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EDITORIAL COMMITTEE

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EDITOR

Shashidhar M. Lokare

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MONETARY POLICY STATEMENT FOR 2018-19

Sixth Bi-monthly Monetary Policy Statement, 2018-19

*Sixth 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 at its meeting today, the Monetary Policy Committee (MPC) decided to:

- reduce the policy repo rate under the liquidity adjustment facility (LAF) by 25 basis points from 6.5 per cent to 6.25 per cent with immediate effect.

Consequently, the reverse repo rate under the LAF stands adjusted to 6.0 per cent, and the marginal standing facility (MSF) rate and the Bank Rate to 6.5 per cent.

The MPC also decided to change the monetary policy stance from calibrated tightening to neutral.

These decisions are in consonance with the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 per cent within a band of +/- 2 per cent, while supporting growth.

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

Assessment

2. Since the last MPC meeting in December 2018, there has been a slowdown in global economic activity. Among key advanced economies (AEs), economic activity in the US lost some steam in Q4:2018. The outlook for Q1:2019 is clouded by the partial government shutdown, though the labour market conditions remain strong. In the Euro area, economic activity lost momentum on weak industrial activity.

The Japanese economy is gradually recovering and an accommodative monetary policy stance is expected to buttress domestic spending.

3. Economic activity also slowed in some major emerging market economies (EMEs). In China, growth decelerated in Q4:2018. Economic activity in Russia lost pace, with soft oil prices posing a downside risk to growth. The Brazilian economy appeared to have ended 2018 on a firmer note, driven by improved domestic spending and exports, though industrial activity continued to struggle to recover from the disruptions of H1:2018. In South Africa, the economic recovery in Q4:2018 remained gradual, tempered by weak industrial activity and subdued exports.

4. Crude oil prices recovered from their December lows in early January on production cuts, but remain below their peak levels in October. Base metals, which witnessed selling pressures in December on persisting uncertainty over US-China trade frictions, recouped losses in January on expectations of thawing of trade disputes and production disruptions. Gold prices have risen, underpinned by safe haven demand in response to geo-political uncertainty and volatility in equity markets. Inflation edged lower in major AEs and many key EMEs.

5. Global financial markets began the year on a calmer note after a turbulent December. Among AEs, equity markets in the US recovered from a sharp sell-off in December, triggered by monetary policy tightening by the Fed, trade tensions and an impending shutdown. EM stock markets, which declined in December on a slew of soft economic data, registered some gains recently on expectations of accommodative monetary policy stances in major economies. The 10-year yield in the US, which fell to a multi-month low in December, rose in January on the edging up of crude oil prices and positive risk sentiment, though softening of the Fed stance restricted the gains. Among other AEs, bond yields in the Euro area and Japan eased on diminishing optimism about global growth. In most EMEs, bond yields have eased as well. In currency markets, the US

* Released on February 07, 2019.

dollar remained under pressure, though expectations of easing trade tensions provided some support. EME currencies appreciated on the pause in the rate hiking cycle by the Fed and expectations of a positive outcome from US-China trade negotiations.

6. Moving on to the domestic economy, on January 7, 2019 the Central Statistics Office (CSO) released the first advance estimates (FAE) for 2018-19, placing India's real gross domestic product (GDP) growth at 7.2 per cent – the same level as in 2017-18 (first revised estimates). The FAE for 2018-19 featured an acceleration in gross fixed capital formation (GFCF) and a slowdown in consumption expenditure (both private and government). The drag from net exports is estimated to decline in 2018-19.

7. Some indicators of investment demand, *viz.*, production and imports of capital goods, contracted in November/December. Credit flows to industry remain muted. Available data suggest that while revenue expenditure of the Centre, excluding interest payments and subsidies, contracted in Q3, that of States increased sharply, thus maintaining overall growth in government spending.

8. On the supply side, the FAE have placed the growth of real gross value added (GVA) at 7.0 per cent in 2018-19 as compared with 6.9 per cent in 2017-18. The estimates incorporated a slowdown in agricultural GVA growth and an acceleration in industrial GVA growth. Services GVA growth is set to soften due to subdued activity in trade, hotels, transport, communication and other services. Growth in public administration and defence services is also likely to moderate.

9. *Rabi* sowing so far (up to February 1, 2019) has been lower than in the previous year, but the overall shortfall of 4.0 per cent across various crops is expected to catch up as the season comes to a close. The lower *rabi* sowing reflects a deficient north-east monsoon (44 per cent below the long period average); however, storage in major reservoirs – the main source of irrigation during the *rabi* season – at 44 per cent of

the full reservoir level (as on January 31, 2019) was marginally higher than in the previous year. The extended period of cold weather in this year's winter is likely to boost wheat yields, which would partly offset the shortfall, if any, in area sown.

10. After exhibiting an uptick in the festive month of October, industrial activity, measured by the index of industrial production (IIP), slowed down in November. The year-on-year (y-o-y) growth in core industries decelerated to 2.6 per cent (y-o-y) in December, pulled down by a slowdown in the production of electricity and coal; and contraction in petroleum refinery products, crude oil and fertilisers output. Capacity utilisation (CU) in the manufacturing sector, as measured by the Reserve Bank's order books, inventory and capacity utilisation survey (OBICUS), increased to 74.8 per cent in Q2 from 73.8 per cent in Q1; seasonally adjusted CU also improved to 75.3 per cent from 74.9 per cent. While the Reserve Bank's business assessment index of the industrial outlook survey (IOS) for Q3:2018-19 suggests a weakening of demand conditions in the manufacturing sector, the business expectations index (BEI) points to an improvement in Q4. The manufacturing purchasing managers' index (PMI) for January remained in expansion on the back of increased output and new orders.

11. High-frequency indicators of the services sector suggest some moderation in the pace of activity. Sales of motorcycles and tractors imply weakening of rural demand in December. Sales of passenger cars – an indicator of urban demand – contracted, possibly reflecting volatility in fuel prices and mandated long-term insurance premium payments. Commercial vehicle sales also shrank in December 2018 from a high base of the previous year. Lead indicators for the hotels sub-segment, *viz.*, foreign tourist arrivals and air passenger traffic, point to softening in November-December. In the communication sub-segment, the telephone subscriber base contracted in October-November, while that of broadband continued to expand in October. The services PMI continued to

expand in January 2019 despite a dip from the previous month. Indicators of the construction sector, *viz.*, consumption of steel and production of cement, continued to show healthy growth, though growth in cement production inched lower in November 2018, reflecting a base effect.

12. Retail inflation, measured by y-o-y change in the CPI, declined from 3.4 per cent in October 2018 to 2.2 per cent in December, the lowest print in the last eighteen months. Continuing deflation in food items, a sharp fall in fuel inflation and some edging down of inflation excluding food and fuel contributed to the decline in headline inflation.

13. Five constituents of the food group – vegetables, sugar, pulses, eggs and fruits, accounting for about 30 per cent of food group – were in deflation in December. Inflation in respect of other major food sub-groups – cereals, milk, and oils and fats – was subdued. Within cereals, rice prices declined for the fourth consecutive month in December. Inflation in prices of meat and fish and non-alcoholic beverages showed an uptick, while it remained sticky for prepared meals.

14. Inflation in the fuel and light group fell from 8.5 per cent in October to 4.5 per cent in December, pulled down by a sharp decline in the prices of liquefied petroleum gas (LPG), reflecting softening of international petroleum product prices. Kerosene inflation continued to edge up due to the calibrated increase in its administered price.

15. CPI inflation excluding food and fuel decelerated to 5.6 per cent in December from 6.2 per cent in October, dragged down mainly by the moderation in the prices of petrol and diesel in line with the decline in international petroleum product prices. Housing inflation continued to edge down as the impact of the house rent allowance (HRA) increase for central government employees dissipated. However, inflation in several of the sub-groups – household goods and services; health; recreation and amusement; and education – firmed up in December, offsetting much

of the impact of lower inflation in petrol, diesel and housing.

16. Inflation expectations of households, measured by the December 2018 round of the Reserve Bank's survey, softened by 80 basis points for the three-month ahead horizon and by 130 basis points for the twelve-month ahead horizon over the last round, reflecting the continued decline in food and fuel prices. Producers' assessment of inflation in input prices eased in Q3 as reported by manufacturing firms polled by the Reserve Bank's industrial outlook survey.

17. Inflation in the prices of farm inputs and industrial raw materials remained elevated, despite some softening. Growth in rural wages moderated in October.

18. The weighted average call rate (WACR) traded below the policy repo rate on 12 out of 20 days in December, all 23 days in January and 4 days in February (up to February 6). The WACR was below the repo rate on an average by 4 basis points in December and 11 basis points each in January and February. Currency in circulation expanded sharply during December and January. The liquidity needs arising out of expansion in currency were met by the Reserve Bank through injection of durable liquidity amounting to ₹500 billion each in December and January through purchases under open market operations (OMOs). Accordingly, total durable liquidity injected through OMOs has aggregated ₹2.36 trillion during 2018-19 so far. Liquidity injected under the LAF was ₹996 billion in December on an average daily net basis, and ₹329 billion in January. In February, however, the average daily liquidity position turned into surplus with an average absorption of ₹279 billion.

19. Export growth on a y-o-y basis was almost flat in November and December 2018, primarily due to a high base effect and weak global demand. While growth in exports of petroleum products remained positive, non-oil exports declined, dragged down by lower shipments of gems and jewellery, engineering goods,

meat and poultry. Import growth slowed in November and turned negative in December 2018. While imports of petroleum (crude and products) rose in line with the increase in import volumes, non-oil imports such as pearls and precious stones, gold, electronic goods and transport equipment, recorded declines. The merchandise trade deficit for April-December 2018 was a shade higher than its level a year ago. Net services exports picked up in October and November 2018, which combined with low oil prices, could have a salutary impact on the current account deficit in Q3. On the financing side, net FDI flows to India during April-November 2018 were higher than a year ago. Foreign portfolio flows turned negative in January 2019, after rebounding in November and December 2018. India's foreign exchange reserves were at US\$ 400.2 billion on February 1, 2019.

Outlook

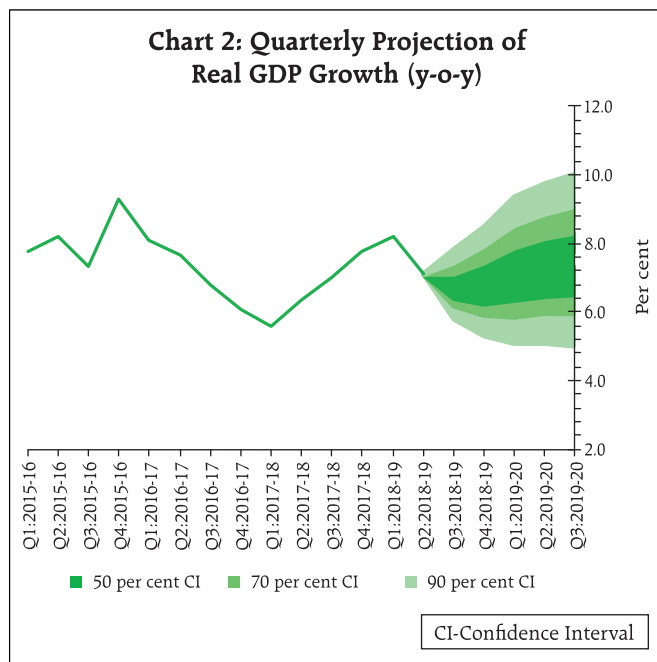
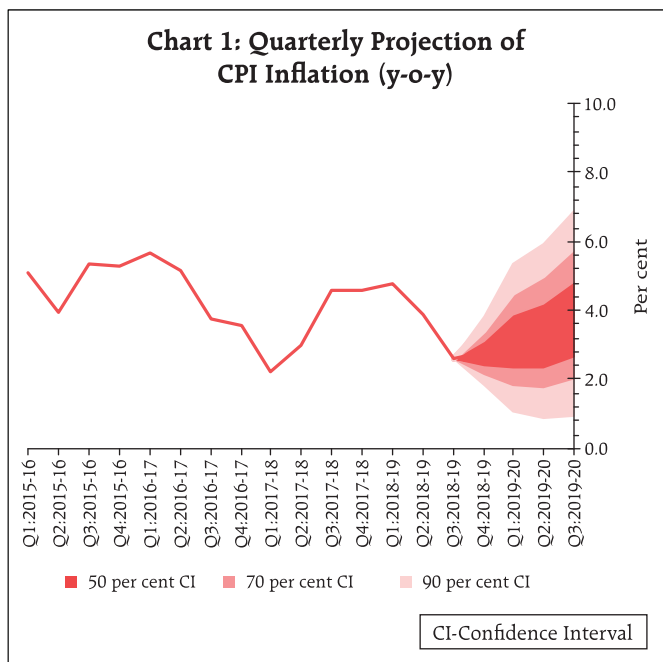
20. In the fifth bi-monthly monetary policy resolution in December 2018, CPI inflation for 2018-19 was projected in the range of 2.7-3.2 per cent in H2:2018-19 and 3.8-4.2 per cent in H1:2019-20, with risks tilted to the upside. The actual inflation outcome at 2.6 per cent in Q3:2018-19 was marginally lower than the projection. There have been downward revisions in inflation projections during the course of the year, reflecting mainly the unprecedented soft inflation recorded across food sub-groups.

21. Several factors will shape the inflation path, going forward. First, food inflation has continued to surprise on the downside with continuing deflation across several items and a significant moderation in inflation in cereals. Several food groups are experiencing excess supply conditions domestically as well as internationally. Hence, the short-term outlook for food inflation appears particularly benign, despite adverse base effects. Secondly, the moderation in the fuel group was larger than anticipated. Inflation in items of rural consumption such as firewood and chips, which had remained sticky and at elevated levels, has collapsed in recent months. Electricity prices also

showed an unexpected moderation, providing a softer outlook for the fuel group. Thirdly, while inflation excluding food and fuel remains elevated, the recent unusual pick-up in the prices of health and education could be a one-off phenomenon. Fourthly, the crude oil price outlook remains broadly the same as in the December policy. Fifthly, the Reserve Bank's surveys show that inflation expectations of households as well as input and output price expectations of producers have moderated significantly. Finally, the effect of the HRA increase for central government employees has dissipated completely along expected lines. Taking into consideration these developments and assuming a normal monsoon in 2019, the path of CPI inflation is revised downwards to 2.8 per cent in Q4:2018-19, 3.2-3.4 per cent in H1:2019-20 and 3.9 per cent in Q3:2019-20, with risks broadly balanced around the central trajectory.

22. Turning to the growth outlook, GDP growth for 2018-19 in the December policy was projected at 7.4 per cent (7.2-7.3 per cent in H2) and at 7.5 per cent for H1:2019-20, with risks somewhat to the downside. The CSO has estimated GDP growth at 7.2 per cent for 2018-19. Looking beyond the current year, the growth outlook is likely to be influenced by the following factors. First, aggregate bank credit and overall financial flows to the commercial sector continue to be strong, but are yet to be broad-based. Secondly, in spite of soft crude oil prices and the lagged impact of the recent depreciation of the Indian rupee on net exports, slowing global demand could pose headwinds. In particular, trade tensions and associated uncertainties appear to be moderating global growth. Taking into consideration the above factors, GDP growth for 2019-20 is projected at 7.4 per cent – in the range of 7.2-7.4 per cent in H1, and 7.5 per cent in Q3 – with risks evenly balanced.

23. Headline inflation is projected to remain soft in the near term reflecting the current low level of inflation and the benign food inflation outlook. Beyond the near term, some uncertainties warrant careful



monitoring. First, vegetable prices have been volatile in the recent period; reversal in vegetable prices could impart upside risk to the food inflation trajectory. Secondly, the oil price outlook continues to be hazy. Thirdly, a further heightening of trade tensions and geo-political uncertainties could also weigh on global growth prospects, dampening global demand and softening global commodity prices, especially oil prices. Fourthly, the unusual spike in the prices of health and education needs to be closely watched. Fifthly, financial markets remain volatile. Sixthly, the monsoon outcome is assumed to be normal; any spatial or temporal variation in rainfall may alter the food inflation outlook. Finally, several proposals in the union budget for 2019-20 are likely to boost aggregate demand by raising disposable incomes, but the full effect of some of the measures is likely to materialise over a period of time.

24. The MPC notes that the output gap has opened up modestly as actual output has inched lower than potential. Investment activity is recovering but

supported mainly by public spending on infrastructure. The need is to strengthen private investment activity and buttress private consumption.

25. Against this backdrop, the MPC decided to change the stance of monetary policy from calibrated tightening to neutral and to reduce the policy repo rate by 25 basis points.

26. The decision to change the monetary policy stance was unanimous. As regards the reduction in the policy repo rate, Dr. Ravindra H. Dholakia, Dr. Pami Dua, Dr. Michael Debabrata Patra and Shri Shaktikanta Das voted in favour of the decision. Dr. Chetan Ghate and Dr. Viral V. Acharya voted to keep the policy rate unchanged. The MPC reiterates its commitment to achieving the medium-term target for headline inflation of 4 per cent on a durable basis. The minutes of the MPC's meeting will be published by February 21, 2019.

27. The next meeting of the MPC is scheduled from April 2 to 4, 2019.

Statement on Developmental and Regulatory Policies

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

I. Regulation and Supervision

1. Relaxation of External Commercial Borrowing (ECB) Framework for Resolution Applicants

Under the extant ECB framework, proceeds of ECB denominated in either foreign currency or Indian Rupee (INR), are not permitted to be utilised for repayment or for on-lending for repayment of domestic Rupee loans. The resolution applicants under Corporate Insolvency Resolution Process (CIRP) under Insolvency and Bankruptcy Code (IBC), 2016 may find it attractive to borrow abroad to repay the existing lenders. In view of the above, it is proposed to relax the end-use restrictions under the approval route of the ECB framework for resolution applicants under the CIRP and allow them to utilise the ECB proceeds for repayment of Rupee term loans of the target company. Such ECBs could be availed from all eligible lenders under the extant ECB framework except from overseas branches/subsidiaries of Indian banks. Guidelines in this regard will be issued by the end of February 2019.

2. Review of Instructions on Bulk Deposit

In terms of extant instructions, banks have been given discretion to offer differential rate of interest on the bulk deposits as per their requirements and Asset-Liability Management (ALM) projections. The instructions in this regard, last reviewed in January 2013, defined "bulk deposits" as single rupee deposits of ₹1 crore and above. With a view to enhancing the operational freedom of banks in raising deposits, it is proposed to revise the definition of bulk deposits as single rupee deposits of ₹2 crore and above; and, that henceforth banks shall maintain their bulk deposit

interest rate cards in the core banking system for supervisory review.

Guidelines in this regard will be issued by the end of February 2019.

3. Umbrella Organisation for Urban Cooperative Banks

The structure, size, lack of avenues for raising capital funds and limited area of operation of the Primary (Urban) Co-operative Banks (UCBs) add to their financial vulnerabilities. A long-term solution to make the UCB sector financially resilient and to enhance the depositors' confidence is to set up an Umbrella Organization (UO) as prevalent in many countries. The UO, apart from extending liquidity and capital support to its member UCBs, would also be expected to set up Information and Technology (IT) infrastructure for shared use of members to enable them to widen their range of services in the wake of advances in information and communication technology at a relatively lower cost. The UO can also offer fund management and other consultancy services.

The idea of setting up of UO for the UCB sector was first mooted in the year 2006 by the Working Group (Chairman: Shri N S Vishwanathan) set up by the Reserve Bank on Augmentation of Capital of UCBs. It was examined in greater detail by the Working Group on Umbrella Organization and Constitution of Revival Fund for Urban Cooperative Banks (Chairman: Shri V S Das) in 2009 and the Expert Committee on Licensing of New Urban Co-operative Banks (Chairman: Shri Y H Malegam) in the year 2011. The need for UO has also been stressed by the High Powered Committee on UCBs (Chairman: Shri R Gandhi) in the year 2015.

The Reserve Bank has received a proposal for setting up an UO from the National Federation of Urban Cooperative Banks and Credit Societies Ltd. (NAFCUB). A decision on the specifics of the UO proposal will be taken by the Reserve Bank shortly.

4. Risk Weights for Rated Exposures to Non-Banking Financial Companies (NBFCs)

Under extant guidelines on Basel III Capital Regulations, exposures/claims of banks on rated as well as unrated Non-deposit Taking Systemically Important Non-Banking Financial Companies (NBFC-ND-SIs), other than Asset Finance Companies (AFCs), Non-Banking Financial Companies – Infrastructure Finance Companies (NBFCs-IFC) and Non-Banking Financial Companies – Infrastructure Development Fund (NBFCs-IDF), have to be uniformly risk-weighted at 100%. With a view to facilitating flow of credit to well-rated NBFCs, it has now been decided that rated exposures of banks to all NBFCs, excluding Core Investment Companies (CICs), would be risk-weighted as per the ratings assigned by the accredited rating agencies, in a manner similar to that for corporates. Exposures to CICs will continue to be risk-weighted at 100%. Guidelines in this regard will be issued by the end of February 2019.

5. Harmonisation of NBFC Categories

Various categories of NBFCs have evolved over time pertaining to specific sector/asset classes. Regulations put in place for each NBFC category have also been somewhat different. At present, there are twelve such categories. The Committee on Comprehensive Financial Services for Small Businesses and Low Income Households (chaired by Dr. Nachiket Mor) and Internal Committee (Chairman: Shri G. Padmanabhan), which submitted their reports in January 2014 and April 2014 respectively, had recommended harmonisation of the various categories of NBFCs. The Reserve Bank is committed to such harmonisation and to move towards activity-based regulation replacing the current entity-based regulation for the NBFC sector. As a first step in this direction, deposit acceptance regulations were harmonised in November 2014. Further, with the recent rationalization and liberalization of ECB norms, differential rules applicable to various categories of NBFCs stand harmonised.

It has now been decided to harmonise major categories of NBFCs engaged in credit intermediation, viz., Asset Finance Companies (AFC), Loan Companies, and Investment Companies, into a single category. The proposed merger of existing categories would reduce to a large extent the complexities arising from multiple categories and also provide the NBFCs greater flexibility in their operations. It will cover 99% of the NBFCs by number. Guidelines in this regard will be issued by the end of February 2019.

II. Financial Markets

6. Foreign Exchange Derivative Facilities for Residents and Non-Residents (Regulation FEMA-25)

A review of the existing facilities for hedging of foreign exchange risk by non-residents and residents was announced in the Statement on Developmental and Regulatory Policies in the Monetary Policy Statements in February 2018 and August 2018, respectively. The said review has been undertaken.

Post review, a draft of the revised directions is being put in the public domain for seeking comments. The draft directions propose to, *inter alia*, merge the facilities for residents and non-residents into a single unified facility for all users, allow users having valid underlying exposure to hedge flexibly using any instrument of their choice, introduce the ability to hedge anticipated exposure to foreign exchange risk, and simplify the procedures for authorised dealers to offer foreign exchange derivatives. The draft circular on the revised guidelines will be released by the end of February 2019.

7. Task Force on Offshore Rupee Markets

In view of offshore interest in the Indian Rupee, the Reserve Bank's policy efforts have been to align incentives for non-residents to gradually move to the domestic market for their hedging requirements. At the same time, there is a need to improve residents' access to derivatives markets to hedge their currency

risks. In order to take forward the process of gradual opening up of the foreign exchange market and also to benefit from a wider range of participants and views, it is proposed to set up a Task Force on Offshore Rupee Markets. The Task Force will examine the issues relating to the offshore Rupee markets in depth and recommend appropriate policy measures that also factor in the requirement of ensuring the stability of the external value of the Rupee. Further details about the composition and terms of reference of the Task Force shall be issued separately by the end of February 2019.

8. Rationalisation of Interest Rate Derivative Directions

The Reserve Bank has, over time, issued regulations covering various interest rate derivative products such as Interest Rate Swap (IRS), Forward Rate Agreement (FRA), Interest Rate Future (IRF), Interest Rate Option (IRO) and Money Market Future (MMF). The comprehensive guidelines on derivatives was issued in 2007 to clearly define the roles and responsibilities for users and market makers. However, except Overnight Indexed Swaps (OIS), the activity in these derivative markets has been rather thin and limited. This, among other reasons, has contributed to a limited use of interest rate derivatives in the Indian financial sector. Some of these regulations have also not been reviewed for almost two decades (IRS/FRA guideline of 1999). It is, therefore, proposed to rationalise interest rate derivative regulations to achieve consistency and ease of access with the eventual objective of fostering a thriving environment for management of interest rate risk in the Indian economy. The draft comprehensive guidelines will be issued for public feedback by the end of March 2019.

9. Regulation of Financial Benchmarks

It was proposed in the Statement on Developmental and Regulatory Policies, in the Fourth Bi-monthly Monetary Policy Statement dated October 05, 2018,

to introduce a regulatory framework for financial benchmarks to improve the governance of the benchmark processes relating to financial products and markets regulated by the Reserve Bank. Draft guidelines are being issued for public consultation.

10. Investment by Foreign Portfolio Investors (FPI) in Corporate Debt

As a part of the review of the FPI investment in Corporate Debt undertaken in April 2018, it was stipulated that no FPI shall have an exposure of more than 20% of its corporate bond portfolio to a single corporate (including exposure to entities related to the corporate). FPIs were given exemption from this requirement on their new investments till end-March 2019 to adjust their portfolios. While the provision was aimed at incentivizing FPIs to maintain a portfolio of assets, further market feedback indicates that FPIs have been constrained by this stipulation. In order to encourage a wider spectrum of investors to access the Indian corporate debt market, it is now proposed to withdraw this provision. A circular to this effect will be issued by mid-February, 2019.

III. Payment and Settlement Systems

11. Regulation of Payment Gateway Service Providers and Payment Aggregators

The Reserve Bank had in November 2009 issued directions regarding maintenance of nodal accounts of intermediaries like payment gateway providers and payment aggregators. In the "Payment and Settlement Systems - Vision 2018" Document, the Reserve Bank had indicated that given the increasing role and importance of such entities, these guidelines would be revised. Accordingly, the Reserve Bank has been examining the need and feasibility of regulating Payment Gateway Service Providers and Payment Aggregators. A discussion paper on comprehensive guidelines covering payments related activities of these entities will be placed in the public domain for consultation with the stakeholders.

IV. Financial Inclusion

12. Working Group to Review Agricultural Credit

Agricultural credit growth has been significant over the years. In spite of this, there remain issues relating to agricultural credit such as regional disparity, extent of coverage, etc. There is also the issue of deepening long-term agricultural credit for capital formation. To examine these issues and arrive at workable solutions and policy initiatives, an Internal Working Group (IWG) to Review Agricultural Credit has been constituted by the Reserve Bank.

13. Collateral-free Agriculture Loan — Enhancement of Limit.

Presently the banks are mandated to extend collateral-free agriculture loans up to ₹1 lakh. This limit of ₹1 lakh was fixed in the year 2010. Keeping in view the overall inflation and rise in agriculture input costs since then, it has been decided to raise the limit for collateral-free agriculture loans from ₹1 lakh to ₹1.6 lakh. This will enhance coverage of small and marginal farmers in the formal credit system. The circular to this effect will be issued shortly.

SPEECHES

Reflections on Current Policy Issues Facing the Indian Economy
Shaktikanta Das

Some Reflections on Micro Credit and How a Public Credit Registry
Can Strengthen It
Viral V. Acharya

National Monetary Authorities and the Global Financial Cycle
Hélène Rey

*Reflections on Current Policy Issues Facing the Indian Economy**

Shaktikanta Das

I am very happy to participate in the 9th edition of Vibrant Gujarat Global Summit. It is indeed a pleasure to be here and share my thoughts on various contours of the Indian economy. I thank the organisers of this event, namely the Government of Gujarat, National Investment and Infrastructure Fund and the Department of Economic Affairs, Ministry of Finance, Government of India for inviting me to this Roundtable.

As this august audience would know, India in recent years has emerged as one of the most vibrant economies in the world. Not only has India survived many global shocks successfully in recent years, it also tops the list of fastest growing emerging market economies (EMEs) in the world. According to the IMF's database, India's contribution to world growth has risen from 7.6 per cent during 2000-2008 to 14.5 per cent in 2018. Multilateral agencies are further optimistic on this as far as the medium-term outlook is concerned. Most importantly, India's growth story is backed by strong domestic fundamentals. For instance, (i) inflation has eased, (ii) central government remains committed to the fiscal targets, and (iii) the current account deficit (CAD) is far less than its peak level during the stress period (*i.e.*, taper talk period of mid-2013).

Indian economy has witnessed an accelerated pace of domestic reforms in recent years. These reforms include, *inter alia*, the flexible inflation-targeting monetary policy framework, the Insolvency

* Shri Shaktikanta Das, Governor, Reserve Bank of India, Speech delivered at the Investors' Roundtable, 9th Vibrant Gujarat Global Summit 2019 on January 18, 2019.

and Bankruptcy Code (IBC), the Goods and Services Tax (GST) and steps for enhancing foreign investments by liberalising the FDI regime and undertaking efforts to provide a conducive business climate.

Let me dwell a bit more on some of these aspects.

Inflation

First, let me talk about inflation. Maintaining price stability in the economy is a basic mandate for a central bank. Delivering low inflation by the central bank induces greater confidence among both domestic and global investors. India has witnessed significant disinflation since 2012-13 - with headline CPI inflation moderating from an annual average of 10.0 per cent in 2012-13 to 3.6 per cent in 2017-18 and 3.7 per cent in 2018-19 so far (April-December). As per the latest reading, headline inflation stood at a low of 2.2 per cent in December 2018. The disinflation was marked by the commitment of the Reserve Bank to bring down inflation in a sequential manner – to 8 per cent by January 2015, 6 per cent by January 2016 and 5 per cent by Q4 of 2016-17 – which was called the glide path for inflation. This, in turn, paved way for the formal adoption of flexible inflation targeting (FIT) through a legislative amendment to the Reserve Bank of India (RBI) Act under which price stability has been mandated as the primary objective of monetary policy, while keeping in mind the objective of growth. Price has been defined in terms of a numerical CPI inflation target set by the government at 4 per cent with a tolerance band of ± 2 per cent. With the formal setting up of a Monetary Policy Committee (MPC), there has been a shift to a committee-based approach for determining the monetary policy. This has enhanced transparency and accountability of the decision making process.

Since the adoption of flexible inflation targeting in India, inflation has been reasonably range bound within the target band. I must add here that easing of global crude oil prices also augured well for our inflation outcomes.

Financial Sector

Let me elaborate on some of the major policy developments in domestic financial sector in recent years.

Banking sector

We all know that Indian banking sector had emerged largely unscathed in the aftermath of the global financial crisis. However, headwinds from international and domestic economic developments posed challenges to the banking sector in recent years. Indian banking system is on the cusp of a transformation, aided by recent policy measures to reduce vulnerabilities and improve its financial health. Several initiatives are underway to strengthen the regulatory and accounting frameworks aimed at increasing the resilience of the institutions. The Reserve Bank's initiatives in the recent period are aimed at ensuring better and timely recognition of stressed assets, sufficient provisioning and an efficient resolution process. Recent supervisory data suggests that these efforts are bearing some results and incipient signs of improvement in asset quality of banks are emerging. After reaching a peak of 11.5 per cent in March 2018, the gross non-performing asset ratio improved to 10.8 per cent in September 2018. As per the current assessment of the Reserve Bank, the ratio may further improve to 10.3 per cent by March 2019¹.

The new resolution framework with the Insolvency and Bankruptcy Code (IBC) as its lynchpin and RBI's regulatory framework as its facilitator, is a game changer. It endeavours to create an environment in which maximum value can be realised from troubled assets, bolstered by the early identification of incipient stress. The shift of power in favour of creditors in the IBC framework will facilitate speedier and impartial resolution process and help in improving the credit repayment culture. The framework has been providing

a market-driven, time-bound process for insolvency resolution of a corporate debtor, thereby helping financial institutions to clean up their balance sheets. Most importantly, it is aiding a paradigm shift in the extant credit culture and discipline.

The progress of IBC framework so far has been encouraging and has resulted in better recovery as compared to the earlier mechanisms. Data available till January 3, 2019 suggest that the resolution processes have been approved in 66 cases, involving around ₹800 billion as resolution value to creditors. The gradually building resilience of the banking sector is evidenced by the fact that banks have improved their profitability ratios and capital positions. Other soundness indicators such as the tier I leverage ratio at 6.7 per cent and the liquidity coverage ratio at 134.8 per cent as at end-September 2018 remain well above the minimum regulatory requirements. Provision coverage ratio also increased to 52.4 per cent at end-September 2018 from 48.3 per cent at end-March 2018. Bank credit is recovering from the risk aversion of recent years. Bank intermediation in the flow of resources to the commercial sector is regaining lost ground.

The growing size and complexity of the Indian financial system warrants strengthening of corporate governance systems in banks. Incidence of financial frauds in recent times further underscores the significance of sound corporate governance standards in banks. The Government, the Bank Board Bureau and the Reserve Bank are currently engaged in developing an objective framework for performance evaluation and this should redefine the contours of corporate governance in the public sector banks (PSBs) with a focus on transparency, accountability and skills.

On the consumer protection front, improvements in grievance redressal, introduction of innovative products for digital payments, and measures to improve cyber security in banking are all expected to expand

¹ Financial Stability Report, December 2018.

financial inclusion and provide financial services efficiently and cost-effectively. The Reserve Bank is cognisant of the fact that deepening of digital payment systems will facilitate greater access to institutional finance by the informal sector, furthering the cause of financial inclusion. We have very recently constituted a High Level Committee on Deepening of Digital Payments with Shri Nandan Nilekani as Chairman to suggest measures for increasing digitisation of payments and enhance financial inclusion through digitisation.

The regulatory approach of RBI has been and will be aimed at ensuring that the banking system withstands the transitory difficult phase and keeps playing a positive intermediation role in supplementing the financial needs of our growing economy.

Non-banking financial sector

Non-banking financial sector is another segment that plays an important role in the Indian financial system, given its unique position in providing complementarity as well as competition to banks. This sector, with a size of around 15 per cent of combined balance sheet of scheduled commercial banks (SCBs), has been growing robustly in recent years, providing an alternative source of funds to the commercial sector. However, the sector has faced challenging times recently.

The debt default of a systemically important NBFC highlighted the vulnerability and need for strengthening regulatory vigil on the sector in general and on asset liability management (ALM) framework in particular. The Reserve Bank intends to strengthen the ALM framework for NBFCs and harmonise it across different categories of NBFCs with the objective of enabling the NBFCs to play a vital role in our economy. In order to allow additional access to funding for the NBFC sector in the wake of the recent crisis, the Reserve Bank has relaxed the norms for NBFCs to securitise their loan books. In addition, banks have been allowed

to provide partial credit enhancement to bonds issued by the systemically important non-deposit taking non-banking financial companies and Housing Finance Companies. This measure will enhance credit rating of bonds and enable the companies to access funds from the bond market on improved terms. We are keen to foster a well regulated, well-functioning and vibrant NBFC sector.

External Sector

India's external sector has remained resilient in recent period despite terms of trade losses due to the firming up of international crude oil prices and uncertain global demand conditions. The current account deficit since FY 2013-14 (*i.e.*, period after the taper talk) has been below 2 per cent of GDP, though it rose to 2.7 per cent in the first half of the financial year 2018-19 reflecting elevated crude oil prices. Modest current account deficit in recent years was accompanied by robust flows of foreign direct investment (FDI). Strong FDI inflows and build-up of foreign exchange reserve buffers have helped India meet its external financing requirements despite domestic capital market facing sizeable outflows of foreign portfolio investment.

As a few advanced economies are on the path of monetary policy normalisation, there has been global portfolio rebalancing away from EMEs, including India. Another factor that has repercussions for India's external sector is the recent developments around Brexit. There are consequential policy challenges for India which enjoys strong trade and investment relations with UK and the EU. We will carefully weigh the challenges and opportunities that lie ahead and undertake appropriate policy responses.

As regards policy environment relating to the external sector, sectoral norms for Foreign Direct Investment have been eased gradually and now 100 per cent FDI is permitted in all sectors, barring a few prohibited sectors. In recent years, the focus has been

to simplify the FDI policy regime by abolishing the Foreign Investment Promotion Board, rationalising various procedures, introducing e-biz portal as a single window for obtaining clearances from the Central Government and using information technology as enabler to make governance more effective. Two days ago, we have also substantially rationalised and liberalised the regulations governing the External Commercial Borrowings by the Indian entities to improve ease of doing business. The full impact of all these reforms and a stable domestic macroeconomic environment will fructify in coming years. In fact, gross FDI inflows in India were at a record high of US\$ 61 billion in 2017-18.

Further, external debt to GDP ratio has fallen from 22.4 per cent at end-March 2013 to 20.8 per cent at end-September 2018. Other external indicators, *viz.*, import cover and short-term debt to reserves ratio are also better, relative to the taper talk period of mid-2013 when the Indian rupee had come under severe pressure (Table).

Challenges and Outlook

India is widely believed to remain world's fastest-growing major economy in the medium to long term. The growth projections of several global agencies rank India at the top among the G-20 economies. In the medium term, annual growth is projected at around 7.5 per cent by the IMF and the World Bank. It is likely that growth will be more sustainable now,

propelled by investment and private consumption. The latest estimates of national accounts suggest that investment activity has accelerated by 12.2 per cent during 2018-19 as compared to 7.6 per cent in 2017-18. Investment activity is expected to strengthen further as the benefits of recent structural reforms begin to materialise.

Going forward, the foremost priority is to preserve domestic macroeconomic and financial stability, especially in a global environment that is clouded by high uncertainty. Not only downward risks to global growth, trade and investment have risen, the spill over effects on emerging markets due to increase in global interest rates could also be profound. We, therefore, need to brace ourselves for any sudden bout of global financial market turbulence that domestic economy and financial markets may face in the period ahead. In such a milieu, domestic macroeconomic policy framework needs to be supported by sound financial supervision and regulation.

Let me highlight the key policy challenges that the Indian economy confronts at the present juncture.

(a) Inflation

- Although headline inflation has moderated significantly in recent years, as discussed earlier, its major components – inflation in food, fuel, and inflation excluding food and fuel – are exhibiting wide divergences this year. While food inflation has turned negative since October 2018 and fuel inflation has been highly volatile, inflation excluding food and fuel remains sticky at close to 6 per cent. Such wide divergences and large volatilities in inflation across major groups pose challenges for inflation assessment. Balancing the objectives of inflation and growth under a flexible inflation targeting framework would warrant careful analysis of every new data.

Table: External Sector Indicators

(Per cent, unless indicated otherwise)

Indicator	End-Mar. 2013	End-Mar. 2017	End-Mar. 2018	End-Sep. 2018
Current account deficit/GDP ratio*	4.8	0.6	1.9	2.7**
External Debt to GDP ratio	22.4	20.0	20.5	20.8
Ratio of Reserves to Total Debt	71.3	78.5	80.2	78.5
Ratio of Short-term Debt to Reserves	33.1	23.8	24.1	26.1
Reserves Cover of Imports (in number of months)	7.0	11.3	10.9	9.5

*Average during the Financial Year; **: Average for H1 of 2018-19

(b) Financial Sector

- There is need for continued vigil on the asset quality of banks as well as resolution of stressed assets with a focus on implementation of the new resolution framework. It will remain critical to ensure that further slippages are contained.
- While technology provides opportunities for growth and innovation in the banking sphere, it also involves newer challenges and risks. Cyber risk is a major challenge. Formulation of comprehensive cyber risk and resilience policies and diligent implementation is critical.
- Another area where policy action is required is corporate governance in banks with a focus on transparency and accountability.

(c) External sector

- While positive policy settings and continued macroeconomic stability helped contain India's external vulnerabilities, a close monitoring of external sector is required, given the sharp movements in global crude oil prices and global financial market volatility. These are the two global shocks

that have implications for our CAD and financial flows.

- Another challenge that Indian companies may face pertains to developments around Brexit. Indian companies and policy makers need to suitably weigh all opportunities and challenges, and accordingly re-strategise to respond appropriately.

Let me conclude by saying that at the RBI, we are committed to play our role as the monetary authority for maintaining mandated price stability objective while keeping in mind the objective of growth; and as the regulator and supervisor of the banking sector and payment systems. We will take necessary steps to maintain financial stability and to facilitate enabling conditions for sustainable and robust growth.

In October 2018, when I had absolutely no clue that I would be landing up in the Reserve Bank in December 2018, I had tweeted, "Central Banks across countries have a very critical role at the current juncture. The challenge is to try and read the situation and take decisive steps in pursuit of their multiple responsibilities." As Governor of the Reserve Bank of India, it would be my endeavour to act according to these principles.

Thank you.

*Some Reflections on Micro Credit and How a Public Credit Registry Can Strengthen It**

Viral V. Acharya

Sometimes when I sit down to write down a new set of remarks, the same old thoughts cross my mind, a bit like one's favorite songs that are so deeply entrenched in the psyche that at the end of a long day when one is reflecting on the subject, they start playing all over again, without any reason and without any conscious decision to rewind to them. In my case, a few striking images flash across my eyes. I have tried in what follows to describe these images and what their collage means for me. They also convey how I try to think about economics and finance more generally – as the media to understand daily situations of households around us and to derive insights on how these situations could be made better, most often in some small ways and occasionally with a big bang. After all, the origin of the word 'economics' is in the ancient Greek term 'oikonomía', meaning 'management of a household'. Based on careful research, many [notably Professors Abhijit Banerjee and Esther Duflo of Massachusetts Institute of Technology (MIT)] contend, that it is the poor who often practice the best economics as the costs they face from mismanaging their households can be rather high.

* Dr. Viral V. Acharya, Deputy Governor, Reserve Bank of India at IIT Bombay Tech Fest., Mumbai on December 15, 2018.

I dedicate these remarks to my favourite school teacher, Shailesh Shah Sir, of Fellowship School in Mumbai, who breathed his last on the morning of January 5, 2019; he taught me Indian languages, social sciences, and the art of compositional writing; he truly lit all his students with ambition and set us on fire with imagination.

Parts of these remarks were first prepared in 2017 for a book launch, followed by delivery at several student gatherings and a few convocations. This final version represents the accumulation of my observations at these talks, which culminated at Indian Institute of Technology, Bombay (IITB) Tech Fest on December 15, 2018. I am grateful to Anujit Mitra, Jose Kattoor and Vineet Srivastava for their valuable inputs.

So let me describe these images that flash across my eyes one by one.

Image One. Many evenings or nights when I stroll with my brother on our terrace in Mumbai, we are greeted on one side by the Pawan Hans Helipad, the sprawling slums of Nehru Nagar, the deafening din from the Swami Vivekananda Road (S V Road), and the serene breeze and waves of the Juhu Beach. I grew up on a crowded street in Girgaum, in south Mumbai. Observing from our first floor window how people went about their lives on the streets was a favorite pastime in our childhood days. Conditioned by that, while I'm on the terrace my eyes invariably end up focusing on the slums of Nehru Nagar. Far into the narrow alleys, bustling and jostling in high density are the slum-dwellers, appearing as diminutive figurines, with much activity and life all around. A man is fixing dish antenna on top of his blue roof; an old couple are perched outside a modest hut, savoring what must be some scrumptious desi chat; a woman slamming blow after blow on the clothes she has carefully aligned to wash; and almost always a group of children gleefully running around, mostly playing cricket and seasonally flying kites.

Some of the evenings, a plane takes off from the domestic or international airport in the east and heads westward on its way; and a chopper swings in and lands at Pawan Hans with much acoustic fanfare. As these sophisticated means of modern transportation make their noisy presence felt, you can see the children bunch together, one of them pointing at the sky, others galvanising around him to marvel at the spectacle. An instant later of course, the children are nonchalantly back to gully cricket or running after a fallen kite.

One cannot but hope that these children – in that brief moment of marvel – have been imbued with ambition; that their eyes are now set on the sky; that they will have the initiative and will get all opportunity to do what it takes to bridge the gap from their narrow

alley to Pawan Hans Helipad next door and to the flight of the giant mechanical birds that fly above.

Will these children take off?

How will their journey be?

Where will they land?

I ponder for a few seconds but then switch attention to the incessant honking of the S V Road vehicles.

Image Two. Until about ten years back, I used to spend a decent chunk of my time as a doctoral student, and later as a professor, working with an Indian NGO, focused on pre-primary and primary education. This activity had become my umbilical cord to India. On my holiday trips back home from New York or London, I would take out a few days to visit some of their baalwadis (daycares) in urban areas, and if travel plans permitted, also the delivery centers for accelerated reading programs in villages. These visits made my interactions with stakeholders more credible, engaging and vivid. But they were also personally rewarding.

There are a few sights, if any, more uplifting than of a child figuring out the alphabet for the first time, reading the first book, flipping pages over and over again in boundless excitement and frenzy, or counting and adding up his or her collection of stones, subitizing them soon after – as in figuring out the exact count without counting, by merely glancing at the collection of treasures! It might be the innocent spark on the child's face, or that "Aha!" or Eureka moment as the child discovers how to read, how to count, how to learn – whatever it is, it works like magic in bowling over the beholder.

One returned from these visits with a shot in the arm to do more; one felt like nurturing the umbilical cord to India further; one realised that joyful learning is an essential groundwork for the journeys, the flights and the ascent that these children will undertake in due course.

Image Three: I am usually en route in car to the office at RBI or Bombay Gymkhana during early mornings. I need to be on S V Road before turning for the Milan subway or now the flyover, which connects to the Western Express Highway. Just before the turn, before one reaches the Hanuman temple and Santacruz bus depot, on the left sidewalk, there is – always – a mother toiling away no matter what time of the day. It is clear she is homeless; she has at least two children, both roughly of the same age. Depending on the time of the morning, she has her work cut out. Some days she is waking up the kids with some sternness on her face; on others she is bathing them with water from an ingeniously figured out water-supply; at times she is getting them dressed in school uniforms; and then she is often running with the kids, who have their backpacks on, towards the neighborhood school. From a distance, she seems to be driven with a single-minded focus of ensuring that her kids get their chance to fly and soar. Her role as a mother certainly seems a mighty one, as Yudhisthir answered to the Yaksha Prashna in Mahabharata, when asked what is heavier than the Earth.

How does the mother make it all work?

Can she afford the books and the supplies?

Is she home when the kids come back?

What job does she do during the day?

Could she be a micro entrepreneur?

The mind is so fickle, however; as soon as the car turns left at the traffic signal and moves onto the flyover, it leaves these questions in background and embarks on its daily descent.

Image Four: Early on a Saturday morning, already quite bright and sunny, a banker carrying his thela (a shoulder bag) steps into the passageway next to a series of kachcha-pukka homes. The surrounding is semi-urban. By the time you have blinked an eye, an army of about twenty women, mostly in saris, of ages spanning from 20 to 50, and a few even 50-plus, have

gathered around him. They have all borrowed certain sums of money from the banker. They make their repayments one by one; each transaction is logged in a physical register; it is also swiped digitally onto their bank cards with a point-of-sale or POS-style machine. Some of the women are borrowing again; some taking out monies from their accounts. The registrar of this group of women, appointed for the month, signs off the log after checking the account entries carefully.

Banking is now done. Growth is about to begin.

I am curious to hear more about what these women are doing with the money. All of them, without exception, are entrepreneurs. One has started a sari trading business, buying them from the city and selling them in the neighborhood with a margin; she has built her enterprise over several years and is the recipient of the biggest loan (one lakh rupees) with the longest maturity (one year) in the group; her friend has acquired a sewing machine with the loan and is stitching blouses to go with the saris; another has opened a beauty parlour; yet another has started a soft-drinks stall in her husband's stationery store as there is extra, unused space therein, well utilised especially during the afternoons when customer traffic is thin for stationery but the heat unbearable. There seemed absolutely no shortage of services to be provided in their immediate sphere of influence.

I was especially eager to know what prompted these women to become entrepreneurs in the first place. The answer I got was not entirely expected: in nine out of ten cases, women had become entrepreneurs to send their kids to a 'top, English medium school', or to have extra monies for private coaching so the child could excel in the state-level exams, or to get the kid to learn some computing and programming as that is where future jobs lie!

Collage of the Images

As these images flashed across my eyes, I realised that rather than being entirely compartmentalised,

these images were all linked, that there was a connection between finance – my day job, and these images that my mind had been subconsciously gathering in mornings, evenings and during holidays. An important link was established from financial inclusion to education of children – from micro finance for women entrepreneurs to them sending children to schools, the children in turn having their "Aha! I did it!!" moments in reading and counting, and to their taking off for the limitless sky and beyond.

Access to finance is the lifeblood of an economy. Its judicious allocation is known to unlock opportunity and growth. It can, in fact, aid even the most fundamental reform for growth by supporting, directly or indirectly, the education of our children, the skilling of our youth, and lighting up of their minds with fire and imagination so they can propel themselves, their families, and the rest of us, forward. Education is perceived by many families as ticket to the ride that will catapult them out of economic stress. Leaving aside minor exceptions, as a rule education is indeed a ticket to such ride.

A mother taking up an enterprise to shape her child's future has all the willingness to pay her debt. As the child grows, her needs too will rise. She will need a clean credit record to be able to borrow again so as to finance her now bigger liquidity requirements. This way, there is full incentive compatibility between her and the finance provider. Besides her willingness to pay, the deft handling of her enterprise, induced by the necessity to keep buying the education ticket over time, will strengthen her ability to pay. At any rate, the financier can start with a small loan, use a short tenor to assess repayment ability, and open for her a bank account that can help track other payment flows and improve credit assessment. The reputation of the woman entrepreneur as a borrower can build swiftly as she keeps repaying and enable her to secure more credit over longer tenors.

Borrowing as part of a group reinforces the strong incentives to repay; default by a borrower when all others are repaying can lead to stigma. Conversely, encouraging of defaults by some can lead to vitiation of the otherwise rich credit culture.

The financier, in turn, can make a healthy spread over own cost of borrowing funds, even accounting for some losses from early defaults, upon whose realisation the entrepreneur can be rationed from future loans or offered only stricter loan terms and tenor.

This way, the availability of micro finance for micro entrepreneurs thrives and benefits the society all around.¹

So let me turn from these images to my day job at the RBI and what efforts we are undertaking to help ensure that micro credit becomes available to more borrowers; micro finance provided a robust foundation; micro enterprise given an additional fillip; and indirectly, in the process, our children offered greater opportunity for schooling and skilling.

Public Credit Registry (PCR) – An Important Step to Democratise and Formalise Credit²

In an emerging economy like India, it is always felt that the smaller entrepreneurs, mostly operating under the informal economy, do not get enough credit as they are informationally opaque to their lenders who prefer to provide loans to more transparent larger businesses. Data as of March 2018 of scheduled commercial banks (SCBs) from the Reserve Bank's Basic Statistical Returns (BSR) shows that close to half of the outstanding credit is for ticket size above a hundred million rupees and thirty per cent is above

one billion rupees. Credit penetration is particularly low for Micro, Small and Medium Enterprises (MSME) sector where the ticket size is generally believed to be between one to ten million rupees. Even though more than 95 per cent of accounts with SCBs are having sanctioned credit limit less than one million each, the amount outstanding on these accounts is only 23 per cent of the total.

Is there a big opportunity for us to rethink and reshape our credit eco-system for the future so that micro credit can thrive to unlock economic value, as I laid out in my collage of images?

At the Reserve Bank, we firmly believe so. We have initiated work on a Public Credit Registry (PCR). We are excited about how we can solve in a fundamental way the information problem affecting access to credit for micro entrepreneurs.

Let me elaborate on the information problem and how a PCR can help get around it.

Information asymmetry with the borrower is the major difficulty faced by any lender while granting a loan. Put simply, the borrower has more information about her own economic condition and risks than the lender. Credit information systems aim to reduce this asymmetry by enabling the lender to know the credit history with past lenders and the current indebtedness of the borrower. They improve efficiency of credit allocation, as the lender can use credit information systems to properly differentiate and appropriately price (interest rate) as well as alter terms (maturity, collateral, covenants, *etc.*) of the loan.

What would occur without the credit information systems?

As borrowers build history, lenders would like to protect the information of their profitable customers and may not be ready to share it directly with other lenders. This way, borrowers can get locked to their initial lenders, become vulnerable to gouging in loan terms, and worse, be unable to convey their credit

¹ At some of the student gatherings and convocations, I ended the remarks here by reciting a poem I received from Yuvaraj Galada on December 22, 2017, called 'The Invitation', written in 1999 by Oriah Mountain Dreamer, that has inspired me immensely.

² For a fuller treatment of this theme, please see my speech "Public Credit Registry (PCR) and Goods and Services Tax Network (GSTN): Giant Strides to Democratise and Formalise Credit in India", delivered in August 2018.

quality to new lenders if existing lenders experience problems of their own (such as due to capital erosion from recognition of losses, as was witnessed in India over the past decade in the form of high retail and MSME cost of borrowing from banks due to spillover from their large corporate borrower loans turning non-performing).

This is where third-party credit information companies come in to play, those that will pool the data from lenders and share the information with other lenders as per the laid down policy. Globally, Private Credit Bureaus (PCBs) and Public Credit Registries (PCRs) both operate in this space. PCBs can be legislatively authorised to receive credit data; however, being for-profit enterprises, they may focus primarily on those data segments around which it is most profitable to build a business model (*e.g.*, provision of credit scores based on data gathered). Indeed, it is found internationally that a PCR, being a non-profit enterprise, is able to ensure much better data coverage than PCBs. In turn, the PCBs when given access to comprehensive data from a PCR can provide better and greater value addition through data analytics and innovations, complementing the PCR.

One can easily surmise that to be useful, it is important for credit information systems to gather complete credit information, possibly even asset-side and cash-flow details about the borrower, which is sometimes referred to as the '360-degree view'. Also, the latest information is more important, giving rise to the demand for near-real-time data. That is how the Report of the High-Level Task Force (HTF) on Public Credit Registry for India, chaired by Shri Y.M. Deosthalee, has envisaged the Public Credit Registry (PCR) to be. The HTF examined the data gaps in the current credit information system in India and recommended that a PCR be set up, backed by an appropriate Act, to improve the information efficiency of the credit market and strengthen the credit culture in India.

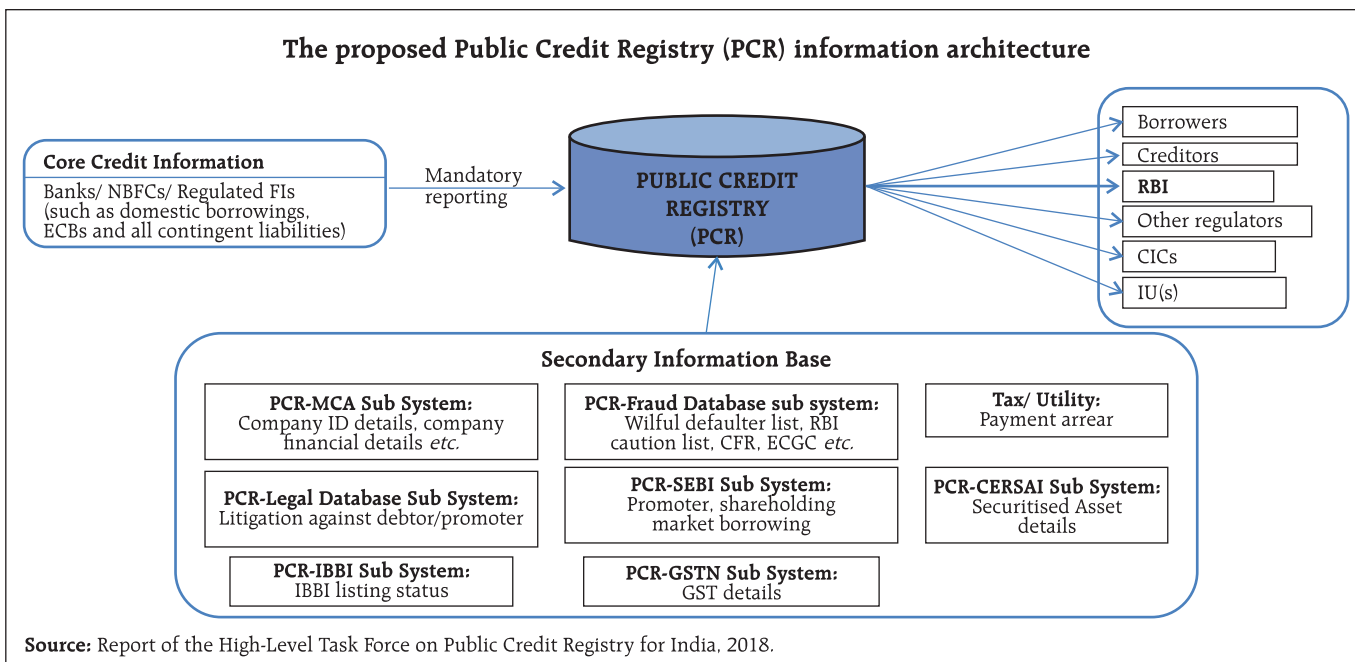
How will the Public Credit Registry (PCR) for India work?

The PCR has been envisaged as a database of core credit information – an infrastructure of sorts on which users of credit data can build further analytics. It will strive to cover all regulated entities (*i.e.*, financiers) in phases and in this way get a 360-degree view of borrowers. It will facilitate linkages with related ancillary information systems outside the banking system including corporate filings, tax systems (including the Goods and Services Network or GSTN), and utility payments. The PCR will have to be backed and governed by a comprehensive Public Credit Registry Act to be brought in consultation with the Government. It will have to follow the latest privacy guidelines based on a laid down consent framework.

The proposed Public Credit Registry (PCR) information architecture

Let me now spend some time on how the PCR will work and help strengthen the credit culture.

- (1) First, PCR will make borrower information more complete with increasing coverage of lending entities. In particular, it will eventually reach out even to the smallest primary agricultural credit societies. It will also cover entities which may not be regulated by the RBI. This will have to be done in phases and it may take up to three to five years to accomplish, possibly sooner.
- (2) Secondly, PCR will vastly simplify and reduce the reporting burdens on the lenders. Other entities including regulators and supervisors will be able to access it for core credit information and supplement it with only the incremental part as per their requirement. Many of the statistical returns presently collected by the RBI may also accordingly be substantially rationalised and pruned, freeing up resources in the financial eco-system for analysis instead of repetitious efforts in data collection, follow-up and cleaning.



The same would be the case with other entities that presently collect such data from banks.

- (3) Thirdly, PCR will have credit data available digitally at a higher frequency than at present. Therefore, it will make credit decision-making faster and efficient.
- (4) Fourthly, as the chart here shows, with linkages to other information systems like corporate data from the Ministry of Corporate Affairs (MCA21) and tax filing or invoicing data (GSTN), it will help the users to access other data on borrowers' assets and evolving cash flows, which are essential for taking efficient credit decisions.
- (5) Finally, it will be possible within the PCR architecture to address privacy concerns and control access to data with a proper consent-based framework for appropriate usage, better than what is currently feasible. These concerns will have to balance the objective that the PCR is just a step in helping the democratisation of credit, whereby credit data is not only used for regulatory / supervisory purposes, but also leveraged to expand the credit market efficiently. In particular,

- a. While an individual will have access to her data stored in PCR, she should be empowered to share it with other lenders for availing credit.
- b. Similarly, lenders need to be given access to their own customers' complete data for monitoring such accounts.
- c. Regulators / supervisors will require full access to the data for their work so that they can address systemic risk concerns with the advantage of a holistic view.

To appropriately put in place the required access and control policies, the High-Level Task Force recommended that a separate Public Credit Registry Act (PCR Act) be brought in. The PCR Act will need to ensure adequate safeguards on data while at the same time address extant restrictions on sharing of credit data that prevent efficient allocation and regulatory supervision of credit. The PCR Act would also have to be comprehensive so as to bring in data from the section of lenders who do not directly fall under the RBI regulations. To this end, the RBI plans to engage with the Government and other regulators in the coming months. In the meantime, the RBI has set

up an Implementation Task Force that is putting the systems infrastructure in place to kick-start the PCR with data from regulated entities that can be covered either under, or with minor tweaking, of the extant legislative framework.

Public Credit Registry can help "sachetise" Micro Credit

To build credit models for individuals and small credits, the financier and its modelers are ideally required to know not just outstanding credit for the micro borrowers, but possibly also their entire repayment history and their cash flow fluctuations, so as to tailor the terms of credit suitably. In the absence of such information, many borrowers may simply get 'rationed' out of the market due to severe information asymmetry faced by financiers.

With a PCR tracking every credit transaction from its origination to closure (initial terms, repayment, default, restructuring, etc.), and being linked to various digital systems in place (as shown in the chart above), it would be possible to identify and get to know well businesses, even micro enterprises and micro entrepreneurs. In other words, the PCR could supply the missing link, which is the complete '360-degree view'- information of the borrower or prospective borrower. This will allow lenders to assess the borrower's credit risk keeping in view the viability of cash flows, ask the relevant questions (e.g., are there other underlying issues that are affecting ability to pay the loan in spite of healthy cash flows from the micro enterprise?), and price the loan terms without compromising on due diligence.

Based on these, nearly-automated loan sanction and disbursement mechanisms can be devised, as are also being attempted by fin-tech companies.

In fact, credit products could get transformed with the possibility of sanctioning small ticket loans with short maturity and zero or low collateral requirement. Borrowers and entrepreneurs can build their reputation and credit quality by repaying well

such initial information-building loans. Gradually, they can borrow more and at longer maturities, potentially making capital investments to enhance productivity. Once their size increases and they register with the GSTN, tax invoices can act as the cash-flow verification with PCR. Robust credit history built over a period can work as sturdy collateral, building the trust of the lenders. Such 'sachetisation' of credit can rapidly expand access to credit for those micro and small enterprises, hitherto not included in the formal credit market.

As I stressed while describing the ability to pay and willingness to pay of micro entrepreneurs, it would remain important not to undermine their inherently strong credit culture by making it easier for borrowers not to repay. That would compromise the essence of how micro entrepreneurs build a reputable credit history to differentiate from others and over time grow in size and economic value creation.

Let me conclude.

There is a deep connect between the images I started with, their collage in my mind, and my day job at the Reserve Bank. Ultimately, while central banks are not always visible to the common person, their policies have the potential to touch her in a meaningful way. As its etymology suggests, this is what economics must help achieve in the end – better management of the household. It is perhaps too ambitious a vision of our future to believe that a fundamental change in the financial data infrastructure such as a PCR can help improve access to micro credit as well as improve schooling and skilling outcomes for our children and youth, but so be it. My son's poster at his school last year introduced me to a gem from Michaelangelo, which underscores why we must keep painting such a vision and persist with efforts to convert it into reality. It says,

"The greatest danger for most of us lies not in setting our aim too high and falling short; but in setting our aim too low, and achieving our mark."

*National Monetary Authorities and the Global Financial Cycle**

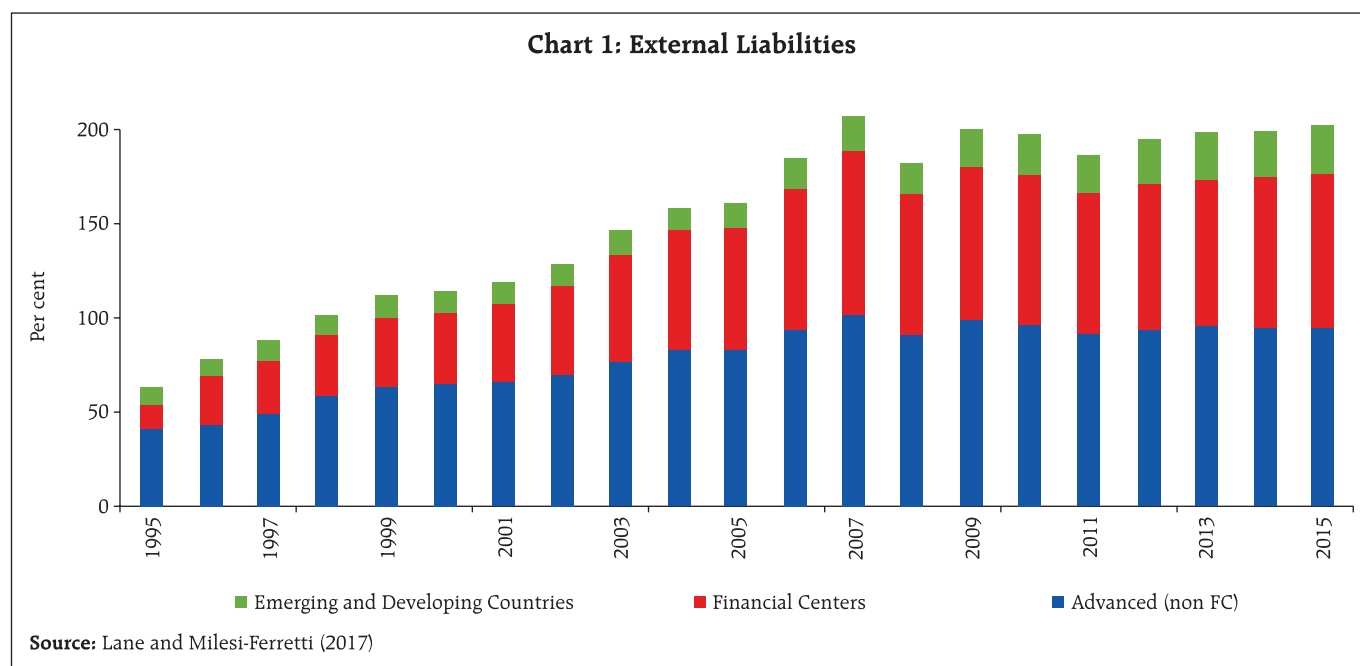
Hélène Rey

It is a great honour to be invited to deliver the sixteenth L. K. Jha Memorial Lecture at the Reserve Bank of India. Lakshmi Kant Jha was a leader in the Indian Civil Service, a distinguished diplomat and a central bank governor among many other achievements. He was also the Deputy Chairman of the Brandt Commission, whose task was to make recommendations on ways of improving North-South negotiations for global development. We would certainly need more initiatives of this sort at this point in time and all of L.K. Jha's talent to help our planet. There are many global issues in front of us, which are more pressing by the day: air and water pollution, climate change, international trade policy, international monetary and financial spillovers are some of the most prominent ones.

In this lecture, I will focus on issues related to this last topic. I will discuss the changing landscape in international financial markets and its relation with the ability of national monetary authorities to set independent monetary and financial conditions for their countries. I will discuss first the characteristics of the current financial globalisation and their implications. I will then review some evidence on the global financial cycle and turn to some discussion of policy options, particularly for financial stability.

2. Financial globalisation in the recent era

Financial globalisation has increased massively since the 1990s. The great financial crisis of 2008 has stopped that progression. A simple and widely used measure of *de facto* financial integration is the sum of all cross-border financial liabilities (or of cross-border financial assets), scaled by annual world GDP. As reported in Lane and Milesi-Ferretti (2017), financial integration has risen spectacularly from the 1990s to 2007: cross-border liabilities increased from about 70 per cent of world GDP in 1995 to about 210 per cent of world GDP in 2007 (see Chart 1). The lion's share of these liabilities (or assets) belong to advanced



* The Sixteenth L.K. Jha Memorial Lecture delivered by Professor Hélène Rey from London Business School at RBI Mumbai, December 14, 2018.

economies or financial centers. In contrast, emerging and developing economies which constituted about 30 per cent of world GDP in 2007 accounted for only 10 per cent of cross-border financial assets. Their economic mass grew remarkably so that as of 2015, the world GDP share of emerging and developing economies was around 40 per cent. Their share of external assets had, however, expanded only to 13 per cent.

The menu of assets exchanged across borders has become broader with derivatives and asset-backed mortgage securities becoming internationally traded. The share of asset managers has also grown in recent years while global bank flows have decreased. Given these large amounts of cross-border asset positions, the scope for international capital flows to provide welfare gains or to do harm, has therefore, widened considerably since the 1990s.

Hidden sides of financial globalisation

A number of offshore financial centers are managing an increasing amount of world wealth as information technology and financial innovation have made it simpler to move funds overseas. The data show a massive over-representation of financial centers (compared to economic size) in cross-border asset holdings. As of 2007, financial centres¹ accounted for around 10 per cent of world GDP but over 43 per cent of global financial assets. In 2015, their share in world GDP was down at 8 per cent but their global share of external assets remained at around 43 per cent. Many of the services provided by offshore centres are legal but some facilitate tax "optimisation". There is also ground to believe that they ease tax evasion and money laundering. Recent work summarised in Zucman (2018) suggests that wealth held in offshore centres is very concentrated. For example, in Scandinavia, the top 0.01 per cent of the wealth distribution appears

¹ From Lane and Milesi-Ferretti (2017): Financial centers: Bahrain, Belgium, Cyprus, Hong Kong S.A.R. of China, Ireland, Luxembourg, Macao S.A.R. of China, Malta, Netherlands, Singapore, Switzerland, United Kingdom, Andorra, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Curaçao, Gibraltar, Guernsey, Isle of Man, Jersey, Mauritius, Netherlands Antilles, Panama, San Marino, Turks and Caicos.

to own about 50 per cent of the wealth hidden in offshore financial centres. The emergence of more decentralised means of payments (cryptocurrencies, digital money) may lead to an amplification of this trend, if regulation is not carefully crafted by the central banking community - keeping abreast with the latest technological innovations and monitor these new types of capital flows.

Benefits of financial globalisation

Some of the most widely cited benefits of financial globalisation, enshrined in the psyche of economists and policy makers alike are - risk diversification and better allocation of capital (without restrictions on mobility, capital should flow to places where the marginal product of capital is the highest). Ironically, may be, since they have been very influential in the policy world, those benefits had not until recently been evaluated in a quantitative version of the stochastic neoclassical growth model, which provides the theoretical foundations for them. In a recent paper, I show with my co-authors (see Coeurdacier *et al.*, (2018)) that welfare gains of financial integration due to better risk sharing and better capital allocation are small even for capital scarce and risky emerging economies.

The intuition for these results can be summarised as follows. Relatively safe developed countries have small gains from reducing consumption volatility. They also have small gains due to a more efficient world allocation of capital after financial integration. Emerging countries face higher levels of uncertainty and could have potentially larger gains when they share risk. However, financial integration, by affecting the distribution of risk across countries, also leads to a change in the value of the steady state capital stocks. Unless riskier countries are also capital scarce, they will see capital flowing out as their precautionary savings are reallocated towards safer (developed) countries. When riskier countries are also significantly capital scarce (as emerging countries in the data), the standard efficiency gains driven by faster convergence

are strongly dampened by the reallocation of precautionary savings. Hence the welfare gains are small.

This does not necessarily imply that the gains from financial integration are small overall, but it does challenge economists and policy makers to go beyond the classic justifications to open up the financial account which are risk diversification and optimal international allocation of capital. There may be mechanisms through which financial flows improve Total Factor Productivity, for example, in the recipient country. It would certainly be valuable to learn more about those mechanisms and how general they are, in particular, whether they pertain to all classes of capital flows.

2. Global Financial Cycles

In a paper written for the 2013 Jackson Hole symposium, I defined the Global Financial Cycle as the co-movement of gross capital flows, credit growth, risky asset prices and leverage across countries.

Capital Flows

Chart 2a shows the matrix of correlations of capital inflows (liabilities of countries) by asset classes

disaggregated in the traditional categories of the balance of payment (FDI, portfolio (debt and equity) and credit²) into different geographical regions (North America, Europe, Latin America, Asia, Emerging Asia, Africa) during the period 1990Q1-2017Q4. The heatmap colours correspond to the signs of the correlations of capital flows across regions and types of flows (green when the correlation is positive and red otherwise). As evidenced by the very clear preponderance of the green colour in the heatmap, most types of capital inflows are positively correlated with one another and across regions. There is a strong commonality in liability flows across the world. The same is true for the matrix of correlations of capital outflows (assets) in Chart 2b. On the other hand there are no systematic patterns in the heatmap of the correlations of net flows. What is behind those co-movements in gross flows and are they associated with global credit growth and asset price fluctuations?

Global factors

It has long been noted that global factors are a major determinant of international capital flows. As observed by Calvo, *et al.*, (1996), "global factors affecting foreign investment tend to have an important

Chart 2a: Correlation Across Liability Flows (1990q1 - 2017q4)

Liabilities	Pfolio N.Am	Pfolio Asia	Pfolio EU	Pfolio Africa	Pfolio LatAm	Pfolio Em.As	FDI N.Am	FDI Asia	FDI EU	FDI Africa	FDI LatAm	FDI Em.As	Cred N.Am	Cred Asia	Cred EU	Cred Africa	Cred LatAm	Cred Em.As	
Pfolio N. Am	1.0																		
Pfolio Asia	0.6	1.0																	
Pfolio EU	0.7	0.5	1.0																
Pfolio Africa	0.6	0.6	0.4	1.0															
Pfolio LatAm	0.5	0.5	0.3	0.6	1.0														
Pfolio Em. As	0.7	0.7	0.5	0.7	0.7	1.0													
FDI N. Am	0.5	0.4	0.5	0.5	0.4	0.5	1.0												
FDI Asia	0.6	0.5	0.4	0.6	0.6	0.7	0.7	1.0											
FDI EU	0.6	0.4	0.5	0.3	0.4	0.3	0.6	0.7	1.0										
FDI Africa	0.4	0.5	0.2	0.5	0.6	0.6	0.6	0.9	0.6	1.0									
FDI LatAm	0.5	0.5	0.4	0.5	0.6	0.6	0.7	0.9	0.7	0.8	1.0								
FDI Em. As	0.5	0.5	0.4	0.5	0.6	0.6	0.6	1.0	0.7	0.9	0.9	1.0							
Credit N. Am	0.3	0.2	0.4	0.1	0.1	0.2	0.2	0.0	0.2	0.0	0.1	0.0	1.0						
Credit Asia	0.5	0.4	0.3	0.4	0.5	0.5	0.3	0.5	0.4	0.4	0.4	0.5	0.4	1.0					
Credit EU	0.4	0.2	0.4	0.1	0.1	0.2	0.2	0.0	0.3	0.0	0.1	0.0	0.6	0.4	1.0				
Credit Africa	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.4	0.6	0.7	0.7	0.0	0.4	0.0	1.0			
Credit LatAm	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.1	0.4	0.1	0.2	1.0		
Credit Em. As	0.4	0.5	0.3	0.4	0.5	0.5	0.1	0.4	0.2	0.4	0.3	0.4	0.2	0.7	0.2	0.2	0.3	1.0	

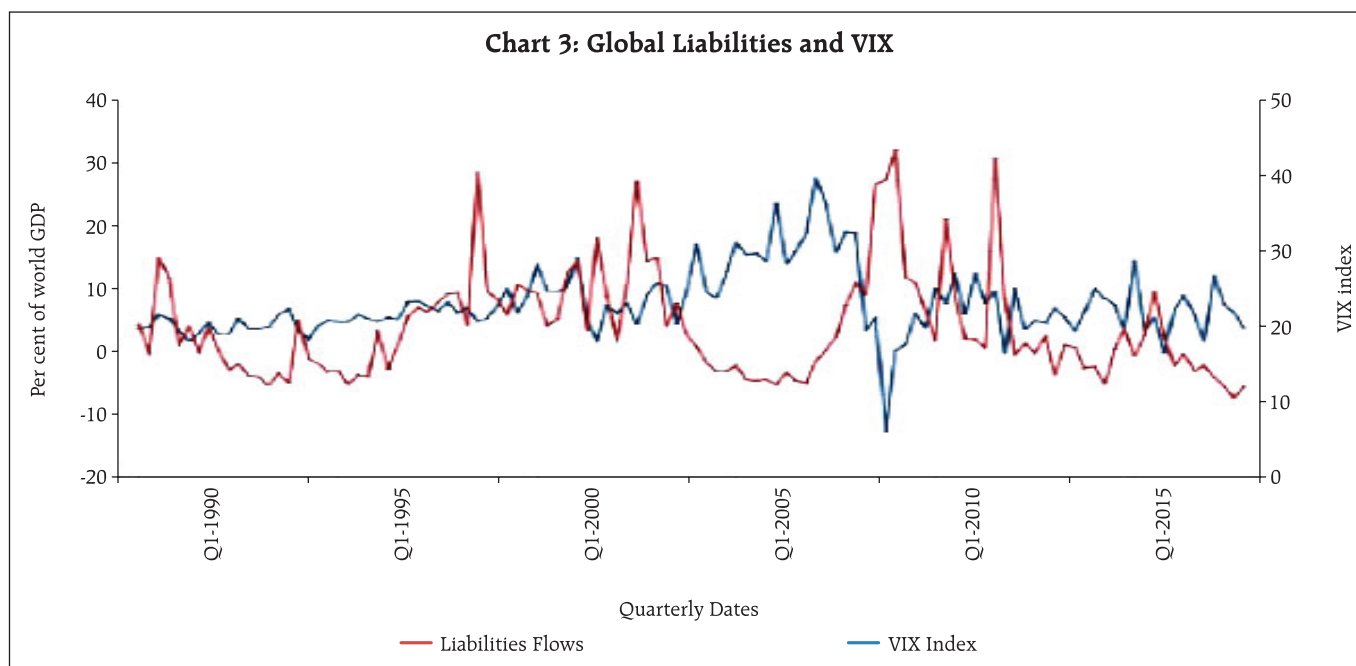
² Technically I use "other investment" which contains bank loans and trade credit. The data are quarterly 1990Q1-2017Q4 and come from the IMF BOPS.

Figure 2b: Correlation Across Asset Flows (1990q1 - 2017q4)

Assets	Pfolio N.Am	Pfolio Asia	Pfolio EU	Pfolio Africa	Pfolio LatAm	Pfolio Em.As	FDI N.Am	FDI Asia	FDI EU	FDI Africa	FDI LatAm	FDI Em.As	Cred N.Am	Cred Asia	Cred EU	Cred Africa	Cred LatAm	Cred Em.As	
Pfolio N. Am	1.0																		
Pfolio Asia	0.4	1.0																	
Pfolio EU	0.7	0.4	1.0																
Pfolio Africa	0.2	0.4	0.2	1.0															
Pfolio LatAm	0.5	0.3	0.6	0.3	1.0														
Pfolio Em. As	0.5	0.6	0.4	0.3	0.3	1.0													
FDI N. Am	0.5	0.5	0.5	0.4	0.4	0.3	1.0												
FDI Asia	0.4	0.7	0.3	0.5	0.3	0.6	0.8	1.0											
FDI EU	0.3	0.5	0.4	0.3	0.2	0.3	0.7	0.7	1.0										
FDI Africa	0.3	0.3	0.0	0.3	0.1	0.3	0.5	0.6	0.4	1.0									
FDI LatAm	0.4	0.5	0.3	0.4	0.3	0.4	0.7	0.8	0.7	0.6	1.0								
FDI Em. As	0.3	0.7	0.2	0.4	0.3	0.5	0.7	0.9	0.6	0.6	0.7	1.0							
Credit N. Am	0.2	0.1	0.4	0.0	0.0	0.0	0.1	-0.1	0.1	-0.1	-0.1	-0.1	1.0						
Credit Asia	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.6	0.5	0.5	0.6	0.5	0.1	1.0					
Credit EU	0.3	0.2	0.5	0.0	0.2	0.1	0.4	0.1	0.3	0.2	0.2	0.0	0.6	0.4	1.0				
Credit Africa	0.4	0.3	0.4	0.2	0.4	0.4	0.3	0.4	0.2	0.2	0.3	0.5	0.0	0.3	0.1	1.0			
Credit LatAm	0.3	0.4	0.1	0.4	0.1	0.2	0.6	0.6	0.5	0.5	0.5	0.5	0.0	0.5	0.2	0.2	1.0		
Credit Em. As	0.3	0.5	0.2	0.2	0.3	0.4	0.6	0.8	0.5	0.6	0.7	0.7	-0.2	0.7	0.1	0.4	0.4	1.0	

cyclical component, which has given rise to repeated booms and busts in capital inflows". Economists have identified cycles in the real rate of interest and in the growth rate of advanced economies as important "push" factors for capital flows. Several studies have found that movements in the VIX³ are strongly associated with capital flows. The VIX is widely seen

as a "fear gauge", a market proxy for risk aversion and uncertainty. Carry trade flows, for example, tend to increase when the VIX is low and to collapse when the VIX spikes. Chart 3 plots aggregate gross inflows as a proportion of the world GDP for the period 1990 Q1-2017 Q4 together with the VIX (inverted scale). Particularly striking is the prolonged lowering of the



³ The VIX is the Chicago Board Options Exchange Market Volatility Index. It is a measure of the implied volatility of S&P 500 index options. Forbes and Warnock (2012) and Bruno and Shin (2015a) emphasise the surge in capital flows associated with the lowering of the VIX.

VIX during the period 2002-2007, during which capital inflows surged. Credit flows are the more volatile and procyclical component of all flows, with a particularly dramatic surge in the run up to the crisis and an equally dramatic collapse during the crisis. Credit growth and leverage are negatively linked to the VIX.

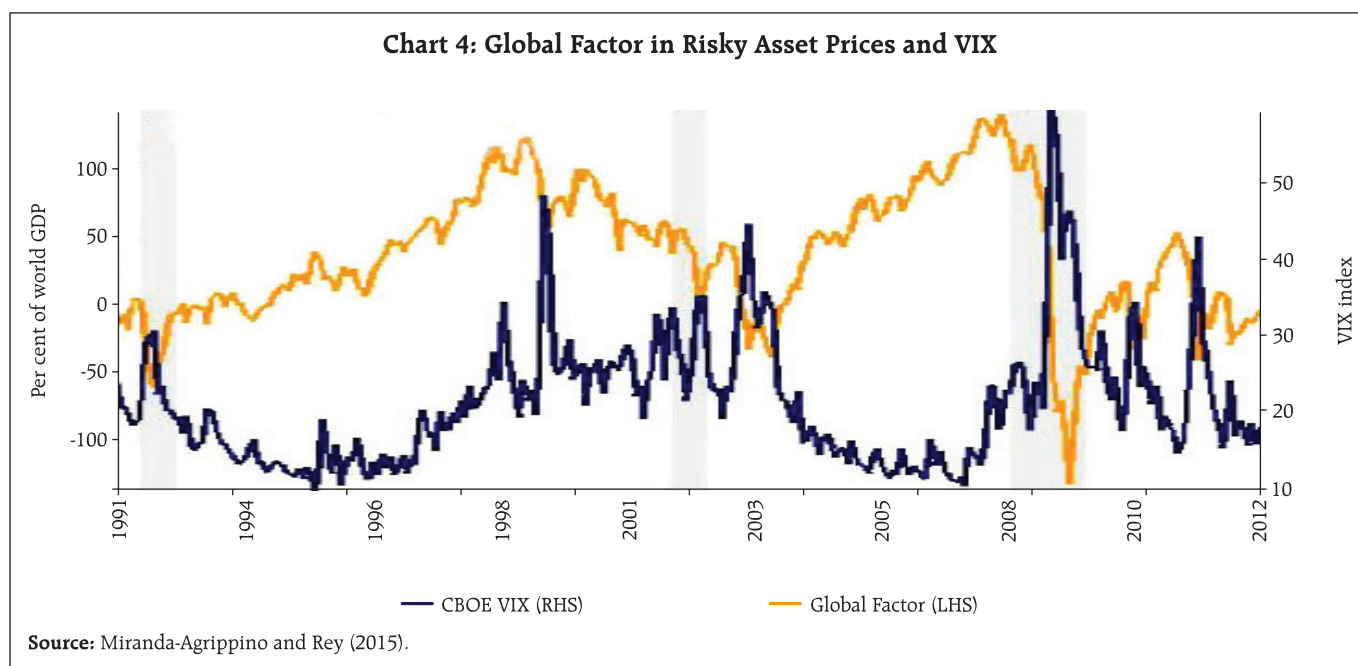
Asset prices

Similarly, risky asset prices around the world co-move negatively with the VIX. For a large part, they do not reflect sector-specific, country-specific or company-specific factors but rather one global factor. As shown by Miranda-Agrippino and Rey (2015), using a large cross section of 858 risky asset prices (*i.e.* prices of stocks, corporate bond prices) distributed over the five continents, an important part of the variance of risky returns (25 per cent) is explained by one single global factor⁴. As apparent from Chart 4, the factor goes up from the early 1990s until mid 1998 when the Russian crisis erupts followed by the Long-Term Capital Management (LTCM) bankruptcy, and eventually the bursting of the dotcom bubble. From the beginning of 2003, the index increases rapidly until the beginning

of the third quarter of 2007 when it plummets. This is shortly after the collapse of the subprime market and this coincides with the first signals of increased vulnerability of the financial markets. The high degree of negative correlation of the global factor with the VIX is striking.

Economic mechanism

One mechanism consistent with those facts is the existence of a positive feedback loop between greater credit supply, asset price inflation, and compression of spreads. Smaller risk premiums amplify bank and non-bank lending. As asset prices go up, measured risk is low and all balance sheets look healthier. By relaxing value-at-risk constraints which are widely used in the banking sector but also in the asset management industry, this creates additional space for lending, and so on. This contributes to the procyclicality of credit and portfolio flows and their importance in the build-up of financial fragility. In some recent work (Coimbra and Rey (2018)), my co-author and I show that in times of low funding costs, agents with the highest ability to take risk, *e.g.* because of looser value-at-risk constraints, tend to increase their balance sheet



⁴ See also Jorda, Schularick, Taylor and Ward (2018).

faster and sometimes driving out more conservative players from market. This leads to a concentration of risk in some fast-growing balance sheets. We find that in the data, the skewness of the distribution of leverage of banks goes up during boom periods of low funding costs. There is a fat right-tail of risk taking financial intermediaries which concentrates a lot of macroeconomic risk. For example, in the Swedish financial crisis at the beginning of the 1990s, Englund (2016) explains, how between 1985 and 1990, the rate of increase of lending by financial institutions jumped to 16 per cent due in part to deregulation. There were rapid shifts in market shares: between 1985 and 1988, the lending shares of Sparbanken Sverige and of Gota increased from 20.8 to 22.1 per cent and from 7.9 per cent to 8.9 per cent of all bank lending, respectively, while more conservative players held back. The CEOs of these two banks emphasised that 'internal targets geared at maximisation of return to equity led to expansion without proper account or risk taking'. There was a significant correlation between the rate of credit expansion and the subsequent credit losses in the crisis, leading to bailouts.

As credit cycles and capital flows obey global factors, they may be inappropriate for the cyclical conditions of some economies. For some countries, the global cycle can lead to excessive credit growth in boom times and excessive retrenchment in bad times. As excessive credit growth is one of the best predictors of crisis⁵, global financial cycles can be associated with surges and retrenchments in capital flows, booms and busts in asset prices and crises. The picture emerging is that of a world with powerful global financial cycles. It is also a world with massive deviations from uncovered interest parity. There are interrelations with the monetary conditions of the centre country (the United States), capital flows and the leverage of the financial sector in many parts of the international financial system.

⁵ Eichengreen and Portes (1987), Gourinchas and Obstfeld (2012), Schularick and Taylor (2012).

3. Constraints on national monetary authorities

In international macroeconomics and finance, we often think within the framework of the "trilemma": in a financially integrated world, fixed exchange rates export the monetary policy of the centre country to the periphery. The corollary is that, only floating exchange rates enable monetary policy independence (see *e.g.* Obstfeld and Taylor (2004)). But the global financial cycle transforms the Mundellian trilemma into a dilemma. The trilemma misleads us by assuming that domestic monetary and financial conditions shaping the macroeconomic situation of a country can be conveniently summarised by this one single variable, the short-term interest rate. If that were the case, the extra degree of freedom gained through exchange-rate flexibility would indeed be enough to neutralise any effects of foreign financial conditions on the domestic macroeconomy. Yet, in a world of globalised finance where financial conditions such as spreads, risk premia, cost of funds are exported from the centre country of the international monetary system monetary policy independence is constrained, including for countries with flexible exchange rates. A growing body of empirical evidence⁶ finds that US monetary policy shocks around FOMC meeting windows are transmitted internationally and affect leverage, asset prices and spreads, capital flows and credit creation around the world including in jurisdiction with flexible rates. The effect of US monetary policy shocks on mortgage spreads is of the same order of magnitude in the US and in Canada for example.

This does not mean that flexible exchange rates have no purpose, they do and they help external adjustments of countries following large macroeconomic shocks as emphasised in Obstfeld and Taylor (2017). But this means that flexible exchange rate cannot insulate economies from the global financial cycle, in particular, during the boom phase of the cycle.

⁶ See Miranda-Agrippino and Rey (2015), Gerko and Rey (2017) among others.

As analysed by Hyun Shin and his co-authors (Bruno and Shin (2015), Hofmann, *et al.*, (2016)) and by Portes and Vines (1997), an appreciation of the exchange rate during the boom phase may strengthen capital flows and encourage more lending. Furthermore as (Caruana (2012)) points out the depreciation of higher-yielding currencies tends to happen fast during episodes of stress in global asset markets, and many emerging market economies have found this destabilising.

4. Paths of Emancipation

National authorities have the following policy options to insulate their economies and manage the global financial cycle:

- i. Impose targeted capital controls;
- ii. Limit credit growth and leverage during the upturn of the cycle, using national macroprudential policies on banks and non-banks;
- iii. Act on the transmission channel structurally by imposing stricter regulation on all financial intermediaries who create credit, bank or non-banks;
- iv. Decrease procyclical fiscal incentives.

If it is really excessive credit growth that is the main issue of concern (as opposed to exchange rate appreciation), capital controls should be viewed as a partial substitute with macroprudential tools. The latter tend to be more targeted. But capital controls may be appropriate if there is a lot of direct cross-border lending and the banking system can be circumvented (see Ostry, *et al.*, (2011)). Macro-prudential policies can weaken the link between domestic monetary policy and capital inflows, without the imposition of capital controls. For instance, by preventing excessive credit growth in boom times, the central bank may reduce the incentive for banks to borrow externally.

There are now many tools available to macroprudential authorities in different countries

(countercyclical buffers, sectoral risk weights, *etc.*, for banks; debt to income ratios, loan to value ratios, *etc.*, for borrowers). But most of the existing panoply of tools can be applied only to the banking sector. Since a lot of recent credit creation takes place outside banks - for example, in India the share of Non-Banking Financial Companies in total credit extended has increased from around 9.4 per cent in March 2009 to more than 17 per cent by March 2018, it becomes more crucial that macroprudential authorities and central banks have the power to modulate credit growth in the non-bank sector as well.

Macroprudential interventions

Beyond tools, one of the biggest practical issues is to determine the timing of intervention. When should one activate circuit breakers to cut the positive feedback loops described earlier? It is important, not to wait too long; not to wait, for example, for the quasi-certainty that there is a bubble in asset prices or real estate to intervene.

One option is to devise quasi-automatic rules based on early-warning indicators that triggers an action (or a documented explanation of why an authority does not act) as soon as a certain threshold is crossed. This has the advantage of being more robust to lobbying of interested parties, banks or finance ministries⁷. It also overcomes the well-known bias towards inaction when good times are unfolding and everyone is happily sharing the dividends of increasing asset returns, forgetting about the risk building up. Recent machine learning techniques can help build more robust early warning indicators (see Fouliard, Howell and Rey (2018)).

Among the tools helping to form the judgement of macroprudential authorities, the ability to stress-test the balance-sheets of the financial sector (banks and non-banks) either in a targeted way or broadly,

⁷ See Acharya and Rajan (2013) for a theoretical analysis of the effect of government myopia on the risks of financial crises.

should figure prominently. This is in order to judge whether large but realistic changes in asset prices could jeopardise financial stability. Stress testing is a difficult exercise in general and estimating second-round effects is particularly challenging but particularly important in a country like India where the shadow banks constitute an important part of total assets (about 13 per cent at end 2016 according to the Financial Stability Board—see Chart 5) and they engage in maturity transformation which could lead to fire sales and affect the banks. Stress tests also require careful thinking about communication policy (and/ or absolute confidentiality as the case may be). Moreover, fiscal backstop strategies are needed to guarantee the credibility of the stress testing. None of this is easy. But doing stress tests regularly and often, even if this is an imperfect process, is a necessary monitoring tool. It improves the knowledge of supervisors and insures they are up to date with the recent market developments; importantly it may also give constructive challenges to the internal risk monitoring of institutions. It may reveal failures in corporate governance in organisations where incentives are not necessarily aligned to keep risk in check or where

information is not available or centralised adequately. It may even reveal “blind spots” of risk taking activities.

At the heart of the transmission mechanism of the global financial cycle to the domestic economy is the ability of financial intermediaries, whether banks or shadow banks to leverage up quickly to very high levels when financing conditions are favourable. Credit is excessively sensitive to the financing costs. It is possible, in addition to or instead of monitoring the cyclical properties of credit growth to use financial regulation to cut the ability of financial intermediaries to be excessively procyclical. Policy levers to do so are the leverage ratio or additional capital requirements.

Importantly, we should not forget that, usually, there are a number of important domestic distortions that interact with capital flows and credit growth. In practice, for political reasons, we see subsidies to investment in real estate and to debt in many countries. These subsidies are instrumental to creating the initial froth in real estate prices and investment. By all means, the first thing to do should be to remove these distortions. It is also important to remember that excessive borrowing by a country often means that

Chart 5: Shadow Banks as Per Cent of Total Assets (end 2016)



Source: Financial Stability Board.

someone else is lending excessively: macroprudential policies apply to lending countries just as well as they apply to borrowing countries.

Finally, for any of this to work, macroprudential authorities should be independent. In return for their independence, macroprudential authorities should be accountable to elected bodies. Their mandate on financial stability should be as transparent as possible and well explained to the parliament and general public. This involves pointing out to the citizens, the very large costs of financial crises. Unfortunately, we have many very concrete examples of these huge costs all over the world: economic costs, social and political costs and even direct threats to the social fabric of our countries. Avoiding financial crises is a difficult task for which one is rarely thanked as in best cases nothing dramatic happens. It should nevertheless be a policy priority.

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ARTICLES

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Contours of Liquidity Management: Developments During 2018-19

Sectoral Deployment of Bank Credit in India *

The sectoral deployment of bank credit has undergone a qualitative shift with aggressive lending to the retail segment and in the form of personal loans. Credit to industry has gradually gained momentum in 2018-19 so far after a prolonged contraction. The pick-up in economic activity has boosted credit demand, while firmer weighted average lending rates of banks and the overhang of non-performing loans have depressed it.

Introduction

In an economy in which banks are the principal financial intermediaries as in India, the bank lending channel is the most important channel of monetary policy transmission, a theme on which interest in the literature goes back to seminal works in the latter half of the twentieth century (Brunner and Meltzer, 1963; Bernanke and Blinder, 1988). Markets for bank credit are notoriously asymmetric and prone to excluding/rationing out disadvantaged participants. In this context, policy interventions have been advocated to correct market failure, produce inclusive equilibria and ensure efficient price discovery to drive the allocation of credit (Canales and Nanda, 2012). In India, the period up to the 1980s was marked by the dominance of the State in the allocation of credit and policy-administered lending rates. Since 1990s, liberalisation brought with it reduction in statutory pre-emptions, the progressive deregulation of interest rates and the infusion of competition with entry of new private banks. Given this history, however, adequate and equitable distribution of bank credit among productive sectors of the economy

has been an abiding concern among academics and policy makers alike (Yakubu and Affoi, 2014 and Makinde, 2016). Accordingly, considerable attention and resources have been devoted to measuring and monitoring the flow of bank credit to various sectors of the economy.

Information on the sectoral flow of gross bank credit has been tracked through the Basic Statistical Returns (BSR) data collection system on an annual basis and more recently, on a quarterly basis since Q1:2014-15. In view of the need for higher frequency monitoring with minimum time lags for the purpose of formulation of monetary policy, information on sectoral deployment of credit from select banks – currently 41 banks that account for about 90 per cent of gross bank credit – is obtained. These data cover all important sectors of the economy and are released on the Reserve Bank's website on the last working day of every month with a lag of about a month. They are also disseminated through various publications of the Reserve Bank and its data warehouse. This is consistent with global best practices as also data dissemination standards of multilateral agencies (Annex Table I). Analyses of these data are provided in the Reserve Bank's flagship publications and form critical inputs for evaluating the transmission of monetary policy across sectors. Furthermore, these data throw light on sectoral responses to monetary policy shocks, financing conditions, borrowing costs and credit-intensities of output.

Against this backdrop, the principal motivation of this article is to analyse recent movements in overall non-food credit co-incident with underlying sectoral dynamics. After presenting some stylised evidence in Section II, Section III addresses key sectors attracting bank credit flows. Some empirical findings on the factors affecting credit flow to key sectors of the economy are discussed in Section IV. The final section offers the concluding remarks.

* This article is prepared by Jessica M. Anthony, Shiv Shankar and Satyananda Sahoo, Monetary Policy Department, Reserve Bank of India. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

II. Non-food Credit: Some Stylised Facts

In India's bank-based financial system, the share of bank credit in total credit to the commercial sector¹ remains high (Chart 1a). More recently, however, there are signs of a structural shift, with other sources of credit gaining foothold, though their shares remain low (Chart 1b).

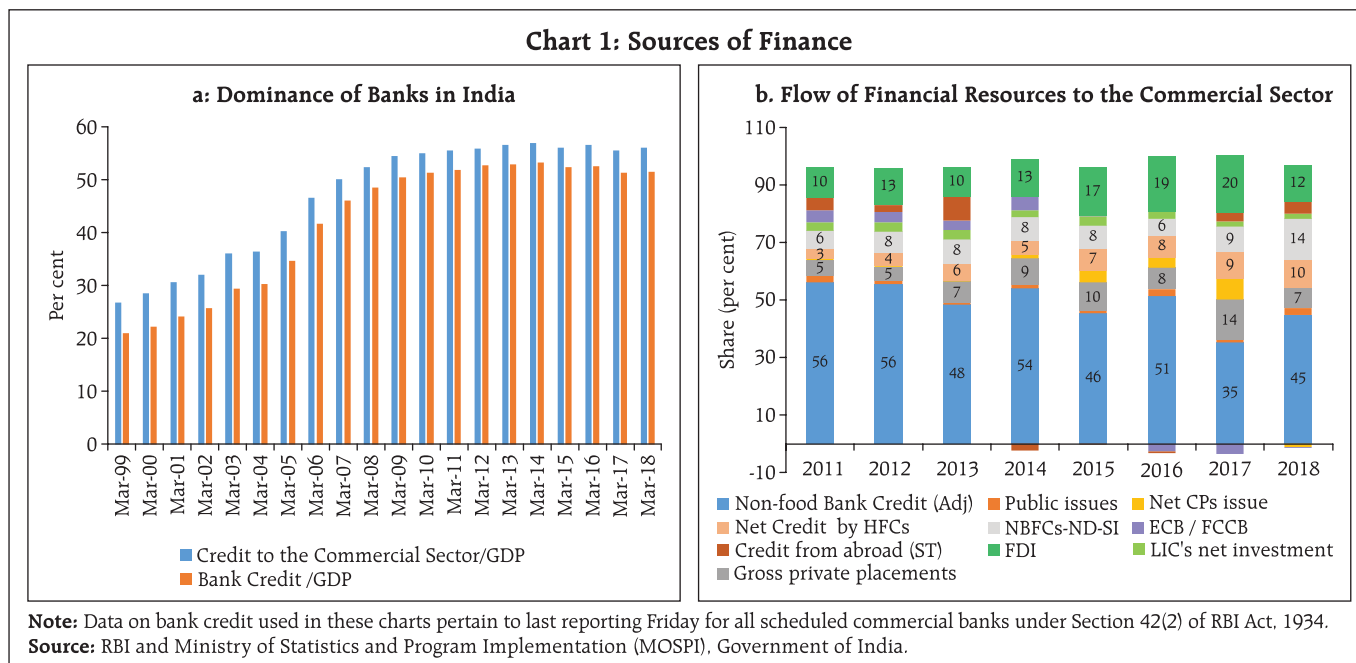
Credit disbursed by the scheduled commercial banks (SCBs) to industry has a dominant share though it has been declining over the years (Chart 2a). The share of credit to agriculture has remained stable over the years, while services and personal loans are the sunrise segments (Annex Tables II and III). The procyclicality of bank credit is evident in the case of India (Chart 2b); however, the presence of multiple categories of banks does help to mute this effect.

The period 2009-13 marked a bank credit boom, with non-food credit growth averaging 17 per cent. Over the following quinquennium, however, it slowed to 10 per cent as the credit cycle turned

down under the weight of a large overhang of stress on banks' balance sheets due to pervasive loan impairment. By 2015, credit slumped to single digits and it is only since May 2017 that a tenuous recovery is gradually taking hold. The worst hit has been the industrial sector, saddled with a huge pile of non-performing assets (NPAs).

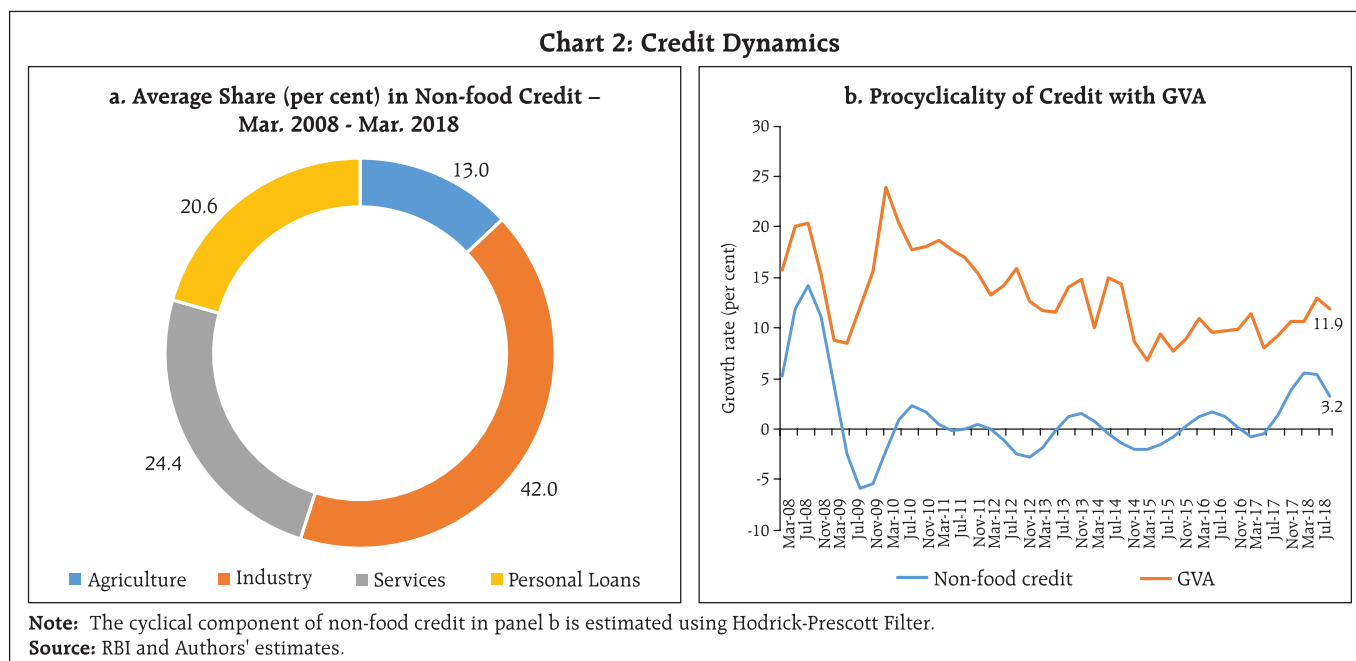
Non-bank credit intermediaries, viz., mutual funds, insurance companies and non-bank financial companies (NBFCs) have taken away some share of credit from the banking sector. Some disintermediation can also be attributed to the buoyant corporate bond market, foreign portfolio investors (FPIs) and domestic institutional investors (Table 1).

Bank credit has also witnessed a qualitative shift, with aggressive lending to the retail segment; accordingly, the personal loan portfolio has grown well above the industry average. Personal loans contributed 48.6 per cent to the incremental credit



¹ Bank credit to the commercial sector includes the Reserve Bank's credit through investments in bonds/shares of financial institutions, loans to them and holdings of internal bills purchased and discounted, commercial banks' credit to the commercial sector in the form of banks' loans and advances, net credit to primary dealers, banks' investments in other approved securities under Section 5(a) of the Banking Regulation Act, 1949 and investments in non-SLR securities.

Chart 2: Credit Dynamics



in March 2018, a sharp jump from 20.0 per cent in March 2013 (Chart 3a). Industry's share has remained

at a third over the years followed by personal loans and services. Credit to industry went into contraction

Table 1: Flow of Financial Resources to the Commercial Sector

(₹ Billion)

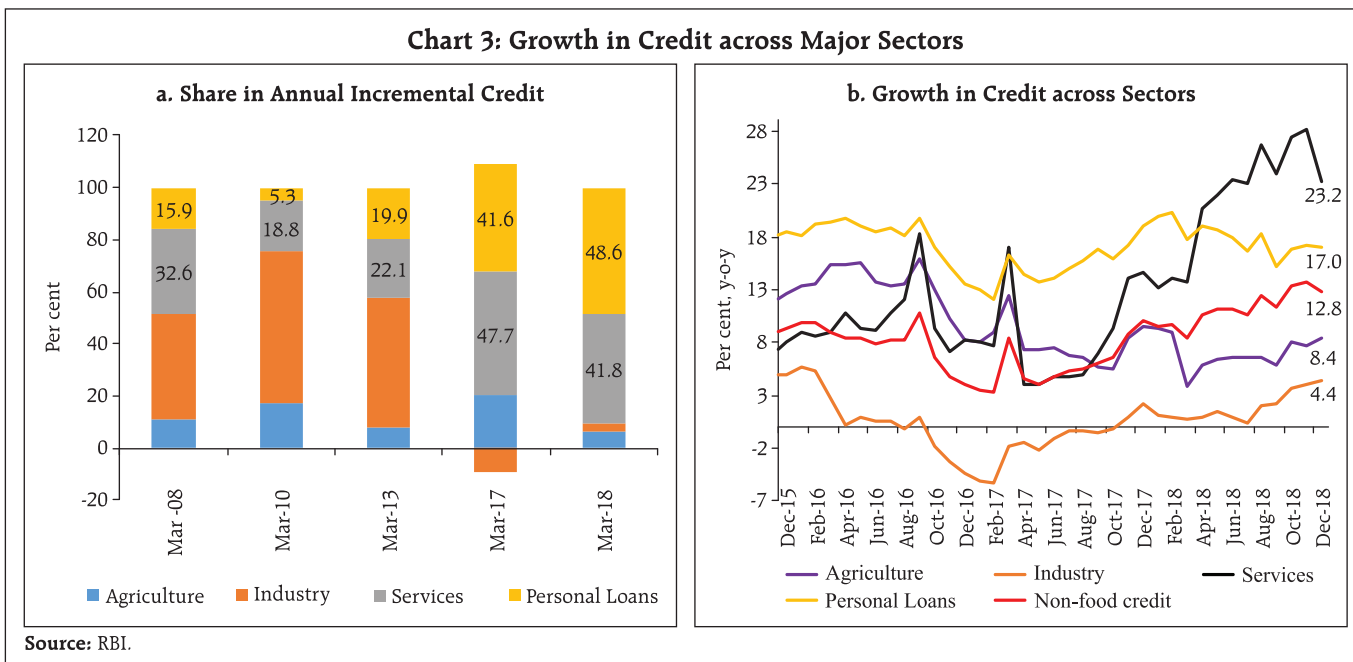
Source	April-March			Apr 1 to Jan 18	
	2015-16	2016-17	2017-18	2017-18	2018-19
A. Adjusted Non-food Bank Credit (NFC)	7,754	4,952	9161	3634	7071
i) Non-Food Credit	7,024	3882	7959	2959	6773
<i>of which:</i> petroleum and fertilizer credit	-18	133	27	-224	-153
ii) Non-SLR Investment by SCBs	731	1070	1202	675	298
B. Flow from Non-banks (B1 + B2)	6,241	9,578	11,220	7,716	7,946
B1. Domestic Sources	3,782	6,820	7,836	5,762	5,677
1 Public issues by non-financial entities	378	155	438	174	84
2 Gross private placements by non-financial entities	1,135	2,004	1,462	1121	1123
3 Net issuance of CPs subscribed to by non-banks	517	1,002	-254	570	2018
4 Net Credit by housing finance companies	1,188	1,374	1,986	1,117	1141
5 Total accommodation by 4 RBI regulated AIFs - NABARD, NHB, SIDBI & EXIM Bank	472	469	951	545	1021
6 Systemically important non-deposit taking NBFCs (net of bank credit)	-277	1,539	2,875	1,959	128
7 LIC's net investment in corporate debt, infrastructure and Social Sector	369	277	378	276	163
B2. Foreign Sources	2,459	2,758	3,385	1,954	2,269
C. Total Flow of Resources (A+B)	13,995	14,530	20,381	11,350	15,017

Note: (i) Higher net credit flows from NBFCs-NDSI in 2017-18 was mainly due to an increase in reporting by Government companies. Negative net credit flows from NBFCs-NDSI in 2015-16 was mainly due to change in classification norm for NBFCs-NDSI, according to which asset size for being classified as NBFC-NDSI was increased from ₹100 crore to ₹500 crore and more. Additionally, conversion of two large NBFCs viz., Bandhan and IDFC into banks during the year also contributed to the decline in credit flow from NBFCs to the commercial sector in 2015-16.

(ii) \$: Up to November 2018 *: Up to December 2018 @: Up to mid-January 2019.

Source: RBI, SEBI, BSE, NSE, Merchant Banks, LIC and NHB.

Chart 3: Growth in Credit across Major Sectors



during most part of 2016-17 and recovered into positive territory only in November 2017 (Chart 3b and Annex Table II).

The pick-up in credit since May 2017 has been driven largely by private sector banks, while public sector banks (PSBs) continue to lag, burdened by a large stock of NPAs (Chart 4).

III. Bank Credit to Key Sectors

Among the key sectors, credit to industry which was growing above 20 per cent until 2011-12, has moderated in the recent years, registering a modest growth in 2017-18, after contracting sharply during 2016-17. While credit growth to the agriculture sector remained somewhat volatile, flows in the form of

Chart 4: Growth in Credit and NPAs (Bank-group wise)

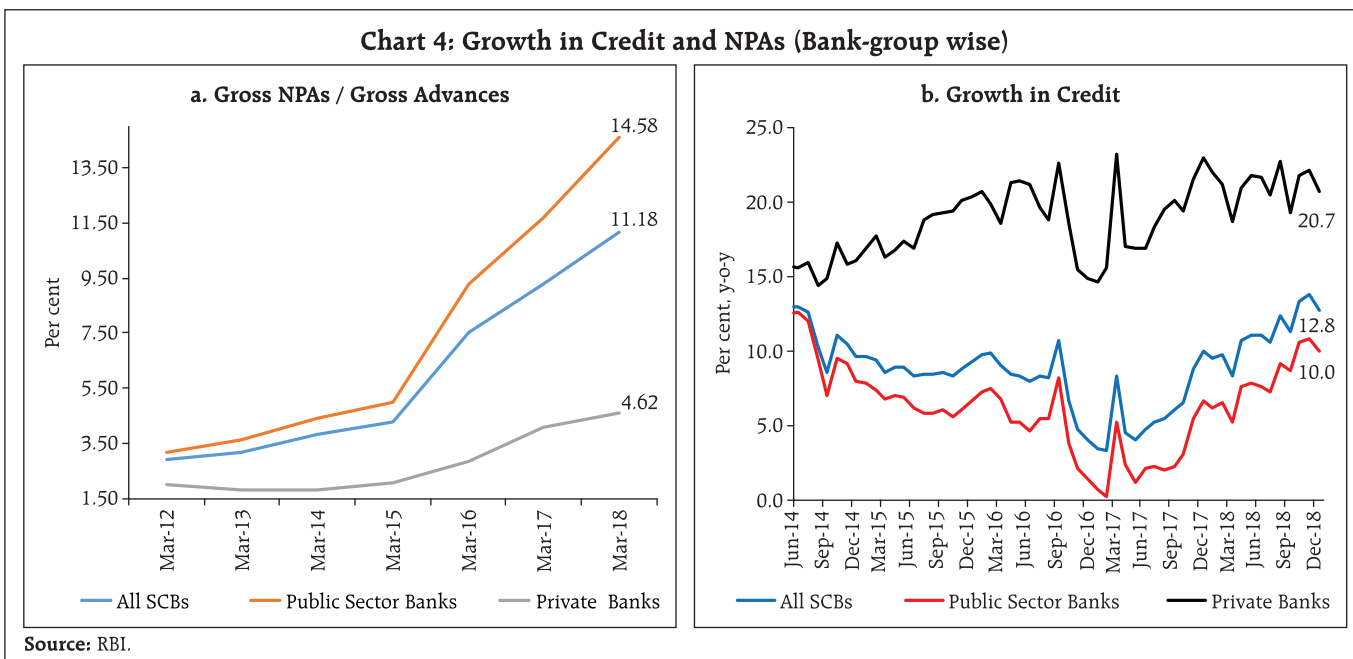


Table 2: Credit Deployment to Select Sectors

	Outstanding (₹ Billion)					Growth (per cent, y-o-y)			
	Mar-08	Mar-11	Mar-14	Mar-18	Nov-18	2010-11	2013-14	2017-18	Dec-18
Non-food credit (1 to 4)	22,048	36,674	55,296	76,884	81,642	20.7	13.6	8.4	12.8
1. Agriculture & Allied Activities	2,753	4,806	6,660	10,302	10,821	15.6	12.9	3.8	8.4
2. Industry (Micro & Small, Medium and Large)	8,583	16,046	25,165	26,993	27,494	22.4	12.8	0.7	4.4
<i>of which</i>									
(i) Infrastructure	2,053	5,214	8,364	8,909	9,719	37.2	14.6	-1.7	9.2
(a) Power	951	2,666	4,869	5,196	5,476	41.9	17.1	-1.1	5.3
(b) Telecommunications	383	933	882	846	906	57.2	0.5	-0.6	6.0
(c) Roads	345	906	1,579	1,665	1,870	23.2	20.2	-7.5	9.8
(ii) Basic Metal & Metal Product	1,076	2,130	3,608	4,160	3,799	30.7	14.9	-1.2	-8.1
(iii) Food Processing	494	768	1,463	1,554	1,478	17.0	24.6	6.8	2.8
3. Services	5,493	8,942	13,375	20,505	22,330	23.0	16.1	13.8	23.2
(i) Trade	1,238	1,850	3,258	4,669	4,860	12.5	18.1	9.1	10.3
(ii) Non-Banking Financial Companies (NBFCs)	789	1,903	2,938	4,964	5,709	67.7	12.9	26.9	55.1
4. Personal Loans	5,218	6,879	10,097	19,085	20,997	17.5	12.5	17.8	17.0
(i) Housing (Including Priority Sector Housing)	2,603	3,499	5,386	9,746	10,966	16.3	17.9	13.3	17.1
(ii) Vehicle Loans	586	726	1,063	1,898	1,992	13.8	-4.3	11.3	8.8

Note: Data are provisional and relate to select banks which cover about 90 per cent of total non-food credit extended by all SCBs.

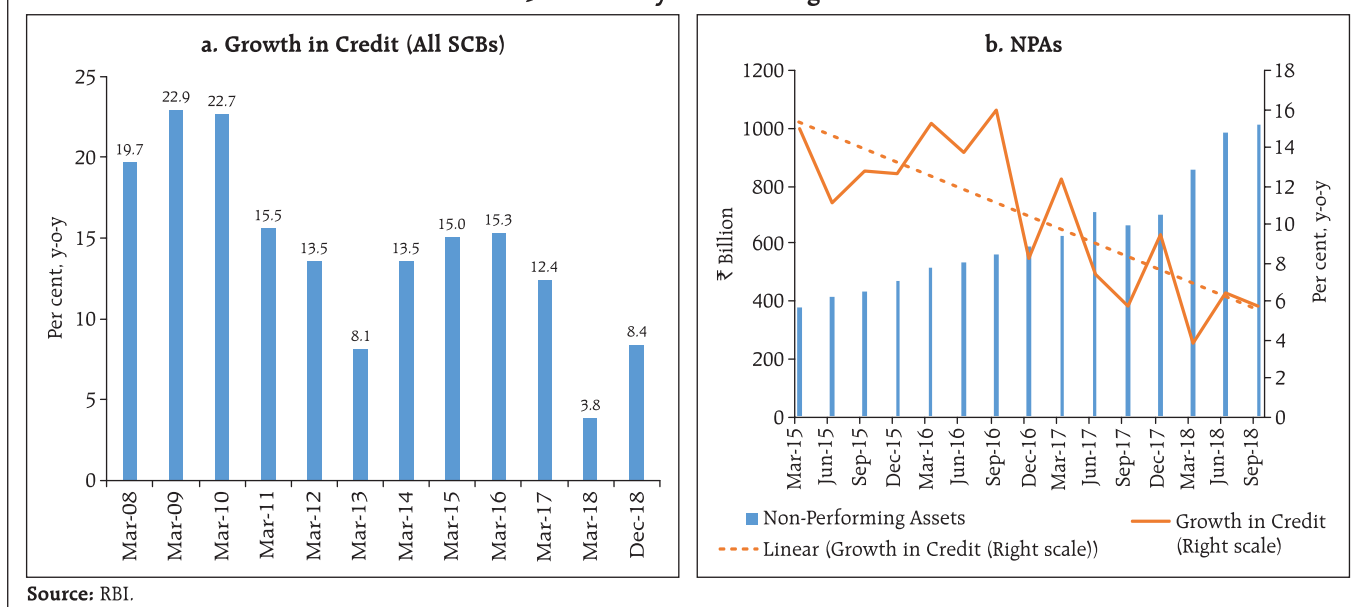
Source: RBI.

personal loans has remained broadly constant over the years (Table 2).

III.1 Agriculture and Allied Activities

Notwithstanding the volatility in growth, the share of agriculture (including farm credit, loans for agricultural infrastructure and ancillary activities)

in total non-food credit has remained broadly unchanged at around 13 per cent over the years, which could be largely attributed to priority sector lending (PSL). Despite targeted lending, credit disbursement to agriculture in 2017-18 has deviated from trend (Chart 5a), reflecting drought in some states in the

Chart 5: Credit Dynamics – Agriculture

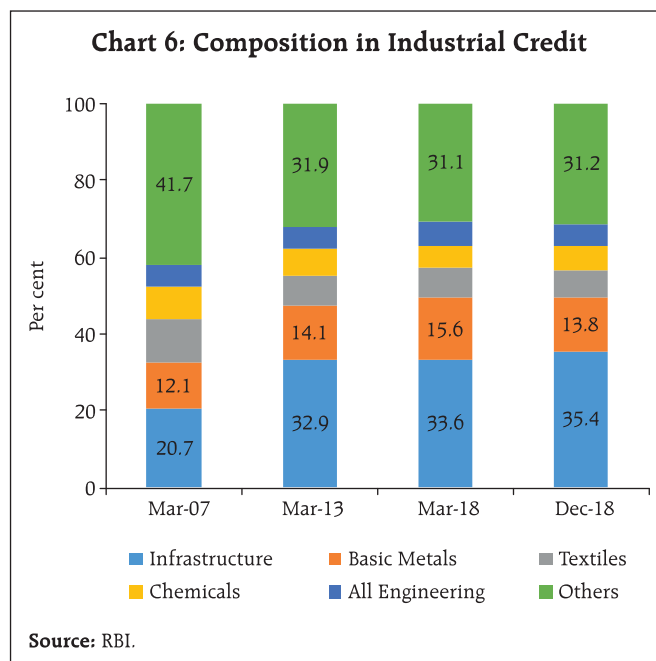
southern region, while expectations of announcement of farm loan waivers have made banks generally averse to lending to this sector. Consequently, exposures of both public and private sector banks has been falling (Chart 5b).

III.2. Industry

Based on limits for investment in plant and machinery, the industrial sector can be broadly classified into three categories, *viz.*, micro and small, medium and large industries. Large industries constitute around 80 per cent of the credit offtake by the industrial sector as a whole, while the share of medium industries has come down significantly over the last decade. Micro and small industries have managed a credit share in a range of 10-15 percent, benefiting from eligibility to be classified under priority sector lending. The industrial sector had been in deceleration/contraction zone since its peak in December 2010, mainly due to the dismal performance of large industries over the years.

Information on credit to industry is obtained for 18 broad sub-categories of the industrial sector, in alignment with the classification of the Basic Statistical Returns (BSR) System/National Industrial Classification (NIC). Infrastructure accounts for roughly one-third of the credit offtake by industry, followed by basic metals and metal products and textiles. Credit offtake by infrastructure witnessed a significant increase from one-fifth of the credit offtake by industry in March 2007 to one-third in March 2018. Basic metals have retained their share in credit offtake, while textiles have witnessed a moderation (Chart 6).

Industry had been reeling under financial stress since the beginning of 2016-17, with credit growth plummeting to 0.7 per cent in 2017-18. Stalled projects have increased at an alarming pace. Improvement in capacity utilisation, alongside the modest pickup in credit growth to industry, point to a recovery gradually gaining hold in 2018-19 (Chart 7).



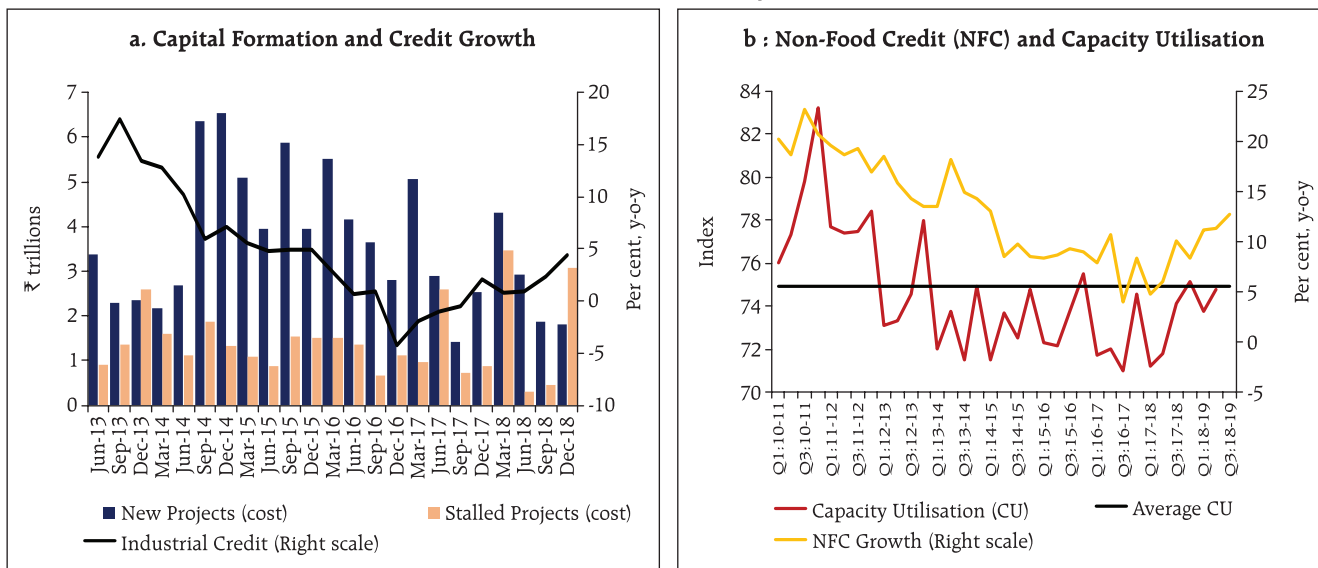
a. Infrastructure

Credit to infrastructure, which accounts for about one-third of bank credit to industry, contracted by 1.1 per cent in 2017-18, prolonging the retrenchment that started since April 2016. The contraction ebbed going into 2018-19, however, with offtake returning to positive territory in July 2018. The dismal performance of this sector could be attributed to loan impairment resulting in lending constraints due to tighter regulatory norms and adverse effects on profitability, especially in telecommunication and power. The National Highway Development Project (NHDP), Phase VII of the Government of India is the latest initiative to boost road infrastructure and incentivise borrowing. The power sector, which accounts for almost half of the credit to infrastructure, has decelerated/contracted in 2017-18, though some easing of stress was observed during 2018-19 (Chart 8).

b. Basic Metals

The basic metals segment accounts for nearly 15 per cent of the credit offtake by industry. It turned out to be the key sector responsible for the fall in industrial credit growth since the beginning of 2016.

Chart 7: Credit to Industry (Drivers)



Source: RBI and Centre for Monitoring Indian Economy (CMIE).

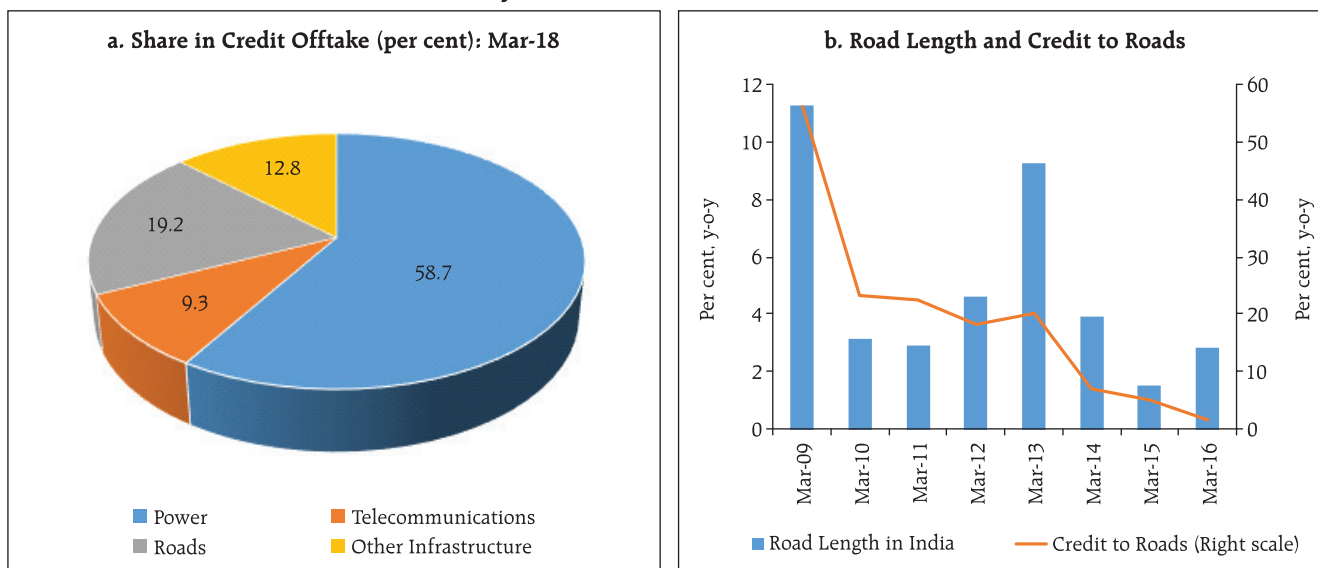
In this segment, iron and steel accounts for nearly three quarters of the credit offtake. Basic metals have remained in contraction zone during most part of 2017-18, though the sector managed to clock positive growth during the current financial year. India's iron and steel sector faces stiff competition from cheaper imports from Russia, China and South Korea. Moreover, shortage of coal in the past few years led to increase in the input cost of steel production.

Nevertheless, India has emerged as the second largest steel producer in the world in 2018-19.

c. Textiles

Textiles constituted around 8 per cent of the credit offtake by industry and its share remained constant since May 2014. It has been facing several hurdles due to operational problems faced by the small and decentralised textile units post-GST.

Chart 8: Credit Dynamics of Infrastructure and its Sub-Sectors



Source: RBI and CMIE.

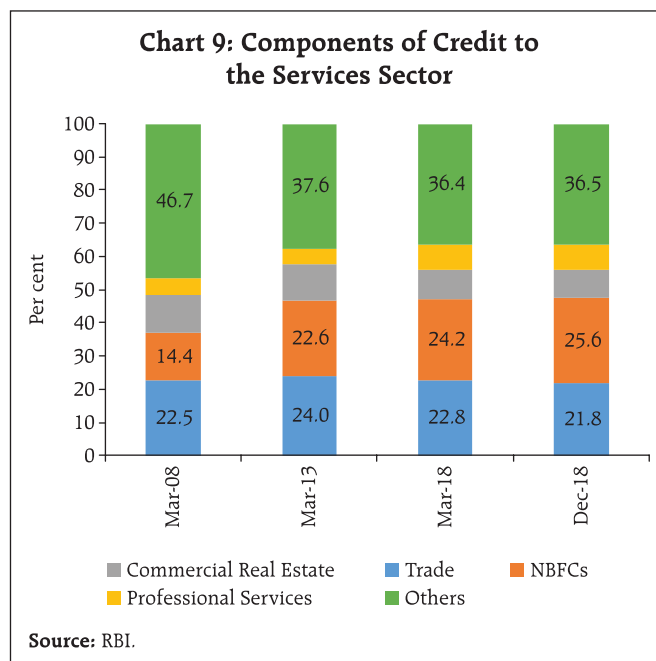
decline in exports of yarns due to withdrawal of various incentives and loss in competitive edge in international market. The textiles segment is broadly classified into three categories, with cotton accounting for 50 per cent share, followed by man-made fibres and jute textiles. The share of cotton textiles has increased in the past decade, while man-made fibres have doubled their share. India's textiles sector has witnessed stiff competition from cheap imports over the years, leading to credit contraction in 2016-17 from a growth of 23.0 per cent in 2007-08 (Annex Table IV).

Most of the industrial sub-components are interlinked in the production process. For instance, the cement and cement products sector largely depends on the performance of construction, real estate and the infrastructure sectors. Using data from January 2015 to March 2018, a positive and significant correlation between credit offtake of the cement and cement products sector with construction (0.27) and infrastructure sectors (0.45) was observed. The uptick in recent credit demand may be attributable to initiatives promoting affordable and rural housing, road and irrigation projects.

III.3. Services

The services sector, with a share of around 55 per cent in India's gross value added (GVA), accounts for roughly a quarter of the total non-food credit disbursed by the SCBs – 27 per cent as of March 2018. Credit growth has remained in double digits in recent years, although demonetisation appears to have delivered a shock in H2:2017-18 when it grew by 13.1 per cent.

Within services, trade and NBFCs account for about 22 per cent and 25 per cent of credit to total services, respectively, while commercial real estate comes third in line followed by professional services (Chart 9). Other constituents include transport operators, computer software, tourism hotel and



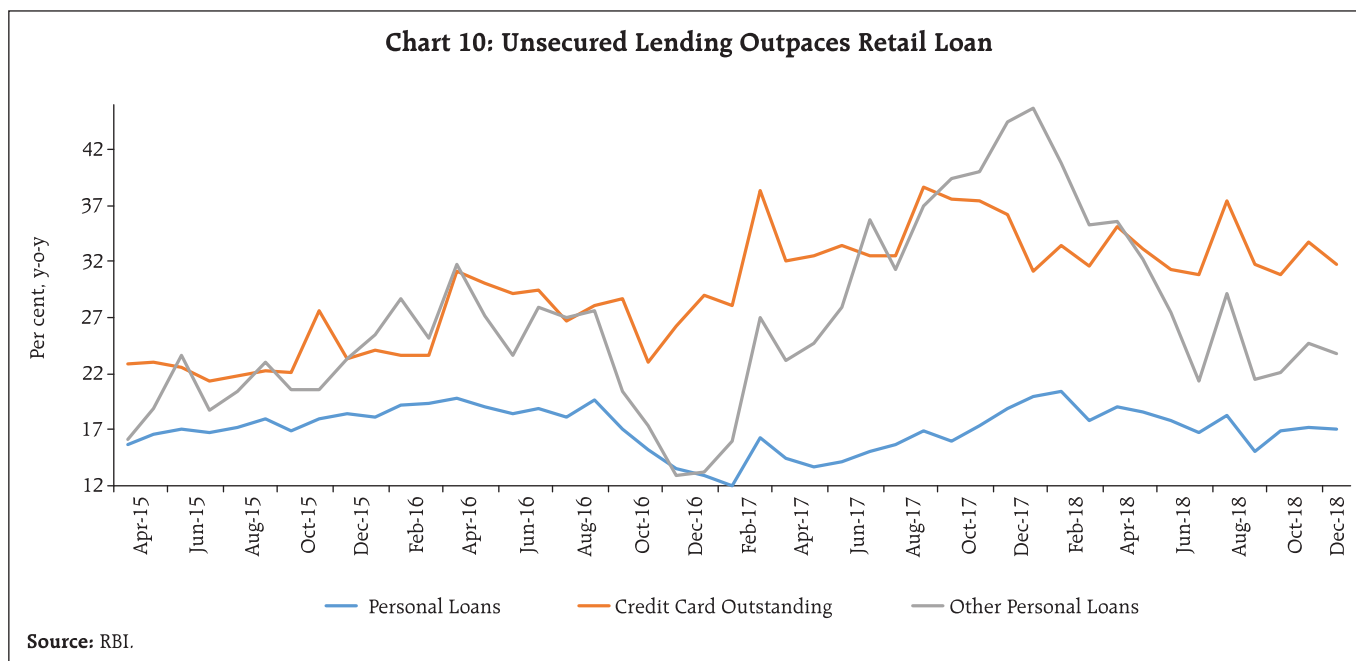
restaurants, shipping and others. During 2017-18, some weakness in trade was observed; however, robust performance of the NBFCs managed to keep credit demand buoyant.

a. Trade

Credit growth to trade remained modest during 2017-18, growing by 9.1 per cent as compared with 14.0 per cent in the previous year. Credit to this sector has been declining in the past few years, with its growth touching its lowest at 3.4 per cent in November 2016. Trade is further sub-divided into retail trade and the wholesale trade, with the former's share remaining dominant and rising marginally since 2007. The growth in credit to retail trade has usually outpaced the wholesale segment and with e-commerce flourishing, this segment is expected to receive a further boost against the backdrop of increasing pace of digitisation.

b. Non-banking Financial Companies (NBFCs)

The share of NBFCs in services has been steadily increasing from around 11 per cent in March 2007 to a quarter of the total credit offtake by services in March 2018. However, credit growth to this sector by SCBs moderated during the last decade and almost halved in 2017-18 as compared to 2007-08. Credit



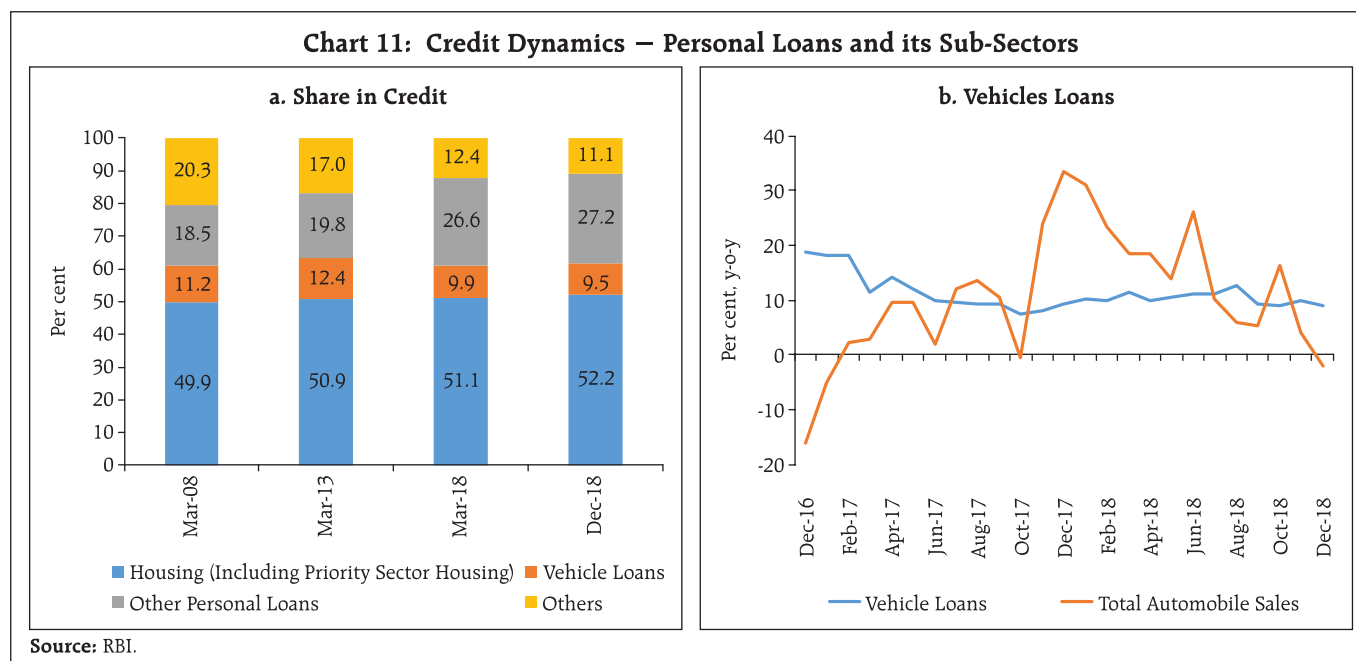
growth declined substantially post-demonetisation, though the sector has witnessed an uptick in 2018-19 in spite of GST-related uncertainties.

III.4. Personal Loans

In the personal loans segment, credit has been growing much above the industry average, largely driven by housing, while vehicles have lost some momentum recently. This sector has seen its share

in incremental credit rising in the last few years. Unsecured lending has been growing at a robust pace as reflected in the high growth of other personal loans and credit cards outstanding (Chart 10).

Housing and vehicle loans account for more than 60 per cent of the personal loan portfolio, with the former remaining the main driver of credit growth (Chart 11a). Credit card outstanding, though not very



large in overall credit, has also shown a significant increase. Education witnessed slower credit-offtake, while credit to consumer durables remained in the contraction zone during 2017-18.

a. Housing Loans

Housing loans account for nearly a half of the credit offtake by the personal loans sector. This sector has remained the main driver of growth of personal loans, though credit offtake has slowed in the recent months with implications for other sectors like construction, steel and cement. Demand for housing tends to be high during periods of high inflation as a hedge against declining real savings. A significant portion of this sector also belongs to the priority sector category.

b. Vehicle Loans

Indian automobiles industry is one of the largest in the world, comprising commercial vehicles, passenger vehicles, three-wheelers and two-wheelers, with the latter accounting for the largest share. A growing middle class, the young population and development of the rural economy has further aided the two-wheeler segment. Vehicles loans have managed to grow by around 10 per cent in 2017-18, despite some hiccups in the beginning of the year. The growth in vehicle loans in the recent period has moderated, reflecting lower automobile sales (Chart 11b). With mandatory implementation of Bharat IV² norms from April 2017 and new insurance norms implemented in 2018, automakers resorted to various means of disposing unsold inventory by offering discounts and shipping inventory to markets where older norms were still prevalent. Another disruption which impacted the automobile industry was the implementation of the GST since July 2017, which

categorised automobiles into the highest slab of 28.0 per cent with varying levels of cess, though some original equipment manufacturers (OEMs) passed the benefits to customers as effective rates were lower after implementation of GST.

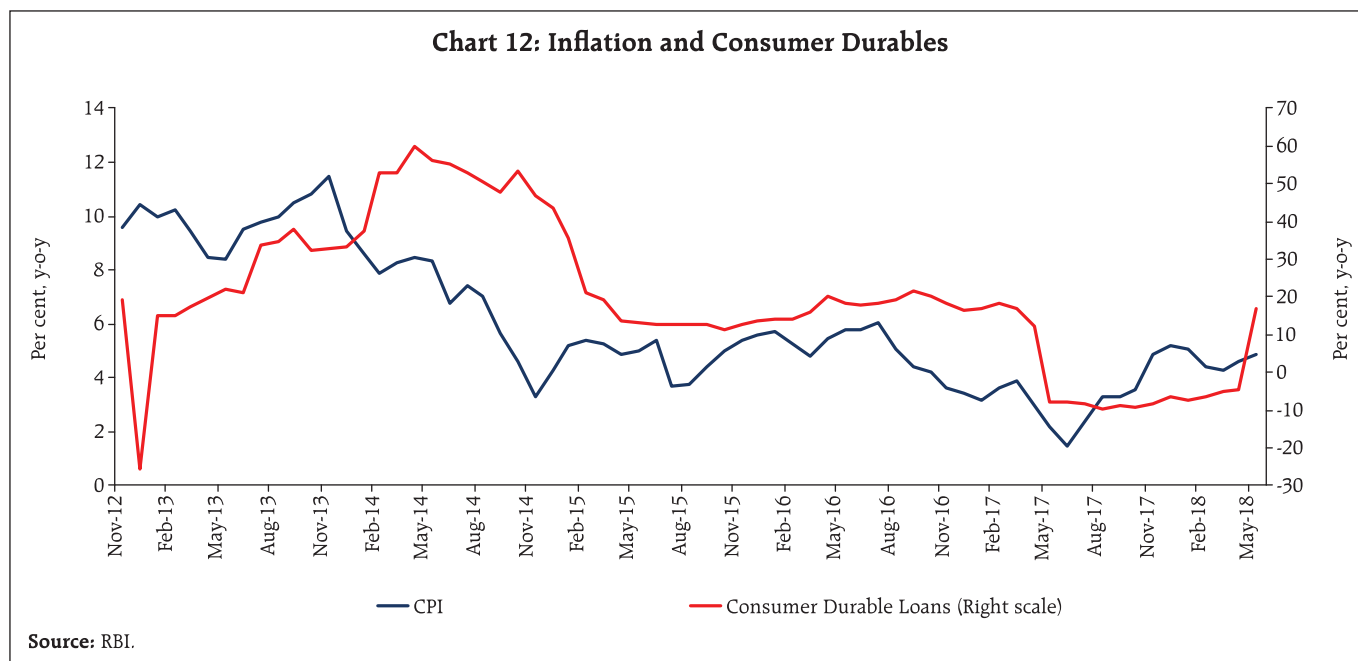
c. Consumer Durables

The consumer durables market in India in both segments – urban and rural – has potential to prosper due to rising incomes of the middle class. The sector's share is at a meagre 1.0 per cent of the total offtake on account of personal loans and it contracted during 2017-18. The consumer durables segment had grown by over 50 per cent in 2014 owing to falling consumer inflation (Chart 12). However, credit growth to this sector suffered during 2017-18 which could be attributed to the uncertainty surrounding GST and increase in prices of some products like air conditioners and refrigerators.

IV. Some Empirical Findings

Is there a long run relationship between credit growth and macro-financial variables? Credit flow to key sectors of the economy has been estimated by an autoregressive distributed lag (ARDL) model as the variables are not of same order of integration *i.e.*, either I(0) or I(1). The models were estimated based on lag length determined by the minimum Akaike information criterion. The estimated models confirm Lagrange Multiplier test for no serial correlation among errors and parameter stability tests. The long-run parameters were obtained from the cointegrating relationship. Dummy variables representing structural reform measures, *i.e.*, demonetisation and GST and policy uncertainty index were included as exogenous variables. The growth rate of non-food credit was positively associated with growth rate of GVA, interest rate spread (IRSPD) – measured by the difference between weighted average lending rate (WALR) and term deposit rate – , deposit growth of SCBs (DEPOSIT) and the business expectation index

² The Bharat norms are emission control standards based on the European regulations. They set limits for release of air pollutants from equipment using internal combustion engines, including vehicles. The BS IV norms were introduced in 13 cities apart from the National Capital Region from April 2010 onwards.



(BEI). A positive relationship between interest rate spread and non-food credit growth could be due to higher profit margin incentivising banks to lend. The ratio of gross NPAs to total advances (NPA) was adversely related with the growth rate of non-food credit (Annex Table V).

Agriculture credit growth turned out to be positively associated with growth of GVA in agriculture (AGR_GVA) and deposit growth of SCBs, while it is adversely related with growth rate of GVA in industry (IND_GVA) and WALR (Annex Table VI). The inverse relationship between credit to agriculture and industrial sector growth could be attributed to the substitution effects.

Credit to the industrial sector was estimated with control variables, *viz.*, industrial GVA (IND_GVA) growth, interest rate, capacity utilisation (CU) and the gross NPA ratio. The empirical findings indicate that capacity utilisation and industry GVA were the most important factors in driving credit to industry, while the lending rate and NPA ratio adversely impacted credit offtake to industry (Annex Table VII).

Credit to sub-sectors, *viz.*, transport operators, tourism, hotels and restaurants and trade (TTTH) was positively associated with GVA growth of trade, hotel, transport and communications (THTC_GVA), railways freight growth (RAILF) and sale of commercial vehicles (CVSALE), while the lending rate may dampen credit demand. Growth of foreign tourist arrival (FTA) may reduce demand for credit through revenues generated in foreign exchange (Annex Table VIII).

Credit to the sub-sectors, *viz.*, professional services, commercial real estate, non-banking financial companies, housing (including priority sector housing) and real estate loan by NBFC was positively associated with deposits growth, credit-deposit ratio and BEI, while inversely related with WALR (Annex Table IX).

To summarise, empirical findings suggest that there is a long run relationship between credit growth and macro-financial variables. While economic activity, deposit growth of SCBs and business expectations positively impact credit growth, a higher lending rate and overhang of non-performing loans dampen credit demand.

V. Conclusion

The analysis of the data on sectoral deployment of bank credit provides useful insights into the direction of flow of credit to the key sectors of the economy. The surge in retail lending appears modest at present as a major portion of the credit is secured, while credit growth to industry has turned and a recovery is gaining traction. NPAs have depressed credit to major sectors, while sector specific issues have also driven the direction of credit. Empirical analyses further show industry's growth crowding out the credit to agriculture.

Credit growth has gone through cycles. The nascent recovery, which set during the second half of 2017-18, has continued into 2018-19, supported by several factors – uptick in fixed asset formation and easing stress in infrastructure. Within industries, credit offtake by the medium and large segments has returned to positive territory in recent months, but remained insipid. Credit flow to micro and small industries continues to be negligible, with growth still in the contraction zone. Several policy efforts, *viz.*, speeding up of loan processing by banks, placing of adequate collateral system and loan guarantees can further enhance credit to micro, small and medium enterprises. Policy efforts are needed on several

fronts such as improving the ease of doing business further, expediting resolution of distressed assets by addressing the NPA problem of the banking sector and speeding up implementation of stalled projects to make the recovery broad-based.

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Annex Table I: Data Release on Sectoral Deployment of Bank Credit – Country Practices

Country	Sector	Frequency
Bangladesh	Agriculture & Allied Activities, Export and Small and Cottage Industries, Commercial sector	Monthly
Bhutan	Agriculture & Allied Activities, Manufacturing/Industry, Commerce and trade	Monthly
Brazil	Industry, Rural credit, Commerce private sector, Households, Housing and credit by economic activities	Monthly
India	Agriculture & Allied Activities ,Industry, Services, Personal Loan	Monthly
Indonesia	Agriculture, Mining, Manufacturing, Construction, Trade, Transport and Service sectors, Mortgages	Monthly
Maldives	Agriculture & Allied Activities, Tourism, Transport and communication	Monthly
México	Agricultural (including livestock), Commercial, Construction, Communications and transportation, Industrial (manufacturing), Services	Quarterly
Nepal	Agriculture & Allied Activities, Construction, Electricity, Gas and Water, Finance, Insurance and Real Estate	Monthly
Pakistan	Agriculture & Allied Activities, SME, Personal Loans, Housing, Corporates, Consumers, Commerce and trade	Quarterly
South Africa	Agriculture & Allied Activities, Mining, Manufacturing, Energy, Construction	Quarterly
Switzerland	Agriculture, forestry and fishing, Information and communication, Real estate, Professional, scientific and technical activities, Administrative and support service	Monthly
Thailand	Non-financial business, Financial business, Households, Housing Loans for Personal Consumption (mortgages)	Monthly
Zambia	Agriculture & Allied Activities, Mining, Manufacturing, Energy, Construction	Quarterly

Source: Websites of central banks/ statistics authority.

Annex Table II: Growth in Credit across Various Sectors

(Per cent, y-o-y)

Sector	Jun-17	Sep-17	Dec-17	Mar-18	Apr-18	May-18	Jun-18	Sep-18	Oct-18	Nov-18	Dec 18
Non-food Credit	4.8	6.1	10.0	8.4	10.7	11.1	11.1	11.3	13.4	13.8	12.8
Agriculture Activities	7.5	5.8	9.5	3.8	5.9	6.4	6.5	5.8	8.0	7.7	8.4
Industry (Micro , Medium and Large)	-1.1	-0.4	2.1	0.7	1.0	1.4	0.9	2.3	3.7	4.0	4.4
Micro	0.5	1.7	7.2	0.9	0.3	0.2	0.7	-1.4	1.6	1.1	-0.9
Medium	-8.1	-8.0	-9.7	-1.1	3.6	4.1	2.7	3.3	10.9	11.0	9.2
Large	-1.0	-0.4	1.9	0.8	1.0	1.5	0.8	2.9	3.8	4.2	5.1
Services	4.7	7.0	14.7	13.8	20.7	21.9	23.3	24	27.4	28.1	23.2
Transport Operators	4.4	7.3	12.8	9.8	11.6	11.3	11.0	12.5	14.5	12.8	13.1
Computer Software	-11.9	-0.9	-0.3	4.1	2.5	5.9	8.5	6.0	12.0	13.0	6.7
Tourism, Hotels & Restaurants	-4.0	-3.9	-1.9	-2.7	3.1	3.3	1.4	1.0	5.5	4.5	5.6
Shipping	-24.6	-23.2	-31.6	-24.7	-13.7	-11.7	-11.5	-12.1	-7.5	-15.4	-14.4
Professional Services	12.6	8.2	19.1	12.9	14.1	19.3	20.2	24.0	25.5	24.5	20.7
Trade	5.3	7.3	16.4	9.1	13.6	15.5	15.2	10.8	12.5	10.8	10.3
Wholesale Trade (other than food procurement)	4.5	3.6	13.3	6.2	11.7	16.3	14.6	11.8	13.0	10.8	10.6
Retail Trade	6.0	10.3	19.0	11.5	15.2	14.8	15.7	10.0	12.2	10.7	10.1
Commercial Real Estate	-3.3	2.9	2.6	0.1	1.6	3.3	5.2	-0.8	2.1	3.2	4.1
Non-Banking Financial Companies (NBFCs)	-1.2	4.4	14.3	26.9	29.5	30.0	35.4	41.5	55.6	57.2	55.1
Other Services	14.0	12.5	21.3	15.9	36.7	36.6	36.5	37.9	35.6	39.2	23.7
Personal Loans	14.1	16.8	18.9	17.8	19.1	18.6	17.9	15.1	16.8	17.2	17.0
Housing	11.4	12.8	14.2	13.3	14.9	15.5	15.8	15.6	17.6	16.8	17.1
Advances against Fixed Deposits	-2.5	-1.6	-7.1	9.6	22.0	10.5	13.7	12.8	30.5	26.9	24.5
Advances to Individuals against share, bonds, etc.	-7.0	-3.6	21.8	17.0	4.9	7.5	8.3	10.6	11.3	9.4	6.9
Credit Card Outstanding	33.4	38.7	36.2	31.6	35.2	33.1	31.3	31.7	30.9	33.8	31.7
Education	1.8	1.1	-1.3	-0.5	-1.4	-0.8	-1.3	-4.0	-3.4	-3.5	-1.8
Vehicle Loans	9.7	9.2	9.3	11.3	9.9	10.4	11.1	9.4	9.1	9.9	8.8
Other Personal Loans	28.0	37.0	44.5	35.3	35.5	32.2	27.5	21.6	22.1	24.7	23.8

Note: 1. Data are provisional and relate to select banks which cover about 90 per cent of total non-food credit extended by all scheduled commercial banks.

2. Times series data are available in the Database on Indian Economy and can be accessed at <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=publications>.

Source: RBI and Authors' calculations.

Annex Table III: Heat Map – Growth in Credit

Sector	Nov 17/ Nov 16	Dec 17/ Dec 16	Jan 18/ Jan 17	Feb 18/ Feb 17	Mar 18/ Mar 17	Apr 18/ Apr 17	May 18/ May 17	Jun 18/ Jun 17	Jul 18/ Jul 17	Aug 18/ Aug 17	Sep 18/ Sep 17	Oct 18/ Oct 17	Nov 18/ Nov 17	Dec 18/ Dec 17
Non-food Credit	8.8	10.0	9.5	9.8	8.4	10.7	11.1	11.1	10.6	12.4	11.3	13.4	13.8	12.8
Agriculture Activities	8.4	9.5	9.4	9.0	3.8	5.9	6.4	6.5	6.6	6.6	5.8	8.0	7.7	8.4
Industry (Micro, Medium and Large)	1.0	2.1	1.1	1.0	0.7	1.0	1.4	0.9	0.3	1.9	2.3	3.7	4.0	4.4
Infrastructure	-2.3	-0.7	-2.9	-1.9	-1.7	-1.3	-0.7	0.0	2.2	4.3	4.7	8.0	8.9	9.2
Basic Metal & Metal Product	1.0	0.1	0.0	-1.0	-1.2	-0.9	-3.6	-5.5	-8.3	-7.8	-7.9	-8.8	-8.2	-8.1
Textiles	4.6	7.6	9.5	7.9	6.9	5.1	5.6	5.5	4.2	2.5	1.3	1.7	1.8	-0.4
Chemicals & Chemical Products	3.2	10.6	13.8	5.7	-5.5	-1.8	4.2	2.3	4.9	7.7	11.7	11.0	9.3	11.0
Services	14.0	14.7	13.2	14.2	13.8	20.7	21.9	23.3	23.0	26.7	24.0	27.4	28.1	23.2
Trade	16.1	16.4	15.9	13.8	9.1	13.6	15.5	15.2	14.0	16.0	10.8	12.5	10.8	10.3
Non-Banking Financial Companies (NBFCs)	13.8	14.3	16.1	22.1	26.9	29.5	30.0	35.4	40.3	43.9	41.5	55.6	57.2	55.1
Personal Loans	17.3	18.9	20.0	20.4	17.8	19.1	18.6	17.9	16.7	18.2	15.1	16.8	17.2	17
Housing (Including Priority Sector Housing)	13.1	14.2	15.2	16.5	13.3	14.9	15.5	15.8	16.5	17.0	15.6	17.6	16.8	17.1
Vehicle Loans	8.0	9.3	10.1	9.9	11.3	9.9	10.4	11.1	11.2	12.7	9.4	9.1	9.9	8.8

Lower credit growth



Higher credit growth



Note: Colour description

Source: RBI and Authors' calculations.

Table IV: Growth in Credit across Various Sectors

(Per cent, y-o-y)

Industry	Jun 17/ Jun 16	Sep 17/ Sep 16	Dec 17/ Dec 16	Mar 18/ Mar 17	Apr 18/ Apr 17	May 18/ May 17	Jun 18/ Jun 17	Jul 18/ Jul 17	Aug 18/ Aug 17	Sep 18/ Sep 17	Oct 18/ Oct 17	Nov 18/ Nov 17	Dec 18/ Dec 17
Mining & Quarrying (incl. Coal)	-3.5	-3.8	-2.3	19.7	6.4	22.5	22.2	24.6	30.1	29.8	32.3	31.8	24.9
Food Processing	-0.7	0.6	11.6	6.8	5.6	5.2	3.3	1.4	1.8	2.2	4.2	1.3	2.8
Sugar	-20.1	-11.5	-5.4	-11.5	-13.3	-13.6	-7.0	-4.4	-7.0	-10.5	-7.5	-9.8	-7.8
Edible Oils & Vanaspati	-5.5	6.2	16.4	15.0	13.9	15.7	15.5	16.9	12.5	16.5	14.6	9.9	10.2
Tea	18.1	5.1	32.2	25.7	39.3	36.0	23.6	19.1	24.3	23.7	28.4	15.6	10.7
Others	8.1	3.7	15.7	10.9	9.4	8.4	3.3	-0.7	1.3	2.3	4.4	2.0	3.8
Beverage & Tobacco	-0.1	-4.5	-0.8	-9.7	-12.5	-7.7	-15.7	-22.1	-22.9	-16.4	-12.7	-15.9	-16.3
Textiles	-3.2	0.4	7.6	6.9	5.1	5.6	5.5	4.2	2.5	1.3	1.7	1.8	-0.4
Cotton Textiles	-0.6	4.8	11.7	9.7	6.7	5.9	3.8	4.0	1.4	0.1	1.3	2.0	-0.2
Jute Textiles	14.1	23.1	22.4	-4.6	-0.3	1.8	-3.2	-25.2	-29.1	-24.7	-18.6	-12.5	-14.8
Man-Made Textiles	8.2	12.7	20.5	19.3	18.5	11.1	10.7	8.7	7.3	6.7	3.7	3.9	2.5
Other Textiles	-9.7	-8.3	-1.1	0.5	-0.4	3.7	6.5	4.3	3.7	2.3	2.4	1.3	-1.1
Leather & Leather Products	0.6	3.3	8.4	5.7	8.3	6.3	4.8	5.1	5.4	2.6	4.4	3.7	-1.6
Wood & Wood Products	-2.2	2.0	6.5	3.3	7.3	9.8	9.6	10.1	9.5	6.4	7.9	8.3	8.4
Paper & Paper Products	-6.5	-11.4	-8.8	-6.1	-7.1	-6.6	-4.5	-5.0	-3.8	-5.4	-2.1	-1.6	-3.2
Petroleum, Coal Products & Nuclear Fuels	0.3	-5.5	-4.0	9.4	16.0	19.7	21.8	5.9	10.8	18.5	9.5	15.1	20.7
Chemicals & Chemical Products	-1.4	2.2	10.6	-5.5	-1.8	4.2	2.3	4.9	7.7	11.7	11.0	9.3	11.0
Fertiliser	8.6	-1.4	0.6	-8.6	16.9	16.8	-0.3	4.2	21.3	34.1	3.7	11.9	11.7
Drugs & Pharmaceuticals	-18.2	-4.2	0.5	4.4	7.6	12.2	16.0	10.4	13.0	8.4	12.9	13.6	7.6
Petro Chemicals	29.5	15.1	36.6	-23.7	-27.4	-18.9	-20.0	-15.6	-15.8	-8.8	-1.5	-8.3	4.5
Others	-10.5	0.5	7.6	8.1	8.5	14.1	13.5	21.2	18.4	23.6	25.9	20.8	20.9
Rubber, Plastic & their Products	6.3	7.6	12.4	8.2	10.6	10.6	6.9	7.6	11.0	8.8	8.8	7.7	9.5
Glass & Glassware	-9.6	-10.0	3.2	6.5	9.2	15.0	18.0	28.6	25.9	30.3	30.6	23.7	23.3
Cement & Cement Products	-7.7	3.3	-0.2	-3.1	-2.3	5.7	2.7	-4.8	-5.5	-10.4	-4.2	4.5	3.7
Basic Metal & Metal Product	-1.0	0.1	0.1	-1.2	-0.9	-3.6	-5.5	-8.3	-7.8	-7.9	-8.8	-8.2	-8.1
Iron & Steel	2.3	3.6	3.4	2.2	1.0	-2.8	-6.5	-10.4	-9.2	-9.2	-10.6	-9.8	-9.3
Other Metal & Metal Product	-10.9	-10.1	-9.8	-11.8	-7.3	-6.4	-2.2	-1.2	-2.9	-3.4	-2.6	-2.9	-3.6
All Engineering	-4.3	-1.7	3.0	3.8	4.4	4.8	4.3	4.3	6.0	3.8	4.6	5.1	6.7
Electronics	-15.6	-1.9	2.7	2.3	3.9	7.1	5.9	6.6	11.9	2.8	0.4	6.5	6.9
Others	-0.6	-1.7	3.0	4.2	4.5	4.2	3.8	3.7	4.4	4.1	5.9	4.7	6.6
Vehicles, Vehicle Parts & Transport Equipment	3.0	-2.6	2.0	7.0	3.8	0.5	6.0	6.0	6.7	9.1	10.6	10.2	10.8
Gems & Jewellery	-0.8	4.0	0.7	5.3	-1.4	0.5	-1.3	0.1	-2.3	-3.7	-0.3	-0.2	-1.5
Construction	12.4	5.7	8.9	9.5	10.6	8.3	7.3	10.5	8.4	8.7	9.6	8.8	7.8
Infrastructure	-2.5	-1.0	-0.7	-1.7	-1.3	-0.7	0.0	2.2	4.3	4.7	8.0	8.9	9.2
Power	-1.6	-0.7	-1.5	-1.1	-0.8	-1.0	-1.2	0.4	1.6	1.1	3.5	5.4	5.3
Telecommunications	-9.1	13.2	6.9	-0.6	4.2	5.3	6.8	9.5	10.5	5.5	12.6	6.6	6.0
Roads	-6.5	-6.5	-5.3	-7.5	-8.0	-4.9	-5.7	-5.4	0.0	1.6	3.6	6.8	9.8
Other Infrastructure	5.6	-2.9	4.9	3.7	2.8	2.9	8.7	16.8	18.9	26.0	32.9	29.9	28.7
Other Industries	5.1	-3.3	1.4	-4.2	-1.1	-2.4	-5.0	-11.0	-3.4	-1.8	-1.3	-2.5	-0.3
Industries	-1.1	-0.4	2.1	0.7	1.0	1.4	0.9	0.3	1.9	2.3	3.7	4.0	4.4

Note: 1. Data are provisional and relate to credit extended to the sub-sectors of industries by select scheduled commercial banks.

2. Times series data are available in the Database on Indian Economy and can be accessed at <https://dbie.rbi.org.in/DBIE/dbie.rbi?site=publications>.

Source: RBI and Authors' calculations.

Annex Table V: Long-run ARDL Regression for Non-food Credit

Explanatory variables	Model: ARDL (1, 0, 3, 0, 3, 4) Dependent variable: Non-food credit growth (Period: Q1:2008 to Q3:2018)	
	Coefficient	t-Statistic
Constant	-253.47	-3.55***
GVA	0.44	2.48**
IRSPD(-1)	7.17	2.22**
NPA(-1)	-0.50	-1.42
DEPOSIT(-1)	0.66	2.92***
Log of BEI	50.78	3.79***
R ²	0.94	
DW statistic	2.06	
F-Statistics Bound Test	5.58***	
Speed of adjustment / Cointegration parameter	-0.96	-6.38***

Note: ***, ** and * indicate 1 per cent, 5 per cent and 10 per cent level of significance, respectively.

Source: Authors' estimates.

Annex Table VI: Long-run ARDL Regression for Agriculture Credit Growth

Variables	Model: ARDL (1, 4, 4, 3, 2) Dependent variable: Agriculture credit growth (Period: Q1:2008 to Q3:2018)	
	Coefficient	t-Statistic
Constant	24.64	2.65***
IND_GVA(-2)	-1.16	-4.21***
AGR_GVA(-1)	0.80	2.40**
WALR	-2.71	-2.13**
DEPOSIT(-1)	0.85	3.18***
R ²	0.93	
DW statistic	2.07	
F-Statistics Bound Test	9.18***	
Speed of adjustment / Cointegration parameter	-0.77	-7.39***

Note: ***, ** and * indicate 1 per cent, 5 per cent and 10 per cent level of significance, respectively.

Source: Authors' estimates.

Annex Table VII: Long-run ARDL Regression for Credit to Industry

Explanatory variables	Model: ARDL (1, 0, 3, 0, 0) Dependent variable: Credit to industry (Period: Q1:2008 to Q3:2018)	
	Coefficient	t-Statistic
Constant	-232.00	-2.03**
IND_GVA	0.17	0.80
Log of CU	117.17	2.56**
WALR	-4.13	-2.11**
NPA	-1.94	-4.12***
R ²	0.96	
DW statistic	2.01	
F-Statistics Bound Test	6.96***	
Speed of adjustment / Cointegration parameter	-0.51	-6.31***

Note: ***, ** and * indicate 1 per cent, 5 per cent and 10 per cent level of significance, respectively.

Source: Authors' estimates.

Annex Table VIII: Long-run ARDL Regression for Credit to Transport Operators, Tourism, Hotels & Restaurants and Trade

Variables	Model: ARDL (1, 1, 3, 1, 3, 3) Dependent variable: Credit to TTTH (Period: Q1:2008 to Q3:2018)	
	Coefficient	t-Statistic
Constant	0.59	0.03
THTC_GVA	0.71	2.93***
WALR(-4)	-0.67	-0.30
RAILF	0.72	2.06*
CVSALE(-3)	0.10	1.85*
FTA	-0.40	-1.95*
R ²	0.91	
DW statistic	2.21	
F-Statistics Bound Test	6.24***	
Speed of adjustment / Cointegration parameter	-0.66	-6.78***

Note: ***, ** and * indicate 1 per cent, 5 per cent and 10 per cent level of significance, respectively.

Source: Authors' estimates.

Annex Table IX: Long-run ARDL Regression for Credit to Professional Services, Commercial Real Estate, Non-Banking Financial Companies, Housing and Real Estate

Variables	Model: ARDL (2, 3, 4, 2, 4) Dependent variable: Credit to services (Period: Q1:2008 to Q3:2018)	
	Coefficient	t-Statistic
Constant	-430.91	-5.85***
WALR	-9.07	-5.89***
DEPOSIT	1.45	9.40***
CD_RATIO	3.45	9.69***
Log of BEI(-1)	63.86	6.37***
R ²	0.95	
DW statistic	2.15	
F-Statistics Bound Test	15.36***	
Speed of adjustment / Cointegration parameter	-0.94	-9.64***

Note: ***, ** and * indicate 1 per cent, 5 per cent and 10 per cent level of significance, respectively.

Source: Authors' estimates.

*Contours of Liquidity Management: Developments During 2018-19**

Against the backdrop of fundamental shifts in the operating procedure of monetary policy and market reforms undertaken over the last decade, a review of the liquidity developments during 2018-19 shows that there was smooth transmission of policy repo rate changes in the inter-bank call money market. Empirical findings highlight the importance of both rate and quantum channels in policy transmission at the short-end of the financial market spectrum.

Introduction

Liquidity management by central banks typically refers to the operating framework of monetary policy that ensures the first leg of transmission by anchoring an interest rate prevailing at the short end of the market spectrum – the operating target – to the policy interest rate. The framework comprises forward-looking assessment of liquidity conditions, effective communication with markets, appropriate choice of instrument/s and conduct of liquidity operations consistent with the stance of monetary policy. Even though liquidity management has short-term effects in financial markets, its implications are enduring in terms of its impact on consumption, investment and capital formation in the economy. It is from this standpoint that a central bank's liquidity management strategy links the daily monetary policy operations, through the operating target, to overall macroeconomic developments by influencing the term structure of interest rates (Bindseil, 2004).

Efficient liquidity management is critical to the operationalisation of monetary policy, the

“plumbing in its architecture” (Patra, *et al*, 2016). The main challenge before liquidity management is to ensure swift and seamless transmission of changes in the policy instrument to the operating target on a continuous basis. Accordingly, central banks simultaneously modulate liquidity conditions by influencing supply conditions in the market for bank reserves, typically the inter-bank market. The efficacy of liquidity management operations hinges on being prescient in assessing liquidity and market conditions and deploying instruments productively, singly and/or in combinations. In turn, these operations ensure controllability of reserves, the integrity and smooth functioning of the payment and settlement architecture and the orderly evolution of the interest rate structure.

The liquidity management framework of the Reserve Bank of India (RBI) has evolved through progressive refinements since 1999 in response to changing domestic and global conditions. Since 2011, the fixed overnight repurchase (repo) rate under the Liquidity Adjustment Facility (LAF) has been formally announced as the single monetary policy rate with the weighted average call money rate (WACR) as the operating target of monetary policy (RBI, 2011). The objective of liquidity management is to align the WACR with the policy rate. The legitimacy of this framework along with the full institutional architecture, accountability mechanisms, and communication requirements were laid out in the monetary policy framework agreement (MPFA) between the RBI and the Government of India (GoI) under the provision of the RBI Act amended in 2016 that *inter alia* set a medium-term inflation target of 4 ± 2 per cent for the RBI in February 2015 (Patra, 2017). The MPFA enjoins the RBI to set out the operating procedure on liquidity management framework and any changes effected therein from time to time in the public domain. This requirement is fulfilled through the Monetary Policy Report (MPR).

* Prepared by Indranil Bhattacharyya, Samir Ranjan Behera and Bhimappa Talwar of the Monetary and Liquidity Analysis Division, Monetary Policy Department, Reserve Bank of India. The views expressed are those of the authors and do not represent the views of the Reserve Bank of India.

This article addresses the trials and tribulations confronting the RBI during 2018-19 when domestic liquidity conditions witnessed large and dramatic swings between surplus and deficits in a setting characterised by the gradual normalisation of the US monetary policy, firming up of global interest rates, oscillating geo-political developments, trade tensions and volatile movements in international crude oil prices. In doing so, it seeks to undertake an analytical assessment of the performance of the RBI in achieving the objectives of liquidity management. An important aspect of this assessment is the management of durable liquidity engendered by large foreign exchange interventions in the context of heightened turbulence in currencies across emerging market economies (EMEs) and unusual surges in the demand for domestic currency. The rest of the article is organised into four sections. The current liquidity management framework is reviewed in Section 2. Developments during the year and outcomes *vis-à-vis* mandate are discussed in Section 3. An empirical evaluation of the transmission of policy impulses to the operating target is taken up in Section 4. The final section presents concluding observations.

2. Evolution of Liquidity Management Framework

In consonance with the changing monetary policy framework in India, the operating procedure of monetary policy has undergone significant refinements. In April 1999, an Interim Liquidity Adjustment Facility (ILAF), operated through repos and lending against collateral of Government of India (GoI) securities, was introduced under which liquidity was injected at various interest rates, but absorbed at the fixed (reverse) repo rate. A collateralised lending facility (CLF) was established alongside an additional collateralised lending facility (ACLF), with export credit refinance and liquidity support to Primary Dealers (PDs) all linked to the Bank Rate. The transition from ILAF to a full-fledged liquidity adjustment facility (LAF) commenced in June 2000.

With the introduction of the LAF, steering overnight money market rates emerged as the key challenge in daily liquidity management operations. The LAF was operated through overnight fixed rate repo (liquidity injection rate) and reverse repo (liquidity absorption rate) from October 2004 to guide the evolution of the term structure of interest rates, consistent with monetary policy objectives (Patra and Kapur, 2012). The LAF became the principal instrument of liquidity management, as it set up an interest rate corridor (with repo rate as the ceiling and reverse repo rate as the floor) varying between 100 bps and 300 bps. As an additional instrument, the Market Stabilisation Scheme (MSS) was introduced in April 2004 to relieve the LAF from the burden of sterilisation operations (Mohan, 2006).

In the ensuing years, the operative policy rate alternated between repo and reverse repo rates depending on deficit and surplus liquidity conditions in the money market which were, in turn, influenced by dramatic swings in capital inflows/outflows. Such oscillating liquidity conditions resulted in call money rate exhibiting highly volatile movements, often breaching either the ceiling or the floor of the corridor. Accordingly, the operating framework was modified in May 2011. The repo rate was made the single independently varying policy rate for transmitting policy signals, on the premise of keeping the system in a deficit mode for efficient transmission of monetary policy impulses (RBI, 2011).¹ A marginal standing facility (MSF) was instituted under which banks could borrow overnight at their discretion by dipping up to 1 per cent into the statutory liquidity ratio (SLR) at 100 basis points (bps) above the repo rate to provide a safety valve against unanticipated liquidity shocks (Patra *et al.*, 2016). The corridor was re-defined as a symmetric one with a fixed width of 200 bps. The repo rate was placed in the middle of the corridor while the reverse repo rate and the MSF rate were placed 100 bps below and 100 bps above the repo rate, respectively.

¹ This, however, resulted in the transmission of policy rate cuts remaining incomplete during the policy easing phase (Patra *et al.* 2016).

Several shortcomings of this framework, however, came to the fore in the immediate aftermath of the global financial crisis and particularly, during the taper tantrum of May 2013. The Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework (Chairman: Dr. Urjit R. Patel; RBI, 2014) noted that excessive reliance of the RBI on the overnight segment of the money market should be avoided by deemphasising overnight repos; instead, liquidity management operations should be conducted through term repos of different tenors. Accordingly, the Committee recommended design changes and refinements in the operating framework with flexibility in the use of instruments but consistent with the overall objectives of monetary policy. Some elements of the revised liquidity management framework were put in place in September 2014.

The key change in the framework was doing away with unlimited accommodation of liquidity needs at the fixed LAF repo rate. Other important aspects of the revised framework included: (i) provision of the predominant portion of central bank liquidity through term repo auctions; (ii) introduction of fine-tuning operations through repo/reverse repo auctions of maturities varying from intra-day to 28 days with liquidity assessment undertaken on a continuous basis; (iii) phasing out export credit refinance; and (iv) progressive reduction in the statutory liquidity ratio (SLR).

Thus, liquidity modulation became increasingly at the discretion of the RBI than in the earlier framework. The main liquidity provision instrument - the 14-day term repo - is synchronised with the reserve maintenance period which allows market participants to hold central bank liquidity for a relatively longer duration. This facilitates lending in the term money segment of the interbank market and is expected to develop market segments and benchmarks for term transactions. More importantly, term repos wean away market participants from their passive dependence on the RBI for cash/treasury management.²

² Term repos are also an efficient indicator of underlying liquidity conditions in the market.

The liquidity management framework was further fine-tuned in view of the shift of monetary policy stance to an accommodative mode in April 2016. The Reserve Bank also indicated that it would smoothen the supply of durable liquidity³ over the year using asset purchases and sales as per requirements. During 2017-18, liquidity management operations were principally aimed at modulating system liquidity from a surplus mode to a position closer to neutrality, consistent with the stance of monetary policy. Anticipating that surplus liquidity conditions may persist throughout the year, both on account of liquidity overhang and higher capital inflows, the Reserve Bank provided forward guidance on liquidity in April 2017 when it indicated it would (i) conduct variable rate reverse repo auctions with a preference for longer term tenors to absorb the remaining post-demonetisation liquidity surplus; (ii) issue Treasury Bills (T-Bills) and dated securities under the market stabilisation scheme (MSS) to modulate liquidity from other sources; (iii) issue cash management bills (CMBs) of appropriate tenors in accordance with the memorandum of understanding (MoU) with the Government of India (GoI) to manage enduring surpluses due to government operations; (iv) conduct open market operations (OMOs) to manage durable liquidity with a view to moving system level liquidity to neutrality; and (v) fine-tune variable rate reverse repo/repo operations to modulate day-to-day liquidity (RBI, 2018). Moreover, in consonance with the recommendation of the Expert Committee to Revise and Strengthen the Monetary Policy Framework (Chairman: Dr. Urjit R. Patel), the width of the policy rate corridor was narrowed from 100 bps in April 2016 to 50 bps in April 2017 in a symmetric manner. Accordingly, the reverse repo rate under the liquidity adjustment facility (LAF) was placed 25 bps below the policy repo rate, while the marginal standing facility (MSF) rate was placed 25 bps above the policy repo rate. As a result, volatility (standard deviation) in the call money market reduced from 0.19 in 2016-17 to 0.10 in 2017-18 even as the volume of the total overnight market remained broadly unchanged.

³ The enduring liquidity in the economy which would facilitate growth while being supportive of the monetary policy stance (RBI, 2016).

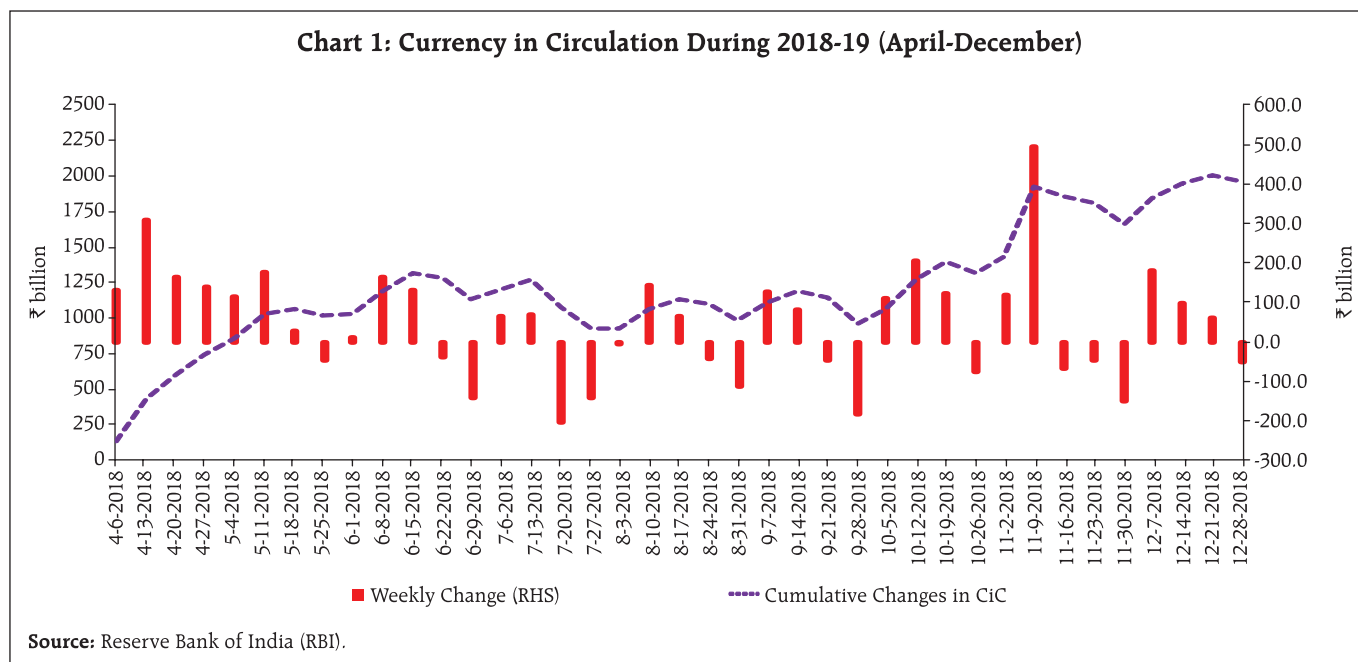
Liquidity management operations during 2018-19 were further facilitated by several regulatory changes. Based on an assessment of financial market conditions, the RBI progressively increased Facility to Avail Liquidity for Liquidity Coverage Ratio (FALLCR) taking the total carve out from the statutory liquidity ratio (SLR) available to banks to 15.5 per cent of their net demand and time liabilities (NDTL) by December 2018⁴. The increase in FALLCR supplemented the ability of individual banks to avail liquidity, if required, from the repo market against high-quality collateral, which, over time, would improve the distribution of liquidity in the financial system. Moreover, with a view to align the SLR with the LCR requirement, it was proposed in December 2018 to reduce the SLR by 25 basis points every calendar quarter – the first such reduction being effective from the quarter commencing January 2019 – until the SLR reaches 18 per cent of NDTL. Furthermore, forward guidance on OMO auctions through the release of an advance schedule indicating the quantum of operations planned for the month helped in conditioning market expectations. Against the backdrop of these significant

changes in the liquidity management framework, it is pertinent to analyse the developments during 2018-19 (April-December) in the next Section.

3. Liquidity Developments During 2018-19

a. Drivers and management of liquidity

Reflecting domestic and global financial market conditions, systemic liquidity underwent significant shifts in the first three quarters of 2018-19. Intensification of fears on global trade tensions and faster than anticipated normalisation of the US monetary policy resulted in capital outflows from the beginning of the year exerting depreciation pressure on the domestic currency. Consequently, the RBI had to intervene through sale of foreign assets, which sucked out domestic liquidity (Annex Table 1). Large currency expansion, representing leakage of liquidity from the financial system, has been a feature persisting through 2018-19, exacerbating the pressure on system level liquidity. Around Diwali (November 7, 2018), for instance, weekly expansion in currency in circulation (CiC) of ₹494 billion was unprecedented (Chart 1).

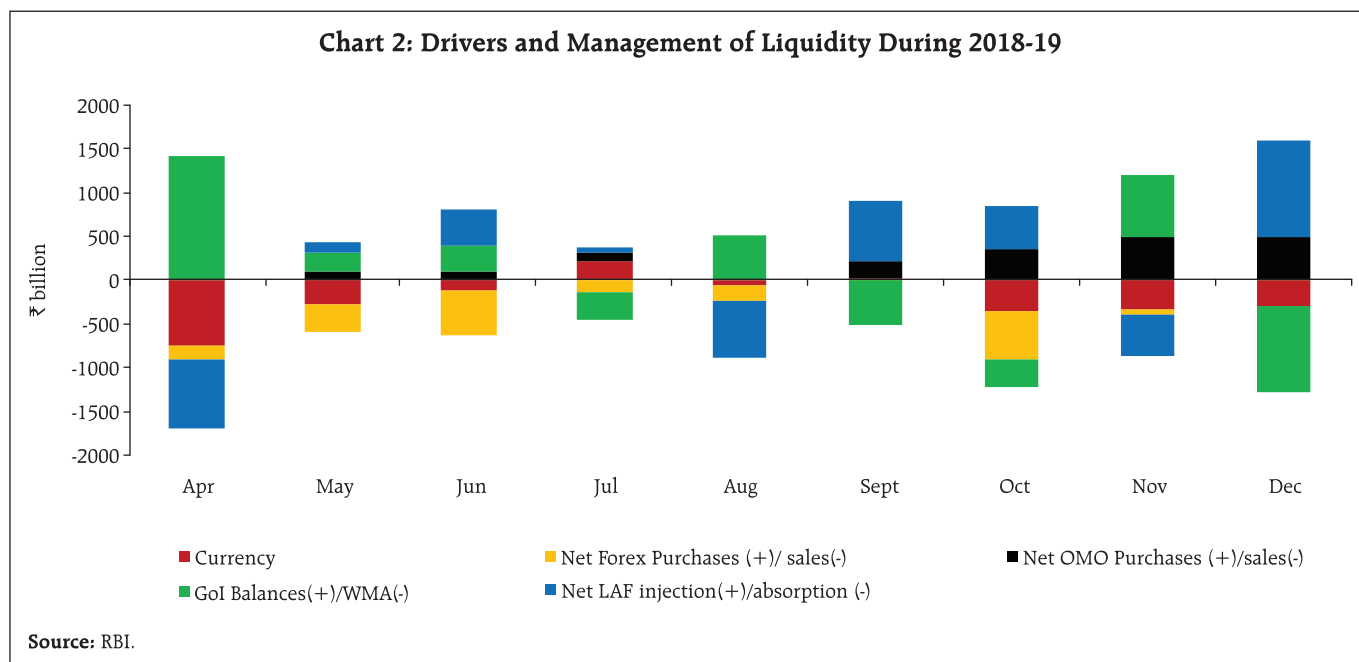


⁴ Including FALLCR (13 per cent), MSF (2 per cent) and Government securities held by banks up to an amount equal to their incremental outstanding credit to non-bank financial companies (NBFCs) and Housing Finance Companies (HFCs), over and above the amount of credit to NBFCs and HFCs outstanding on their books as on October 19, 2018, and limited to 0.5 per cent of the bank's NDTL.

Given the significant changes in systemic liquidity across the first three quarters of 2018-19, it would be useful to introspect on the quarterly developments during the year. In Q1:2018-19, liquidity conditions generally remained in surplus, reflecting the Centres' transfer of Goods and Services Tax (GST) proceeds to States in April and higher spending right up to June 2018. The resulting flow of liquidity into the system (₹1.4 trillion in April) more than offset the drain on liquidity caused by two autonomous factors⁵ – currency expansion by ₹743 billion and forex sales of ₹140 billion – during the month. The scale of forex sales picked up in May and June, and currency expansion continued to be higher than the usual seasonal upsurge, resulting in a liquidity deficit in the system for a brief period from mid-June to July 2018 (further exacerbated by advance tax outflows). Accordingly, the RBI injected liquidity through variable rate repo of various tenors, in addition to the regular 14-day repo, to tide over the liquidity tightness. In addition, two OMO purchases of ₹100 billion each were conducted by the RBI in May and June 2018 to infuse durable liquidity into

the system (Chart 2). Overall, net liquidity absorption under the LAF moderated progressively during the quarter from an average daily net position of ₹496 billion in April to ₹140 billion in June.

During Q2:2018-19, liquidity conditions gyrated. In July, moderation in government spending (especially in the second half) and the RBI's forex sales, necessitated average daily net injection of ₹107 billion under the LAF, topped up with OMO purchases amounting to ₹100 billion during the month. The system moved back into absorption mode in August (up to August 19) due to increased spending by the Centre which even warranted recourse to ways and means advances (WMA) from the RBI, although indirect tax payments whittled down excess liquidity for a brief period. The RBI absorbed ₹30 billion on an average daily net basis during the month, even as systemic liquidity turned into deficit between August 20 and 30, necessitating liquidity injection. The system moved back into surplus during August 31 - September 10 as Government spending increased in the second half of the month, however, system liquidity swung



⁵ Autonomous drivers of liquidity are the primary liquidity available to banks stemming from regular central banking functions as the currency authority and banker to banks and the government. The typical autonomous factors are banknotes in circulation, foreign exchange assets, and volume of government deposits. These are items in the central bank balance sheet that are not current account holdings of credit institutions.

back into deficit due to advance tax outflows. The RBI undertook daily net injection of liquidity through the LAF to the tune of ₹406 billion along with two OMO purchases amounting to ₹200 billion in the second half of September to meet durable liquidity requirements. Day to day systemic liquidity surplus was managed by the RBI through variable rate reverse repos auctions, with occasional and transient liquidity deficits met through regular 14-day variable rate term repos and other tenors (Chart 3).

Liquidity conditions generally remained in deficit during Q3:2018-19. From the second week of October, the combination of stepped-up festival related large currency demand and the RBI's forex sales resulted in a systemic deficit which continued for the rest of the month. With the Centre expanding spending including by resorting to WMA, the deficit moderated in the beginning of November, but increased subsequently as currency expansion was sustained during the festival season, and it increased in the second half of December mainly on the back of advance tax outflows. In order to meet liquidity needs, the RBI conducted variable rate repos auctions of various tenors, including longer term (28-day and 56-day) in addition to regular 14-day repos. Additionally, durable liquidity to the tune of

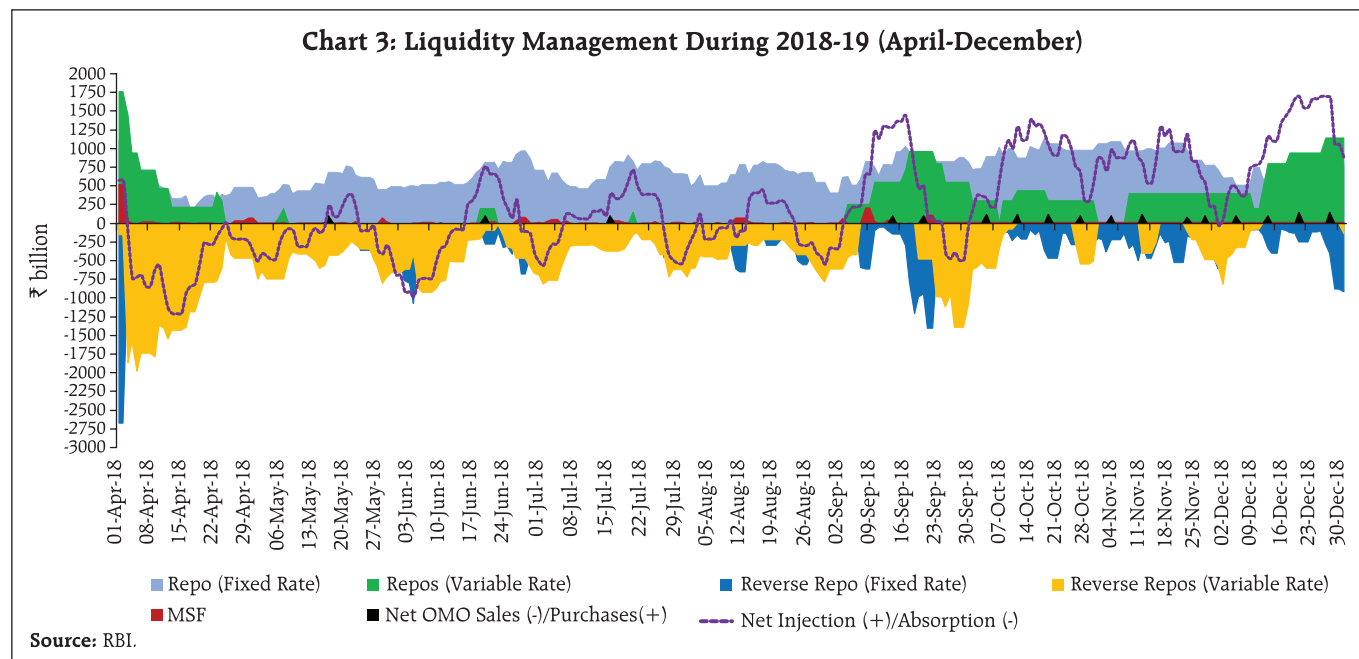
Table 1: OMO Purchase Auctions During 2018-19
(April-December)

Date of Auction	Amount	Month-wise	Quarter
May 17, 2018	100	May - 100	
June 21, 2018	100	June - 100	Q1 - 200
July 19, 2018	100	July - 100	
September 19, 2018	100	September - 200	Q2 - 300
September 27, 2018	100		
October 11, 2018	120		
October 17, 2018	120	October - 360	
October 25, 2018	120		
November 01, 2018	100		
November 06, 2018	100	November - 500	Q3 - 1,360
November 15, 2018	120		
November 22, 2018	80		
November 29, 2018	100		
December 06, 2018	100		
December 13, 2018	100	December - 500	
December 20, 2018	150		
December 27, 2018	150		
Total (17 auctions)	1,860	1,860	1,860

Source: RBI.

₹360 billion were injected through OMOs in October, which was subsequently scaled up to ₹500 billion each in November and December, thus taking the total durable liquidity injection to ₹1.36 trillion during the quarter (Table 1). RBI also conducted variable rate

Chart 3: Liquidity Management During 2018-19 (April-December)



Source: RBI.

reverse repo auctions to mop up sporadic instances of excess liquidity.

To summarise, the RBI's forex operations and currency expansion turned out to be the prime drivers of durable liquidity in the banking system in 2018-19 whereas the ebb and flow of government spending was the key trigger for frictional liquidity movements. As a result, net LAF positions mirrored movements in government cash balances during the year (Chart 4).

The unusual scale of the government's spending through the availment of ways and means advances (WMA) and overdraft (OD) from June onwards, and the compensating variations in the net LAF positions is illustrative of the changing liquidity scenario during 2018-19 (Table 2). The temporary mismatches between receipts and payments of the government were met through recourse to CMBs on six instances aggregating ₹1.3 trillion during April – December.

Large volumes of liquidity injections through longer term maturities (21, 28 and 56 days) were another defining feature of liquidity management during 2018-19, while reverse repos of 7 days maturity

Table 2: Key Liquidity Indicators During 2018-19
(Number of days*)

Month	Net LAF		GoI Cash Balances	
	Deficit	Surplus	WMA/OD	Surplus
April	1	18	0	19
May	5	17	4	18
June	10	11	17	4
July	16	6	16	6
August	10	10	14	6
September	12	6	9	9
October	17	4	12	9
November	18	0	14	4
December	19	1	7	13

*: Working days excluding Saturdays.

Source: Daily Press Release on Money Market Operations and RBI records.

was the preferred instrument for absorbing liquidity in terms of frequency of usage - the relatively shorter maturity for absorption instruments perhaps signifying that episodes of surplus liquidity was not endemic (Table 3).

The evolution of liquidity conditions and their management by the RBI gets encapsulated in the movement of bank reserves. The market for bank reserves evolves largely through the dynamic interaction between the central bank and depository

Chart 4: Net LAF and GoI Balance in 2018-19 (April-December)

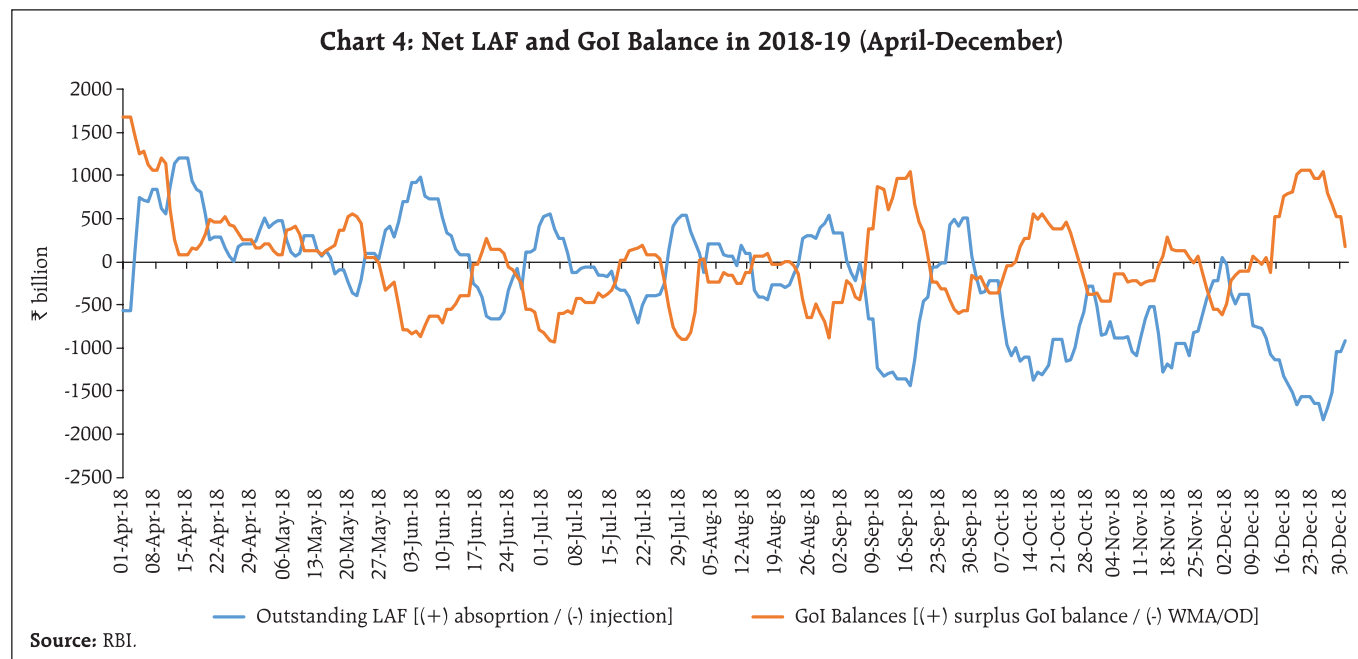


Table 3: Fine-tuning Operations through Variable Rate Auctions (April-December)

	Repo (maturity)						Reverse Repo (maturity)							
	7	8	14	21	28	56	2	3	4	6	7	11	13	14
Frequency (number of days)	3	1	1	2	3	2	3	7	5	2	95	1	1	13
Average volume (₹ billion)	165	250	142	325	250	225	456	344	249	186	140	41	26	44

Source: RBI.

institutions. If liquidity pressures from autonomous drivers of liquidity are not fully offset by liquidity management measures, it reflects in either drawdown or accumulation of bank reserves. An analytical scrutiny of the liquidity drivers and its management during 2018-19 (April-December) throws interesting insights. During the first quarter (April 1-June 29, 2018), autonomous drivers led to liquidity withdrawal more than what was injected through liquidity management operations; consequently, the deficit was met by large drawdown in bank reserves (Table 4). Large injection through repos under the LAF window along with OMO purchases significantly enhanced liquidity injection to the banking system during the third quarter, which reflected in accumulation of bank reserves. Thus, an

aggregative picture of bank reserves (April-December) may be somewhat misleading in decoding liquidity movements during the year.

b. Operating target and marksmanship

The effectiveness of liquidity management lies in the precision with which the WACR – the operating target – can be aligned with the policy repo rate within the LAF corridor. During 2018-19 (April-December), the WACR generally remained below the repo rate while liquidity conditions oscillated between surplus and deficit conditions (Chart 5).

A marked feature of the WACR's movements was that it traded below the repo rate even after surplus conditions in the first quarter of 2018-19 ebbed and

Table 4: Liquidity and Bank Reserves **

{(+) Injection / (-) Absorption of liquidity from banking system}

(₹billion)

	April 1- Jun 29	Jun 29-Sep 28	Sep 28- Dec 28	Total
	(1)	(2)	(3)	4 = (1+2+3)
A. Autonomous Drivers of Liquidity (1+2+3+4)	-696	-113	-1915	-2725
1. Net Purchases from Authorised Dealers (ADs) #	-976	-313	-591	-1881
2. Currency in Circulation	-1138	179	-997	-1956
3. Government of India Cash Balances	1930	-319	-603	1007
4. Others*	-512	340	276	104
B. Management of Liquidity (5+6+7+8)	293	256	2195	2744
5. Net Liquidity Adjustment Facility (LAF) @	-259	90	1113	944
6. Open Market Purchases	207	300	1360	1867
7. Standing Liquidity Facilities for Primary Dealers (PDs)	-1	-5	2	-4
8. CRR Balances \$	347	-129	-280	-63
C. Bank Reserves (A+B)	-403	142	280	18

** : Calculations are based on data pertaining to last Friday of the month; first quarter variation is calculated over March 31, 2018.

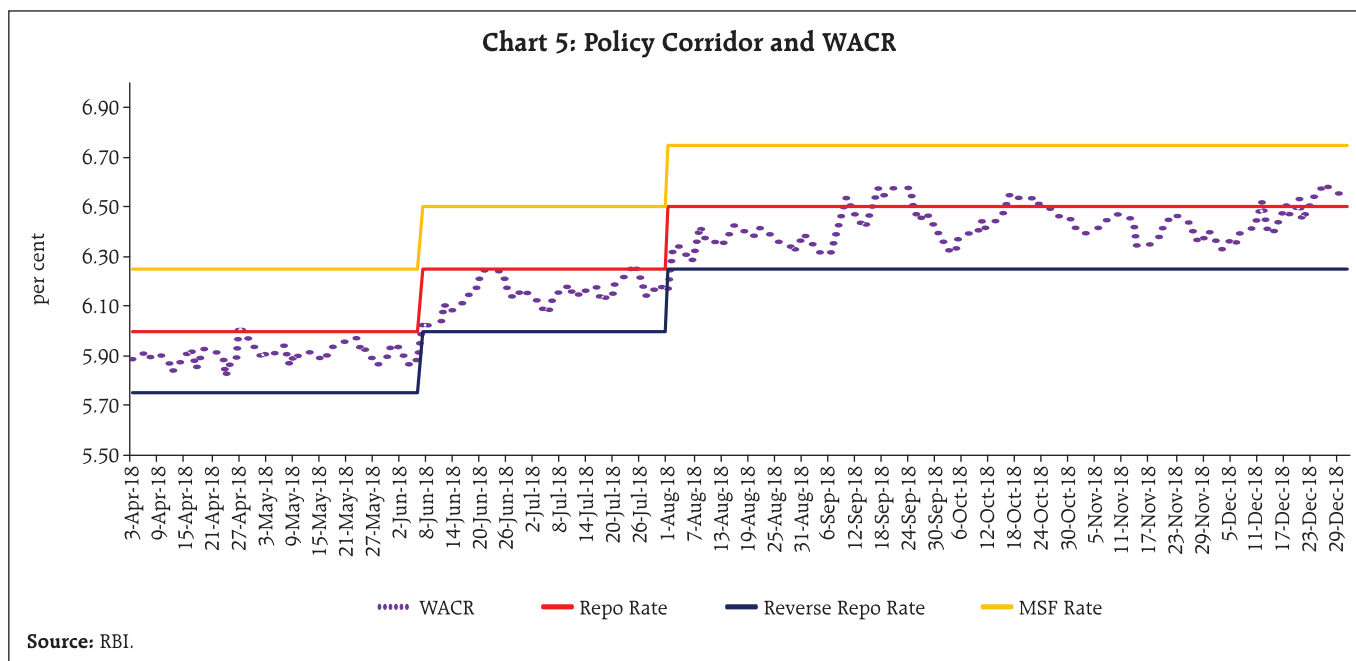
: Net OMO purchases include outright as also NDS-OM operations

* : Include valuation changes, hair cut on operations, etc.

@ : Net LAF represents the liquidity position of fixed rate and variable rate repo and MSF net of reverse repo operations.

\$: Due to increase in NDTL (adjusted for change in excess CRR maintained by banks).

Source: RBI and authors calculations.



systemic liquidity was tight warranting net injection through repos (Table 5 and Chart 6).

There are several reasons for this anomalous behavior:

- (i) most of the co-operative banks are not participants in the NDS-Call trading platform. Non-scheduled co-operative banks, District Central co-operative banks and State co-operative banks tend to enter the inter-bank call money market late in the trading hours - after the closure of the collateralised

market segments – and their lending activity increases during the second half of the day thus driving rates below the repo rate;

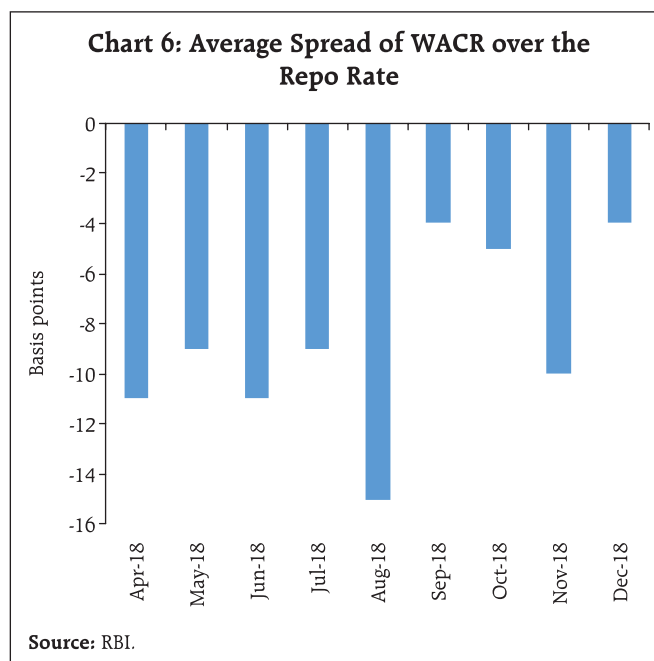
- (ii) the first hour of trading in the inter-bank call money market usually accounts for about 75-80 per cent of the day's volume as most of the market participants are unable to assess their inflows/outflows for

Table 5: WACR, Repo and Net LAF

Months	WACR < Repo Rate	WACR > Repo Rate	Average net LAF deficit (-) /surplus (+)
	Number of days*		(₹ billion)
April	18	1	496
May	22	0	142
June	20	1	140
July	22	0	-107
August	20	0	30
September	11	7	-406
October	15	6	-560
November	18	0	-806
December	12	8	-996

*: Working days excluding Saturdays.

Source: RBI.



the day in the absence of a robust liquidity forecasting framework, and as a result, late-hour demand supply mismatches reflect in low call rates;

- (iii) the absence of uniform market hours across all money market segments (including the collateralised segments), which are not in sync with real time gross settlement (RTGS) timings often have a destabilising impact on the WACR towards the market's closure.

4. Policy Transmission - Empirical Evaluation

We examine the factors determining movements in WACR by augmenting the empirical framework of Patra, *et al.* (2016) with suitable modifications. The explanatory variable, *i.e.*, the change in WACR is explained by both the level and lagged changes in the WACR, the policy repo rate (RR), and outstanding balances under the net LAF as a proportion of net demand and time liability of scheduled commercial banks (RNLAF). While the impact of RR on the WACR represents the *announcement effect* of policy changes, the impact of the RNLAF on WACR captures the *liquidity effect* (Bhattacharyya and Sahoo, 2011).

The empirical analysis is based on daily data covering the period January 1, 2014 – December 31, 2018. Unit root tests indicate that the null hypothesis of nonstationarity cannot be rejected for the WACR and RR. The same, however, is rejected for RNLAF. Bound tests reveal that the three variables (WACR, RR and RNLAF) are cointegrated. Therefore, it is appropriate to use the autoregressive distributed lag (ARDL) approach (Pesaran, *et al.*, 2001) instead of differencing the data and losing valuable information / data series properties especially when they are of different orders of integration. The base line specification for capturing short-run dynamics is given below:

$$\Delta (WACR)_t = a^* (WACR - b^* RR - c^* RNLAF)_{t-1} + \sum d_i^* \Delta (WACR_{t-i}) + \sum e_i^* \Delta (RR_{t-i}) + \sum f_i^* \Delta (RNLAF_{t-i}) + \varepsilon_t \dots \dots \dots (Eq. 1)$$

In the next step, we augment Eq.1 with dummies to capture market idiosyncratic factors. Call money rates tend to spike towards the quarter-end when banks generally reduce lending in the call money market in order to avoid higher risk weights on lending in the uncollateralised segment for meeting their capital adequacy requirements. This phenomenon is captured through an end-quarter dummy (D_quarter). Furthermore, maintenance of reserve requirements is subject to a daily end-of-the-day minimum and fortnightly averaging – *i.e.*, banks hold excess reserves in the first week while drawing down during the second week of the fortnightly reserve maintenance period. The shortage of eligible collateral with liquidity deficient banks prevents access to the RBI's standing facilities on some days of the reserve maintenance period, which can also lead to fluctuations in daily call rates. Accordingly, these effects are sought to be captured by daily dummies (D_daily - represented by dummies D2 to D10)⁶ in the baseline specification. Thus, the extended specification is:

$$\Delta(WACR)_t = a^* (WACR - b^* RR - c^* RNLAF - \sum d^* D_quarter - \sum e_j^* D_daily)_{t-1} + \sum f_i^* \Delta (WACR_{t-i}) + \sum g_i^* \Delta (RR_{t-i}) + \sum h_i^* \Delta (RNLAF_{t-i}) + \sum i_i^* \Delta (D_quarter_{t-i}) + \sum j_i^* \Delta (Dum_daily_{t-i}) + \varepsilon_t \dots \dots \dots (Eq. 2)$$

The estimates of the baseline and the augmented models are presented in Annex Table 2. As the results are qualitatively similar, we focus on the augmented specification (Model 3) for the narrative. The long-run coefficient of the policy repo rate is about unity indicating strong announcement effects, *i.e.*, on an average, the call rate gets closely aligned to the policy rate ahead of liquidity modulating operations. At the same time, the liquidity effect is rather muted (a change of 100 bps in RNLAF results in a change

⁶ Dummies D1, D2, D3, D4 and D5 denote Monday, Tuesday, Wednesday, Thursday and Friday of the first week of the 14-day reserve maintenance period, while D6, D7, D8, D9 and D10 denote Monday, Tuesday, Wednesday, Thursday and Friday of the second week of the reserve maintenance period. To avoid multicollinearity, we do not include a dummy (D1) in the estimated equation for the Monday of the first week.

of 7 bps in the WACR in the opposite direction), *i.e.*, liquidity surplus (deficit) in the system leads to decline (increase) in the WACR. Moreover, the high value of the coefficient on D_quarter (positive and statistically significant) suggests significant pressure on the WACR at the end of each quarter. The coefficient of D_daily, however, turns out to be marginally positive (weakly significant) for the reporting fortnight. Finally, the short-run dynamics captured by the error correction term indicate that the speed of adjustment to any shock is significant – *i.e.*, around 37 per cent of the deviation gets adjusted on the following trading day.

The estimation results for a longer period sample (5 years) are at variance with the developments during the current year. In terms of the liquidity effect, the estimates point to a negative relationship between liquidity conditions and the WACR *i.e.*, liquidity tightness (easing) should result in a hardening (softening) of the WACR above the repo rate. In sharp contrast, developments during the current year indicate that the WACR traded below the repo rate even when systemic liquidity was in deficit. This bears out our hypothesis of issues in market microstructure being at work - asynchronous market closure timings across segments; trading intensity high in early hours; and market timings not in sync with settlement timings. These factors merit greater attention in the ongoing efforts to improve transmission.⁷

5. Concluding Observations

Liquidity management was subjected to conflicting pulls during 2018-19 in an environment suffused with global spillovers, the rapid pace of remonetisation and frictional high tides of budgetary spending. As a consequence, liquidity in the system underwent sizable churns that vitiated patterns of the recent past and necessitated atypical responses

from the RBI in terms of the choice of instrument mix and the timing of deployment – for the first time, pre-announced OMO notified amounts entered the RBI's arsenal of liquidity management instruments. Another defining feature of the 2018-19 experience is that liquidity absorption was conducted through short-tenor (4-7 days) reverse repo whereas liquidity injection was mainly through longer-tenor (28-56 days) repo, indicating that episodes of liquidity surplus in the system were transient. In the event, the combination of one-sided OMOs (purchases) and long-duration repo imparted a downward bias to the WACR which trailed below the policy rate throughout the year, warranting careful review of the framework's performance in terms of the marksmanship objective that has been pursued with the progressive narrowing of the LAF corridor.

The empirical results suggest that announcement effects tend to dominate over liquidity effects so that the market's reactions to policy innovations are stronger and faster than the responsiveness of actual cost of funds to system liquidity shifts engendered by the policy changes when they fully play out. The results also underscore the need for assigning priority to reforms of the market microstructure if the full effects of the overhaul of the liquidity management framework are to be reaped in terms of marksmanship and efficiency of transmission. Significantly, however, the volatility of the WACR has reduced, stabilising market expectations.

An unfinished agenda awaits the evolution of the liquidity framework. The 14-day repo, through which the bulk of primary liquidity is provided to satiate the demand for reserves, needs to replace the fixed rate overnight repo as the single policy rate. Two-way OMOs need to be conducted in a market-based framework so that quantity modulation occurs seamlessly rather than relying on announcement effects. The experience of 2018-19 also suggests that fine-tuning operations should be of short tenors and easily reversible, not

⁷ The Statement on Developmental and Regulatory Policies of the third Bi-monthly Monetary Policy Statement issued on August 01, 2018 announced the setting up of an internal group to comprehensively review timings of various markets and the necessary payment infrastructure for supporting the recommended revisions to market timings.

overwhelming the durable liquidity operations. A more accurate assessment of liquidity needs is critical, combining top-down methodologies and bottom-up approaches. A roadmap for liquidity management reforms has been laid out (RBI, 2014), and it is apposite to carry its implementation forward. The success of liquidity management in terms of its objectives hinges around clear and transparent communication of intent, content, time frame and target(s).

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Annex

Table 1: Movements in Key Drivers and its Impact on Systemic Liquidity

Operation/Instrument/Variable	Change in (1)	Impact on Banking System Liquidity
(1)	(2)	(3)
Autonomous factors		
Currency in circulation	Increase	↓
	Decrease	↑
GoI Cash Balances	Build-up	↓
	Drawdown	↑
Forex intervention by RBI	Purchase	↑
	Sales	↓
Excess Reserves maintained by banks with RBI	Build-up	↓
	Drawdown	↑
Policy driven (Discretionary) factors		
Open Market Operations by RBI	Purchase	↑
	Sales	↓
Cash Reserve Requirements (CRR)	Increase	↓
	Reduction	↑
Net LAF position	Injection*	↑
	Absorption#	↓

*: (Repos + MSF – Reverse Repos) > 0; #: (Repos + MSF – Reverse Repos) < 0; Increase (↑); Decrease (↓)

Source: Authors adaptation from Mitra and Abhilasha, 2014.

Table 2: Policy Rate, Liquidity and the WACR – Alternate Specifications

Variables	Base Line - Model 1	Augmented - Model 2 (with quarterly dummies)	Augmented - Model 3 (with both quarterly and daily dummies)
Selected Model ¹	ARDL(5, 1, 1)	ARDL(5, 1, 1)	ARDL(5, 1, 1)
<i>Long-run equation: dependent variable: WACR</i>			
RR	1.05 (0.00)	1.06 (0.00)	1.06 (0.00)
RNLAF	-0.08 (0.00)	-0.07 (0.00)	-0.07 (0.00)
D_quarter	-	1.33 (0.00)	1.32 (0.00)
D_Daily10	-	-	0.03 (0.08)
Error correction (-1)	-0.34 (0.00)	-0.37 (0.00)	-0.37(0.00)
Adj. R ²	0.94	0.95	0.95
F-Statistics	37.75	50.51	50.81
Lower and upper bound critical value	1% [4.13, 5.00]	1% [4.13, 5.00]	1% [4.13, 5.00]
Q-statistics	5.52 (0.85)	21.99 (0.15)	21.71 (0.17)

Note: Figures in parenthesis indicate p-value. ¹Lag length is selected using Akaike Information Criteria (AIC).

Source: Author's estimates.

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Notes: .. = Not available.

- = Nil/Negligible.

P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2017-18	2017-18		2018-19	
		Q1	Q2	Q1	Q2
	1	2	3	4	5
1 Real Sector (% Change)					
1.1 GVA at Basic Prices	6.9	5.6	6.1	8.0	6.9
1.1.1 Agriculture	5.0	3.0	2.6	5.3	3.8
1.1.2 Industry	6.1	-0.4	7.1	10.8	6.5
1.1.3 Services	7.8	8.5	6.4	7.5	7.5
1.1a Final Consumption Expenditure	8.6	8.7	6.3	8.4	8.0
1.1b Gross Fixed Capital Formation	9.3	0.8	6.1	10.0	12.5
	2017-18	2017		2018	
	1	Nov.	Dec.	Nov.	Dec.
	1	2	3	4	5
1.2 Index of Industrial Production	4.4	8.5	7.3	0.5	-
2 Money and Banking (% Change)					
2.1 Scheduled Commercial Banks					
2.1.1 Deposits	6.2	3.0	3.6	10.8	8.9
2.1.2 Credit	10.0	9.3	10.4	16.2	13.9
2.1.2.1 Non-food Credit	10.2	9.6	11.2	16.3	13.8
2.1.3 Investment in Govt. Securities	9.5	3.6	-6.7	2.0	-0.5
2.2 Money Stock Measures					
2.2.1 Reserve Money (M0)	27.4	30.4	55.9	18.9	17.0
2.2.2 Broad Money (M3)	9.2	8.4	10.0	10.4	10.2
3 Ratios (%)					
3.1 Cash Reserve Ratio	4.00	4.00	4.00	4.00	4.00
3.2 Statutory Liquidity Ratio	19.50	19.50	19.50	19.50	19.50
3.3 Cash-Deposit Ratio	5.1	4.7	5.1	4.8	5.1
3.4 Credit-Deposit Ratio	75.5	73.5	74.7	77.1	78.2
3.5 Incremental Credit-Deposit Ratio	117.3	250.9	173.7	111.6	139.2
3.6 Investment-Deposit Ratio	29.0	31.0	30.5	28.5	27.9
3.7 Incremental Investment-Deposit Ratio	43.0	853.3	159.9	17.8	1.1
4 Interest Rates (%)					
4.1 Policy Repo Rate	6.00	6.00	6.00	6.50	6.50
4.2 Reverse Repo Rate	5.75	5.75	5.75	6.25	6.25
4.3 Marginal Standing Facility (MSF) Rate	6.25	6.25	6.25	6.75	6.75
4.4 Bank Rate	6.25	6.25	6.25	6.75	6.75
4.5 Base Rate	8.65/9.45	8.95/9.45	8.85/9.45	8.95/9.45	8.95/9.45
4.6 MCLR (Overnight)	7.80/7.95	7.70/8.05	7.65/8.05	8.15/8.45	8.15/8.55
4.7 Term Deposit Rate >1 Year	6.25/6.75	6.00/6.75	6.00/6.75	6.25/7.50	6.25/7.50
4.8 Savings Deposit Rate	3.50/4.00	3.50/4.00	3.50/4.00	3.50/4.00	3.50/4.00
4.9 Call Money Rate (Weighted Average)	6.15	5.89	5.99	6.39	6.57
4.10 91-Day Treasury Bill (Primary) Yield	6.11	6.15	6.19	6.77	6.65
4.11 182-Day Treasury Bill (Primary) Yield	6.33	6.25	6.33	7.06	6.84
4.12 364-Day Treasury Bill (Primary) Yield	6.49	6.28	6.42	7.22	6.94
4.13 10-Year G-Sec Par Yield (FBIL)	7.42	7.25	7.51	7.64	7.36
5 Reference Rate and Forward Premia					
5.1 INR-US\$ Spot Rate (Rs. Per Foreign Currency)	65.04	64.73	63.93	69.66	69.98
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	80.62	76.72	76.39	79.36	80.18
5.3 Forward Premia of US\$ 1-month (%)	4.61	4.26	4.32	4.31	4.37
3-month (%)	4.37	4.08	4.44	4.02	3.97
6-month (%)	4.21	4.39	4.47	4.13	4.09
6 Inflation (%)					
6.1 All India Consumer Price Index	3.6	4.9	5.2	2.3	2.2
6.2 Consumer Price Index for Industrial Workers	3.1	4.0	4.0	4.9	5.2
6.3 Wholesale Price Index	2.9	4.0	3.6	4.6	3.8
6.3.1 Primary Articles	1.3	5.6	3.9	0.9	2.3
6.3.2 Fuel and Power	8.2	8.4	8.0	16.3	8.4
6.3.3 Manufactured Products	2.7	2.7	2.8	4.2	3.6
7 Foreign Trade (% Change)					
7.1 Imports	20.9	23.7	21.5	4.3	-2.4
7.2 Exports	10.0	31.0	15.7	0.7	0.3

Note : Financial Benchmark India Pvt. Ltd. (FBIL) has commenced publication of the G-Sec benchmarks with effect from March 31, 2018 as per RBI circular FMRD.DIRD.7/14.03.025/2017-18 dated March 31, 2018. FBIL has started dissemination of reference rates w.e.f. July 10, 2018.

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

(₹ Billion)

Item	As on the Last Friday/ Friday						
	2017-18	2018		2019			
		Jan.	Dec. 28	Jan. 4	Jan. 11	Jan. 18	Jan. 25
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	18,044.20	17,129.62	19,992.41	20,030.20	20,285.00	20,392.60	20,359.57
1.1.2 Notes held in Banking Department	0.15	0.17	0.13	0.11	0.09	0.12	0.12
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	18,044.35	17,129.79	19,992.54	20,030.31	20,285.09	20,392.72	20,359.69
1.2 Assets							
1.2.1 Gold Coin and Bullion	733.81	683.75	719.43	736.93	736.93	736.93	736.93
1.2.2 Foreign Securities	17,303.70	16,438.93	19,264.84	19,285.17	19,540.04	19,647.71	19,614.75
1.2.3 Rupee Coin	6.84	7.11	8.27	8.21	8.13	8.08	8.01
1.2.4 Government of India Rupee Securities	–	–	–	–	–	–	–
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	9,854.76	8,124.68	7,050.87	6,981.57	6,499.89	6,312.66	6,185.26
2.1.1.1 Central Government	68.08	1.01	1.00	1.01	1.01	1.01	1.00
2.1.1.2 Market Stabilisation Scheme	–	946.73	–	–	–	–	–
2.1.1.3 State Governments	6.51	0.42	0.43	0.42	0.42	0.42	0.42
2.1.1.4 Scheduled Commercial Banks	5,256.86	4,566.12	5,331.73	4,824.90	4,906.90	5,016.46	4,931.14
2.1.1.5 Scheduled State Co-operative Banks	48.28	38.83	34.42	34.26	36.21	34.20	34.45
2.1.1.6 Non-Scheduled State Co-operative Banks	25.49	18.91	21.42	21.94	22.50	22.30	22.54
2.1.1.7 Other Banks	305.66	264.03	286.12	281.43	283.70	281.83	283.25
2.1.1.8 Others	4,143.88	2,288.63	1,375.75	1,810.55	1,249.15	956.43	912.46
2.1.1.9 Financial Institution Outside India	–	–	–	7.07	–	–	–
2.1.2 Other Liabilities	9,141.27	8,675.15	10,559.47	10,777.68	11,102.55	11,343.32	11,431.07
2.1/2.2 Total Liabilities or Assets	18,996.03	16,799.84	17,610.34	17,759.26	17,602.45	17,655.97	17,616.33
2.2 Assets							
2.2.1 Notes and Coins	0.15	0.17	0.13	0.11	0.10	0.12	0.12
2.2.2 Balances held Abroad	8,887.95	8,798.57	6,748.99	6,841.30	6,891.20	6,987.18	7,107.52
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	–	532.93	331.24	171.06	–
2.2.3.2 State Governments	7.39	31.80	7.62	38.28	73.61	56.43	9.19
2.2.3.3 Scheduled Commercial Banks	2,739.78	756.72	1,881.09	1,174.74	1,017.86	1,049.95	999.49
2.2.3.4 Scheduled State Co-op. Banks	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	41.17	59.71	44.60	50.77	48.98	47.98
2.2.3.9 Financial Institution Outside India	–	–	–	7.07	–	–	–
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	6,469.59	8,070.78	8,233.05	8,336.47	8,440.46	8,541.94
2.2.6 Other Assets	883.90	701.82	842.02	887.18	901.21	901.79	910.09
2.2.6.1 Gold	673.37	621.75	759.11	776.86	787.65	787.65	793.12

* 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	
Dec. 1, 2018	10.20	221.28	-	-	-	-	-	-	-	-211.08
Dec. 3, 2018	36.21	601.62	-	177.59	1.77	-	-	-	-	-741.23
Dec. 4, 2018	31.41	163.24	126.50	368.86	0.50	-	-	-	-	-373.69
Dec. 5, 2018	27.16	192.77	-	8.00	22.25	-	-	-	-	-151.36
Dec. 6, 2018	36.11	114.99	-	84.34	1.05	-	-	-	-	-162.17
Dec. 7, 2018	101.26	228.46	66.15	38.48	24.50	-2.19	-	-	100.00	22.78
Dec. 10, 2018	115.96	100.33	-	-	27.30	-	-	-	-	42.93
Dec. 11, 2018	201.37	90.92	235.02	-	5.87	-	-	-	-	351.34
Dec. 12, 2018	212.71	92.86	-	-	0.02	2.01	-	-	-	121.88
Dec. 13, 2018	59.71	160.18	250.02	-	0.50	-	-	-	-	150.05
Dec. 14, 2018	35.46	340.08	469.37	-	29.21	-4.54	-	-	100.00	289.42
Dec. 15, 2018	106.27	62.55	-	-	26.87	-	-	-	-	70.59
Dec. 17, 2018	60.76	83.24	-	-	10.01	-	-	-	-	-12.47
Dec. 18, 2018	60.87	95.03	230.05	-	0.65	4.05	-	-	-	200.59
Dec. 19, 2018	43.58	126.40	142.00	-	1.35	-1.20	-	-	-	59.33
Dec. 20, 2018	184.34	136.34	-	-	15.05	1.65	-	-	-	64.70
Dec. 21, 2018	136.58	255.15	123.24	-	32.05	-	-	-	150.00	186.72
Dec. 24, 2018	209.03	122.87	146.67	-	-	-	-	-	-	232.83
Dec. 26, 2018	227.86	108.20	-	-	158.10	-	-	-	-	277.76
Dec. 27, 2018	205.37	288.25	200.01	-	7.10	-0.90	-	-	-	123.33
Dec. 28, 2018	41.24	401.11	235.02	-	1.26	1.30	-	-	150.00	27.71
Dec. 29, 2018	-	476.99	-	-	-	-	-	-	-	-476.99
Dec. 31, 2018	41.38	916.88	-	137.50	57.35	-	-	-	-	-955.65

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

(US \$ Million)

Item	As on December 31, 2018		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	1,025	419	606
2. More than 1 month and upto 3 months	1,984	1,182	802
3. More than 3 months and upto 1 year	5,453	9,287	-3,834
4. More than 1 year	0	0	0
Total (1+2+3+4)	8,462	10,888	-2,426

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday							
	2017-18	2018						2019
		Jan. 19	Aug. 31	Sep. 28	Oct. 26	Nov. 23	Dec. 21	Jan. 18
	1	2	3	4	5	6	7	8
1 MSF	—	—	1.3	42.0	—	7.5	32.1	5.0
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	25.4	9.8	23.9	19.0	20.3	21.2	20.8	17.0
4 Others								
4.1 Limit	—	—	—	—	—	—	—	—
4.2 Outstanding	—	—	—	—	—	—	—	—
5 Total Outstanding (1+2.2+3.2+4.2)	25.4	9.8	25.1	61.0	20.3	28.7	52.9	22.1

Money and Banking

No. 6: Money Stock Measures

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2017-18	2017	2018		
		Dec. 22	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	17,597.1	16,164.2	19,244.5	19,316.9	19,509.1
1.1 Notes in Circulation	18,037.0	16,717.7	19,850.1	19,881.9	20,041.8
1.2 Circulation of Rupee Coin	249.1	248.5	249.5	249.5	249.5
1.3 Circulation of Small Coins	7.4	7.4	7.4	7.4	7.4
1.4 Cash on Hand with Banks	696.4	809.4	862.6	822.0	789.7
2 Deposit Money of the Public	15,076.2	12,699.0	13,640.3	13,389.2	13,276.7
2.1 Demand Deposits with Banks	14,837.1	12,470.1	13,382.7	13,135.5	13,026.0
2.2 'Other' Deposits with Reserve Bank	239.1	228.9	257.6	253.8	250.7
3 M₁ (1 + 2)	32,673.3	28,863.2	32,884.7	32,706.1	32,785.8
4 Post Office Saving Bank Deposits	1,092.1	1,028.0	1,256.2	1,256.2	1,256.2
5 M₂ (3 + 4)	33,765.4	29,891.2	34,140.9	33,962.3	34,042.0
6 Time Deposits with Banks	106,952.6	103,223.6	112,303.0	113,279.5	112,710.3
7 M₃ (3 + 6)	139,625.9	132,086.8	145,187.7	145,985.6	145,496.1
8 Total Post Office Deposits	3,008.1	2,881.4	3,372.6	3,372.6	3,372.6
9 M₄ (7 + 8)	142,633.9	134,968.2	148,560.4	149,358.3	148,868.7

No. 7: Sources of Money Stock (M₃)

(₹ Billion)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2017-18	2017	2018		
			Dec. 22	Nov. 23	Dec. 7
	1	2	3	4	5
1 Net Bank Credit to Government	40,014.0	39,285.9	43,445.9	44,382.1	42,346.7
1.1 RBI's net credit to Government (1.1.1-1.1.2)	4,759.6	3,868.4	7,127.2	7,812.2	6,830.1
1.1.1 Claims on Government	6,435.6	6,552.1	7,251.6	7,813.6	7,899.0
1.1.1.1 Central Government	6,418.4	6,531.3	7,251.6	7,743.6	7,893.4
1.1.1.2 State Governments	17.2	20.8	0.0	70.0	5.7
1.1.2 Government deposits with RBI	1,676.0	2,683.7	124.4	1.4	1,069.0
1.1.2.1 Central Government	1,675.6	2,683.3	123.9	1.0	1,068.5
1.1.2.2 State Governments	0.4	0.4	0.4	0.4	0.4
1.2 Other Banks' Credit to Government	35,254.4	35,417.5	36,318.7	36,570.0	35,516.6
2 Bank Credit to Commercial Sector	92,137.2	86,419.3	97,243.0	98,009.5	98,770.5
2.1 RBI's credit to commercial sector	140.3	86.9	93.2	88.3	92.8
2.2 Other banks' credit to commercial sector	91,996.9	86,332.3	97,149.8	97,921.2	98,677.7
2.2.1 Bank credit by commercial banks	86,254.2	80,682.7	91,326.3	92,062.5	92,876.4
2.2.2 Bank credit by co-operative banks	5,666.0	5,562.2	5,737.8	5,769.7	5,712.3
2.2.3 Investments by commercial and co-operative banks in other securities	76.7	87.5	85.8	88.9	88.9
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	29,223.0	27,284.0	29,297.1	29,047.4	28,826.0
3.1 RBI's net foreign exchange assets (3.1.1-3.1.2)	27,607.8	25,945.6	27,975.2	27,725.5	27,504.0
3.1.1 Gross foreign assets	27,609.9	25,947.5	27,977.5	27,727.8	27,506.3
3.1.2 Foreign liabilities	2.1	1.9	2.3	2.3	2.3
3.2 Other banks' net foreign exchange assets	1,615.1	1,338.4	1,321.9	1,321.9	1,321.9
4 Government's Currency Liabilities to the Public	256.5	256.0	257.0	257.0	257.0
5 Banking Sector's Net Non-monetary Liabilities	22,004.8	21,158.3	25,055.2	25,710.4	24,704.0
5.1 Net non-monetary liabilities of RBI	9,069.9	8,557.9	10,899.7	10,751.0	10,503.4
5.2 Net non-monetary liabilities of other banks (residual)	12,934.9	12,600.4	14,155.5	14,959.4	14,200.6
M₃ (1+2+3+4-5)	139,625.9	132,086.8	145,187.7	145,985.6	145,496.1

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2017-18	2017	2018		
		Dec. 22	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
Monetary Aggregates					
NM ₁ (1.1 + 1.2.1+1.3)	32,673.3	28,863.2	32,884.7	32,706.1	32,785.8
NM ₂ (NM ₁ + 1.2.2.1)	80,142.1	74,683.5	82,729.5	83,002.3	82,835.7
NM ₃ (NM ₂ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	141,816.7	133,905.3	147,140.8	147,890.5	147,582.8
1 Components					
1.1 Currency with the Public	17,597.1	16,164.2	19,244.5	19,316.9	19,509.1
1.2 Aggregate Deposits of Residents	120,323.4	114,292.9	124,148.8	124,904.7	124,248.0
1.2.1 Demand Deposits	14,837.1	12,470.1	13,382.7	13,135.5	13,026.0
1.2.2 Time Deposits of Residents	105,486.3	101,822.8	110,766.1	111,769.2	111,222.0
1.2.2.1 Short-term Time Deposits	47,468.8	45,820.2	49,844.8	50,296.1	50,049.9
1.2.2.1.1 Certificates of Deposit (CDs)	1,931.1	1,281.5	1,687.0	1,705.0	1,835.4
1.2.2.2 Long-term Time Deposits	58,017.4	56,002.5	60,921.4	61,473.1	61,172.1
1.3 'Other' Deposits with RBI	239.1	228.9	257.6	253.8	250.7
1.4 Call/Term Funding from Financial Institutions	3,657.1	3,219.3	3,490.0	3,415.1	3,575.0
2 Sources					
2.1 Domestic Credit	139,941.3	132,916.6	148,987.5	150,731.4	149,452.4
2.1.1 Net Bank Credit to the Government	40,014.0	39,285.9	43,445.9	44,382.1	42,346.7
2.1.1.1 Net RBI credit to the Government	4,759.6	3,868.4	7,127.2	7,812.2	6,830.1
2.1.1.2 Credit to the Government by the Banking System	35,254.4	35,417.5	36,318.7	36,570.0	35,516.6
2.1.2 Bank Credit to the Commercial Sector	99,927.3	93,630.7	105,541.6	106,349.2	107,105.8
2.1.2.1 RBI Credit to the Commercial Sector	140.3	86.9	93.2	88.3	92.8
2.1.2.2 Credit to the Commercial Sector by the Banking System	99,787.1	93,543.8	105,448.5	106,260.9	107,013.0
2.1.2.2.1 Other Investments (Non-SLR Securities)	7,728.5	7,108.2	8,187.6	8,201.2	8,242.4
2.2 Government's Currency Liabilities to the Public	256.5	256.0	257.0	257.0	257.0
2.3 Net Foreign Exchange Assets of the Banking Sector	26,931.6	25,495.2	26,900.8	27,443.4	26,490.3
2.3.1 Net Foreign Exchange Assets of the RBI	27,607.8	25,945.6	27,975.2	27,725.5	27,504.0
2.3.2 Net Foreign Currency Assets of the Banking System	-676.2	-450.4	-1,074.4	-282.0	-1,013.7
2.4 Capital Account	20,705.2	19,510.2	23,516.2	23,004.4	22,953.6
2.5 Other items (net)	4,607.6	5,252.3	5,488.3	7,536.9	5,663.3

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2017-18	2017	2018		
		Dec.	Oct.	Nov.	Dec.
	1	2	3	4	5
1 NM₃	141,816.7	133,905.3	146,312.1	147,140.8	147,582.8
2 Postal Deposits	3,008.1	2,881.4	3,372.6	3,372.6	3,372.6
3 L₁ (1 + 2)	144,824.7	136,786.7	149,684.7	150,513.4	150,955.4
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 L₂ (3 + 4)	144,854.0	136,816.0	149,714.0	150,542.8	150,984.8
6 Public Deposits with Non-Banking Financial Companies	319.1	316.0
7 L₃ (5 + 6)	145,173.1	137,132.0

No. 10: Reserve Bank of India Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2017-18	2017		2018	
		Dec. 22	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	18,293.5	16,973.6	20,107.0	20,138.8	20,298.8
1.2 Bankers' Deposits with the RBI	5,655.3	4,790.6	5,103.6	5,082.7	5,155.6
1.2.1 Scheduled Commercial Banks	5,269.1	4,476.7	4,765.7	4,743.2	4,821.1
1.3 'Other' Deposits with the RBI	239.1	228.9	257.6	253.8	250.7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	24,187.8	21,993.1	25,468.2	25,475.3	25,705.2
2 Sources					
2.1 RBI's Domestic Credit	5,393.4	4,349.5	8,135.8	8,243.9	8,447.6
2.1.1 Net RBI credit to the Government	4,759.6	3,868.4	7,127.2	7,812.2	6,830.1
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)	4,742.9	3,848.0	7,127.6	7,742.6	6,824.8
2.1.1.1.1 Loans and Advances to the Central Government	–	–	–	106.1	–
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	6,411.5	6,523.9	7,243.1	7,629.2	7,885.1
2.1.1.1.3.1 Central Government Securities	6,411.5	6,523.9	7,243.1	7,629.2	7,885.1
2.1.1.1.4 Rupee Coins	6.9	7.4	8.5	8.4	8.3
2.1.1.1.5 Deposits of the Central Government	1,675.6	2,683.3	123.9	1.0	1,068.5
2.1.1.2 Net RBI credit to State Governments	16.8	20.4	-0.4	69.6	5.3
2.1.2 RBI's Claims on Banks	493.5	394.2	915.4	343.4	1,524.7
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	493.5	394.2	915.4	343.4	1,524.7
2.1.3 RBI's Credit to Commercial Sector	140.3	86.9	93.2	88.3	92.8
2.1.3.1 Loans and Advances to Primary Dealers	25.4	20.8	21.2	18.9	20.8
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	256.5	256.0	257.0	257.0	257.0
2.3 Net Foreign Exchange Assets of the RBI	27,607.8	25,945.6	27,975.2	27,725.5	27,504.0
2.3.1 Gold	1,397.4	1,334.8	1,553.6	1,473.3	1,478.5
2.3.2 Foreign Currency Assets	26,210.6	24,610.9	26,421.8	26,252.4	26,025.7
2.4 Capital Account	8,584.3	7,890.8	10,488.5	10,153.8	9,871.3
2.5 Other Items (net)	485.6	667.1	411.2	597.2	632.1

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	Outstanding as on March 31/ last Fridays of the month/ Fridays						
	2017-18	2017		2018			
		Dec. 29	Nov. 30	Dec. 7	Dec. 14	Dec. 21	Dec. 28
	1	2	3	4	5	6	7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 + 2.4 + 2.5 – 2.6)	24,187.8	22,375.9	25,568.7	25,476.2	26,293.2	25,706.0	26,180.2
1 Components							
1.1 Currency in Circulation	18,293.5	16,932.7	19,959.0	20,139.7	20,239.0	20,299.7	20,250.4
1.2 Bankers' Deposits with RBI	5,655.3	5,198.0	5,353.2	5,082.7	5,776.0	5,155.6	5,673.7
1.3 'Other' Deposits with RBI	239.1	245.2	256.6	253.8	278.3	250.7	256.1
2 Sources							
2.1 Net Reserve Bank Credit to Government	4,759.6	4,276.0	7,857.7	7,812.2	7,937.9	6,830.1	7,382.9
2.2 Reserve Bank Credit to Banks	493.5	158.6	389.7	343.4	1,036.2	1,524.7	1,480.0
2.3 Reserve Bank Credit to Commercial Sector	140.3	91.3	89.8	88.3	85.3	92.8	93.2
2.4 Net Foreign Exchange Assets of RBI	27,607.8	26,185.5	27,386.5	27,725.5	28,117.5	27,504.0	27,490.2
2.5 Government's Currency Liabilities to the Public	256.5	256.0	257.9	257.9	257.9	257.9	258.0
2.6 Net Non- Monetary Liabilities of RBI	9,069.9	8,591.4	10,412.7	10,751.0	11,141.6	10,503.4	10,524.0

No. 12: Commercial Bank Survey

(₹ Billion)

Item	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2017-18	2017	2018		
		Dec. 22	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	112,794.2	106,808.0	116,598.9	117,336.0	116,674.5
1.1.1 Demand Deposits	13,702.8	11,339.6	12,259.6	12,008.5	11,899.1
1.1.2 Time Deposits of Residents	99,091.4	95,468.3	104,339.2	105,327.5	104,775.3
1.1.2.1 Short-term Time Deposits	44,591.1	42,960.8	46,952.7	47,397.4	47,148.9
1.1.2.1.1 Certificates of Deposits (CDs)	1,931.1	1,281.5	1,687.0	1,705.0	1,835.4
1.1.2.2 Long-term Time Deposits	54,500.3	52,507.6	57,386.6	57,930.1	57,626.4
1.2 Call/Term Funding from Financial Institutions	3,657.1	3,219.3	3,490.0	3,415.1	3,575.0
2 Sources					
2.1 Domestic Credit	127,142.0	121,142.2	133,799.5	134,833.9	134,603.9
2.1.1 Credit to the Government	33,174.1	33,317.1	34,250.9	34,506.5	33,465.7
2.1.2 Credit to the Commercial Sector	93,967.9	87,825.1	99,548.7	100,327.4	101,138.2
2.1.2.1 Bank Credit	86,254.2	80,682.7	91,326.3	92,062.5	92,876.4
2.1.2.1.1 Non-food Credit	85,834.4	80,018.2	90,603.4	91,268.1	92,103.0
2.1.2.2 Net Credit to Primary Dealers	64.3	105.9	113.7	141.2	95.5
2.1.2.3 Investments in Other Approved Securities	10.5	18.1	10.7	12.1	13.5
2.1.2.4 Other Investments (in non-SLR Securities)	7,638.9	7,018.6	8,098.0	8,111.6	8,152.7
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	–676.2	–450.4	–1,074.4	–282.0	–1,013.7
2.2.1 Foreign Currency Assets	2,018.0	1,840.4	1,784.5	2,516.0	1,783.6
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	1,466.3	1,400.8	1,536.9	1,510.3	1,488.2
2.2.3 Overseas Foreign Currency Borrowings	1,227.9	890.0	1,322.1	1,287.7	1,309.1
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	5,321.8	4,794.0	4,612.8	5,125.1	3,988.6
2.3.1 Balances with the RBI	5,256.9	4,476.7	4,765.7	4,743.2	4,821.1
2.3.2 Cash in Hand	600.6	711.5	762.4	725.3	692.2
2.3.3 Loans and Advances from the RBI	535.7	394.2	915.4	343.4	1,524.7
2.4 Capital Account	11,879.3	11,377.7	12,786.0	12,609.0	12,840.5
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	3,457.1	4,080.9	4,463.1	6,316.7	4,488.7
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	4,360.8	4,081.6	3,812.7	3,794.6	4,061.8
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	–268.2	–64.2	–506.9	–444.0	–471.6

No. 13: Scheduled Commercial Banks' Investments

(₹ Billion)

Item	As on March 30, 2018	2017	2018		
		Dec. 22	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
1 SLR Securities	33,184.5	33,335.1	34,261.6	34,518.6	33,479.2
2 Commercial Paper	1,159.4	1,103.2	1,076.9	937.5	948.2
3 Shares issued by					
3.1 PSUs	118.7	115.6	117.0	116.8	117.3
3.2 Private Corporate Sector	745.3	728.0	731.1	721.9	723.3
3.3 Others	42.1	42.9	62.0	58.0	64.2
4 Bonds/Debentures issued by					
4.1 PSUs	1,399.7	1,130.2	1,255.1	1,275.0	1,269.6
4.2 Private Corporate Sector	2,222.3	2,026.3	2,268.4	2,267.9	2,277.8
4.3 Others	994.6	621.3	1,267.4	1,283.1	1,266.4
5 Instruments issued by					
5.1 Mutual funds	177.3	586.6	470.7	565.6	564.3
5.2 Financial institutions	895.8	787.3	849.3	885.6	921.5

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			
	2017-18	2017	2018		2017-18	2017	2018	
		Dec.	Nov.	Dec.		Dec.	Nov.	Dec.
1	2	3	4	5	6	7	8	
Number of Reporting Banks	223	223	223	223	149	149	149	150
1 Liabilities to the Banking System	2,344.9	2,142.1	2,357.2	2,630.4	2,282.0	2,090.7	2,309.7	2,583.3
1.1 Demand and Time Deposits from Banks	1,667.5	1,531.1	1,552.1	1,632.8	1,615.6	1,481.6	1,509.2	1,590.1
1.2 Borrowings from Banks	611.7	550.4	670.8	912.2	601.2	550.4	667.4	909.3
1.3 Other Demand and Time Liabilities	65.7	60.5	134.2	85.5	65.2	58.7	133.1	84.0
2 Liabilities to Others	126,658.9	121,238.7	131,366.7	131,275.8	123,506.3	118,133.1	128,208.5	128,096.5
2.1 Aggregate Deposits	117,285.4	112,475.6	122,625.3	122,292.0	114,260.5	109,521.9	119,602.9	119,248.0
2.1.1 Demand	13,994.8	12,280.6	13,204.8	12,900.3	13,702.8	12,013.1	12,929.2	12,617.0
2.1.2 Time	103,290.6	100,195.0	109,420.5	109,391.8	100,557.7	97,508.8	106,673.7	106,631.1
2.2 Borrowings	3,693.9	3,664.2	3,572.0	3,702.3	3,657.1	3,617.7	3,529.9	3,660.5
2.3 Other Demand and Time Liabilities	5,679.7	5,098.9	5,169.3	5,281.5	5,588.7	4,993.5	5,075.6	5,188.1
3 Borrowings from Reserve Bank	2,740.1	869.7	1,133.0	1,881.1	2,739.8	869.7	1,133.0	1,881.1
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	2,740.1	869.7	1,133.0	1,881.1	2,739.8	869.7	1,133.0	1,881.1
4 Cash in Hand and Balances with Reserve Bank	6,029.2	5,698.3	5,920.0	6,217.6	5,857.5	5,558.1	5,778.8	6,072.9
4.1 Cash in Hand	616.3	692.9	779.8	762.8	600.65	674.7	761.0	741.2
4.2 Balances with Reserve Bank	5,412.9	5,005.4	5,140.2	5,454.8	5,256.9	4,883.3	5,017.8	5,331.7
5 Assets with the Banking System	3,011.8	2,700.1	3,209.7	3,685.9	2,614.6	2,280.8	2,846.8	3,296.6
5.1 Balances with Other Banks	2,041.9	1,851.5	2,196.3	2,579.2	1,860.5	1,695.7	2,022.6	2,369.5
5.1.1 In Current Account	156.0	175.4	119.7	176.5	123.1	148.0	93.1	153.4
5.1.2 In Other Accounts	1,885.9	1,676.1	2,076.6	2,402.7	1,737.4	1,547.7	1,929.5	2,216.1
5.2 Money at Call and Short Notice	360.5	336.8	384.8	451.5	182.4	130.5	234.3	319.8
5.3 Advances to Banks	284.1	258.5	322.3	318.2	282.0	257.3	321.5	311.9
5.4 Other Assets	325.3	253.3	306.3	337.1	289.6	197.3	268.4	295.5
6 Investment	34,124.7	34,383.7	35,071.1	34,161.1	33,184.5	33,420.0	34,137.5	33,236.6
6.1 Government Securities	34,067.4	34,322.5	35,002.7	34,097.8	33,174.1	33,408.0	34,126.9	33,229.0
6.2 Other Approved Securities	57.3	61.3	68.5	63.3	10.5	12.0	10.6	7.6
7 Bank Credit	88,785.3	84,299.3	96,039.4	95,952.7	86,254.2	81,794.6	92,219.0	93,197.2
7a Food Credit	611.4	776.1	1,028.6	987.1	419.9	584.6	798.3	756.9
7.1 Loans, Cash-credits and Overdrafts	86,451.5	81,974.2	93,847.7	93,684.8	83,984.8	79,527.5	90,073.0	90,976.3
7.2 Inland Bills-Purchased	230.3	276.8	208.5	217.9	203.9	257.3	195.1	204.3
7.3 Inland Bills-Discounted	1,417.3	1,365.8	1,397.3	1,422.6	1,387.5	1,334.0	1,373.6	1,397.9
7.4 Foreign Bills-Purchased	266.0	258.7	237.2	227.4	263.0	256.3	234.3	224.2
7.5 Foreign Bills-Discounted	420.3	423.9	348.6	400.1	415.0	419.5	343.0	394.5

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

(₹ Billion)

Item	Outstanding as on				Growth (%)	
	Mar. 30, 2018	2017	2018		Financial year so far	Y-o-Y
		Dec. 22	Nov. 23	Dec. 21	2018-19	2018
	1	2	3	4	5	6
1 Gross Bank Credit	77,303	73,055	81,652	82,413	6.6	12.8
1.1 Food Credit	419	662	721	771	84.2	16.4
1.2 Non-food Credit	76,884	72,393	80,931	81,642	6.2	12.8
1.2.1 Agriculture & Allied Activities	10,302	9,981	10,648	10,821	5.0	8.4
1.2.2 Industry	26,993	26,341	27,084	27,494	1.9	4.4
1.2.2.1 Micro & Small	3,730	3,683	3,630	3,650	-2.1	-0.9
1.2.2.2 Medium	1,037	957	1,051	1,046	0.9	9.2
1.2.2.3 Large	22,226	21,701	22,403	22,798	2.6	5.1
1.2.3 Services	20,505	18,119	22,538	22,330	8.9	23.2
1.2.3.1 Transport Operators	1,213	1,152	1,292	1,303	7.5	13.1
1.2.3.2 Computer Software	186	179	191	191	2.8	6.7
1.2.3.3 Tourism, Hotels & Restaurants	365	367	384	388	6.3	5.6
1.2.3.4 Shipping	63	73	64	62	-1.1	-14.4
1.2.3.5 Professional Services	1,554	1,422	1,685	1,717	10.5	20.7
1.2.3.6 Trade	4,669	4,406	4,795	4,860	4.1	10.3
1.2.3.6.1 Wholesale Trade	2,052	1,935	2,116	2,140	4.3	10.6
1.2.3.6.2 Retail Trade	2,618	2,471	2,679	2,719	3.9	10.1
1.2.3.7 Commercial Real Estate	1,858	1,825	1,877	1,899	2.2	4.1
1.2.3.8 Non-Banking Financial Companies (NBFCs)	4,964	3,682	5,663	5,709	15.0	55.1
1.2.3.9 Other Services	5,633	5,013	6,587	6,200	10.1	23.7
1.2.4 Personal Loans	19,085	17,952	20,662	20,997	10.0	17.0
1.2.4.1 Consumer Durables	197	182	33	33	-83.4	-82.0
1.2.4.2 Housing	9,746	9,362	10,774	10,966	12.5	17.1
1.2.4.3 Advances against Fixed Deposits	725	557	682	693	-4.4	24.5
1.2.4.4 Advances to Individuals against share & bond	56	58	60	62	11.1	6.9
1.2.4.5 Credit Card Outstanding	686	642	853	845	23.2	31.7
1.2.4.6 Education	697	704	692	691	-0.9	-1.8
1.2.4.7 Vehicle Loans	1,898	1,831	1,987	1,992	5.0	8.8
1.2.4.8 Other Personal Loans	5,080	4,617	5,582	5,714	12.5	23.8
1.2A Priority Sector	25,532	24,224	26,041	26,279	2.9	8.5
1.2A.1 Agriculture & Allied Activities	10,216	9,932	10,587	10,750	5.2	8.2
1.2A.2 Micro & Small Enterprises	9,964	9,066	9,957	10,047	0.8	10.8
1.2A.2.1 Manufacturing	3,730	3,683	3,630	3,650	-2.1	-0.9
1.2A.2.2 Services	6,234	5,383	6,327	6,397	2.6	18.9
1.2A.3 Housing	3,756	3,727	4,043	4,085	8.8	9.6
1.2A.4 Micro-Credit	264	169	230	239	-9.4	41.3
1.2A.5 Education Loans	607	592	568	567	-6.6	-4.2
1.2A.6 State-Sponsored Orgs. for SC/ST	3	3	3	3	14.2	20.3
1.2A.7 Weaker Sections	5,690	5,493	5,986	6,019	5.8	9.6
1.2A.8 Export Credit	283	409	185	185	-34.7	-54.8

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

(₹ Billion)

Industry	Outstanding as on				Growth (%)	
	Mar. 30, 2018	2017	2018		Financial year so far	Y-o-Y
		Dec. 22	Nov. 23	Dec. 21	2018-19	2018
	1	2	3	4	5	6
1 Industry	26,993	26,341	27,084	27,494	1.9	4.4
1.1 Mining & Quarrying (incl. Coal)	413	334	430	417	0.8	24.9
1.2 Food Processing	1,554	1,439	1,407	1,478	-4.8	2.8
1.2.1 Sugar	290	270	239	249	-14.1	-7.8
1.2.2 Edible Oils & Vanaspati	211	194	208	214	1.3	10.2
1.2.3 Tea	45	48	54	53	19.0	10.7
1.2.4 Others	1,008	927	906	963	-4.5	3.8
1.3 Beverage & Tobacco	156	170	140	142	-8.7	-16.3
1.4 Textiles	2,099	2,007	1,984	1,999	-4.8	-0.4
1.4.1 Cotton Textiles	1,057	1,002	987	1,000	-5.5	-0.2
1.4.2 Jute Textiles	22	25	21	21	-5.0	-14.8
1.4.3 Man-Made Textiles	243	235	237	241	-0.7	2.5
1.4.4 Other Textiles	776	745	740	737	-5.1	-1.1
1.5 Leather & Leather Products	113	109	111	107	-5.0	-1.6
1.6 Wood & Wood Products	109	106	114	115	5.7	8.4
1.7 Paper & Paper Products	306	310	303	300	-2.2	-3.2
1.8 Petroleum, Coal Products & Nuclear Fuels	651	471	536	568	-12.8	20.7
1.9 Chemicals & Chemical Products	1,630	1,598	1,692	1,774	8.8	11.0
1.9.1 Fertiliser	306	244	268	272	-10.9	11.7
1.9.2 Drugs & Pharmaceuticals	484	474	508	510	5.3	7.6
1.9.3 Petro Chemicals	387	443	395	463	19.6	4.5
1.9.4 Others	453	438	521	529	16.7	20.9
1.10 Rubber, Plastic & their Products	424	408	436	447	5.4	9.5
1.11 Glass & Glassware	85	82	102	101	19.7	23.3
1.12 Cement & Cement Products	526	531	556	550	4.6	3.7
1.13 Basic Metal & Metal Product	4,160	4,132	3,792	3,799	-8.7	-8.1
1.13.1 Iron & Steel	3,262	3,223	2,908	2,922	-10.4	-9.3
1.13.2 Other Metal & Metal Product	898	910	884	877	-2.4	-3.6
1.14 All Engineering	1,553	1,514	1,580	1,615	4.0	6.7
1.14.1 Electronics	344	350	369	374	8.8	6.9
1.14.2 Others	1,210	1,164	1,211	1,241	2.6	6.6
1.15 Vehicles, Vehicle Parts & Transport Equipment	787	730	785	808	2.6	10.8
1.16 Gems & Jewellery	727	690	680	680	-6.5	-1.5
1.17 Construction	901	862	930	928	3.1	7.8
1.18 Infrastructure	8,909	8,898	9,579	9,719	9.1	9.2
1.18.1 Power	5,196	5,200	5,397	5,476	5.4	5.3
1.18.2 Telecommunications	846	854	900	906	7.1	6.0
1.18.3 Roads	1,665	1,703	1,822	1,870	12.3	9.8
1.18.4 Other Infrastructure	1,202	1,140	1,460	1,467	22.0	28.7
1.19 Other Industries	1,890	1,952	1,928	1,947	3.0	-0.3

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								
	2017-18	2017	2018						
		Nov, 24	Sep, 14	Sep, 28	Oct, 12	Oct, 26	Nov, 09	Nov, 23	Nov, 30
	1	2	3	4	5	6	7	8	9
Number of Reporting Banks	31	32	31	31	30	31	31	31	30
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	540.9	568.3	547.9	556.6	513.5	543.6	565.3	554.8	537.8
2 Demand and Time Liabilities									
2.1 Demand Liabilities	158.0	203.0	190.4	174.8	160.9	160.4	172.0	166.5	162.5
2.1.1 Deposits									
2.1.1.1 Inter-Bank	41.7	78.5	51.2	51.4	53.7	46.4	50.1	47.9	49.1
2.1.1.2 Others	89.9	95.1	79.5	88.2	79.1	83.9	86.1	86.8	83.3
2.1.2 Borrowings from Banks	1.2	0.0	11.5	7.5	3.1	3.2	3.5	4.6	0.0
2.1.3 Other Demand Liabilities	25.2	29.3	48.2	27.8	25.0	27.0	32.3	27.2	30.2
2.2 Time Liabilities	797.9	886.0	876.6	878.8	842.8	865.5	869.5	854.5	855.5
2.2.1 Deposits									
2.2.1.1 Inter-Bank	336.5	405.4	394.5	397.1	399.5	392.5	383.8	380.0	393.7
2.2.1.2 Others	451.0	473.1	468.4	468.4	434.5	459.7	479.2	468.0	454.6
2.2.2 Borrowings from Banks	3.1	0.0	6.0	7.3	2.6	6.2	0.0	0.2	0.0
2.2.3 Other Time Liabilities	7.3	7.4	7.7	6.1	6.3	7.1	6.5	6.4	7.2
3 Borrowing from Reserve Bank	0.0	0.8	0.4	0.4	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	404.8	472.6	439.1	447.6	486.1	487.4	516.1	516.3	520.2
4.1 Demand	112.3	155.7	146.3	151.5	157.0	156.2	168.5	170.0	168.3
4.2 Time	292.5	317.0	292.8	296.1	329.1	331.2	347.5	346.3	351.9
5 Cash in Hand and Balances with Reserve Bank	55.6	46.3	60.4	46.2	46.0	44.8	44.0	44.2	42.6
5.1 Cash in Hand	2.8	3.1	3.2	3.3	2.6	3.1	3.0	3.0	3.1
5.2 Balance with Reserve Bank	52.8	43.3	57.2	42.9	43.4	41.7	41.0	41.2	39.4
6 Balances with Other Banks in Current Account	15.0	7.8	9.5	10.9	7.2	9.0	9.4	40.4	11.0
7 Investments in Government Securities	295.6	315.7	322.4	316.9	310.8	316.4	314.0	317.7	310.0
8 Money at Call and Short Notice	208.8	229.2	161.0	155.5	180.0	164.3	178.0	181.2	166.6
9 Bank Credit (10.1+11)	434.4	463.0	545.7	543.2	530.3	544.0	533.2	543.0	550.2
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	434.4	463.0	545.7	543.2	530.3	543.9	533.2	543.0	550.2
10.2 Due from Banks	668.5	736.8	737.1	762.0	783.0	788.6	792.6	798.7	812.4
11 Bills Purchased and Discounted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Prices and Production

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

Group/Sub group	2017-18			Rural			Urban			Combined		
	Rural	Urban	Combined	Dec. 17	Nov. 18	Dec. 18	Dec. 17	Nov. 18	Dec. 18	Dec. 17	Nov. 18	Dec. 18
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	138.6	137.4	138.1	141.5	140.0	138.8	138.8	139.1	137.6	140.5	139.7	138.4
1.1 Cereals and products	135.2	133.7	134.7	136.4	137.1	137.1	134.4	138.1	138.5	135.8	137.4	137.5
1.2 Meat and fish	142.7	143.8	143.1	143.7	150.8	152.0	142.6	146.3	147.8	143.3	149.2	150.5
1.3 Egg	134.4	134.1	134.3	144.8	136.7	137.5	145.9	137.8	141.0	145.2	137.1	138.9
1.4 Milk and products	140.3	138.6	139.6	141.9	141.9	142.5	139.5	141.6	141.6	141.0	141.8	142.2
1.5 Oils and fats	121.7	114.8	119.2	123.1	122.8	124.5	115.9	118.1	118.2	120.5	121.1	122.2
1.6 Fruits	146.2	137.0	141.9	147.2	143.9	140.4	135.0	141.5	138.5	141.5	142.8	139.5
1.7 Vegetables	146.8	154.3	149.3	161.0	147.5	137.3	163.2	145.2	132.4	161.7	146.7	135.6
1.8 Pulses and products	136.4	123.6	132.1	133.8	121.0	121.1	119.8	115.3	117.5	129.1	119.1	119.9
1.9 Sugar and confectionery	119.8	120.2	119.9	121.9	111.6	110.0	120.7	112.5	111.0	121.5	111.9	110.3
1.10 Spices	135.0	139.2	136.4	135.8	140.6	140.7	139.7	141.4	141.5	137.1	140.9	141.0
1.11 Non-alcoholic beverages	131.1	125.0	128.5	131.1	137.5	138.0	125.7	128.0	128.1	128.8	133.5	133.9
1.12 Prepared meals, snacks, sweets	149.4	145.1	147.4	151.4	156.1	156.2	146.3	152.6	152.9	149.0	154.5	154.7
2 Pan, tobacco and intoxicants	150.0	153.8	151.0	153.2	161.9	162.5	157.0	164.4	164.6	154.2	162.6	163.1
3 Clothing and footwear	145.3	132.4	140.2	147.2	150.8	151.0	134.0	140.5	140.8	142.0	146.7	147.0
3.1 Clothing	146.1	133.8	141.3	148.0	151.7	151.8	135.6	142.4	142.7	143.1	148.0	148.2
3.2 Footwear	140.0	124.7	133.7	141.9	145.5	146.1	125.6	130.2	130.3	135.1	139.1	139.5
4 Housing	--	136.4	136.4	--	--	--	139.1	146.9	146.5	139.1	146.9	146.5
5 Fuel and light	138.6	123.0	132.7	142.6	150.3	149.2	126.8	136.7	132.4	136.6	145.1	142.8
6 Miscellaneous	130.4	124.4	127.5	131.9	140.1	141.8	125.1	132.2	131.7	128.6	136.3	136.9
6.1 Household goods and services	137.7	128.2	133.2	139.5	148.0	149.7	129.3	135.8	136.2	134.7	142.2	143.3
6.2 Health	133.9	126.6	131.1	136.1	145.4	149.9	128.2	136.8	137.3	133.1	142.1	145.1
6.3 Transport and communication	121.2	115.3	118.0	122.0	130.3	128.9	115.3	121.2	118.8	118.5	125.5	123.6
6.4 Recreation and amusement	132.1	124.6	127.9	133.4	143.1	143.4	125.6	131.3	131.7	129.0	136.5	136.8
6.5 Education	139.7	135.9	137.4	141.1	150.2	155.1	136.7	146.1	146.5	138.5	147.8	150.1
6.6 Personal care and effects	126.5	124.1	125.5	127.8	133.1	133.4	124.6	130.5	130.8	126.5	132.0	132.3
General Index (All Groups)	137.2	132.5	135.0	139.8	142.4	142.1	134.1	139.0	138.0	137.2	140.8	140.2

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

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2017-18	2018		
				Dec.	Nov.	Dec.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	284	286	302	301
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	889	900	914	913
3 Consumer Price Index for Rural Labourers	1986-87	--	895	906	921	921

Source: Labour Bureau, Ministry of Labour and Employment, Government of India.

No. 20: Monthly Average Price of Gold and Silver in Mumbai

Item	2017-18	2017	2018	
			Dec.	Nov.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	29,300	28,763	31,010	31,251
2 Silver (₹ per kilogram)	39,072	37,270	36,879	37,095

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	2017-18	2017		2018	
			Dec.	Oct.	Nov. (P)	Dec. (P)
I ALL COMMODITIES	100.000	114.9	115.7	122.0	121.8	120.1
I.1 PRIMARY ARTICLES	22.618	130.6	131.7	137.2	137.2	134.7
I.1.1 FOOD ARTICLES	15.256	143.2	144.1	145.9	146.1	144.0
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	142.6	140.6	146.7	148.6	149.9
1.1.1.2 Fruits & Vegetables	3.475	155.9	162.1	157.8	155.2	142.9
1.1.1.3 Milk	4.440	139.7	140.2	144.1	144.1	143.6
1.1.1.4 Eggs,Meat & Fish	2.402	135.7	134.2	135.3	137.4	140.3
1.1.1.5 Condiments & Spices	0.529	125.2	128.2	131.7	131.6	129.1
1.1.1.6 Other Food Articles	0.948	144.0	142.6	143.1	143.8	145.5
I.1.2 NON-FOOD ARTICLES	4.119	119.6	119.2	123.4	124.6	124.5
1.1.2.1 Fibres	0.839	119.0	119.4	130.1	130.9	128.6
1.1.2.2 Oil Seeds	1.115	129.9	129.3	137.6	140.7	140.9
1.1.2.3 Other non-food Articles	1.960	110.9	106.6	108.1	108.1	107.8
1.1.2.4 Floriculture	0.204	148.7	184.0	166.7	169.3	177.7
I.1.3 MINERALS	0.833	122.5	122.2	140.4	130.4	140.4
1.1.3.1 Metallic Minerals	0.648	109.1	109.3	128.1	116.1	128.1
1.1.3.2 Other Minerals	0.185	169.3	167.7	183.6	180.5	183.6
I.1.4 CRUDE PETROLEUM & NATURAL GAS	2.410	73.0	78.5	104.1	104.1	91.7
I.2 FUEL & POWER	13.152	93.3	95.5	111.3	110.0	103.5
I.2.1 COAL	2.138	118.7	117.0	123.4	123.4	123.4
1.2.1.1 Coking Coal	0.647	134.1	131.7	133.3	133.3	133.3
1.2.1.2 Non-Coking Coal	1.401	112.5	110.4	119.0	119.0	119.0
1.2.1.3 Lignite	0.090	104.2	113.5	120.0	120.0	120.0
I.2.2 MINERAL OILS	7.950	82.5	87.0	107.6	105.5	94.7
I.2.3 ELECTRICITY	3.064	103.7	102.4	112.4	112.4	112.4
I.3 MANUFACTURED PRODUCTS	64.231	113.8	114.2	118.9	118.8	118.3
I.3.1 MANUFACTURE OF FOOD PRODUCTS	9.122	127.4	127.4	129.7	129.0	127.7
1.3.1.1 Processing and Preserving of meat	0.134	134.4	133.7	138.1	138.1	136.5
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	128.1	133.1	140.6	135.2	134.8
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	119.1	119.7	114.1	114.0	113.7
1.3.1.4 Vegetable and Animal oils and Fats	2.643	109.4	111.5	118.8	116.7	114.1
1.3.1.5 Dairy products	1.165	142.1	141.7	136.0	135.7	133.4
1.3.1.6 Grain mill products	2.010	137.4	137.3	143.0	142.9	143.3
1.3.1.7 Starches and Starch products	0.110	112.6	112.0	113.3	115.3	119.4
1.3.1.8 Bakery products	0.215	128.8	128.1	129.8	129.5	128.9
1.3.1.9 Sugar, Molasses & honey	1.163	128.0	124.1	113.2	112.8	110.3
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	126.1	126.9	129.2	126.9	126.6
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	131.4	132.2	133.5	136.3	137.0
1.3.1.12 Tea & Coffee products	0.371	129.1	128.7	138.5	138.3	137.3
1.3.1.13 Processed condiments & salt	0.163	118.2	121.3	120.5	122.6	122.9
1.3.1.14 Processed ready to eat food	0.024	127.2	127.6	126.6	128.8	125.3
1.3.1.15 Health supplements	0.225	141.1	139.1	139.6	142.3	145.9
1.3.1.16 Prepared animal feeds	0.356	153.0	149.8	159.4	160.9	159.0
I.3.2 MANUFACTURE OF BEVERAGES	0.909	118.9	119.9	121.4	121.7	122.0
1.3.2.1 Wines & spirits	0.408	113.8	113.4	114.8	115.0	115.2
1.3.2.2 Malt liquors and Malt	0.225	117.9	118.2	121.4	121.7	121.2
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	127.4	130.7	131.1	131.7	132.9
I.3.3 MANUFACTURE OF TOBACCO PRODUCTS	0.514	148.4	151.8	149.9	149.7	149.5
1.3.3.1 Tobacco products	0.514	148.4	151.8	149.9	149.7	149.5
I.3.4 MANUFACTURE OF TEXTILES	4.881	113.4	113.2	119.2	119.1	119.2
1.3.4.1 Preparation and Spinning of textile fibres	2.582	106.2	105.5	112.6	112.1	111.3
1.3.4.2 Weaving & Finishing of textiles	1.509	122.0	122.4	127.8	128.4	128.8
1.3.4.3 Knitted and Crocheted fabrics	0.193	108.6	108.1	113.6	113.8	113.8
1.3.4.4 Made-up textile articles, Except apparel	0.299	124.6	124.7	129.1	129.1	134.6
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	141.7	138.5	140.7	142.7	141.3
1.3.4.6 Other textiles	0.201	117.5	117.9	120.4	118.6	120.4
I.3.5 MANUFACTURE OF WEARING APPAREL	0.814	136.9	138.8	138.4	138.1	138.4
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	137.8	138.7	139.3	138.7	139.0
1.3.5.2 Knitted and Crocheted apparel	0.221	134.5	139.1	136.2	136.7	136.9

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

Commodities	Weight	2017-18	2017	2018		
			Dec.	Oct.	Nov. (P)	Dec. (P)
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	0.535	120.1	121.2	121.9	121.5	121.1
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	110.9	111.6	110.7	110.1	108.5
1.3.6.2 Luggage, HandBags, Saddlery and Harness	0.075	131.2	132.7	137.4	135.5	134.5
1.3.6.3 Footwear	0.318	121.6	122.8	123.2	123.3	123.6
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	0.772	131.5	131.4	132.5	133.5	133.9
1.3.7.1 Saw milling and Planing of wood	0.124	120.5	121.2	123.6	125.5	127.6
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	131.5	133.0	135.9	136.9	136.5
1.3.7.3 Builder's carpentry and Joinery	0.036	159.8	155.7	158.5	156.9	157.0
1.3.7.4 Wooden containers	0.119	134.5	128.3	119.8	120.4	122.7
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	1.113	118.9	118.6	124.7	125.3	125.2
1.3.8.1 Pulp, Paper and Paperboard	0.493	122.3	122.9	131.9	132.8	132.2
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	116.1	113.2	116.0	117.0	118.4
1.3.8.3 Other articles of paper and Paperboard	0.306	116.2	117.1	121.8	121.6	120.8
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	0.676	143.7	143.5	146.7	146.5	147.5
1.3.9.1 Printing	0.676	143.7	143.5	146.7	146.5	147.5
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	6.465	112.5	113.2	120.5	120.8	120.0
1.3.10.1 Basic chemicals	1.433	111.2	114.3	127.6	128.2	126.5
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	117.1	116.8	121.6	122.8	123.4
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	113.0	113.0	120.3	119.2	117.2
1.3.10.4 Pesticides and Other agrochemical products	0.454	115.3	114.8	119.9	121.0	119.4
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	108.6	107.5	112.4	113.1	112.4
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	115.2	115.4	116.7	117.7	117.5
1.3.10.7 Other chemical products	0.692	110.1	110.0	118.7	117.9	117.3
1.3.10.8 Man-made fibres	0.296	97.5	99.7	107.0	107.0	105.9
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	1.993	121.2	123.2	123.2	124.3	124.1
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	121.2	123.2	123.2	124.3	124.1
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	2.299	107.6	106.9	109.9	110.4	110.2
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	100.3	98.3	99.0	99.3	99.6
1.3.12.2 Other Rubber Products	0.272	91.0	90.2	91.6	91.9	92.0
1.3.12.3 Plastics products	1.418	113.9	113.8	118.2	118.6	118.3
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	3.202	112.7	113.3	115.5	115.6	115.2
1.3.13.1 Glass and Glass products	0.295	117.2	116.3	122.0	121.5	121.3
1.3.13.2 Refractory products	0.223	113.2	108.2	111.5	112.4	110.7
1.3.13.3 Clay Building Materials	0.121	94.0	94.3	95.8	96.5	97.2
1.3.13.4 Other Porcelain and Ceramic Products	0.222	112.5	112.3	112.2	112.3	112.3
1.3.13.5 Cement, Lime and Plaster	1.645	113.8	113.6	113.0	112.9	112.8
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	118.9	119.1	120.5	121.4	120.6
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	117.2	117.9	118.7	119.5	118.8
1.3.13.8 Other Non-Metallic Mineral Products	0.169	89.9	109.9	139.5	139.5	136.5
1.3.14 MANUFACTURE OF BASIC METALS	9.646	101.4	102.9	114.8	113.9	112.5
1.3.14.1 Inputs into steel making	1.411	98.2	97.7	119.0	117.1	114.5
1.3.14.2 Metallic Iron	0.653	99.4	100.8	121.6	119.5	117.5
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	93.2	94.5	101.2	100.2	98.8
1.3.14.4 Mild Steel -Long Products	1.081	95.6	98.5	111.5	112.1	110.4
1.3.14.5 Mild Steel - Flat products	1.144	104.9	106.2	123.0	122.4	119.6
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	97.3	97.9	114.3	113.8	110.3
1.3.14.7 Stainless Steel - Semi Finished	0.924	98.2	100.8	114.1	113.2	112.8
1.3.14.8 Pipes & tubes	0.205	116.1	118.8	127.6	127.0	126.2
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	107.9	109.3	112.9	112.8	111.6
1.3.14.10 Castings	0.925	104.8	106.8	110.7	109.1	109.9
1.3.14.11 Forgings of steel	0.271	118.4	119.6	136.7	134.5	136.2
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	3.155	109.5	110.9	116.0	116.2	116.1
1.3.15.1 Structural Metal Products	1.031	105.9	106.2	114.2	113.5	113.6
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	122.6	126.0	129.6	129.7	127.3
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	109.0	109.4	103.8	108.6	103.8
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	90.7	93.0	93.8	96.7	100.2
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	102.3	99.4	99.5	99.8	100.1
1.3.15.6 Other Fabricated Metal Products	0.728	114.8	116.9	125.1	124.2	125.0
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	2.009	110.1	110.5	113.1	113.0	112.3
1.3.16.1 Electronic Components	0.402	103.7	101.7	101.3	102.4	101.7
1.3.16.2 Computers and Peripheral Equipment	0.336	127.4	127.4	135.1	135.1	135.1

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

Commodities	Weight	2017-18	2017	2018		
			Dec.	Oct.	Nov. (P)	Dec. (P)
1.3.16.3 Communication Equipment	0.310	110.6	116.0	117.3	116.5	116.8
1.3.16.4 Consumer Electronics	0.641	103.1	102.9	105.5	104.9	102.8
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	106.9	108.4	111.2	111.2	110.6
1.3.16.6 Watches and Clocks	0.076	137.8	136.1	138.5	138.6	138.6
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	102.9	100.5	101.9	99.8	105.4
1.3.16.8 Optical instruments and Photographic equipment	0.008	108.0	113.1	107.2	107.2	105.3
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	2.930	109.6	109.7	111.7	112.1	112.0
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	105.8	105.3	106.7	108.7	108.5
1.3.17.2 Batteries and Accumulators	0.236	117.4	116.5	118.3	118.3	118.0
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	116.5	112.8	128.5	126.3	128.4
1.3.17.4 Other electronic and Electric wires and Cables	0.428	105.7	107.5	112.3	111.9	111.7
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	109.9	111.3	109.8	105.9	106.0
1.3.17.6 Domestic appliances	0.366	121.3	121.5	121.0	121.9	120.8
1.3.17.7 Other electrical equipment	0.206	107.2	108.6	108.9	108.4	108.9
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	4.789	108.9	108.9	111.5	111.7	111.7
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	102.3	101.8	102.5	103.3	102.9
1.3.18.2 Fluid power equipment	0.162	115.3	115.3	118.8	118.8	118.5
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	108.6	109.0	109.0	109.1	109.3
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	109.0	113.6	110.2	111.3	110.1
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	78.5	79.3	77.4	77.4	77.4
1.3.18.6 Lifting and Handling equipment	0.285	105.8	107.0	110.0	110.3	111.2
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	127.3	127.0	130.2	129.9	129.8
1.3.18.9 Agricultural and Forestry machinery	0.833	112.8	112.8	117.6	117.8	117.9
1.3.18.10 Metal-forming machinery and Machine tools	0.224	99.6	97.3	102.5	102.6	103.3
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	75.0	74.0	76.5	76.5	76.4
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	121.1	121.9	128.0	128.0	127.7
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	117.4	112.5	118.9	119.3	118.3
1.3.18.14 Other special-purpose machinery	0.468	119.5	119.7	123.2	122.8	124.3
1.3.18.15 Renewable electricity generating equipment	0.046	70.4	70.3	67.0	67.0	67.0
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	4.969	110.7	110.2	113.4	113.7	112.8
1.3.19.1 Motor vehicles	2.600	112.6	112.0	114.0	114.3	113.9
1.3.19.2 Parts and Accessories for motor vehicles	2.368	108.6	108.3	112.8	113.1	111.5
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	1.648	110.2	111.5	111.8	112.1	112.4
1.3.20.1 Building of ships and Floating structures	0.117	158.8	158.7	158.8	158.8	158.8
1.3.20.2 Railway locomotives and Rolling stock	0.110	104.0	105.2	103.6	103.4	103.4
1.3.20.3 Motor cycles	1.302	105.3	107.0	106.8	107.0	107.4
1.3.20.4 Bicycles and Invalid carriages	0.117	121.3	120.1	128.7	129.0	129.2
1.3.20.5 Other transport equipment	0.002	119.9	119.7	124.8	124.8	124.9
1.3.21 MANUFACTURE OF FURNITURE	0.727	120.3	120.6	127.7	128.4	127.5
1.3.21.1 Furniture	0.727	120.3	120.6	127.7	128.4	127.5
1.3.22 OTHER MANUFACTURING	1.064	109.2	106.1	107.6	107.1	114.6
1.3.22.1 Jewellery and Related articles	0.996	106.7	103.1	104.5	104.0	111.9
1.3.22.2 Musical instruments	0.001	171.0	181.3	167.5	177.1	172.0
1.3.22.3 Sports goods	0.012	126.0	125.2	128.8	128.6	131.6
1.3.22.4 Games and Toys	0.005	128.2	128.9	131.1	132.4	132.1
1.3.22.5 Medical and Dental instruments and Supplies	0.049	151.9	157.6	160.6	160.7	160.3
2 FOOD INDEX	24.378	137.3	137.8	139.9	139.7	137.9

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	2016-17	2017-18	April-November		November	
				2017-18	2018-19	2017	2018
	1	2	3	4	5	6	7
General Index	100.00	120.0	125.3	121.6	127.7	125.8	126.4
1 Sectoral Classification							
1.1 Mining	14.37	102.5	104.9	98.4	102.0	107.7	110.6
1.2 Manufacturing	77.63	121.0	126.6	123.0	129.1	127.7	127.2
1.3 Electricity	7.99	141.6	149.2	150.5	160.5	140.1	147.2
2 Use-Based Classification							
2.1 Primary Goods	34.05	117.5	121.8	118.6	124.3	120.9	124.8
2.2 Capital Goods	8.22	101.5	105.6	99.5	106.7	104.3	100.8
2.3 Intermediate Goods	17.22	122.3	125.1	122.2	123.0	125.4	119.7
2.4 Infrastructure/ Construction Goods	12.34	125.0	132.0	128.2	138.8	129.3	135.8
2.5 Consumer Durables	12.84	122.6	123.6	122.3	132.3	122.0	120.9
2.6 Consumer Non-Durables	15.33	126.5	139.9	133.8	139.0	149.1	148.2

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 - December			
	2018-19 (Revised Estimates)	2018-19 (Actuals)	2017-18 (Actuals)	Percentage to Revised Estimates	
				2018-19	2017-18
	1	2	3	4	5
1 Revenue Receipts	17,296.8	10,840.4	10,136.2	62.7	67.3
1.1 Tax Revenue (Net)	14,844.1	9,363.3	9,001.2	63.1	70.9
1.2 Non-Tax Revenue	2,452.8	1,477.1	1,135.0	60.2	48.1
2 Capital Receipts	7,275.5	7,479.9	6,853.3	102.8	96.2
2.1 Recovery of Loans	131.6	123.2	106.4	93.6	60.9
2.2 Other Receipts	800.0	342.2	537.4	42.8	53.7
2.3 Borrowings and Other Liabilities	6,344.0	7,014.6	6,209.5	110.6	104.4
3 Total Receipts (1+2)	24,572.4	18,320.3	16,989.6	74.6	76.6
4 Revenue Expenditure	21,406.1	16,202.1	14,623.6	75.7	75.2
4.1 Interest Payments	5,875.7	4,211.9	3,739.6	71.7	70.4
5 Capital Expenditure	3,166.2	2,118.2	2,366.0	66.9	86.5
6 Total Expenditure (4+5)	24,572.4	18,320.3	16,989.6	74.6	76.6
7 Revenue Deficit (4-1)	4,109.3	5,361.7	4,487.4	130.5	102.2
8 Fiscal Deficit {6-(1+2.1+2.2)}	6,344.0	7,014.6	6,209.5	110.6	104.4
9 Gross Primary Deficit (8-4.1)	468.3	2,802.6	2,469.9	598.5	385.9

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

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2016-17	2017		2018				
		Dec. 29	Nov. 23	Nov. 30	Dec. 7	Dec. 14	Dec. 21	Dec. 28
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	323.7	274.3	311.0	340.0	315.9	319.4	390.5	380.1
1.2 Primary Dealers	243.5	182.7	203.4	174.8	163.9	160.9	152.2	173.3
1.3 State Governments	146.2	1,022.0	751.0	779.0	789.0	708.8	768.8	748.3
1.4 Others	343.4	589.3	673.4	643.8	638.8	606.6	522.4	481.8
2 182-day								
2.1 Banks	216.2	361.4	371.9	375.3	362.7	393.8	415.3	404.0
2.2 Primary Dealers	316.5	193.2	477.1	471.5	450.8	426.2	415.4	428.1
2.3 State Governments	193.6	61.2	344.5	344.5	344.5	344.5	344.5	344.5
2.4 Others	120.9	108.7	170.4	172.4	205.8	199.8	189.3	187.8
3 364-day								
3.1 Banks	512.3	339.8	566.7	535.1	572.0	595.8	572.3	529.3
3.2 Primary Dealers	551.8	606.0	759.4	779.9	761.3	781.3	787.1	815.5
3.3 State Governments	26.3	29.7	180.9	180.9	180.9	180.9	180.9	180.9
3.4 Others	326.4	341.2	541.3	572.2	573.4	551.8	589.8	624.4
4 14-day Intermediate								
4.1 Banks	–	–	–	–	–	–	–	–
4.2 Primary Dealers	–	–	–	–	–	–	–	–
4.3 State Governments	1,560.6	1,564.5	1,361.8	1,276.3	800.4	762.2	1,359.8	1,406.2
4.4 Others	5.1	4.7	6.3	4.9	18.3	18.0	5.5	4.8
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	3,320.8	4,109.3	5,351.1	5,369.4	5,359.1	5,269.9	5,328.6	5,298.0

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												
2018-19												
Nov. 28	70	68	345.86	148.01	38	69.99	148.01	218.00	98.34	6.7706		
Dec. 5	70	61	520.80	30.01	31	69.99	30.01	100.00	98.35	6.7292		
Dec. 12	70	45	276.65	12.01	23	69.99	12.01	82.00	98.36	6.6877		
Dec. 19	70	78	409.08	68.01	30	69.99	68.01	138.00	98.38	6.6048		
Dec. 26	70	54	340.46	56.51	30	69.99	56.51	126.50	98.37	6.6462		
182-day Treasury Bills												
2018-19												
Nov. 28	40	60	231.36	0.02	23	39.98	0.02	40.00	96.60	7.0587		
Dec. 5	40	50	170.18	0.03	24	39.98	0.03	40.01	96.62	7.0157		
Dec. 12	40	44	182.56	69.12	19	39.98	69.12	109.10	96.65	6.9513		
Dec. 19	40	52	277.87	53.50	10	40.00	53.50	93.50	96.69	6.8654		
Dec. 26	40	52	162.41	25.00	27	40.00	25.00	65.00	96.70	6.8440		
364-day Treasury Bills												
2018-19												
Nov. 28	40	80	249.74	0.09	22	39.91	0.09	40.00	93.28	7.2239		
Dec. 5	40	74	189.77	0.09	15	39.91	0.09	40.00	93.34	7.1548		
Dec. 12	40	74	192.38	0.08	16	39.92	0.08	40.00	93.44	7.0398		
Dec. 19	40	67	269.98	0.03	13	39.97	0.03	40.00	93.50	6.9710		
Dec. 26	40	61	122.51	0.00	28	40.00	0.00	40.00	93.53	6.9366		
Cash Management Bills												
2018-19												
Jun. 11	250	86	1,598.72	–	47	250.00	–	250.00	98.74	6.6538		
Jun. 25	200	62	1,647.38	–	39	200.00	–	200.00	99.20	6.5412		
Jul. 10	200	75	2,068.86	–	25	200.00	–	200.00	98.77	6.4934		
Oct. 15	150	77	1,295.13	–	26	150.00	–	150.00	98.91	6.8175		
Dec. 5	300	44	1,365.88	–	24	300.00	–	300.00	99.78	6.7064		

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on		Range of Rates	Weighted Average Rates
		Borrowings/ Lendings	Borrowings/ Lendings
		1	2
December	1, 2018	5.05-6.50	6.18
December	3, 2018	5.00-6.55	6.33
December	4, 2018	5.00-6.50	6.35
December	5, 2018	5.00-6.80	6.37
December	6, 2018	5.00-6.75	6.35
December	7, 2018	5.00-6.60	6.41
December	10, 2018	5.00-6.55	6.42
December	11, 2018	5.00-6.60	6.48
December	12, 2018	5.00-6.70	6.52
December	13, 2018	5.00-6.85	6.41
December	14, 2018	5.00-6.55	6.39
December	15, 2018	4.10-6.65	6.49
December	17, 2018	5.00-6.75	6.51
December	18, 2018	5.00-6.62	6.47
December	19, 2018	5.00-7.00	6.47
December	20, 2018	5.00-6.75	6.53
December	21, 2018	5.00-6.65	6.44
December	24, 2018	5.00-7.25	6.55
December	26, 2018	5.00-7.36	6.59
December	27, 2018	5.00-6.80	6.58
December	28, 2018	5.00-7.20	6.56
December	29, 2018	4.10-6.40	6.00
December	31, 2018	5.00-6.85	6.54
January	1, 2019	5.00-6.55	6.34
January	2, 2019	5.00-6.60	6.33
January	3, 2019	5.00-6.60	6.32
January	4, 2019	5.00-6.70	6.29
January	5, 2019	4.10-7.00	6.10
January	7, 2019	5.00-6.55	6.37
January	8, 2019	5.00-6.60	6.35
January	9, 2019	5.00-6.80	6.36
January	10, 2019	5.00-6.55	6.36
January	11, 2019	5.00-6.52	6.34
January	14, 2019	5.00-6.70	6.36
January	15, 2019	5.00-6.60	6.42

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2017	2018			
	Dec. 22	Nov. 9	Nov. 23	Dec. 7	Dec. 21
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	1,269.8	1,312.0	1,485.1	1,556.7	1,806.6
1.1 Issued during the fortnight (₹ Billion)	185.2	128.8	279.7	310.8	322.2
2 Rate of Interest (per cent)	6.21-7.75	7.12-8.50	6.92-8.50	6.99-9.37	6.83-9.02

No. 28: Commercial Paper

Item	2017	2018			
	Dec. 31	Nov. 15	Nov. 30	Dec. 15	Dec. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	4,090.5	5,847.2	5,606.1	5,460.8	4,987.3
1.1 Reported during the fortnight (₹ Billion)	916.0	1,066.2	1,300.6	1,036.5	957.8
2 Rate of Interest (per cent)	6.22-10.76	6.69-11.73	6.63-11.09	6.51-11.18	6.78-10.29

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2017-18	2017	2018					
		Dec. 29	Nov. 23	Nov. 30	Dec. 7	Dec. 14	Dec. 21	Dec. 28
	1	2	3	4	5	6	7	8
1 Call Money	245.5	300.7	342.2	267.6	358.1	350.8	372.0	306.7
2 Notice Money	36.6	50.0	9.6	97.1	5.0	83.7	60.1	236.6
3 Term Money	9	5.3	4.0	9.4	4.6	6.8	2.0	6.5
4 CBLO/TRIPARTY REPO	2,130.1	2,691.9	2,300.0	2,917.6	2,514.8	3,128.2	2,518.7	2,950.4
5 Market Repo	1,921.8	2,345.3	1,748.6	2,188.8	1,861.6	2,100.0	1,733.0	2,171.0
6 Repo in Corporate Bond	3.8	1.2	8.4	45.2	41.5	47.5	59.2	66.0
7 Forex (US \$ million)	55,345	69,022	55,903	76,552	68,026	61,119	65,507	65,175
8 Govt. of India Dated Securities	808.7	760.2	507.8	951.1	1,187.7	1,114.5	884.6	646.2
9 State Govt. Securities	45.3	19.7	32.6	80.0	57.0	43.6	79.3	77.7
10 Treasury Bills								
10.1 91-Day	35.5	44.9	49.4	36.0	31.9	18.6	69.2	73.1
10.2 182-Day	10.2	4.4	19.4	16.9	36.1	17.0	21.9	32.3
10.3 364-Day	10.3	11.7	27.8	31.8	32.2	20.6	47.5	31.0
10.4 Cash Management Bills	13	–	1.4	1.9	66.1	35.4	–	–
11 Total Govt. Securities (8+9+10)	923.0	840.9	638.3	1,117.7	1,411.0	1,249.7	1,102.5	860.4
11.1 RBI	–	0.6	27.6	22.3	23.4	20.8	30.7	37.7

Note : Collateralised Borrowing and Lending Obligation (CBLO) segment of the money market has been discontinued and replaced with Triparty Repo with effect from November 05, 2018.

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

(Amount in ₹ Billion)

Security & Type of Issue	2017-18		2017-18 (Apr.-Dec.)		2018-19 (Apr.-Dec.) *		Dec. 2017		Dec. 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	214	679.9	143	369.7	106	145.2	18	22.4	4	7.7
1A Premium	211	657.8	142	356.7	104	140.1	18	20.7	4	7.0
1.1 Public	193	466.0	130	324.5	100	126.8	16	13.9	2	0.5
1.1.1 Premium	190	448.7	129	313.8	98	123.1	16	13.1	2	0.4
1.2 Rights	21	213.9	13	45.1	6	18.4	2	8.5	2	7.2
1.2.1 Premium	21	209.1	13	42.9	6	17.1	2	7.6	2	6.6
2 Preference Shares	–	–	–	–	–	–	–	–	–	–
2.1 Public	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Debentures	7	49.5	5	41.2	15	285.7	1	2.3	1	2.6
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Public	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	7	49.5	5	41.2	15	285.7	1	2.3	1	2.6
3.2.1 Public	7	49.5	5	41.2	15	285.7	1	2.3	1	2.6
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Bonds	–	–	–	–	–	–	–	–	–	–
4.1 Public	–	–	–	–	–	–	–	–	–	–
4.2 Rights	–	–	–	–	–	–	–	–	–	–
5 Total (1+2+3+4)	221	729.5	148	410.9	121	430.8	19	24.7	5	10.3
5.1 Public	200	515.6	135	365.8	115	412.4	17	16.2	3	3.1
5.2 Rights	21	213.9	13	45.1	6	18.4	2	8.5	2	7.2

* : Data is Provisional

Note : Since April 2018, monthly data is compiled on the basis of closing date of issues as against the earlier practice of compilation on the basis of opening date.

Source : Securities and Exchange Board of India.

External Sector

No. 31: Foreign Trade

Item	Unit	2017-18	2017		2018			
			Dec.	Aug.	Sep.	Oct.	Nov.	Dec.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	19,565.1	1,788.0	1,938.3	2,018.2	1,986.6	1,901.5	1,975.4
	US \$ Million	303,526.2	27,832.6	27,871.0	27,946.8	26,980.4	26,463.0	27,927.7
1.1 Oil	₹ Billion	2,414.3	238.8	263.5	318.1	334.5	370.3	297.6
	US \$ Million	37,465.1	3,717.8	3,789.5	4,404.3	4,542.7	5,153.1	4,207.8
1.2 Non-oil	₹ Billion	17,150.8	1,549.2	1,674.8	1,700.1	1,652.1	1,531.2	1,677.7
	US \$ Million	266,061.1	24,114.8	24,081.5	23,542.5	22,437.7	21,309.9	23,719.9
2 Imports	₹ Billion	30,010.3	2,700.2	3,147.6	3,031.7	3,248.5	3,102.4	2,900.3
	US \$ Million	465,581.0	42,030.8	45,258.3	41,981.7	44,117.2	43,176.9	41,005.0
2.1 Oil	₹ Billion	7,003.2	664.6	830.5	790.9	1,049.2	969.6	754.9
	US \$ Million	108,658.7	10,345.0	11,941.4	10,951.3	14,249.3	13,493.4	10,672.3
2.2 Non-oil	₹ Billion	23,007.1	2,035.6	2,317.1	2,240.9	2,199.2	2,132.9	2,145.5
	US \$ Million	356,922.3	31,685.8	33,316.9	31,030.4	29,867.9	29,683.5	30,332.7
3 Trade Balance	₹ Billion	-10,445.2	-912.1	-1,209.2	-1,013.5	-1,261.8	-1,201.0	-925.0
	US \$ Million	-162,054.8	-14,198.2	-17,387.3	-14,034.9	-17,136.8	-16,713.9	-13,077.3
3.1 Oil	₹ Billion	-4,588.9	-425.7	-566.9	-472.8	-714.7	-599.3	-457.2
	US \$ Million	-71,193.6	-6,627.2	-8,151.8	-6,547.0	-9,706.6	-8,340.3	-6,464.5
3.2 Non-oil	₹ Billion	-5,856.3	-486.4	-642.3	-540.7	-547.1	-601.7	-467.7
	US \$ Million	-90,861.2	-7,571.0	-9,235.5	-7,487.9	-7,430.2	-8,373.6	-6,612.8

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

No. 32: Foreign Exchange Reserves

Item	Unit	2018				2019		
		Jan. 19	Dec. 14	Dec. 21	Dec. 28	Jan. 4	Jan. 11	Jan. 18
		1	2	3	4	5	6	7
1 Total Reserves	₹ Billion	26,431	28,157	27,537	27,523	27,671	27,988	28,191
	US \$ Million	414,785	393,121	393,288	393,404	396,085	397,352	396,681
1.1 Foreign Currency Assets	₹ Billion	24,896	26,389	25,772	25,758	25,871	26,173	26,374
	US \$ Million	390,769	367,866	367,971	368,077	370,292	371,379	370,726
1.2 Gold	₹ Billion	1,306	1,476	1,479	1,479	1,514	1,525	1,525
	US \$ Million	20,422	21,187	21,224	21,224	21,690	21,844	21,844
1.3 SDRs	SDRs Million	1,061	1,052	1,052	1,052	1,052	1,052	1,052
	₹ Billion	98	104	102	102	102	104	104
1.4 Reserve Tranche Position in IMF	US \$ Million	1,531	1,450	1,459	1,463	1,463	1,472	1,465
	₹ Billion	131	188	184	185	184	187	188
	US \$ Million	2,063	2,618	2,634	2,640	2,640	2,656	2,645

No. 33: NRI Deposits

(US\$ Million)

Scheme	Outstanding				Flows	
	2017-18	2017	2018		2017-18	2018-19
		Dec.	Nov.	Dec.	Apr.-Dec.	Apr.-Dec.
	1	2	3	4	5	6
1 NRI Deposits	126,182	123,315	125,685	125,772	5,040	6,975
1.1 FCNR(B)	22,026	21,808	20,433	20,840	806	-1,185
1.2 NR(E)RA	90,035	88,135	90,515	90,254	3,703	6,604
1.3 NRO	14,121	13,372	14,737	14,678	531	1,556

No. 34: Foreign Investment Inflows

(US\$ Million)

Item	2017-18	2017-18	2018-19	2017	2018	
		Apr.-Dec.	Apr.-Dec.	Dec.	Nov.	Dec.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1-1.1.2)	30,286	23,879	24,808	2,736	851	2,657
1.1.1 Direct Investment to India (1.1.1.1-1.1.2)	39,431	30,825	33,087	3,285	1,225	3,620
1.1.1.1 Gross Inflows/Gross Investments	60,974	47,877	46,624	6,057	3,269	5,664
1.1.1.1.1 Equity	45,521	36,425	33,988	4,875	1,795	4,447
1.1.1.1.1.1 Government (SIA/FIPB)	7,797	6,488	2,033	55	210	1
1.1.1.1.1.2 RBI	29,569	22,663	27,820	2,995	1,378	4,264
1.1.1.1.1.3 Acquisition of shares	7,491	6,789	3,640	1,769	151	126
1.1.1.1.1.4 Equity capital of unincorporated bodies	664	485	495	56	56	56
1.1.1.1.2 Reinvested earnings	12,542	9,149	9,973	1,061	1,061	1,061
1.1.1.1.3 Other capital	2,911	2,303	2,663	121	413	157
1.1.1.2 Repatriation/Disinvestment	21,544	17,052	13,537	2,772	2,044	2,044
1.1.1.2.1 Equity	21,325	16,867	13,314	2,762	2,022	2,022
1.1.1.2.2 Other capital	219	185	223	10	22	22
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3-1.1.2.4)	9,144	6,947	8,279	549	375	963
1.1.2.1 Equity capital	5,254	3,991	5,043	383	226	722
1.1.2.2 Reinvested Earnings	2,853	2,139	2,189	238	238	238
1.1.2.3 Other Capital	4,525	3,561	2,867	252	211	303
1.1.2.4 Repatriation/Disinvestment	3,487	2,744	1,820	323	300	300
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3-1.2.4)	22,115	19,839	-11,875	-120	1,707	1,107
1.2.1 GDRs/ADRs	-	-	-	-	-	-
1.2.2 FIIs	22,165	19,789	-13,694	-84	1,758	1,159
1.2.3 Offshore funds and others	-	-	-	-	-	-
1.2.4 Portfolio investment by India	50	-50	-1,819	36	51	51
1 Foreign Investment Inflows	52,401	43,718	12,933	2,615	2,557	3,765

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

(US\$ Million)

Item	2017-18	2017	2018		
		Dec.	Oct.	Nov.	Dec.
	1	2	3	4	5
1 Outward Remittances under the LRS	11,333.6	981.4	1,093.6	996.8	1,093.1
1.1 Deposit	414.9	31.6	29.7	29.4	31.6
1.2 Purchase of immovable property	89.6	10.9	9.0	6.6	5.4
1.3 Investment in equity/debt	441.8	31.0	29.7	24.9	34.3
1.4 Gift	1,169.7	107.9	90.9	102.2	110.4
1.5 Donations	8.5	0.4	0.3	0.6	1.3
1.6 Travel	4,022.1	361.6	373.8	339.7	386.2
1.7 Maintenance of close relatives	2,937.4	255.3	192.9	208.0	223.3
1.8 Medical Treatment	27.5	2.7	2.6	3.4	1.9
1.9 Studies Abroad	2,021.4	147.0	344.0	267.7	277.9
1.10 Others	200.6	32.9	20.8	14.2	21.0

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

Item	2016-17	2017-18	2018		2019
			January	December	January
	1	2	3	4	5
36-Currency Export and Trade Based Weights (Base: 2004-05=100)					
1 Trade-Based Weights					
1.1 NEER	74.65	76.94	76.81	72.89	72.32
1.2 REER	114.52	119.71	120.35	115.02	114.12
2 Export-Based Weights					
2.1 NEER	76.38	78.89	78.94	74.34	73.88
2.2 REER	116.45	121.94	122.59	117.21	116.49
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	66.86	68.13	67.57	63.44	62.97
1.2 REER	125.17	129.87	129.68	123.46	121.59
2 Base: 2016-17 (April-March) =100					
2.1 NEER	100.00	101.90	101.07	94.89	94.18
2.2 REER	100.00	103.75	103.61	98.63	97.14

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

(US\$ Million)

Item	2017-18	2017	2018	
		Dec.	Nov.	Dec.
	1	2	3	4
1 Automatic Route				
1.1 Number	769	56	78	66
1.2 Amount	20,397	905	1,296	3,332
2 Approval Route				
2.1 Number	38	1	2	1
2.2 Amount	8,471	400	770	474
3 Total (1+2)				
3.1 Number	807	57	80	67
3.2 Amount	28,868	1,305	2,066	3,806
4 Weighted Average Maturity (in years)	6.10	6.20	6.20	5.50
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.34	2.39	0.92	1.15
5.2 Interest rate range for Fixed Rate Loans	0.00-12.25	0.00-10.50	0.00-15.00	0.00-12.00

No. 38: India's Overall Balance of Payments

(US \$ Million)

Item	Jul-Sep 2017 (PR)			Jul-Sep 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	292,554	283,055	9,499	290,177	292,044	-1,868
1 CURRENT ACCOUNT (1.1+ 1.2)	145,498	152,454	-6,956	160,007	179,119	-19,112
1.1 MERCHANDISE	76,082	108,536	-32,455	83,399	133,432	-50,034
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	69,417	43,918	25,499	76,609	45,687	30,922
1.2.1 Services	47,409	29,032	18,377	50,094	29,844	20,250
1.2.1.1 Travel	6,962	5,332	1,630	7,038	5,813	1,225
1.2.1.2 Transportation	4,206	4,175	31	4,641	5,086	-446
1.2.1.3 Insurance	635	542	92	646	396	250
1.2.1.4 G.n.i.e.	126	145	-19	140	261	-122
1.2.1.5 Miscellaneous	35,479	18,837	16,642	37,629	18,287	19,342
1.2.1.5.1 Software Services	19,295	1,325	17,969	20,755	1,472	19,283
1.2.1.5.2 Business Services	9,084	9,559	-475	9,408	9,690	-282
1.2.1.5.3 Financial Services	1,321	1,574	-253	1,311	1,132	180
1.2.1.5.4 Communication Services	536	215	321	606	278	328
1.2.2 Transfers	17,522	1,850	15,672	20,891	1,560	19,331
1.2.2.1 Official	108	212	-104	35	215	-180
1.2.2.2 Private	17,414	1,638	15,776	20,856	1,346	19,511
1.2.3 Income	4,486	13,036	-8,550	5,623	14,282	-8,659
1.2.3.1 Investment Income	3,456	12,472	-9,016	4,549	13,691	-9,141
1.2.3.2 Compensation of Employees	1,030	564	466	1,074	592	482
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	147,055	130,165	16,890	129,255	112,925	16,330
2.1 Foreign Investment (2.1.1+2.1.2)	87,191	72,714	14,477	75,386	69,132	6,254
2.1.1 Foreign Direct Investment	20,046	7,635	12,411	14,997	7,126	7,872
2.1.1.1 In India	18,979	4,288	14,692	14,246	4,055	10,191
2.1.1.1.1 Equity	15,107	4,253	10,854	10,185	3,894	6,291
2.1.1.1.2 Reinvested Earnings	3,043	-	3,043	3,456	-	3,456
2.1.1.1.3 Other Capital	829	34	795	606	161	445
2.1.1.2 Abroad	1,067	3,347	-2,281	751	3,071	-2,320
2.1.1.2.1 Equity	1,067	1,041	26	751	1,112	-361
2.1.1.2.2 Reinvested Earnings	0	713	-713	0	747	-747
2.1.1.2.3 Other Capital	0	1,593	-1,593	0	1,212	-1,212
2.1.2 Portfolio Investment	67,145	65,079	2,066	60,388	62,006	-1,618
2.1.2.1 In India	67,016	64,579	2,437	59,216	61,616	-2,400
2.1.2.1.1 FIIs	67,016	64,579	2,437	59,216	61,616	-2,400
2.1.2.1.1.1 Equity	52,492	55,924	-3,432	50,860	52,179	-1,319
2.1.2.1.1.2 Debt	14,524	8,655	5,869	8,356	9,436	-1,081
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	128	500	-372	1,173	391	782
2.2 Loans (2.2.1+2.2.2+2.2.3)	33,438	30,582	2,857	23,120	16,933	6,187
2.2.1 External Assistance	1,259	1,176	82	1,216	1,264	-48
2.2.1.1 By India	14	31	-17	12	30	-18
2.2.1.2 To India	1,245	1,145	100	1,204	1,234	-30
2.2.2 Commercial Borrowings	8,156	9,376	-1,220	8,494	7,047	1,447
2.2.2.1 By India	2,964	2,672	292	1,515	1,349	166
2.2.2.2 To India	5,192	6,704	-1,512	6,979	5,698	1,281
2.2.3 Short Term to India	24,023	20,029	3,994	13,411	8,622	4,789
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	23,614	20,029	3,585	7,392	8,622	-1,230
2.2.3.2 Suppliers' Credit up to 180 days	409	0	409	6,019	0	6,019
2.3 Banking Capital (2.3.1+2.3.2)	16,876	16,702	174	21,194	20,672	522
2.3.1 Commercial Banks	16,790	16,702	88	21,194	20,670	524
2.3.1.1 Assets	2,566	4,936	-2,370	5,370	5,638	-268
2.3.1.2 Liabilities	14,224	11,766	2,458	15,823	15,031	792
2.3.1.2.1 Non-Resident Deposits	12,187	11,476	711	15,402	12,075	3,326
2.3.2 Others	86	0	86	0	2	-2
2.4 Rupee Debt Service	0	2	-2	0	1	-1
2.5 Other Capital	9,549	10,166	-616	9,555	6,187	3,368
3 Errors & Omissions	-	436	-436	914	-	914
4 Monetary Movements (4.1+ 4.2)	0	9,499	-9,499	1,868	0	1,868
4.1 I.M.F.	0	0	0	-	-	-
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	-	9,499	-9,499	1,868	0	1,868

No. 39: India's Overall Balance of Payments

(₹ Billion)

Item	Jul-Sep 2017 (PR)			Jul-Sep 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	18,808	18,197	611	20,356	20,487	-131
1 CURRENT ACCOUNT (1.1+ 1.2)	9,354	9,801	-447	11,225	12,566	-1,341
1.1 MERCHANDISE	4,891	6,978	-2,086	5,851	9,361	-3,510
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	4,463	2,823	1,639	5,374	3,205	2,169
1.2.1 Services	3,048	1,866	1,181	3,514	2,094	1,421
1.2.1.1 Travel	448	343	105	494	408	86
1.2.1.2 Transportation	270	268	2	326	357	-31
1.2.1.3 Insurance	41	35	6	45	28	18
1.2.1.4 G.n.i.e.	8	9	-1	10	18	-9
1.2.1.5 Miscellaneous	2,281	1,211	1,070	2,640	1,283	1,357
1.2.1.5.1 Software Services	1,240	85	1,155	1,456	103	1,353
1.2.1.5.2 Business Services	584	615	-31	660	680	-20
1.2.1.5.3 Financial Services	85	101	-16	92	79	13
1.2.1.5.4 Communication Services	34	14	21	43	20	23
1.2.2 Transfers	1,126	119	1,008	1,466	109	1,356
1.2.2.1 Official	7	14	-7	2	15	-13
1.2.2.2 Private	1,120	105	1,014	1,463	94	1,369
1.2.3 Income	288	838	-550	394	1,002	-607
1.2.3.1 Investment Income	222	802	-580	319	960	-641
1.2.3.2 Compensation of Employees	66	36	30	75	42	34
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	9,454	8,368	1,086	9,067	7,922	1,146
2.1 Foreign Investment (2.1.1+2.1.2)	5,605	4,675	931	5,288	4,850	439
2.1.1 Foreign Direct Investment	1,289	491	798	1,052	500	552
2.1.1.1 In India	1,220	276	945	999	284	715
2.1.1.1.1 Equity	971	273	698	714	273	441
2.1.1.1.2 Reinvested Earnings	196	0	196	242	0	242
2.1.1.1.3 Other Capital	53	2	51	43	11	31
2.1.1.2 Abroad	69	215	-147	53	215	-163
2.1.1.2.1 Equity	69	67	2	53	78	-25
2.1.1.2.2 Reinvested Earnings	0	46	-46	0	52	-52
2.1.1.2.3 Other Capital	0	102	-102	0	85	-85
2.1.2 Portfolio Investment	4,317	4,184	133	4,236	4,350	-113
2.1.2.1 In India	4,308	4,152	157	4,154	4,322	-168
2.1.2.1.1 FIIs	4,308	4,152	157	4,154	4,322	-168
2.1.2.1.1.1 Equity	3,375	3,595	-221	3,568	3,660	-93
2.1.2.1.1.2 Debt	934	556	377	586	662	-76
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	8	32	-24	82	27	55
2.2 Loans (2.2.1+2.2.2+2.2.3)	2,150	1,966	184	1,622	1,188	434
2.2.1 External Assistance	81	76	5	85	89	-3
2.2.1.1 By India	1	2	-1	1	2	-1
2.2.1.2 To India	80	74	6	84	87	-2
2.2.2 Commercial Borrowings	524	603	-78	596	494	101
2.2.2.1 By India	191	172	19	106	95	12
2.2.2.2 To India	334	431	-97	490	400	90
2.2.3 Short Term to India	1,544	1,288	257	941	605	336
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,518	1,288	231	519	605	-86
2.2.3.2 Suppliers' Credit up to 180 days	26	0	26	422	0	422
2.3 Banking Capital (2.3.1+2.3.2)	1,085	1,074	11	1,487	1,450	37
2.3.1 Commercial Banks	1,079	1,074	6	1,487	1,450	37
2.3.1.1 Assets	165	317	-152	377	396	-19
2.3.1.2 Liabilities	914	756	158	1,110	1,054	56
2.3.1.2.1 Non-Resident Deposits	783	738	46	1,080	847	233
2.3.2 Others	6	0	6	0	0	-
2.4 Rupee Debt Service	0	0	-	0	0	-
2.5 Other Capital	614	654	-40	670	434	236
3 Errors & Omissions	0	28	-28	64	0	64
4 Monetary Movements (4.1+ 4.2)	0	611	-611	131	0	131
4.1 I.M.F.	-	-	-	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	611	-611	131	0	131

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

(US \$ Million)

Item	Jul-Sep 2017 (PR)			Jul-Sep 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	145,490	152,435	-6,944	160,007	179,098	-19,091
1.A Goods and Services (1.A.a+1.A.b)	123,491	137,568	-14,078	133,493	163,277	-29,784
1.A.a Goods (1.A.a.1 to 1.A.a.3)	76,082	108,536	-32,455	83,399	133,432	-50,034
1.A.a.1 General merchandise on a BOP basis	75,534	102,823	-27,289	83,400	124,201	-40,801
1.A.a.2 Net exports of goods under merchandising	548	0	548	-1	-	-1
1.A.a.3 Nonmonetary gold	-	5,714	-5,714	-	9,231	-9,231
1.A.b Services (1.A.b.1 to 1.A.b.13)	47,409	29,032	18,377	50,094	29,844	20,250
1.A.b.1 Manufacturing services on physical inputs owned by others	32	9	24	58	8	50
1.A.b.2 Maintenance and repair services n.i.e.	52	109	-58	43	259	-216
1.A.b.3 Transport	4,206	4,175	31	4,641	5,086	-446
1.A.b.4 Travel	6,962	5,332	1,630	7,038	5,813	1,225
1.A.b.5 Construction	517	366	152	766	635	131
1.A.b.6 Insurance and pension services	635	542	92	646	396	250
1.A.b.7 Financial services	1,321	1,574	-253	1,311	1,132	180
1.A.b.8 Charges for the use of intellectual property n.i.e.	142	1,290	-1,147	162	1,942	-1,780
1.A.b.9 Telecommunications, computer, and information services	19,985	1,653	18,332	21,425	1,869	19,557
1.A.b.10 Other business services	9,084	9,559	-475	9,408	9,690	-282
1.A.b.11 Personal, cultural, and recreational services	371	723	-353	447	774	-328
1.A.b.12 Government goods and services n.i.e.	126	145	-19	140	261	-122
1.A.b.13 Others n.i.e.	3,974	3,555	420	4,008	1,978	2,031
1.B Primary Income (1.B.1 to 1.B.3)	4,486	13,036	-8,550	5,623	14,282	-8,659
1.B.1 Compensation of employees	1,030	564	466	1,074	592	482
1.B.2 Investment income	2,727	12,350	-9,623	3,474	13,397	-9,923
1.B.2.1 Direct investment	1,418	5,905	-4,487	1,777	6,220	-4,443
1.B.2.2 Portfolio investment	70	3,442	-3,372	53	3,516	-3,463
1.B.2.3 Other investment	153	2,995	-2,842	135	3,648	-3,513
1.B.2.4 Reserve assets	1,086	8	1,078	1,508	13	1,495
1.B.3 Other primary income	728	122	607	1,075	293	782
1.C Secondary Income (1.C.1+1.C.2)	17,514	1,830	15,684	20,891	1,539	19,352
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	17,414	1,638	15,776	20,856	1,346	19,511
1.C.1.1 Personal transfers (Current transfers between resident and/	16,854	1,352	15,502	20,224	991	19,233
1.C.1.2 Other current transfers	560	286	274	633	354	278
1.C.2 General government	100	193	-93	35	193	-159
2 Capital Account (2.1+2.2)	83	115	-31	75	96	-21
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	20	41	-22	2	4	-2
2.2 Capital transfers	64	73	-10	72	92	-19
3 Financial Account (3.1 to 3.5)	146,980	139,569	7,411	131,048	112,851	18,198
3.1 Direct Investment (3.1A+3.1B)	20,046	7,635	12,411	14,997	7,126	7,872
3.1.A Direct Investment in India	18,979	4,288	14,692	14,246	4,055	10,191
3.1.A.1 Equity and investment fund shares	18,150	4,253	13,897	13,640	3,894	9,747
3.1.A.1.1 Equity other than reinvestment of earnings	15,107	4,253	10,854	10,185	3,894	6,291
3.1.A.1.2 Reinvestment of earnings	3,043	-	3,043	3,456	-	3,456
3.1.A.2 Debt instruments	829	34	795	606	161	445
3.1.A.2.1 Direct investor in direct investment enterprises	829	34	795	606	161	445
3.1.B Direct Investment by India	1,067	3,347	-2,281	751	3,071	-2,320
3.1.B.1 Equity and investment fund shares	1,067	1,754	-687	751	1,859	-1,108
3.1.B.1.1 Equity other than reinvestment of earnings	1,067	1,041	26	751	1,112	-361
3.1.B.1.2 Reinvestment of earnings	-	713	-713	-	747	-747
3.1.B.2 Debt instruments	0	1,593	-1,593	0	1,212	-1,212
3.1.B.2.1 Direct investor in direct investment enterprises	-	1,593	-1,593	-	1,212	-1,212
3.2 Portfolio Investment	67,145	65,079	2,066	60,388	62,006	-1,618
3.2.A Portfolio Investment in India	67,016	64,579	2,437	59,216	61,616	-2,400
3.2.1 Equity and investment fund shares	52,492	55,924	-3,432	50,860	52,179	-1,319
3.2.2 Debt securities	14,524	8,655	5,869	8,356	9,436	-1,081
3.2.B Portfolio Investment by India	128	500	-372	1,173	391	782
3.3 Financial derivatives (other than reserves) and employee stock options	4,617	5,670	-1,053	5,623	4,344	1,278
3.4 Other investment	55,172	51,686	3,486	48,172	39,374	8,798
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	12,273	11,476	797	15,402	12,078	3,324
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	86	0	86	0	2	-2
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	12,187	11,476	711	15,402	12,075	3,326
3.4.2.3 General government	-	-	-	-	-	-
3.4.2.4 Other sectors	-	-	-	-	-	-
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	14,018	15,779	-1,761	15,502	16,905	-1,403
3.4.3.A Loans to India	11,040	13,076	-2,036	13,975	15,526	-1,551
3.4.3.B Loans by India	2,978	2,703	275	1,527	1,379	147
3.4.4 Insurance, pension, and standardized guarantee schemes	42	203	-161	36	142	-106
3.4.5 Trade credit and advances	24,023	20,029	3,994	13,411	8,622	4,789
3.4.6 Other accounts receivable/payable - other	4,815	4,199	616	3,822	1,626	2,196
3.4.7 Special drawing rights	-	-	-	0	0	0
3.5 Reserve assets	0	9,499	-9,499	1,868	0	1,868
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)	0	9,499	-9,499	1,868	-	1,868
4 Total assets/liabilities	146,980	139,569	7,411	131,048	112,851	18,198
4.1 Equity and investment fund shares	76,497	68,305	8,193	72,083	62,810	9,273
4.2 Debt instruments	65,668	57,566	8,101	53,276	48,415	4,861
4.3 Other financial assets and liabilities	4,815	13,698	-8,883	5,690	1,626	4,063
5 Net errors and omissions	-	436	-436	914	-	914

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

(₹ Billion)

Item	Jul-Sep 2017 (PR)			Jul-Sep 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	9,353	9,800	-446	11,225	12,564	-1,339
1.A Goods and Services (1.A.a+1.A.b)	7,939	8,844	-905	9,365	11,454	-2,089
1.A.a Goods (1.A.a.1 to 1.A.a.3)	4,891	6,978	-2,086	5,851	9,361	-3,510
1.A.a.1 General merchandise on a BOP basis	4,856	6,610	-1,754	5,851	8,713	-2,862
1.A.a.2 Net exports of goods under merchandising	35	0	35	-0	0	-0
1.A.a.3 Nonmonetary gold	0	367	-367	0	648	-648
1.A.b Services (1.A.b.1 to 1.A.b.13)	3,048	1,866	1,181	3,514	2,094	1,421
1.A.b.1 Manufacturing services on physical inputs owned by others	2	1	2	4	1	4
1.A.b.2 Maintenance and repair services n.i.e.	3	7	-4	3	18	-15
1.A.b.3 Transport	270	268	2	326	357	-31
1.A.b.4 Travel	448	343	105	494	408	86
1.A.b.5 Construction	33	24	10	54	45	9
1.A.b.6 Insurance and pension services	41	35	6	45	28	18
1.A.b.7 Financial services	85	101	-16	92	79	13
1.A.b.8 Charges for the use of intellectual property n.i.e.	9	83	-74	11	136	-125
1.A.b.9 Telecommunications, computer, and information services	1,285	106	1,179	1,503	131	1,372
1.A.b.10 Other business services	584	615	-31	660	680	-20
1.A.b.11 Personal, cultural, and recreational services	24	47	-23	31	54	-23
1.A.b.12 Government goods and services n.i.e.	8	9	-1	10	18	-9
1.A.b.13 Others n.i.e.	256	229	27	281	139	142
1.B Primary Income (1.B.1 to 1.B.3)	288	838	-550	394	1,002	-607
1.B.1 Compensation of employees	66	36	30	75	42	34
1.B.2 Investment income	175	794	-619	244	940	-696
1.B.2.1 Direct investment	91	380	-288	125	436	-312
1.B.2.2 Portfolio investment	5	221	-217	4	247	-243
1.B.2.3 Other investment	10	193	-183	10	256	-246
1.B.2.4 Reserve assets	70	1	69	106	1	105
1.B.3 Other primary income	47	8	39	75	21	55
1.C Secondary Income (1.C.1+1.C.2)	1,126	118	1,008	1,466	108	1,358
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1,120	105	1,014	1,463	94	1,369
1.C.1.1 Personal transfers (Current transfers between resident and/	1,084	87	997	1,419	70	1,349
1.C.1.2 Other current transfers	36	18	18	44	25	20
1.C.2 General government	6	12	-6	2	14	-11
2 Capital Account (2.1+2.2)	5	7	-2	5	7	-1
2.1 Gross acquisitions (DR.)/(disposals (CR.) of non-produced nonfinancial assets	1	3	-1	0	0	-0
2.2 Capital transfers	4	5	-1	5	6	-1
3 Financial Account (3.1 to 3.5)	9,449	8,973	476	9,193	7,917	1,277
3.1 Direct Investment (3.1A+3.1B)	1,289	491	798	1,052	500	552
3.1.A Direct Investment in India	1,220	276	945	999	284	715
3.1.A.1 Equity and investment fund shares	1,167	273	893	957	273	684
3.1.A.1.1 Equity other than reinvestment of earnings	971	273	698	714	273	441
3.1.A.1.2 Reinvestment of earnings	196	0	196	242	0	242
3.1.A.2 Debt instruments	53	2	51	43	11	31
3.1.A.2.1 Direct investor in direct investment enterprises	53	2	51	43	11	31
3.1.B Direct Investment by India	69	215	-147	53	215	-163
3.1.B.1 Equity and investment fund shares	69	113	-44	53	130	-78
3.1.B.1.1 Equity other than reinvestment of earnings	69	67	2	53	78	-25
3.1.B.1.2 Reinvestment of earnings	0	46	-46	0	52	-52
3.1.B.2 Debt instruments	0	102	-102	0	85	-85
3.1.B.2.1 Direct investor in direct investment enterprises	0	102	-102	0	85	-85
3.2 Portfolio Investment	4,317	4,184	133	4,236	4,350	-113
3.2.A Portfolio Investment in India	4,308	4,152	157	4,154	4,322	-168
3.2.1 Equity and investment fund shares	3,375	3,595	-221	3,568	3,660	-93
3.2.2 Debt securities	934	556	377	586	662	-76
3.2.B Portfolio Investment by India	8	32	-24	82	27	55
3.3 Financial derivatives (other than reserves) and employee stock options	297	365	-68	394	305	90
3.4 Other investment	3,547	3,323	224	3,379	2,762	617
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	789	738	51	1,080	847	233
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	6	0	6	0	0	-0
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	783	738	46	1,080	847	233
3.4.2.3 General government	-	-	-	-	-	-
3.4.2.4 Other sectors	-	-	-	-	-	-
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	901	1,014	-113	1,087	1,186	-98
3.4.3.A Loans to India	710	841	-131	980	1,089	-109
3.4.3.B Loans by India	191	174	18	107	97	10
3.4.4 Insurance, pension, and standardized guarantee schemes	3	13	-10	3	10	-7
3.4.5 Trade credit and advances	1,544	1,288	257	941	605	336
3.4.6 Other accounts receivable/payable - other	310	270	40	268	114	154
3.4.7 Special drawing rights	-	-	-	0	0	0
3.5 Reserve assets	0	611	-611	131	0	131
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)	0	611	-611	131	0	131
4 Total assets/liabilities	9,449	8,973	476	9,193	7,917	1,277
4.1 Equity and investment fund shares	4,918	4,391	527	5,057	4,406	651
4.2 Debt instruments	4,222	3,701	521	3,737	3,396	341
4.3 Other financial assets and liabilities	310	881	-571	399	114	285
5 Net errors and omissions	-	28	-28	64	-	64

No. 42: International Investment Position

(US\$ Million)

Item	As on Financial Year /Quarter End							
	2017-18		2017		2018			
			Sep.		Jun.		Sep.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
1	2	3	4	5	6	7	8	
1 Direct Investment Abroad/in India	157,373	378,965	153,514	363,949	160,717	372,393	163,036	362,164
1.1 Equity Capital and Reinvested Earnings	103,734	363,190	101,566	347,959	106,443	356,627	107,551	346,526
1.2 Other Capital	53,640	15,775	51,947	15,991	54,274	15,766	55,486	15,638
2 Portfolio Investment	2,665	272,418	2,456	253,966	1,704	254,519	922	238,093
2.1 Equity	1,246	155,106	2,408	150,074	1,477	144,433	696	135,249
2.2 Debt	1,418	117,312	48	103,892	227	110,086	227	102,843
3 Other Investment	48,235	401,286	44,679	380,428	41,332	393,031	41,530	397,640
3.1 Trade Credit	1,696	103,156	1,263	93,590	1,357	99,586	904	104,172
3.2 Loan	8,225	159,939	5,952	156,397	7,023	157,611	7,073	158,345
3.3 Currency and Deposits	20,790	126,456	19,175	118,266	16,294	124,506	16,628	122,137
3.4 Other Assets/Liabilities	17,524	11,736	18,288	12,175	16,658	11,328	16,925	12,986
4 Reserves	424,545	–	400,205	–	405,740	–	400,525	–
5 Total Assets/ Liabilities	632,818	1,052,669	600,854	998,343	609,493	1,019,943	606,014	997,897
6 IIP (Assets - Liabilities)		–419,851		–397,489		–410,450		–391,883

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2017-18	2018			2017-18	2018		
		Oct.	Nov.	Dec.		Oct.	Nov.	Dec.
	1	2	3	4	5	6	7	8
1 RTGS	124.46	11.86	10.97	11.32	1,467,431.99	142,152.55	130,030.07	145,830.04
1.1 Customer Transactions	120.71	11.58	10.70	11.05	1,036,698.74	97,944.08	91,162.92	101,338.56
1.2 Interbank Transactions	3.72	0.28	0.27	0.27	130,426.03	13,912.67	11,922.19	15,085.17
1.3 Interbank Clearing	0.024	0.002	0.002	0.002	300,307.22	30,295.81	26,944.96	29,406.31
2 CCIL Operated Systems	3.50	0.32	0.25	0.32	1,074,802.02	115,017.56	89,962.85	102,273.20
2.1 CBLO	0.204	0.022	0.002	–	283,307.58	32,597.57	2,693.59	–
2.2 Govt. Securities Clearing	1.12	0.09	0.09	0.12	370,363.78	39,571.40	53,489.45	63,213.83
2.2.1 Outright	0.92	0.07	0.06	0.09	113,998.80	7,701.86	7,378.19	11,377.50
2.2.2 Repo	0.199	0.021	0.016	0.017	256,364.98	31,869.53	22,603.13	21,654.73
2.2.3 Tri-party Repo	–	–	0.01	0.02	–	–	23,508.13	30,181.60
2.3 Forex Clearing	2.17	0.21	0.16	0.20	421,130.66	42,848.59	33,779.81	39,059.37
3 Paper Clearing	1,171.31	98.91	86.66	92.52	81,934.93	7,026.39	6,229.28	6,687.42
3.1 Cheque Truncation System (CTS)	1,138.05	97.80	85.67	91.71	79,451.24	6,948.47	6,153.57	6,626.42
3.2 MICR Clearing	–	–	–	–	–	–	–	–
3.2.1 RBI Centres	–	–	–	–	–	–	–	–
3.2.2 Other Centres	–	–	–	–	–	–	–	–
3.3 Non-MICR Clearing	33.27	1.11	0.99	0.81	2,483.68	77.92	75.71	61.00
4 Retail Electronic Clearing	5,467.29	612.11	591.65	620.10	192,017.98	22,035.92	21,034.97	22,268.70
4.1 ECS DR	1.54	0.04	0.03	0.03	9.72	0.25	0.25	0.16
4.2 ECS CR (includes NECS)	6.14	0.66	0.47	0.50	118.64	16.03	12.14	10.80
4.3 EFT/NEFT	1,946.36	209.04	194.21	194.78	172,228.52	19,227.03	18,246.68	19,570.40
4.4 Immediate Payment Service (IMPS)	1,009.80	154.62	149.94	176.93	8,924.98	1,403.07	1,347.57	1,468.99
4.5 National Automated Clearing House (NACH)	2,503.46	247.75	246.99	247.86	10,736.12	1,389.55	1,428.33	1,218.35
5 Cards	13,358.62	1,424.97	1,363.39	1,462.09	38,214.64	4,042.86	3,839.04	4,220.92
5.1 Credit Cards	1,412.97	161.97	146.65	159.22	4,626.33	565.96	519.94	546.38
5.1.1 Usage at ATMs	7.81	0.91	0.80	0.88	36.68	4.18	3.76	4.03
5.1.2 Usage at POS	1,405.16	161.06	145.85	158.34	4,589.65	561.78	516.18	542.35
5.2 Debit Cards	11,945.65	1,263.00	1,216.74	1,302.88	33,588.31	3,476.90	3,319.10	3,674.54
5.2.1 Usage at ATMs	8,602.26	869.61	840.17	915.34	28,987.61	2,933.92	2,778.69	3,143.12
5.2.2 Usage at POS	3,343.39	393.39	376.57	387.54	4,600.70	542.98	540.41	531.42
6 Prepaid Payment Instruments (PPIs)	3,459.05	420.20	394.17	441.77	1,416.34	221.28	185.19	189.22
6.1 m-Wallet	3,025.98	368.45	347.32	392.99	1,086.75	187.86	161.08	163.68
6.2 PPI Cards	432.63	51.75	46.84	48.77	310.41	33.42	24.11	25.54
6.3 Paper Vouchers	0.44	0.00	0.00	0.00	19.19	–	–	–
7 Mobile Banking	1,872.26	559.48	575.80	661.06	14,738.54	2,480.17	2,490.97	2,771.48
8 Cards Outstanding	898.56	1,041.28	1,035.64	1,002.36	–	–	–	–
8.1 Credit Card	37.48	42.68	43.24	44.21	–	–	–	–
8.2 Debit Card	861.08	998.61	992.40	958.15	–	–	–	–
9 Number of ATMs (in actuals)	222247	220154	220114	220051	–	–	–	–
10 Number of POS (in actuals)	3083067	3450355	3510859	3592424	–	–	–	–
11 Grand Total (1.1+1.2+2+3+4+5+6)	23,584.20	2,568.38	2,447.07	2,628.12	2,555,510.68	260,200.76	224,336.42	252,063.19

Note : Data for latest 12 month period is provisional.

Mobile Banking - The data from July 2017 includes only individual payments and corporate payments initiated, processed, and authorised using mobile device.

Other corporate payments which are not initiated, processed, and authorised using mobile device are excluded.

2.1: With effect from November 05, 2018, CCIL has discontinued CBLO.

2.2.3: Tri-party Repo under the Securities segment has been operationalised from November 05, 2018.

Occasional Series

No. 44: Small Savings

(₹ Billion)

Scheme		2017-18	2017	2018		
			May	Mar.	Apr.	May
		1	2	3	4	5
1 Small Savings	Receipts	728.98	48.03	119.83	67.14	89.35
	Outstanding	8,039.71	7,387.84	8,039.71	8,106.68	8,196.24
1.1 Total Deposits	Receipts	583.32	37.33	75.38	65.83	72.65
	Outstanding	5,273.10	4,755.02	5,273.10	5,338.93	5,411.58
1.1.1 Post Office Saving Bank Deposits	Receipts	171.45	4.43	25.16	25.85	20.52
	Outstanding	1,092.10	935.69	1,092.10	1,117.95	1,138.47
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	-1.62	-0.32	1.06	-0.43	-0.28
	Outstanding	31.38	32.33	31.38	30.95	30.67
1.1.4 National Saving Scheme, 1992	Receipts	0.05	-0.04	0.03	-0.06	-0.06
	Outstanding	-0.43	-0.58	-0.43	-0.49	-0.55
1.1.5 Monthly Income Scheme	Receipts	16.25	-1.19	8.90	7.04	9.21
	Outstanding	1,816.91	1,795.24	1,816.91	1,823.95	1,833.16
1.1.6 Senior Citizen Scheme 2004	Receipts	122.64	12.01	11.28	10.88	12.29
	Outstanding	417.18	314.94	417.18	428.06	440.35
1.1.7 Post Office Time Deposits	Receipts	196.33	15.26	19.02	15.74	20.53
	Outstanding	992.92	821.58	992.92	1,008.66	1,029.19
1.1.7.1 1 year Time Deposits	Outstanding	598.18	527.91	598.18	605.02	614.56
1.1.7.2 2 year Time Deposits	Outstanding	45.97	38.38	45.97	46.45	47.63
1.1.7.3 3 year Time Deposits	Outstanding	61.40	52.64	61.40	62.23	63.23
1.1.7.4 5 year Time Deposits	Outstanding	287.37	202.65	287.37	294.96	303.77
1.1.8 Post Office Recurring Deposits	Receipts	78.68	7.18	9.63	6.81	10.44
	Outstanding	923.20	855.52	923.20	930.01	940.45
1.1.9 Post Office Cumulative Time Deposits	Receipts	-0.45	0.00	0.31	0.00	0.00
	Outstanding	-0.37	0.08	-0.37	-0.37	-0.37
1.1.10 Other Deposits	Receipts	-0.01	0.00	-0.01	0.00	0.00
	Outstanding	0.21	0.22	0.21	0.21	0.21
1.2 Saving Certificates	Receipts	79.43	7.32	7.32	3.83	14.13
	Outstanding	2,066.76	1,996.49	2,066.76	2,070.42	2,084.76
1.2.1 National Savings Certificate VIII issue	Receipts	-0.65	-5.04	9.69	1.92	3.59
	Outstanding	871.74	860.23	871.74	873.66	877.25
1.2.2 Indira Vikas Patras	Receipts	-9.56	0.02	-11.75	0.00	1.17
	Outstanding	-0.71	8.87	-0.71	-0.71	0.46
1.2.3 Kisan Vikas Patras	Receipts	-155.92	-11.88	-8.96	-11.87	-12.57
	Outstanding	379.81	513.30	379.81	367.94	355.37
1.2.4 Kisan Vikas Patras - 2014	Receipts	245.88	24.27	18.29	13.89	22.02
	Outstanding	706.12	502.21	706.12	720.01	742.03
1.2.5 National Saving Certificate VI issue	Receipts	-0.29	-0.05	0.05	-0.06	0.03
	Outstanding	-1.40	-1.18	-1.40	-1.46	-1.43
1.2.6 National Saving Certificate VII issue	Receipts	-0.03	0.00	0.00	-0.05	-0.11
	Outstanding	-0.64	-0.62	-0.64	-0.69	-0.80
1.2.7 Other Certificates	Outstanding	111.84	113.68	111.84	111.67	111.88
1.3 Public Provident Fund	Receipts	66.23	3.38	37.13	-2.52	2.57
	Outstanding	699.85	636.33	699.85	697.33	699.90

Note: The data on receipts from April 2017 are net receipts, i.e., gross receipts minus gross payments.

Source: Accountant General, Post and Telegraphs.

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

(Per cent)

Central Government Dated Securities					
Category	2017			2018	
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(A) Total (in ₹. Billion)	51451.83	52813.50	53967.78	54556.81	56028.30
1 Commercial Banks	40.37	41.40	42.68	41.84	41.41
2 Non-Bank PDs	0.33	0.33	0.29	0.33	0.37
3 Insurance Companies	23.49	23.63	23.49	24.24	24.61
4 Mutual Funds	1.86	1.33	1.00	1.13	1.41
5 Co-operative Banks	2.62	2.69	2.57	2.59	2.51
6 Financial Institutions	0.78	0.82	0.90	0.93	0.97
7 Corporates	1.04	1.09	0.91	1.09	1.01
8 Foreign Portfolio Investors	4.58	4.53	4.35	3.84	3.65
9 Provident Funds	5.99	5.32	5.88	5.79	5.71
10 RBI	12.84	11.94	11.62	11.63	11.76
11. Others	6.11	6.92	6.30	6.58	6.58
11.1 State Governments	1.92	1.91	1.91	1.97	1.99

State Governments Securities					
Category	2017			2018	
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(B) Total (in ₹. Billion)	22488.35	23329.53	24288.29	24954.61	25668.33
1 Commercial Banks	37.64	38.13	35.79	35.02	34.66
2 Non-Bank PDs	0.38	0.51	0.51	0.75	0.58
3 Insurance Companies	34.00	33.35	34.13	34.24	33.74
4 Mutual Funds	1.92	1.68	1.64	1.20	1.05
5 Co-operative Banks	4.82	4.78	4.78	4.79	4.75
6 Financial Institutions	0.22	0.22	0.35	0.35	0.43
7 Corporates	0.11	0.13	0.15	0.16	0.17
8 Foreign Portfolio Investors	0.16	0.21	0.23	0.15	0.10
9 Provident Funds	18.37	17.05	19.67	20.34	21.04
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	2.37	3.94	2.76	2.99	3.48
11.1 State Governments	0.00	0.01	0.05	0.06	0.07

Treasury Bills					
Category	2017			2018	
	Sep.	Dec.	Mar.	Jun.	Sep.
	1	2	3	4	5
(C) Total (in ₹. Billion)	5704.50	5102.82	3798.76	5280.07	5657.50
1 Commercial Banks	52.15	48.40	60.74	55.30	47.84
2 Non-Bank PDs	1.38	1.67	2.17	1.41	1.86
3 Insurance Companies	4.32	5.22	4.17	3.66	4.55
4 Mutual Funds	12.44	10.40	2.27	7.03	10.69
5 Co-operative Banks	2.33	2.05	2.42	1.29	1.20
6 Financial Institutions	3.54	3.97	3.55	2.36	1.67
7 Corporates	1.64	2.12	2.45	1.88	6.67
8 Foreign Portfolio Investors	0.00	0.00	0.00	0.00	0.00
9 Provident Funds	0.20	0.02	0.11	0.21	0.01
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	22.01	26.17	22.12	26.87	25.50
11.1 State Governments	18.73	21.81	16.35	23.11	21.36

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

(₹ Billion)

Item	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
	1	2	3	4	5	6
1 Total Disbursements	30,002.99	32,852.10	37,606.11	42,659.69	48,579.90	53,611.81
1.1 Developmental	17,142.21	18,720.62	22,012.87	25,379.05	29,324.08	32,025.64
1.1.1 Revenue	13,944.26	14,830.18	16,682.50	18,784.17	22,525.73	24,390.87
1.1.2 Capital	2,785.08	3,322.62	4,120.69	5,012.13	5,857.77	6,745.79
1.1.3 Loans	412.88	567.82	1,209.68	1,582.75	940.58	888.98
1.2 Non-Developmental	12,427.83	13,667.69	15,108.10	16,726.46	18,542.53	20,762.79
1.2.1 Revenue	11,413.65	12,695.20	13,797.27	15,552.39	17,684.36	19,839.32
1.2.1.1 Interest Payments	5,342.30	5,845.42	6,480.91	7,244.48	8,166.36	8,851.50
1.2.2 Capital	990.37	946.87	1,273.06	1,157.75	844.41	909.08
1.2.3 Loans	23.81	25.63	37.77	16.32	13.76	14.40
1.3 Others	432.95	463.79	485.14	554.17	713.29	823.38
2 Total Receipts	30,013.72	31,897.37	37,780.49	42,884.32	47,718.59	52,780.35
2.1 Revenue Receipts	22,114.75	23,876.93	27,483.74	31,322.01	35,923.82	41,185.41
2.1.1 Tax Receipts	18,465.45	20,207.28	22,971.01	26,221.45	30,132.23	34,941.02
2.1.1.1 Taxes on commodities and services	11,257.81	12,123.48	14,409.52	16,523.77	18,296.56	22,138.76
2.1.1.2 Taxes on Income and Property	7,176.34	8,051.76	8,522.71	9,656.22	11,802.47	12,775.14
2.1.1.3 Taxes of Union Territories (Without Legislature)	31.30	32.04	38.78	41.46	33.20	27.12
2.1.2 Non-Tax Receipts	3,649.30	3,669.65	4,512.72	5,100.56	5,791.59	6,244.38
2.1.2.1 Interest Receipts	401.62	396.22	357.79	332.20	316.10	368.35
2.2 Non-debt Capital Receipts	391.13	609.55	598.27	690.63	1,651.83	1,428.43
2.2.1 Recovery of Loans & Advances	93.85	220.72	165.61	209.42	648.80	616.50
2.2.2 Disinvestment proceeds	297.28	388.83	432.66	481.22	1,003.03	811.93
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	7,497.11	8,365.63	9,524.10	10,647.04	11,004.25	10,997.97
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	7,424.19	8,236.30	9,396.62	10,467.08	10,980.08	11,023.86
3A.1.1 Net Bank Credit to Government	3,358.58	-374.76	2,310.90	6,171.23	1,447.92	..
3A.1.1.1 Net RBI Credit to Government	1,081.30	-3,341.85	604.72	1,958.16	-1,448.47	..
3A.1.2 Non-Bank Credit to Government	4,065.61	8,611.06	7,085.72	4,295.85	9,532.16	..
3A.2 External Financing	72.92	129.33	127.48	179.97	24.18	-25.89
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	7,424.19	8,236.30	9,396.62	10,467.08	10,980.08	11,023.86
3B.1.1 Market Borrowings (net)	6,391.99	6,640.58	6,732.98	6,898.21	7,951.99	8,398.36
3B.1.2 Small Savings (net)	-142.81	-565.80	-785.15	-1,050.38	-1,653.29	-1,434.61
3B.1.3 State Provident Funds (net)	312.90	343.39	352.61	456.88	406.13	474.19
3B.1.4 Reserve Funds	34.63	51.09	-33.22	-64.36	6.70	31.14
3B.1.5 Deposits and Advances	255.45	275.45	134.70	177.92	168.45	159.10
3B.1.6 Cash Balances	-10.72	954.74	-174.38	-224.63	861.31	831.46
3B.1.7 Others	582.75	536.84	3,169.08	4,273.43	3,238.79	2,564.21
3B.2 External Financing	72.92	129.33	127.48	179.97	24.18	-25.89
4 Total Disbursements as per cent of GDP	26.7	26.3	27.3	28.0	29.0	28.6
5 Total Receipts as per cent of GDP	26.7	25.6	27.4	28.1	28.4	28.2
6 Revenue Receipts as per cent of GDP	19.7	19.2	20.0	20.5	21.4	22.0
7 Tax Receipts as per cent of GDP	16.4	16.2	16.7	17.2	18.0	18.7
8 Gross Fiscal Deficit as per cent of GDP	6.7	6.7	6.9	7.0	6.6	5.9

... : Not available. RE: Revised Estimates; BE: Budget Estimates

Source : Budget Documents of Central and State Governments.

No. 47: Financial Accommodation Availed by State Governments under various Facilities

(₹ Billion)

Sr. No	State/Union Territory	During December-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	5.76	19	14.92	19	5.71	17
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	-	-	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	0.39	21	1.58	19	0.42	14
7	Gujarat	-	-	-	-	-	-
8	Haryana	-	-	-	-	-	-
9	Himachal Pradesh	-	-	-	-	-	-
10	Jammu & Kashmir	-	-	6.42	25	0.22	1
11	Jharkhand	-	-	3.32	18	1.66	2
12	Karnataka	-	-	-	-	-	-
13	Kerala	-	-	-	-	-	-
14	Madhya Pradesh	-	-	-	-	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	0.27	10	0.35	8	-	-
17	Meghalaya	-	-	-	-	-	-
18	Mizoram	-	-	-	-	-	-
19	Nagaland	0.41	21	1.07	16	0.16	4
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	0.07	26	5.98	26	2.79	13
23	Rajasthan	-	-	-	-	-	-
24	Tamil Nadu	-	-	-	-	-	-
25	Telangana	2.56	19	8.65	19	4.31	9
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	-	-	3.87	17	0.89	7
29	West Bengal	3.69	11	11.81	11	2.17	6

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

Source: Reserve Bank of India.

No. 48: Investments by State Governments

(₹ Billion)

Sr. No	State/Union Territory	As on end of December 2018			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	72.96	7.18	0.02	0
2	Arunachal Pradesh	9.51	0.01	--	0
3	Assam	45.84	0.42	0	40.00
4	Bihar	54.66	--	0	0
5	Chhattisgarh	36.67	--	0.01	2.17
6	Goa	5.06	2.54	--	0
7	Gujarat	120.77	4.24	0	0
8	Haryana	18.39	10.54	0	0
9	Himachal Pradesh	--	--	--	8.00
10	Jammu & Kashmir	--	--	--	0
11	Jharkhand	0	--	0	0
12	Karnataka	27.37	--	0	225.00
13	Kerala	18.97	--	0	0
14	Madhya Pradesh	--	8.14	0.00	0
15	Maharashtra	308.52	--	--	400.00
16	Manipur	3.33	0.88	0	0
17	Meghalaya	5.41	0.23	0.09	0
18	Mizoram	4.77	0.22	--	0
19	Nagaland	13.10	0.28	--	0
20	Odisha	118.19	12.74	0.74	242.50
21	Puducherry	2.82	--	--	8.97
22	Punjab	0	0	0.08	0
23	Rajasthan	--	--	1.29	43.92
24	Tamil Nadu	58.55	--	0.46	303.15
25	Telangana	42.42	6.19	0.01	0
26	Tripura	2.90	0.04	--	0
27	Uttar Pradesh	--	--	1.87	0
28	Uttarakhand	26.49	0.70	0	0
29	West Bengal	93.57	3.71	2.14	0
	Total	1090.31	58.07	6.71	1273.71

No. 49: Market Borrowings of State Governments

(₹ Billion)

Sr. No.	State	2016-17		2017-18		2018-19						Total amount raised, so far in 2018-19	
		Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	October		November		December		Gross	Net
						Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised	Gross Amount Raised	Net Amount Raised		
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Andhra Pradesh	195.00	177.06	228.00	189.22	45.43	39.60	20.00	14.17	15.00	6.25	246.60	217.44
2	Arunachal Pradesh	4.53	2.87	8.88	7.03	-	-	-	-	-	-	4.00	4.00
3	Assam	30.90	19.94	77.60	67.97	-	-	5.00	5.00	10.00	10.00	59.00	59.00
4	Bihar	177.00	168.15	100.00	89.08	-	-	-	-	-	-7.50	-	-7.50
5	Chhattisgarh	42.00	38.98	81.00	81.00	15.00	15.00	10.00	10.00	-	-	25.00	25.00
6	Goa	13.20	11.71	18.00	14.00	1.00	1.00	2.00	-	2.50	2.50	15.00	13.00
7	Gujarat	247.20	209.44	240.00	157.85	35.88	35.88	37.08	27.08	38.75	26.25	196.71	164.21
8	Haryana	158.00	153.59	166.40	158.40	15.00	15.00	30.00	30.00	-	-	110.25	105.25
9	Himachal Pradesh	34.00	21.63	46.00	25.51	5.00	3.00	5.00	3.00	-	-	25.00	17.98
10	Jammu & Kashmir	27.90	18.99	62.00	39.74	3.25	1.13	8.75	6.75	-	-	42.00	32.24
11	Jharkhand	51.54	47.25	60.00	48.07	-	-	-	-	10.00	8.05	20.00	18.05
12	Karnataka	280.07	240.26	220.98	173.48	75.00	67.00	76.00	76.00	60.00	60.00	211.00	203.00
13	Kerala	173.00	146.86	205.00	162.03	15.00	15.00	15.00	11.50	18.00	10.00	163.00	139.65
14	Madhya Pradesh	161.00	145.51	150.00	131.25	20.96	20.96	26.00	19.75	16.00	16.00	122.96	116.71
15	Maharashtra	400.00	364.72	450.00	364.80	-	-20.00	-	-	20.00	20.00	128.69	108.69
16	Manipur	6.30	4.78	5.25	2.78	-	-	0.50	0.50	1.00	-1.00	5.00	3.00
17	Meghalaya	10.01	7.18	11.16	9.20	1.50	1.50	2.50	1.30	2.50	2.50	6.50	5.30
18	Mizoram	1.70	-0.35	4.24	2.77	-	-	-	-	-	-	-	-0.27
19	Nagaland	10.70	7.33	11.35	7.66	-	-	-	-	1.50	1.50	5.00	3.40
20	Odisha	76.20	69.90	84.38	84.38	-	-	-	-	-	-	45.00	45.00
21	Puducherry	5.25	5.25	8.25	4.88	1.00	1.00	0.50	0.50	1.00	1.00	3.50	2.50
22	Punjab	136.00	121.44	174.70	133.49	23.00	18.00	10.00	10.00	23.26	16.24	160.80	128.78
23	Rajasthan	160.54	143.25	249.14	167.77	15.00	15.00	27.00	12.00	23.70	12.08	266.00	211.26
24	Sikkim	7.44	5.74	9.95	7.45	1.25	1.25	1.00	1.00	-	-2.93	7.25	4.32
25	Tamil Nadu	372.50	349.94	409.65	360.23	35.00	22.50	40.00	32.50	42.50	25.00	298.90	261.40
26	Telangana	218.61	205.79	246.00	218.28	30.00	25.83	30.00	25.83	15.00	8.75	199.68	178.84
27	Tripura	9.90	7.53	11.37	11.37	-	-	-	-	2.43	2.43	11.43	11.43
28	Uttar Pradesh	410.50	369.05	416.00	371.78	85.00	75.00	20.00	10.00	45.00	35.00	230.00	170.00
29	Uttarakhand	54.50	50.81	66.60	58.30	2.50	2.50	5.50	5.50	6.00	3.85	53.50	46.85
30	West Bengal	344.31	312.30	369.11	253.04	40.00	34.00	20.00	5.00	84.83	75.95	209.83	117.42
	Grand Total	3819.79	3426.92	4191.00	3402.81	465.77	390.15	391.84	307.39	438.96	331.91	2871.59	2405.94

- : Nil.

Source : Reserve Bank of India.

Explanatory Notes to the Current Statistics

Table No. 1

1.2& 6: Annual data are average of months.

3.5 & 3.7: Relate to ratios of increments over financial year so far.

4.1 to 4.4, 4.8,4.9 &5: Relate to the last friday of the month/financial year.

4.5, 4.6 & 4.7: Relate to five major banks on the last Friday of the month/financial year.

4.10 to 4.12: Relate to the last auction day of the month/financial year.

4.13: Relate to last day of the month/ financial year

7.1&7.2: Relate to Foreign trade in US Dollar.

Table No. 2

2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.

2.2.2: Include cash, fixed deposits and short-term securities/bonds, *e.g.*, issued by IIFC (UK).

Table No. 4

Maturity-wise position of outstanding forward contracts is available at <http://nsdp.rbi.org.in> under "Reserves Template".

Table No. 5

Special refinance facility to Others, i.e. to the EXIM Bank, is closed since March 31, 2013.

Table No. 6

For scheduled banks, March-end data pertain to the last reporting Friday.

2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11

3.1 in Table 7 and 2.4 in Table 11: Include foreign currency denominated bonds issued by IIFC (UK).

Table No. 8

NM₂ and NM₃ do not include FCNR (B) deposits.

2.4: Consist of paid-up capital and reserves.

2.5: includes other demand and time liabilities of the banking system.

Table No. 9

Financial institutions comprise EXIM Bank, SIDBI, NABARD and NHB.

L₁ and L₂ are compiled monthly and L₃ quarterly.

Wherever data are not available, the last available data have been repeated.

Table No. 13

Data in column Nos. (4) & (5) are Provisional.

Table No. 14

Data in column Nos. (4) & (8) are Provisional.

Table No. 15 & 16

Data are provisional and relate to select 41 scheduled commercial banks, accounting for about 90 per cent of total non-food credit extended by all scheduled commercial banks (excludes ING Vysya which has been merged with Kotak Mahindra since April 2015).

Export credit under priority sector relates to foreign banks only.

Micro & small under item 2.1 includes credit to micro & small industries in manufacturing sector.

Micro & small enterprises under item 5.2 includes credit to micro & small enterprises in manufacturing as well as services sector.

Priority Sector is as per old definition and does not conform to FIDD Circular FIDD.CO.Plan.BC.54/04.09.01/2014-15 dated April 23, 2015.

Table No. 17

2.1.1: Exclude reserve fund maintained by co-operative societies with State Co-operative Banks

2.1.2: Exclude borrowings from RBI, SBI, IDBI, NABARD, notified banks and State Governments.

4: Include borrowings from IDBI and NABARD.

Table No. 24

Primary Dealers (PDs) include banks undertaking PD business.

Table No. 30

Exclude private placement and offer for sale.

1: Exclude bonus shares.

2: Include cumulative convertible preference shares and equi-preference shares.

Table No. 32

Exclude investment in foreign currency denominated bonds issued by IIFC (UK), SDRs transferred by Government of India to RBI and foreign currency received under SAARC SWAP arrangement. Foreign currency assets in US dollar take into account appreciation/depreciation of non-US currencies (such as Euro, Sterling, Yen and Australian Dollar) held in reserves. Foreign exchange holdings are converted into rupees at rupee-US dollar RBI holding rates.

Table No. 34

1.1.1.1.2 & 1.1.1.1.4: Estimates.

1.1.1.2: Estimates for latest months.

'Other capital' pertains to debt transactions between parent and subsidiaries/branches of FDI enterprises.

Data may not tally with the BoP data due to lag in reporting.

Table No. 35

1.10: Include items such as subscription to journals, maintenance of investment abroad, student loan repayments and credit card payments.

Table No. 36

Increase in indices indicates appreciation of rupee and vice versa. For 6-Currency index, base year 2016-17 is a moving one, which gets updated every year. REER figures are based on Consumer Price Index (combined). Methodological details are available in December 2005 and April 2014 issues of the Bulletin.

Table No. 37

Based on applications for ECB/Foreign Currency Convertible Bonds (FCCBs) which have been allotted loan registration number during the period.

Table Nos. 38, 39, 40 & 41

Explanatory notes on these tables are available in December issue of RBI Bulletin, 2012.

Table No. 43

1.3: Pertain to multilateral net settlement batches.

3.1: Pertain to three centres – Mumbai, New Delhi and Chennai.

3.3: Pertain to clearing houses managed by 21 banks.

6: Available from December 2010.

7: Include IMPS transactions.

9: Includes ATMs deployed by Scheduled Commercial banks and White Label ATMs (WLA). WLA are included from April 2014 onwards.

Mobile Banking - The data from July 2017 includes only individual payments and corporate payments initiated, processed, and authorised using mobile device. Other corporate payments which are not initiated, processed, and authorised using mobile device are excluded.

Table No. 45

(-): represents nil or negligible

The revised table format since June 2016, incorporates the ownership pattern of State Governments Securities and Treasury Bills along with the Central Government Securities.

State Government Securities include special bonds issued under Ujwal DISCOM Assurance Yojana (UDAY) scheme. Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

The category 'Others' comprises State Governments, Pension Funds, PSUs, Trusts, HUF/Individuals etc.

Table No. 46

GDP data from 2011-12 onwards are based on 2011-12 base. Data from year 2015-16 pertains to 29 states.

The GDP data from 2015-16 pertains to the Second Advance Estimates of National Income released by Central Statistics Office on 28th February 2018.

GDP for 2016-17 (RE) and 2017-18 are from Union Budget 2017-18.

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 temporary cash mismatches.

OD is advanced to State Governments beyond their WMA limits.

Average amount Availed is the total accommodation (SDF/WMA/OD) availed divided by number of days for which accommodation was extended during the month.

- : Nil.

Table No. 48

CSF and GRF are reserve funds maintained by some State Governments with the Reserve Bank of India.

ATBs include Treasury bills of 91 days, 182 days and 364 days invested by State Governments in the primary market.

--: Not Applicable (not a member of the scheme).

The concepts and methodologies for Current Statistics are available in Comprehensive Guide for Current Statistics of the RBI Monthly Bulletin (<https://rbi.org.in/Scripts/PublicationsView.aspx?id=17618>)

Time series data of 'Current Statistics' is available at <https://dbie.rbi.org.in>.

Detailed explanatory notes are available in the relevant press releases issued by RBI and other publications/releases of the Bank such as **Handbook of Statistics on the Indian Economy**.

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Notes

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

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