant through the second half of 2017, boosted by the improving macroeconomic outlook and the gradual normalisation of the US monetary policy. While equity markets surged on a renewed appetite for risk, currencies were lifted by the weakening of the US dollar since November. Yield curves in bond markets tended to flatten with still subdued inflation expectations, and corporate credit spreads narrowed. In 2018, however, market sentiment has been dampened by accelerating wage and employment growth in the US, triggering fears of a faster pace of interest rate increases. Longer term interest rates have been hardening tracking US yields, but also in response to country-specific developments. Oscillating geo-political developments and more recent fears of a trade war in response to the US tariff announcements have heightened uncertainty considerably. Volatility has pervaded various market segments, with equity and bond market sell offs spilling across geographies. Currency markets have been hit by the turbulence of safe haven flights that are rotating capital flows among emerging economies and sporadically strengthening the US dollar. Financial markets have remained on edge in recent weeks.

In domestic financial markets, various segments have exhibited diverse movements. While money markets remained laden with the overhang of liquidity that characterised the first half of the year, surplus liquidity has gradually ebbed and turned into deficit since February. As recourse to primary liquidity became pronounced from mid-December, overnight interest rates have begun 'middling' within the LAF corridor more frequently (Chart IV.1). Little farther out on the term curve, however, interest rates on Treasury bills (T-Bills) and discount rates on commercial papers (CPs) are hardening as markets sense that liquidity conditions are balancing out. In bond markets, long-term yields rose unrelentingly from August on apprehensions of excessive issuances, reactions to fiscal slippages following the announcement of the Union Budget for 2018-19, and rising inflation expectations peaking in early March. A spike in international crude price and rise in global interest rates contributed to the hardening of yields. Thereafter, yields declined sharply on favourable inflation print for February 2018 and in response to the lower than expected borrowings indicated by the Government in the issuance calendar for H1:2018-19. Corporate bonds also rose in sync, although credit spreads moderated with the improving outlook on growth.

Until the Budget announcement, equity markets scaled new peaks, riding on aggressive buying by domestic mutual funds and foreign portfolio investors. Thereafter, corrections are occurring with bearish sentiment being more freely expressed in the equity market. The Union Budget proposal to levy long-term capital gains tax (LTCG) of 10 per cent on gains exceeding ₹1 lakh from sale of equity shares, sharp increase in US bond yields, the announcement of protectionist tariffs by the US and revelations of fraud in some domestic banks have impacted equity markets adversely since the beginning of February. The foreign exchange segment has moved in tandem; while the rupee had gained against the US dollar on the back of sustained portfolio inflows with the ebullience in equity markets, sentiment had reversed after the Budget announcement and portfolio outflows picked up from mid-February as global cues weighed on the rupee.

In the credit market, activity is slowly gaining strength, despite the overhang of corporate loan delinquencies. The total flow of financial resources to the commercial sector in 2017-18 was much higher than that during the previous year, primarily due to an increase in non-food credit by banks. Credit demand surged in the second half of 2017-18 - though at divergent pace across bank-groups - with the growth pick-up spreading across sectors as underlying macroeconomic conditions improved. Both deposit and lending rates eased up to November as the cumulative reduction in the policy rate of 200 basis points since January 2015 was fully transmitted to new loans.

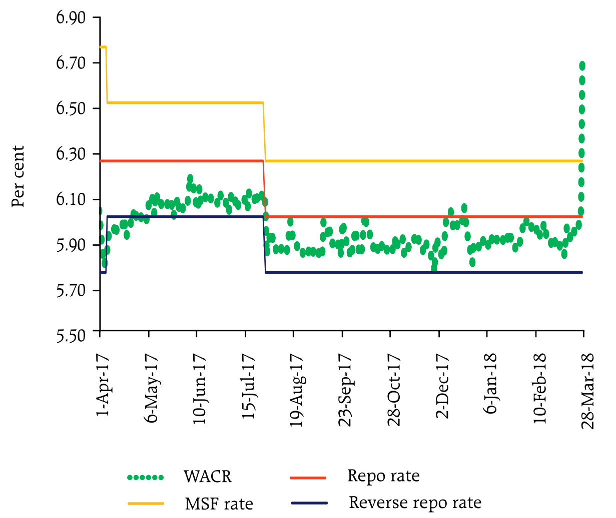
IV.1 Financial Markets

As set out above, domestic financial market segments have been mainly driven by idiosyncratic factors, barring phases of overwhelming global spillovers that impacted equity and forex markets intermittently. Excess liquidity, which had persisted till January following demonetisation, turned into deficit towards close of the year. Bond markets have experienced some drying up of liquidity as yields rose amidst concerns about inflation and the fiscal situation. The credit market, which was overcast with risk aversion and disintermediation, has exhibited a steady improvement in recent months with credit growth being in double digits since December. Sizeable investments by mutual funds into equity displaced the hitherto dominant position of foreign investors.

IV.1.1 Money Market

In the unsecured call money market, private banks and primary dealers are the major borrowers, and cooperative banks and public sector banks are the major lenders. In terms of intra-day activity, a distinct U-shaped pattern is discernible, with the thickest part of trading – more than 60 per cent of daily call money transactions - occurring in the first hour (9-10 am) when primary dealers are most active as borrowers, and in the last hour (4-5 pm) when the call money market becomes the only source of market liquidity for banks and primary dealers. In both these time segments, public sector banks are the largest lenders. Co-operative banks accounted for 39 per cent of call money lending during the second half of 2017-18, down from 46 per cent in the first half.

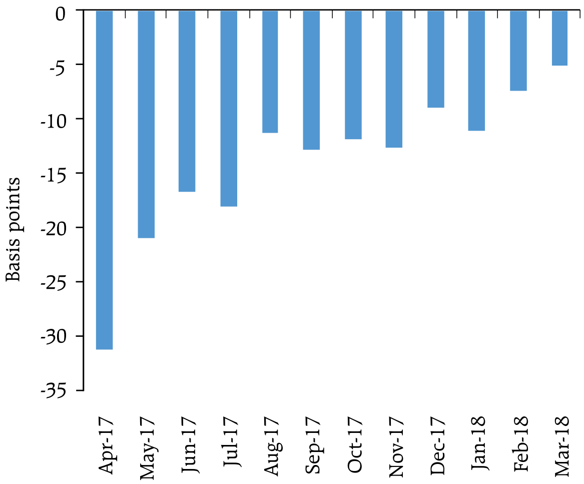
Chart IV.1: Policy Corridor and WACR



WACR: Weighted average call rate.
Sources: RBI, Clearing Corporation of India Ltd. (CCIL) and staff estimates.

The demonetisation-induced slosh of liquidity hung heavily over the market in October and November. Amplified by the effects of the Reserve Bank's forex operations, it continued to impart a downside bias to the weighted average call rate (WACR), as in the preceding two quarters (Chart IV.1). By mid-December, however, liquidity tightened with advance tax outflows. Restrained government spending impacted call money market conditions from February and firmed up interest rates. As net liquidity absorption under the LAF steadily shrank through the second half of 2017-18, the spread between the WACR and the policy repo rate narrowed from (-)13 basis points in September 2017 to (-)5 basis points in March 2018 (Chart IV.2). With the narrowing of the LAF corridor to 50 basis points in April 2017 from 100 bps earlier, volatility in the call money market has reduced, while the volume has remained broadly unchanged at less than 10 per cent of the total overnight market (Charts IV.3 and IV.4).

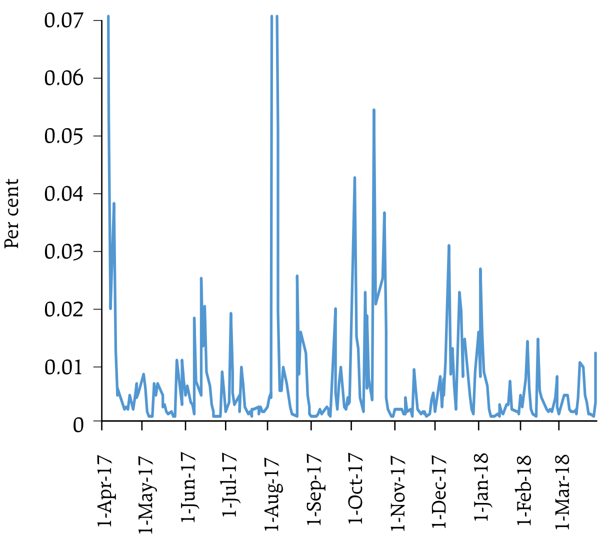
Chart IV.2: Average Spread of WACR over the Repo Rate



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

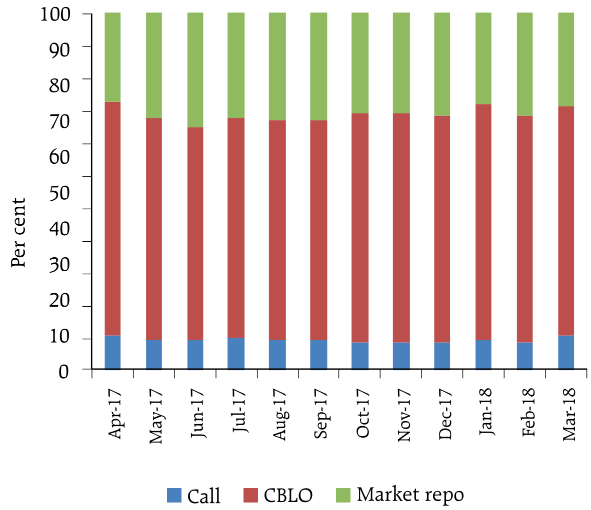
In the Collateralised Borrowing and Lending Obligation (CBLO) segment, which constitutes more than 60 per cent of the overnight market, banks are usually on the borrowing side, while mutual funds (MFs) are the major lenders. The share of MFs in CBLO lending, which had gone up to as much as 80 per cent in March 2017 in the wake of demonetisation, has gradually subsided during the year to more normal levels, averaging around 60-70 per cent up to March

Chart IV.3: Volatility in WACR



WACR: Weighted average call rate
Sources: RBI, Clearing Corporation of India Ltd. (CCIL) and staff estimates.

Chart IV.4: Share of Major Segments in Money Market Volume



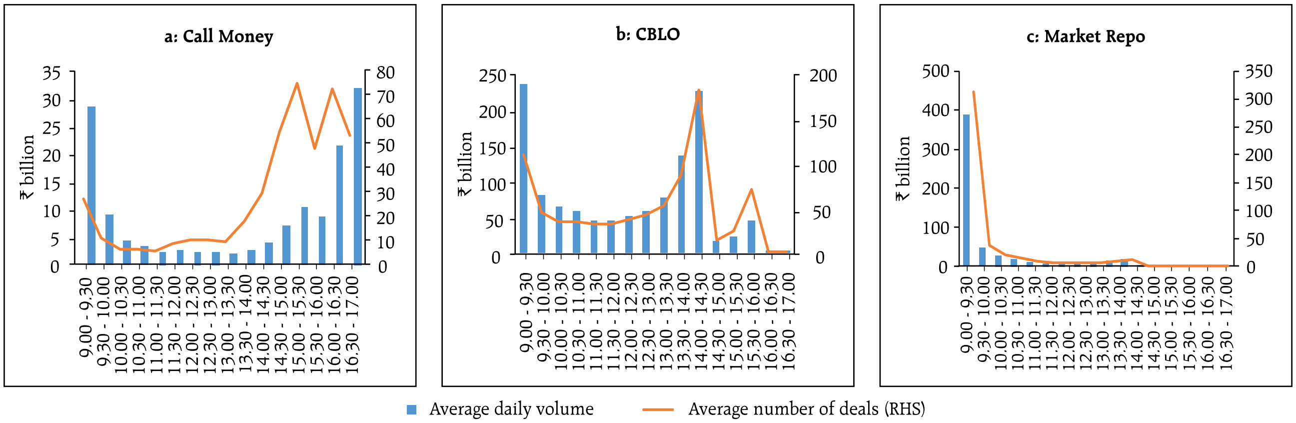
Sources: RBI, Clearing Corporation of India Ltd. (CCIL) and staff estimates.

2018. Intra-day trading is largely concentrated in the first hour in alignment with the call money segment and spikes around 1-2.30 pm due to stepped-up activity by associate members: market participants such as mutual funds and insurance companies who do not have current accounts with the Reserve Bank and are not allowed into the market beyond 2.30 pm (in order to provide for adequate time for settlement of fund obligations for these members who settle at designated settlement banks) (Chart IV.5). Trading volumes and rates fall sharply in the CBLO segment on reporting Fridays to escape the application of the cash reserve ratio (CRR)[1].

The collateralised market repo segment accounts for 30 per cent of the overall overnight market turnover. Typically, the turnover in the market repo segment comprises 'basket repos', in which foreign banks are the major lenders as they prefer market repo for lending because of its collateralised nature, and 'specials' that are used by market participants for acquiring specific securities to deliver against their outstanding short positions. In the second half of 2017-18, the shares of basket repo and special repo turnover in the market repo segment's turnover were 55 per cent and 45 per

[1] Borrowings in call money and market repo are exempt from Cash Reserve Ratio (CRR) requirement, whereas borrowings in CBLO market attract CRR.

Chart IV.5: Intra-day Pattern of Money Market Activity*

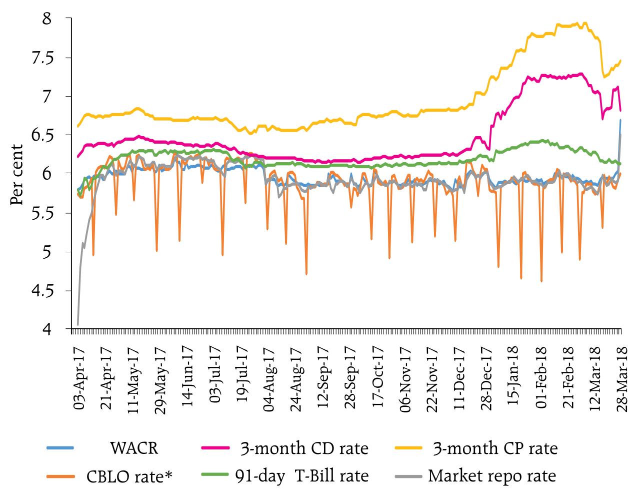


* Based on data during H2:2017-18. CBLO: Collateralised borrowing and lending obligations.
Sources: RBI, Clearing Corporation of India Ltd.(CCIL) and staff estimates.

cent, respectively, as against 57 per cent and 43 per cent in the first half. Interest rates in the collateralised segments, *i.e.,* CBLO and market repo, evolved with a soft bias relative to the WACR and, in fact, traded 10 basis points and 2 basis points, respectively, below the WACR on average through the second half of 2017-18.

Barring term premia, interest rates on certificates of deposits (CDs), commercial paper (CPs) and 91-day Treasury bills (T-Bills) generally evolve in alignment with the WACR (Chart IV.6). From mid-December, however, they have diverged on higher

Chart IV.6: Money Market Rates



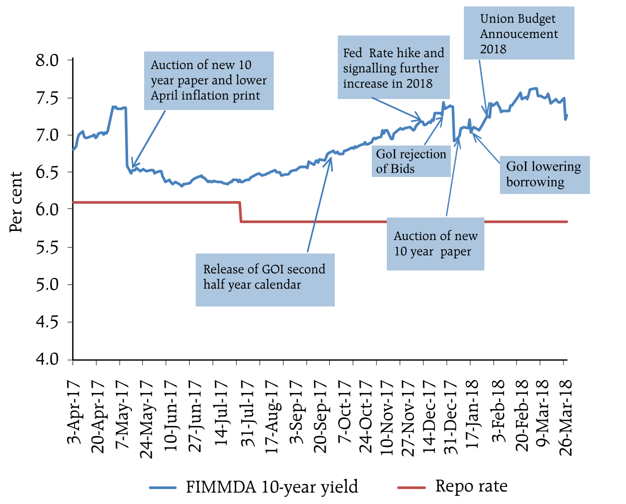
* CBLO rates drop on reporting Fridays as the volumes shift to the market repo segment to take advantage of exemption from the cash reserve ratio.
Sources: CCIL, Bloomberg and Reuters.

interest rates for lending beyond March-end on the consideration of year-end demand for funds for balance sheet management purposes – a usual seasonal phenomenon – though this divergence was initially triggered by the announcement of additional market borrowing by the government. In recent years, CPs have been increasingly resorted to as credit substitutes for working capital requirements as CP rates continue to rule significantly lower than bank lending rates. Consequently, issuances of CPs picked up to ₹11,448 billion in the second half of 2017-18 as against ₹9,125 billion a year ago. As surplus liquidity shrank, fresh issuances of CDs also went up to ₹2,181 billion from just ₹1,017 billion in the second half of 2016-17.

IV.1.2 Government Securities Market

Since the beginning of August 2017, yields in the secondary government securities (G-sec) market hardened almost monotonically, driven mostly by domestic factors up to early March 2018 (Chart IV.7). G-sec yields hardened by 20 bps in October mainly due to informal communication by the government in late September that gross fiscal deficit (GFD) could be higher, increase in inflation forecast by the monetary policy committee (MPC) on October 4 and concerns over increase in the supply of papers in the form of bank recapitalisation bonds announced on October 24, 2017. G-Sec yields hardened by 20 bps

Chart IV.7: 10 - Year Yield and RBI Repo Rate



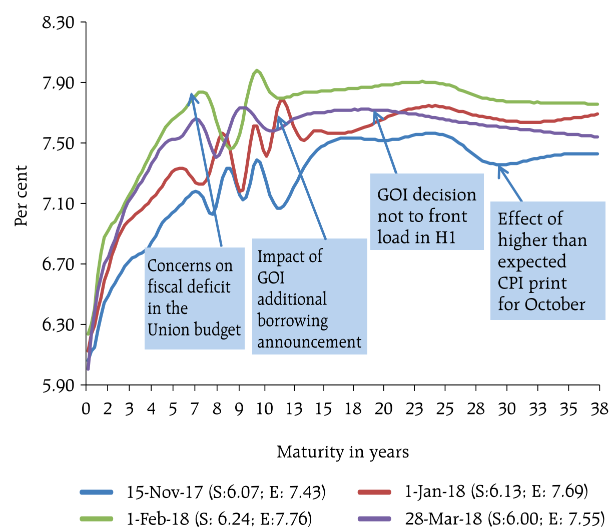
Sources: RBI and Fixed Income Money Market and Derivatives Association of India (FIMMDA).

during November 2017 partly due to fiscal concerns.[2] Moody's rating upgrade on November 17, 2017 and the cancellation of open market sales scheduled for November 23, provided transient relief to the market. In December, the upside tilt in the balance of risks set out in the resolution of the MPC on December 6, concerns about rising inflation following December 12 release of inflation print and the communication on December 27, 2017 that fiscal slippage will be funded by additional market borrowings by the central government led to a rise in yields by 27 bps. Among global factors, rising international crude prices through the quarter and the increase of 25 basis points in the federal funds target on December 13, 2017 meeting of the FOMC pushed up the G-sec yields. On the whole, G-sec yields rose by 67 bps during Q3:2017-18. Over the same period, US yields rose by 8 bps.

In Q4, notwithstanding the announcement of reduction of additional borrowings by the central government by ₹300 billion (from the amount of ₹500 billion extra borrowing announced in December) on January 17, 2018, the upward pressure on yields resumed from mid-January as still elevated crude prices and spillovers from episodes of global bond sell-off accentuated fears of oversupply of domestic paper. These fears materialised with the fiscal slippage announced in the Union Budget on February 1. Yields traded with a tightening bias till early March, scaling a two-year peak of 7.81 per cent on March 5, 2018. However, yields softened sharply by around 45 bps thereafter due to the lower inflation print for February released on March 12 and the decision by the Government not to front-load its borrowings in H1:2018-19 which resulted in a sharp fall in G-sec yields of 29 bps in a single day on March 27, 2018. As a result, the 10-year yield softened by 7 bps in Q4:2017-18 as against a rise of 36 bps in US yields.

Reflecting these developments, the yield curve underwent level shifts through the second half of 2017-18, including in respect of the new benchmark paper issued on January 5, 2018 (Chart IV.8). An empirical analysis suggests that the sensitivity of bond yields in India to global factors represented by the US bond yield has declined in the recent period (although it has risen gradually since Q3), while its responsiveness to domestic factors has increased. Time-varying parameter estimates indicate that

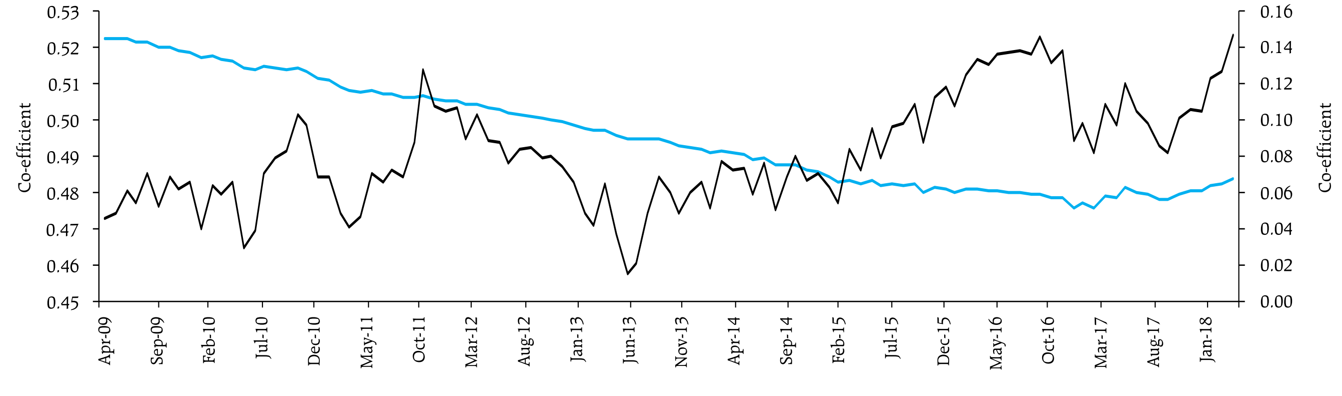
Chart IV.8: G-sec Yield Curve



Sources: RBI and FIMMDA. S: Start E: End

[2] GFD for H1:2017-18 was 91.3 per cent of budget estimates (BE) for the whole year as against 83.9 per cent for the corresponding period of the previous year.

Chart IV.9: Sensitivity of India's G-sec Yield



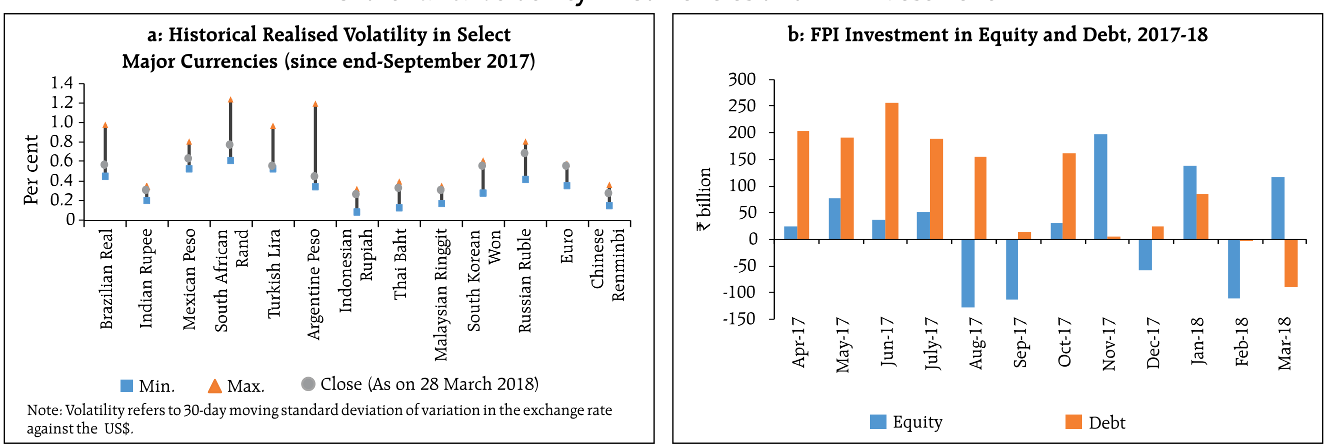
Source: RBI staff estimates.

the effect of inflation on bond yields in India has increased significantly, especially since August 2017 (Chart IV.9)[3].

Persisting positive yield differentials between global (US treasuries) and Indian G-secs and the stability of the Indian rupee in the foreign exchange market relative to other currencies provided congenial conditions for foreign portfolio investors (FPIs) who were net buyers in the debt market during the most part of H2 (Chart IV.10), notwithstanding intermittent reversals following the Budget announcement. FPIs made investment of ₹606 billion in G-secs in 2017-18, resulting in utilisation of 92.9 per cent of the extant limit on G-sec investment. In addition, FIIs also made investment in state development loans (SDLs) of ₹40 billion.

In the primary segment, two discerning features characterised opposite ends of the spectrum. At the short end of the G-sec market, T-Bill issuances declined during H2 with the steady improvement in the central government's cash balances. Yields on T-Bills, however tracked the benchmark and hardened till February before cooling down during March owing to surplus liquidity emerging from the redemption of T-Bills issued under Market Stabilisation Scheme (MSS) in April-May 2017 (Chart IV.11).

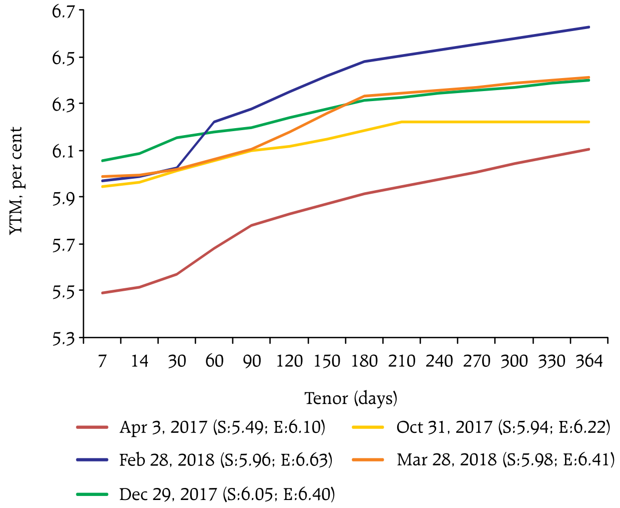
Chart IV.10: Volatility in Currencies and FPI Investment



Sources: Bloomberg and National Securities Depository Limited (NSDL).

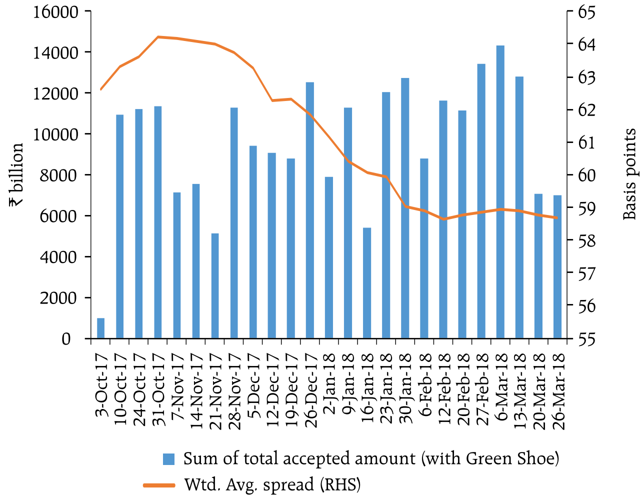
[3] Indian G-sec yield is regressed on its own lag, lags of government market borrowings, lagged CPI inflation and US G-sec yield and coefficients allowed to vary over time that follow a random walk process. The estimation is conducted in a state-space framework using Kalman filter algorithm for the period April 2007 to February 2018. The Chart represents the time-varying response of Indian G-sec yield to CPI inflation and US G-sec yields.

Chart IV.11: FIMMDA-Thomson Reuters Treasury Bill Benchmark (YTM)



Source: FIMMDA. S: Start E: End

Chart IV.12: Weighted Average Spread* of SDLs and Total Amount Raised through SDLs (All Maturities)



*Spread: Cut-off yields over 10-year G-sec yields.
Source: RBI.

At the longer end, the issuances of SDLs moderated in Q3, partly in reaction to the tightening financial conditions in the bond market. However, issuances peaked in Q4 reflecting the increased expenditure by the States towards end of the financial year. The weighted average spreads over the 10-year G-sec yield moderated to 56 bps in H2 as compared with 63 bps in H1 (Chart IV.12). There were no issuances under the UDAY scheme during 2017-18 and the total secondary market trading volume (face value) of UDAY bonds was ₹898 billion.

Following the recommendations of the 14th Finance Commission, all states (barring Delhi, Madhya Pradesh, Kerala and Arunachal Pradesh) have been excluded from the National Small Savings Fund (NSSF) financing facility beginning 2016-17. Consequently, market borrowings of states increased, also triggered by large redemptions of past borrowings. This drove up the supply of SDLs, which in turn impacted yields in the bond market, already reeling under the pressures of oversupply of paper.

The relationship between the spread on SDLs and fiscal situation of individual States remained weak during 2017-18. The inter-state spread during the year at 6 bps was marginally lower than that of 7 bps in 2016-17.

IV.1.3 Corporate Bond Market

Corporate bond yields hardened during H2:2017-18 tracking the rising G-sec yields (Chart IV.13a). In contrast, credit spread, *i.e.*, the spreads of corporate bond yields over G-sec yields of corresponding maturity narrowed from September 2017 onwards, barring intermittent spikes during December and January. The spreads of 5-year AA rated corporate bonds yields declined by 16 basis points, reflecting improvement in financing conditions on the back of higher corporate earnings in a brightening macroeconomic outlook, and with the prospects of speedy resolution of insolvency under the bankruptcy code. Empirical analysis suggests that credit spreads increase with amplification of credit risks as captured through credit default swap (CDS) spreads, and increase in global liquidity risks measured by the Libor-OIS spread. However, spreads reduce with an increase in earnings prospects as reflected in 12-month forward price-to-earning-ratios[4].

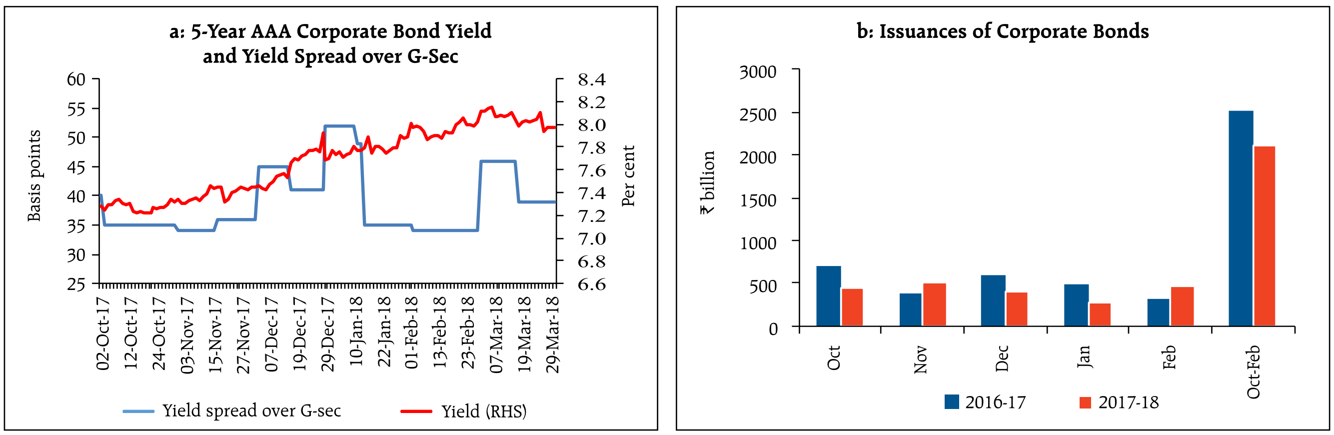
Average daily turnover in the corporate bond market increased to ₹75.6 billion during H2:2017-18 (up to March 27, 2018) from ₹70.6 billion a year ago; however, the tightening of credit conditions reflected in hardening of corporate bond yields during H2: 2017-18 prompted corporates to shift to banks for meeting their funding requirements. Consequently, resource mobilisation through issuances of corporate bonds in the primary market declined by 15.9 per cent to ₹2,105 billion during October 2017-February 2018 from ₹2,502 billion during the same period of 2016-17 (Chart IV.13b). The share of financial entities in the resource mobilisation was 76 per cent during October 2017–February 2018. Almost the entire resource mobilisation from the corporate bond market (99.9 per cent) was by way of private placements. FPI in corporate bonds increased from ₹1.98 trillion at end-September 2017 to ₹2.24 trillion as on March 28, 2018, constituting 91.9 per cent of the approved limit for investment in corporate bonds.

IV.1.4 Stock Market

Equity markets extended their gains in H1:2017-18 into H2, with the Sensex closing at a historic high of 36,283 on January 29, 2018. A number of factors contributed to the market's overall buoyancy: strengthening macroeconomic conditions; revival of corporate sales and improving prospects for future earnings; the announcement of PSU banks' recapitalisation; a jump in India's ranking in the World Bank's ease of doing business index; the ratings upgrade by Moody's; sustained net investment by domestic institutional investors; and positive cues from global equity markets.

Market conditions and sentiment reversed dramatically in February and selling pressures intensified, with a variety of factors in play: global sell-offs in bonds and equities following stronger than expected job and inflation data for the US that prompted market participants to anticipate a faster pace of normalisation of US monetary policy; expectations of tighter liquidity conditions going forward; bearish sentiment post the Union Budget proposal to levy long-term capital gains tax (LTCG) of 10 per cent on gains exceeding ₹1 lakh from sale of equity shares; the breach in the fiscal deficit target for 2017-18 and for the medium term; and disclosure of fraudulent transactions by Punjab National Bank (Chart IV.14). Consequently, even though the BSE Sensex gained by 5.4 per cent during

Chart IV.13: Corporate Bond Yields and Issuances



Sources: Bloomberg, FIMMDA and Securities and Exchange Board of India (SEBI).

[4] Determinants of corporate bond spreads *(cb)* are estimated in an Autoregressive Distributive Lag (1,0,1,1) cointegration framework using daily data for the period January 1, 2013 through March 12, 2018:

$$\Delta cb_t = 6.73 - 0.03^* cb_{t-1} + 0.01^* cds_t - 0.21^* pe_{t-1} + 0.41^* libois_t +$$

(2.40) (-4.58) (2.05) (-1.80) (2.87)

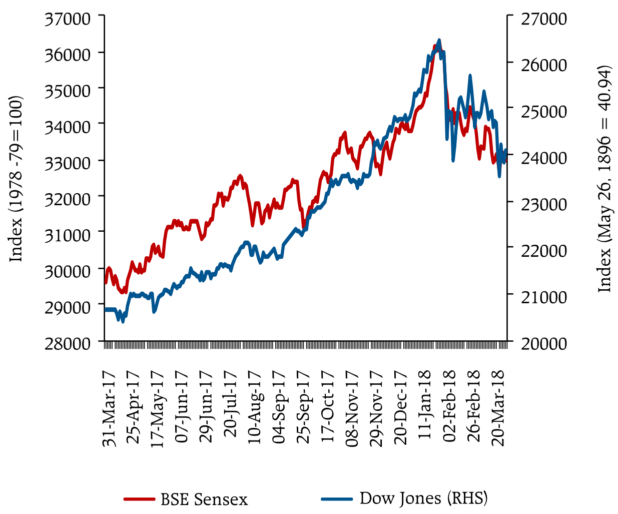
$$2.30^* \; [cb_t - (0.25^* cds_{t-1} - 7.85^* pe_{t-1} + 15.35^* libois_{t-1} + 250.58) + 4.98^* \Delta libois_t]$$

(3.63) (2.14) (-1.79) (3.16) (2.53) (4.33)

Δ: first difference (daily); *cds*: CDS spread (ICICI Bank); *pe*: 12-month forward price-to-earning ratio of NSE Nifty. *libois*: Libor-OIS spread.
F-Statistics (Bound test): 4.43 [5% critical value =3.67]

R^2 =0.97; Serial Corr. LM (4-lags) p-value = 0.39; ARCH (4-lags) p-value = 0.76.
Figures in parentheses are *t*-statistics.
Note: Lags were selected using Akaike Information Criterion (AIC) criteria.

Chart IV.14: Stock Market Performance



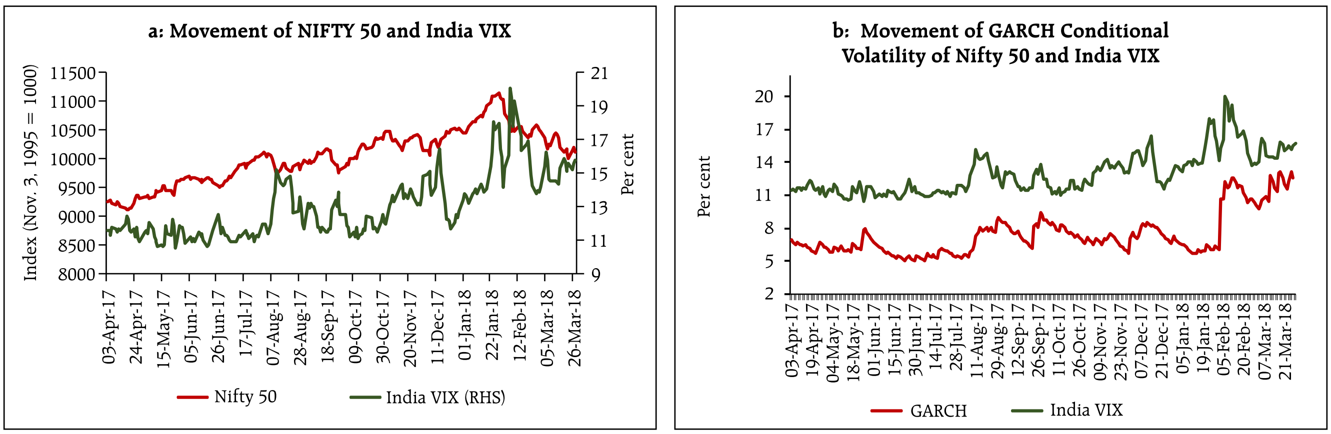
Source: Bloomberg.

H2:2017-18, it declined by 5.0 per cent during the month of February and suffered losses of 3.6 per cent in March as well on worries of trade wars triggered by the announcement of tariffs on steel and aluminium imports by the US administration and plan to impose tariff on Chinese goods.

The sharp increase in equity indices in the second half of January 2018 and the dramatic correction in the first half of February 2018 were both associated with heightened volatility (Chart IV.15a). The increase in volatility during the first week of February 2018 resulted from spillover of enhanced volatility in global markets, as rising bond yields triggered sell-off in stocks, which was exacerbated by collapse of several complex volatility-linked funds and algorithmic trading strategies tied to market volatility.[5] The India volatility index (VIX)[6], which captures short-term expected volatility of Nifty 50, increased sharply during this period. While equity indices and the VIX are generally inversely correlated, they moved in tandem during the second half of January 2018 with the correlation co-efficient being 0.88. Global markets also witnessed a similar aberration as the S&P 500 and VIX moved together with a correlation co-efficient of 0.70.

The put-call ratio, an indicator of market expectations, broadly remained stable and stayed below one in India. These configurations suggest that equity markets in India had perhaps risen excessively and that a correction – rather than a bearish phase – was imminent. As if in corroboration, the sharp correction in equity indices led to the restoration of the inverse relationship between the VIX and NIFTY 50 in February 2018, with the correlation co-efficient being -0.31. Realised volatility estimated through GARCH conditional volatility remained consistently lower than the expected volatility (measured by the VIX) during this period (Chart IV.15b).

Chart IV.15: Movement of NIFTY 50 and Its Volatility



Sources: National Stock Exchange (NSE) and RBI.

GARCH: Generalised autoregressive conditional heteroskedasticity.

5 *BIS Quarterly Review*, March 2018 and Press reports.

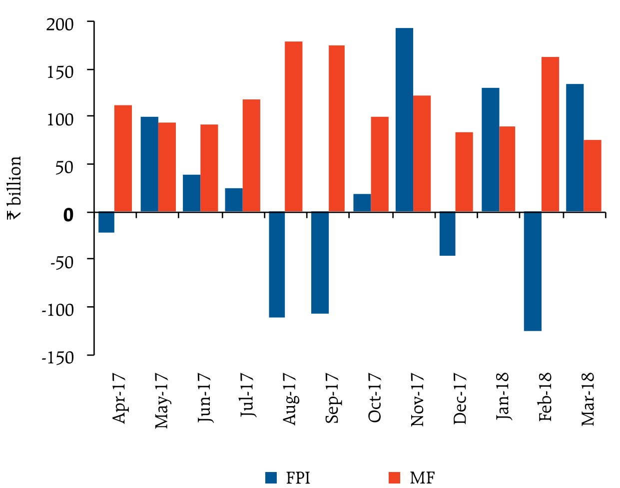
6 India volatility index (VIX), which is computed by NSE based on the order book of NIFTY options, is a measure of market expectation of volatility over the near-term, *i.e.,* over the next 30 calendar days.

While domestic institutional investors, particularly MFs, engaged in sustained net buying in the equity market, foreign portfolio flows experienced some volatility in February. Net investment by mutual funds in equities during October 2017 to March 27, 2018 at ₹631 billion was higher than that of ₹302 billion by foreign portfolio investors (Chart IV.16).

During October 2017-February 2018, resources raised under equity-oriented investment schemes were higher at ₹841 billion than ₹399 billion during the corresponding period of the previous year. This reflected greater participation not only from retail and high net worth individuals (HNIs), but also from corporates. Equity assets under management (AUM) of mutual funds increased by 16.7 per cent from ₹6.6 trillion at end-September 2017 to ₹7.7 trillion at end-February 2018.

In the primary segment of the equity market, resource mobilisation through public issues of equity (initial public offers and right issues) increased sharply to ₹610 billion during October 2017-February 2018 from ₹100 billion in the corresponding period of the previous year. Of the total 71 initial public offer (IPO) issues, 53 issues were listed on the small and medium enterprises (SMEs) platforms of BSE Ltd. and National Stock Exchange (NSE). Of the total resource mobilisation by way of public equity issues during 2017-18, 50.4 per cent was raised by insurance companies.

Chart IV.16: Net Investment in Equity by Institutional Investors



Sources: NSDL and Securities and Exchange Board of India (SEBI).

IV.1.5 Foreign Exchange Market

The Indian rupee experienced intermittent bouts of volatility during H2:2017-18. Concerns over political turmoil in the Middle East and the concomitant knock-on impact on international crude oil prices drove the rupee lower against the dollar during the first two weeks of November 2017. A weakening US dollar and robust foreign portfolio investor (FPI) purchases in the Indian debt market supported the rupee through December and early January (Chart IV.17a). In the latter part of January and in February, the re-emergence of concerns around the repercussions of elevated energy prices on India's trade deficit, anxiety around recalibration of the speed of monetary policy tightening by the Federal Reserve upon arrival of strong wages and employment data, and the introduction of LTCG tax in India subjected the rupee to downward pressure. This was accentuated by the strengthening of the US dollar and sales by FPIs in the equity and debt markets. Net purchases by FPIs from mid-March 2018 supported the rupee. Overall, the rupee appreciated marginally from its end-September 2017 levels in contrast to currencies of peers that are running current account deficits (Chart IV.17b).

The Indian rupee depreciated in nominal terms against a basket of 36 currencies of trading partners between September 2017 and March 2018 (Table IV.1). In real terms also, the rupee depreciated, although the extent of depreciation was lower than in nominal terms, reflecting inflation differentials.

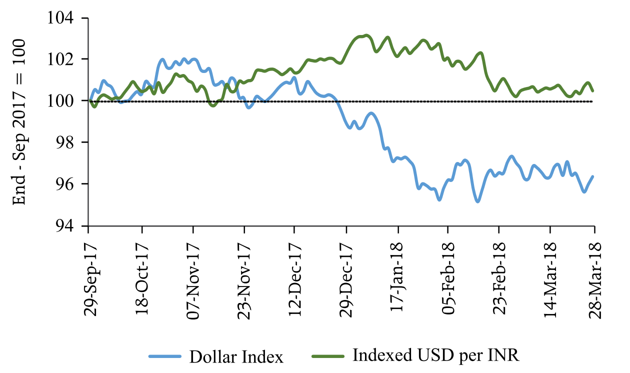
Table IV.1: Nominal (NEER) and Real Effective Exchange Rates (REER): Trade-based (Base: 2004-05=100)

Exchange Rate	Index: end-March 2018 (P)	Appreciation (+)/Depreciation(-) (Per cent) March 2018 over September 2017
36-currency NEER	74.9	-2.0
36-currency REER	117.4	-1.5
6-currency NEER	65.0	-3.4
6-currency REER	124.4	-3.2

P: Provisional.
Note: REER figures are based on the Consumer Price Index (Combined).
Source: RBI.

Chart IV.17: Exchange Rates

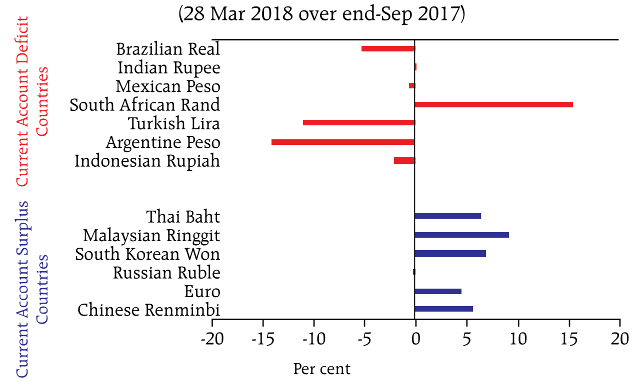
a: Exchange Rates - India and the US



Sources: RBI and Bloomberg.

b: Movement of Major Currencies Against the US dollar

(28 Mar 2018 over end-Sep 2017)



Source: Bloomberg.

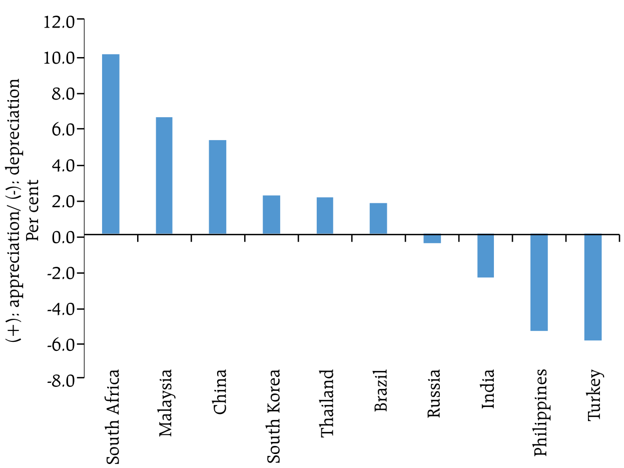
Currencies of peer economies such as South Africa, Malaysia, China and South Korea, among others, appreciated in real terms, while those of the Philippines and Turkey depreciated (Chart IV.18).

IV.1.6 Credit Market

After remaining depressed for nearly two years, non-food credit built upon the uptick that started around June 2017 and expanded in double digits from December 2017. The resurgence in credit growth was observed across bank groups, though the pace of growth continues to vary among bank groups. The year-on-year growth rate of bank credit for scheduled banks was 11.1 per cent as on March 16, 2018. Credit extended by private sector banks and public sector banks grew by 21.5 per cent and 6.7 per cent, respectively. Credit extended by foreign banks has returned to positive territory after a year-long contraction (Chart IV.19).

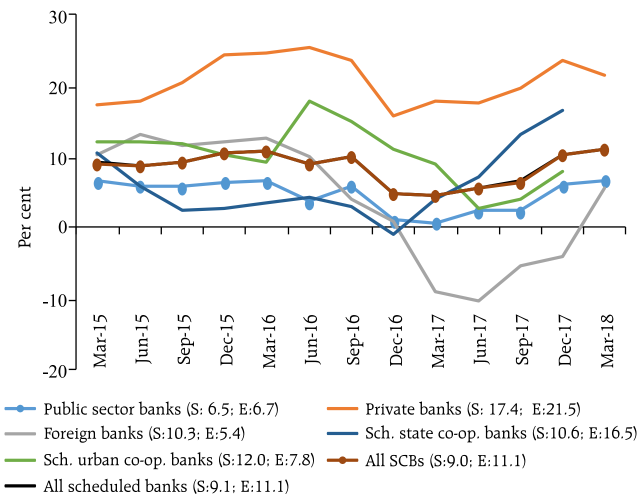
Credit growth is also becoming increasingly broad-based (Chart IV.20), with offtake by industry turning positive after a protracted period of contraction. The industry sub-groups that registered the sharpest improvement in credit flow on a y-o-y basis as of February 2018 include mining and quarrying, food processing, textiles, chemicals, rubber, leather, glassware and engineering industries.

Chart IV.18: REER - February 2018 over September 2017



Source: Bank for International Settlements.

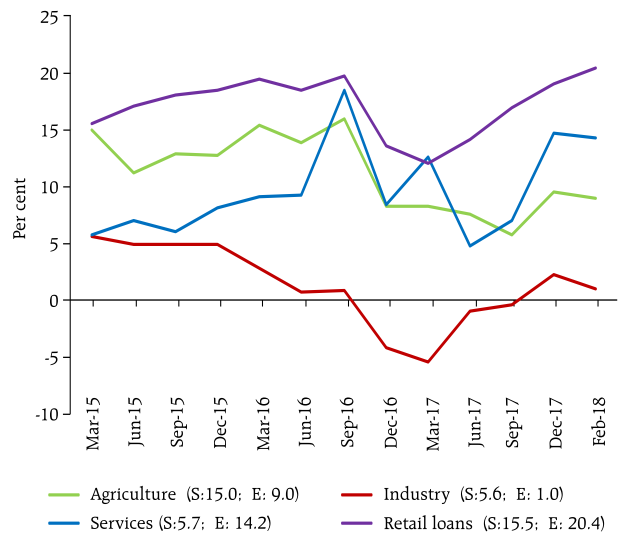
Chart IV.19: Bank Group-wise Credit Growth



Notes: 1. Data for private banks from March 2017 onwards include small finance banks.
2. Data for March pertain to March 16, 2018.

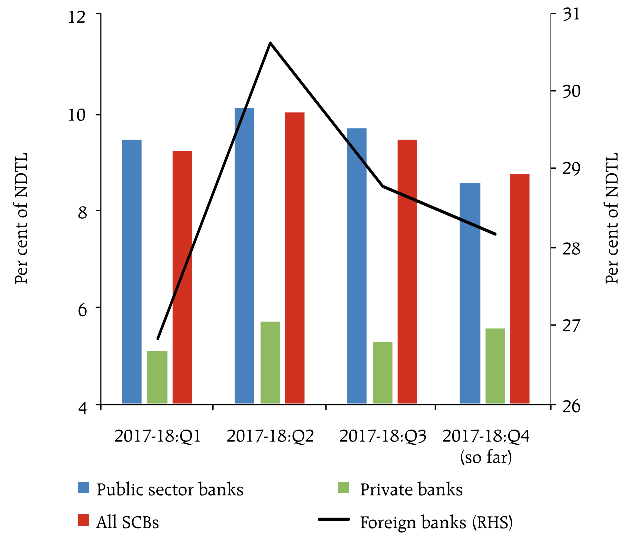
Source: RBI. S: Start E: End

Chart IV.20: Sectoral Credit Growth



Source: RBI. S: Start E: End

Chart IV.22: Excess Statutory Liquidity Ratio



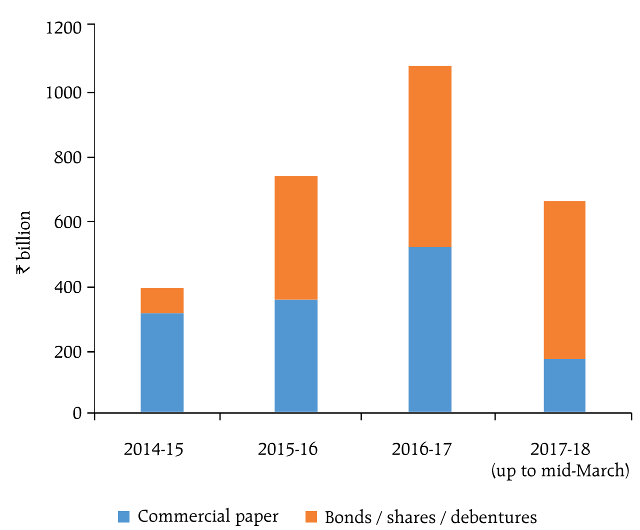
Source: RBI.

With a pick-up in the traditional form of financing through loans, resource flow to the commercial sector of the economy by way of non-SLR investments (investment in commercial paper (CP) and bonds/shares/debentures issued by non-financial corporates) by banks declined in 2017-18 (Chart IV.21).

Concomitant with the reduction in surplus liquidity in the system, pick-up in credit growth as also rising risk of fluctuations in government bond yields, investment in government securities by banks over and above the prescribed statutory liquidity ratio (SLR) declined through H2. The banking system as a whole maintained excess SLR by 8.2 per cent of their net demand and time liabilities (NDTL) as on March 2, 2018 (Chart IV.22).

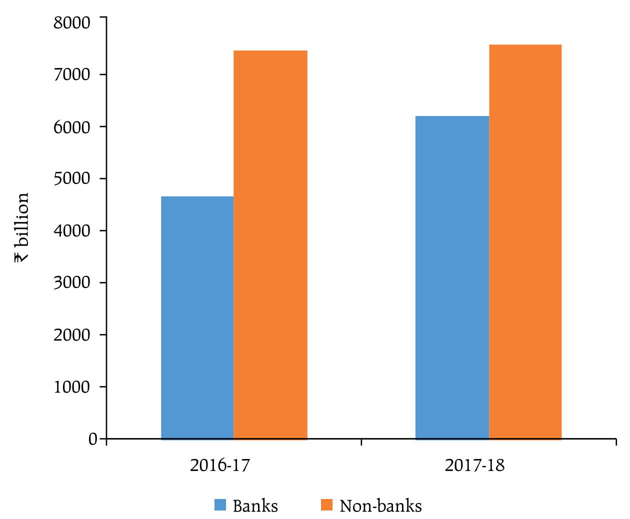
The total flow of financial resources to the commercial sector in 2017-18 (up to March 16, 2018) was higher than in the comparable period a year ago (Chart IV.23). While funding from the banking sector increased by 33 per cent, that from the non-bank sector (including

Chart IV.21: Non-SLR Investment



Source: RBI.

Chart IV.23: Flow of Financial Resources



Sources: RBI, Securities and Exchange Board of India (SEBI), National Housing Bank (NHB) and Life Insurance Corporation of India (LIC).

Table IV.2: Funding from Non-Bank Sources to the Commercial Sector

(Amount in ₹ billion)

Item	April to mid-March			
	2016-17		2017-18	
	Amount	Per cent to Total	Amount	Per cent to Total
A. Flow from Non-banks (A1+A2)	**7,336**	**100.0**	**7,491**	**100.0**
A1. Domestic Sources	**5,114**	**69.7**	**4,869**	**65.0**
1 Public issues by non-financial entities $	120	1.6	380	5.1
2 Gross private placement by non-financial entities $	1,804	24.6	1,273	17.0
3 Net issuance of CPs subscribed to by non-banks	1,465	20.0	462	6.2
4 Net credit by housing finance companies #	761	10.4	1,117	14.9
5 Total accommodation by 4 RBI regulated AIFIs $	192	2.6	708	9.4
6 NBFCs-ND-SI (net of bank credit) *	541	7.4	588	7.8
7 LIC's net investment in corporate debt, infrastructure and social sector $	230	3.1	341	4.6
A2. Foreign Sources	**2,222**	**30.3**	**2,622**	**35.0**
1 External Commercial Borrowings / FCCB @	-467	-6.4	-108	-1.4
2 Short-term credit from abroad *	167	2.3	604	8.1
3 Foreign Direct Investment to India @	2,523	34.4	2,126	28.4

#: Up to Nov. *: Up to Dec. @: Up to Jan. $: Up to Feb.

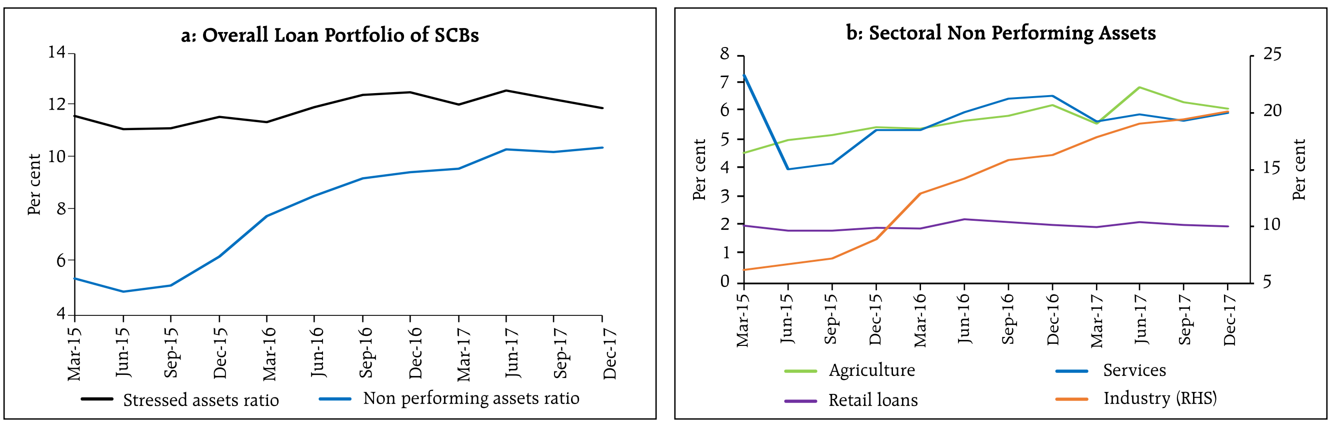
Sources: RBI, SEBI, NHB, LIC, BSE, NSE and merchant banks.

domestic and foreign sources) increased marginally by 2 per cent. It needs to be noted that data on most non-bank sources of funding are available with a lag. Overall funding provided by banks and non-banks to the commercial sector improved by 14 per cent.

Apart from banks, the main sources of domestic funding for the commercial sector during 2017-18 were the corporate debt market (private placement of debt), housing finance companies, the four RBI-regulated all India financial institutions (AIFIs) and non-banking financial companies (NBFCs) (Table IV.2). Further, funding through public issues increased sharply; as a result, their share in total funding increased by more than three-fold. Foreign direct investment and short-term credit from abroad were the main sources of foreign non-bank funding to the commercial sector, with the latter showing a sharp over three-fold increase.

Even as the stressed assets ratio of banks has stabilised, the overall level of gross non-performing assets in the system has continued to rise, especially in the case of industry due to the continuing improvement in asset quality recognition at banks (Chart IV.24). This overhang has been one of the factors that has held down the surge in growth rate of loan books of public sector banks.

Chart IV.24: Stressed Assets and Non-Performing Assets*



*:As per cent of gross advances.
Source: RBI.

Table IV.3: Transmission to Deposit and Lending Rates

(Variation in percentage points)

Period	Repo Rate	Term Deposit Rates		Lending Rates			
		Median Term Deposit Rate	WADTDR	Median Base Rate	1 Yr Median MCLR	WALR - Outstanding Rupee Loans	WALR - Fresh Rupee Loans
January 2015 to March 2018	-2.00	-1.65	-2.04	-0.80	*	-1.59	-1.90
April 2016 to March 2018	-0.75	-0.95	-1.13	-0.20	-1.05	-0.95	-0.92
Memo:							
Pre-Demonetisation							
January 2015 to October 2016	-1.75	-0.99	-1.26	-0.61	*	-0.75	-0.97
April 2016 to October 2016	-0.50	-0.29	-0.35	-0.01	-0.17	-0.11	0.01
Post-Demonetisation							
November 2016 to March 2018	-0.25	-0.66	-0.78	-0.19	-0.88	-0.84	-0.93

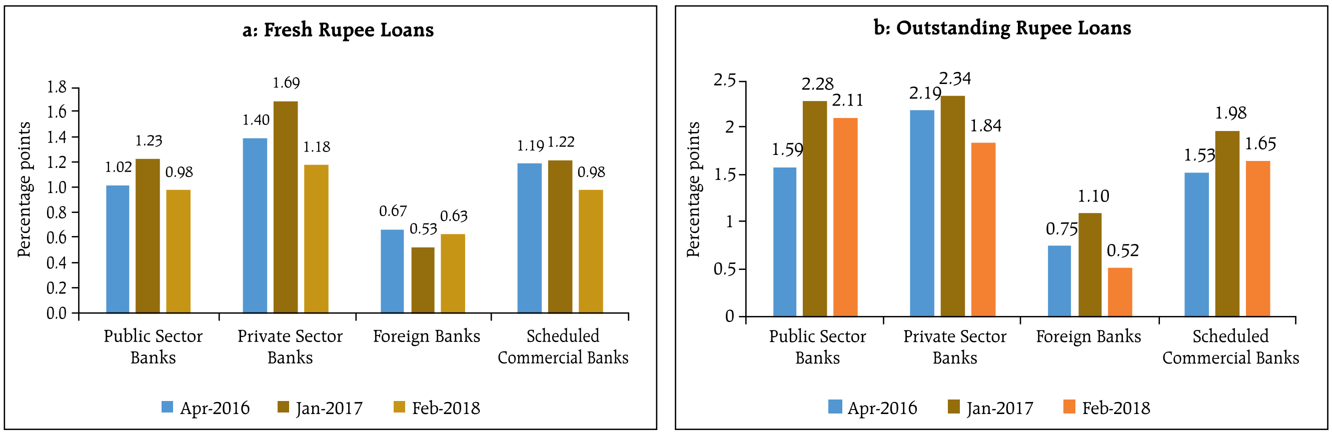
WADTDR: Weighted average domestic term deposit rate. WALR: Weighted average lending rate. MCLR: Marginal cost of funds based lending rate system.
Latest data for WADTDR and WALR pertain to February 2018.
*: MCLR system was put in place on April 1, 2016.
Source: RBI.

IV.2 Monetary Policy Transmission

The surge in low cost current account and savings account (CASA) deposits into the banking system post demonetisation, coupled with the aggressive reduction in term deposit rates, aided the pass through of policy rate cuts to lending rates of commercial banks (Table IV.3). The speed of transmission gathered momentum from November 2016, with lending rates falling faster than term deposit rates. This also reflected the still subdued demand for credit and the availability of alternative non-bank sources of financing. The extent of reduction in lending rates on outstanding loans continued to be relatively small though, due to sticky interest rates on base-rate-linked loans and the 1-year reset period of MCLR-linked loans.

Since January 2015 – when the accommodative cycle of monetary policy commenced – the median base rate has declined by 80 basis points (bps) as against the cumulative decline of 200 bps in the policy repo rate. Significantly, the pace of decline in the base rate slackened drastically after the introduction of the MCLR in April 2016. As the proportion of outstanding loans linked to the base rate (which were contracted during July 2010 – March 2016) declined only gradually through 2016-17 and in 2017-18, the transmission of policy rate cuts to outstanding loans amounted to 55 bps during 2017-18 (up to February), *albeit* higher than 40 bps during 2016-17. As a result, the monthly median spread between the WALR and one-year MCLRs of individual banks declined after scaling a peak in January 2017 (Chart IV.25).

Chart IV.25: Median Spread - WALR over 1-year MCLR



Source: RBI.

The asset quality of banks plays a significant role in keeping the spread (over the MCLR/base rate) low. With deterioration in asset quality, banks tend to charge higher spreads by loading higher credit risk premia while pricing loans, thereby impeding monetary transmission. A study in this regard confirms this observed behavioural relationship (Box IV.1).

Box IV.1: Asset Quality and Monetary Transmission

Efficient monetary transmission is contingent upon the health of the banking system, particularly in a bank-dependent financial system such as in India (Table IV.1.1). Asset quality could impact monetary transmission by amplifying/retarding the effect of changes in short-term policy/money market interest rates on lending interest rates as well as by changing banks' lending standards and their use of non-price measures while sanctioning loans. The impact of asset quality on monetary transmission can be captured by net interest margin (NIM), which is the difference between interest income and interest expenditure (in relation to total assets). In the presence of gross non-performing assets (NPAs), transmission may be impeded if banks charge higher NIM to account for higher credit risk while maintaining their profitability (return on assets) at the targeted level. This would mean that during the easing phase of monetary policy cycle, banks will not lower their lending rates in line with the reduction in their cost of funding (John, *et al*, 2018).

In the Indian context, a question has arisen as to whether the deterioration in asset quality of banks in the recent period has had any adverse impact on monetary transmission. To test this hypothesis, Arellano-Bover/Blundell-Bond dynamic panel GMM model was used with time and bank fixed effects employing quarterly data on 72 banks – 26 public sector banks, 19 private sector banks and 27 foreign banks - for the period 2010-11 Q1 to 2017-18 Q1. Estimates reveal that credit risk, proxied separately by the gross NPA to total assets ratio and the stressed assets to total assets ratio resulted in increase in NIM of scheduled commercial banks (Table IV.1.2)[7]. This suggests that deterioration in asset quality indeed impacted monetary transmission in India.

The regression was initially conducted for the full sample period (Q1:2010-11 to Q1:2017-18). However, the impact of asset quality on NIM appeared to differ between (a) Q1:2010-11 to Q1:2015-16 (sub-period I); and (b) Q2:2015-16 to Q1:2017-18 (sub-period II).

Table IV.1.1: Share of Banks in the Flow of Resources to the Commercial Sector

(Per cent)

Year	Domestic and Foreign Sources	Domestic sources
2007-08	44.1	63.5
2008-09	47.3	58.5
2009-10	45.0	56.7
2010-11	56.9	70.2
2011-12	55.7	68.7
2012-13	48.1	61.7
2013-14	54.0	63.9
2014-15	45.5	55.2
2015-16	51.3	61.3
2016-17	34.9	43.2
2016-17 (Up to Feb 2017)	38.3	48.5
2017-18 (Up to Feb 2018)	42.9	53.5

Source: RBI, SEBI, NHB and LIC.

Table IV.1.2: Determinants of Net Interest Margin of SCBs
Dependent Variable: NIM

	Full Sample	Sub-Period I	Sub- Period II
(1)	(2)	(3)	(4)
Gross NPA	0.0057*	0.0211***	–0.0202***
Operating Expense	0.5066***	0.4313***	0.5444***
CRAR	0.0006*	0.0013***	–0.0085***
Observations	2088	1512	576

***: Significant at 1% level; *: significant at 10% level.

Notes: Model Specification: Arellano-Bover/Blundell-Bond dynamic panel-data regression-system GMM with time and bank fixed effects.

NIM = (Interest income minus interest expense) to total assets (in per cent). The regressions control for seasonality, lags, bank size, capital adequacy, return on assets, operating expense and non-interest income.

Hansen test for over identification restrictions and Arellano-Bond test for residual auto correlations are found to be satisfactory. Gross NPAs and operating expense are expressed as per cent to total assets.

Source: Staff estimates, Supervisory Returns, RBI.

[7] Similar relationship as in Table 2 is obtained – although the level of significance varies - using stressed assets ratio as an explanatory variable in lieu of gross NPAs ratio; the results using stressed assets ratio as an explanatory variable may be seen in *Monetary Policy Report, April 2016*, Box IV.1 and the Reserve Bank's *Annual Report, 2016-17*, Box III.1.

Table IV.1.3: Determinants of NIM – Bank Group-wise (Full Sample)
Dependent variable: NIM

	Scheduled Commercial Banks	Public Sector Banks	Private Sector Banks	Foreign Banks
(1)	(2)	(3)	(4)	(5)
Gross NPA	0.0057*	–0.0128***	0.0097	0.0123
Operating Expense	0.5066***	0.5614***	0.6585***	0.4870***
CRAR	0.0006*	0.0007	0.0024	0.0007
Observations	2088	754	551	783

Note: Refer to notes in Table IV.1.2.

During the first sub-period, the impact of the gross NPA ratio on NIM was positive and statistically significant, indicating that when NPA ratios were at a lower level, *albeit* rising, and credit growth was relatively strong, banks were able to charge additional risk premia to compensate for credit risk. During the second sub-period, the coefficient of the gross NPA ratio turned negative and statistically significant, suggesting that banks were not able to pass on the entire burden of NPAs to their new borrowers in the form of higher credit risk premium. Also, during this sub-period, the asset quality review (AQR) driven reclassification of restructured loans as NPAs prevented banks from recognising interest income on outstanding NPAs. Therefore, these findings suggest that in a competitive market, there are limits up to which banks could compensate themselves for a high degree of credit risk by charging additional risk premium for making provisions and achieving targeted returns on assets.

Divergent behaviour was also observed for the three bank groups - public, private and foreign – for the full sample period. While gross NPAs were found to have a negative impact on NIMs of public sector banks, they had a positive but statistically insignificant impact on NIMs of private sector and foreign banks. Since NPAs of public sector banks were at a much higher level than those of two other bank groups, the bank group-wise analysis corroborates the findings of the sub-period analysis that at higher levels of NPAs banks could not compensate themselves by charging higher credit risk premium (Table IV.1.3).

The sub-period-wise and bank group-wise analyses suggest the presence of non-linearities imposed by the gross NPA ratio in determining the impact of credit risks on NIM. To ascertain a non-linear relationship between the gross NPA ratio and NIM, it was attempted to estimate the regression for the full sample period by introducing slope dummies for the gross NPA ratio.[8] It was found that the slope is positive and statistically significant when the level of gross NPA ratio is low, and negative and statistically significant when the gross NPA ratio is higher.

In summary, the findings support the bank group-wise and sub-period wise analyses *i.e.*, at low levels of NPA ratio, banks are able to load the costs on to lending rates and protect NIMs, but not so at a higher level of NPAs.

Reference:

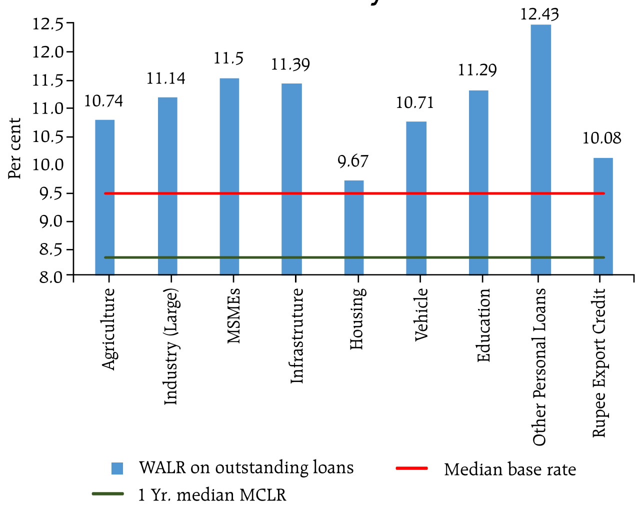
John, Joice, A.K. Mitra, Janak Raj and D. P. Rath (2018), "Asset Quality and Monetary Transmission in India", *Reserve Bank of India Occasional Papers, forthcoming.*

In continuation of the past pattern of pricing of sectoral credit, commercial banks charged the lowest spread (over and above the base rate/MCLR) on housing sector mortgages and the highest spread for personal loans (other than housing, vehicle and education), which have an unsecured component (Chart IV.26). The low spread on housing loans could be attributed to the stiff competition from the non-bank sector and low default rates in this sector (Chart IV.27).

High quality corporate bond yields continued to remain below the MCLR, making the former a relatively

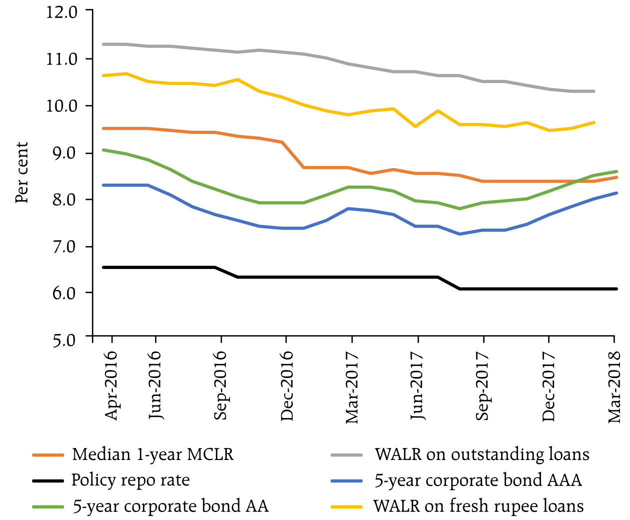
[8] $NIM_{b,t} = c + \alpha_b + \gamma_t + \delta_1 * NIM_{b,(t-1)} + \delta_2 * NIM_{b,(t-2)} + \beta_1 * d * GNPA + \beta_2 * (1-d) * GNPA + \Psi * X + \varepsilon_{b,t}$
where α_b represents the bank fixed effects, and γ_t represents the time fixed effects, *GNPA* is the gross NPA to assets ratio, *X* represents a vector of other explanatory variables, and $d = 1$ when gross NPA to asset ratio is below the sample median of 1.6 per cent of total assets and 0 otherwise. β_1 and β_2 represent the slope of GNPA on NIM, when GNPA is low and high, respectively.

Chart IV.26: Sector-wise WALR (outstanding loans) over 1-year Median MCLR and Median Base Rate – February 2018



Source: RBI.

Chart IV.28: Lending Rates and Corporate Bond Yields during MCLR Regime

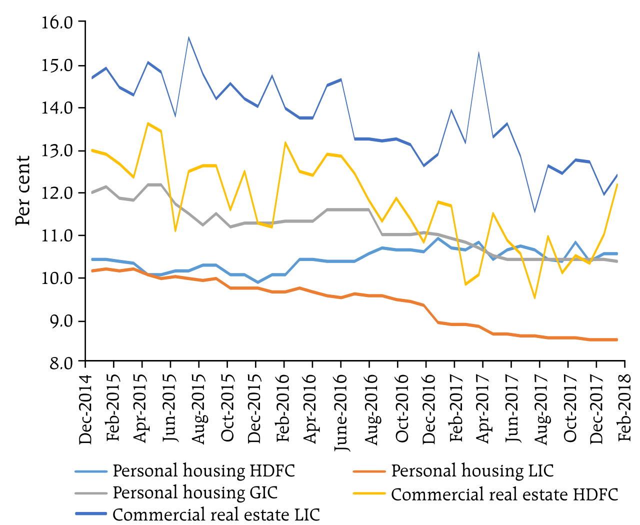


Source: RBI.

attractive instrument for raising resources by top rated corporates (Chart IV.28).

After the policy rate cut of 25 bps on August 2, 2017, the MCLR declined across tenors and across bank groups till February. During March, however, the MCLR was increased for all tenor by commercial banks. The benchmark tenor for MCLR is one year in the case of all public sector banks and most private sector banks, whereas it is dispersed across maturity buckets, including overnight and one-month tenors in the case of foreign banks[10]. Tenor-wise, the transmission was largest for the overnight tenor, followed by the one-month tenor for commercial banks (Chart IV.29a). Among bank groups, the transmission to weighted average lending rate (WALR) and weighted average domestic term deposit rate (WADTDR) was largest in the case of public sector banks, followed by foreign banks and private sector banks (Chart IV.29b).

Chart IV.27: WALR of NBFCs on Fresh Loans to Personal and Commercial Housing Segments

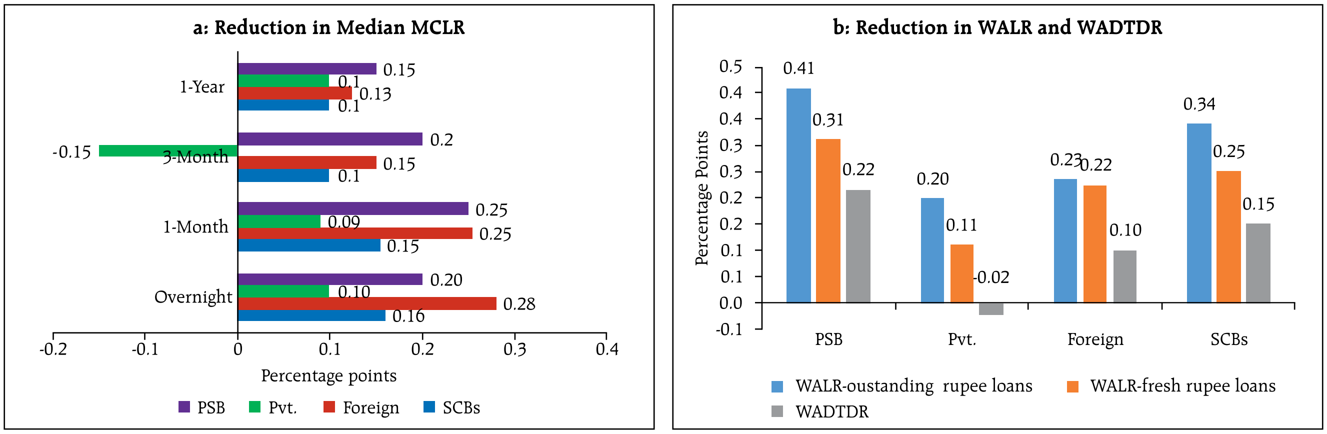


Source: RBI.

Since December 2017 and January 2018, respectively, deposit and lending rates have begun to inch up in line with interest rates in other financial market segments. With the transition of system-level liquidity from surplus towards neutrality, banks have started raising their interest rates in a sequence beginning with bulk term deposit rates, retail term deposit rates and on to MCLRs. The reduction in the share of current account and savings account (CASA) deposits of banks from 40.9 per cent in September 2017 to 39.8 per cent in mid-March 2018 could also be exerting upward pressure on the cost of funding (Chart IV.30). The one-year median MCLR of private sector banks

[10] Of the 57 commercial banks (14 public sector banks, 17 private sector banks and 26 foreign banks) for which data are available, 35 banks (14 public sector banks, 14 private banks and 7 foreign banks) have one-year MCLR as the benchmark tenor.

Chart IV.29: Transmission across Tenors and Bank Groups - since August 2, 2017 Policy

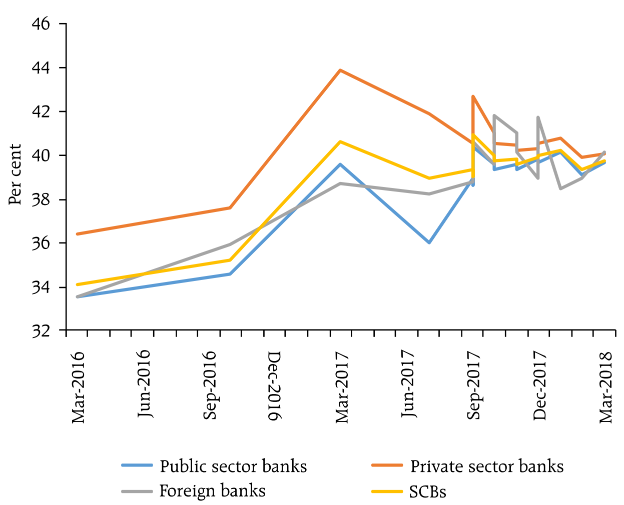


PSB: Public sector banks. Pvt.: Private sector banks. Foreign: Foreign banks. SCBs: Scheduled commercial banks (excluding regional rural banks and small finance banks).
Source: RBI.

and foreign banks increased by 10 bps and 5 bps, respectively, during January-February 2018. Further, the one-year median MCLR of both public sector banks and foreign banks increased by 5 bps and 3 bps, respectively, during March. With the WADTDR rising by 10 bps during December-February, WALR on fresh rupee loans and WALR on outstanding rupee loans of commercial banks too increased by 14 bps and 3 bps, respectively, from their lows reached in December and January, respectively.

One of the factors that impedes transmission is the higher interest rates on small saving instruments. On March 28, 2018, the Government decided to keep the interest rates on small savings unchanged for Q1:2018-19 from those notified for Q4:2017-18. As a result, interest rates on some small savings schemes are now, for the first time, lower than those prescribed under the formula for fixing small saving interest rates and are better aligned with term deposit interest rates of banks (Table IV.4).

Chart IV.30: Bank-Group wise Share of CASA Deposits in Aggregate Deposits



Source: RBI.

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

The Reserve Bank's approach to managing large and persisting liquidity surpluses in the post-demonetisation period was set out in the Monetary Policy Reports of April and October 2017. Pro-active liquidity management measures undertaken in H2:2017-18 drew upon this framework. During Q3, the Reserve Bank deployed variable rate reverse repo auctions of tenors ranging from overnight to 28 days and conducted open market sales on three occasions to absorb ₹300 billion on a durable basis (₹200 billion in October and ₹100 billion in November) in addition to the regular mopping up of liquidity through LAF fixed rate reverse repo. Accordingly, net average daily absorption of liquidity under the LAF declined from ₹1,400 billion in October 2017 to ₹718 billion in November, also aided by the ongoing increase in currency in circulation and pick-up in credit growth. Liquidity conditions temporarily turned into deficit mode in the second half of December with the slowdown in government spending prolonging the shortfall created by the usual advance tax outflows.

Table IV.4: Interest Rates on Small Savings Instruments for Q1:2018-19

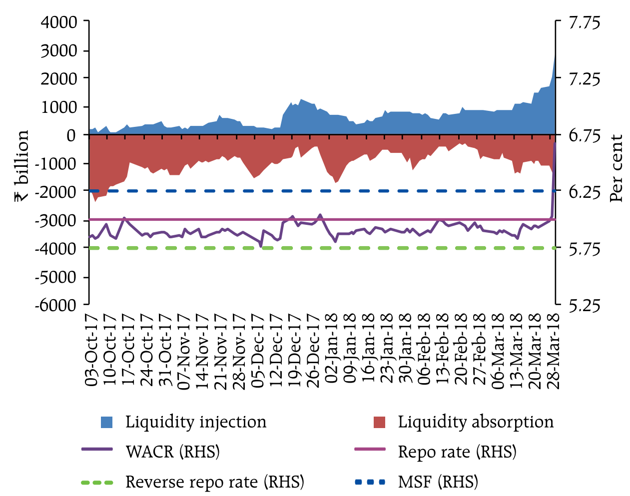
Instrument/Scheme	Maturity (years)	Spread (Percentage point) $	Average G-sec yield (Per cent) of corresponding maturity (December 2017 to February 2018)	Formula based rate of Interest (Per cent) (applicable for April to June 2018)	GoI Announced Rate of interest (Per cent) (applicable for Apr to June 2018)	Difference (Percentage point)
(1)	(2)	(3)	(4)	(5) = (3) + (4)	(6)	(7) = (6) - (5)
Savings Deposit	-				4.00	-
Public Provident Fund	15	0.25	7.67	7.92	7.60	-0.32
Term Deposits						
1-Year	1	0	6.36	6.36	6.60	0.24
2-Year	2	0	6.58	6.58	6.70	0.12
3-Year	3	0	6.81	6.81	6.90	0.09
5-Year	5	0.25	7.25	7.50	7.40	-0.10
Post Office Recurring Deposit Account	5	0	6.81	6.81	6.90	0.09
Post Office Monthly Income Scheme	5	0.25	7.21	7.46	7.30	-0.16
Kisan Vikas Patra	118 Months	0	7.67	7.67	7.30	-0.37
NSC VIII Issue	5	0.25	7.45	7.70	7.60	-0.10
Senior Citizens Saving Scheme	5	1.00	7.25	8.25	8.30	0.05
Sukanya Samriddhi Account Scheme	21	0.75	7.67	8.42	8.10	-0.32

$: 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 staff estimates.

Liquidity amounting to ₹1,315 billion was injected through variable rate repos of varying tenors in addition to regular 14-day term repos.

In Q4, surplus liquidity declined with intermittent deficits on account of the drying up of government spending and large tax collections. The Reserve Bank resorted to fine-tuning variable rate auctions on both sides, in addition to the regular operations. Average daily net liquidity absorbed under Liquidity Adjustment Facility (LAF) (including Marginal Standing Facility (MSF)) declined from ₹2,667 billion in Q2 to ₹812 billion in Q3 and further to ₹30 billion in Q4. Consequently, the weighted average call rate (WACR) inched closer to the repo rate (Chart IV.31). During Q4, the liquidity situation moved from absorption mode during January – with average daily net liquidity absorbed under LAF (including MSF) amounting to ₹353 billion – to injection mode during February and March amounting to ₹60 billion and ₹213 billion, respectively. The WACR touched a high of 6.67 per cent on March 28, 2018 on the back of usual year-end increased demand for liquidity.

Chart IV.31: Liquidity Management under LAF and Weighted Average Call Rate

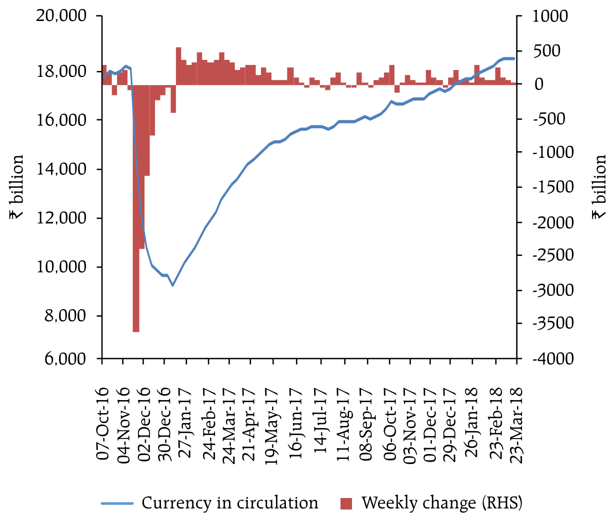


Source: RBI.

Currency in circulation reached the pre-demonetisation level during the week ended March 9, 2018 (Chart IV.32).

Anticipating tightness in liquidity conditions in March and with a view to providing greater flexibility to the banking system to tide over the usual year-end liquidity mismatches, four additional variable rate

Chart IV.32: Currency in Circulation



Source: RBI.

repo operations (₹250 billion each) of longer tenors (24 to 31 days) were conducted and standalone primary dealers (SPDs) were allowed to participate within the usual notified amount of the regular term repo auction conducted on March 28, 2018. Furthermore, liquidity was augmented in March through redemption of T-Bills, which were issued under the Market Stabilisation Scheme (MSS) in April and May 2017.

The amended RBI Act, 1934 enjoins the Reserve Bank to place the operating procedure of monetary policy and changes therein from time to time in the public domain. The Union Budget 2018-19 has proposed an amendment to Section 17 of the RBI Act, 1934 which would allow the Reserve Bank of India to accept "*money as deposits, repayable with interest, from banks or any other person under the Standing Deposit Facility Scheme, as approved by the Central Board, from time to time, for the purposes of liquidity management.*" The Standing Deposit Facility (SDF) as and when introduced will provide an additional mechanism for draining liquidity, particularly during periods of exceptional liquidity glut (Box IV.2).

IV.4 Conclusion

Equity and bond markets remain vulnerable to episodic bouts of volatility in a period of considerable uncertainty surrounding the evolution of global financial markets as well as around domestic developments which can impact market sentiment and liquidity conditions significantly, as the year gone by has shown. In the

Box IV.2: Standing Deposit Facility

The SDF will be an additional instrument of liquidity management for the Reserve Bank. It provides symmetry to the operating framework of monetary policy by introducing a standing absorption facility analogous to the injection tool embodied in the marginal standing facility (MSF). It is designed to enable the Reserve Bank to deal with extraordinary situations in which it has to absorb massive amounts of liquidity. This assumes critical importance in the context of the Reserve Bank's instrument independence. The experience with surges in capital flows in 2007 and with demonetisation in 2016 demonstrated that collateral constraints associated with instruments such as the reverse repo and the market stabilisation scheme (MSS) can often become binding, particularly when a surfeit of liquidity pushes financial prices towards the zero lower bound. The SDF will ensure that such tail events do not threaten financial stability without the need to take recourse to instruments outside the Reserve Bank's toolkit such as the MSS. In that sense, the SDF needs to be regarded as a tool for ensuring financial stability in addition to liquidity management.

Within the existing liquidity management framework, liquidity absorption through reverse repos, open market operations and the cash reserve ratio (CRR) are at the discretion of the Reserve Bank, while access to standing facilities would be at the discretion of banks. Accordingly, the SDF will enable banks to park excess liquidity with the Reserve Bank at their discretion. All existing liquidity management procedures will remain in place and the SDF will act as a backup for exceptionally high liquidity shocks. The Expert Committee to Revise and Strengthen the Monetary Policy Framework (Chairman: Dr. Urjit R. Patel) (2014) recommended

(cont...)

that the Reserve Bank should have the discretion to set the interest rate on the SDF without reference to the policy interest rate unlike the MSF rate, reverse repo rate and the Bank Rate, which are linked to the policy repo rate.

Country experiences suggest that the SDF can eventually gravitate to operating as a floor for the liquidity corridor; however, flexibility in this regard is also a feature of the country experience as, for instance, in the US context in which the facility of interest on cash reserves was initially introduced as a 'soft floor', but currently operates as a ceiling of the band around the federal funds target rate. Moreover, most of the countries that operate an SDF as a liquidity floor do not have an instrument akin to the fixed rate reverse repo in India (Table IV.2.1).

Table IV.2.1: Standing Deposit Facility - Country Practices

Sr. No.	Country	SDF Rate	Automatic	Amount Restriction
1	Canada	Provides a floor to the operating band; is set 25 bps below the target rate for the overnight rate, *i.e.*, the policy interest rate *(1.0 per cent since January 17, 2018).*	Yes	No
2	European Central Bank	Provides a floor to the overnight market interest rate *(-0.40 per cent since March 16, 2016).*	Standing facilities are available to eligible counterparties at their own initiative, subject to fulfilment of certain operational access conditions.	No
3	Singapore	50 bps below the reference rate, with a floor of zero; reference rate is the weighted average of successful bids for Monetary Authority of Singapore's S$500 million overnight clean borrowing or loan conducted during money market operations on the same day, rounded to two decimal places.	No	Transactions of minimum size of S$10 million, with increments of S$1 million.
4	Sweden	75 bps below the repo rate; is effectively the floor *(-1.25 per cent since February 17, 2016).*	Yes	No
5	United Kingdom	Currently the rate on overnight standing deposit facility is 0.25 per cent (25 bps below the Bank Rate); acts as a floor to the interest rate corridor.	No	No
6	Indonesia	75 bps below the BI 7-day reverse repo rate *(3.50 per cent since September 25, 2017).*	Yes	Minimum Rupiah 1,000 million; with multiples of Rupiah 100 million.
7	Malaysia	25 bps below the overnight policy rate; is the designated floor rate *(3.0 per cent since January 25, 2018).*	No	Minimum amount of RM 5 million.
8	Sri Lanka	Provides the floor for absorption of overnight excess liquidity from the banking system *(7.25 per cent).*	Yes	No
9	South Africa	100 bps below the policy rate *(5.5 per cent from March 29, 2018).*	Yes	No
10	South Korea	100 bps below the Bank of Korea Base Rate, is effectively the floor; in case of need can be at the same level as the Base Rate *(0.50 per cent since November 30, 2017).*	Yes	No
11	Thailand	50 bps below the policy rate; sets a floor on the overnight market interest rates *(1.0 per cent since April 29, 2015).*	Yes	No
12	The Philippines	50 bps below the overnight reverse repurchase (RRP) rate; sets a floor on the overnight market interest rates.	Yes	No
13	Russia	100 bps below the key policy rate; floor of the corridor *(6.25 per cent from March 26, 2018).*	Yes	Volume of liquidity absorbed through these operations is restricted only by the limits connected with Bank of Russia risk management

Note: 1. Access to Standing Deposit Facility is considered automatic, unless a specific mention is found on the central bank's website indicating otherwise.
2. No limit is assumed for the deposit facility, unless a specific mention is found on the central bank's website regarding the limit.
Source: Central bank websites.

forex market, global developments – particularly in the systemically important economies – will continue to influence exchange rate developments, especially through the magnitude and direction of capital flows. Credit growth is accelerating and is also becoming broad-based, which bodes well for sustaining the pick-up in domestic economic activity that appears to have taken root since Q3. Going forward, liquidity conditions would be managed in a manner consistent with the Reserve Bank's policy stance of moving towards *ex ante* neutrality in order to facilitate closer alignment of the operating target of monetary policy – the WACR – with the policy repo rate. Issues in monetary transmission will continue to engage the Reserve Bank and market participants, and efforts will be carried forward towards bringing in greater transparency in the setting of interest rates by banks.

V. External Environment

Global growth has gained further momentum, supported by both advanced and emerging market economies. World trade growth has outpaced global growth after lagging behind for two years. Inflation remains subdued and below target levels across most regions despite improving demand and firming up of crude oil prices.

Since the MPR of October 2017, global economic activity has gained strength, with growth impulses becoming synchronised across regions. Global trade has expanded, buoyed by gradually improving global demand and especially, the revival of investment activity in advanced economies (AEs). Crude prices have firmed up on strong demand and geo-political concerns, necessitating the drawdown of inventories even as production cuts by the Organisation of the Petroleum Exporting Countries (OPEC) restrain supply. Metal prices have risen, fuelled by demand-supply imbalances and resurgent demand as economic prospects improve. Inflation has remained below target levels in most AEs despite the pick-up in aggregate demand and rise in some commodity prices, while it remains subdued in most emerging market economies (EMEs).

International financial markets, which were buoyed by reflation trade and remained resilient to the normalisation of monetary policy by the US Fed during Q4:2017 and January 2018, turned volatile beginning the first week of February on (i) strong payrolls and accelerated wage growth data in the US fuelling expectations of faster tightening of monetary policy; (ii) announcement of protectionist trade measures by the US and retaliatory talk; and (iii) uncertainty surrounding the Brexit transition deal. Equity markets in advanced and emerging market economies, which had rallied in H2:2017, shed some of their gains in Q1:2018. Bond yields in major AEs hardened on expectations of faster monetary policy normalisation and rise in inflation in some AEs. The US dollar remained weak, while the euro and the yen appreciated. EME currencies behaved divergently with a general appreciating bias until January 2018.

V.1 Global Economic Conditions

The US economy slowed in Q4:2017 on surging imports and depleting inventories, after growing at a robust pace in Q3 on the back of strong private consumption, investment activity and net exports. For the year 2017 as a whole, GDP grew at 2.3 per cent, accelerating from 1.5 per cent in the preceding year. Labour market conditions improved further with the unemployment rate falling to a low of 4.1 per cent. Industrial production also registered a robust growth driven largely by mining activity. These developments in conjunction with rising consumer confidence and higher disposable incomes due to tax cuts should support growth. However, the impact of the tax cuts on the fiscal balance and the ramifications from a potential trade war remain major risks to the outlook (Table V.1).

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

(Per cent)

Country	Q4-2016	Q1-2017	Q2-2017	Q3-2017	Q4-2017	2018 (P)	2019 (P)
Advanced Economies							
Canada	2.2	3.7	4.3	1.5	1.7	2.3	2.0
Euro area	2.4	2.4	2.8	2.8	2.4	2.2	2.0
Japan	1.1	1.9	2.4	2.4	1.6	1.2	0.9
South Korea	2.8	4.0	2.4	5.6	-0.8	3.0	3.0
UK	2.8	1.2	0.8	2.0	1.6	1.5	1.5
US	1.8	1.2	3.1	3.2	2.9	2.7	2.5
Emerging Market Economies							
Brazil	-2.8	5.2	2.4	0.8	0.4	1.9	2.1
China	6.8	5.6	7.6	7.2	6.4	6.6	6.4
Malaysia	5.2	7.2	5.2	7.2	3.6	4.8	4.8
Mexico	3.9	2.5	1.0	-0.7	3.1	2.3	3.0
Russia*	0.3	0.5	2.5	2.2	0.9	1.7	1.5
South Africa	0.4	-0.5	2.9	2.3	3.1	0.9	0.9
Thailand	3.2	4.8	5.2	4.0	2.0	3.5	3.4
Memo:	**2017 (E)**			**2018 (P)**			**2019 (P)**
World Output	3.7			3.9			3.9
World Trade Volume	4.7			4.6			4.4

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

Source: Bloomberg and International Monetary Fund (IMF).

Economic activity in the euro area continued to expand at a solid pace in H2, marking 2017 as one of the best years for the area in over a decade, although consumer spending and factory activity slowed down, possibly weighed down by political uncertainty and the strengthening of the currency. However, consistently falling unemployment rate and elevated consumer confidence continued to point to the underlying strength of the economy. The outlook for the euro area remains upbeat with still accommodative monetary policy and rising global demand, although the strong euro could act as a drag on net exports and growth.

Despite some slowdown more recently, Japan recorded eight consecutive quarters of growth up to Q4:2017, with the unemployment rate remaining subdued at 2.5 per cent in February. Incoming data, however, point to a slowdown in momentum as the Japanese economy entered 2018. Manufacturing purchasing managers' indices (PMI) eased in QI:2018, reflecting the strengthening of the yen, and this could take its toll on export orders. The strong currency has also hurt business sentiment in QI:2018, amidst rising concerns about potential trade wars.

Economic activity also continued to expand in major EMEs. China's economy grew by 6.9 per cent in 2017, above both the official target of 6.5 per cent and 6.7 per cent recorded in 2016. Notwithstanding financial risks, a government-led economic restructuring is underway, transitioning China from an export-driven path to a more balanced one that is driven by domestic demand. The economy began 2018 on a firm note, with buoyant retail sales indicating robust consumption and increasing industrial production in Q1, though investment in fixed assets remain subdued on efforts by authorities to contain local government debt. Risks emanating from a potential trade war with the US have, however, clouded the economic outlook.

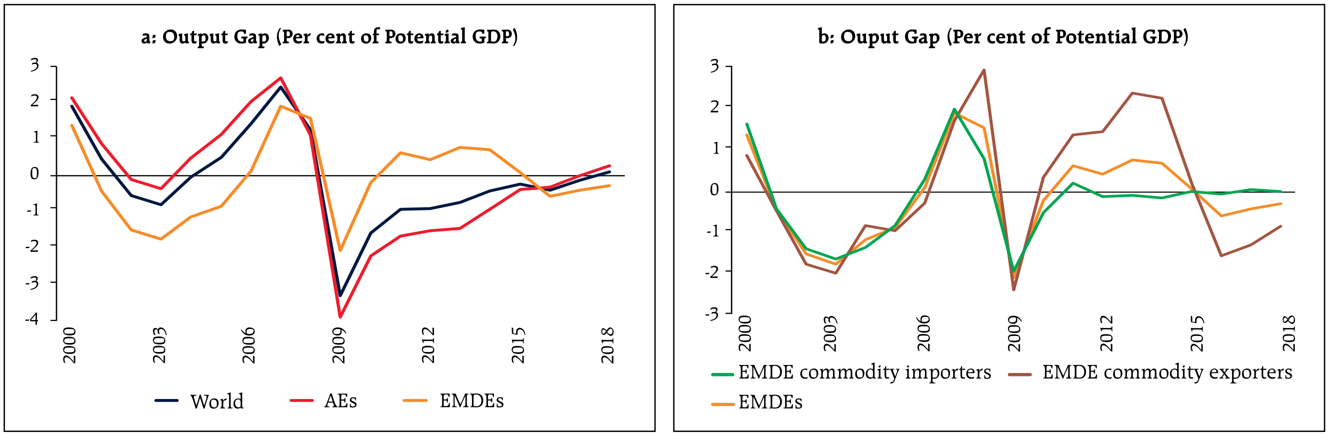
In Brazil, economic activity is gaining momentum, driven by higher commodity prices and improved fiscal outlook. The unemployment rate has edged intermittently lower with an improvement in industrial production. Elevated levels of public debt and inability to enact pension reforms has led to sovereign rating downgrade, which may stall the recovery. The Russian economy has continued to recover, benefiting from monetary policy easing, higher oil prices and strong household consumption. The production cut deal with OPEC will, however, keep oil output contained, thus limiting its export potential. In South Africa, leading indicators, *viz.,* the manufacturing PMI and business confidence improved in Q1:2018. In Indonesia, growth accelerated in Q4 for the second consecutive quarter on account of strong investment and public sector spending, while rising imports diminished the contribution of net exports. The Thai economy grew at its fastest pace in five years in 2017 – despite slower growth in Q4:2017 relative to preceding quarters – underpinned by domestic demand, supported by improved consumer and business confidence and accommodative monetary and fiscal policies. The Malaysian economy maintained its robust momentum in the fourth quarter, fuelled by strong private sector spending and rising exports.

Even as the cyclical recovery is underway in AEs, potential output growth is falling due to subdued capital formation, slowing factor productivity growth and less favourable demographics (World Bank, 2018). Among emerging and developing economies (EMDEs), output gaps have vanished in the case of commodity importing countries, but for commodity exporting countries, there is still some slack (Chart V.1).

The composite PMI indicates economic growth remained robust across most economies in Q1:2018. The composite leading indicators (CLIs) of Organisation for Economic Co-operation and Development (OECD) point to prospects of growth strengthening in the euro area, Russia, Brazil and Japan, and remaining stable in the US and China (Chart V.2).

Global trade, which has been picking up since late 2016 - early 2017 led by strengthening global

Chart V.1: Output Gap

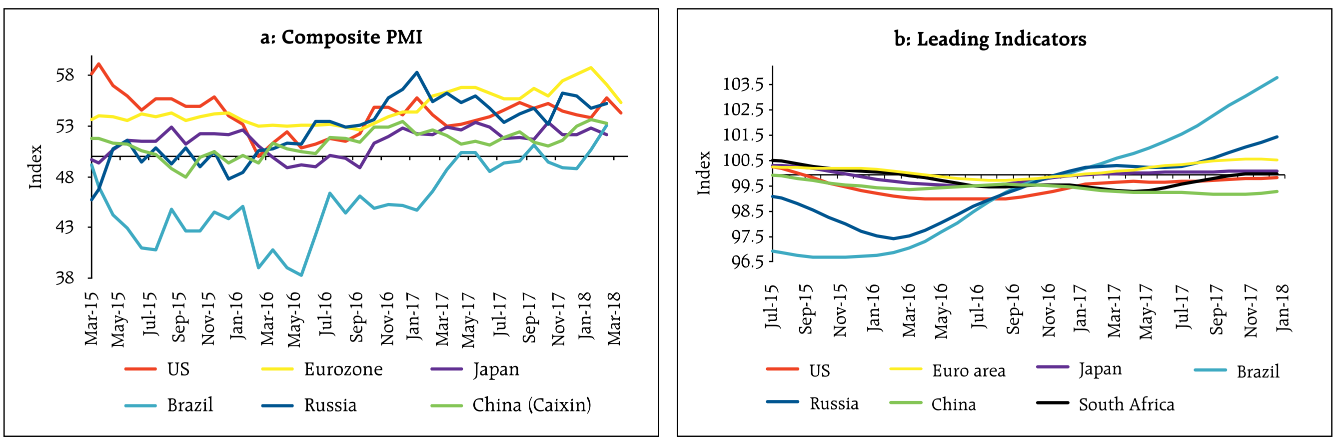


Source: Global Economic Prospects, January 2018, World Bank.

demand, capital spending and robust manufacturing activity, accelerated further into the final quarter of 2017 (Chart V.3a). The US, China, Japan and Germany were major contributors to global trade growth in 2017. Strong trade volume growth continued in Q1:2018 with container shipping and air freight remaining above trend. The forward-looking export orders index of the World Bank has reached its highest level since 2011, pointing to sustained expansion in trade flows in the first half of 2018. However, recent protectionist measures announced by the US and likely to be adopted by other major AEs could exacerbate trade wars and undermine global growth, trade and welfare. The recent recovery in global trade also remains vulnerable to geopolitical tensions and political uncertainties, which may dampen prospects for investments and cross-border trade financing flows. World trade volume is projected to grow by 4.6 per cent in 2018, marginally lower than 4.7 per cent in 2017, but higher than world GDP growth (WEO Update, January 2018, IMF).

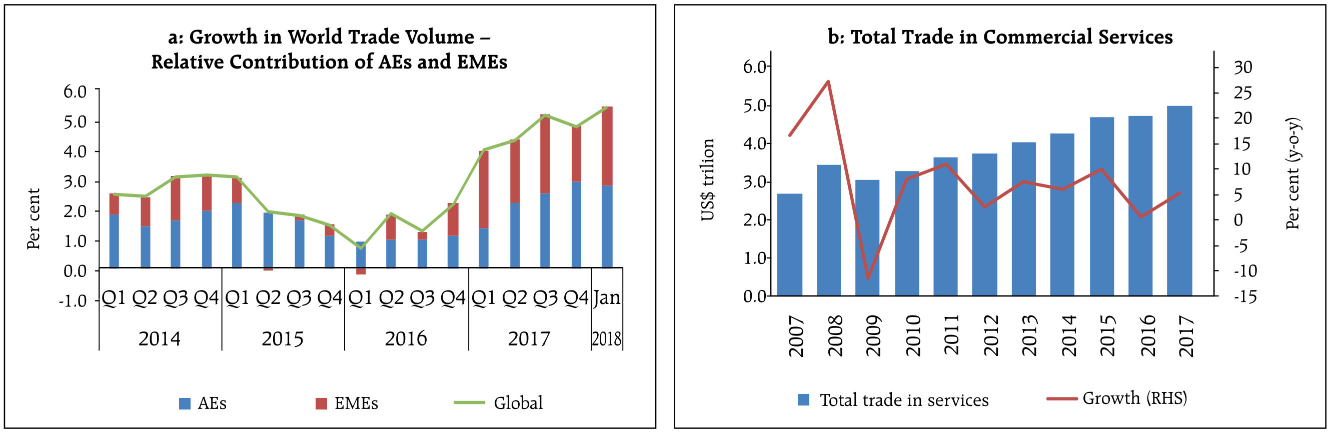
Besides merchandise trade, commercial trade in services also recorded a broad-based recovery across AEs and EMDEs in 2017 after it plunged in 2016 (Chart V.3b). Global information technology spending – a critical driver of global trade in software services – is projected to improve in 2018, though the stricter US policy of issuing H-1B visas could be a potential drag.

Chart V.2: Leading Indicators



Source: Bloomberg and Organisation for Economic Co-operation and Development.

Chart V.3: World Trade



Source: CPB Netherlands and World Trade Organization.

V.2 Commodity Prices and Inflation

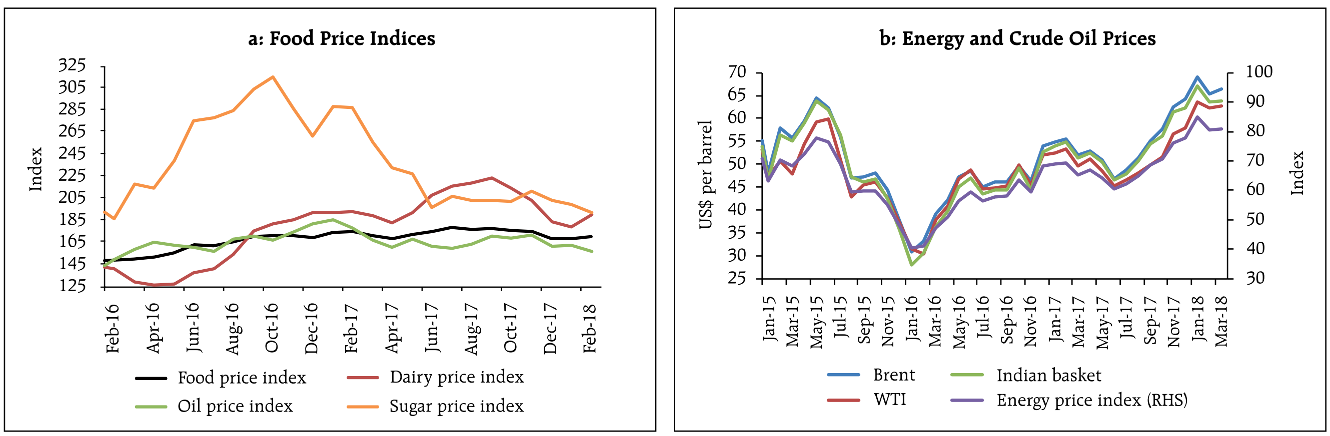
During H2:2017 and Q1:2018, global commodity price movements have largely reflected commodity-specific demand-supply imbalances and the movement of the US dollar. The Bloomberg commodity index increased by 3.6 per cent during October to March 2018.

The food price index of the Food and Agriculture Organisation (FAO) fell by 3.2 per cent on account of decline in prices of sugar and dairy products. International sugar prices, in particular, came under considerable downward pressure mostly because of record levels of output in major producing countries, which released substantial export surpluses (Chart V.4a).

Crude oil prices surged by around 22 per cent over the last six months with Brent touching a three-year high in January on strong demand riding the improving outlook for global economic activity, especially manufacturing and reduced supplies as cuts in production by OPEC and Russia offset the ramped up shale production in the US. The weak US dollar has also provided a fillip (Chart V.4b).

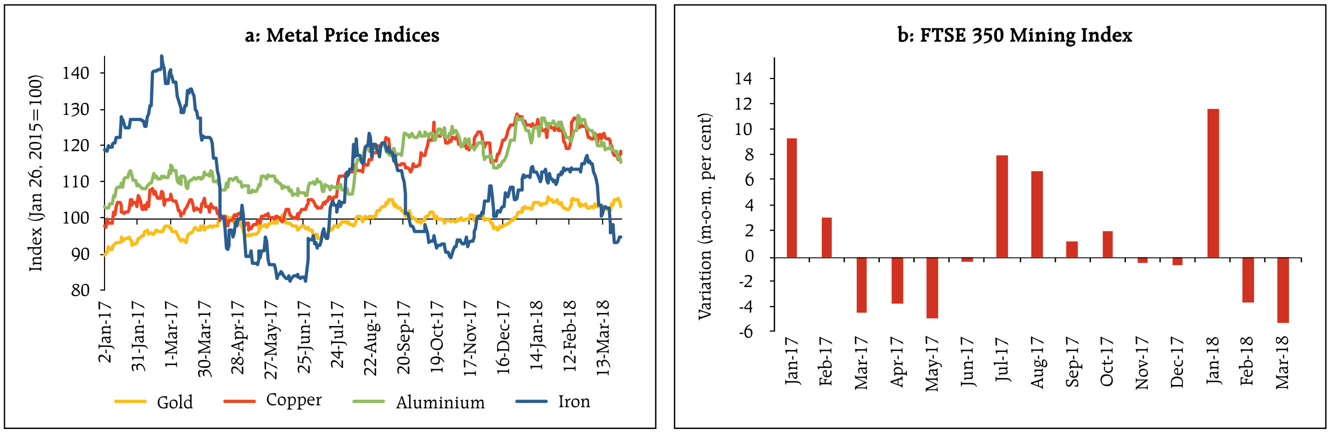
Base metal prices rose by 2.3 per cent during October to March led by copper. Copper prices rose by 3.8 per cent during the same period, touching almost four-year high in December 2017, before losing some steam in recent months on the jump in inventories of refined copper, slowdown in imports by China and the equity market sell-off triggering risk-off sentiment

Chart V.4: Food and Crude Price Indices



Source: World Bank, and Food and Agriculture Oraganization.

Chart V.5: Commodity Prices and Equities



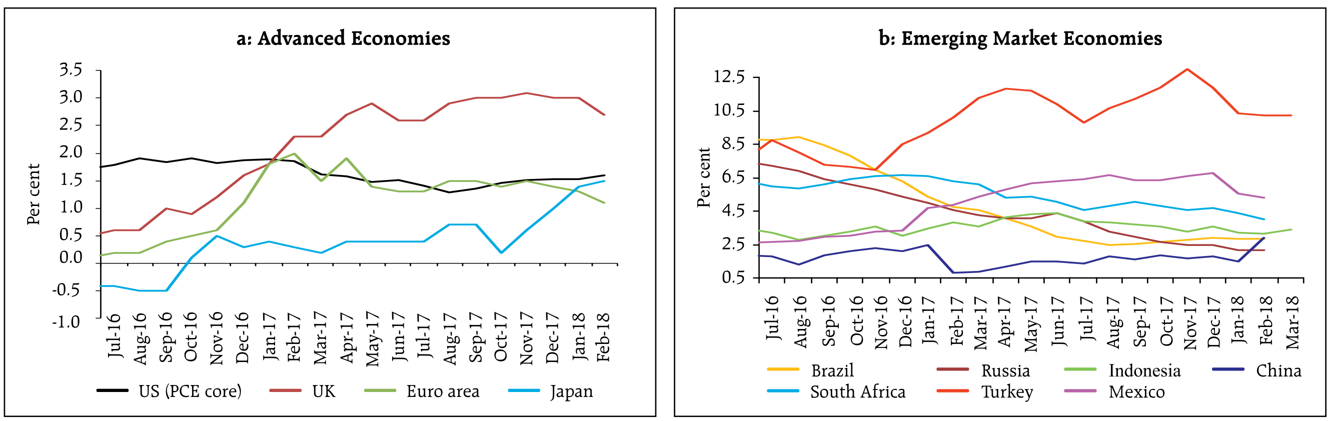
Source: Bloomberg.

(Chart V.5). Gold prices, which had started rising since mid-December due to the weak US dollar, fell to a two-month low at the beginning of March on the outlook for the US economy turning brighter. However, safe haven demand triggered by fears of a trade war led to firming up of prices.

Barring some exceptions, inflation remains subdued and below target levels in major advanced and emerging economies. Among AEs, CPI inflation in the US has risen over the year and has remained above two per cent from October 2017. However, the personal consumption expenditure (PCE) deflator, the measure of inflation used by the Fed, remains below the target. The tightening labour market, rising wages and the boost to disposable incomes from tax cuts pose upside risks. Inflation in the euro area slowed for the third consecutive month in February, despite rising energy prices. In Japan, inflation jumped to a 34-month high in February due to surge in food prices, but remains well below the central bank's target (Chart V.6a).

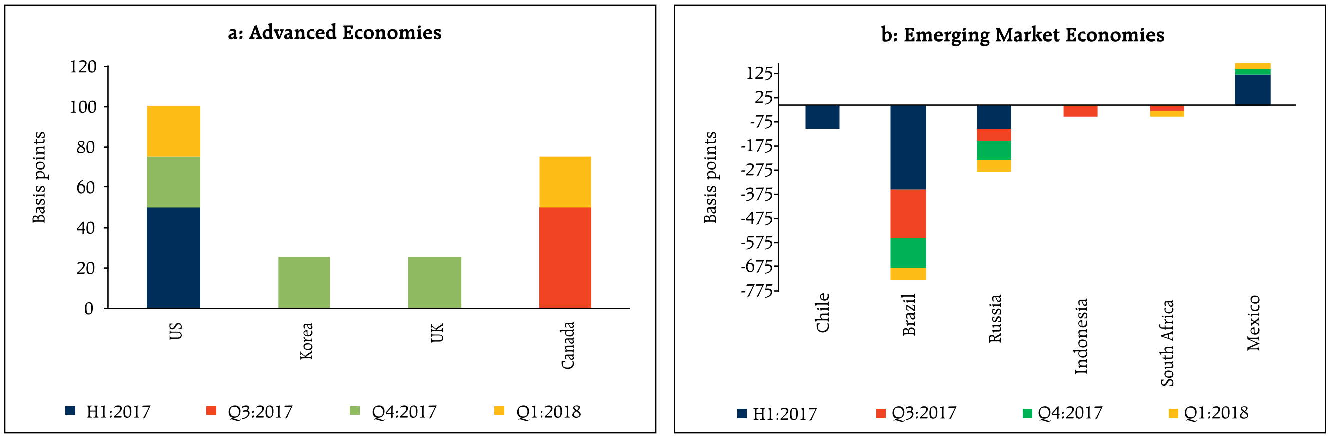
Inflationary pressures in EMEs are ebbing (Chart V.6b). In Russia, inflation continued to edge lower, falling to a two-decade low in February. In Brazil, inflation moderated on falling housing costs and food prices, while it eased in South Africa to a three-year low in February on falling transport and food costs. China's consumer price inflation which remained soft until January 2018, rose in February on usual festival related demand. In Indonesia, it has been softening on easing of housing and utility prices. Inflation in Turkey continued to be in double digits, though the easing of price pressures in March pulled it down to an eight-month low.

Chart V.6: CPI Inflation (y-o-y) in Select Economies



PCE: Personal Consumption Expenditure.
Source: Bloomberg.

Chart V.7: Policy Rate Changes in Select Major Economies



Source: Bloomberg.

V.3 Monetary Policy Stance

The monetary policy stance has remained accommodative in many countries, with the Fed's policy normalisation progressing along expected lines. The US Fed raised its policy rate by 25 bps each in December 2017 and March 2018 meetings. The March 2018 projections of the Federal Open Market Committee (FOMC) participants suggest that the Fed could hike the policy rate two more times in 2018. In contrast, the ECB has maintained its ultra-accommodative policy stance and kept its rates at a record low. The strong euro is weighing on inflation and keeping it below the target. The Bank of Japan has continued with its ultra-accommodative stance as inflation has remained well below the target (Chart V.7a).

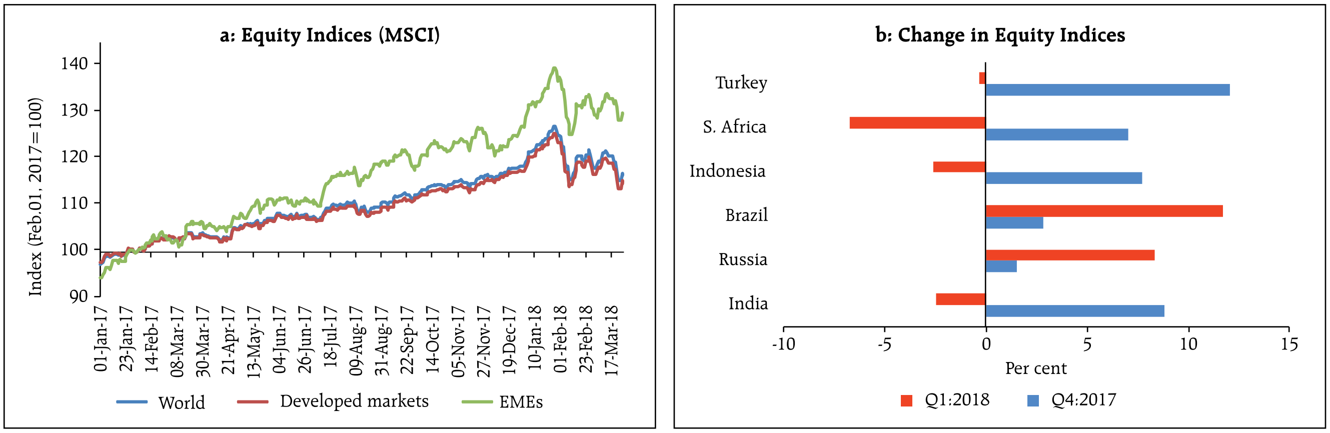
Monetary policy stances remained diverse in EMEs, with many central banks in key EMEs reducing policy rates. Central Bank of the Russian Federation cut rates thrice – in December, February and March – with inflation developments remaining favourable, while Brazil has been cutting rates aggressively on underwhelming inflation. South Africa cut its policy rate in March on subsiding inflation. The People's Bank of China has left its benchmark one-year lending and deposits rates unchanged since October 2015, preferring to influence borrowing costs through liquidity operations and inter-bank market rates. Among other EMEs, Indonesia has kept its policy rate unchanged since the rate cut effected in September 2017. Turkey kept its policy rate unchanged as inflation remained elevated. Mexico raised its policy rate twice in December and March on rising inflation concerns (Chart V.7b).

V.4 Global Financial Markets

Although markets remained relatively calm and stable during most part of 2017 and January 2018 even in the wake of the unwinding of the Fed's balance sheet, financial markets turned volatile in February and went into swift correction on fears of faster rate hikes by the US Fed. Early March also witnessed the return of volatility on announcement of protectionist measures by the US and the momentary calm was shattered by intensification of trade protectionism between China and the US. The growing financial market integration in recent years has led to spillovers of volatility from AEs to EMEs due to monetary policy actions and financial events, as witnessed recently (Box V.1).

Equity prices have risen across most AEs and EMEs on improving global growth prospects and still accommodative monetary policy stances (Chart V.8a). The Morgan Stanley Capital International (MSCI) World Index increased by 3.9 per cent between October 2017 and March 2018. Equity markets, which had surged during Q4:2017 and January 2018, tanked due to sharp sell-offs across the globe during February on rising interest rate concerns in the US. Just when the equity market in the US began to recover with

Chart V.8: Equity Indices



Source: Bloomberg.

Box V.1: Global Shocks and Spillovers to EMEs – An Episodic Analysis

Integration of financial market segments across economies increases the vulnerability of EMEs to geo-political events and shifts in monetary policy stances of systemically important central banks. Over the last decade, many EMEs had to adjust their policies and frameworks to deal with these shocks emanating from advanced economies (AEs). A financial shock originating in a particular country/region can inflate geographically through three possible channels[1], *viz.*, portfolio rebalancing, banking liquidity and signalling [Patra *et al.*(2016)].

An analysis of three episodes of volatility spillovers (Table V.1.1) on the equity, bond and foreign exchange markets in Brazil, India, Russia, South Africa and Turkey using daily data from January 1, 2007 to February 26, 2018 yields interesting results. In this regard, rolling window of six months with reference to pre- and post-event date/period were considered for the episodic analysis. Three proxies for global shocks, *viz.*, US VIX as the 'fear' index for equities, broad dollar index (DXY) for the currency market and spread between 10-year and 3-month US treasury yields (term premia) for the bond market were taken as control variables.

At the peak of global financial crisis during 2008-2009, markets appeared to have been impacted relatively more by quantitative easing (QE) of AEs. Subsequently, AEs resorted to prolonged QE contingent upon the pace of global economic recovery. Measures taken by EMEs to counter the impact of unconventional policies kept volatility contained, though interspersed by episodes of high turbulence triggered by random events (Chart V.1.1).

Table V.1.1: Major Episodes of Global Spillover

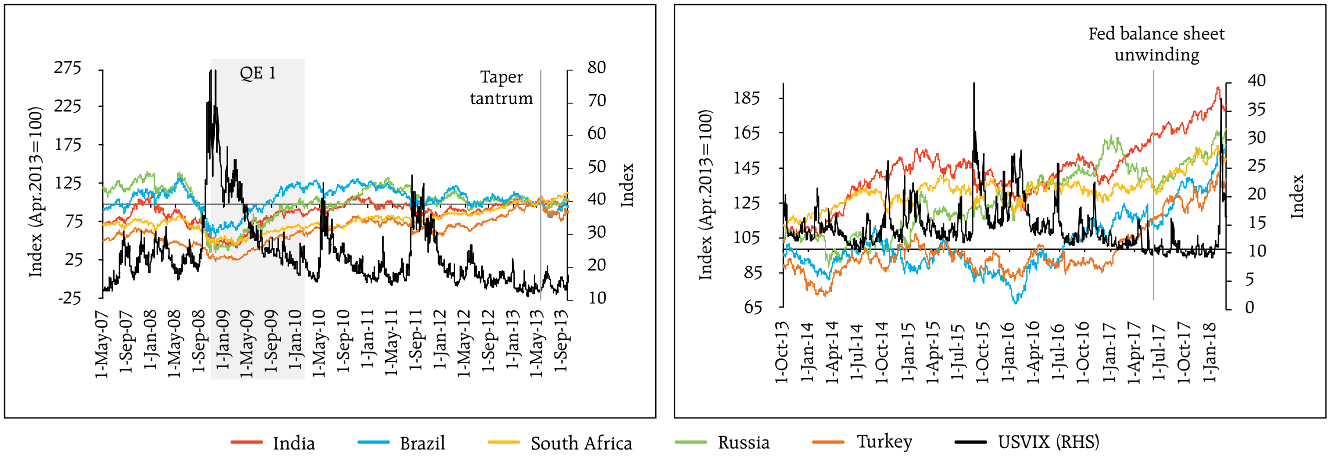
Episode	Date/period	Impact on EMEs
Unconventional monetary policies, *viz.*, zero lower bound policy rate and quantitative easing by major AE central banks.	From November 2008 in a phased manner up to October 2014	Unconventional liquidity injection led to large capital inflows to EMEs resulting in heightened volatility in the equity and forex markets.
Hints of monetary policy normalisation by the US Fed (taper tantrum).	May 22 – August 10, 2013	Portfolio outflows from EMEs triggering high volatility in equity, debt and currency markets.
Unwinding of US Fed balance sheet and reversal of monetary policy stance.	June 20, 2017 onwards	Portfolio rebalancing channel played a dominant role, followed by the liquidity channel by way of portfolio reallocation towards AEs – liquidity conditions in EMEs tightened.

(contd.)

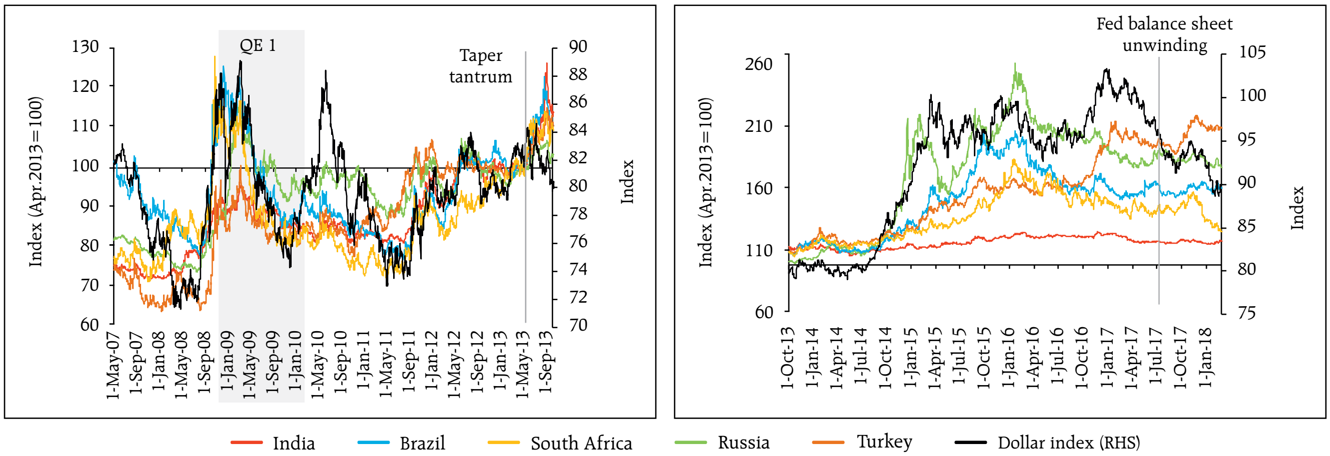
[1] According to portfolio rebalancing channel, investors have incentives to shift their low return yielding investments towards assets with higher expected returns. The liquidity channel refers to the higher availability of reserves that brings about a decline in liquidity premium, a reduction in borrowing costs and an increase in lending by *hitherto* credit-constrained lenders. The signalling channel is closely related to the forward guidance communication strategies that central banks have used recently to influence the expectations of market participants that short-term interest rates could persist for an extended period of time.

Chart V.1.1: Impact on Markets

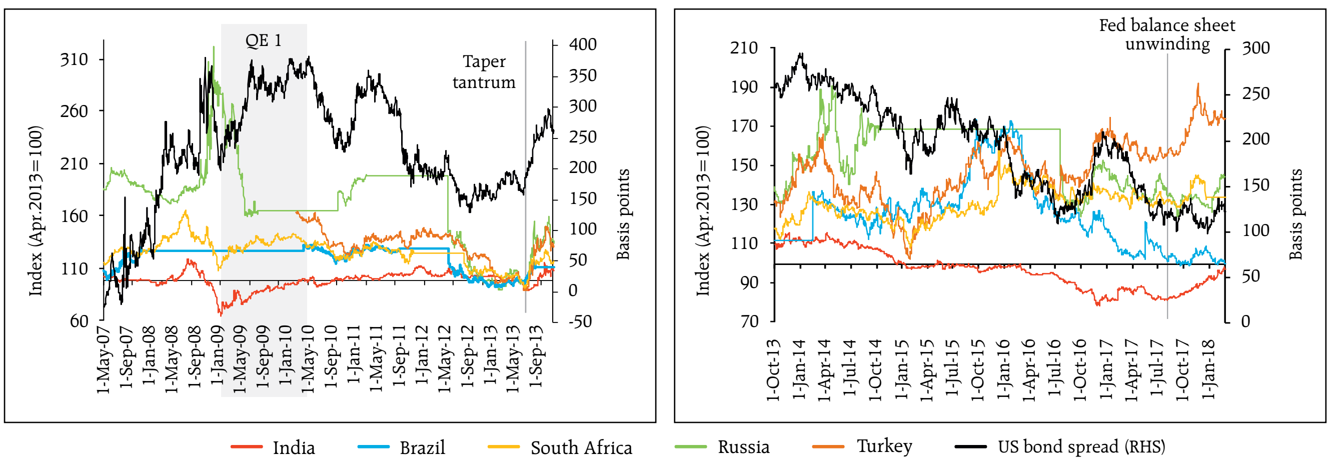
a: Volatility and Stock Indices



b: Currency Movements



C: Yield Movement



Source: Bloomberg; and RBI staff calculations.

(contd.)

In a Generalised Auto Regressive Conditional Heteroskedasticity (GARCH) framework, the control variables are entrenched in the mean equations for respective markets as follows:

GARCH (p, q) model:

Mean equation:

$$y_t = c + \sum_{i=1}^{n} \gamma_i y_{t-i} + \sum_{j=0}^{n} \delta_j x_{t-j} + \varepsilon_t$$

Variance equation:

$$\sigma_t^2 = w + \sum_{i=1}^{q} \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^{p} \beta_j \sigma_{t-j}^2$$

where y_t denotes the returns on the daily equity indices or currency indices or change in sovereign yields (10-year) in various EMEs; and x_t denotes the appropriate control variables (US VIX, DXY and spread between 10-year and 3-month US treasury yields).

The variance equation provides the time-varying volatility of the residuals (ε_t) generated from the mean equation, which consists of three components, *viz.*, long-term average components (w), the last period forecast variance (σ^2) and volatility observed in the previous period (ε^2). Large values of both α and β suggest increased conditional volatility. While large value of α implies greater response of innovation caused by episodic or unpredictable news/events, large value of β indicates the persistence of volatility.

In equity markets, GARCH coefficients (β) were found highly statistically significant across countries during the different phases of QE in the US[2]. The taper tantrum of 2013 had an impact on all markets due to its suddenness, though South Africa and India were impacted the most. Moreover, balance sheet normalisation had an impact on all EMEs, barring Russia. The news effect (α) was statistically significant for all EMEs, during all the episodes, though Russia remained insulated from the balance sheet normalisation announcement.

In currency markets, β was significant in all EMEs during QE1, *i.e.* November 2008 to March 2010, though the impact of taper tantrum did not persist in Russia. The coefficient α was found to be highly significant among all the EMEs, though the magnitude was larger for Brazil and Turkey during QE1 and for Turkey and Russia during taper tantrum.

In the sovereign bond market, β was significant for India and Turkey during all three events. The findings suggest α adversely impacted all sovereign bond markets, though the impact was mostly felt in Brazil and Russia during QE1 and taper tantrum.

The above analysis suggests that the three global shocks did cause volatility and adverse reactions across EMEs and across different asset markets, in varying degrees. All the three episodes impacted the bond market more than the currency and the equity segments, with the impact of the taper tantrum being more severe than the other two.

References:

Apostolou, A., and J. Beirne (2017), "Volatility Spillovers of Federal Reserve and ECB Balance Sheet Expansions to Emerging Market Economies", *ECB Working Paper Series No. 2044.*

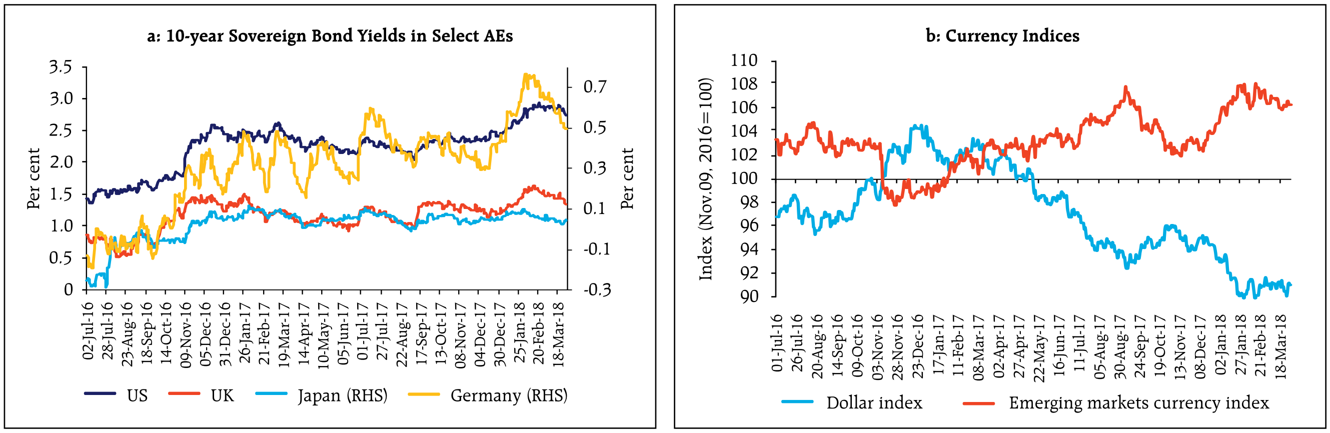
Patra, M. D., S. Pattanaik, J. John and H. K. Behera (2016), "Global Spillovers and Monetary Policy Transmission in India", *RBI Working Paper Series No. 03.*

investors shrugging off fears of inflation worries, volatility returned in March on announcement of US trade policies. In the euro area, equity prices have remained under pressure, lagging behind most peers on expectations of lower corporate earnings and revenue due to a strong euro. Also negotiations surrounding *Brexit* and election in some member countries adversely impacted investor sentiment. In Japan, a rally in share prices during 2017 and early 2018 was driven by stronger economic performance, higher corporate earnings and lower corporate tax rates. In February, Japanese stock markets cooled during the global stock market sell-off, with the rising yen also slicing away some gains.

Equity markets in EMEs have also gained, notwithstanding the sharp sell-off in February and March, though their performance continued to be

[2] Detailed estimation results are available upon request.

Chart V.9: Yield and Currency Indices



Source: Bloomberg.

dominated by country-specific factors (Chart V.8b). These markets have become volatile in the recent period amidst the repricing of inflation risk, higher US sovereign yields, and more recently, on announcement of protectionist measures by the US Administration.

Sovereign bond yields in many AEs hardened with the 10-year US sovereign bond yield touching a four-year high in February on expectations of faster rate hikes by the Fed. Recent inward looking policies have also soured investor sentiment and impacted bond yields adversely. In the euro area, the benchmark 10-year German bond yield has risen, though weak inflation numbers in the euro area have exerted some downward pressure. In Japan, bond yields have been falling since February 2018, coming off from a multi-month high on Japan's yield curve control policy (Chart V.9a). Bond yields in EMEs were driven by country-specific factors, though they have risen recently in most countries on expectations of shrinking global liquidity and pick-up in inflation in the US.

Currency markets have been driven mainly by monetary policy stances in the key AEs and macroeconomic data. The US dollar continued to depreciate and fell to a multi-year low in January on improving growth prospects in other regions. Weaker GDP data for Q4:2017 and comments by authorities in January in favour of a weaker dollar also weighed on the currency. In early March, however, the US dollar rose on upbeat views by the Fed on the US economy, but fell again on fears of intensification of trade wars. The euro is trading at its highest level in more than three years on narrowing of growth differentials between the euro area and its peers and the weakening of the US dollar. The Japanese yen touched the highest level against the US dollar since November 2016 on fears of a trade war.

The MSCI Emerging Market Currency index hit a two-month high in January 2018 on the US dollar's weakness, rising commodity prices and a more synchronised growth upturn, along with ebbing political concerns in some of the constituents (Chart V.9b). Most Asian currencies have retreated in the wake of the recent stock market turmoil, global trade risks and the upbeat US economic outlook, though investors continue to discriminate on country-specific factors.

V.5 Conclusion

Global economic activity has been witnessing a broad-based cyclical upturn. The acceleration in global trade outpacing global growth is a welcome development. Inflation remains below policy target levels in many key economies despite rise in some commodity prices and improving demand outlook, while monetary policy stances remain diverse. The recent volatility in financial markets stemming mainly from the uncertainty over the pace of normalisation of monetary policy in AEs could pose a challenge to the EMEs, while fears of rising trade protectionism have clouded the global trade outlook.

SPEECH

Banking Regulatory Powers Should Be Ownership Neutral
Urjit R. Patel

*Banking Regulatory Powers Should Be Ownership Neutral**

Urjit R. Patel

I speak today to highlight some fundamental fissures that exist in the regulation of banks, in particular, public sector banks (PSBs). It has been slightly over a month since the latest fraud in the Indian banking sector broke news.

Success has many fathers; failures none. Hence, there has been the usual blame game, passing the buck, and a tonne of honking, mostly short-term and knee-jerk reactions. These appear to have prevented the participants in this cacophony from deep reflection and soul searching that can help solve fundamental issues that are the root cause of such frauds and related irregularities in the banking sector, which as I will explain are in fact far too regular.

Let me start with what has been at the heart of some of the immediate reactions – the Reserve Bank's supervision of banks.

IMF/World Bank FSAP Assessment

In its 2017 Financial Sector Assessment Programme (FSAP) of India, conducted, completed and released prior to this episode, the International Monetary Fund (IMF) and the World Bank (WB), made the following observations:

1. In the publicly released FSSA (Financial System Stability Assessment) report, Para 35, page 17: *The RBI has made substantial progress in strengthening banking supervision: A key achievement was the introduction in 2013 of risk-based supervision through a comprehensive and forward-looking Supervisory Program for Assessment of Risk and Capital (SPARC). The Basel III framework and other international guidance were implemented or are being phased in, including stricter regulations on large exposures. Domestic and cross-border cooperation arrangements are now firmly in place. The AQR (Asset Quality Review) and the strengthening of regulations in 2015 have improved distressed asset recognition. In April 2017, the RBI established a new Enforcement Department and revised its prompt corrective action (PCA) framework to incorporate more prudent risk-tolerance thresholds.*

2. Further, in its specific comments on Other Regulation, Accounting, and Disclosure (Core Principles or CPs 20, 26–29: Para 60, page 21): *The internal control regulations issued by the RBI are adequate and are supported by the requirements of the SPARC risk-based supervision system. This system provides extensive guidelines for inspection of the internal control and audit function, and prescribes that a bank's internal controls allow identification and controlling of risks. The Internal Audit Departments in banks are required to have appropriate resources and staff with the requisite skills. Tasks can be outsourced, allowing additional expertise to be brought in. The auditors reported that overall experience with the quality of internal audit of banks was satisfactory.*

However, the FSAP for India laments at several points the fact that the Reserve Bank's regulatory powers over banks are not neutral to bank ownership:

1. In the Detailed Assessment Report (DAR) on the Basel Core Principles (BCP) on the Effective Banking Supervision, Para 6, Page 7: *Some previously observed weaknesses concerning the independence of the RBI and the inherent conflict of interest when supervising public sector banks (PSBs) remain. The RBI enjoys a large degree of operational autonomy, but*

* Urjit R. Patel, Governor, Reserve Bank of India, Inaugural Lecture: Centre for Law and Economics, Centre for Banking and Financial Laws, Gujarat National Law University, in Gandhinagar on March 14, 2018.

amendments to several legal provisions, and formal grounding of RBI independence in the RBI Act, would provide greater legal certainty. The RBI's legal powers to supervise and regulate PSBs are also constrained– it cannot remove PSB directors or management, who are appointed by the government of India (GoI), nor can it force a merger or trigger the liquidation of a PSB; it[RBI] has also limited legal authority to hold PSB Boards accountable regarding strategic direction, risk profiles, assessment of management, and compensation. Legal reforms are thus highly desirable to empower the RBI to fully exercise the same responsibilities for PSBs as now apply to private banks, and to ensure a level playing field in supervisory enforcement.

2. Specifically, on Corporate Governance (CP 14, Para 50, page 18): *The appropriate rules on fitness and propriety, and banks' internal governance structures, are in place with respect to private and foreign banks. Nevertheless, the influence the RBI may exercise on banks' governance through section 21 Banking Regulation (BR) Act, placement of RBI representatives on banks' Boards, and the RBI's very limited authority under the Banking Acts, as well as the custom to hold the PSB Boards accountable has become problematic. Under the law and according to custom, the RBI cannot hold PSB Boards accountable for assessing and– when necessary– replacing weak and nonperforming senior management and government-appointed Board members.*[1]

Let me elaborate.

Banking Regulatory Powers in India are NOT Ownership Neutral

All commercial banks in India are regulated by the RBI under the BR Act of 1949. Additionally, all public sector banks are regulated by the Government of India (GoI) under the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970; the Bank Nationalisation Act, 1980; and the State Bank of India Act, 1955. Section 51 of the amended BR Act explicitly states which portions of the BR Act apply to the PSBs, most common thread across the omissions being complete removal or emaciation of RBI powers on corporate governance at PSBs:

1. RBI cannot remove directors and management at PSBs as Section 36AA(1) of the BR Act is not applicable to the PSBs.
2. Section 36ACA(1) of the BR Act that provides for supersession of a Bank Board is also not applicable in the case of PSBs (and regional rural banks or RRBs) as they are not banking companies registered under the Companies Act.
3. Section 10B(6) of the BR Act that provides for removal of the Chairman and Managing Director (MD) of a banking company is also not applicable in the case of PSBs.[2]
4. RBI cannot force a merger in the case of PSBs as per Section 45 of the BR Act.
5. PSB's banking activity does not require license from RBI under Section 21 of the BR Act; hence, RBI cannot revoke a license under Section 22(4) of the BR Act as it can in the case of private sector banks.

[1] It is to be noted here that the FSAP also mentions in Other Regulation, Accounting, and Disclosure (CPs 20, 26–29, Para 62, page 21): *Currently, the external auditor is not obliged to report immediately to the RBI regulator any issues encountered in the audited bank that are of material interest to the supervisor. This is only permitted after publication of the annual statements. Moreover, regulators need powers to access the auditor's working papers when needed. This is currently not envisaged. The laws and/or regulations should explicitly authorise the external auditor to inform the RBI of any concerns at any time; also, before the annual statements have been finalised and published. The RBI should be given the explicit authority to obtain information at any time from the external auditor.* This point, however, applies both for public and private sector banks.

[2] The exception to this is IDBI Bank Ltd., for which the Articles of Association (Clause 120) grant the RBI the requisite authority.

6. RBI cannot trigger liquidation of PSBs as per Section 39 of the BR Act.

7. Furthermore, in a remarkable exception of sorts, in some cases there is duality of Managing Director and the Chairman – they are the same – implying the MD is primarily answerable only to himself or herself.

This legislative reality has in effect led to a deep fissure in the landscape of banking regulatory terrain: a system of dual regulation, by the Finance Ministry in addition to RBI.[3] I will now take a few minutes to explain why this fissure or the fault line is bound to lead to tremors such as the most recent fraud.

Temptation to engage in fraud at the level of employee or employees is always present, in banks (or in corporations), be it in public sector or private sector. The question then is whether there is adequate deterrence faced by employees from undertaking frauds and enough incentives for management to put in place preventive measures to preempt frauds. In case of banks, three potentially powerful mechanisms could induce discipline against frauds:

1. **Investigative / vigilance / legal deterrence:** Criminal investigation of frauds and attached penalties can serve as an effective deterrence if reporting and investigation are expedient and penalties are adequately severe relative to the gains from fraudulent activity.

2. **Market discipline:** Fraudulent activity can be a net loss to the bottom-line; in this case, bank investors would impose deterrence, e.g., uninsured creditors might 'run' on the bank inducing liquidity problems, or shareholders might 'exit', effectively raising the cost of capital and inducing solvency questions. In anticipation of such disruptive outcomes that might cause loss of control, management and board members may put in place governance mechanisms to prevent or reduce the incidence of fraud and/or hold larger buffers in the capital structure to bear losses when fraud materialises.

3. **Regulatory discipline:** Banks in most parts of the world, however, have a significant portion of deposit funding that is insured, and since banks serve critical payments and settlements function, they are often too big to fail or too many to fail. Hence, a part of the market discipline is weakened as a tradeoff with financial stability and is substituted by delegation of supervisory and regulatory powers to a banking regulator. Detection and punishment by the regulator then need to be effective to discipline fraud.

How do these mechanisms work in case of private and public sector banks in India?

Investigative and formal enforcement process takes in our country, perhaps for the right reasons, a fair bit of time. Indeed, RBI data on banking frauds suggests that only a handful of cases over the past five years have had closure, and cases of substantive economic significance remain open. As a result, the overall enforcement mechanism – at least until now – is not perceived to be a major deterrent to frauds relative to economic gains from fraud.

It is fair to say that in case of private sector banks, the real deterrence arises from market and regulatory discipline, and their confluence. A private bank CEO's primary concern is whether s/he will be able to raise capital when the need arises or even whether s/he will still be running the bank the next day. The point is that they could be readily cautioned through their Boards and even replaced by the RBI in case of large or persistent irregularities. Further, a private bank failing

[3] Of course, there are several other (well documented) implications of being public sector banks: board constitution, wherein it is difficult to categorise any director as independent; significant and widening compensation differences with private sector banks, leading to the erosion of specialist skills; external vigilance enforcement through the Central Vigilance Commission (CVC) and Central Bureau of Investigation (CBI); and limited applicability of the Right To Information (RTI) Act.

to meet bank solvency standards and under RBI's PCA would find it hard to raise capital, whereby it would need to put the house in order at swift notice so it can raise funding from markets and get back to growth path. In turn, there are incentives to invest in governance, so as to limit frauds and regulatory violations, and to respond with alacrity when incidents do arise.

In contrast, the market discipline mechanism for public sector banks is appreciably weaker compared to that at private banks. There is implicitly a stronger perceived sovereign guarantee for all creditors of PSBs, and the principal shareholder – the government – has not so far been interested in fundamentally modifying the ownership structure. From an economic standpoint, this weakened market discipline should imply that the government would prefer *stronger* regulatory discipline of these banks, not *weaker*. However, as I explained above at length, and perhaps since the original idea behind bank nationalisation was complete government control over credit allocation to the economy, the situation in India is exactly the reverse: RBI's regulatory powers over PSBs are weaker than those over the private sector banks.

The BR Act exemptions for PSBs mean that the one agency – the regulatory – that can respond relatively quickly against banking frauds or irregularities cannot take effective action. Hence, for example, MDs at PSBs find it comfortable to tell media that business will be as usual for them under RBI's Prompt Corrective Action framework as even if they do not meet the stipulated restrictions of the framework, the ultimate authority over their tenure is with the government and not with the RBI.

It is not entirely surprising that there has been a recurring theme in report after report on financial sector reforms in the country that has suggested strengthening of PSB governance through improvement in top management and Board member appointments; or, ownership neutrality in banking regulatory powers; or improving market discipline by considering a variety of diverse ownership structures.

Will we let another opportunity to catalyse fundamental reform at PSBs pass by?

It is fully transparent what needs to be done. From the RBI's standpoint, legislative changes to the BR Act that make our banking regulatory powers fully ownership neutral – not piecemeal, but fully – is a minimum requirement. It might also be the most readily feasible of these options.[4]

No Banking Regulator Can Catch or Prevent All Frauds

Another point is in order before I move to the broader issue of bank stressed assets and their resolution. There has been a tendency in the pronouncements post revelation of the fraud that RBI supervision team should have caught it. While that can always be said *ex post* with any fraud, it is simply infeasible for a banking regulator to be in every nook and corner of banking activity to rule out frauds by 'being there'. If a regulator could achieve such perfect outcomes, it would effectively imply that the regulator can do anything that banks can do, and by implication, can simply perform the entire banking intermediation activity itself. What is needed is that various mechanisms to deter frauds and other irregularities are in place and have bite so that fraud incidence is low and magnitudes contained. Indeed, frauds have happened at banks in regimes with varied levels of banking regulatory quality and in both public and private banks.

In the specific case at hand, the Reserve Bank had identified, based on cyber risk considerations, the exact source of operational hazard –through which we understand now the fraud had been perpetrated. In particular, the RBI had issued precise instructions *via*

[4] The duality of banking regulatory powers exists even in the case of co-operative banks where the RBI has to contend with several powers being vested away from it in hands of state governments. Co-operative banks are typically small and their failures are dealt adequately with through liquidation by the Deposit Insurance and Credit Guarantee Corporation (DICGC), which insures some of their depositors. This duality also needs to be addressed as part of the broader banking sector reforms to improve credit culture and reduce fraudulent lending.

three circulars in 2016 to enable banks to eliminate the hazard. It turns out *ex post* the bank had simply not done so. Clearly, the internal processes at the bank failed in allowing the operational hazard to remain in place in spite of clear instructions to close it. As we have stated in RBI's only press statement on this case to date, this was essentially an operational failure at our second largest public sector bank. The RBI will undertake actions against the bank that it is empowered to but this set is limited under its BR Act powers over PSBs.

Indeed, in a recent interview to the Press Trust of India, March 11, 2018, the IMF Deputy Managing Director Tao Zhang has reinforced this point along with others I alluded to above:

'[W]e think the PSB recapitalisation should be part of a broader package of financial reforms to speed up the resolution of NPAs, improve PSB governance, reduce the role of the public sector in the financial system, and enhance bank lending capacity and practices… The experts recommended legal changes to enable the RBI to extend all the powers currently exercised over private sector banks to public sector ones; in particular, regarding Board member dismissals, mergers, and license revocation… Having said that, banks' operational risk management, risk culture, internal control frameworks and external audit function should typically play a central role in preventing fraud.'

Need to Refocus on the Bigger Issue of Stressed Assets Resolution

Let me now turn to an issue of greater magnitude and more significance than the most recent banking fraud. Its magnitude is larger than 8 1/2 lakh crores of stressed assets on bank balance-sheets and its significance stems from several practices in promoter-bank credit relationship that need immediate attention. The RBI's Financial Stability Report of June 2017 (Section VII. Frauds, Para 3.36) clarifies that there is a link between bank frauds and this stressed assets problem:

'One of the emerging risk to the financial sector is increasing trends in frauds in commercial banks and financial institutions. During the last five financial years, frauds have increased substantially both in volume and value terms. During this period, while the volume of frauds has increased by 19.6 per cent from 4235 to 5064, the value (loss incurred) has increased by 72 per cent from ₹97.5 billion (₹9,750 crores) to ₹167.7 billion (₹16,770 crores). Share of frauds in [loan] advances portfolio continued to be high at 86 per cent of the frauds reported during 2016-17 (in terms of amount involved)…In a number of large value frauds, serious gaps in credit underwriting standards were evident. Some of the often seen gaps are liberal cash flow projection at the proposal stage, lack of continuous monitoring of cash flows and cash profits (EBITDA), lack of security perfection and over valuation, gold plating of projects, diversion of funds, double financing and general credit governance issues in banks. Moreover, almost all corporate loan related fraud cases get seasoned for 2 to 3 years as NPAs before they are reported as fraud.'

The broad conclusion that has been universally reached is that enterprises in India have over and over again received excessive credit during loan growth cycles, which is followed soon after with repayment problems. Rather than resolving stressed credit problems swiftly, banks–either through loan-level 'fudges' or refusal to recognise the true asset quality of the credits – have allowed promoters in charge of enterprises to have a soft landing. This soft landing has comprised of even more bank lending so as to keep the accounts artificially in full repayment on past dues, protracted control for promoters over failed assets, and effectively granting them the ability to divert cash and assets, often outside of our jurisdictional reach.

The RBI has been clamping down on the failure to recognise asset quality as non-performing as per its norms by requiring that banks, whose 'divergence' exceeds by 15 per cent of the true non-performing assets as per the norms, disclose the divergence. This should restore some market discipline against such practices, especially in the case of private sector banks. However, ultimately there also needs to be a framework in place for time-bound resolution of the underlying stress in assets that limits the discretion of banks to delay the recognition of stress, ever-green 'zombie' or living-dead borrowers, and poorly allocate credit.

To this end, I wish to present and clarify the rationale behind RBI's revised framework for prompt recognition and resolution of stressed assets. The framework that was released last month remains somewhat under-appreciated in terms of its importance. So let me lay it out.

Prompt Recognition and Resolution of Stressed Assets – Revised Framework

1. The Banking Regulation (Amendment) Act, 2017, and the subsequent authorisation given by the Government of India therein, has empowered the Reserve Bank to issue directions to the banks for resolution of stressed assets, including referring assets to the Insolvency and Bankruptcy Code 2016 (IBC). The Reserve Bank has taken steps over the last year in this direction, with a focus on reference to the IBC of certain large value stressed accounts, covering approximately 40 per cent of banking sector's overall exposure to the stressed assets.

2. The revised framework for resolution of stressed assets released by the Reserve Bank on February 12, 2018 is a step towards taking these initial steps to their natural conclusion and laying down a steady-state approach. The steady-state approach is aimed at ensuring early resolution of stressed assets in a transparent and time-bound manner so that maximum value could be realised by the lenders while also recognising the potential ongoing concern value of stressed assets. As explained below, this approach is a positive step towards strengthening the credit culture in the economy, at both borrowers and banks.

3. Various special schemes for resolution, which were introduced by the RBI in the pre-IBC context, had made the resolution process driven by asset-classification consideration of lenders. In particular, the forbearance that was embedded in the schemes to make it easier for banks to resolve assets became an end in itself with little resolution achieved through deployment of the schemes.

4. The revised framework substitutes for these pre-IBC schemes and does away with forbearance since it delayed resolution. The framework relies instead on the biggest structural reform in the credit system in the country in several decades, *viz.*, the IBC, as an important part of resolution. By employing the IBC as its lynchpin, the framework is intended rightly to ensure that the resolution plan for stressed assets is dictated also, and in fact, primarily, by asset viability considerations.

5. It must be stressed that the revised framework would allow lenders absolute flexibility to put in place any credible resolution plan, as under the pre-IBC schemes, subject to meeting certain implementation conditions (the conditions being necessary to alleviate concerns relating to ever-greening of unviable assets).

6. In particular, in respect of accounts with aggregate exposure greater than ₹2,000 crores, the resolution plan would be required to be implemented within 180 days from the date of default, failing which these would be referred under the IBC. This threshold would be brought down only gradually over a period of two years

to enable the IBC infrastructure to install in parallel the required capacity to handle more cases. It must be emphasised that IBC itself is a resolution framework, whereby such accounts will have sufficient time (180 days from the date of default plus up to 270 days under the IBC) for effective resolution.

7. It must also be underscored that under the revised framework:

   a. Change of ownership is being favoured even prior to the IBC reference as it leads to asset being classified as standard (as under the earlier schemes). The defaulting promoters also risk losing control of the firm under the IBC bidding. Hence, the revised framework will engender incentives for borrowers to not over-borrow and instead to manage better the various business risks that might lead to default.

   b. There will also be greater incentive for lenders to implement an efficient turnaround plan to get a quicker upgrade in case of restructuring. Further since there is no forbearance for assets classified as NPAs, the revised framework will encourage banks to reduce slippages to NPAs through early recognition of stress and timely action, possibly even before a borrower gets into financial difficulty.

In other words, the IBC along with RBI's revised framework will help break the promoter-bank nexus which has led to crony capitalism and attendant NPA/credit misallocation problem as ever-greening suited some borrowers and some lenders under the earlier framework. In turn, this will prevent the erosion of growth from the emergence of zombie firms and sectors.

8. Finally, the revised framework specifically excludes the revival and rehabilitation of Micro, Small and Medium Enterprises (MSMEs) with exposures of up to ₹25 crore, which shall continue to be covered under the earlier norms.

We believe this is precisely the fundamental reform needed in order to strengthen the credit culture at origination, default, asset quality recognition and resolution stages. By so doing, it should weaken in the first place opportunities for engaging in frauds relating to loan advances.

Let me now make some **Concluding Remarks.**

I have chosen to speak today to convey that we at the Reserve Bank of India also feel the anger, hurt and pain at the banking sector frauds and irregularities. In plain simple English, these practices amount to a looting of our country's future by some in the business community, in cahoots with some lenders. As safeguards of your deposits at banks, and starting with the Asset Quality Review of banks announced by the Reserve Bank in 2015 – since ably conducted by our supervisory teams and as acknowledged objectively by experts of reputed multilateral agencies, we are doing all we can to break this unholy nexus.

I see what we have undertaken for cleaning up the credit culture of the country – in particular, the comprehensive regulatory overhaul announced by the Reserve Bank on February 12th for prompt recognition and resolution of NPAs at banks – as the *Mandara* mount or the churning rod in the *Amrit Manthan* or the *Samudra Manthan* of the modern day Indian economy. Until the churn is complete and the nectar of stability safely secured for the country's future, someone must consume the poison that emanates along the way. If we need to face the brickbats and be the *Neelakantha* consuming this poison, we will do so as our duty; we will persist with our endeavours and get better with each trial and tribulation along the way.

I do wish more promoters and banks, individually – or collectively through their industry bodies, would reconsider being on the side of *Devas* rather than *Asuras* in this *Amrit Manthan.*

The owner of our public sector banks – the government –which has provided the IBC, the related ordinances and the bank recapitalisation package to get the churn going, might consider making further, equally important contributions by:

1. Making banking regulatory powers neutral to bank ownership and levelling the playing field between public sector and private sector banks; and,
2. Informing itself about what to do with the public sector banking system going forward as part of optimising over the best use of scarce national fiscal resources.

It is an open issue whether centralised government control alone can be effective enough at designing and implementing governance of banking franchise comprising over 2/3rds of the sector's deposits and assets. It would be better instead to restore regulatory and market discipline.

These, and other structural reforms to the banking sector, would enable India to grow sustainably at respectable rates. Thank you.

ARTICLES

*Union Budget 2018-19: An Assessment**

This article analyses the key features of the Union Budget 2018-19 presented on February 1, 2018 and passed in the Parliament in March 2018. Drawing on the impetus provided by reforms – the goods and services tax; digitisation; demonetisation; the Insolvency and Bankruptcy Code (IBC) – and a turnaround in the performance of the economy in the second half of 2017-18, the Union Budget for 2018-19 tries to balance prudence with the political compulsions of a pre-election year. It focuses on the rural economy and agriculture, the social sector (education, health and social protection), senior citizens, infrastructure and the financial sector. The step-up in allocations to these sectors are sought to be financed by augmenting direct tax collections and by sustaining the disinvestment drive. The Budget has deviated from the earlier fiscal consolidation path and aims at achieving the fiscal deficit of 3 per cent of GDP by 2020-21.

Key Thrust Areas of the Union Budget 2018-19

- Boosting the supply chain in agriculture from production to marketing: remunerative minimum support prices; agri-markets and connectivity; horticulture, organic farming; food processing and exports.
- Enhancing rural welfare: expansion of programmes for free LPG connections (PM's Ujjwala Scheme); electricity (PM's Saubhagya Yojana); sanitation (PM's Swachh Bharat Mission); housing (PM's Awas Yojana); and rural employment.
- Education - leveraging on technology and increasing investment in research and related infrastructure; health – wellness centres; and social protection – health and other insurance for disadvantaged households.
- Promotion of medium, small and micro enterprises (MSMEs) – addressing balance sheet stress and financing constraints; and employment – incentivising women employment in the formal sector; fixed term employment for all sectors; skilling (PM's Kaushal Kendra Programme).
- Building infrastructure in defence, urbanisation (smart cities mission); tourism; roads; railways; airports; ports and inland waterways.
- Finance: developing the corporate bond market; reforming stamp duty regime for financial transactions; long term capital gains tax; bank recapitalisation; hybrid instruments for foreign investment; strengthening the monetary policy framework with the introduction of standing deposit facility by the RBI.

Annex 1 lists the key policy initiatives laid out in the Budget.

I. Fiscal Deficit

In 2017-18, there is a fiscal slippage of 0.3 per cent of Gross Domestic Product (GDP) in the revised estimates from the budgeted 3.2 per cent. The slippage is even higher for the revenue deficit (RD) at 0.7 per cent of GDP and for the effective revenue deficit (ERD)[1] at 0.8 per cent. For 2018-19, the Gross Fiscal Deficit (GFD) is budgeted at 3.3 per cent of GDP, implying a slippage from the targets indicated in the

* Prepared by Smt. Kaushiki Singh and Shri K. Mate, Research Officers, under the overall guidance of Smt. Sangita Misra, Director, Fiscal Analysis Division, Department of Economic and Policy Research, Reserve Bank of India. The views expressed are of the authors and do not pertain to the Institution they belong to. Usual disclaimers apply. The previous article on Union Budget 2017-18 was published in the Reserve Bank of India Bulletin, May 2017.

[1] Effective Revenue Deficit is the difference between revenue deficit and grants for creation of capital assets signifying that amount of capital receipts that are being used for actual consumption expenditure of the Government.

Table 1: Fiscal Deficit: Actual *vis-à-vis* Observable Targets (Per cent of GDP)

	2017-18			2018-19		
	RE	MTEF	FRBM Review Panel	BE	MTEF	FRBM Review Panel
FD/GDP	3.5	3.2	3.0	3.3	3.0	3.0
RD/GDP	2.6	1.9	2.1	2.2	1.6	1.8
ERD/GDP	1.5	0.7	-	1.2	0.4	-

Medium Term Expenditure Framework (MTEF)/Fiscal Responsibility and Budget Management (FRBM) review roadmap (Table 1). The achievement of the target of 3.0 per cent of GDP has been deferred to 2020-21 as per the proposed new regime of the FRBM. The Government has further decided to insert adequately defined "escape and buoyancy clauses" to determine when the targets may be relaxed or tightened as the case may be[2]. The Government has also decided to do away with the deficit targets on revenue account, *i.e.* RD and consequentially, ERD.

The decomposition of GFD for 2018-19 shows that although the revenue deficit-GDP ratio is budgeted to reduce in 2018-19 *vis-à-vis* 2017-18, it continues to pre-empt almost 67 per cent of the borrowed resources as against 59 per cent in 2016-17 (Table 2).

The fiscal slippage in 2017-18 needs to be seen in the context of the reforms that are underway, especially the GST and its implementation as well as the fact that less than the full year's collections were available. Nevertheless, it might have implications for macro-economic stability while undermining the confidence of external investors (RBI, Sixth Bi-monthly Monetary Policy Statement, 2018). The fiscal credibility is particularly important from ratings agencies' perspective, considering that India remains a relatively high debt and high deficit country among similarly rated countries (Annex II). Also, given that India's combined deficit remains high *vis-a-vis* its Asian peers, there is a need for radical programme of deep fiscal adjustment requiring close coordination between the Union and the State governments (Joshi, 2017) (Annex III).

Table 2: Decomposition of GFD (Per cent)

	2015-16		2016-17		2017-18		2018-19
	BE	Actual	BE	Actual	BE	RE	BE
Revenue Deficit	71.0	64.3	66.3	59.1	58.8	73.8	66.6
Capital Outlay	39.1	42.5	41.0	46.3	49.4	42.1	44.6
Net Lending	2.4	1.0	3.2	3.6	5.1	0.9	1.5
Disinvestment	-12.5	-7.9	-10.6	-8.9	-13.3	-16.8	-12.8

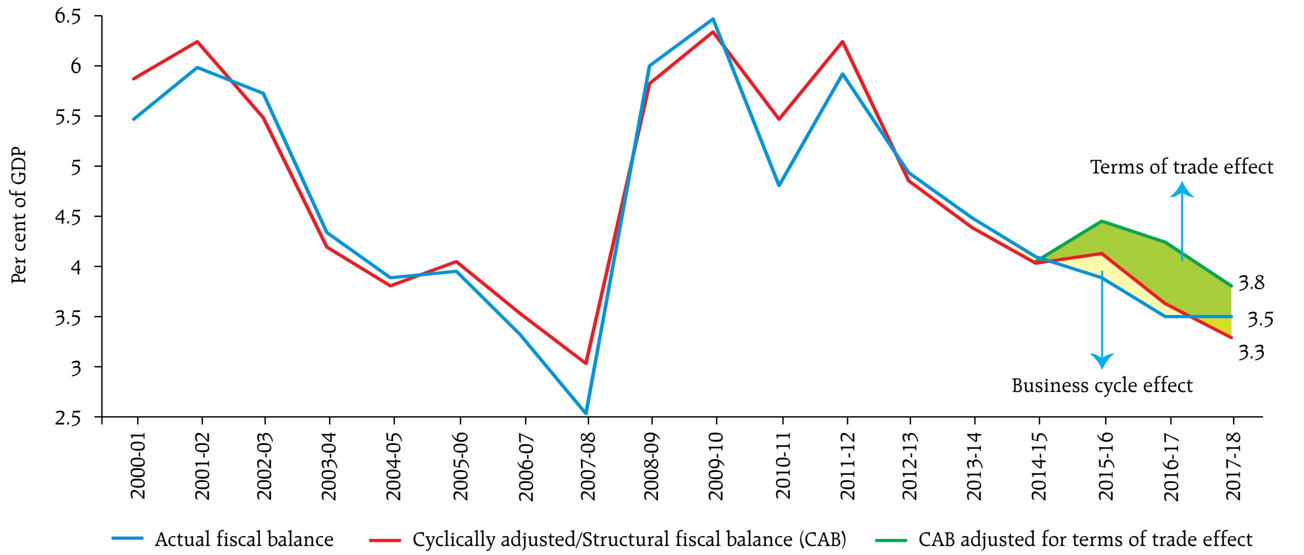
While the headline fiscal deficit numbers have been widely analysed *vis-à-vis* observable parameters, assessing the fiscal deficit with respect to certain unobservable parameters also provide some useful insights. International institutions like the International Monetary Fund (IMF) and the Organisation for Economic Cooperation and Development (OECD) have conducted extensive research in this area and are encouraging economies to adopt and publish fiscal stance after due adjustments for the impact on account of business cycle and other unobserved cyclical factors like asset and commodity prices (Bornhorst *et al.*, 2011; Fedelino *et al.*, 2009; Girouard and Andre 2005). This is crucial, particularly to enhance fiscal transparency as weakening of the fiscal balance can sometimes be masked temporarily by high output/asset price upturns. Conversely, during a recession, the fiscal balance can be overstated on account of cyclical factors.

In 2017-18, growth slowed cyclically and this contributed to some loss of tax revenue. Computing the cyclically adjusted fiscal deficit as per the IMF definition[3], the business cycle impact on fiscal deficit

[2] Fiscal Policy Strategy Statement, 2018-19

[3] These have been computed based on HP and BK based potential output estimates and using revenue elasticities, both aggregated and disaggregated, as estimated for India using the IMF, OECD and ECB approach in Ghosh and Misra (2015) and Misra and Trivedi (2016).

Chart 1: Fiscal Deficit : Actual *vis - a vis* Unobservable Parameters



is estimated to be about 0.17 per cent of GDP in 2017-18. This implies that but for the negative output gap, the gross fiscal deficit would have been 3.3 per cent of GDP and not the headline 3.5 per cent. However, this fiscal leeway gets wiped out if one takes into account the terms of trade benefit that the fisc had enjoyed due to decline in oil prices since 2015-16 on dual grounds: lower subsidies on Kerosene and LPG as well as higher excise on petrol and diesel as low prices were not completely passed on to consumers. While the benefit due to terms of trade effect is estimated at its highest in 2016-17 at 0.62 per cent of GDP, for 2017-18 it is placed at 0.48 per cent[4] taking the overall fiscal balance adjusted for cyclical and terms of trade effect to about 3.8 per cent (Chart 1). Going forward in 2018-19, with oil prices rising and output gap remaining close/slightly below the potential, fiscal deficit may not enjoy these terms of trade and business cycle benefits as indicated in the last row of Table 3.

Table 3: Business Cycle and Terms of Trade Effect (as per cent of GDP)

Year	Actual Fiscal Deficit	Business Cycle Benefit	Terms of Trade Benefit	Total Benefit
2015-16	3.9	0.24	0.32	0.56
2016-17	3.5	0.13	0.62	0.75
2017-18 RE	3.5	-0.17	0.48	0.31
2018-19 P	3.3	**Zero/negative**	**negative**	**negative**

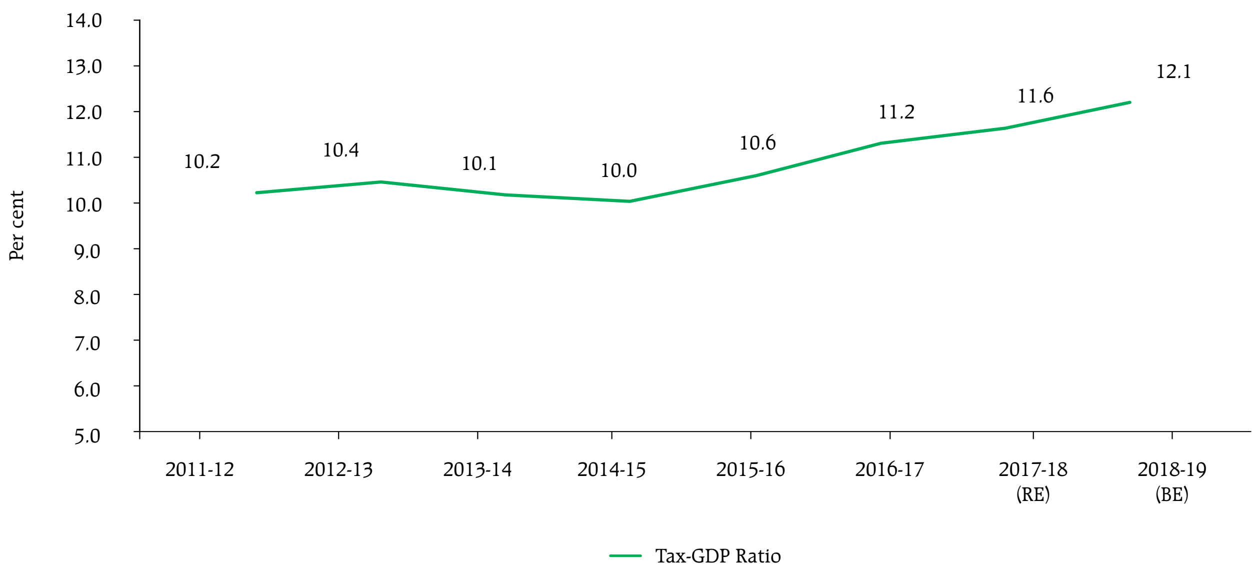
II. Receipts

II.1 *Tax Revenue*

The Union Budget has estimated gross tax revenue to grow by 16.7 per cent in 2018-19 to 12.1 per cent of GDP (Annex IV). Net of devolution of tax revenues to States, net tax revenue is budgeted to grow by 16.6 per cent to 7.9 per cent of GDP. This is the highest budgeted tax-GDP ratio so far, reflecting the formalisation of GST and widening of the tax base (Chart 2).

4 Terms of trade effect have been estimated by (1) subtracting the excess excise in petrol and diesel in these years from its long term trend and (2) by adding the estimated additional subsidy that GoI would have given based on the average long run elasticity of subsidies to oil price gap. While the methodology remains as in the literature, it may be noted that terms of trade benefit has generally been computed for oil exporting countries during oil price rise (Parkyn, 2010 and Turner, 2006). However, given that India is an importer of oil, terms of trade benefit is associated with oil price decline.

Chart 2: Tax-GDP Ratio:Budgeted to be Highest so far



The budgeted buoyancies for all tax categories of direct taxes are higher in 2018-19 than the average of the preceding eight years (2010-11 to 2017-18) (Table 4).

II.1.1 *Direct Taxes*

Direct taxes are budgeted to grow by 14.4 per cent in 2018-19, mainly on account of an estimated 19.9 per cent growth in income tax collections. The number of taxpayers has increased post demonetisation. During the current financial year, 6.84 crore income-tax returns were filed as compared to 5.43 crore returns filed during the last financial year, which translates into a growth rate of 26 per cent[5]. Direct Taxes collections during 2017-18 have helped in making up for the shortfall in non-tax revenue.

The Government aiming to provide relief to salaried taxpayers, has announced a standard deduction of ₹ 40,000/- in lieu of the present exemption in respect of transport allowance and reimbursement of miscellaneous medical expenses. On the other hand, the existing 3 per cent education cess will be replaced by a 4 per cent "Health and Education Cess" to be levied on the tax payable.

The corporate tax rate of 25 per cent for companies whose turnover was less than ₹ 0.5 billion in financial year 2015-16 has now been extended

Table 4: Tax Buoyancy

	Average Tax Buoyancy (2008-09 to 2017-18)	Post Crisis Tax Buoyancy (2010-11 to 2017-18)	2017-18 Revised Estimates	Budgeted Tax Buoyancy for 2018-19
1	2	3	4	5
Gross Tax Revenue	1.01	1.22	1.34	1.45
Corporation Tax	0.87	0.87	1.62	0.88
Income Tax	1.17	1.37	2.09	1.72
Customs Duty	0.23	0.46	-3.98	-1.46
Union Excise Duty	0.84	1.21	-2.74	-0.54
Service Tax	0.75	0.79	-6.85	-8.66

[5] GoI, Press Information Bureau, April 02, 2018

to companies with turnover up to ₹ 2.5 billion. The estimate of revenue forgone due to this measure is ₹70 billion during the financial year 2018-19. The lower corporate income tax rate for 99 per cent of the companies, however, will benefit the entire class of micro, small and medium enterprises as it will leave them with higher investible surpluses. Also, it will encourage higher tax compliance in the MSME sector.

II.1.2 *Indirect Taxes*

Indirect taxes collection in 2017-18 exceeded 2016-17 collections by 8.7 per cent, despite receiving GST revenues only for 11 months, instead of 12 months. Indirect taxes are budgeted to grow by 19.1 per cent during 2018-19, with GST collections budgeted at ₹7.4 trillion - an increase of 67.3 per cent and 21.5 per cent after adjusting for loss of one month collection (Table 5). On GST, while on one hand concerns have been raised on the significantly high budgeted numbers given that rationalisation of rates is still underway, on the other hand, international evidence suggests that implementation of VAT/ GST have resulted in a higher government revenue-GDP ratio over time (RBI, 2017). About 1.03 crore taxpayers have been registered under GST so far (till February 25, 2018) of which 16.42 lakh are Composition Dealers which are required to file returns every quarter[6].

Customs duty on certain items have been increased – illustratively, the duty on mobile phones has been increased from 15 per cent to 20 per cent and on certain parts of TVs to 15 per cent. Though the increase in customs duty is expected to incentivise the domestic value addition and the Make in India initiative and may also promote creation of more jobs in the country, it may likely be seen as a protectionist measure attracting retaliatory actions from trading partners.

II.2 Non-Tax Revenue

Receipts from non-tax revenues are budgeted to increase in 2018-19 by 3.9 per cent. Dividend and profits from public sector enterprises (including public sector banks) and surplus transfer from the RBI were lower than the budgeted amount by 25.3 per cent during 2017-18 and are effectively budgeted to increase on the lower base (Table 6). With the merger of the Railway Budget with the Union Budget, the Railways has stopped paying dividend on the capital at charge since 2017-18.

Within receipts from economic services, net receipts from communication services (*i.e.*, spectrum auctions) are budgeted to be significantly higher in 2018-19 than in 2017-18 (RE) - by 58.3 per cent. Notably, net receipts from communication services were budgeted at ₹443.4 billion in 2017-18, but actual receipts (₹307.4 billion) fell short mainly because of deferment of spectrum auctions.

It is observed that non tax revenues provided strong support to central government receipts in 2015-16 (27.0 per cent growth) and 2016-17 (33.2 per cent growth). With non-tax revenues in 2017-18 and 2018-19 being lower than 2016-17, the pressure will be higher on the government to achieve the tax revenue and the disinvestment targets.

Table 5: GST Collections

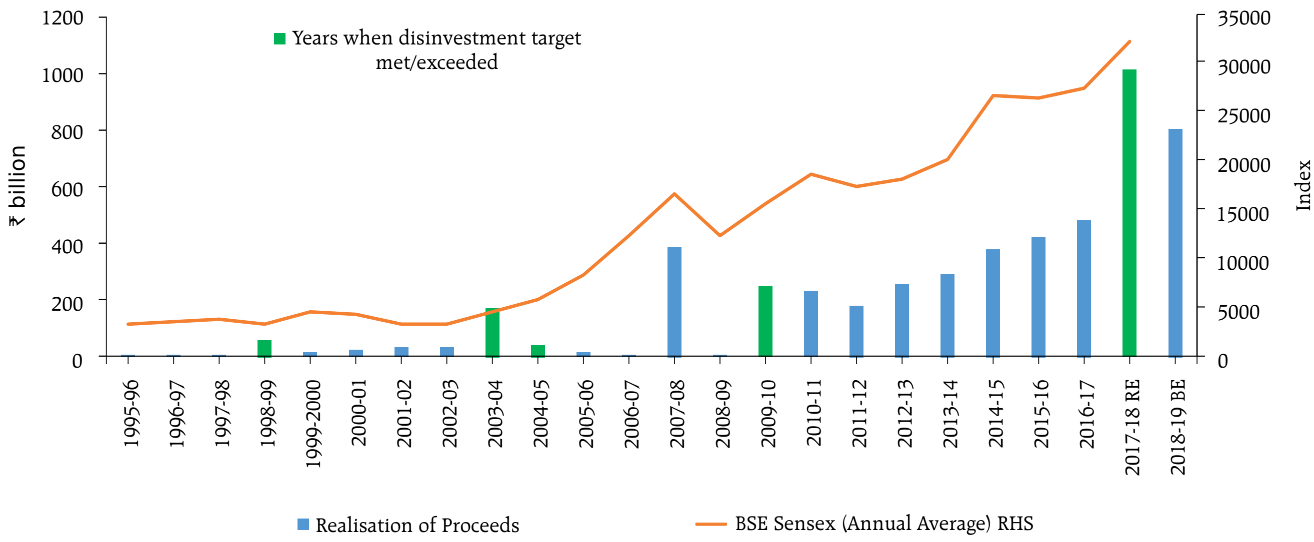
	2017-18 (RE) (₹ billion)	2018-19 (BE) (₹ billion)	Year-on-Year Growth Rate (Per cent)
CGST	2214	6039	172.8
IGST	1619	500	-69.1
Compensation Cess	613	900	46.7
Total	**4446**	**7439**	**67.3**

Table 6: Dividends and Profits

	₹ Billion			Growth Rate (Per cent)		
	2016-17	2017-18 (RE)	2018-19 (BE)	2016-17	2017-18 (RE)	2018-19 (BE)
Dividend and Profits	1230.2	1064.3	1073.1	9.7	-13.5	0.8
From PSEs	518.5	548.1	524.9	69.4	5.7	-4.2
From RBI/ Banks/FIs	711.6	516.2	548.2	-12.7	-27.5	6.2

6 GoI, Press Information Bureau, February 27, 2018

Chart 3: Disinvestment Proceeds and Stock Market Performance



II.3 Non-debt Capital Receipts

The target for disinvestment has been pegged at ₹800 billion in 2018-19 (BE). In 2017-18 (RE), the Government exceeded the target by ₹275 billion facilitated by buoyant stock markets (Chart 3). Net recoveries of loans and advances are budgeted to decline by 30.2 per cent over 2017-18 (RE). Total non-debt capital receipts, which were ₹330 billion higher in 2017-18 (RE) than BE, are estimated to decline by 21.5 per cent in 2018-19 (BE). With the realisation of budgeted targets for disinvestment in 2017-18 for the first time since 2009-10, there is optimism on the prospects for 2018-19. This will support revenue mobilisation efforts and render the deficit financeable. Any corrections in the stock market may, however, make it challenging for the Government to meet its budgeted target in 2018-19.

III. Expenditure

Total expenditure is budgeted to grow by 10.1 per cent in 2018-19 (12.3 per cent in 2017-18 RE) (Table 7). Revenue expenditure is budgeted to grow at a higher rate than capital expenditure.

The Budget estimates for different expenditure categories deviate from the MTEF Statement (an FRBM document), which was laid before the Parliament in August 2017. Total expenditure is budgeted to be 4.4 per cent higher than in the MTEF statement, mainly on account of higher revenue expenditure, particularly pensions and petroleum subsidies (Table 8). Expenditure projections diverging in the span of five months, *i.e.*, from the MTEF in August 2017 may pose risks to credibility of the fiscal policy stance. With the revenue-capital ratio slated to worsen from 6:1 in 2016-17 to 7:1 in 2018-19, the quality of public expenditure may remain a concern.

Table 7: Expenditure of Central Government

Item	Per cent of GDP			Growth Rate		
	2016-17	2017-18(RE)	2018-19(BE)	2016-17	2017-18(RE)	2018-19(BE)
Total Expenditure	12.9	13.2	13.0	10.3	12.3	10.1
Revenue Expenditure	11.1	11.6	11.4	9.9	15.0	10.2
Capital Expenditure	1.9	1.6	1.6	12.5	-3.9	9.9

Table 8: Budget Estimate (BE) *vis-s-vis* MTEF Statement

(₹ Billion)

Expenditure Items	2018-19		Difference= BE-MTEF	
	Budget Estimate	Projection by MTEF Statement	₹ Billion	Per cent
I. Revenue Expenditure	21417.7	19990.1	1427.7	7.1
of which				
(i) Interest	5758.0	5644.0	114.0	2.0
(ii) Pension	1684.7	1443.2	241.5	16.7
(iii) Major Subsidies	2643.3	2630.0	13.4	0.5
a. Fertiliser	700.8	700.0	0.8	0.1
b. Food	1693.2	1750.0	-56.8	-3.2
c. Petroleum	249.3	180.0	69.3	38.5
II. Capital Expenditure	3004.4	3410.0	-405.6	-11.9
III. Total Expenditure	24422.1	23400.1	1022.1	4.4

III.1 *Capital Expenditure*

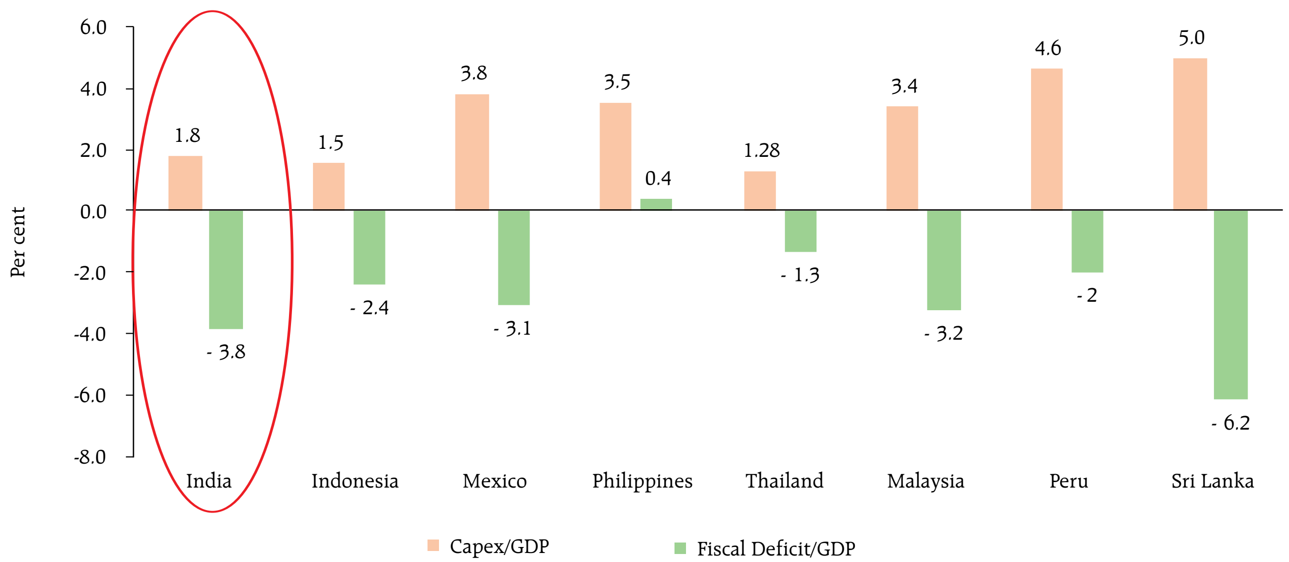
Capital expenditure which is growth inducing has been proposed to be raised by 9.9 per cent in 2018-19 over the revised estimates of 2017-18, marking a decline of 3.0 per cent when compared with BE of 2017-18. Capital Outlay (capital expenditure excluding loans and advances) is budgeted to increase by 12.6 per cent in 2018-19, a marginal rise over BE but sharply higher than 1.6 per cent in 2017-18 (RE). Capital outlay on major infrastructure is estimated to grow by a robust 23.0 per cent in 2018-19 (BE) - as against a decline of (-) 2.1 per cent in 2017-18 (RE) - led by the railways, roads and bridges (Table 9). Expenditure on civil aviation, on the other hand, is in contraction, as it has been since 2016-17, the sector is being encouraged to tap the market through borrowings and asset monetisation rather than rely on budgetary support. The budgeted allocation for communications (growth of 0.5 per cent over 2017-18 RE) may not seem to be in consonance with the objective of gradual transformation towards a digital economy.

In a partial equilibrium framework, a rise of ₹207 billion in capital outlay is likely to increase output by ₹434 billion (about 0.2 % of GDP in 2018-19), assuming the capital outlay multiplier to be 2.10 (Jain and Kumar; 2013). It may be noted that amongst its peer EMEs, India's share of GDP spent on capital expenditure is low despite relatively higher fiscal deficit (Chart 4) (Akin *et al*; 2017). Actual capital expenditure, however, would be higher than the budget estimates if the internal and extra budgetary resources (IEBR) deployed by the central Public Sector Units (PSUs) and commercial departmental undertakings are considered. It, therefore, needs to be recognised that the Government is now financing important expenditure of capital nature through extra budgetary resources (EBR).

Table 9: Capital Outlay

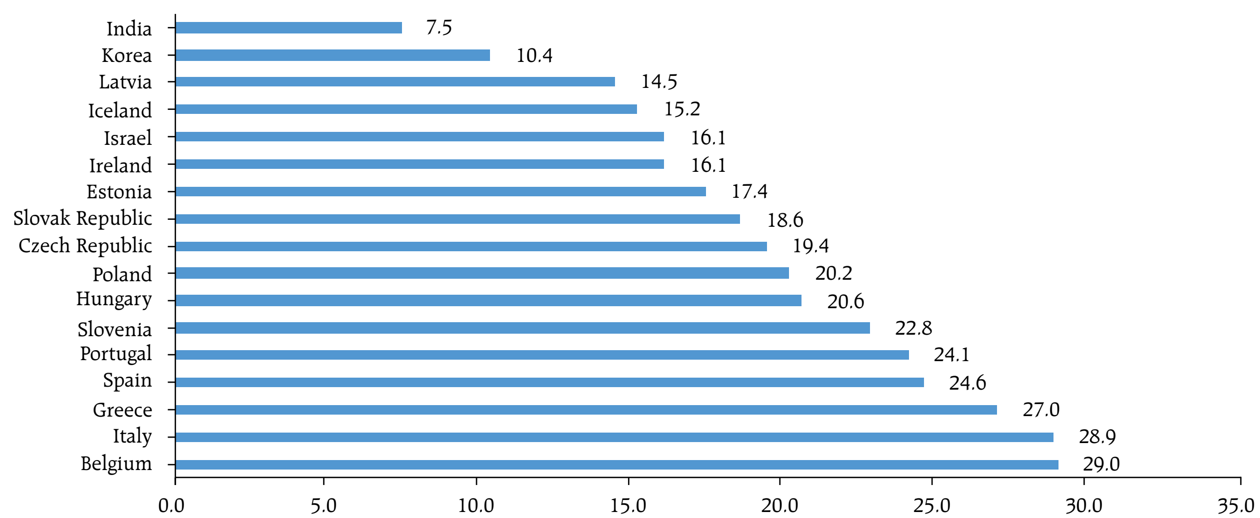
	2015-16	2016-17	2017-18 (RE)	2018-19 (BE)	2016-17	2017-18(RE)	2018-19 (BE)
	(₹ Billion)				(Percent Change)		
1. Total Capital Outlay (Excluding defence)	1467.3	1614.3	1640.1	1846.8	10.0	1.6	12.6
1.1 Major Infrastructure	737.8	1001.2	980.4	1206.1	35.7	-2.1	23.0
Irrigation	0.9	0.8	3.2	6.2	-8.5	285.5	95.3
Energy	19.4	45.3	28.0	52.6	133.2	-38.3	88.1
Indian Railways	350.1	452.3	400.0	530.6	29.2	-11.6	32.7
Roads and Bridges	296.4	437.7	480.3	557.2	47.7	9.7	16.0
Civil Aviation	33.6	27.1	18.4	7.2	-19.4	-31.9	-60.9
Ports and Light Houses	1.9	3.2	1.7	3.3	66.9	-46.5	91.7
Communications	35.5	34.8	48.8	49.0	-2.0	40.4	0.5
1.2 Industry and Minerals	36.2	41.4	42.6	45.0	14.1	3.0	5.5
1.3 Science, Technology and Environment	40.4	52.3	53.2	70.5	29.5	1.7	32.5
1.4 Others	652.9	519.4	563.9	525.3	-20.4	8.6	-6.8

Chart 4: Government Capital Expenditure and Fiscal Balance Average of FY 2014 - FY 2016[7]



With the National Health Protection Scheme under the ''Ayushman Bharat'' programme aimed at interventions in the primary, secondary and tertiary care system and the reform of the education system, the expenditure on health and education, together, is budgeted to grow by 4.6 per cent as per the Union Budget 2018-19. In terms of GDP, the social sector expenditure, primarily constituting health and education in India continues to remain woefully below peers (Chart 5).

Chart 5: Social Sector Expenditure as % GDP (2016)



Source: OECD Statistics and RBI

[7] Average of three years viz., 2013-14 to 2015-16 has been taken for Central Government capital expenditure and fiscal balance for the countries depicted in the graph. The data has been sourced from ADB Statistical Database; Central Bank of Mexico; Central Bank of Sri Lanka; Budget Management Department, Philippines; Central Bank of Peru and Union Budget Documents, India.

III.2 *Subsidies and Interest Payments*

Subsidies and interest payments constitute a major portion of government's committed revenue expenditure. In contrast to 2017-18 (RE) when major subsidies declined by ₹106.2 billion from the budget estimates in a broad-based manner, they are slated to increase by 15.1 per cent in 2018-19 mainly on account of increase in food subsidies by 20.7 per cent. The share of major subsidies is, however, budgeted to remain unchanged at 1.4 per cent of GDP in 2018-19 (BE) (Table 10).

Given the likely hardening of global crude and gas prices, petroleum and fertiliser subsidies, however, may rise. Owing to the farmer distress, minimum support prices have also risen reflecting itself in slight increase in food subsidy. Going forward, the budgetary outgo on major subsidies, however, should fall in the medium term *via* targeting and better coverage, through the direct benefit transfer (DBT) scheme and digitisation, which could reduce leakages.

Interest payments are budgeted to increase by 8.5 per cent in 2018-19 over 2017-18 (RE). In 2018-19 (BE), interest payments have been estimated at ₹5758 billion constituting 26.9 per cent of budgeted revenue expenditure and 23.6 per cent of the total budgeted expenditure of the central government, respectively. They are budgeted to be around 3.1 per cent of GDP in 2018-19 marginally lower than 3.2 per cent in 2017-18 (RE). The buoyancy in revenues are expected to mitigate the interest payment outgo of the Government[8].

Annex V presents the key receipts, expenditure and deficit indicators at a glance.

IV. Financing of Deficit

Gross market borrowing for 2018-19 is estimated at ₹6,055 billion, higher by about 1.1 per cent over the preceding year's level. Net market borrowing at ₹3,991 billion is, however, estimated to decline by 2.6 per cent during the same period on account of higher repayments during the year (Table 11). Switches (gross) of securities (which is cash neutral) and net buyback of ₹281 billion and ₹719 billion, respectively, are also provided for[9]. Net market borrowing through dated securities accounting for 63.9 per cent of the GFD in 2018-19 (BE) is lower than 68.9 per cent in 2017-18 (RE). The Union Budget has provided for gross issuance of cash management bills (CMBs) at ₹1 trillion for cash management operations and not for funding the GFD. The net issuances of CMB is nil for 2018-19 (BE). Government aims to raise ₹50 billion *via* Sovereign Gold Bonds (SGBs) in 2018-19. Going forward, fiscal slippage concerns and concomitant higher borrowing requirements may have implications for the economy wide cost of borrowing and could crowd out productive private sector investment (RBI, MPR, 2018). Also, the potential interest savings due to reduced reliance on the market may not

Table 10: Major Subsidies of Central Government

(Amount in ₹ Billion)

Items	2016-17 (Actuals)		2017-18 (BE)		2017-18 (RE)		2018-19 (BE)	
	Amount	% to GDP	Amount	% to GDP	Amount	% to GDP	Amount	% to GDP
Total Major Subsidies	**2,040.2**	**1.3**	**2,403.4**	**1.4**	**2,297.2**	**1.4**	**2,643.4**	**1.4**
i. Food	1,101.7	0.7	1,453.4	0.9	1,402.8	0.8	1,693.2	0.9
ii. Fertiliser	663.1	0.4	700.0	0.4	649.7	0.4	700.8	0.4
iii. Petroleum	275.4	0.2	250.0	0.1	244.6	0.1	249.3	0.1

[8] Medium Term Expenditure Framework Statement, 2017

[9] It may be noted that subsequent to budget announcement, the GoI, in its press release dated March 26 2018 has announced a reduction in financing *via* market borrowing by ₹500 billion, with ₹250 billion each to be financed by buybacks and National Small Savings Fund (NSSF).

Table 11: GFD Financing

(₹ Billion)

Item	2016-17 (Actual)	2017-18 (RE)	2018-19 (BE)
1	2	3	4
Gross Fiscal Deficit	**5,356.18**	**5,948.49**	**6,242.76**
	(100.0)	(100.0)	(100.0)
Financed by			
Net Market Borrowings*	3,381.49	4098.57	3991.20
	(63.1)	(68.9)	(63.9)
Other treasury bills	170.57	700.07	80.00
	(3.2)	(11.8)	(1.3)
Securities Issued against	674.35	1,026.28	750.00
Small Savings (net)	(12.6)	(17.3)	(12.0)
External Assistance	179.97	24.18	-25.89
	(3.4)	(0.4)	-(0.4)
State Provident Fund	177.45	150.00	170.00
	(3.3)	(2.5)	(2.7)
NSSF	154.51	-415.54	0.00
	(2.9)	-(7.0)	(0.0)
Reserve Fund	-64.36	6.70	31.14
	-(1.2)	(0.1)	(0.5)
Deposits and Advances	177.92	168.45	159.10
	(3.3)	(2.8)	(2.5)
Draw Down of Cash Balances	-88.95	-393.79	430.66
	-(1.7)	-(6.6)	(6.9)
Others	593.23	583.58	656.54
	(11.1)	(9.8)	(10.5)

*Includes Dated Securities and 364-day Treasury Bills, taking into account the net impact of switching of securities and buybacks.

Note: Figures in parenthesis represent percentages to GFD.

accrue with higher recourse to NSSF and other small savings.

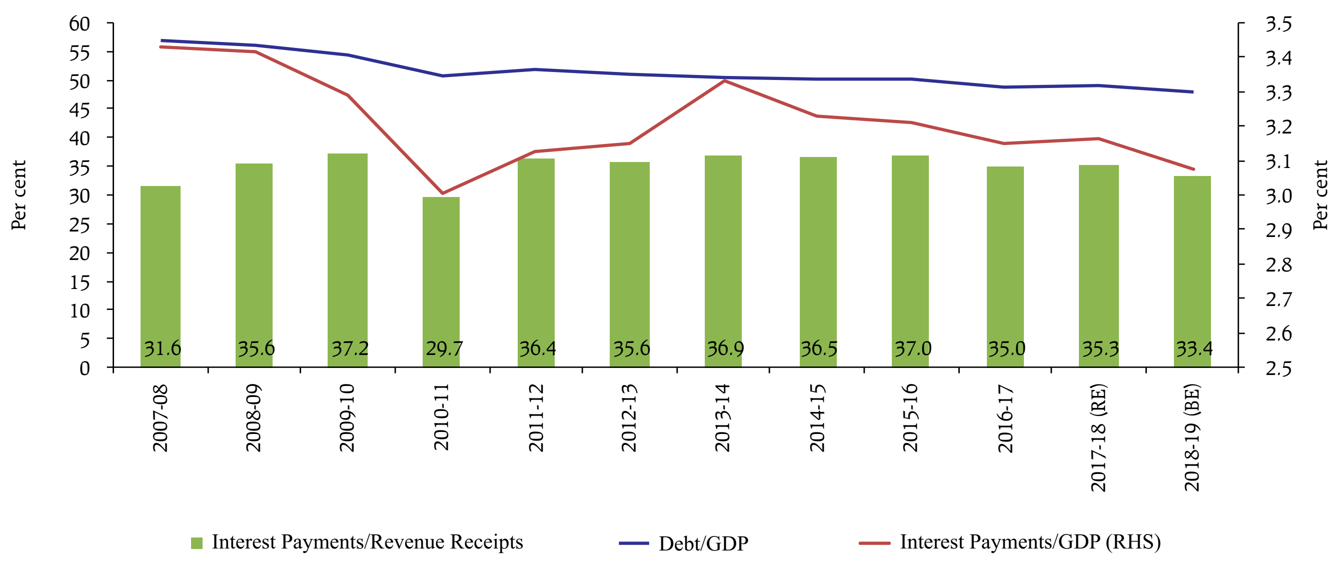
V. Liabilities

Total liabilities-GDP ratio of the Central Government is budgeted to decline to 47.8 per cent in 2018-19 from 49.1 per cent in 2017-18 (RE). Notably, the Government has accepted the key recommendation of the Fiscal Reform and Budget Management Committee, 2017 relating to adoption of the Debt Rule and has decided to bring down Central Government's Debt to GDP ratio to 40 per cent by 2024-25. Interest payments as proportion of revenue receipts, which is an indicator of debt servicing capacity, is budgeted to decrease marginally from the previous year (Chart 6).

VI. Resource Transfers from Centre to States in 2018-19

Following the recommendation of the 14th Finance Commission, the States' share of tax devolution was increased from 32 to 42 per cent of the divisible pool, serving the twin objectives of increasing the flow of unconditional transfers to the States and yet leaving appropriate fiscal space for the Union to carry out specific-purpose transfers to the States.

Chart 6: Debt and Interest Burden of the Central Government



Given the above background, gross transfer to state governments is expected to increase marginally during 2018-19, largely driven by tax devolution and 'finance commission grants', even as growth in transfer through different schemes has decelerated sharply. Centre is expected to transfer ₹7,881 billion in the form of tax devolution to the state governments in 2018-19, which is around 17.0 per cent higher than the transfer made a year ago. This sharp increase is expected assuming a buoyant tax collection in 2018-19.

In the Fiscal Policy Strategy Statement, it is highlighted that state governments seem to be moving close to their targeted fiscal consolidation – in part because the centre has guaranteed them a large increase in their indirect tax take, as part of the GST agreement. The transfer of GST compensation cess to states is fiscal neutral as the above amounts have been levied as a cess over the peak rate of 28 per cent on certain specified luxury and demerit goods, like tobacco and tobacco products, pan masala, aerated waters, motor vehicles. This is proposed to be introduced for a period of five years to compensate States for any revenue loss on account of implementation of GST. The amounts are transferred to a non-lapsable fund in the public account called the GST Compensation Fund as per the Section 10 of the GST (Compensation to States) Act, 2017.

Growth in transfer under centrally sponsored schemes, which has a share of around 22.0 per cent in the gross transfer, is expected to decelerate sharply by 5.3 percent in 2018-19 as against a growth of 16.8 per cent a year ago. The transfer to states (per cent to GDP) is expected to increase by 10 basis points in 2018-19 in both gross and net terms (Table 12).

Table 12: Resource Transfer to States

		2016-17	2017-18 (RE)	2018-19 (BE)	2016-17	2017-18 (RE)	2018-19 (BE)	2017-18 (RE)	2018-19 (BE)
		Amount			Share in Total Transfer			Growth	
		₹ Billion			Per cent			Per cent	
I.	**Devolution of States' share in Taxes**	**6080.0**	**6730.1**	**7880.9**	**61.7**	**60.3**	**62.1**	**10.7**	**17.1**
II.	**Some Important Items of Transfer**	**480.5**	**393.9**	**544.8**	**4.9**	**3.5**	**4.3**	**-18.0**	**38.3**
	Of which								
	a. Externally Aided Projects - Loan	177.6	175.0	200.0	1.8	1.6	1.6	-1.5	14.3
	b. Special Assistance	109.0	70.0	150.0	1.1	0.6	1.2	-35.8	114.3
III.	**Finance Commission Grants**	**955.5**	**1014.9**	**1093.7**	**9.7**	**9.1**	**8.6**	**6.2**	**7.8**
	Of which								
	a. Grant for Rural Local Bodies	313.7	390.4	450.7	3.2	3.5	3.6	24.5	15.4
	b. Grants for Urban Local Bodies	145.0	172.5	198.7	1.5	1.5	1.6	19.0	15.2
	c. Post Devolution Revenue Deficit Grants	413.1	358.2	345.8	4.2	3.2	2.7	-13.3	-3.5
IV.	**Total Transfer to States [Other than (I)+(II)+(III)]**	**2289.6**	**2967.2**	**3109.9**	**23.2**	**26.6**	**24.5**	**29.6**	**4.8**
	a. Under Centrally Sponsored Schemes (Revenue)	2258.5	2637.8	2777.5	22.9	23.6	21.9	16.8	5.3
	b. Under Central Sector Schemes	24.1	317.65	321.9	0.2	2.8	2.5	1219.7	1.3
V.	**Total Transfer to Delhi and Puducherry**	**51.1**	**52.7**	**65.0**	**0.5**	**0.5**	**0.5**	**3.1**	**23.3**
VI.	**Gross Transfers to States/UTs**	**9856.7**	**11158.8**	**12694.4**	**100.0**	**100.0**	**100.0**	**13.2**	**13.8**
VII.	**Less Recovery of Loans and Advances**	**125.8**	**93.0**	**96.0**	**-**	**-**	**-**	**-26.1**	**3.2**
VIII.	**Net Transfers (VI-VII)**	**9731.0**	**11065.8**	**12598.4**	**-**	**-**	**-**	**13.7**	**13.9**
IX.	**Gross Transfers / GDP (per cent)**	**6.5**	**6.7**	**6.8**	**-**	**-**	**-**	**-**	**-**
X.	**Net Transfers / GDP (per cent)**	**6.4**	**6.6**	**6.7**	**-**	**-**	**-**	**-**	**-**

Source: Union Budget 2018-19

VII. Other Important Measures with relevance to Reserve Bank of India

VII.1 *Bank Recapitalisation*

The bank recapitalisation program has been launched with bonds of ₹800 billion being issued this year. The programme has been integrated with an ambitious reform agenda, under the rubric of an Enhanced Access and Service Excellence (EASE) programme. This recapitalisation will pave the way for the public sector banks to lend additional credit of ₹5 trillion. Recapitalisation is a significant step by the Government in strengthening the balance sheet of banks and should enable banks to scale up credit to productive sectors. Although the bond-based recapitalisation is budget-neutral, it effectively results in increasing the Government's shareholding in public sector banks through rights shares and this might be perceived as roll-back of reforms by investors.

VII.2 *Standing Deposit Facility*

The Finance Bill proposes an amendment to section 17 of the RBI Act to enable the introduction of the standing deposit facility (SDF). This will considerably strengthen the conduct of monetary policy as it will provide the RBI the wherewithal to absorb exceptionally large expansion of liquidity without having to provide collateral to market participants. This additional instrument in the toolkit of the RBI will address episodes such as demonetisation and surges of capital inflows, and may even obviate the need for issuances under the Market Stabilisation Scheme which carry fiscal costs.

VII.3 *Minimum Support Prices*

Minimum support prices (MSP) for rabi crops at least at one and a half times of the cost has been extended to all kharif crops with a view to ensuring remunerative prices for farmers. It may be noted that Rabi MSPs fixed for crop year 2017-18 (market year 2018-19) were one and a half times of A2+FL costs, not overall C2 costs which also include the imputed costs of owned land and interest on owned fixed capital. Further, for all crops (kharif and rabi) taken together, CPI-weighted MSPs were more than 1.5 times A2+FL costs, but only 14 per cent higher over C2 costs[9]. In addition, there are several proposals that could reduce volatility in food inflation, *viz.*; higher procurement will stabilise market prices around MSPs; inclusion of tomatoes, onions and potatoes under 'Operation Greens'; and adoption of cluster based models in a scientific manner at district levels. Although the exact impact of MSP increase on inflation cannot be fully assessed at this stage but it does pose upside risks to inflation outlook (RBI, Sixth Bi-monthly Monetary Policy Statement, 2018).

VIII. Overall Assessment

Summing up, the Union Budget for 2018-19 is confronted with a tight trade-off between the rigours of fiscal consolidation and the demands for stimulating the economy. While the waning of the drag from demonetisation and GST implementation will have favourable effects on economic activity and boost tax revenues, terms of trade losses associated with the hardening of international crude prices could restrict fiscal space. Meanwhile, sizeable outlays on agriculture and infrastructure will impose pressure on revenues, necessitating adherence or even over-achievement of disinvestment targets that are in some sense autonomous to the decision to divest and contingent upon market conditions.

Turning to revenues, GST collections could benefit from delayed buoyancy as the system stabilises

[9] A2 + FL includes all expenses in cash and kind on account of hired labour including human, bullock, machine, seed, insecticides, pesticides, manure, fertilizers, irrigation charges and miscellaneous expenses and imputed costs of family labour (FL). C2 includes A2+FL costs as well as imputed costs of owned land and interest on owned fixed capital.

and this could encourage further reforms in the form of moving towards a simpler and more equitable rate structure. The increase in customs duties on selected items is essentially a revenue raising effort. On direct taxes, while the proposal to extend the rate of 25 per cent to companies with turnover up to ₹2.5 billion will entail revenue losses, the benefit to MSMEs from the supportive tax regime could increase buoyancy and compliance. The surge in the number of tax assesses, especially new ones, augurs well for raising the tax-GDP ratio to at least the levels of peers. Against this background, achieving the disinvestment target assumes crucial importance and will warrant a strategic approach that takes advantage of market conditions and investor appetite.

As regards the interaction of the Budget with the financial system, recapitalisation of banks could lend tailwinds to the recent recovery in bank credit and, in turn, support overall growth. The introduction of the Standing Deposit Facility is a big positive for macroeconomic and financial stability.

Finally, the emphasis on the rural economy is welcome and it is a step forward in the vision of doubling farm incomes by 2022 set out by the Government. This would revive rural demand and set the stage for a durable upturn in growth. The push towards digitisation, delivery of Aadhar enabled public services and the focus on employment will make the revival of growth inclusive and equitable.

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Annex I

Key Policy Initiatives

Agriculture and social sectors: Budget speech emphasizes the government's commitment to doubling farmers' income. Budget proposes to launch new schemes or extend existing schemes in agriculture and social sectors. Important measures are as follows:

- **Minimum Support Price (MSP) and Operation Green:** Minimum support prices (MSP) for rabi crops at least at one and a half times of the cost has been extended to all kharif crops with a view to ensuring remunerative prices for farmers.
- **Irrigation:** Augmented the scope of Long Term Irrigation Fund already set up in NABARD. Ground water irrigation scheme under Prime Minister Krishi Sinchai Yojna- Har Khet ko Pani will be taken up in 96 deprived irrigation districts where less than 30 percent of the land holdings gets assured irrigation presently. An amount of ₹26 billion has been allocated for the purpose.
- **Rural livelihood and housing:** Establish a dedicated Affordable Housing Fund (AHF) in National Housing Bank, funded from priority sector lending shortfall and fully serviced bonds authorized by the Government of India; Substantially increase allocation of National Rural Livelihood Mission.
- **Health and Social Protection:** The budget announced a flagship National Health Protection Scheme providing coverage for secondary and tertiary care hospitalization upto 5 lakh rupees per family per year for 10 crore poor and vulnerable families. The budget highlights that this will be the world's largest government funded health care programme.
- **Education:** To improve the quality of education, the budget proposes training of 13 lakh untrained teachers; increasing digital intensity in education and moving gradually from "blackboard to digital board", setting up Ekalavya schools for tribal students on par with Navodaya Vidyalayas. It proposes stepping up investments in research and related infrastructure by an initiative called ***RISE*** (*Revitalising Infrastructure and Systems in Education)* with a total investment of ₹1,000 billion in the next four years.

Infrastructure and MSMEs: Important measures pertaining to infrastructure and MSMEs include the following:

- **Tourism:** Tourist amenities at 100 Adarsh monuments of the Archaeological Survey of India will be upgraded. Ten prominent tourist sites will be developed into Iconic Tourism destinations by following a holistic approach.
- **Highways:** To raise equity from the market for its mature road assets, NHAI will consider organizing its road assets into Special Purpose Vehicles and use innovative monetizing structures like Toll, Operate and Transfer (TOT) and Infrastructure Investment Funds (InvITs).
- **Railways:** Railways' Capex for the year 2018-19 has been pegged at ₹1485 billion primarily for capacity creation - 18,000 kilometers of doubling, third and fourth line works and 5000 kilometers of gauge conversion.
- **Aviation:** New initiative NABH-Nirman to expand airport capacity more than five times to handle a billion trips per year.
- **Information Technology and Digital India:** NITI Aayog will initiate a national program to direct our efforts in the area of artificial intelligence, including research and development of its

applications. Digital India program allocation doubled to ₹30.7 billion in 2018-19. ₹100 billion for creation and augmentation of telecom infrastructure.

- **Medium, Small and Micro Enterprises (MSMEs):** Leverage financial information database for improving MSME financing leveraging on increased formalization of MSMEs due to demonetization and GST. The budget also proposes to onboard public sector banks and corporates on Trade Electronic Receivable Discounting System (TReDS) platform and link this with GSTN.

Building Institutions and Improving Public Service Delivery:

- The Government will bring out an industry friendly 'Defence Production Policy 2018' to promote domestic production by public sector, private sector and MSMEs. Measures will be undertaken to develop two defense industrial production corridors.
- Evolve a scheme to assign unique ID for enterprises (along the lines of Aadhar for individuals).
- Develop a National Logistics Portal as a single window online marketplace for all stakeholders.
- Capital of the Food Corporation of India will be restructured to enhance equity and to raise long-term debt for meeting its standing working capital requirement
- It is proposed to allow strong Regional Rural Banks to raise capital from the market to enable them increase their credit to rural economy.
- To promote gold as an asset class, Gold Monetization Scheme will be revamped to enable people to open a hassle-free Gold Deposit Account.
- The Government will review existing guidelines and processes and bring out a coherent and integrated Outward Direct Investment (ODI) policy

Financial sector:

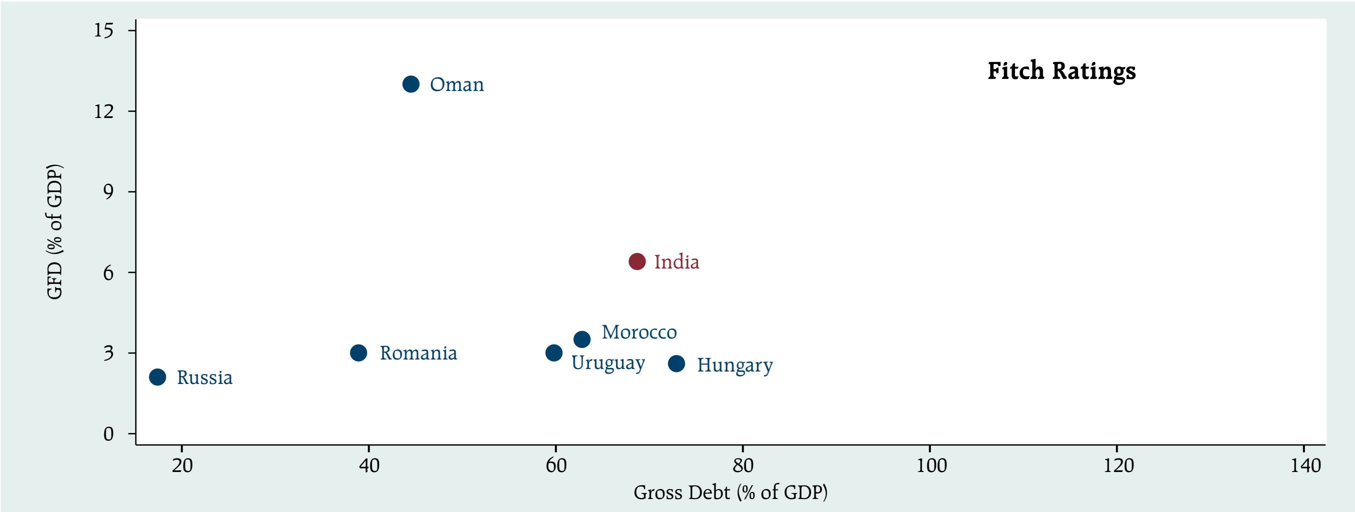
- **Bank Recapitalisation:** The bank recapitalisation program has been launched with bonds of ₹ 800 billion being issued this year. The programme has been integrated with an ambitious reform agenda, under the rubric of an Enhanced Access and Service Excellence (EASE) programme.
- **Bond markets**: The Government announced that SEBI will consider mandating, beginning with large Corporates, to meet about one-fourth of their financing needs from the bond market. Rating requirement for bond issue will move from 'AA' to 'A' grade. The Government will also undertake reform measures with respect to stamp duty regime on financial securities transactions in consultation with the States and make necessary amendments the Indian Stamp Act. These steps have potential benefits (positives) for the bond markets.
- **Amendment of RBI Act to enable Standing Deposit Facility:** The Finance Bill proposes an amendment to section 17 of the RBI Act to enable the introduction of the standing deposit facility (SDF).
- The Government will establish a unified authority for regulating all financial services in International Finance Service Centers (IFSCs) in India.
- The Government does not consider crypto-currencies as legal tender or coin and will take all measures to eliminate use of these crypto-assets in financing illegitimate activities or as part of the payment system.

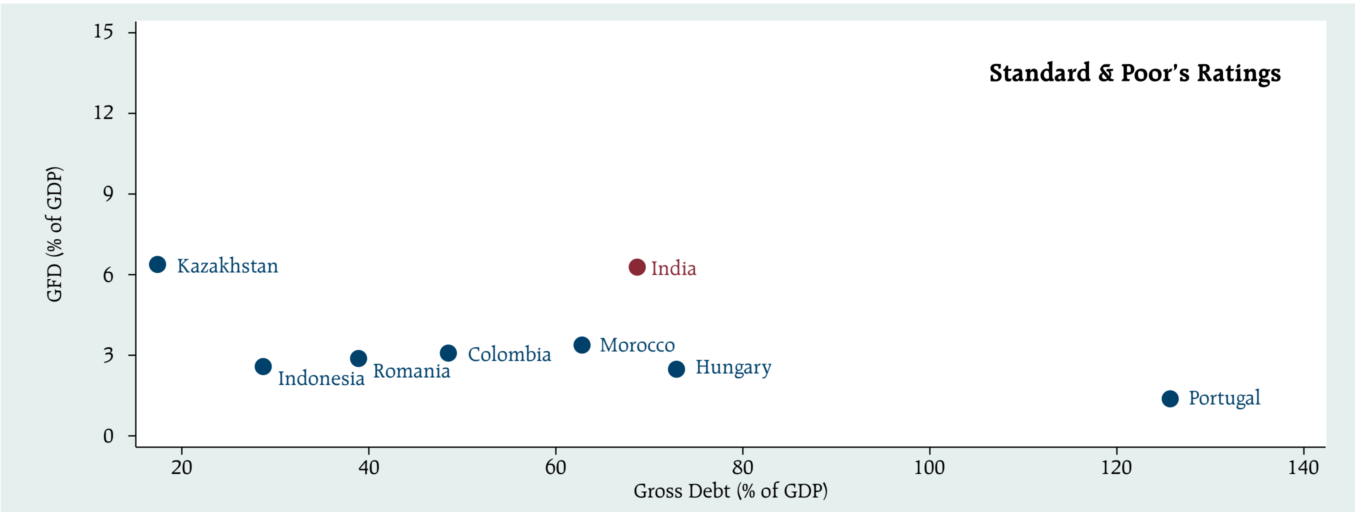
Tax Proposals:

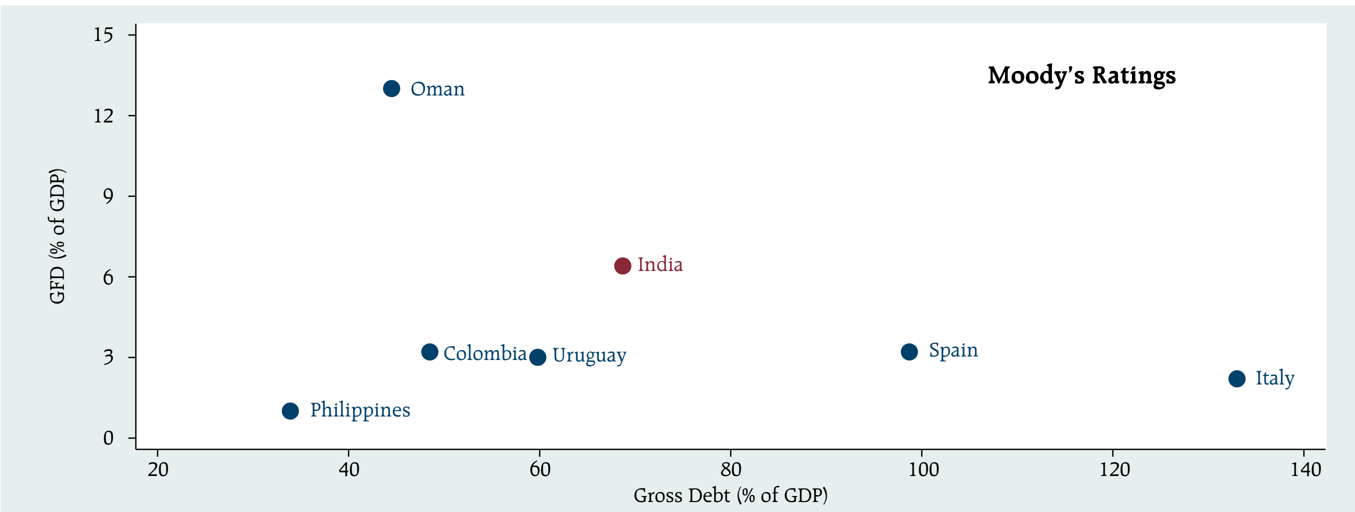
- **Long term capital gains (LTCG):** Currently, long term capital gains (LTCG) arising from transfer of listed equity shares, units of equity oriented fund and unit of a business trust are exempt from tax. The budget proposes to tax long-term capital gains exceeding ₹ 1 lakh at the rate of 10 per cent without allowing the benefit of any indexation. All gains up to 31st January, 2018, however, will be grandfathered. The gains from equity shares held up to one year will continue to be taxed at the rate of 15 per cent on short capital gains. The budget proposed to introduce a tax on distributed income by equity oriented mutual fund at the rate of 10 per cent to provide a level playing field across growth oriented funds and dividend distributing funds.
- **Reduction in tax rate:** Tax rate has been reduced to 25 per cent for companies who have a reported turnover of up to ₹2.5 billion in 2016-17.
- **Increase in customs duty to incentivise 'Make in India' initiatives:** In a departure from recent policy to reduce customs duty, the budget announced undertaking an increase in customs duty to incentivize domestic value addition in certain sectors, like food processing, electronics, auto components, footwear and furniture.
- **Excise duty:** Road and infrastructure cess on petrol and diesel increased from ₹6 per litre to ₹8 per litre. Adjustment is made on basic excise duty (decrease of ₹2 per litre) on these items so that the net impact is nil.

Annex II

General Government GFD and Debt of countries with similar ratings as India







Note: GFD, here, refers to negative of 'overall balance' as defined in IMF Fiscal Monitor.
Source: Fiscal Monitor (IMF, October 2017) and authors' Calculation.

Annex III

General Government Overall Balance of Emerging Market Economies

General Government Overall Balance (per cent of GDP)			
Serial No.	**Country**	**2016**	**2017**
Latin America			
1.	Argentina	-5.8	-6.6
2.	Brazil	-9.0	-9.2
3.	Chile	-2.9	-3.1
4.	Colombia	-3.0	-3.2
5.	Mexico	-2.8	-1.4
6.	Uruguay	-4.0	-3.0
7.	Venezuela	-17.8	-18.5
Africa and Middle East			
8.	Egypt	-10.9	-9.5
9.	Saudi Arabia	-17.2	-8.6
10.	South Africa	-4.0	-4.5
Asia			
11.	China	-3.7	-3.7
12.	India*	-7.1	-5.9
13.	Indonesia	-2.5	-2.7
14.	Malaysia	-3.0	-3.0
15.	Philippines	-0.4	-1.0
16.	Sri Lanka	-5.4	-5.2
17.	Thailand	0.6	-1.4
Europe			
18.	Hungary	-1.8	-2.6
19.	Poland	-2.4	-2.7
20.	Romania	-2.4	-3.0
21.	Russia	-3.7	-2.1
22.	Turkey	-2.3	-3.2

***:** RBI internal staff calculation (data for 2016 is based on Revised Estimates and for 2017 is based on Budget estimates, respectively of 29 states and Union Government).

Source: International Monetary Fund, Fiscal Monitor, October 2017

Annex IV

Tax Revenues						
	As percent of GDP			Growth (%)		
	2016-17	2017-18 (RE)	2018-19 (BE)	2016-17	2017-18 (RE)	2018-19 (BE)
1	2	3	4	5	6	7
Corporation Tax	3.2	3.4	3.3	7.0	16.3	10.2
Tax on Income	2.4	2.6	2.8	26.8	21.0	19.9
Customs Duty	1.5	0.8	0.6	7.1	-40.0	-16.8
Union Excise Duty	2.5	1.7	1.4	32.5	-27.4	-6.3
Service Tax	1.7	0.5	0.0	20.4	-68.8	-100.0
Gross Tax Revenue	11.2	11.6	12.1	17.9	13.4	16.7

Annex V

Budget at a Glance

(Amount in ₹ Billion)

Items	2016-17 (Accounts)	2017-18 (Budget Estimates)	2017-18 (Revised Estimates)	2018-19 (Budget Estimates)	Variation (%)	
					Col. 4 over Col. 2	Col. 5 over Col. 4
1	2	3	4	5	6	7
1. Revenue Receipts (i+ii)	**13,742.0**	**15,157.7**	**15,054.3**	**17,257.4**	**9.5**	**14.6**
	(9.0)	***(9.0)***	***(9.0)***	***(9.2)***		
i) Tax Revenue (Net to Centre)	11,013.7	12,270.1	12,694.5	14,806.5	15.3	16.6
ii) Non-tax Revenue	2,728.3	2,887.6	2,359.7	2,450.9	-13.5	3.9
of which:						
Interest Receipts	162.3	190.2	135.5	151.6	-16.5	11.9
2. Capital Receipts	**6009.9**	**6,309.6**	**7123.2**	**7164.8**	**18.5**	**0.6**
	(3.9)	***(3.8)***	***(4.2)***	***(3.8)***		
of which:						
i) Net Market Borrowings	3381.5	3,482.3	4098.6	3991.2	**21.2**	**-2.6**
ii) Recoveries of Loans	176.3	119.3	174.7	122.0	-0.9	-30.2
iii) Miscellaneous Capital Receipts	477.4	725.0	1,000.0	800.0	109.5	-20.0
3. Total Receipts (1+2)	**19,751.9**	**21,467.4**	**22,177.5**	**24,422.1**	**12.3**	**10.1**
	(12.9)	***(12.8)***	***(13.2)***	***(13.0)***		
4. Revenue Expenditure	**16,905.8**	**18,369.3**	**19,443.1**	**21,417.7**	**15.0**	**10.2**
	(11.1)	***(10.9)***	***(11.6)***	***(11.4)***		
5. Capital Expenditure	**2,846.1**	**3,098.0**	**2,734.5**	**3,004.4**	**-3.9**	**9.9**
	(1.9)	***(1.8)***	***(1.6)***	***(1.6)***		
8. Total Expenditure (6+7)	**19,751.9**	**21,467.4**	**22,177.5**	**24,422.1**	**12.3**	**10.1**
	(12.9)	***(12.8)***	***(13.2)***	***(13.0)***		
of which						
i) Interest Payments	4,807.1	5,230.8	5,308.4	5,758.0	10.4	8.5
ii) Defence	2,517.8	2,623.9	2,671.1	2,827.3	6.1	5.8
iii) Major Subsidies	2,040.2	2,403.4	2,297.2	2,643.4	12.6	15.1
9. Revenue Deficit (4-1)	**3,163.8**	**3,211.6**	**4,388.8**	**4,160.3**	**38.7**	**-5.2**
	(2.1)	***(1.9)***	***(2.6)***	***(2.2)***		
10. Effective Revenue Deficit	**1,506.5**	**1,258.1**	**2,496.3**	**2,206.9**	**65.7**	**-11.6**
	(1.0)	***(0.7)***	***(1.5)***	***(1.2)***		
11. Gross Fiscal Deficit	**5,356.2**	**5,465.3**	**5,948.5**	**6,242.8**	**11.1**	**4.9**
(8-(1+2ii+2iii))	***(3.5)***	***(3.2)***	***(3.5)***	***(3.3)***		
12. Gross Primary Deficit (11-6i)	**549.0**	**234.5**	**640.1**	**484.8**	**16.6**	**-24.3**
	(0.4)	***(0.1)***	***(0.4)***	***(0.3)***		

Note: Figures in parenthesis are per cent to GDP

Census on Foreign Liabilities and Assets of Indian Direct Investment Companies: 2016-17[*]

India is emerging as a preferred destination for foreign direct investment (FDI), half of which is in the manufacturing sector in market value terms, as per the latest census on foreign liabilities and assets (FLA)[1] of Indian direct investment (DI) companies. India's FDI stock was nearly four times its outward direct investment (ODI). With strong cross-border trade linkages, both Indian and foreign cross-border subsidiaries recorded good business growth during 2016-17. Information and communication continued to be the largest export-oriented sector among foreign subsidiaries in India. Equity valuation gains, though varying across economic sectors, have been sizeable.

1. Introduction

Direct investment (DI) is a core component of cross-border capital flows, reflecting non-resident investors' lasting interest in the host economy. Quantitatively, DI is typically associated with control (50 per cent or more equity share) or a significant degree of influence (10 per cent or more equity share) over the management of the recipient enterprise. A direct investor can be an individual, a group of related individuals, an incorporated or unincorporated enterprise (public or private), a group of related enterprises, government, trusts or other organisations that own enterprise(s).

The effects of foreign direct investment are found to be diversified but dependent on recipient economy's absorptive conditions, including its institutional set up, and the degree of complementarity and substitution between domestic and foreign investment (Benassy-Quere *et al*, 2007; Economou *et al*, 2016). It promotes economic growth by supporting industrial activity and employment through transfer of technology and physical capital while also stimulating domestic investment (Bosworth and Collins, 1999; Alfaro, 2017). It also fosters global trade and facilitates integration into the global economy more successfully than other modes of capital flows (Frankel and Romer, 1999; Moran, 2016).

Since DI flows are components of country's balance of payments (BoP), the International Monetary Fund (IMF) has focused on improving the availability and timeliness of cross-border investment data, which *inter alia* include the coordinated portfolio investment surveys (CPIS) and the coordinated direct investment surveys (CDIS)[2]. They are designed to improve the availability and quality of comparable cross-border portfolio and direct investment data, both overall and by immediate counterpart economy. The CDIS was launched in 2009 and the second phase of the G-20 Data Gap Initiative (DGI-II) of 2015 recommends participation of G-20 economies in the effort.

Since 2011, the Reserve Bank has mandated an '*annual return on foreign liabilities and assets (FLA)*' for Indian companies that have received FDI and/or made direct investment overseas in the previous year(s) including the latest year[3].

[*] This article is prepared by Sumit Roy and Avinash Patil, External Liabilities and Assets Statistics Division, Department of Statistics and Information Management, Reserve Bank of India. The views expressed in the article are those of the authors and are not necessarily shared by the Reserve Bank. The previous article in the series with reference period 2015-16 was published in the January 2017 issue of the Reserve Bank of India Bulletin.

[1] Detailed results of this census were released on RBI website (www.rbi.org.in) on January 19, 2018.

[2] Detailed data on partner country-wise inward and outward direct investment (debt and equity) at market prices are made available on the IMF's web-site http://data.imf.org/CDIS for the CDIS participating countries, including India.

[3] These data are collected as per the Reserve Bank's A. P. (DIR Series) Circular No.45 dated March 15, 2011 under the Foreign Exchange Management Act (FEMA), 1999 as amended from time to time. The format of annual return on foreign liabilities and assets is available on the RBI's website (www.rbi.org.in → Forms category → FEMA Forms), and more details are given in the 'Foreign Exchange' section under FAQs. In case of a FDI/ODI subsidiary company (*i.e.*, single foreign investor holding is more than 50 per cent of total equity), information on exports, imports, domestic sales and purchases are also collected as a part of foreign affiliates trade statistics (FATS).

The FLA census provides comprehensive information on market value of foreign liabilities and assets of Indian companies arising on account of foreign direct investment (FDI), overseas direct investment (ODI) and other investments, which are used as inputs in the compilation of BoP, CPIS, CDIS, international investment position (IIP) statistics and foreign affiliates trade statistics (FATS)[4].

This article presents the major findings of the 2016-17 round of the census on foreign liabilities and assets (FLA) covering 17,020 companies of which 15,169 companies (including foreign subsidiaries) reported inward investment. It provides estimates of inward and outward direct investment position at face value and market value and country / sector profile as well as aggregate and sector-wise sale / purchase (both domestic and overseas) of Indian and foreign subsidiary companies under FATS along with some cross country comparisons.

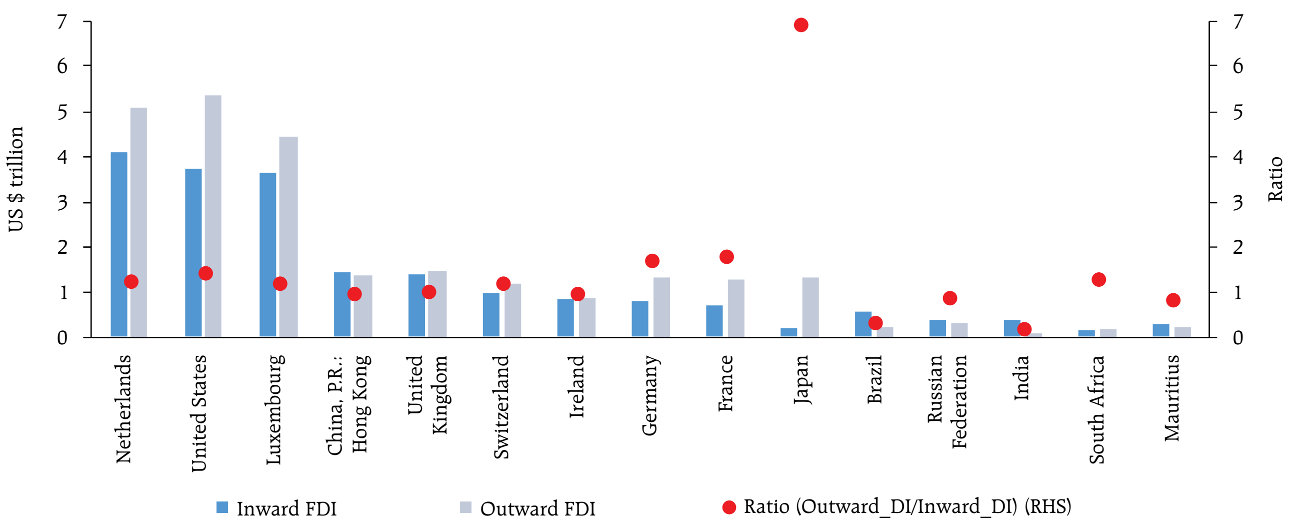
The remainder of this article is organised into five sections: A snapshot of global cross-border direct investment including India's position is presented in section 2. Foreign liabilities and assets of Indian DI companies reported in the census are summarised in section 3 focusing on coverage, level of investment at face value and market value, sectoral composition, sources and destinations and composition of other investments. The key features of FATS are presented in section 4. Section 5 summarises the main takeaways and concludes the article.

2. Global Cross-border Direct Investment

In the CDIS for 2016, 105 countries reported inward DI whereas 79 countries reported outward DI. The Netherlands, USA and Luxembourg were the top three DI source as well as destination countries: together they accounted for 37.7 per cent of inward investment and 49.4 per cent of outward DI at market value. Among other major countries, Japan's outward DI was nearly seven times of its inward DI (Chart 1). This ratio was also high for France, Germany and Switzerland.

With a share of 1.2 per cent in total investment reported under the CDIS, India was the 19th largest recipient of DI, whereas it stood 33rd among DI source countries (0.3 per cent share) (Chart 2).

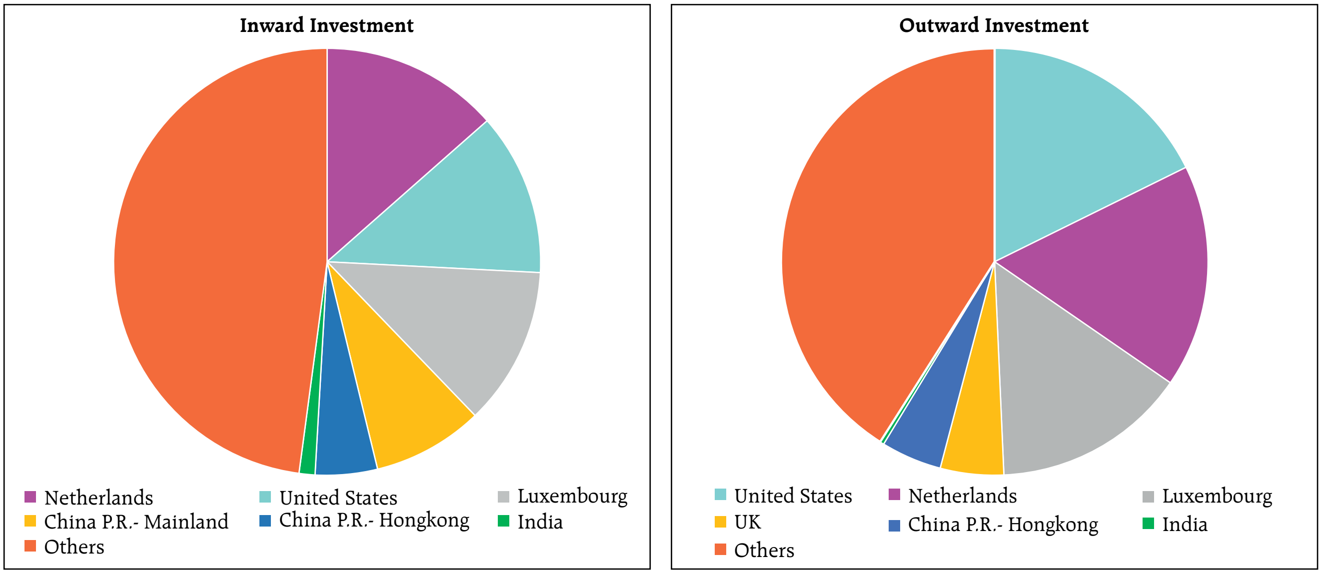
Chart 1: Inward and Outward FDI at Market Value in Select Countries-December 2016



Source: Co-ordinated Direct Investment Survey, 2016 (IMF), where data for India relates to March 2017 (end of financial year).

[4] It is important to note here that changes in outstanding assets/liabilities would be different from flows recorded in the balance of payments (BoP) during a year, as the former would also include valuation changes due to price and exchange rate movements.

Chart 2: Global Direct Investment – Share of CDIS-Reporting Countries



3. Foreign Liabilities and Assets: Census Results

Under each round of the FLA census, DI companies report data for the preceding two financial years. Any comparison of the results across census rounds, therefore, needs to take into account the coverage in each round and this would change due to: (a) addition/deletion of DI companies during the year and (b) improvement in reporting compliance.

3.1 Coverage

Under the 2016-17 census round, 18,667 companies responded[5], of which 17,020 companies had outstanding FDI / ODI in their balance sheet as on March 2017 as stated earlier (Table 1). An overwhelming majority of these companies (85.6 per cent) reported only inward FDI and others reported ODI or bi-directional investment. FDI reporting companies had share of 78 per cent of FDI

Table 1: FLA census 2016-17: Coverage

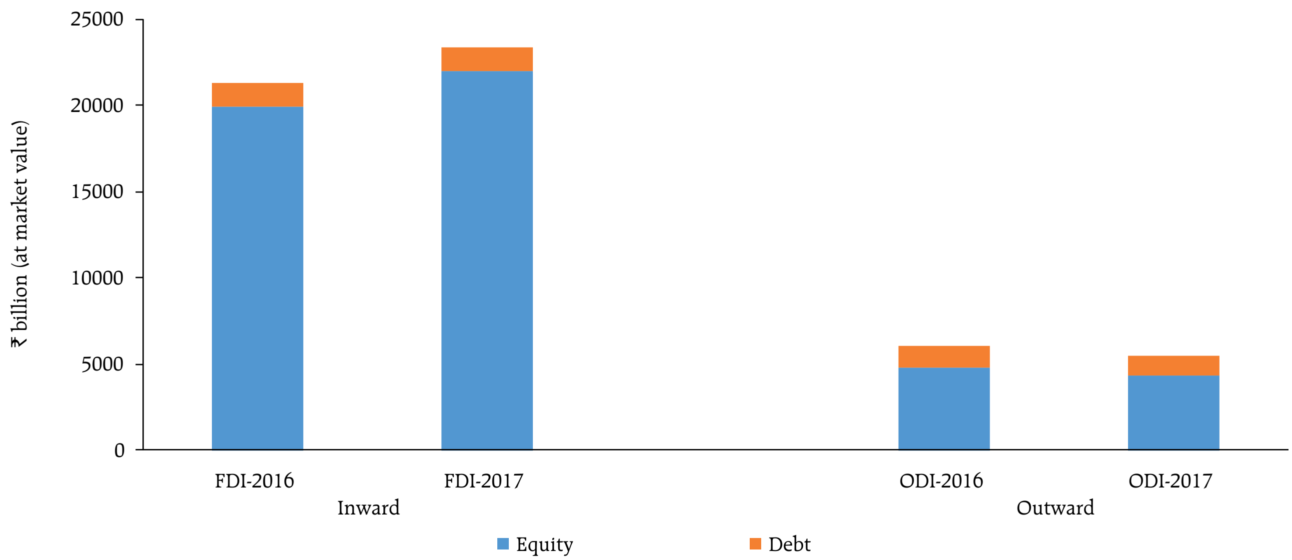
(Number of companies)

Category	Types of Company	Direct Investment			
		Both Inward & Outward	Only Inward	Only Outward	Total
Unlisted Companies	Foreign Associate in India	255	2,371	-	2,626
	Foreign Subsidiary in India	237	11,888	-	12,125
	Others	-	135*	1,411	1,546
	Total	**492**	**14,394**	**1,411**	**16,297**
Listed Companies	Foreign Associate in India	68	96	-	164
	Foreign Subsidiary in India	32	87	-	119
	Others	-	-	440	440
	Total	**100**	**183**	**440**	**723**
Grand Total		**592**	**14,577**	**1,851**	**17,020**

* include Limited liability partnerships (LLPs), Special purpose vehicles (SPVs) and public-private partnerships.

[5] As some companies may still report, the results presented here are provisional.

Chart 3: Inward and Outward Direct Investment



in the total equity of these companies and foreign companies had majority equity stakes in over 80 per cent of them.

3.2 Inward and Outward Direct Investment

The FLA census collects data on both face value and market value of equity capital. Shares of listed companies are valued at market price on the closing date of the reference period (*i.e.*, end-March). A large number of the FDI reporting companies (around 98 per cent, with 49.7 per cent share in total FDI) were unlisted and they were advised to use the *'own fund of book value (OFBV)'* method for market valuation of equity[6].

The market value of the FDI stock (including investment flows and valuation changes) increased by 9.7 per cent during 2016-17 and stood at ₹23,387 billion (USD 360.7 billion) in March 2017 of which nearly 94 per cent was held as equity (Chart 3). On the other hand, the stock of ODI declined by 9.8 per cent during the year to ₹ 5,411 billion (USD 83.4 billion).

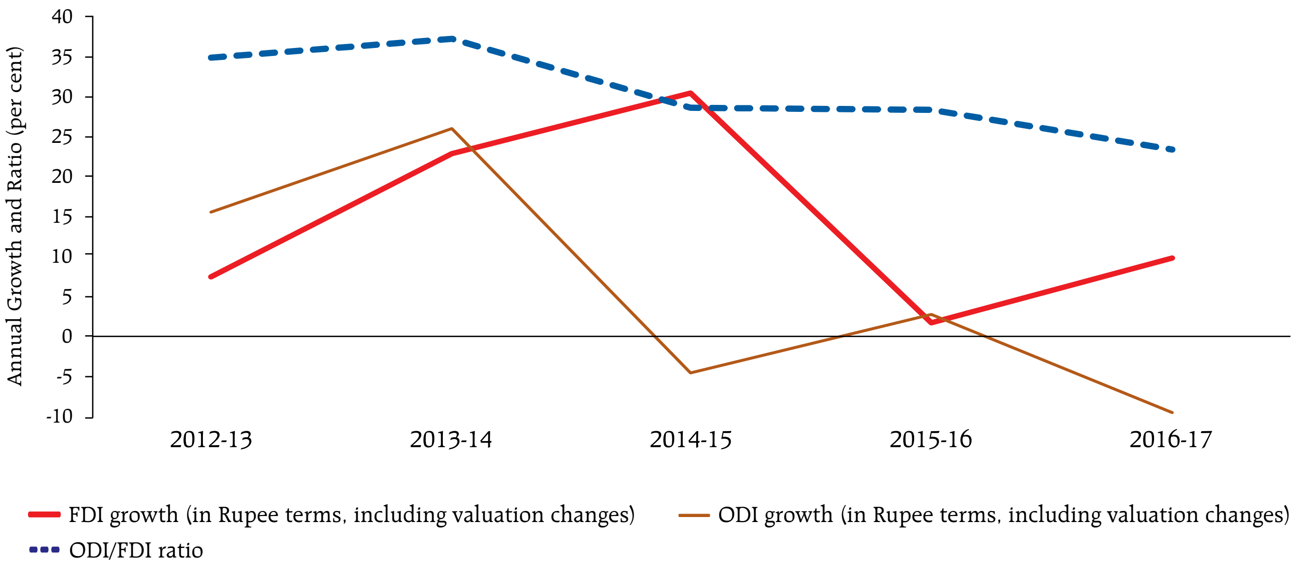
Inward FDI has witnessed average annual growth of 14.3 per cent since 2012-13, the year from which comparable census data are available. The divergence between the growth in inward and outward direct investment contributed to decline in the ratio of outward to inward direct investment after 2013-14. In March 2017, FDI in India was more than four times of its ODI at market value (Chart 4).

3.3 Sector-wise Distribution of Inward Direct Investment

The manufacturing sector held 42.3 per cent of the face value of total FDI (50.2 per cent at market value), with the motor vehicles group holding the highest share, followed by food products and machinery and equipment. The services sector had a share of 47.8 per cent at face value (40.7 per cent at market value). Non-financial companies accounted for nearly 87 per cent of the total FDI equity at face value in March 2017 (Table 2). Information and communication services and financial and insurance activities were the major FDI attracting services. The sector wise composition of FDI at market value is presented in Annex 1.

[6] Own Fund Book Value (OFBV) of equity investment is the share of non-resident equity holding in the net worth of the company (*i.e.*, sum of paid-up equity capital, participating preference shares, reserves and surplus) [Source:CDIS Guide of the IMF].

Chart 4: Inward and Outward Direct Investment - Annual Growth



Changes in investment stocks at market value over a period are influenced by inflows/outflows, reinvestments/losses as well as valuation changes. The sectors that attracted higher FDI also made more valuation gains: the top ten FDI receiving sectors accounted for 36.6 per cent of FDI equity at face value but 53.5 per cent of FDI equity at market value (Chart 5).

Changes in market valuation of FDI equity are, *inter alia*, reflected in the ratio of market value of such investments to their face value. At the aggregate level, this ratio has moved up over the last five years with intermittent changes (Chart 6) and stood at 5.0 in March 2017. For broad economic sectors, the ratio had a wide range from 2.1 to 34.7 (Table 3): among major sub-sectors, the ratio was 21.7 for computer

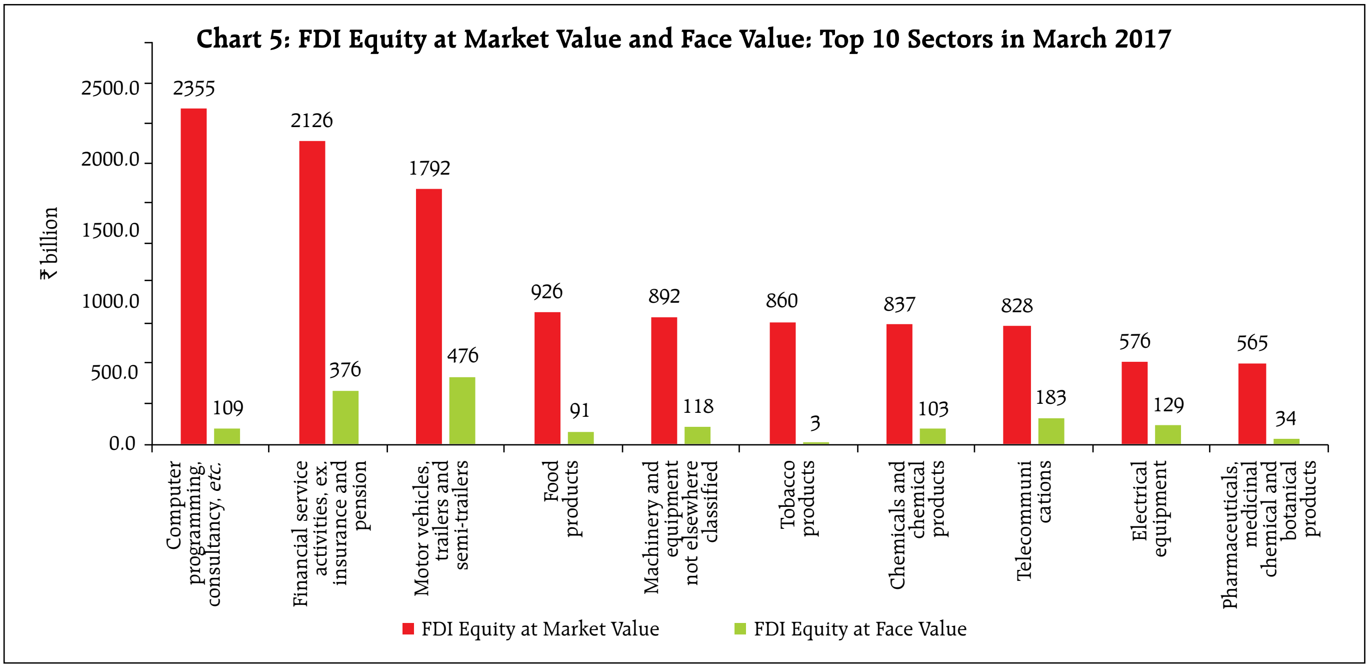
Table 2: Sector-wise Equity Participation of FDI Companies: March 2017

(₹ billion at face value)

Activity	Total Equity (Resident and Non-Resident)	FDI Equity Stake
1. Agriculture-related, Plantations and Allied activities	10.3	8.5
2. Mining	40.3	23.5
3. Manufacturing	2,207.8	1,872.9
4. Electricity, gas, steam and air conditioning	391.2	235.7
5. Water supply; sewerage, waste management and remediation activities	9.3	6.9
6. Construction	221.6	162.1
7. Services	2,809.2	2,116.8
Total	**5,689.7**	**4,426.4**

Table 3: Sector-wise GDP growth and Market Value to Face Value Ratio

Sector	No. of Companies	Ratio of Market Value to Face Value
1. Agri-related, Plantations & Allied activities	67	5.0
2. Mining	97	34.7
3. Manufacturing	3,672	5.9
4. Electricity, gas & water supply	507	2.1
5. Construction	711	2.3
6. Information and communication Services	3,610	8.5
7. Other Services	6,505	3.1
Total	**15,169**	**5.0**



programming whereas stood at 3.8 for motor vehicles.

Manufacturing of food product and electrical equipment recorded significant increase in FDI equity stock during 2016-17 followed by motor vehicles as well as information and communication sector. A comparison of growth in face value *vis-à-vis* market value of FDI equity shows considerable valuation gains for the manufacturing sector. Barring the real estate sector, all major services recorded significant increase in FDI equity at market value (Annex 2).

3.4 Source / Destination of Direct Investment

Mauritius remained the largest source of FDI in India (21.8 per cent share at market price) followed by the USA, the UK, Singapore and Japan. Singapore was the major ODI destination (19.7 per cent share)

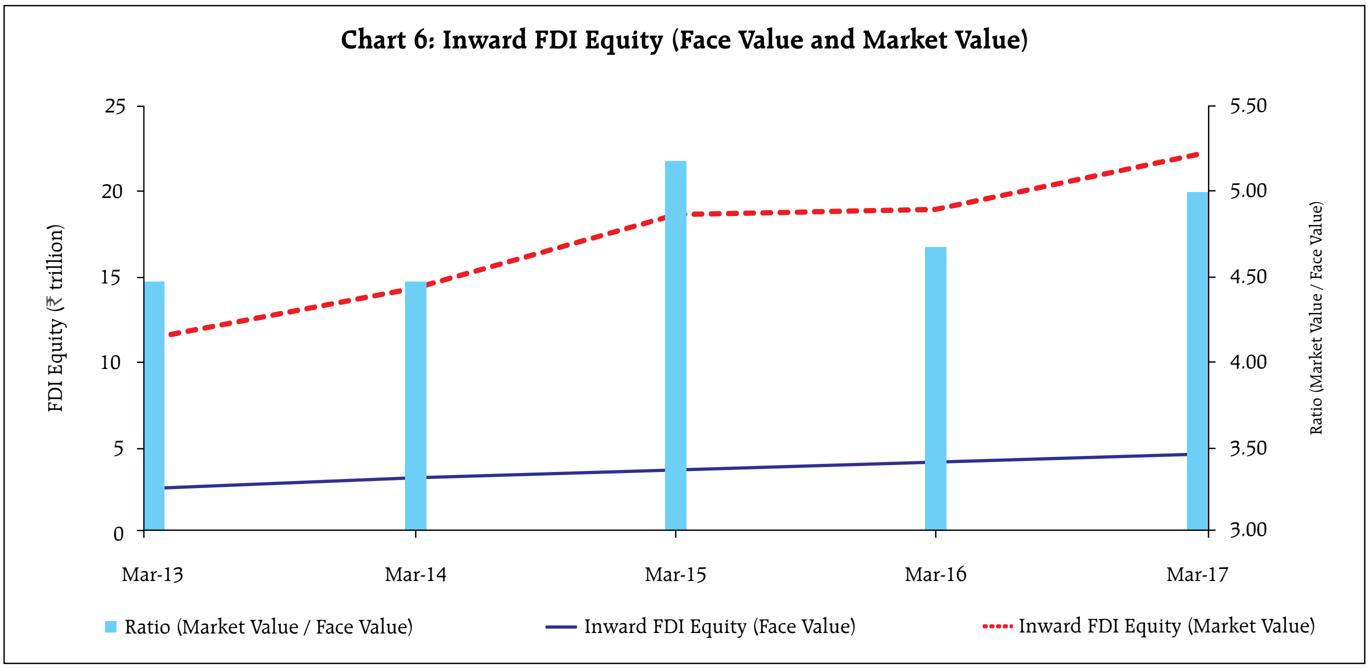
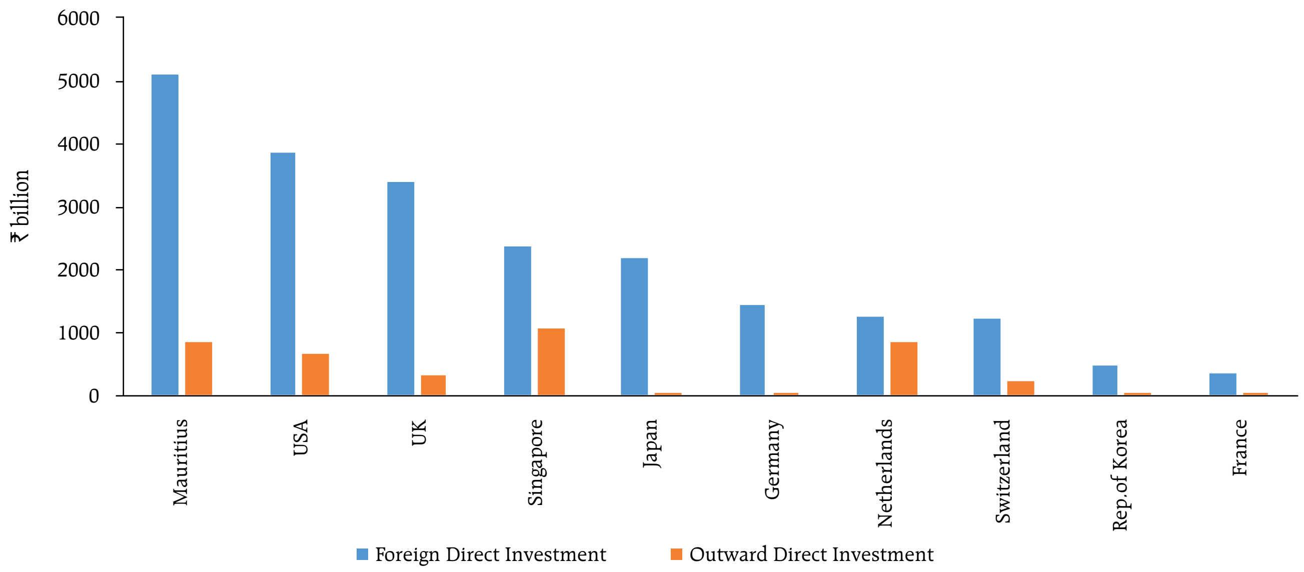


Chart 7: Direct Investment at Market Value - Major Partner Countries (March 2017)



followed by Netherlands, Mauritius and the USA. India's top ten counterparty countries together had 92.4 per cent share in total FDI and 74.6 per cent share in total ODI (Chart 7).

3.5 Other Investments

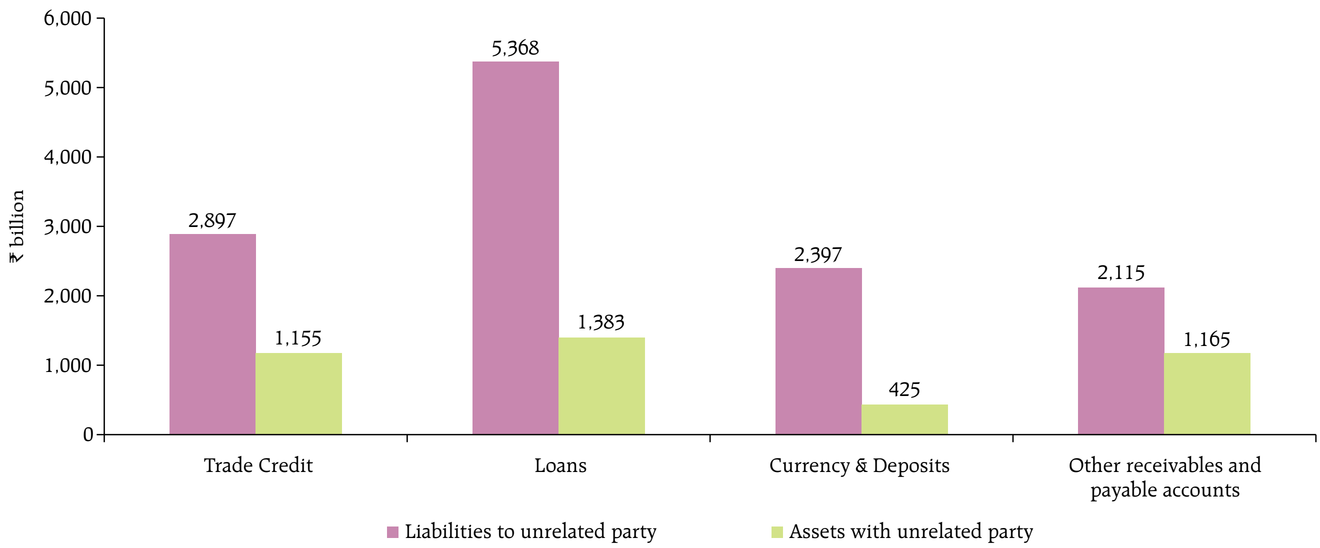
Other investment liabilities[7] of reporting companies increased by 15.0 per cent during the year and stood at ₹ 12,775 billion at end-March 2017: corresponding overseas assets amounted to 32.3 per cent of these liabilities. Loans had the highest share (42.0 per cent), followed by trade credit, currency and deposits and other payables with unrelated (third party) non-resident entities. Among the corresponding overseas assets too, the share of loans was highest (33.5 per cent), followed by trade credit and currency and deposits (Chart 8).

4. Foreign Affiliates' Trade Statistics (FATS)

In respect of foreign subsidiaries and affiliates, FDI statistics cover international transfer of funds but not their economic operations (*e.g.*, turnover, foreign trade). Foreign affiliates' trade statistics (FATS) go beyond the monetary value of stocks and flows; they portray the dimensions of overseas commercial presence of affiliates in the local economy for trade in goods and/or services. FDI includes all foreign interests amounting to 10 per cent or more voting power, whereas FATS relate to all affiliates that are foreign-controlled subsidiaries (*i.e.*, single direct investor's holding is more than 50 per cent of equity). Thus, FDI and FATS reflect two related aspects of the role of multinational corporations in the global economy. FDI involves the monetary value of investment flows and stocks in companies where foreign investors have

[7] Other investment claims and liabilities (e.g., trade credit, loans, currency and deposits and other receivable and payable accounts with unrelated non-resident entities) exclude inter-company debt transactions (e.g., borrowing and lending of funds between direct investors and subsidiaries, associates, parent companies, sister companies and branches), which are included under direct investment. Loans include external commercial borrowings, financial leases and repurchase agreements, and other loans and advances. If the reporting DI company is a bank, non-resident deposits as well as any credit balance in VOSTRO accounts and overdue in NOSTRO accounts are included under currency and deposits under the head 'outstanding liabilities'. Credit balances in NOSTRO accounts and debit balances in VOSTRO accounts are treated similarly under the head 'outstanding claims'. Miscellaneous receivables and payables (e.g., accounts relating to interest payments in arrears, loan payments in arrears, outstanding wages and salaries, prepaid insurance premium, outstanding taxes) are also included here.

Chart 8: Other Foreign Investment of FDI Companies: March 2017



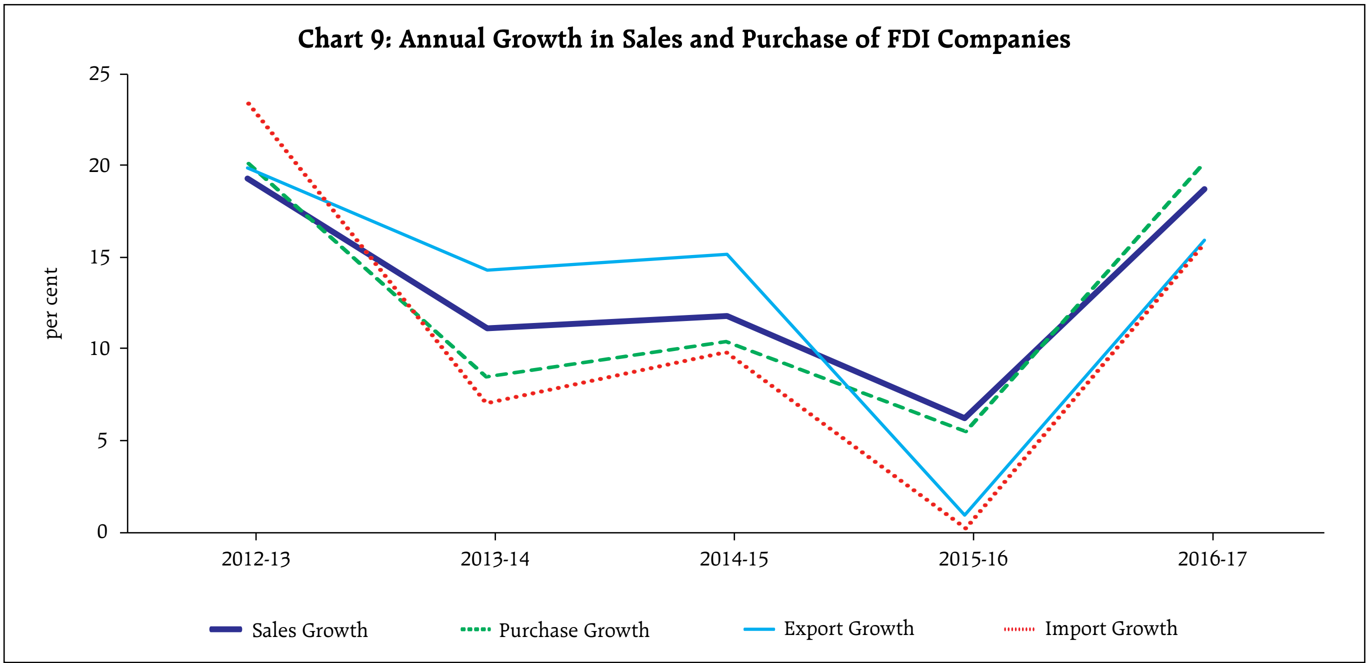
a lasting interest whereas FATS relate to economic activity (mainly sales, expenditures, exports and imports) of companies in which foreign investors have a majority stake.

The FLA census captures data on activities (sales, expenditures, exports and imports) of both inward and outward subsidiaries. Of the 2,443 Indian companies that reported outward direct investment, 2,100 companies had a total of 3,578 overseas subsidiaries, which reported trade data relating to outward FATS. Their total sales, including exports, grew by 14.7 per cent during 2016-17 whereas their purchases, including imports, recorded a growth of 9.2 per cent (Annex 3). Exports accounted for 30.8 per cent of their total sales whereas imports had a much larger share of 57.9 per cent in their total purchases (Annex 4).

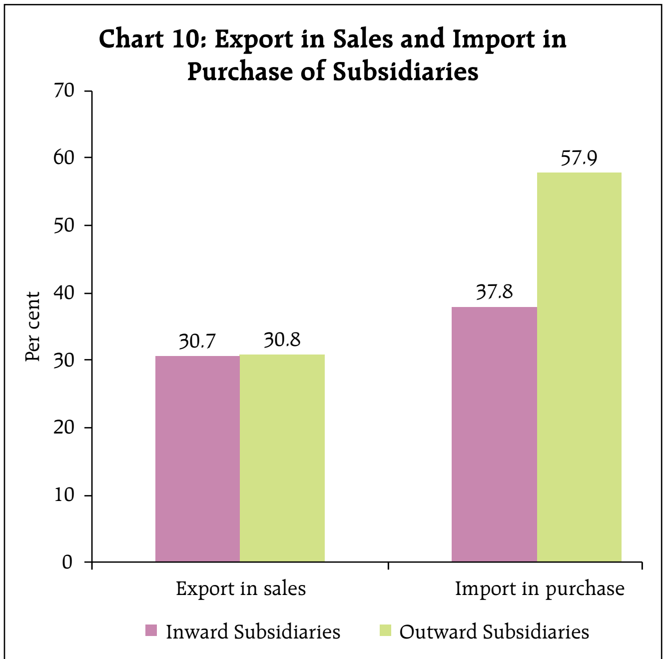
Recovering from recent moderation, sales of foreign subsidiaries in India turned around and increased by 18.7 per cent to ₹19,321 billion in 2016-17 (Annex 5). Unlisted companies, which are not required to disseminate their quarterly results, accounted for 82.5 per cent of sales. Manufacturing and services sectors had shares of 55.2 per cent and 41.5 per cent, respectively, in total sales. The information and communication services sector had the highest share of 20.7 per cent in sales of which, over two-thirds was through exports. Also, during the last two years, domestic trade outpaced overseas trade, with growth in sales and purchases exceeding export and import growth (Chart 9).

Inwards FATS data reported by 12,244 foreign subsidiaries in India also confirm strong trade links of foreign subsidiary companies. At the aggregate level, 30.7 per cent of their total sales were in terms of exports whereas imports accounted for 37.8 per cent of their total purchases (Chart 10).

Purchases by foreign subsidiaries moved in tandem with their sales, increasing by 20.1 per cent to ₹11,974 billion in 2016-17. Entities in the services sector recorded higher turnover growth than their counterparts in manufacturing. Their purchase-to-sales ratio stood at 62.0 per cent, which is much lower than the ratio of 81.3 per cent for all subsidiary companies and is consistent with higher utilisation of human capital in the services sector.



Aggregate exports of foreign subsidiary companies in India increased by 15.9 per cent during 2016-17 (Annex 6). Information and communication services remained the major export-oriented sector as only less than one-third of their sales were in domestic market and the sector accounted for 47.3 per cent of total exports. Foreign subsidiaries in the manufacturing sector, especially those in the food products, were more focussed on domestic market as reflected in the lower export-to-sales ratio for 2016-17.



Total imports of the subsidiary companies increased by 15.7 per cent to ₹ 4,530 billion in 2016-17. The share of imports in total purchases by manufacturing companies was 43.7 per cent as compared with 29.2 per cent for services sector companies. Major importing sectors under manufacturing included coke and refined petroleum products, motor vehicles, trailers and semi-trailers and computer, electronic and optical products (Annex 6).

5. Conclusion

India is emerging as a preferred destination for FDI. During 2016-17, the market value of direct investment by foreign companies in India rose strongly on sustained net investment inflows. The results of the 2016-17 census points to sizable valuation gains accruing to inward FDI equity with wide variations across sectors but accentuated towards the service sector relative to the manufacturing sector. This suggests that factors such as capital intensity, return on capital and the assessment of the outlook are at work.

By comparison, India's profile as FDI source country has been muted. During 2016-17, outward DI was subdued and the ratio of outward to inward direct investment at market value moderated for the third successive year. Nevertheless, Indian companies continue to reach out to global markets and 2,443 companies reported overseas presence in March 2017 with robust growth in turnover.

Activities of both Indian and foreign cross-border subsidiaries increased during the year. The information and communication sector continued to be the largest export-oriented sector among foreign subsidiaries in India. Their domestic sales recovered and recorded improvement in business growth during 2016-17, with domestic trade growth outpacing that of overseas trade during the last two years. Nevertheless, foreign trade continued to have a substantial share in the business of both domestic and overseas subsidiaries companies.

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Annex 1: Sector-wise Distribution of FDI Equity & Debt: March 2017

At Market Value (₹ billion)

Activity	Equity	Debt	Total FDI
A. Agriculture-related, Plantations & Allied activities	**42.9**	**0.7**	**43.6**
B. Mining	**815.4**	**2.2**	**817.6**
C. Manufacturing	**11,056.8**	**680.1**	**11,736.9**
of which:			
Chemicals and chemical products	837.4	41.2	878.6
Pharmaceuticals, medicinal chemical & botanical prod.	564.6	150.2	714.8
Motor vehicles, trailers and semi-trailers	1,791.7	143.0	1,934.7
Tobacco products	860.4	-	860.4
Food products	925.7	19.4	945.1
Electrical equipment	576.5	24.5	601.0
Machinery and equipment	892.3	26.9	919.2
Coke and refined petroleum products	384.7	2.1	386.8
Computer, electronic and optical products	387.7	92.9	480.6
Basic metals	145.9	22.9	168.8
D. Electricity, gas, steam and air conditioning supply	**502.2**	**98.5**	**600.7**
E. Water supply, sewerage, waste management /remediation	**6.5**	**0.6**	**7.1**
F. Construction	**375.4**	**290.9**	**666.3**
G. Services	**9,195.8**	**318.6**	**9,514.4**
of which:			
Information and communication	4,210.5	59.4	4,269.9
Financial and insurance activities	2,742.3	15.4	2,757.7
Total	**21,995.0**	**1,391.6**	**23,386.6**

Annex 2: Activity-wise FDI Equity at Face Value and Market Value of 15,169 FDI Companies

(Amount in ₹ billion)

Activity	FDI Equity at Face Value		FDI Equity at Market Value	
	Amount	Per cent Growth	Amount	Per cent Growth
A. Agriculture-related, Plantations and Allied activities	**8.5**	**-19.8**	**42.9**	**-12.8**
B. Mining	**23.5**	**-27.9**	**815.4**	**78.4**
C. Manufacturing	**1,872.9**	**2.9**	**11,056.8**	**18.4**
Manufacture of food products	90.7	60.0	925.7	16.3
Manufacture of beverages	23.7	23.4	128.0	-3.0
Manufacture of tobacco products	3.1	47.6	860.4	27.8
Manufacture of textiles	11.0	-39.9	32.0	1.3
Manufacture of wearing apparel	8.1	20.9	94.8	381.2
Manufacture of leather and related products	0.7	-36.4	41.6	6.1
Manufacture of wood & products of wood/cork (ex. furniture)	0.1	0.0	0.1	-75.0
Manufacture of paper and paper products	12.0	3.4	33.8	-6.4
Printing and reproduction of recorded media	2.4	-29.4	1.9	-9.5
Manufacture of coke and refined petroleum products	116.5	9.1	384.7	52.2
Manufacture of chemicals and chemical products	103.2	-4.4	837.4	21.7
Manufacture of pharmaceuticals, medicinal chemical and botanical products	34.4	-17.3	564.6	-14.5
Manufacture of rubber and plastics products	103.4	6.3	171.0	11.7
Manufacture of other non-metallic mineral products	18.8	-32.4	131.7	-17.6
Manufacture of basic metals	119.5	2.4	145.9	8.0
Manufacture of fabricated metal products, except machinery and equipment	33.9	-0.6	71.9	13.4
Manufacture of computer, electronic and optical products	31.6	-31.5	387.7	40.4
Manufacture of electrical equipment	128.7	16.6	576.5	-19.1
Manufacture of machinery and equipment not elsewhere classified	118.1	-22.0	892.3	54.8
Manufacture of motor vehicles, trailers and semi-trailers	475.6	6.1	1,791.7	43.7
Manufacture of other transport equipment	57.4	-2.7	84.0	3.6
Manufacture of furniture	1.5	50.0	2.6	44.4
Other manufacturing	360.3	8.0	2,868.3	11.5
Repair and installation of machinery and equipment	18.2	-6.2	28.2	0.0
D. Electricity, gas, steam and air conditioning supply	**235.7**	**19.5**	**502.2**	**24.9**
E. Water supply, sewerage, waste management /remediation	**6.9**	**46.8**	**6.5**	**54.8**
F. Construction	**162.1**	**-2.2**	**375.4**	**-4.4**
G. Services	**2,117.0**	**16.8**	**9,195.8**	**12.7**
1. Wholesale and retail trade; motor vehicles/motorcycles repair	473.2	9.6	635.2	16.3
2. Transportation and storage	126.6	39.1	484.3	4.5
3. Accommodation and Food service activities	69.4	21.5	146.4	7.7
4. Information and communication	495.3	72.0	4,210.5	9.9
5. Financial and insurance activities	589.1	1.1	2,742.3	23.3
6. Real estate activities	25.3	-23.6	117.6	-25.7
7. Other Services activities	338.1	2.6	859.5	6.8
Total	**4,426.4**	**9.5**	**21,995.0**	**17.0**

Annex 3: Activity-wise Sale and Purchase of ODI* Companies

(Amount in ₹ billion)

Activity	Amount		Per cent share in total	
	Sale	Purchase	Sale	Purchase
A. Agriculture-related, Plantations & Allied activities	**8.8**	**6.3**	**0.2**	**0.2**
B. Mining	**77.9**	**61.1**	**1.8**	**1.8**
C. Manufacturing	**1,582.9**	**1,331.2**	**37.2**	**38.5**
of which:				
Food products	38.3	34.3	0.9	1
Coke and refined petroleum products	200.6	191.2	4.7	5.5
Chemicals and chemical products	143.9	102.1	3.4	3
Pharmaceuticals, medicinal and chemical products	300.9	199.8	7.1	5.8
Computer, electronic and optical products	1.3	1.0	0.0	0
Electrical equipment	11.9	9.7	0.3	0.3
Machinery and equipment not elsewhere classified.	18.0	13.2	0.4	0.4
Motor vehicles, trailers and semi-trailers	285.8	266.2	6.7	7.7
D. Electricity, gas, steam and air conditioning supply	**24.8**	**15.8**	**0.6**	**0.5**
E. Water supply; sewerage, waste management and remediation activities	**1.7**	**1.3**	**0.0**	**0**
F. Construction	**32.0**	**26.4**	**0.8**	**0.8**
G. Services	**2,525.8**	**2,017.1**	**59.4**	**58.3**
of which:				
Wholesale and retail trade; repair of motor vehicles and motorcycles	480.8	439.8	11.3	12.7
Transportation and storage	60.7	55.1	1.4	1.6
Information and communication	1,699.8	1,288.3	40.0	37.2
Financial and insurance activities	92.0	87.3	2.2	2.5
Total	**4,253.9**	**3,459.2**	**100.0**	**100.0**

*Sale and Purchase of 3,578 overseas subsidiaries are reported by 2,100 Indian companies.

Annex 4: Activity-wise Export and Import of ODI Companies

(Amount in ₹ billion)

Activity	Amount		Share (per cent)	
	Export	Import	Export in Sales	Import in Purchase
A. Agriculture-related, Plantations & Allied activities	**2.7**	**3.3**	**30.7**	**52.4**
B. Mining	**44.2**	**40.3**	**56.7**	**66.0**
C. Manufacturing	**586.0**	**674.6**	**37.0**	**50.7**
of which:				
Food products	17.4	17.9	45.4	52.2
Coke and refined petroleum products	156.5	172.1	78.0	90.0
Chemicals and chemical products	67.6	66.8	47.0	65.4
Pharmaceuticals, medicinal chemical products	63.9	113.0	21.2	56.6
Computer, electronic and optical products	0.2	0.3	15.4	30.0
Electrical equipment	6.8	5.9	57.1	60.8
Machinery and equipment not elsewhere classified.	6.2	6.2	34.4	47.0
Motor vehicles, trailers and semi-trailers	69.3	50.4	24.2	18.9
D. Electricity, gas, steam and air conditioning supply	**7.7**	**10.2**	**31.0**	**64.6**
E. Water supply; sewerage, waste management and remediation activities	**0.0**	**0.2**	**0.0**	**15.4**
F. Construction	**1.6**	**1.2**	**5.0**	**4.5**
G. Services	**667.1**	**1,272.8**	**26.4**	**63.1**
of which:				
Wholesale and retail trade; repair of motor vehicles and motorcycles	382.7	344.9	79.6	78.4
Transportation and storage	46.1	42.0	75.9	76.2
Information and communication	187.7	830.8	11.0	64.5
Financial and insurance activities	18.7	21.5	20.3	24.6
Total	**1,309.3**	**2,002.6**	**30.8**	**57.9**

* Export and Import of 3,578 overseas subsidiaries are reported by 2,100 companies.

Annex 5: Activity-wise Sale and Purchase of Foreign Subsidiary Companies* During 2016-17

(Amount in ₹ billion)

Activity	Amount		Per cent share in total	
	Sale	**Purchase**	**Sale**	**Purchase**
A. Agriculture-related, Plantations & Allied activities	**56.3**	**42.8**	**0.3**	**0.4**
B. Mining	**178.1**	**153.5**	**0.9**	**1.3**
C. Manufacturing	**10,663.3**	**7,080.7**	**55.2**	**59.1**
of which:				
Food products	640.8	382.7	3.3	3.2
Coke and refined petroleum products	863.4	510.4	4.5	4.3
Chemicals and chemical products	560.1	330.9	2.9	2.8
Pharmaceuticals, medicinal and chemical products	386.9	215.0	2.0	1.8
Computer, electronic and optical products	1,061.1	695.5	5.5	5.8
Electrical equipment	710.9	429.2	3.7	3.6
Machinery and equipment not elsewhere classified	818.8	554.9	4.2	4.6
Motor vehicles, trailers and semi-trailers	2,356.0	1,720.0	12.2	14.4
D. Electricity, gas, steam and air conditioning supply	**165.1**	**115.1**	**0.9**	**1**
E. Water supply; sewerage, waste management and remediation activities	**11.3**	**6.8**	**0.1**	**0.1**
F. Construction	**229.2**	**131.0**	**1.2**	**1.1**
G. Services	**8,017.4**	**4,444.4**	**41.5**	**37.1**
of which:				
Wholesale and retail trade; repair of motor vehicles and motorcycles	2,190.6	1,962.9	11.3	16.4
Transportation and storage	231.1	166.4	1.2	1.4
Information and communication	4,000.4	1,560.6	20.7	13
Financial and insurance activities	387.6	160.6	2.0	1.3
Total	**19,320.7**	**11,974.3**	**100.0**	**100**

* Of the 12,244 subsidiary companies in India, 8,557 reported sales and 5,648 reported purchase.

Annex 6: Activity wise Export and Import of Foreign Subsidiary Companies* During 2016-17

(Amount in ₹ billion)

Activity	Amount		Share (per cent)	
	Export	Import	Export in Sales	Import in Purchase
A. Agriculture-related, Plantations & Allied activities	**2.0**	**5.8**	**3.6**	**13.6**
B. Mining	**1.9**	**88.7**	**1.1**	**57.8**
C. Manufacturing	**2,047.9**	**3,091.7**	**19.2**	**43.7**
of which:				
Food products	53.3	89.1	8.3	23.3
Coke and refined petroleum products	358.6	404.0	41.5	79.2
Chemicals and chemical products	102.1	170.5	18.2	51.5
Pharmaceuticals, medicinal chemical products	141.5	106.8	36.6	49.7
Computer, electronic and optical products	206.5	560.8	19.5	80.6
Electrical equipment	91.8	161.3	12.9	37.6
Machinery and equipment not elsewhere classified	241.7	203.5	29.5	36.7
Motor vehicles, trailers and semi-trailers	343.9	317.4	14.6	18.5
D. Electricity, gas, steam and air conditioning supply	**6.0**	**34.1**	**3.6**	**29.6**
E. Water supply; sewerage, waste management and remediation activities	**0.7**	**1.1**	**6.2**	**16.2**
F. Construction	**14.1**	**11.7**	**6.2**	**8.9**
G. Services	**3,852.0**	**1,296.7**	**48.0**	**29.2**
of which:				
Wholesale and retail trade; repair of motor vehicles and motorcycles	386.3	916.1	17.6	46.7
Transportation and storage	54.7	28.2	23.7	16.9
Information and communication	2,802.0	264.0	70.0	16.9
Financial and insurance activities	142.4	11.4	36.7	7.1
Total	**5,924.6**	**4,529.8**	**30.7**	**37.8**

* Of the 12,244 subsidiary companies in India, 6,365 reported exports and 3,931 reported imports.

PRESS RELEASE OF WORKING PAPERS AND DRG STUDY

Operating Performance of Initial Public Offering Firms after Issue in India – A Revisit

The paper examines how the operating performance of the Indian firms changed after their initial public offerings. It is found that the operating performance does not deteriorate post IPOs, if a performance indicator like "profit" is normalised by sales volumes (i.e., return on sales) rather than assets (i.e., return on assets). Unlike a distinct decline in return on assets reported in similar other studies, a stable return on sales is found in this study. This paper highlights the importance of choice of right variables for matching and normalisation purposes.

Non-Linear, Asymmetric and Time-Varying Exchange Rate Pass-Through: Recent Evidence from India

Exploring nonlinearities and time variations in exchange rate pass-through (ERPT) to consumer prices in India for the period from April 2005 to March 2016, this paper finds ERPT is asymmetric with pass-through from small depreciations being the strongest. ERPT to consumer inflation has declined in recent years in an environment of low inflation and declining trade openness. A DSGE model calibrated for the Indian economy with open economy features suggests that non-linear and time-varying ERPT poses challenges for monetary policy in terms of imported inflation and policy transmission.

Role of Financial Frictions in Monetary Policy Transmission in India

The study developed a New Keynesian Dynamic Stochastic General Equilibrium (NK-DSGE) model with an imperfectly competitive banking sector and examined the role of various financial frictions in monetary policy transmission in India.

Main findings of the study:

The study finds a weak transmission of monetary policy shocks. Interest rates in the economy increase following a positive policy rate shock, albeit at a lesser pace and squeeze the demand for credit. This leads to contractionary effects emanating from both the demand side of the economy, via reduction of consumption and investment demand, and from the supply side, via replacement cost of physical capital. This two-pronged contraction leads to a sharp decline in the demand for factors of production, in particular the labour, which drives down the aggregate output and inflation. A negative policy rate shock leads to lower interest rates which, in turn, exert expansionary effects in the economy.

Monetary policy transmission improves if friction in the financial system diminishes, particularly with greater financial inclusion in terms of depositors' base and easing of the collateral constraints of the households. Easier norms for collaterals are likely to enable households to increase their borrowings which, in turn, may improve the transmission.

The simulation experiments suggest that the standard form of Taylor rule with forecast-based inflation and output gap turns out to be the optimal rule to stabilise inflation and output. In fact, adjusting the policy interest rate to smooth out the credit cycle and/or asset price cycle exacerbates volatility of inflation and output. Overall, it emerges that targeting financial stability through monetary policy may not be appropriate for the purpose of economic stabilisation.

CURRENT STATISTICS

Contents

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

No. 1: Select Economic Indicators

Item	2016-17	2016-17		2017-18	
		Q2	Q3	Q2	Q3
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	7.1	7.2	6.9	6.2	6.7
1.1.1 Agriculture	6.3	5.5	7.5	2.7	4.1
1.1.2 Industry	8.7	7.8	8.8	7.0	6.8
1.1.3 Services	6.7	7.4	6.0	6.6	7.6
1.1a Final Consumption Expenditure	8.0	7.6	9.7	5.9	5.7
1.1b Gross Fixed Capital Formation	10.1	10.5	8.7	6.9	12.0
	2016-17	2017		2018	
		Jan.	Feb.	Jan.	Feb.
	1	1	2	3	4
1.2 Index of Industrial Production	4.6	3.5	1.2	7.5	-
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	11.3	12.7	12.0	4.6	5.8
2.1.2 Credit	4.5	4.3	3.6	10.1	11.2
2.1.2.1 Non-food Credit	5.2	4.3	4.3	11.0	11.5
2.1.3 Investment in Govt. Securities	17.4	27.7	22.5	-4.0	3.0
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	-12.9	-25.3	-19.5	50.3	39.3
2.2.2 Broad Money (M3)	10.6	6.0	6.1	10.8	10.3
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.00	4.00	4.00	4.00	4.00
3.2 Statutory Liquidity Ratio	20.50	20.50	20.50	19.50	19.50
3.3 Cash-Deposit Ratio	5.3	4.8	4.7	4.8	4.7
3.4 Credit-Deposit Ratio	72.9	70.7	71.2	74.5	74.9
3.5 Incremental Credit-Deposit Ratio	41.4	13.0	16.7	165.7	148.5
3.6 Investment-Deposit Ratio	28.2	33.3	31.6	30.6	30.7
3.7 Incremental Investment-Deposit Ratio	28.4	75.6	60.4	171.0	126.7
4 Interest Rates (%)					
4.1 Policy Repo Rate	6.25	6.25	6.25	6.00	6.00
4.2 Reverse Repo Rate	5.75	5.75	5.75	5.75	5.75
4.3 Marginal Standing Facility (MSF) Rate	6.75	6.75	6.75	6.25	6.25
4.4 Bank Rate	6.75	6.75	6.75	6.25	6.25
4.5 Base Rate	9.25/9.60	9.25/9.65	9.25/9.65	8.65/9.45	8.65/9.45
4.6 MCLR (Overnight)	7.75/8.20	7.75/8.20	7.75/8.20	7.65/8.05	7.65/7.80
4.7 Term Deposit Rate >1 Year	6.50/7.00	6.50/7.00	6.50/7.00	6.00/6.75	6.00/6.75
4.8 Savings Deposit Rate	4.00	4.00	4.00	3.50/4.00	3.50/4.00
4.9 Call Money Rate (Weighted Average)	5.97	5.98	5.95	5.90	5.94
4.10 91-Day Treasury Bill (Primary) Yield	5.82	6.23	6.15	6.40	6.36
4.11 182-Day Treasury Bill (Primary) Yield	6.05	6.22	6.27	6.50	6.50
4.12 364-Day Treasury Bill (Primary) Yield	6.14	6.25	6.30	6.58	6.66
4.13 10-Year G-Sec Par Yield (FIMMDA)	7.00	6.87	7.19	7.40	7.70
5 RBI Reference Rate and Forward Premia					
5.1 INR-US$ Spot Rate (Rs. Per Foreign Currency)	64.84	68.20	66.84	63.50	64.82
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	69.25	72.75	70.54	79.07	79.76
5.3 Forward Premia of US$ 1-month (%)	5.09	4.40	4.85	4.16	4.26
3-month (%)	4.97	4.84	5.15	4.57	4.50
6-month (%)	4.90	4.68	5.00	4.50	4.13
6 Inflation (%)					
6.1 All India Consumer Price Index	4.5	3.2	3.7	5.1	4.4
6.2 Consumer Price Index for Industrial Workers	4.1	1.9	2.6	5.1	4.7
6.3 Wholesale Price Index	1.7	4.3	5.5	2.8	2.5
6.3.1 Primary Articles	3.4	1.9	4.0	2.4	0.8
6.3.2 Fuel and Power	-0.3	16.7	25.2	4.1	3.8
6.3.3 Manufactured Products	1.3	3.3	3.2	2.8	3.0
7 Foreign Trade (% Change)					
7.1 Imports	0.5	11.8	24.9	26.0	10.4
7.2 Exports	5.4	5.5	18.6	11.6	4.5

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

(₹ Billion)

Item	As on the Last Friday/ Friday						
	2017-18	2017	2018				
		Mar.	Feb. 23	Mar. 9	Mar. 16	Mar. 23	Mar. 30
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	18,044.21	13,101.81	17,566.61	17,879.54	17,972.74	18,021.03	18,044.21
1.1.2 Notes held in Banking Department	0.15	0.12	0.18	0.18	0.16	0.14	0.15
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	**18,044.35**	**13,101.93**	**17,566.79**	**17,879.72**	**17,972.90**	**18,021.17**	**18,044.35**
1.2 Assets							
1.2.1 Gold Coin and Bullion	733.81	675.08	717.64	733.81	733.81	733.81	733.81
1.2.2 Foreign Securities	17,303.70	12,422.35	16,842.25	17,139.11	17,232.30	17,280.55	17,303.70
1.2.3 Rupee Coin	6.83	4.50	6.90	6.80	6.79	6.81	6.83
1.2.4 Government of India Rupee Securities	–	–	–	–	–	–	–
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	9,854.75	10,389.43	7,957.11	7,813.30	8,016.11	8,428.47	9,854.75
2.1.1.1 Central Government	68.08	50.00	1.01	1.00	1.01	1.00	68.08
2.1.1.2 Market Stabilisation Scheme	–	–	946.73	946.73	–	–	–
2.1.1.3 State Governments	6.51	0.42	0.42	0.42	0.42	0.42	6.51
2.1.1.4 Scheduled Commercial Banks	5,256.86	5,087.73	4,589.80	4,486.61	4,564.34	4,590.75	5,256.86
2.1.1.5 Scheduled State Co-operative Banks	48.28	55.13	34.48	34.44	36.33	35.93	48.28
2.1.1.6 Non-Scheduled State Co-operative Banks	25.49	18.92	20.03	19.52	20.25	19.53	25.49
2.1.1.7 Other Banks	305.66	279.49	260.97	262.07	264.96	265.35	305.66
2.1.1.8 Others	4,143.89	4,897.74	2,103.67	2,062.50	3,125.54	3,515.48	4,143.89
2.1.1.9 Financial Institution Outside India	–	–	–	–	–	–	–
2.1.2 Other Liabilities	9,141.27	8,411.18	9,056.98	9,112.56	9,002.29	9,200.82	9,141.27
2.1/2.2 Total Liabilities or Assets	**18,996.03**	**18,800.61**	**17,014.09**	**16,925.86**	**17,015.14**	**17,629.29**	**18,996.03**
2.2 Assets							
2.2.1 Notes and Coins	0.15	0.12	0.18	0.18	0.16	0.14	0.15
2.2.2 Balances held Abroad	8,887.95	10,263.49	9,023.47	8,884.36	8,698.63	8,827.93	8,887.95
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	–	–	–	–	–
2.2.3.2 State Governments	7.39	12.62	6.16	60.63	22.21	24.59	7.39
2.2.3.3 Scheduled Commercial Banks	2,739.78	218.10	781.40	792.43	1,097.92	1,559.62	2,739.78
2.2.3.4 Scheduled State Co-op.Banks	0.35	–	–	–	–	0.35	0.35
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	106.75	39.91	44.96	53.84	58.38	71.60	106.75
2.2.3.9 Financial Institution Outside India	–	–	–	–	–	–	–
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	–	–	–	–	–	–	–
2.2.4.2 Government Treasury Bills	–	–	–	–	–	–	–
2.2.5 Investments	6,369.76	7,528.11	6,413.77	6,368.13	6,368.70	6,369.22	6,369.76
2.2.6 Other Assets	883.90	738.26	744.16	766.30	769.14	775.84	883.90
2.2.6.1 Gold	673.37	613.19	652.57	669.10	669.96	673.37	673.37

* Data are provisional

No. 3: Liquidity Operations by RBI

(₹ Billion)

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
Feb. 1, 2018	25.10	246.35	–	201.85	2.02	–	–	–	–	–421.08
Feb. 2, 2018	29.07	574.65	90.80	136.39	0.70	–	–	–	–	–590.47
Feb. 3, 2018	74.08	44.66	–	–	–	–	–	–	–	29.42
Feb. 5, 2018	25.40	138.14	–	214.65	0.20	–2.60	–	–	–	–329.79
Feb. 6, 2018	24.20	65.57	146.00	169.14	–	–	–	–	–	–64.51
Feb. 7, 2018	47.89	99.22	–	–	16.50	0.61	–	–	–	–34.22
Feb. 8, 2018	25.00	41.01	–	146.20	–	–	–	–	–	–162.21
Feb. 9, 2018	25.30	92.94	90.50	100.16	0.20	–	–	–	–	–77.10
Feb. 12, 2018	36.30	66.97	134.00	57.23	20.46	–	–	–	–	66.56
Feb. 13, 2018	–	81.43	–	–	17.50	–	–	–	–	–63.93
Feb. 14, 2018	219.29	50.09	41.30	2.90	29.67	–	–	–	–	237.27
Feb. 15, 2018	57.19	205.27	187.40	21.95	–	0.60	–	–	–	17.97
Feb. 16, 2018	40.55	270.66	91.75	254.74	4.53	–	–	–	–	–388.57
Feb. 17, 2018	130.99	23.95	–	–	4.50	–	–	–	–	111.54
Feb. 19, 2018	–	50.15	–	–	14.70	–	–	–	–	–35.45
Feb. 20, 2018	58.25	56.06	157.75	–	7.85	–	–	–	–	167.79
Feb. 21, 2018	36.27	88.37	250.05	–	–	–1.70	–	–	–	196.25
Feb. 22, 2018	47.60	98.65	92.85	–	1.75	1.70	–	–	–	45.25
Feb. 23, 2018	36.05	176.43	55.00	240.66	–	–3.16	–	–	–	–329.20
Feb. 26, 2018	36.15	91.65	–	138.75	0.20	–	–	–	–	–194.05
Feb. 27, 2018	35.85	161.69	182.50	–	0.40	3.36	–	–	–	60.42
Feb. 28, 2018	36.40	250.43	–	250.54	0.44	5.82	–	–	–	–458.31

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

i) Operations in OTC segment

Item	2016-17	2017	2018	
		Feb.	Jan.	Feb.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	12,351.00	1,190.00	7,364.00	1,665.00
1.1 Purchase (+)	71,764.00	2,201.00	7,953.00	3,320.00
1.2 Sale (–)	59,413.00	1,011.00	589.00	1,655.00
2 ₹ equivalent at contract rate (₹ Billion)	822.16	80.74	481.84	119.62
3 Cumulative (over end-March) (US $ Million)	12,351.00	8,813.00	31,028.00	32,693.00
(₹ Billion)	822.17	588.33	2,037.55	2,157.17
4 Outstanding Net Forward Sales (–)/ Purchase (+) at the end of month (US $ Million)	10,835.00	2,842.00	26,051.00	22,668.00

ii) Operations in currency futures segment

Item	2016-17	2017	2018	
		Feb.	Jan.	Feb.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US $ Million) (1.1–1.2)	0.00	0.00	0.00	0.00
1.1 Purchase (+)	10,456.00	0.00	0.00	750.00
1.2 Sale (–)	10,456.00	0.00	0.00	750.00
2 Outstanding Net Currency Futures Sales (–)/ Purchase (+) at the end of month (US $ Million)	0.00	0.00	0.00	–1,005.00

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

Item	As on February 28, 2018		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	3,328	203	3,125
2. More than 1 month and upto 3 months	8,231	340	7,891
3. More than 3 months and upto 1 year	13,845	2,383	11,462
4. More than 1 year	190	0	190
Total (1+2+3+4)	**25,594**	**2,926**	**22,668**

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday							
	2016-17	2017				2018		
		Mar. 31	Oct. 27	Nov. 24	Dec. 22	Jan. 19	Feb. 16	Mar. 30
	1	2	3	4	5	6	7	8
1 MSF	19.3	19.3	–	5.5	4.9	–	4.5	–
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit	–	–	–	–	–	–	–	–
2.2 Outstanding	–	–	–	–	–	–	–	–
3 Liquidity Facility for PDs								
3.1 Limit	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
3.2 Outstanding	14.8	14.8	19.4	17.9	20.8	9.8	12.0	25.4
4 Others								
4.1 Limit	–	–	–	–	–	–	–	–
4.2 Outstanding	–	–	–	–	–	–	–	–
5 Total Outstanding (1+2.2+3.2+4.2)	34.1	34.1	19.4	23.3	25.6	9.8	16.6	25.4

Money and Banking

No. 6: Money Stock Measures

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	12,641.2	10,644.9	16,602.4	16,680.0	17,067.1
1.1 Notes in Circulation	13,101.8	11,067.9	17,076.6	17,139.7	17,521.0
1.2 Circulation of Rupee Coin	243.4	242.0	248.5	248.5	248.5
1.3 Circulation of Small Coins	7.4	7.4	7.4	7.4	7.4
1.4 Cash on Hand with Banks	711.4	672.5	730.2	715.6	709.9
2 Deposit Money of the Public	14,178.3	11,865.3	12,601.1	12,830.4	12,688.2
2.1 Demand Deposits with Banks	13,967.4	11,709.0	12,341.2	12,619.8	12,487.3
2.2 'Other' Deposits with Reserve Bank	210.9	156.3	259.9	210.6	200.9
3 M_1 (1 + 2)	**26,819.6**	**22,510.2**	**29,203.5**	**29,510.4**	**29,755.3**
4 Post Office Saving Bank Deposits	920.6	926.4	968.8	968.8	968.8
5 M_2 (3 + 4)	**27,740.2**	**23,436.6**	**30,172.3**	**30,479.3**	**30,724.2**
6 Time Deposits with Banks	101,099.8	100,113.2	104,929.3	105,959.4	105,531.0
7 M_3 (3 + 6)	**127,919.4**	**122,623.4**	**134,132.7**	**135,469.8**	**135,286.3**
8 Total Post Office Deposits	2,562.1	2,544.3	2,717.2	2,717.2	2,717.2
9 M_4 (7 + 8)	**130,481.4**	**125,167.7**	**136,849.9**	**138,187.0**	**138,003.6**

No. 7: Sources of Money Stock (M_3)

(₹ Billion)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 Net Bank Credit to Government	**38,566.1**	**40,296.8**	**40,413.8**	**40,699.4**	**40,373.7**
1.1 RBI's net credit to Government (1.1.1–1.1.2)	6,208.1	4,921.7	4,601.6	4,407.4	4,167.1
1.1.1 Claims on Government	7,512.0	7,623.2	6,466.4	6,436.8	6,396.4
1.1.1.1 Central Government	7,499.4	7,614.1	6,442.5	6,385.3	6,386.4
1.1.1.2 State Governments	12.6	9.1	23.9	51.5	10.0
1.1.2 Government deposits with RBI	1,303.9	2,701.5	1,864.8	2,029.4	2,229.3
1.1.2.1 Central Government	1,303.5	2,701.0	1,864.4	2,028.9	2,228.9
1.1.2.2 State Governments	0.4	0.4	0.4	0.4	0.4
1.2 Other Banks' Credit to Government	32,358.0	35,375.1	35,812.2	36,292.0	36,206.6
2 Bank Credit to Commercial Sector	**84,114.9**	**80,199.3**	**87,452.6**	**88,371.7**	**88,247.6**
2.1 RBI's credit to commercial sector	72.9	47.7	69.5	73.5	79.4
2.2 Other banks' credit to commercial sector	84,042.0	80,151.6	87,383.1	88,298.2	88,168.2
2.2.1 Bank credit by commercial banks	78,414.7	74,588.5	81,694.2	82,611.0	82,508.2
2.2.2 Bank credit by co-operative banks	5,548.9	5,477.3	5,606.6	5,606.9	5,612.3
2.2.3 Investments by commercial and co-operative banks in other securities	78.4	85.7	82.3	80.3	47.7
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	**25,582.3**	**25,289.1**	**27,714.0**	**28,298.9**	**28,219.2**
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	23,972.1	24,341.1	26,437.6	27,022.6	26,942.9
3.1.1 Gross foreign assets	23,974.1	24,343.2	26,439.6	27,024.6	26,944.9
3.1.2 Foreign liabilities	2.0	2.0	1.9	2.0	2.0
3.2 Other banks' net foreign exchange assets	1,610.2	948.0	1,276.3	1,276.3	1,276.3
4 Government's Currency Liabilities to the Public	**250.9**	**249.5**	**256.0**	**256.0**	**256.0**
5 Banking Sector's Net Non-monetary Liabilities	**20,594.8**	**23,411.2**	**21,703.6**	**22,156.1**	**21,810.1**
5.1 Net non-monetary liabilities of RBI	8,333.5	9,193.0	8,608.2	8,809.8	8,718.7
5.2 Net non-monetary liabilities of other banks (residual)	12,261.3	14,218.2	13,095.4	13,346.3	13,091.4
M_3 (1+2+3+4–5)	**127,919.4**	**122,623.4**	**134,132.7**	**135,469.8**	**135,286.3**

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
Monetary Aggregates					
NM_1 (1.1 + 1.2.1+1.3)	26,819.6	22,510.2	29,203.5	29,510.4	29,755.3
NM_2 (NM_1+ 1.2.2.1)	71,695.2	66,932.0	75,778.1	76,546.6	76,595.0
NM_3 (NM_2 + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	129,706.3	124,592.6	136,255.2	137,605.6	137,455.9
1 Components					
1.1 Currency with the Public	12,641.2	10,644.9	16,602.4	16,680.0	17,067.1
1.2 Aggregate Deposits of Residents	113,690.9	110,424.1	115,840.5	117,144.7	116,575.4
1.2.1 Demand Deposits	13,967.4	11,709.0	12,341.2	12,619.8	12,487.3
1.2.2 Time Deposits of Residents	99,723.5	98,715.1	103,499.3	104,524.9	104,088.1
1.2.2.1 Short-term Time Deposits	44,875.6	44,421.8	46,574.7	47,036.2	46,839.6
1.2.2.1.1 Certificates of Deposit (CDs)	1,570.6	1,475.6	1,864.1	1,725.0	1,801.1
1.2.2.2 Long-term Time Deposits	54,847.9	54,293.3	56,924.6	57,488.7	57,248.4
1.3 'Other' Deposits with RBI	210.9	156.3	259.9	210.6	200.9
1.4 Call/Term Funding from Financial Institutions	3,163.2	3,367.3	3,552.4	3,570.3	3,612.5
2 Sources					
2.1 Domestic Credit	129,185.0	127,443.3	135,391.6	136,392.0	136,082.5
2.1.1 Net Bank Credit to the Government	38,566.1	40,296.8	40,413.8	40,699.4	40,373.7
2.1.1.1 Net RBI credit to the Government	6,208.1	4,921.7	4,601.6	4,407.4	4,167.1
2.1.1.2 Credit to the Government by the Banking System	32,358.0	35,375.1	35,812.2	36,292.0	36,206.6
2.1.2 Bank Credit to the Commercial Sector	90,618.9	87,146.5	94,977.8	95,692.6	95,708.8
2.1.2.1 RBI Credit to the Commercial Sector	72.9	47.7	69.5	73.5	79.4
2.1.2.2 Credit to the Commercial Sector by the Banking System	90,546.0	87,098.8	94,908.3	95,619.1	95,629.4
2.1.2.2.1 Other Investments (Non-SLR Securities)	6,462.5	6,880.0	7,432.4	7,240.9	7,378.3
2.2 Government's Currency Liabilities to the Public	250.9	249.5	256.0	256.0	256.0
2.3 Net Foreign Exchange Assets of the Banking Sector	23,819.8	23,489.3	25,766.6	26,349.9	26,393.2
2.3.1 Net Foreign Exchange Assets of the RBI	23,972.1	24,341.1	26,437.6	27,022.6	26,942.9
2.3.2 Net Foreign Currency Assets of the Banking System	–152.3	–851.8	–671.0	–672.7	–549.6
2.4 Capital Account	18,195.5	18,782.0	19,697.4	19,952.4	19,801.0
2.5 Other items (net)	5,353.9	7,807.5	5,461.6	5,439.9	5,474.7

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2016-17	2017		2018	
		Feb.	Dec.	Jan.	Feb.
	1	2	3	4	5
1 NM_3	**129,706.3**	**124,592.6**	**134,544.0**	**136,255.2**	**137,455.9**
2 Postal Deposits	2,562.1	2,544.3	2,717.2	2,717.2	2,717.2
3 L_1 (1 + 2)	**132,268.3**	**127,136.9**	**137,261.2**	**138,972.4**	**140,173.2**
4 Liabilities of Financial Institutions	29.3	29.3	29.3	29.3	29.3
4.1 Term Money Borrowings	26.6	26.6	26.6	26.6	26.6
4.2 Certificates of Deposit	0.3	0.3	0.3	0.3	0.3
4.3 Term Deposits	2.5	2.5	2.5	2.5	2.5
5 L_2 (3 + 4)	**132,297.7**	**127,166.2**	**137,290.6**	**139,001.7**	**140,202.5**
6 Public Deposits with Non-Banking Financial Companies	317.9	..	313.6	..	..
7 L_3 (5 + 6)	**132,615.6**	..	**137,604.2**	..	..

No. 10: Reserve Bank of India Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	13,352.7	11,317.4	17,332.6	17,395.6	17,777.0
1.2 Bankers' Deposits with the RBI	5,441.3	4,589.8	4,839.6	4,743.4	4,822.2
1.2.1 Scheduled Commercial Banks	5,087.7	4,282.4	4,523.2	4,423.4	4,504.3
1.3 'Other' Deposits with the RBI	210.9	156.3	259.9	210.6	200.9
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	19,004.8	16,063.5	22,432.0	22,349.6	22,800.1
2 Sources					
2.1 RBI's Domestic Credit	3,115.3	665.9	4,346.6	3,880.9	4,319.9
2.1.1 Net RBI credit to the Government	6,208.1	4,921.7	4,601.6	4,407.4	4,167.1
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)	6,195.9	4,913.0	4,578.1	4,356.4	4,157.5
2.1.1.1.1 Loans and Advances to the Central Government	–	–	–	–	–
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	7,494.9	7,609.8	6,435.4	6,378.2	6,379.5
2.1.1.1.3.1 Central Government Securities	7,494.9	7,609.8	6,435.4	6,378.2	6,379.5
2.1.1.1.4 Rupee Coins	4.5	4.3	7.1	7.1	7.0
2.1.1.1.5 Deposits of the Central Government	1,303.5	2,701.0	1,864.4	2,028.9	2,228.9
2.1.1.2 Net RBI credit to State Governments	12.2	8.7	23.5	51.0	9.6
2.1.2 RBI's Claims on Banks	-3,165.7	-4,303.5	-324.5	-600.0	73.4
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	-3,165.7	-4,303.5	-324.5	-600.0	73.4
2.1.3 RBI's Credit to Commercial Sector	72.9	47.7	69.5	73.5	79.4
2.1.3.1 Loans and Advances to Primary Dealers	14.8	10.6	9.8	13.4	12.0
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	250.9	249.5	256.0	256.0	256.0
2.3 Net Foreign Exchange Assets of the RBI	23,972.1	24,341.1	26,437.6	27,022.6	26,942.9
2.3.1 Gold	1,288.3	1,305.3	1,305.5	1,370.2	1,370.2
2.3.2 Foreign Currency Assets	22,684.0	23,036.0	25,132.3	25,652.5	25,572.8
2.4 Capital Account	7,512.8	8,279.5	8,002.3	8,316.5	8,210.0
2.5 Other Items (net)	820.6	913.5	605.9	493.3	508.6

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	Outstanding as on March 31/ last Fridays of the month/ Fridays						
	2016-17	2017	2018				
		Feb. 24	Jan. 26	Feb. 2	Feb. 9	Feb. 16	Feb. 23
	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)	19,004.8	16,464.0	22,502.3	22,349.6	22,637.8	22,800.1	22,938.0
1 Components							
1.1 Currency in Circulation	13,352.7	11,644.8	17,385.6	17,395.6	17,663.4	17,777.0	17,822.6
1.2 Bankers' Deposits with RBI	5,441.3	4,661.4	4,887.9	4,743.4	4,767.6	4,822.2	4,905.3
1.3 'Other' Deposits with RBI	210.9	157.7	228.9	210.6	206.8	200.9	210.2
2 Sources							
2.1 Net Reserve Bank Credit to Government	6,208.1	5,456.9	4,180.3	4,407.4	4,301.8	4,167.1	4,022.2
2.2 Reserve Bank Credit to Banks	-3,165.7	-4,453.5	96.6	-600.0	-212.8	73.4	363.8
2.3 Reserve Bank Credit to Commercial Sector	72.9	46.1	74.7	73.5	70.3	79.4	78.5
2.4 Net Foreign Exchange Assets of RBI	23,972.1	24,273.1	26,541.0	27,022.6	27,000.8	26,942.9	27,233.9
2.5 Government's Currency Liabilities to the Public	250.9	249.5	256.0	256.0	256.0	256.0	256.0
2.6 Net Non- Monetary Liabilities of RBI	8,333.5	9,108.1	8,646.2	8,809.8	8,778.3	8,718.7	9,016.3

No. 12: Commercial Bank Survey

(₹ Billion)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2016-17	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	106,200.3	103,000.1	108,349.9	109,652.4	109,081.1
1.1.1 Demand Deposits	12,814.4	10,576.5	11,213.0	11,486.6	11,355.7
1.1.2 Time Deposits of Residents	93,385.9	92,423.6	97,136.9	98,165.7	97,725.4
1.1.2.1 Short-term Time Deposits	42,023.6	41,590.6	43,711.6	44,174.6	43,976.4
1.1.2.1.1 Certificates of Deposits (CDs)	1,570.6	1,475.6	1,864.1	1,725.0	1,801.1
1.1.2.2 Long-term Time Deposits	51,362.2	50,833.0	53,425.3	53,991.2	53,749.0
1.2 Call/Term Funding from Financial Institutions	3,163.2	3,367.3	3,552.4	3,570.3	3,612.5
2 Sources					
2.1 Domestic Credit	115,141.3	114,725.7	122,887.6	124,063.6	124,025.2
2.1.1 Credit to the Government	30,297.5	33,258.2	33,740.9	34,206.2	34,130.6
2.1.2 Credit to the Commercial Sector	84,843.8	81,467.5	89,146.7	89,857.4	89,894.6
2.1.2.1 Bank Credit	78,414.7	74,588.5	81,694.2	82,611.0	82,508.2
2.1.2.1.1 Non-food Credit	77,875.4	73,533.1	81,108.1	82,087.2	82,032.7
2.1.2.2 Net Credit to Primary Dealers	44.2	69.9	95.5	82.6	85.6
2.1.2.3 Investments in Other Approved Securities	12.2	18.8	14.2	12.4	12.1
2.1.2.4 Other Investments (in non-SLR Securities)	6,372.9	6,790.4	7,342.8	7,151.3	7,288.7
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	–152.3	–851.8	–671.0	–672.7	–549.6
2.2.1 Foreign Currency Assets	1,983.5	1,385.2	1,740.7	1,774.1	1,980.7
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	1,376.3	1,398.1	1,430.0	1,434.5	1,442.9
2.2.3 Overseas Foreign Currency Borrowings	759.5	839.0	981.8	1,012.3	1,087.4
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	8,867.0	9,157.3	5,480.8	5,642.6	5,043.8
2.3.1 Balances with the RBI	5,087.7	4,282.4	4,523.2	4,423.4	4,504.3
2.3.2 Cash in Hand	613.6	571.4	633.1	619.2	612.9
2.3.3 Loans and Advances from the RBI	–3,165.7	–4,303.5	–324.5	–600.0	73.4
2.4 Capital Account	10,441.0	10,260.8	11,453.4	11,394.1	11,349.3
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	4,051.6	6,403.0	4,341.6	4,416.7	4,476.5
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	3,877.6	3,963.7	3,832.0	4,014.9	3,994.8
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	–62.4	–202.6	–315.1	–424.9	–433.2

No. 13: Scheduled Commercial Banks' Investments

(₹ Billion)

Item	As on March 31, 2017	2017	2018		
		Feb. 17	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 SLR Securities	30,309.6	33,277.0	33,635.9	34,218.7	34,142.7
2 Commercial Paper	1,159.6	1,315.1	1,306.1	1,256.2	1,249.6
3 Shares issued by					
3.1 PSUs	91.9	90.7	115.9	114.6	114.4
3.2 Private Corporate Sector	567.3	522.6	718.9	719.5	720.4
3.3 Others	51.8	44.7	42.8	42.7	42.7
4 Bonds/Debentures issued by					
4.1 PSUs	1,118.5	1,148.1	1,143.2	1,079.2	1,094.0
4.2 Private Corporate Sector	1,680.0	1,479.8	2,125.7	2,107.4	2,094.9
4.3 Others	810.9	690.5	702.9	685.2	688.1
5 Instruments issued by					
5.1 Mutual funds	134.0	916.9	573.9	326.0	450.0
5.2 Financial institutions	844.3	680.5	788.3	820.5	834.5

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

(₹ Billion)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks				All Scheduled Commercial Banks			
	2016-17	2017	2018		2016-17	2017	2018	
		Feb.	Jan.	Feb.		Feb.	Jan.	Feb.
	1	2	3	4	5	6	7	8
Number of Reporting Banks	221	219	223	223	150	148	149	149
1 Liabilities to the Banking System	**2,397.7**	**2,175.3**	**2,193.9**	**2,141.3**	**2,330.7**	**2,108.7**	**2,142.3**	**2,092.5**
1.1 Demand and Time Deposits from Banks	1,765.5	1,671.9	1,502.1	1,443.6	1,698.6	1,605.8	1,452.7	1,399.1
1.2 Borrowings from Banks	573.6	452.3	629.4	638.9	573.5	451.7	628.7	636.0
1.3 Other Demand and Time Liabilities	58.6	51.1	62.4	58.9	58.6	51.1	60.9	57.4
2 Liabilities to Others	**118,405.4**	**116,427.8**	**121,661.3**	**123,136.4**	**115,376.9**	**113,480.6**	**118,551.0**	**120,029.5**
2.1 Aggregate Deposits	110,485.7	107,189.1	112,392.6	113,419.2	107,576.6	104,367.4	109,421.8	110,448.0
2.1.1 Demand	13,104.8	10,928.9	11,454.9	11,594.4	12,814.4	10,669.2	11,180.1	11,325.5
2.1.2 Time	97,381.0	96,260.1	100,937.7	101,824.9	94,762.2	93,698.2	98,241.7	99,122.6
2.2 Borrowings	3,192.8	3,886.2	4,043.0	4,210.3	3,163.2	3,848.9	3,994.5	4,161.8
2.3 Other Demand and Time Liabilities	4,726.9	5,352.5	5,225.7	5,506.9	4,637.1	5,264.3	5,134.8	5,419.7
3 Borrowings from Reserve Bank	**218.1**	**103.3**	**756.7**	**781.4**	**218.1**	**103.3**	**756.7**	**781.4**
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	218.1	103.3	756.7	781.4	218.1	103.3	756.7	781.4
4 Cash in Hand and Balances with Reserve Bank	5,869.3	5,074.2	5,375.8	5,379.9	5,701.3	4,931.0	5,235.1	5,245.9
4.1 Cash in Hand	630.5	597.7	685.5	672.8	613.60	577.0	668.9	656.1
4.2 Balances with Reserve Bank	5,238.8	4,476.6	4,690.2	4,707.1	5,087.7	4,354.0	4,566.1	4,589.8
5 Assets with the Banking System	**2,934.5**	**2,937.3**	**2,803.0**	**3,011.5**	**2,437.3**	**2,442.6**	**2,407.9**	**2,646.3**
5.1 Balances with Other Banks	1,898.0	1,841.3	1,953.4	2,131.4	1,700.1	1,657.2	1,792.8	1,984.9
5.1.1 In Current Account	197.3	143.6	153.1	168.9	160.6	120.9	131.4	150.2
5.1.2 In Other Accounts	1,700.7	1,697.7	1,800.3	1,962.4	1,539.5	1,536.3	1,661.4	1,834.7
5.2 Money at Call and Short Notice	296.9	325.8	285.6	293.7	77.0	95.9	111.6	130.0
5.3 Advances to Banks	380.4	333.3	271.8	298.1	379.5	331.9	268.7	282.7
5.4 Other Assets	359.1	436.9	292.3	288.3	280.7	357.6	234.7	248.7
6 Investment	**31,161.1**	**33,856.9**	**34,418.9**	**34,849.4**	**30,309.6**	**32,956.5**	**33,469.1**	**33,948.3**
6.1 Government Securities	31,144.8	33,831.8	34,354.4	34,821.5	30,297.5	32,938.3	33,453.2	33,936.4
6.2 Other Approved Securities	16.4	25.0	64.5	27.8	12.2	18.2	16.0	11.9
7 Bank Credit	**80,817.8**	**76,648.4**	**83,980.4**	**85,212.6**	**78,414.7**	**74,345.1**	**81,471.9**	**82,679.8**
7a Food Credit	652.4	772.0	735.8	649.6	539.3	609.3	544.3	458.2
7.1 Loans, Cash-credits and Overdrafts	78,490.1	74,570.1	81,835.5	83,046.5	76,148.5	72,320.1	79,385.9	80,576.2
7.2 Inland Bills-Purchased	263.5	217.2	201.0	205.7	246.0	202.2	179.4	182.4
7.3 Inland Bills-Discounted	1,402.8	1,241.0	1,310.2	1,319.2	1,365.9	1,209.8	1,279.8	1,287.7
7.4 Foreign Bills-Purchased	248.6	233.7	244.5	244.4	246.4	231.1	242.3	241.5
7.5 Foreign Bills-Discounted	412.7	386.3	389.2	396.8	407.9	381.7	384.5	392.0

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

(₹ Billion)

Item	Outstanding as on				Growth (%)	
	Mar. 31, 2017	2017	2018		Financial year so far	Y-o-Y
		Feb. 17	Jan. 19	Feb. 16	2017-18	2018
	1	2	3	4	5	6
1 Gross Bank Credit	**71,347**	**67,754**	**73,009**	**73,737**	**3.3**	**8.8**
1.1 Food Credit	**400**	**886**	**473**	**347**	**–13.3**	**-60.8**
1.2 Non-food Credit	**70,947**	**66,867**	**72,536**	**73,390**	**3.4**	**9.8**
1.2.1 Agriculture & Allied Activities	**9,924**	**9,330**	**10,068**	**10,168**	**2.5**	**9.0**
1.2.2 Industry	**26,800**	**26,014**	**26,151**	**26,272**	**–2.0**	**1.0**
1.2.2.1 Micro & Small	3,697	3,562	3,738	3,703	0.2	4.0
1.2.2.2 Medium	1,048	1,005	972	1,027	–2.0	2.3
1.2.2.3 Large	22,055	21,448	21,442	21,542	–2.3	0.4
1.2.3 Services	**18,022**	**16,120**	**18,030**	**18,406**	**2.1**	**14.2**
1.2.3.1 Transport Operators	1,104	1,039	1,172	1,189	7.7	14.4
1.2.3.2 Computer Software	179	174	185	186	4.0	7.0
1.2.3.3 Tourism, Hotels & Restaurants	375	380	371	371	–1.1	-2.3
1.2.3.4 Shipping	84	118	61	66	–21.7	-44.4
1.2.3.5 Professional Services	1,377	1,243	1,508	1,540	11.9	23.9
1.2.3.6 Trade	4,279	3,943	4,484	4,487	4.9	13.8
1.2.3.6.1 Wholesale Trade	1,932	1,800	1,993	1,961	1.5	8.9
1.2.3.6.2 Retail Trade	2,347	2,143	2,491	2,526	7.6	17.9
1.2.3.7 Commercial Real Estate	1,856	1,781	1,841	1,802	–2.9	1.1
1.2.3.8 Non-Banking Financial Companies (NBFCs)	3,910	3,195	3,760	3,902	–0.2	22.1
1.2.3.9 Other Services	4,859	4,247	4,650	4,864	0.1	14.5
1.2.4 Personal Loans	**16,200**	**15,403**	**18,286**	**18,544**	**14.5**	**20.4**
1.2.4.1 Consumer Durables	208	202	184	189	–9.2	-6.5
1.2.4.2 Housing	8,601	8,202	9,466	9,556	11.1	16.5
1.2.4.3 Advances against Fixed Deposits	661	588	591	657	–0.7	11.6
1.2.4.4 Advances to Individuals against share & bond	48	49	53	53	12.1	8.1
1.2.4.5 Credit Card Outstanding	521	493	653	658	26.3	33.4
1.2.4.6 Education	701	720	708	705	0.6	-2.0
1.2.4.7 Vehicle Loans	1,705	1,692	1,847	1,859	9.0	9.9
1.2.4.8 Other Personal Loans	3,755	3,456	4,783	4,867	29.6	40.8
1.2A Priority Sector	**24,357**	**22,889**	**24,359**	**24,437**	**0.3**	**6.8**
1.2A.1 Agriculture & Allied Activities	9,909	9,302	10,024	10,082	1.7	8.4
1.2A.2 Micro & Small Enterprises	9,020	8,437	9,161	9,176	1.7	8.8
1.2A.2.1 Manufacturing	3,697	3,562	3,738	3,703	0.2	4.0
1.2A.2.2 Services	5,322	4,875	5,423	5,472	2.8	12.2
1.2A.3 Housing	3,683	3,572	3,740	3,747	1.7	4.9
1.2A.4 Micro-Credit	189	185	191	240	27.3	30.0
1.2A.5 Education Loans	604	611	580	589	–2.5	-3.6
1.2A.6 State-Sponsored Orgs. for SC/ST	6	6	3	3	–54.9	-53.5
1.2A.7 Weaker Sections	5,546	5,208	5,570	5,577	0.6	7.1
1.2A.8 Export Credit	425	435	321	236	–44.4	-45.7

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

(₹ Billion)

Industry	Outstanding as on				Growth (%)	
	Mar. 31, 2017	2017	2018		Financial year so far	Y-o-Y
		Feb. 17	Jan. 19	Feb. 16	2017-18	2018
	1	2	3	4	5	6
1 Industry	**26,800**	**26,014**	**26,151**	**26,272**	**–2.0**	**1.0**
1.1 Mining & Quarrying (incl. Coal)	**345**	**332**	**353**	**388**	**12.6**	**16.9**
1.2 Food Processing	**1,455**	**1,329**	**1,429**	**1,480**	**1.7**	**11.4**
1.2.1 Sugar	327	303	262	273	–16.4	–9.6
1.2.2 Edible Oils & Vanaspati	184	166	195	199	8.4	19.8
1.2.3 Tea	35	35	47	47	31.4	33.0
1.2.4 Others	909	826	925	961	5.7	16.4
1.3 Beverage & Tobacco	**173**	**168**	**162**	**161**	**–6.6**	**–4.0**
1.4 Textiles	**1,963**	**1,903**	**2,047**	**2,054**	**4.6**	**7.9**
1.4.1 Cotton Textiles	964	924	1,028	1,033	7.2	11.8
1.4.2 Jute Textiles	23	21	22	22	–3.6	6.6
1.4.3 Man-Made Textiles	204	196	238	241	18.1	23.1
1.4.4 Other Textiles	773	763	759	758	–1.8	–0.6
1.5 Leather & Leather Products	**107**	**99**	**111**	**110**	**2.7**	**10.5**
1.6 Wood & Wood Products	**105**	**98**	**106**	**106**	**0.6**	**7.7**
1.7 Paper & Paper Products	**326**	**341**	**311**	**298**	**–8.7**	**–12.6**
1.8 Petroleum, Coal Products & Nuclear Fuels	**596**	**527**	**441**	**497**	**–16.7**	**–5.8**
1.9 Chemicals & Chemical Products	**1,724**	**1,520**	**1,630**	**1,607**	**–6.8**	**5.7**
1.9.1 Fertiliser	335	303	252	270	–19.3	–11.1
1.9.2 Drugs & Pharmaceuticals	464	446	481	483	4.2	8.2
1.9.3 Petro Chemicals	507	368	449	409	–19.4	11.1
1.9.4 Others	419	402	448	445	6.4	10.7
1.10 Rubber, Plastic & their Products	**392**	**367**	**424**	**412**	**5.2**	**12.3**
1.11 Glass & Glassware	**79**	**78**	**83**	**84**	**5.7**	**7.2**
1.12 Cement & Cement Products	**542**	**546**	**518**	**510**	**–5.9**	**–6.5**
1.13 Basic Metal & Metal Product	**4,211**	**4,147**	**4,118**	**4,106**	**–2.5**	**–1.0**
1.13.1 Iron & Steel	3,192	3,135	3,207	3,210	0.5	2.4
1.13.2 Other Metal & Metal Product	1,018	1,013	911	896	–12.0	–11.5
1.14 All Engineering	**1,496**	**1,475**	**1,505**	**1,511**	**1.0**	**2.4**
1.14.1 Electronics	336	343	344	346	2.9	0.8
1.14.2 Others	1,160	1,132	1,161	1,165	0.4	2.9
1.15 Vehicles, Vehicle Parts & Transport Equipment	**736**	**724**	**741**	**733**	**–0.4**	**1.3**
1.16 Gems & Jewellery	**690**	**690**	**688**	**692**	**0.3**	**0.3**
1.17 Construction	**822**	**818**	**871**	**857**	**4.2**	**4.7**
1.18 Infrastructure	**9,064**	**8,984**	**8,767**	**8,816**	**–2.7**	**–1.9**
1.18.1 Power	5,254	5,258	5,153	5,172	–1.6	–1.6
1.18.2 Telecommunications	851	822	798	821	–3.5	–0.1
1.18.3 Roads	1,800	1,797	1,688	1,692	–6.0	–5.8
1.18.4 Other Infrastructure	1,160	1,107	1,129	1,131	–2.5	2.1
1.19 Other Industries	**1,973**	**1,867**	**1,846**	**1,850**	**–6.3**	**–0.9**

No. 17: State Co-operative Banks Maintaining Accounts with the Reserve Bank of India

(₹ Billion)

Item	Last Reporting Friday (in case of March)/Last Friday/ Reporting Friday					
	2016-17	2016	2017			
		Nov, 25	Oct, 13	Oct, 27	Nov, 10	Nov, 24
	1	2	3	4	5	6
Number of Reporting Banks	32	31	30	30	30	30
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	527.8	479.7	538.5	549.2	566.7	566.0
2 Demand and Time Liabilities						
2.1 Demand Liabilities	183.2	162.5	158.2	166.5	162.4	200.9
2.1.1 Deposits						
2.1.1.1 Inter-Bank	45.0	42.4	41.6	41.9	39.9	77.8
2.1.1.2 Others	106.3	93.4	90.8	90.1	92.6	93.7
2.1.2 Borrowings from Banks	2.0	0.0	0.0	0.0	0.5	0.0
2.1.3 Other Demand Liabilities	30.0	26.6	25.7	34.6	29.4	29.3
2.2 Time Liabilities	947.6	876.0	866.5	868.9	890.0	884.6
2.2.1 Deposits						
2.2.1.1 Inter-Bank	512.6	482.0	411.4	402.7	408.9	405.4
2.2.1.2 Others	421.5	386.2	447.7	459.1	474.1	472.3
2.2.2 Borrowings from Banks	4.4	0.0	0.0	0.0	0.0	0.0
2.2.3 Other Time Liabilities	9.2	7.8	7.4	7.0	7.0	6.9
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.0	0.8
4 Borrowings from a notified bank / Government	517.2	440.3	481.0	474.6	473.7	469.1
4.1 Demand	180.4	152.6	167.0	164.0	159.7	155.7
4.2 Time	336.8	287.7	314.1	310.6	314.1	313.5
5 Cash in Hand and Balances with Reserve Bank	66.6	69.0	44.6	43.8	46.4	46.2
5.1 Cash in Hand	3.7	28.6	2.9	3.0	2.7	3.0
5.2 Balance with Reserve Bank	62.9	40.4	41.6	40.8	43.7	43.3
6 Balances with Other Banks in Current Account	17.5	10.6	7.8	7.8	7.4	7.5
7 Investments in Government Securities	329.8	280.2	309.7	310.4	313.3	315.7
8 Money at Call and Short Notice	254.4	253.8	214.1	230.2	238.2	228.9
9 Bank Credit (10.1+11)	458.7	413.0	464.1	463.0	529.2	458.1
10 Advances						
10.1 Loans, Cash-Credits and Overdrafts	458.6	413.0	464.1	463.0	529.2	458.1
10.2 Due from Banks	777.0	717.4	741.0	738.6	667.1	736.8
11 Bills Purchased and Discounted	0.1	0.0	0.0	0.0	0.0	0.0

Prices and Production

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

Group/Sub group	2016-17			Rural			Urban			Combined		
	Rural	Urban	Combined	Feb. 17	Jan. 18	Feb. 18	Feb. 17	Jan. 18	Feb. 18	Feb. 17	Jan. 18	Feb. 18
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	**135.3**	**134.9**	**135.2**	**133.6**	**140.4**	**138.6**	**132.1**	**137.2**	**135.6**	**133.0**	**139.2**	**137.5**
1.1 Cereals and products	130.8	128.9	130.2	133.3	136.6	136.4	132.8	134.6	134.8	133.1	136.0	135.9
1.2 Meat and fish	137.9	140.1	138.7	138.3	144.4	143.7	139.8	143.7	142.9	138.8	144.2	143.4
1.3 Egg	128.9	130.7	129.6	129.3	143.8	140.5	129.3	143.6	139.9	129.3	143.7	140.3
1.4 Milk and products	135.2	132.4	134.1	137.2	142.0	141.6	133.5	139.6	139.9	135.8	141.1	141.0
1.5 Oils and fats	120.3	112.0	117.3	122.1	123.2	123.0	114.3	116.4	116.2	119.2	120.7	120.5
1.6 Fruits	138.1	132.8	135.6	138.7	147.9	147.3	131.4	133.8	135.5	135.3	141.3	141.8
1.7 Vegetables	139.2	144.8	141.1	119.1	152.1	142.3	120.2	150.5	136.9	119.5	151.6	140.5
1.8 Pulses and products	165.6	170.3	167.2	156.9	131.8	130.2	143.1	118.4	117.0	152.2	127.3	125.8
1.9 Sugar and confectionery	112.1	114.9	113.0	116.2	119.5	117.8	119.5	117.3	115.4	117.3	118.8	117.0
1.10 Spices	135.1	143.8	138.0	136.0	136.0	135.6	144.0	140.5	140.7	138.7	137.5	137.3
1.11 Non-alcoholic beverages	128.1	122.4	125.7	129.4	131.2	130.4	123.4	125.9	126.0	126.9	129.0	128.6
1.12 Prepared meals, snacks, sweets	141.7	139.2	140.5	144.4	151.8	151.7	141.9	146.8	147.1	143.2	149.5	149.6
2 Pan, tobacco and intoxicants	**140.1**	**144.2**	**141.2**	**143.7**	**153.6**	**153.4**	**146.3**	**157.7**	**159.3**	**144.4**	**154.7**	**155.0**
3 Clothing and footwear	**137.9**	**127.8**	**133.9**	**140.2**	**147.5**	**147.9**	**129.3**	**134.4**	**134.7**	**135.9**	**142.3**	**142.7**
3.1 Clothing	138.6	128.9	134.8	140.9	148.3	148.7	130.5	136.0	136.3	136.8	143.5	143.8
3.2 Footwear	133.7	121.7	128.7	135.8	142.3	142.5	122.5	125.9	126.1	130.3	135.5	135.7
4 Housing	--	**128.0**	**128.0**	--	--	--	**130.5**	**140.4**	**141.3**	**130.5**	**140.4**	**141.3**
5 Fuel and light	**130.1**	**116.4**	**124.9**	**133.2**	**142.3**	**142.3**	**119.2**	**127.3**	**127.3**	**127.9**	**136.6**	**136.6**
6 Miscellaneous	**125.0**	**120.6**	**122.9**	**127.0**	**132.3**	**132.5**	**122.4**	**125.8**	**126.5**	**124.8**	**129.1**	**129.6**
6.1 Household goods and services	131.3	124.3	128.0	133.6	139.8	139.8	125.3	129.5	129.9	129.7	134.9	135.1
6.2 Health	128.1	121.6	125.6	130.1	136.0	136.1	122.9	129.0	129.8	127.4	133.3	133.7
6.3 Transport and communication	117.4	112.8	114.9	119.5	122.7	123.3	115.5	116.3	117.4	117.4	119.3	120.2
6.4 Recreation and amusement	125.9	121.0	123.2	127.7	134.3	134.2	122.2	126.2	126.5	124.6	129.7	129.9
6.5 Education	132.3	131.1	131.6	134.9	141.6	141.3	132.4	137.1	137.1	133.4	139.0	138.8
6.6 Personal care and effects	121.7	120.3	121.1	123.2	128.6	128.9	121.7	125.5	126.2	122.6	127.3	127.8
General Index (All Groups)	**132.4**	**127.9**	**130.3**	**132.6**	**139.3**	**138.4**	**128.2**	**134.1**	**134.0**	**130.6**	**136.9**	**136.4**

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

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2016-17	2017	2018	
				Feb.	Jan.	Feb.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	276	274	288	287
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	870	869	895	889
3 Consumer Price Index for Rural Labourers	1986-87	–	875	874	901	896

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

Item	2016-17	2017	2018	
		Feb.	Jan.	Feb.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	29,665	29,265	29,854	30,391
2 Silver (₹ per kilogram)	42,748	42,914	38,931	38,454

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	2016-17	2017		2018	
			Feb.	Dec.	Jan. (P)	Feb. (P)
	1	2	3	4	5	6
1 ALL COMMODITIES	**100.000**	**111.6**	**113.0**	**115.7**	**115.8**	**115.8**
1.1 PRIMARY ARTICLES	**22.618**	**128.9**	**127.0**	**131.7**	**129.7**	**128.0**
1.1.1 FOOD ARTICLES	**15.256**	**140.3**	**136.6**	**144.1**	**140.6**	**137.8**
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	152.0	150.2	140.6	140.4	139.9
1.1.1.2 Fruits & Vegetables	3.475	138.7	120.6	162.1	146.0	133.4
1.1.1.3 Milk	4.440	134.3	135.4	140.2	140.3	140.6
1.1.1.4 Eggs,Meat & Fish	2.402	133.0	135.0	134.2	135.2	134.7
1.1.1.5 Condiments & Spices	0.529	140.5	135.3	128.2	130.7	131.7
1.1.1.6 Other Food Articles	0.948	150.5	155.8	142.6	143.1	144.0
1.1.2 NON-FOOD ARTICLES	**4.119**	**122.2**	**123.9**	**119.2**	**120.7**	**120.6**
1.1.2.1 Fibres	0.839	117.1	123.0	119.4	123.4	120.9
1.1.2.2 Oil Seeds	1.115	136.0	128.8	129.3	132.7	138.2
1.1.2.3 Other non-food Articles	1.960	114.9	116.5	106.6	106.6	107.3
1.1.2.4 Floriculture	0.204	137.4	171.0	184.0	178.6	151.3
1.1.3 MINERALS	**0.833**	**113.1**	**112.7**	**122.2**	**121.9**	**122.2**
1.1.3.1 Metallic Minerals	0.648	98.4	98.7	109.3	108.4	109.3
1.1.3.2 Other Minerals	0.185	164.4	161.7	167.7	169.0	167.7
1.1.4 CRUDE PETROLEUM & NATURAL GAS	**2.410**	**73.1**	**77.0**	**78.5**	**78.3**	**80.6**
1.2 FUEL & POWER	**13.152**	**86.3**	**94.5**	**95.5**	**96.9**	**98.1**
1.2.1 COAL	**2.138**	**109.0**	**115.9**	**117.0**	**121.1**	**122.6**
1.2.1.1 Coking Coal	0.647	108.2	130.8	131.7	131.7	131.7
1.2.1.2 Non-Coking Coal	1.401	110.5	110.7	110.4	116.8	119.0
1.2.1.3 Lignite	0.090	90.2	89.9	113.5	113.5	113.5
1.2.2 MINERAL OILS	**7.950**	**73.3**	**83.8**	**87.0**	**88.2**	**89.8**
1.2.3 ELECTRICITY	**3.064**	**104.2**	**107.4**	**102.4**	**102.4**	**102.4**
1.3 MANUFACTURED PRODUCTS	**64.231**	**110.7**	**111.8**	**114.2**	**114.7**	**115.2**
1.3.1 MANUFACTURE OF FOOD PRODUCTS	**9.122**	**125.4**	**128.0**	**127.4**	**126.8**	**126.4**
1.3.1.1 Processing and Preserving of meat	0.134	137.1	138.0	133.7	133.0	133.3
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	127.7	130.6	133.1	128.2	126.1
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	120.2	118.9	119.7	118.4	117.2
1.3.1.4 Vegetable and Animal oils and Fats	2.643	107.0	110.0	111.5	112.4	112.9
1.3.1.5 Dairy products	1.165	132.3	138.6	141.7	141.0	139.6
1.3.1.6 Grain mill products	2.010	136.2	138.6	137.3	137.0	138.4
1.3.1.7 Starches and Starch products	0.110	114.6	112.9	112.0	112.6	113.1
1.3.1.8 Bakery products	0.215	127.0	128.0	128.1	129.3	128.8
1.3.1.9 Sugar, Molasses & honey	1.163	124.8	132.9	124.1	120.0	116.6
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	125.5	124.1	126.9	127.4	127.1
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	137.1	133.4	132.2	129.1	126.7
1.3.1.12 Tea & Coffee products	0.371	125.9	117.2	128.7	127.4	118.8
1.3.1.13 Processed condiments & salt	0.163	124.5	120.9	121.3	120.8	121.6
1.3.1.14 Processed ready to eat food	0.024	126.3	124.7	127.6	126.2	126.4
1.3.1.15 Health supplements	0.225	143.2	142.2	139.1	139.1	137.7
1.3.1.16 Prepared animal feeds	0.356	165.4	159.9	149.8	149.4	152.1
1.3.2 MANUFACTURE OF BEVERAGES	**0.909**	**116.1**	**116.9**	**119.9**	**119.9**	**119.3**
1.3.2.1 Wines & spirits	0.408	113.3	114.1	113.4	113.2	113.0
1.3.2.2 Malt liquors and Malt	0.225	114.2	115.0	118.2	118.4	117.7
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	121.8	122.7	130.7	131.2	130.0
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	**0.514**	**141.6**	**141.1**	**151.8**	**151.3**	**152.7**
1.3.3.1 Tobacco products	0.514	141.6	141.1	151.8	151.3	152.7
1.3.4 MANUFACTURE OF TEXTILES	**4.881**	**111.2**	**112.0**	**113.2**	**113.0**	**113.7**
1.3.4.1 Preparation and Spinning of textile fibres	2.582	103.3	104.8	105.5	105.8	106.4
1.3.4.2 Weaving & Finishing of textiles	1.509	120.9	119.7	122.4	121.2	122.4
1.3.4.3 Knitted and Crocheted fabrics	0.193	107.1	108.5	108.1	108.8	109.1
1.3.4.4 Made-up textile articles, Except apparel	0.299	121.7	123.4	124.7	124.7	125.4
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	143.0	145.1	138.5	138.5	138.7
1.3.4.6 Other textiles	0.201	112.9	116.2	117.9	118.9	118.0
1.3.5 MANUFACTURE OF WEARING APPAREL	**0.814**	**131.0**	**132.1**	**138.8**	**138.5**	**139.0**
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	133.9	134.9	138.7	138.6	139.1
1.3.5.2 Knitted and Crocheted apparel	0.221	123.3	124.6	139.1	138.3	138.8

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2016-17	2017		2018	
			Feb.	Dec.	Jan. (P)	Feb. (P)
	1	2	3	4	5	6
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	**0.535**	**122.6**	**120.4**	**121.2**	**120.7**	**121.6**
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	119.9	116.6	111.6	109.4	109.8
1.3.6.2 Luggage, HandbAgs, Saddlery and Harness	0.075	132.3	131.1	132.7	132.6	134.2
1.3.6.3 Footwear	0.318	121.5	119.5	122.8	122.9	123.9
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	**0.772**	**129.8**	**130.7**	**131.4**	**130.8**	**130.9**
1.3.7.1 Saw milling and Planing of wood	0.124	122.9	122.6	121.2	120.0	120.1
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	127.3	128.2	133.0	132.2	132.2
1.3.7.3 Builder's carpentry and Joinery	0.036	153.8	159.4	155.7	158.2	157.5
1.3.7.4 Wooden containers	0.119	140.3	140.6	128.3	128.1	128.8
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	**1.113**	**113.6**	**114.6**	**118.6**	**121.4**	**120.0**
1.3.8.1 Pulp, Paper and Paperboard	0.493	117.7	119.8	122.9	123.3	124.9
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	114.7	114.1	113.2	122.3	115.3
1.3.8.3 Other articles of paper and Paperboard	0.306	105.9	106.6	117.1	117.6	116.8
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	**0.676**	**141.1**	**143.1**	**143.5**	**144.6**	**143.5**
1.3.9.1 Printing	0.676	141.1	143.1	143.5	144.6	143.5
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	**6.465**	**111.0**	**111.3**	**113.2**	**113.8**	**115.0**
1.3.10.1 Basic chemicals	1.433	104.7	106.2	114.3	116.1	117.1
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	118.7	116.7	116.8	117.4	118.1
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	113.7	114.4	113.0	114.1	115.4
1.3.10.4 Pesticides and Other agrochemical products	0.454	116.8	117.0	114.8	115.3	115.1
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	108.5	109.1	107.5	107.0	109.3
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	113.7	113.7	115.4	114.9	115.8
1.3.10.7 Other chemical products	0.692	106.5	107.3	110.0	110.4	112.8
1.3.10.8 Man-made fibres	0.296	94.1	98.3	99.7	99.6	99.5
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	**1.993**	**119.7**	**121.1**	**123.2**	**121.7**	**120.7**
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	119.7	121.1	123.2	121.7	120.7
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	**2.299**	**107.5**	**108.8**	**106.9**	**107.8**	**107.3**
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	101.4	102.8	98.3	100.7	98.1
1.3.12.2 Other Rubber Products	0.272	90.4	92.3	90.2	90.5	90.1
1.3.12.3 Plastics products	1.418	113.3	114.6	113.8	114.2	114.6
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	**3.202**	**109.8**	**108.9**	**113.3**	**114.0**	**114.4**
1.3.13.1 Glass and Glass products	0.295	116.6	116.7	116.3	117.0	118.3
1.3.13.2 Refractory products	0.223	116.2	114.3	108.2	109.6	106.8
1.3.13.3 Clay Building Materials	0.121	94.3	88.4	94.3	98.6	96.5
1.3.13.4 Other Porcelain and Ceramic Products	0.222	111.8	112.0	112.3	112.4	112.3
1.3.13.5 Cement, Lime and Plaster	1.645	110.6	109.3	113.6	114.0	115.1
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	115.3	116.8	119.1	120.3	119.7
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	117.4	117.8	117.9	117.7	118.3
1.3.13.8 Other Non-Metallic Mineral Products	0.169	70.9	68.8	109.9	111.0	111.5
1.3.14 MANUFACTURE OF BASIC METALS	**9.646**	**91.1**	**93.7**	**102.9**	**105.8**	**107.9**
1.3.14.1 Inputs into steel making	1.411	82.9	88.1	97.7	105.3	108.9
1.3.14.2 Metallic Iron	0.653	79.4	82.6	100.8	103.6	110.0
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	89.8	89.2	94.5	96.4	97.4
1.3.14.4 Mild Steel -Long Products	1.081	85.3	87.1	98.5	102.1	105.5
1.3.14.5 Mild Steel - Flat products	1.144	89.4	91.4	106.2	110.8	114.5
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	85.6	90.8	97.9	103.3	105.9
1.3.14.7 Stainless Steel - Semi Finished	0.924	84.1	86.9	100.8	101.7	102.1
1.3.14.8 Pipes & tubes	0.205	107.8	112.0	118.8	122.6	123.5
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	100.1	104.8	109.3	110.9	111.5
1.3.14.10 Castings	0.925	102.2	102.0	106.8	106.7	106.7
1.3.14.11 Forgings of steel	0.271	118.2	117.5	119.6	119.2	118.2
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	**3.155**	**105.1**	**107.6**	**110.9**	**111.9**	**111.8**
1.3.15.1 Structural Metal Products	1.031	102.5	105.2	106.2	108.0	109.6
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	109.2	116.3	126.0	126.5	126.8
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	108.5	105.5	109.4	109.4	109.2
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	94.7	91.7	93.0	92.6	91.6
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	111.5	114.4	99.4	99.5	99.5
1.3.15.6 Other Fabricated Metal Products	0.728	108.1	110.1	116.9	118.3	115.8
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	**2.009**	**108.3**	**108.8**	**110.5**	**111.0**	**110.7**
1.3.16.1 Electronic Components	0.402	106.7	106.0	101.7	102.9	102.3
1.3.16.2 Computers and Peripheral Equipment	0.336	127.3	127.3	127.4	127.4	127.4

No. 21: Wholesale Price Index (Concld.)

(Base: 2011-12 = 100)

Commodities	Weight	2016-17	2017		2018	
			Feb.	Dec.	Jan. (P)	Feb. (P)
	1	2	3	4	5	6
1.3.16.3 Communication Equipment	0.310	104.1	104.1	116.0	116.0	114.3
1.3.16.4 Consumer Electronics	0.641	100.0	100.8	102.9	103.9	104.1
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	103.1	106.1	108.4	108.0	106.5
1.3.16.6 Watches and Clocks	0.076	137.9	140.6	136.1	137.1	136.8
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	104.3	102.8	100.5	100.6	103.4
1.3.16.8 Optical instruments and Photographic equipment	0.008	96.6	95.7	113.1	111.9	112.3
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	**2.930**	**108.2**	**108.0**	**109.7**	**110.1**	**109.4**
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	105.0	104.9	105.3	106.3	104.9
1.3.17.2 Batteries and Accumulators	0.236	120.4	121.3	116.5	116.9	116.8
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	118.8	117.2	112.8	113.7	113.9
1.3.17.4 Other electronic and Electric wires and Cables	0.428	99.7	101.8	107.5	107.6	108.5
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	108.5	105.8	111.3	110.4	108.8
1.3.17.6 Domestic appliances	0.366	119.4	118.8	121.5	121.8	121.6
1.3.17.7 Other electrical equipment	0.206	104.4	103.0	108.6	107.7	107.4
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	**4.789**	**107.9**	**108.2**	**108.9**	**108.1**	**109.7**
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	104.1	103.7	101.8	102.0	102.8
1.3.18.2 Fluid power equipment	0.162	114.3	113.9	115.3	115.9	116.1
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	106.6	106.4	109.0	109.7	110.1
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	104.5	105.3	113.6	111.0	111.9
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	77.8	74.9	79.3	78.9	79.1
1.3.18.6 Lifting and Handling equipment	0.285	103.2	104.3	107.0	110.5	107.3
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	124.9	125.7	127.0	127.9	128.1
1.3.18.9 Agricultural and Forestry machinery	0.833	112.3	112.2	112.8	104.3	114.0
1.3.18.10 Metal-forming machinery and Machine tools	0.224	100.1	102.5	97.3	100.5	100.2
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	79.6	76.8	74.0	74.0	73.8
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	116.9	122.1	121.9	119.8	122.1
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	116.2	115.9	112.5	121.3	117.9
1.3.18.14 Other special-purpose machinery	0.468	115.8	116.7	119.7	120.4	119.9
1.3.18.15 Renewable electricity generating equipment	0.046	73.7	72.4	70.3	70.3	68.5
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	**4.969**	**110.4**	**110.2**	**110.2**	**110.7**	**111.1**
1.3.19.1 Motor vehicles	2.600	113.4	113.3	112.0	111.9	111.8
1.3.19.2 Parts and Accessories for motor vehicles	2.368	107.2	106.9	108.3	109.4	110.3
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	**1.648**	**107.7**	**109.7**	**111.5**	**111.7**	**112.0**
1.3.20.1 Building of ships and Floating structures	0.117	158.7	158.8	158.7	158.8	158.8
1.3.20.2 Railway locomotives and Rolling stock	0.110	100.6	102.6	105.2	104.7	105.2
1.3.20.3 Motor cycles	1.302	102.8	104.9	107.0	107.3	107.5
1.3.20.4 Bicycles and Invalid carriages	0.117	118.0	120.2	120.1	120.6	121.0
1.3.20.5 Other transport equipment	0.002	116.5	118.9	119.7	120.5	121.2
1.3.21 MANUFACTURE OF FURNITURE	**0.727**	**114.1**	**115.9**	**120.6**	**120.7**	**120.7**
1.3.21.1 Furniture	0.727	114.1	115.9	120.6	120.7	120.7
1.3.22 OTHER MANUFACTURING	**1.064**	**119.7**	**114.1**	**106.1**	**104.2**	**106.8**
1.3.22.1 Jewellery and Related articles	0.996	118.4	112.9	103.1	101.0	103.9
1.3.22.2 Musical instruments	0.001	158.0	150.5	181.3	189.0	180.9
1.3.22.3 Sports goods	0.012	124.7	126.6	125.2	125.3	125.7
1.3.22.4 Games and Toys	0.005	125.2	127.2	128.9	129.2	130.2
1.3.22.5 Medical and Dental instruments and Supplies	0.049	143.3	134.9	157.6	157.6	155.6
2 FOOD INDEX	**24.378**	**134.7**	**133.4**	**137.8**	**135.5**	**133.5**

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	2015-16	2016-17	April-January		January	
				2016-17	2017-18	2017	2018
	1	2	3	4	5	6	7
General Index	100.00	114.7	120.0	118.7	123.6	123.1	132.3
1 Sectoral Classification							
1.1 Mining	14.37	97.3	102.5	99.2	101.7	114.4	114.5
1.2 Manufacturing	77.63	115.9	121.0	119.9	125.0	123.1	133.8
1.3 Electricity	7.99	133.8	141.6	142.2	149.7	138.9	149.5
2 Use-Based Classification							
2.1 Primary Goods	34.05	112.0	117.5	116.2	120.5	122.0	129.1
2.2 Capital Goods	8.22	98.4	101.5	98.2	102.5	98.8	113.2
2.3 Intermediate Goods	17.22	118.4	122.3	121.3	123.7	123.9	130.0
2.4 Infrastructure/ Construction Goods	12.34	120.3	125.0	124.2	129.7	128.7	137.4
2.5 Consumer Durables	12.84	119.1	122.6	122.7	122.3	116.7	126.0
2.6 Consumer Non-Durables	15.33	117.2	126.5	124.6	137.6	138.5	153.0

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

Government Accounts and Treasury Bills

No. 23: Union Government Accounts at a Glance

(Amount in ₹ Billion)

Item	Financial Year	April - Feb			
	2017-18 (Revised Estimates)	2017-18 (Actuals)	2016-17 (Actuals)	Percentage to Revised Estimates	
				2017-18	2016-17
	1	2	3	4	5
1 Revenue Receipts	**15,054.3**	**11,776.8**	**10,941.8**	**78.2**	**76.9**
1.1 Tax Revenue (Net)	12,694.5	10,355.5	8,852.7	81.6	81.3
1.2 Non-Tax Revenue	2,359.7	1,421.3	2,089.1	60.2	62.4
2 Capital Receipts	**7,123.2**	**8,214.9**	**6,588.4**	**115.3**	**111.5**
2.1 Recovery of Loans	174.7	133.0	141.8	76.1	128.1
2.2 Other Receipts	1,000.0	924.9	390.4	92.5	85.8
2.3 Borrowings and Other Liabilities	5,948.5	7,157.0	6,056.1	120.3	113.4
3 Total Receipts (1+2)	**22,177.5**	**19,991.7**	**17,530.2**	**90.1**	**87.0**
4 Revenue Expenditure	19,443.1	17,020.9	15,382.2	87.5	88.7
4.1 Interest Payments	5,308.4	4,507.3	4,039.8	84.9	83.6
5 Capital Expenditure	2,734.5	2,970.9	2,148.0	108.6	76.8
6 Total Expenditure (4+5)	**22,177.5**	**19,991.7**	**17,530.2**	**90.1**	**87.0**
7 Revenue Deficit (4-1)	**4,388.8**	**5,244.1**	**4,440.4**	**119.5**	**142.8**
8 Fiscal Deficit {6-(1+2.1+2.2)}	**5,948.5**	**7,157.0**	**6,056.1**	**120.3**	**113.4**
9 Gross Primary Deficit (8-4.1)	**640.1**	**2,649.7**	**2,016.3**	**414.0**	**393.8**

Source: Controller General of Accounts (CGA), Ministry of Finance, Government of India.

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2016-17	2017	2018					
		Feb. 24	Jan. 19	Jan. 26	Feb. 2	Feb. 9	Feb. 16	Feb. 23
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	323.7	228.4	242.7	293.6	323.1	374.2	358.7	388.2
1.2 Primary Dealers	243.5	150.8	194.4	217.9	190.0	184.4	157.8	194.1
1.3 State Governments	146.2	438.1	1,091.9	904.7	923.7	718.7	663.7	638.7
1.4 Others	343.4	633.1	596.7	519.9	517.7	472.3	514.8	449.5
2 182-day								
2.1 Banks	216.2	219.0	304.2	309.0	310.8	330.6	285.0	293.8
2.2 Primary Dealers	316.5	354.2	251.4	259.0	276.8	250.0	288.1	287.0
2.3 State Governments	193.6	194.4	71.2	68.4	94.4	99.4	99.4	117.9
2.4 Others	120.9	113.3	156.7	107.0	126.8	93.9	141.2	93.6
3 364-day								
3.1 Banks	512.3	581.4	294.1	323.8	323.9	365.9	331.3	364.7
3.2 Primary Dealers	551.8	506.5	644.4	687.1	612.8	654.6	638.2	684.1
3.3 State Governments	26.3	26.9	29.7	29.7	126.7	126.7	126.7	126.7
3.4 Others	326.4	367.6	364.7	332.5	397.6	353.3	395.2	357.4
4 14-day Intermediate								
4.1 Banks	–	–	–	–	–	–	–	–
4.2 Primary Dealers	–	–	–	–	–	–	–	–
4.3 State Governments	1,560.6	1,326.3	1,316.4	1,563.2	1,219.4	1,173.4	1,621.0	1,666.0
4.4 Others	5.1	5.8	5.8	4.2	2.9	7.7	5.5	4.0
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	3,320.8	3,813.6	4,242.1	4,052.6	4,224.5	4,024.1	4,000.1	3,995.5

14D intermediate T-Bills are non-marketable unlike 91D, 182D and 364D T-Bills. These bills are 'intermediate' by nature as these are liquidated to replenish shortfall in the daily minimum cash balances of State Governments

No. 25: Auctions of Treasury Bills

(Amount in ₹ Billion)

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										
2017-18										
Jan. 31	70	53	425.06	68.18	28	70.00	68.18	138.18	98.43	6.3977
Feb. 7	70	42	358.54	15.54	19	70.00	15.54	85.54	98.43	6.3977
Feb. 14	70	45	540.92	5.00	13	70.00	5.00	75.00	98.44	6.3563
Feb. 21	70	55	327.60	16.65	30	70.00	16.65	86.65	98.44	6.3563
Feb. 28	70	51	467.68	40.01	39	70.00	40.01	110.01	98.44	6.3563
182-day Treasury Bills										
2017-18										
Jan. 31	40	44	114.31	26.00	21	40.00	26.00	66.00	96.86	6.5014
Feb. 7	30	35	98.20	10.00	13	30.00	10.00	40.00	96.85	6.5228
Feb. 14	40	44	128.12	–	12	40.00	–	40.00	96.87	6.4800
Feb. 21	30	44	118.53	18.51	17	30.00	18.51	48.51	96.87	6.4800
Feb. 28	40	37	114.43	40.00	15	40.00	40.00	80.00	96.86	6.5014
364-day Treasury Bills										
2017-18										
Jan. 31	30	44	94.01	97.00	16	30.00	97.00	127.00	93.84	6.5824
Feb. 7	40	53	112.90	–	19	40.00	–	40.00	93.78	6.6508
Feb. 14	30	58	119.61	–	20	30.00	–	30.00	93.84	6.5824
Feb. 21	40	41	128.80	–	19	40.00	–	40.00	93.79	6.6394
Feb. 28	30	60	116.29	–	27	30.00	–	30.00	93.77	6.6622

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on		Range of Rates	Weighted Average Rates
		Borrowings/ Lendings	Borrowings/ Lendings
		1	2
February	1, 2018	4.90-6.40	5.89
February	2, 2018	4.50-6.05	5.91
February	3, 2018	4.90-6.00	5.63
February	5, 2018	4.90-6.05	5.86
February	6, 2018	4.90-6.05	5.87
February	7, 2018	4.90-6.25	5.88
February	8, 2018	4.90-6.40	5.90
February	9, 2018	4.90-6.10	5.89
February	12, 2018	4.90-6.20	5.99
February	14, 2018	4.90-6.15	5.98
February	15, 2018	5.00-6.50	5.95
February	16, 2018	4.70-6.50	5.94
February	17, 2018	4.65-6.10	5.82
February	20, 2018	5.00-6.35	5.96
February	21, 2018	4.95-6.15	5.95
February	22, 2018	4.90-6.60	5.94
February	23, 2018	4.90-6.40	5.90
February	26, 2018	4.90-6.15	5.97
February	27, 2018	4.95-6.15	5.93
February	28, 2018	4.95-6.95	5.93
March	1, 2018	4.25-6.15	5.90
March	3, 2018	4.90-6.05	5.68
March	5, 2018	4.95-6.10	5.88
March	6, 2018	4.95-6.10	5.87
March	7, 2018	4.95-6.35	5.89
March	8, 2018	4.90-6.40	5.88
March	9, 2018	4.90-6.35	5.90
March	12, 2018	4.90-6.03	5.86
March	13, 2018	4.90-6.02	5.86
March	14, 2018	3.00-7.25	5.83
March	15, 2018	4.90-6.90	5.91

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2017	2018			
	Feb. 17	Jan. 5	Jan. 19	Feb. 2	Feb. 16
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	1,457.5	1,525.5	1,689.8	1,711.8	1,779.8
1.1 Issued during the fortnight (₹ Billion)	98.8	344.9	182.0	327.1	216.5
2 Rate of Interest (per cent)	6.18-6.70	6.23-7.60	6.32-7.40	6.30-7.80	6.23-7.92

No. 28: Commercial Paper

Item	2017	2018			
	Feb. 28	Jan. 15	Jan. 31	Feb. 15	Feb. 28
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	3,726.7	4,696.5	4,575.0	4,886.3	4,550.5
1.1 Reported during the fortnight (₹ Billion)	772.3	913.2	1,320.2	1,037.7	723.8
2 Rate of Interest (per cent)	6.08-14.19	5.48-9.65	6.27-11.88	6.07-11.81	6.22-10.60

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2017-18	2017	2018					
		Feb. 24	Jan. 19	Jan. 26	Feb. 2	Feb. 9	Feb. 16	Feb. 23
	1	2	3	4	5	6	7	8
1 Call Money	245.5	210.8	265.8	222.5	242.2	219.6	220.9	230.6
2 Notice Money	36.6	12.1	129.8	11.3	86.4	3.3	110.1	2.8
3 Term Money	9	6.8	17.6	9.9	15.7	7.1	11.5	5.9
4 CBLO	2,130.1	1,896.1	2,626.5	2,301.2	2,631.1	2,247.5	2,472.2	2,185.3
5 Market Repo	1,921.8	1,669.2	2,363.6	1,651.8	2,483.7	1,652.4	2,786.2	1,761.7
6 Repo in Corporate Bond	3.8	2.0	2.2	3.5	3.0	3.9	4.9	3.9
7 Forex (US $ million)	55,345	55,158	63,091	70,147	79,009	67,409	63,556	84,038
8 Govt. of India Dated Securities	808.7	494.3	716.4	777.1	729.1	665.3	722.7	423.3
9 State Govt. Securities	45.3	45.5	24.7	40.9	39.2	23.2	21.7	45.4
10 Treasury Bills								
10.1 91-Day	35.5	44.3	26.1	22.8	25.2	22.7	21.6	40.9
10.2 182-Day	10.2	1.7	4.8	9.1	4.1	2.8	5.3	3.6
10.3 364-Day	10.3	12.5	11.4	20.3	14.0	12.6	6.6	15.7
10.4 Cash Management Bills	13	6.5	–	–	–	–	–	–
11 Total Govt. Securities (8+9+10)	923.0	604.7	783.4	870.2	811.6	726.6	777.8	529.0
11.1 RBI	–	0.4	1.5	0.0	5.2	0.2	1.7	0.2

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

(Amount in ₹ Billion)

Security & Type of Issue	2016-17		2016-17 (Apr.-Feb.)		2017-18 (Apr.-Feb.) *		Feb. 2017		Feb. 2018 *	
	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	**116**	**303.6**	**87**	**268.7**	**179**	**576.1**	**8**	**7.5**	**18**	**183.7**
1A Premium	113	291.3	84	258.1	176	558.8	8	6.8	18	180.0
1.1 Public	105	280.7	79	248.4	160	363.7	7	1.2	13	16.6
1.1.1 Premium	102	270.4	76	239.7	157	351.2	7	1.0	13	15.5
1.2 Rights	11	22.9	8	20.3	19	212.4	1	6.3	5	167.1
1.2.1 Premium	11	20.9	8	18.5	19	207.6	1	5.9	5	164.6
2 Preference Shares	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.1 Public	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Debentures	**16**	**295.5**	**15**	**293.3**	**5**	**41.2**	**–**	**–**	**–**	**–**
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Public	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	16	295.5	15	293.3	5	41.2	–	–	–	–
3.2.1 Public	16	295.5	15	293.3	5	41.2	–	–	–	–
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Bonds	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
4.1 Public	–	–	–	–	–	–	–	–	–	–
4.2 Rights	–	–	–	–	–	–	–	–	–	–
5 Total (1+2+3+4)	**132**	**599.0**	**102**	**562.0**	**184**	**617.3**	**8**	**7.5**	**18**	**183.7**
5.1 Public	121	576.1	94	541.7	165	404.9	7	1.2	13	16.6
5.2 Rights	11	22.9	8	20.3	19	212.4	1	6.3	5	167.1

* : Data is Provisional

Source : Securities and Exchange Board of India

External Sector

No. 31: Foreign Trade

Item	Unit	2016-17	2017				2018	
			Feb.	Oct.	Nov.	Dec.	Jan.	Feb.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	18,541.0	1,658.6	1,487.3	1,692.1	1,778.0	1,588.1	1,663.1
	US $ Million	276,547.0	24,726.7	22,852.4	26,087.1	27,676.9	24,956.0	25,834.4
1.1 Oil	₹ Billion	2,120.3	170.3	202.0	234.8	234.5	237.5	208.3
	US $ Million	31,622.3	2,539.6	3,104.6	3,619.2	3,650.6	3,732.9	3,236.5
1.2 Non-oil	₹ Billion	16,420.7	1,488.2	1,285.2	1,457.3	1,543.5	1,350.6	1,454.7
	US $ Million	244,924.7	22,187.2	19,747.8	22,468.0	24,026.3	21,223.1	22,597.9
2 Imports	₹ Billion	25,668.2	2,297.2	2,437.6	2,621.5	2,692.3	2,587.6	2,434.2
	US $ Million	382,740.9	34,248.4	37,454.9	40,416.5	41,909.3	40,661.7	37,813.6
2.1 Oil	₹ Billion	5,825.6	517.8	605.8	619.4	664.8	741.9	656.2
	US $ Million	86,865.7	7,719.8	9,309.1	9,550.2	10,347.6	11,658.9	10,194.3
2.2 Non-oil	₹ Billion	19,842.6	1,779.4	1,831.8	2,002.1	2,027.6	1,845.6	1,778.0
	US $ Million	295,875.2	26,528.6	28,145.8	30,866.4	31,561.7	29,002.7	27,619.3
3 Trade Balance	₹ Billion	–7,127.2	–638.7	–950.4	–929.4	–914.3	–999.5	–771.1
	US $ Million	–106,193.9	–9,521.7	–14,602.5	–14,329.4	–14,232.4	–15,705.7	–11,979.2
3.1 Oil	₹ Billion	–3,705.4	–347.5	–403.8	–384.7	–430.2	–504.4	–447.9
	US $ Million	–55,243.4	–5,180.3	–6,204.6	–5,931.0	–6,697.0	–7,926.1	–6,957.9
3.2 Non-oil	₹ Billion	–3,421.9	–291.2	–546.6	–544.7	–484.1	–495.1	–323.2
	US $ Million	–50,950.6	–4,341.4	–8,398.0	–8,398.4	–7,535.5	–7,779.6	–5,021.3

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

No. 32: Foreign Exchange Reserves

Item	Unit	2017	2018					
		Mar. 10	Feb. 2	Feb. 9	Feb. 16	Feb. 23	Mar. 2	Mar. 9
		1	2	3	4	5	6	7
1 Total Reserves	**₹ Billion**	**24,273**	**27,023**	**27,001**	**26,944**	**27,234**	**27,436**	**27,425**
	US $ Million	**364,109**	**421,915**	**419,760**	**421,721**	**420,591**	**420,758**	**421,487**
1.1 Foreign Currency Assets	₹ Billion	22,695	25,421	25,399	25,342	25,630	25,800	25,787
	US $ Million	340,456	396,769	394,647	396,573	395,466	395,643	396,332
1.2 Gold	₹ Billion	1,329	1,370	1,370	1,370	1,370	1,401	1,403
	US $ Million	19,914	21,514	21,514	21,514	21,514	21,523	21,549
1.3 SDRs	SDRs Million	1,065	1,061	1,061	1,059	1,059	1,059	1,059
	₹ Billion	96	99	99	99	100	100	100
	US $ Million	1,435	1,547	1,533	1,546	1,537	1,529	1,535
1.4 Reserve Tranche Position in IMF	₹ Billion	154	134	133	133	134	135	135
	US $ Million	2,305	2,084	2,065	2,087	2,074	2,064	2,072

No. 33: NRI Deposits

(US$ Million)

Scheme	Outstanding				Flows	
	2016-17	2017	2018		2016-17	2017-18
		Feb.	Jan.	Feb.	Apr.-Feb.	Apr.-Feb.
	1	2	3	4	5	6
1 NRI Deposits	**116,867**	**111,563**	**124,413**	**124,255**	**–14,836**	**7,399**
1.1 FCNR(B)	21,002	20,573	22,161	21,844	–24,743	842
1.2 NR(E)RA	83,213	79,182	88,514	88,535	8,183	5,329
1.3 NRO	12,652	11,809	13,739	13,876	1,724	1,228

No. 34: Foreign Investment Inflows

(US$ Million)

Item	2016-17	2016-17	2017-18	2017	2018	
		Apr.-Feb.	Apr.-Feb.	Feb.	Jan.	Feb.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	**35,612**	**35,680**	**29,645**	**994**	**1,913**	**4,007**
1.1.1 Direct Investment to India (1.1.1.1–1. 1.1.2)	**42,215**	**39,265**	**37,693**	**1,712**	**2,318**	**4,538**
1.1.1.1 Gross Inflows/Gross Investments	**60,220**	**56,204**	**56,786**	**2,779**	**3,760**	**5,136**
1.1.1.1.1 Equity	44,701	42,142	42,245	1,321	2,529	3,292
1.1.1.1.1.1 Government (SIA/FIPB)	5,900	5,818	7,741	16	92	1,161
1.1.1.1.1.2 RBI	30,417	28,832	26,516	908	2,095	1,758
1.1.1.1.1.3 Acquisition of shares	7,161	6,380	7,283	286	231	263
1.1.1.1.1.4 Equity capital of unincorporated bodies	1,223	1,112	705	111	111	111
1.1.1.1.2 Reinvested earnings	12,343	11,263	11,290	1,080	1,080	1,080
1.1.1.1.3 Other capital	3,176	2,798	3,251	378	151	764
1.1.1.2 Repatriation/Disinvestment	**18,005**	**16,938**	**19,093**	**1,067**	**1,442**	**599**
1.1.1.2.1 Equity	17,318	16,378	18,883	939	1,440	576
1.1.1.2.2 Other capital	687	560	210	128	3	23
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	**6,603**	**3,585**	**8,048**	**719**	**405**	**531**
1.1.2.1 Equity capital	9,792	7,155	4,466	604	371	213
1.1.2.2 Reinvested Earnings	2,925	2,682	2,844	244	244	244
1.1.2.3 Other Capital	4,450	3,760	3,990	423	167	204
1.1.2.4 Repatriation/Disinvestment	10,564	10,012	3,251	552	378	129
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	**7,612**	**–1,324**	**20,969**	**1,609**	**3,499**	**–2,369**
1.2.1 GDRs/ADRs	–	–	–	–	–	–
1.2.2 FIIs	7,766	–1,280	20,941	1,719	3,504	–2,351
1.2.3 Offshore funds and others	–	–	–	–	–	–
1.2.4 Portfolio investment by India	154	43	–28	111	5	17
1 Foreign Investment Inflows	**43,224**	**34,356**	**50,614**	**2,602**	**5,412**	**1,638**

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

(US$ Million)

Item	2016-17	2017		2018	
		Feb.	Dec.	Jan.	Feb.
	1	2	3	4	5
1 Outward Remittances under the LRS	**8,170.7**	**570.3**	**981.4**	**1,168.0**	**837.6**
1.1 Deposit	283.8	21.2	31.6	35.7	32.0
1.2 Purchase of immovable property	92.9	9.1	10.9	5.0	5.8
1.3 Investment in equity/debt	443.6	27.0	31.0	22.9	22.5
1.4 Gift	749.5	57.6	107.9	115.4	95.2
1.5 Donations	8.8	0.3	0.4	0.6	0.5
1.6 Travel	2,568.0	163.2	361.6	453.6	291.9
1.7 Maintenance of close relatives	2,169.5	168.6	255.3	282.8	234.2
1.8 Medical Treatment	17.3	1.1	2.7	1.7	1.8
1.9 Studies Abroad	1,536.4	114.5	147.0	231.0	139.7
1.10 Others	300.8	7.7	32.9	19.3	14.0

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

Item	2015-16	2016-17	2017	2018	
			March	February	March
	1	2	3	4	5
36-Currency Export and Trade Based Weights (Base: 2004-05=100)					
1 Trade-Based Weights					
1.1 NEER	74.75	74.65	77.19	75.58	74.92
1.2 REER	112.08	114.51	117.57	118.42	117.38
2 Export-Based Weights					
2.1 NEER	76.45	76.38	79.02	77.80	77.08
2.2 REER	114.44	116.44	119.25	120.84	119.72
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	67.52	66.86	69.46	65.98	65.31
1.2 REER	122.71	125.17	129.97	125.75	124.56
2 Base: 2016-17 (April-March) =100					
2.1 NEER	101.00	100.00	103.88	98.69	97.68
2.2 REER	98.04	100.00	103.84	100.47	99.52

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

(Amount in US$ Million)

Item	2016-17	2017	2018	
		Feb.	Jan.	Feb.
	1	2	3	4
1 Automatic Route				
1.1 Number	729	62	45	61
1.2 Amount	16,247	1,674	460	2,057
2 Approval Route				
2.1 Number	37	3	3	4
2.2 Amount	5,738	553	80	1,043
3 Total (1+2)				
3.1 Number	766	65	48	65
3.2 Amount	21,985	2,227	540	3,100
4 Weighted Average Maturity (in years)	5.30	4.50	5.80	7.40
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.62	1.55	3.05	1.47
5.2 Interest rate range for Fixed Rate Loans	0.00-14.75	0.00-11.20	0.69-12.25	0.00-10.00

No. 38: India's Overall Balance of Payments

(US $ Million)

Item	Oct-Dec 2016 (PR)			Oct-Dec 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**268,270**	**269,511**	**–1,242**	**319,724**	**310,290**	**9,434**
1 CURRENT ACCOUNT (1.1+ 1.2)	**130,191**	**138,167**	**–7,976**	**150,108**	**163,585**	**–13,478**
1.1 MERCHANDISE	**68,755**	**102,028**	**–33,273**	**77,541**	**121,638**	**–44,097**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**61,436**	**36,139**	**25,297**	**72,566**	**41,947**	**30,619**
1.2.1 Services	42,145	24,365	17,780	49,961	29,021	20,940
1.2.1.1 Travel	6,187	3,710	2,477	7,441	4,621	2,820
1.2.1.2 Transportation	3,797	3,268	529	4,388	4,419	–31
1.2.1.3 Insurance	522	413	109	611	435	176
1.2.1.4 G.n.i.e.	176	135	40	203	193	11
1.2.1.5 Miscellaneous	31,464	16,839	14,625	37,318	19,354	17,964
1.2.1.5.1 Software Services	18,947	945	18,002	19,974	1,333	18,641
1.2.1.5.2 Business Services	8,319	8,065	255	9,859	9,400	459
1.2.1.5.3 Financial Services	1,210	1,624	–414	983	1,574	–591
1.2.1.5.4 Communication Services	559	231	327	414	239	175
1.2.2 Transfers	15,276	1,382	13,894	17,685	1,623	16,062
1.2.2.1 Official	110	212	–102	96	202	–105
1.2.2.2 Private	15,166	1,170	13,996	17,589	1,422	16,167
1.2.3 Income	4,015	10,392	–6,377	4,920	11,303	–6,382
1.2.3.1 Investment Income	3,008	9,761	–6,753	3,765	10,724	–6,959
1.2.3.2 Compensation of Employees	1,007	631	376	1,155	578	577
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**137,418**	**131,344**	**6,073**	**168,778**	**146,705**	**22,074**
2.1 Foreign Investment (2.1.1+2.1.2)	**66,952**	**68,559**	**–1,607**	**93,990**	**84,371**	**9,619**
2.1.1 Foreign Direct Investment	18,547	8,813	9,734	15,287	10,989	4,297
2.1.1.1 In India	18,066	4,871	13,196	14,317	8,315	6,002
2.1.1.1.1 Equity	14,532	4,812	9,720	10,755	8,287	2,468
2.1.1.1.2 Reinvested Earnings	3,060	–	3,060	3,173	–	3,173
2.1.1.1.3 Other Capital	475	59	416	389	29	360
2.1.1.2 Abroad	480	3,942	–3,462	969	2,674	–1,704
2.1.1.2.1 Equity	480	2,283	–1,802	969	1,111	–141
2.1.1.2.2 Reinvested Earnings	0	731	–731	0	785	–785
2.1.1.2.3 Other Capital	0	928	–928	0	778	–778
2.1.2 Portfolio Investment	48,405	59,746	–11,341	78,703	73,382	5,322
2.1.2.1 In India	48,250	59,564	–11,314	78,576	73,145	5,430
2.1.2.1.1 FIIs	48,250	59,564	–11,314	78,576	73,145	5,430
2.1.2.1.1.1 Equity	37,637	42,371	–4,733	63,467	61,246	2,221
2.1.2.1.1.2 Debt	10,613	17,194	–6,581	15,109	11,900	3,209
2.1.2.1.2 ADR/GDRs	0	0	0	0	–	0
2.1.2.2 Abroad	154	181	–27	127	236	–109
2.2 Loans (2.2.1+2.2.2+2.2.3)	**31,150**	**29,469**	**1,682**	**38,186**	**32,096**	**6,090**
2.2.1 External Assistance	1,601	1,058	543	1,947	1,201	746
2.2.1.1 By India	14	57	–43	14	31	–17
2.2.1.2 To India	1,587	1,001	586	1,934	1,170	764
2.2.2 Commercial Borrowings	6,092	7,917	–1,825	10,789	10,227	562
2.2.2.1 By India	963	280	683	2,755	2,623	132
2.2.2.2 To India	5,129	7,637	–2,508	8,034	7,604	430
2.2.3 Short Term to India	23,457	20,493	2,964	25,449	20,667	4,782
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	22,700	20,493	2,207	24,456	20,667	3,789
2.2.3.2 Suppliers' Credit up to 180 days	757	0	757	993	0	993
2.3 Banking Capital (2.3.1+2.3.2)	**30,610**	**27,430**	**3,180**	**25,355**	**20,775**	**4,580**
2.3.1 Commercial Banks	30,610	27,427	3,182	25,107	20,775	4,332
2.3.1.1 Assets	19,123	107	19,016	8,245	8,721	–475
2.3.1.2 Liabilities	11,487	27,321	–15,834	16,861	12,054	4,807
2.3.1.2.1 Non-Resident Deposits	7,450	25,980	–18,530	14,489	11,398	3,091
2.3.2 Others	0	2	–2	248	0	248
2.4 Rupee Debt Service	0	0	0	–	0	0
2.5 Other Capital	8,706	5,887	2,819	11,248	9,463	1,784
3 Errors & Omissions	**660**	**–**	**660**	**838**	**–**	**838**
4 Monetary Movements (4.1+ 4.2)	**1,242**	0	**1,242**	0	**9,434**	**–9,434**
4.1 I.M.F.	0	0	0	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	1,242	0	1,242	0	9,434	–9,434

No. 39: India's Overall Balance of Payments

(₹ Billion)

Item	Oct-Dec 2016 (PR)			Oct-Dec 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	**18,088**	**18,172**	**–84**	**20,695**	**20,085**	**611**
1 CURRENT ACCOUNT (1.1+ 1.2)	**8,778**	**9,316**	**–538**	**9,716**	**10,589**	**–872**
1.1 MERCHANDISE	**4,636**	**6,879**	**–2,243**	**5,019**	**7,873**	**–2,854**
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	**4,142**	**2,437**	**1,706**	**4,697**	**2,715**	**1,982**
1.2.1 Services	2,842	1,643	1,199	3,234	1,879	1,355
1.2.1.1 Travel	417	250	167	482	299	183
1.2.1.2 Transportation	256	220	36	284	286	–2
1.2.1.3 Insurance	35	28	7	40	28	11
1.2.1.4 G.n.i.e.	12	9	3	13	12	1
1.2.1.5 Miscellaneous	2,121	1,135	986	2,416	1,253	1,163
1.2.1.5.1 Software Services	1,278	64	1,214	1,293	86	1,207
1.2.1.5.2 Business Services	561	544	17	638	608	30
1.2.1.5.3 Financial Services	82	110	–28	64	102	–38
1.2.1.5.4 Communication Services	38	16	22	27	15	11
1.2.2 Transfers	1,030	93	937	1,145	105	1,040
1.2.2.1 Official	7	14	–7	6	13	–7
1.2.2.2 Private	1,023	79	944	1,138	92	1,046
1.2.3 Income	271	701	–430	318	732	–413
1.2.3.1 Investment Income	203	658	–455	244	694	–450
1.2.3.2 Compensation of Employees	68	43	25	75	37	37
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	**9,265**	**8,856**	**409**	**10,925**	**9,496**	**1,429**
2.1 Foreign Investment (2.1.1+2.1.2)	4,514	4,623	–108	6,084	5,461	623
2.1.1 Foreign Direct Investment	1,251	594	656	989	711	278
2.1.1.1 In India	1,218	328	890	927	538	388
2.1.1.1.1 Equity	980	324	655	696	536	160
2.1.1.1.2 Reinvested Earnings	206	0	206	205	0	205
2.1.1.1.3 Other Capital	32	4	28	25	2	23
2.1.1.2 Abroad	32	266	–233	63	173	–110
2.1.1.2.1 Equity	32	154	–122	63	72	–9
2.1.1.2.2 Reinvested Earnings	0	49	–49	0	51	–51
2.1.1.2.3 Other Capital	0	63	–63	0	50	–50
2.1.2 Portfolio Investment	3,264	4,028	–765	5,094	4,750	344
2.1.2.1 In India	3,253	4,016	–763	5,086	4,735	351
2.1.2.1.1 FIIs	3,253	4,016	–763	5,086	4,735	351
2.1.2.1.1.1 Equity	2,538	2,857	–319	4,108	3,964	144
2.1.2.1.1.2 Debt	716	1,159	–444	978	770	208
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	10	12	–2	8	15	–7
2.2 Loans (2.2.1+2.2.2+2.2.3)	**2,100**	**1,987**	**113**	**2,472**	**2,078**	**394**
2.2.1 External Assistance	108	71	37	126	78	48
2.2.1.1 By India	1	4	–3	1	2	–1
2.2.1.2 To India	107	67	40	125	76	49
2.2.2 Commercial Borrowings	411	534	–123	698	662	36
2.2.2.1 By India	65	19	46	178	170	9
2.2.2.2 To India	346	515	–169	520	492	28
2.2.3 Short Term to India	1,582	1,382	200	1,647	1,338	310
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,531	1,382	149	1,583	1,338	245
2.2.3.2 Suppliers' Credit up to 180 days	51	0	51	64	0	64
2.3 Banking Capital (2.3.1+2.3.2)	**2,064**	**1,849**	**214**	**1,641**	**1,345**	**296**
2.3.1 Commercial Banks	2,064	1,849	215	1,625	1,345	280
2.3.1.1 Assets	1,289	7	1,282	534	564	–31
2.3.1.2 Liabilities	774	1,842	–1,068	1,091	780	311
2.3.1.2.1 Non-Resident Deposits	502	1,752	–1,249	938	738	200
2.3.2 Others	0	0	–	16	0	16
2.4 Rupee Debt Service	0	0	0	0	0	0
2.5 Other Capital	587	397	190	728	613	116
3 Errors & Omissions	**45**	–	**45**	**54**	–	**54**
4 Monetary Movements (4.1+ 4.2)	**84**	0	**84**	0	**611**	**–611**
4.1 I.M.F.	0	0	0	–	–	–
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	84	0	84	0	611	–611

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

(US $ Million)

Item	Oct-Dec 2016 (PR)			Oct-Dec 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**130,183**	**138,147**	**–7,964**	**150,101**	**163,566**	**–13,465**
1.A Goods and Services (1.A.a+1.A.b)	**110,900**	**126,394**	**–15,493**	**127,502**	**150,659**	**–23,157**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**68,755**	**102,028**	**–33,273**	**77,541**	**121,638**	**–44,097**
1.A.a.1 General merchandise on a BOP basis	69,539	92,137	–22,597	77,848	112,038	–34,190
1.A.a.2 Net exports of goods under merchanting	–784	0	–784	–307	0	–307
1.A.a.3 Nonmonetary gold	–	9,892	–9,892	–	9,600	–9,600
1.A.b Services (1.A.b.1 to 1.A.b.13)	**42,145**	**24,365**	**17,780**	**49,961**	**29,021**	**20,940**
1.A.b.1 Manufacturing services on physical inputs owned by others	22	6	16	34	13	21
1.A.b.2 Maintenance and repair services n.i.e.	47	72	–25	43	129	–87
1.A.b.3 Transport	3,797	3,268	529	4,388	4,419	–31
1.A.b.4 Travel	6,187	3,710	2,477	7,441	4,621	2,820
1.A.b.5 Construction	591	224	367	529	327	201
1.A.b.6 Insurance and pension services	522	413	109	611	435	176
1.A.b.7 Financial services	1,210	1,624	–414	983	1,574	–591
1.A.b.8 Charges for the use of intellectual property n.i.e.	144	1,509	–1,366	215	1,929	–1,714
1.A.b.9 Telecommunications, computer, and information services	19,595	1,247	18,348	20,513	1,662	18,850
1.A.b.10 Other business services	8,319	8,065	255	9,859	9,400	459
1.A.b.11 Personal, cultural, and recreational services	328	439	–111	366	501	–135
1.A.b.12 Government goods and services n.i.e.	176	135	40	203	193	11
1.A.b.13 Others n.i.e.	1,209	3,652	–2,444	4,777	3,819	958
1.B Primary Income (1.B.1 to 1.B.3)	**4,015**	**10,392**	**–6,377**	**4,920**	**11,303**	**–6,382**
1.B.1 Compensation of employees	1,007	631	376	1,155	578	577
1.B.2 Investment income	2,367	9,610	–7,243	3,141	10,606	–7,465
1.B.2.1 Direct investment	1,218	4,864	–3,647	1,580	4,735	–3,155
1.B.2.2 Portfolio investment	20	1,656	–1,636	19	2,618	–2,599
1.B.2.3 Other investment	265	3,090	–2,826	332	3,245	–2,913
1.B.2.4 Reserve assets	865	0	865	1,209	8	1,201
1.B.3 Other primary income	641	151	490	625	119	506
1.C Secondary Income (1.C.1+1.C.2)	**15,268**	**1,362**	**13,906**	**17,678**	**1,604**	**16,074**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	15,166	1,170	13,996	17,589	1,422	16,167
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	14,579	959	13,620	17,011	1,083	15,928
1.C.1.2 Other current transfers	587	211	376	578	339	239
1.C.2 General government	101	192	–90	89	182	–93
2 Capital Account (2.1+2.2)	**59**	**78**	**–19**	**131**	**97**	**33**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	15	28	–12	47	19	28
2.2 Capital transfers	44	51	–7	84	78	5
3 Financial Account (3.1 to 3.5)	**138,608**	**131,286**	**7,323**	**168,655**	**156,061**	**12,593**
3.1 Direct Investment (3.1A+3.1B)	**18,547**	**8,813**	**9,734**	**15,287**	**10,989**	**4,297**
3.1.A Direct Investment in India	18,066	4,871	13,196	14,317	8,315	6,002
3.1.A.1 Equity and investment fund shares	17,591	4,812	12,780	13,928	8,287	5,641
3.1.A.1.1 Equity other than reinvestment of earnings	14,532	4,812	9,720	10,755	8,287	2,468
3.1.A.1.2 Reinvestment of earnings	3,060	–	3,060	3,173	–	3,173
3.1.A.2 Debt instruments	475	59	416	389	29	360
3.1.A.2.1 Direct investor in direct investment enterprises	475	59	416	389	29	360
3.1.B Direct Investment by India	480	3,942	–3,462	969	2,674	–1,704
3.1.B.1 Equity and investment fund shares	480	3,014	–2,534	969	1,896	–927
3.1.B.1.1 Equity other than reinvestment of earnings	480	2,283	–1,802	969	1,111	–141
3.1.B.1.2 Reinvestment of earnings	–	731	–731	–	785	–785
3.1.B.2 Debt instruments	0	928	–928	0	778	–778
3.1.B.2.1 Direct investor in direct investment enterprises	–	928	–928	–	778	–778
3.2 Portfolio Investment	**48,405**	**59,746**	**–11,341**	**78,703**	**73,382**	**5,322**
3.2.A Portfolio Investment in India	48,250	59,564	–11,314	78,576	73,145	5,430
3.2.1 Equity and investment fund shares	37,637	42,371	–4,733	63,467	61,246	2,221
3.2.2 Debt securities	10,613	17,194	–6,581	15,109	11,900	3,209
3.2.B Portfolio Investment by India	154	181	–27	127	236	–109
3.3 Financial derivatives (other than reserves) and employee stock options	**5,931**	**2,811**	**3,120**	**5,402**	**5,905**	**–503**
3.4 Other investment	**64,484**	**59,917**	**4,568**	**69,263**	**56,351**	**12,912**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	7,450	25,982	–18,532	14,738	11,398	3,340
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	2	–2	248	0	248
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	7,450	25,980	–18,530	14,489	11,398	3,091
3.4.2.3 General government	–	–	–	–	–	0
3.4.2.4 Other sectors	–	–	–	–	–	0
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	30,853	10,423	20,430	23,354	20,805	2,549
3.4.3.A Loans to India	29,876	10,086	19,790	20,585	18,150	2,434
3.4.3.B Loans by India	978	338	640	2,769	2,654	114
3.4.4 Insurance, pension, and standardized guarantee schemes	229	223	5	21	58	–37
3.4.5 Trade credit and advances	23,457	20,493	2,964	25,449	20,667	4,782
3.4.6 Other accounts receivable/payable - other	2,495	2,795	–299	5,701	3,422	2,279
3.4.7 Special drawing rights	–	–	–	–	–	0
3.5 Reserve assets	**1,242**	0	**1,242**	0	**9,434**	**–9,434**
3.5.1 Monetary gold	–	–	–	–	–	0
3.5.2 Special drawing rights n.a.	–	–	–	–	–	0
3.5.3 Reserve position in the IMF n.a.	–	–	–	–	–	0
3.5.4 Other reserve assets (Foreign Currency Assets)	1,242	0	1,242	0	9,434	–9,434
4 Total assets/liabilities	**138,608**	**131,286**	**7,323**	**168,655**	**156,061**	**12,593**
4.1 Equity and investment fund shares	62,023	53,412	8,611	83,915	77,629	6,286
4.2 Debt instruments	72,848	75,079	–2,231	79,038	65,576	13,462
4.3 Other financial assets and liabilities	3,737	2,795	942	5,701	12,856	–7,155
5 Net errors and omissions	**660**	–	**660**	**838**	–	**838**

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

(₹ Billion)

Item	Oct-Dec 2016 (PR)			Oct-Dec 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	**8,778**	**9,315**	**–537**	**9,716**	**10,587**	**–872**
1.A Goods and Services (1.A.a+1.A.b)	**7,477**	**8,522**	**–1,045**	**8,253**	**9,752**	**–1,499**
1.A.a Goods (1.A.a.1 to 1.A.a.3)	**4,636**	**6,879**	**–2,243**	**5,019**	**7,873**	**–2,854**
1.A.a.1 General merchandise on a BOP basis	4,689	6,212	–1,524	5,039	7,252	–2,213
1.A.a.2 Net exports of goods under merchanting	–53	0	–53	–20	0	–20
1.A.a.3 Nonmonetary gold	–	667	–667	0	621	–621
1.A.b Services (1.A.b.1 to 1.A.b.13)	**2,842**	**1,643**	**1,199**	**3,234**	**1,879**	**1,355**
1.A.b.1 Manufacturing services on physical inputs owned by others	1	0	1	2	1	1
1.A.b.2 Maintenance and repair services n.i.e.	3	5	–2	3	8	–6
1.A.b.3 Transport	256	220	36	284	286	–2
1.A.b.4 Travel	417	250	167	482	299	183
1.A.b.5 Construction	40	15	25	34	21	13
1.A.b.6 Insurance and pension services	35	28	7	40	28	11
1.A.b.7 Financial services	82	110	–28	64	102	–38
1.A.b.8 Charges for the use of intellectual property n.i.e.	10	102	–92	14	125	–111
1.A.b.9 Telecommunications, computer, and information services	1,321	84	1,237	1,328	108	1,220
1.A.b.10 Other business services	561	544	17	638	608	30
1.A.b.11 Personal, cultural, and recreational services	22	30	–7	24	32	–9
1.A.b.12 Government goods and services n.i.e.	12	9	3	13	12	1
1.A.b.13 Others n.i.e.	81	246	–165	309	247	62
1.B Primary Income (1.B.1 to 1.B.3)	**271**	**701**	**–430**	**318**	**732**	**–413**
1.B.1 Compensation of employees	68	43	25	75	37	37
1.B.2 Investment income	160	648	–488	203	687	–483
1.B.2.1 Direct investment	82	328	–246	102	306	–204
1.B.2.2 Portfolio investment	1	112	–110	1	169	–168
1.B.2.3 Other investment	18	208	–191	22	210	–189
1.B.2.4 Reserve assets	58	0	58	78	1	78
1.B.3 Other primary income	43	10	33	40	8	33
1.C Secondary Income (1.C.1+1.C.2)	**1,029**	**92**	**938**	**1,144**	**104**	**1,040**
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1,023	79	944	1,138	92	1,046
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	983	65	918	1,101	70	1,031
1.C.1.2 Other current transfers	40	14	25	37	22	15
1.C.2 General government	7	13	–6	6	12	–6
2 Capital Account (2.1+2.2)	**4**	**5**	**–1**	**8**	**6**	**2**
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	1	2	–1	3	1	2
2.2 Capital transfers	3	3	0	5	5	0
3 Financial Account (3.1 to 3.5)	**9,346**	**8,852**	**494**	**10,917**	**10,102**	**815**
3.1 Direct Investment (3.1A+3.1B)	**1,251**	**594**	**656**	**989**	**711**	**278**
3.1.A Direct Investment in India	1,218	328	890	927	538	388
3.1.A.1 Equity and investment fund shares	1,186	324	862	902	536	365
3.1.A.1.1 Equity other than reinvestment of earnings	980	324	655	696	536	160
3.1.A.1.2 Reinvestment of earnings	206	0	206	205	0	205
3.1.A.2 Debt instruments	32	4	28	25	2	23
3.1.A.2.1 Direct investor in direct investment enterprises	32	4	28	25	2	23
3.1.B Direct Investment by India	32	266	–233	63	173	–110
3.1.B.1 Equity and investment fund shares	32	203	–171	63	123	–60
3.1.B.1.1 Equity other than reinvestment of earnings	32	154	–122	63	72	–9
3.1.B.1.2 Reinvestment of earnings	0	49	–49	0	51	–51
3.1.B.2 Debt instruments	0	63	–63	0	50	–50
3.1.B.2.1 Direct investor in direct investment enterprises	0	63	–63	0	50	–50
3.2 Portfolio Investment	**3,264**	**4,028**	**–765**	**5,094**	**4,750**	**344**
3.2.A Portfolio Investment in India	3,253	4,016	–763	5,086	4,735	351
3.2.1 Equity and investment fund shares	2,538	2,857	–319	4,108	3,964	144
3.2.2 Debt securities	716	1,159	–444	978	770	208
3.2.B Portfolio Investment by India	10	12	–2	8	15	–7
3.3 Financial derivatives (other than reserves) and employee stock options	**400**	**190**	**210**	**350**	**382**	**–33**
3.4 Other investment	**4,348**	**4,040**	**308**	**4,483**	**3,648**	**836**
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	502	1,752	–1,250	954	738	216
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	0	0	16	0	16
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	502	1,752	–1,249	938	738	200
3.4.2.3 General government	–	–	–	–	–	–
3.4.2.4 Other sectors	–	–	–	–	–	–
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	2,080	703	1,377	1,512	1,347	165
3.4.3.A Loans to India	2,014	680	1,334	1,332	1,175	158
3.4.3.B Loans by India	66	23	43	179	172	7
3.4.4 Insurance, pension, and standardized guarantee schemes	15	15	0	1	4	–2
3.4.5 Trade credit and advances	1,582	1,382	200	1,647	1,338	310
3.4.6 Other accounts receivable/payable - other	168	188	–20	369	221	148
3.4.7 Special drawing rights	–	–	–	0	0	0
3.5 Reserve assets	**84**	0	**84**	0	**611**	**–611**
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)	84	0	84	0	611	–611
4 Total assets/liabilities	**9,346**	**8,852**	**494**	**10,917**	**10,102**	**815**
4.1 Equity and investment fund shares	4,182	3,601	581	5,432	5,025	407
4.2 Debt instruments	4,912	5,062	–150	5,116	4,245	871
4.3 Other financial assets and liabilities	252	188	64	369	832	–463
5 Net errors and omissions	**45**	**–**	**45**	**54**	**–**	**54**

No. 42: International Investment Position

(US$ Million)

Item	As on Financial Year /Quarter End							
	2016-17		2016		2017			
			Dec.		Sep.		Dec.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1 Direct Investment Abroad/in India	148,229	342,607	144,086	318,487	153,637	364,126	155,341	377,683
1.1 Equity Capital and Reinvested Earnings	99,114	327,845	96,569	304,538	101,681	347,947	102,608	361,431
1.2 Other Capital	49,115	14,762	47,516	13,949	51,956	16,180	52,734	16,253
2 Portfolio Investment	2,615	238,598	2,283	221,101	2,456	253,975	2,565	267,717
2.1 Equity	1,593	153,978	2,280	140,567	2,408	150,062	2,281	155,663
2.2 Debt	1,022	84,621	4	80,534	48	103,912	284	112,054
3 Other Investment	43,433	377,136	38,129	365,355	39,040	380,574	40,643	391,861
3.1 Trade Credit	1,793	88,896	1,949	84,782	1,263	93,589	1,572	98,440
3.2 Loan	7,305	159,572	4,236	160,092	5,882	156,857	5,507	156,079
3.3 Currency and Deposits	20,073	117,110	14,873	110,019	17,208	118,266	18,802	123,546
3.4 Other Assets/Liabilities	14,261	11,557	17,072	10,462	14,687	11,862	14,763	13,796
4 Reserves	369,955	–	358,898	–	400,205	–	409,072	–
5 Total Assets/ Liabilities	564,231	958,341	543,396	904,943	595,338	998,675	607,621	1,037,262
6 IIP (Assets - Liabilities)		–394,110		–361,546		–403,337		–429,641

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2016-17	2017	2018		2016-17	2017	2018	
		Dec.	Jan.	Feb.		Dec.	Jan.	Feb.
	1	2	3	4	5	6	7	8
1 RTGS	**107.86**	**10.90**	**11.16**	**10.63**	**1,253,652.08**	**128,098.85**	**133,665.22**	**114,123.57**
1.1 Customer Transactions	103.66	10.58	10.85	10.34	849,950.51	90,557.83	95,866.37	82,134.80
1.2 Interbank Transactions	4.17	0.31	0.31	0.29	131,953.25	10,349.96	11,622.03	9,630.83
1.3 Interbank Clearing	0.018	0.002	0.002	0.002	271,748.31	27,191.06	26,176.82	22,357.94
2 CCIL Operated Systems	**3.65**	**0.28**	**0.35**	**0.28**	**1,056,173.36**	**88,062.67**	**101,560.41**	**85,016.52**
2.1 CBLO	0.22	0.02	0.02	0.02	229,528.33	23,657.46	29,883.06	23,264.19
2.2 Govt. Securities Clearing	1.51	0.09	0.10	0.07	404,389.08	30,067.97	32,265.24	27,459.78
2.2.1 Outright	1.34	0.07	0.08	0.06	168,741.46	8,453.70	8,696.66	6,273.99
2.2.2 Repo	0.168	0.016	0.018	0.016	235,647.62	21,614.27	23,568.57	21,185.79
2.3 Forex Clearing	1.93	0.18	0.23	0.19	422,255.95	34,337.24	39,412.12	34,292.56
3 Paper Clearing	**1,206.69**	**96.44**	**98.99**	**93.35**	**80,958.15**	**6,752.50**	**6,994.65**	**6,553.58**
3.1 Cheque Truncation System (CTS)	1,111.86	94.57	96.71	91.82	74,035.22	6,563.97	6,792.60	6,453.56
3.2 MICR Clearing	–	-	-	-	–	–	–	–
3.2.1 RBI Centres	–	-	-	-	–	–	–	–
3.2.2 Other Centres	–	-	-	-	–	–	–	–
3.3 Non-MICR Clearing	94.83	1.86	2.28	1.53	6,922.93	188.53	202.05	100.02
4 Retail Electronic Clearing	**4,204.96**	**469.96**	**489.35**	**475.36**	**132,250.12**	**17,464.68**	**17,086.24**	**16,673.47**
4.1 ECS DR	8.76	0.13	0.12	0.09	39.14	0.84	0.79	0.40
4.2 ECS CR (includes NECS)	10.10	0.51	0.50	0.49	144.08	7.24	8.68	8.10
4.3 EFT/NEFT	1,622.10	169.05	170.21	165.59	120,039.68	15,779.20	15,374.07	14,843.90
4.4 Immediate Payment Service (IMPS)	506.73	98.01	99.56	99.25	4,111.06	871.06	882.14	882.70
4.5 National Automated Clearing House (NACH)	2,057.27	202.26	218.96	209.94	7,916.17	806.34	820.57	938.35
5 Cards	**12,055.87**	**1,178.80**	**1,173.66**	**1,116.38**	**30,214.00**	**3,469.97**	**3,379.02**	**3,225.95**
5.1 Credit Cards	1,093.51	124.48	130.73	115.44	3,312.21	421.98	417.78	379.81
5.1.1 Usage at ATMs	6.37	0.71	0.75	0.69	28.39	3.34	3.41	3.22
5.1.2 Usage at POS	1,087.13	123.77	129.98	114.75	3,283.82	418.64	414.37	376.60
5.2 Debit Cards	10,962.36	1,054.32	1,042.94	1,000.93	26,901.79	3,047.99	2,961.24	2,846.13
5.2.1 Usage at ATMs	8,563.06	761.93	741.56	718.28	23,602.73	2,640.39	2,550.22	2,474.87
5.2.2 Usage at POS	2,399.30	292.39	301.37	282.66	3,299.07	407.60	411.03	371.26
6 Prepaid Payment Instruments (PPIs)	**1,963.66**	**319.85**	**361.20**	**345.37**	**838.01**	**143.34**	**147.71**	**149.59**
6.1 m-Wallet	1,629.98	288.37	326.30	310.01	532.42	125.68	125.63	131.04
6.2 PPI Cards	333.11	31.44	34.87	35.32	277.52	16.34	20.76	17.65
6.3 Paper Vouchers	0.51	0.03	0.03	0.03	25.36	1.33	1.32	0.90
7 Mobile Banking	**976.85**	**206.38**	**214.55**	**222.81**	**13,104.76**	**1,054.57**	**1,121.37**	**1,146.07**
8 Cards Outstanding	**801.49**	**877.97**	**882.94**	**892.37**	–	–	–	–
8.1 Credit Card	29.84	35.50	36.24	36.94	–	–	–	–
8.2 Debit Card	771.65	842.47	846.70	855.43	–	–	–	–
9 Number of ATMs (in actuals)	**222475**	**221832**	**221620**	**221687**	–	–	–	–
10 Number of POS (in actuals)	**2529141**	**3027382**	**3061817**	**3079487**	–	–	–	–
11 Grand Total (1.1+1.2+2+3+4+5+6)	**19,542.66**	**2,076.22**	**2,134.71**	**2,041.36**	**2,282,337.40**	**216,800.95**	**236,656.45**	**203,384.73**

Note : Data for latest 12 month period is provisional.

Occasional Series

No. 44: Small Savings

(₹ Billion)

Scheme		2016-17	2016	2017		
			Aug.	Jun.	Jul.	Aug.
		1	2	3	4	5
1 Small Savings	**Receipts**	**4,341.75**	**334.03**	**55.80**	**55.54**	**60.31**
	Outstanding	**7,312.73**	**6,877.30**	**7,443.48**	**7,498.89**	**7,559.02**
1.1 Total Deposits	**Receipts**	**3,879.55**	**308.08**	**44.45**	**45.81**	**47.19**
	Outstanding	**4,689.77**	**4,374.73**	**4,799.48**	**4,845.29**	**4,892.47**
1.1.1 Post Office Saving Bank Deposits	Receipts	2,474.46	189.60	11.00	12.17	9.96
	Outstanding	920.64	707.61	946.70	958.88	968.84
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	0.56	0.30	–0.30	–0.24	–0.21
	Outstanding	33.01	33.85	32.04	31.78	31.57
1.1.4 National Saving Scheme, 1992	Receipts	0.01	0.00	–0.05	–0.04	1.07
	Outstanding	–0.48	–0.21	–0.63	–0.67	0.40
1.1.5 Monthly Income Scheme	Receipts	353.34	31.02	–0.40	–0.36	0.35
	Outstanding	1,800.66	1,855.13	1,794.85	1,794.49	1,794.83
1.1.6 Senior Citizen Scheme 2004	Receipts	100.02	7.70	11.14	10.57	11.79
	Outstanding	294.53	248.52	326.08	336.66	348.45
1.1.7 Post Office Time Deposits	Receipts	476.65	40.83	15.19	16.19	15.88
	Outstanding	796.58	738.96	836.77	852.95	868.84
1.1.7.1 1 year Time Deposits	Outstanding	518.38	506.55	534.34	541.25	547.75
1.1.7.2 2 year Time Deposits	Outstanding	36.58	32.28	39.37	40.32	41.25
1.1.7.3 3 year Time Deposits	Outstanding	51.77	49.17	53.24	53.95	54.70
1.1.7.4 5 year Time Deposits	Outstanding	189.85	150.96	209.82	217.43	225.14
1.1.8 Post Office Recurring Deposits	Receipts	474.51	38.63	7.87	7.52	8.35
	Outstanding	844.53	790.47	863.37	870.90	879.24
1.1.9 Post Office Cumulative Time Deposits	Outstanding	0.08	0.18	0.08	0.08	0.08
1.1.10 Other Deposits	Receipts	0	0.00	0.00	0.00	0.00
	Outstanding	0.22	0.22	0.22	0.22	0.22
1.2 Saving Certificates	**Receipts**	**289.85**	**21.41**	**9.47**	**7.28**	**10.60**
	Outstanding	**1,989.35**	**1,936.09**	**2,005.79**	**2,012.93**	**2,023.36**
1.2.1 National Savings Certificate VIII issue	Receipts	120.63	6.90	–4.13	–4.55	–2.83
	Outstanding	872.39	866.04	856.09	851.53	848.71
1.2.2 Indira Vikas Patras	Receipts	0.00	0.00	–0.01	–0.04	–0.01
	Outstanding	8.86	8.92	8.86	8.83	8.81
1.2.3 Kisan Vikas Patras	Receipts	–0.01	0.03	–11.95	–11.98	–11.99
	Outstanding	535.72	595.60	501.35	489.37	477.38
1.2.4 Kisan Vikas Patras - 2014	Receipts	169.23	14.48	25.55	23.89	25.49
	Outstanding	460.23	353.00	527.78	551.67	577.17
1.2.5 National Saving Certificate VI issue	Receipts	0.00	0.00	0.01	–0.04	–0.05
	Outstanding	–1.12	–1.00	–1.17	–1.21	–1.26
1.2.6 National Saving Certificate VII issue	Receipts	0.00	0.00	0.00	0.00	–0.01
	Outstanding	–0.62	–0.57	–0.62	–0.62	–0.63
1.2.7 Other Certificates	Outstanding	113.89	114.10	113.50	113.36	113.18
1.3 Public Provident Fund	**Receipts**	**172.35**	**4.54**	**1.88**	**2.45**	**2.52**
	Outstanding	**633.61**	**566.48**	**638.21**	**640.67**	**643.19**

Source: Accountant General, Post and Telegraphs.

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

(Per cent)

Central Government Dated Securities					
Category	2016	2017			
	Dec.	Mar.	Jun.	Sep.	Dec.
	1	2	3	4	5
(A) Total (in ₹ Billion)	**49246.98**	**49109.75**	**50430.94**	**51451.83**	**52813.50**
1 Commercial Banks	40.92	40.46	39.68	40.37	41.40
2 Non-Bank PDs	0.28	0.16	0.31	0.33	0.33
3 Insurance Companies	22.55	22.90	23.13	23.49	23.63
4 Mutual Funds	1.96	1.49	1.44	1.86	1.33
5 Co-operative Banks	2.63	2.70	2.65	2.62	2.69
6 Financial Institutions	0.86	0.81	0.73	0.78	0.82
7 Corporates	1.05	1.05	1.29	1.04	1.09
8 Foreign Portfolio Investors	3.13	3.53	4.29	4.58	4.53
9 Provident Funds	6.24	6.27	6.13	5.99	5.32
10 RBI	14.61	14.65	14.29	12.84	11.94
11. Others	5.77	5.98	6.07	6.11	6.92
11.1 State Governments	1.83	1.92	1.91	1.92	1.91

State Governments Securities					
Category	2016	2017			
	Dec.	Mar.	Jun.	Sep.	Dec.
	1	2	3	4	5
(B) Total (in ₹ Billion)	**19343.91**	**20893.41**	**21467.07**	**22488.35**	**23329.53**
1 Commercial Banks	41.25	39.01	37.94	37.64	38.13
2 Non-Bank PDs	0.30	0.39	0.38	0.33	0.44
3 Insurance Companies	31.87	32.50	33.53	34.00	33.35
4 Mutual Funds	1.36	2.42	1.89	1.92	1.68
5 Co-operative Banks	4.47	4.75	4.82	4.82	4.78
6 Financial Institutions	0.29	0.30	0.27	0.22	0.22
7 Corporates	0.13	0.17	0.11	0.11	0.13
8 Foreign Portfolio Investors	0.06	0.07	0.08	0.16	0.21
9 Provident Funds	16.81	17.27	18.10	18.37	17.05
10 RBI	0.03	0.06	0.06	0.06	0.07
11. Others	3.43	3.05	2.81	2.37	3.94
11.1 State Governments	-	-	-	-	-

Treasury Bills					
Category	2016	2017			
	Dec.	Mar.	Jun.	Sep.	Dec.
	1	2	3	4	5
(C) Total (in ₹ Billion)	**4366.47**	**3320.80**	**6135.01**	**5704.50**	**5102.82**
1 Commercial Banks	50.47	57.85	53.96	52.15	48.40
2 Non-Bank PDs	1.80	1.25	1.09	1.32	1.57
3 Insurance Companies	2.02	4.58	3.20	4.32	5.22
4 Mutual Funds	12.91	7.85	15.31	12.44	10.40
5 Co-operative Banks	3.28	5.62	2.48	2.33	2.05
6 Financial Institutions	2.76	4.57	2.60	3.54	3.97
7 Corporates	1.81	1.83	1.54	1.64	2.12
8 Foreign Portfolio Investors	-	-	-	-	-
9 Provident Funds	0.43	0.35	0.06	0.20	0.02
10 RBI	0.09	0.02	0.05	0.06	0.09
11. Others	24.44	16.09	19.72	22.01	26.17
11.1 State Governments	20.51	11.02	16.71	18.73	21.81

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

(₹ Billion)

Item	2012-13	2013-14	2014-15	2015-16	2016-17 RE	2017-18 BE
	1	2	3	4	5	6
1 Total Disbursements	**26,949.34**	**30,002.99**	**32,852.10**	**33,782.60**	**40,599.68**	**43,957.96**
1.1 Developmental	15,741.62	17,142.21	18,720.62	19,429.44	24,271.15	26,194.51
1.1.1 Revenue	12,807.14	13,944.26	14,830.18	14,971.45	18,457.92	19,701.57
1.1.2 Capital	2,446.11	2,785.08	3,322.62	3,400.51	4,471.03	5,515.05
1.1.3 Loans	488.38	412.88	567.82	1,057.49	1,342.20	977.89
1.2 Non-Developmental	10,850.47	12,427.83	13,667.69	13,984.15	15,870.24	17,261.83
1.2.1 Revenue	9,991.40	11,413.65	12,695.20	12,739.11	15,031.91	16,430.73
1.2.1.1 Interest Payments	4,543.06	5,342.30	5,845.42	6,134.74	6,881.68	7,536.87
1.2.2 Capital	837.14	990.37	946.87	1,207.71	816.42	807.16
1.2.3 Loans	21.93	23.81	25.63	37.33	21.92	23.94
1.3 Others	357.24	432.95	463.79	369.01	458.29	501.62
2 Total Receipts	**27,690.29**	**30,013.72**	**31,897.37**	**34,487.63**	**39,810.09**	**42,551.06**
2.1 Revenue Receipts	19,716.19	22,114.75	23,876.93	24,504.58	30,356.58	33,511.38
2.1.1 Tax Receipts	16,879.59	18,465.45	20,207.28	20,754.42	23,917.47	27,066.67
2.1.1.1 Taxes on commodities and services	10,385.91	11,257.81	12,123.48	12,912.47	15,168.50	16,914.54
2.1.1.2 Taxes on Income and Property	6,462.73	7,176.34	8,051.76	7,803.16	8,706.20	10,105.34
2.1.1.3 Taxes of Union Territories (Without Legislature)	30.94	31.30	32.04	38.78	42.77	46.79
2.1.2 Non-Tax Receipts	2,836.60	3,649.30	3,669.65	3,750.16	6,439.11	6,444.71
2.1.2.1 Interest Receipts	355.43	401.62	396.22	347.38	322.08	275.25
2.2 Non-debt Capital Receipts	389.20	391.13	609.55	588.52	595.33	1,245.96
2.2.1 Recovery of Loans & Advances	129.29	93.85	220.72	155.86	136.03	519.12
2.2.2 Disinvestment proceeds	259.91	297.28	388.83	432.66	459.30	726.84
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	**6,843.95**	**7,497.11**	**8,365.63**	**8,689.51**	**9,647.78**	**9,200.62**
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	6,771.94	7,424.19	8,236.30	8,562.02	9,499.05	9,042.73
3A.1.1 Net Bank Credit to Government	3,352.80	3,358.58	–374.76	2,310.90	6,306.09	...
3A.1.1.1 Net RBI Credit to Government	548.40	1,081.30	–3,341.85	604.72	1,958.16	...
3A.1.2 Non-Bank Credit to Government	3,419.14	4,065.61	8,611.06	6,251.12	3,192.96	...
3A.2 External Financing	72.01	72.92	129.33	127.48	148.73	157.89
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	6,771.94	7,424.19	8,236.30	8,562.02	9,499.05	9,042.73
3B.1.1 Market Borrowings (net)	6,536.94	6,391.99	6,640.58	6,354.19	6,472.74	6,970.13
3B.1.2 Small Savings (net)	–85.70	–142.81	–565.80	–785.15	–1,091.76	–941.16
3B.1.3 State Provident Funds (net)	329.94	312.90	343.39	298.82	326.18	332.03
3B.1.4 Reserve Funds	–4.12	34.63	51.09	–33.22	–82.42	–10.45
3B.1.5 Deposits and Advances	27.22	255.45	275.45	134.70	386.99	502.14
3B.1.6 Cash Balances	–740.96	–10.72	954.74	–705.03	789.59	1,406.90
3B.1.7 Others	708.62	582.75	536.84	3,297.71	2,697.73	783.13
3B.2 External Financing	72.01	72.92	129.33	127.48	148.73	157.89
4 Total Disbursements as per cent of GDP	*27.1*	*26.7*	*26.4*	*24.7*	*26.7*	*26.1*
5 Total Receipts as per cent of GDP	*27.8*	*26.7*	*25.6*	*25.2*	*26.2*	*25.3*
6 Revenue Receipts as per cent of GDP	*19.8*	*19.7*	*19.2*	*17.9*	*20.0*	*19.9*
7 Tax Receipts as per cent of GDP	*17.0*	*16.4*	*16.2*	*15.2*	*15.8*	*16.1*
8 Gross Fiscal Deficit as per cent of GDP	*6.9*	*6.7*	*6.7*	*6.4*	*6.4*	*5.5*

Source : Budget Documents of Central and State Governments.

…: Not available. RE: Revised Estimates; BE: Budget Estimates

No. 47: Financial Accommodation Availed by State Governments under various Facilities

(₹ Billion)

Sr. No	State/Union Territory	During February-2018					
		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	7.19	13	12.84	13	15.33	7
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	-	-	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	0.77	13	0.26	6	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	-	-	-	-	-	-
9	Himachal Pradesh	-	-	-	-	-	-
10	Jammu & Kashmir	-	-	5.09	17	0.56	2
11	Jharkhand	-	-	-	-	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	0.76	12	2.91	7	-	-
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	-	-	-	-	-	-
17	Meghalaya	-	-	-	-	-	-
18	Mizoram	-	-	-	-	-	-
19	Nagaland	1.61	18	0.81	3	-	-
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	0.07	26	7.58	26	3.51	16
23	Rajasthan	-	-	-	-	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	3.40	11	2.69	9	-	-
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	1.37	18	4.34	14	0.50	6
29	West Bengal	-	-	-	-	-	-

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Billion)

Sr. No	State/Union Territory	During February-2018			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	64.77	6.74	0.10	0
2	Arunachal Pradesh	7.04	--	--	0
3	Assam	40.93	0.39	0	14.00
4	Bihar	50.90	--	0	0
5	Chhattisgarh	31.31	--	0.01	0
6	Goa	4.47	2.22	--	0
7	Gujarat	112.45	3.95	0	20.00
8	Haryana	17.20	9.64	0	0
9	Himachal Pradesh	--	--	--	0
10	Jammu & Kashmir	--	--	--	0
11	Jharkhand	0	--	0	0
12	Karnataka	25.48	--	0	108.00
13	Kerala	17.71	--	0.03	0
14	Madhya Pradesh	--	7.61	0.00	0
15	Maharashtra	268.68	--	--	200.00
16	Manipur	3.11	0.82	0	0
17	Meghalaya	4.60	0.17	0.09	0
18	Mizoram	4.20	0.20	--	0
19	Nagaland	10.03	0.25	--	0
20	Odisha	109.91	11.94	0.70	150.50
21	Puducherry	2.77	--	--	7.67
22	Punjab	0	0	0.08	0
23	Rajasthan	--	--	1.29	39.74
24	Tamil Nadu	51.54	--	0.48	293.50
25	Telangana	39.63	5.77	0.07	0
26	Tripura	3.67	0.03	--	0
27	Uttar Pradesh	--	--	1.82	0
28	Uttarakhand	24.62	0.65	0.01	0
29	West Bengal	87.29	2.96	4.30	50.00
	Total	**982.29**	**53.34**	**8.99**	**883.41**

Explanatory Notes to the Current Statistics

Table No. 1

1.2 & 6: Annual data are averages of months.
3.5 & 3.7: Relate to ratios of increments over financial year so far.
4.1 to 4.4, 4.8, 4.12 & 5: Relate to the last day 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.
4.9 to 4.11: Relate to the last auction day of the month/financial year.

Table No. 2

2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.
2.2.2: Include cash, fixed deposits and short-term securities/bonds, *e.g.*, issued by IIFC (UK).

Table No. 4

Maturity-wise position of outstanding forward contracts is available at http://nsdp.rbi.org.in under ''Reserves Template''.

Table No. 5

Special refinance facility to Others, i.e. to the EXIM Bank, is closed since March 31, 2013.

Table No. 6

For scheduled banks, March-end data pertain to the last reporting Friday.
2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11

3.1 in Table 7 and 2.4 in Table 11: Include foreign currency denominated bonds issued by IIFC (UK).

Table No. 8

NM_2 and NM_3 do not include FCNR (B) deposits.
2.4: Consist of paid-up capital and reserves.
2.5: includes other demand and time liabilities of the banking system.

Table No. 9

Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.
L_1 and L_2 are compiled monthly and L_3 quarterly.
Wherever data are not available, the last available data have been repeated.

Table No. 13

Data against column Nos. (1), (2) & (3) are Final (including RRBs) and for column Nos. (4) & (5) data are Provisional (excluding RRBs)

Table No. 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 multiateral 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 from 2011-12 onwards are based on 2011-12 base. Data from year 2015-16 pertains to 26 states.

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 and 364-day Treasury Bills.

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 (excluding 364-day 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 temporry 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)**

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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10. Administrative Glossary (English-Hindi)	₹110 per copy (over the counter)	

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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