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CONTENTS

Monetary Policy Statement for 2018-19

Fourth Bi-monthly Monetary Policy Statement, 2018-19	1
Monetary Policy Report – October 2018	9

Speech

Preventive Vigilance – The Key Tool of Good Governance at Public Sector Institutions Urjit R. Patel	81
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Articles

Recent Developments in India's Mutual Fund Industry	89
Inflation Expectations Survey of Households: 2017-18	105

Press Release of Working Papers and Occasional Papers

Economic Activity and its Determinants: A Panel Analysis of Indian States	117
Nowcasting Real Estate Activity in India using Google Trend Data	119
Volatility Spillovers between Forex and Stock Markets in India	121
Inter-temporal Calculative Trust Design to Reduce Collateral Need for Business Credits	123
Global Liquidity and Foreign Portfolio Flows to India: An Empirical Assessment	125

Current Statistics	127
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Recent Publications	171
----------------------------	------------

MONETARY POLICY STATEMENT FOR 2018-19

Fourth Bi-monthly Monetary Policy Statement, 2018-19

Monetary Policy Report – October 2018

***Fourth 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:

- keep the policy repo rate under the liquidity adjustment facility (LAF) unchanged at 6.5 per cent.

Consequently, the reverse repo rate under the LAF remains at 6.25 per cent, and the marginal standing facility (MSF) rate and the Bank Rate at 6.75 per cent.

The decision of the MPC is consistent with the stance of calibrated tightening of monetary policy in consonance with the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 per cent within a band of +/- 2 per cent, while supporting growth. The main considerations underlying the decision are set out in the statement below.

Assessment

2. Since the last MPC meeting in August 2018, global economic activity has remained resilient in spite of ongoing trade tensions, but is becoming uneven and the outlook is clouded by several uncertainties. Among advanced economies (AEs), the United States (US) economy appeared to have sustained pace in Q3:2018 as reflected in strong retail sales and robust industrial activity. In the Euro area, economic activity remained subdued due to overall weak economic sentiment, weighed down mainly by political uncertainty. The Japanese economy has so far maintained the momentum of the previous quarter,

buoyed by recovering industrial production and strong business optimism.

3. Economic activity in major emerging market economies (EMEs) has been facing headwinds from both global and country-specific factors. In China, industrial production growth has moderated with slowing exports and the ongoing deleveraging of the financial system weighing on growth prospects. The Russian economy has been gathering steam with the manufacturing sector turning around, and the employment scenario remaining upbeat on rising oil prices. In Brazil, economic activity is recovering from the setback in Q2, supported by improving business and consumer sentiment, though weak domestic demand and the sluggish pace of recovery in manufacturing activity point to a slow revival. The South African economy slipped into recession in Q2:2018, pulled down by the negative contribution from agriculture on account of a strong unfavourable base effect.

4. Growth in global trade is weakening as reflected in export orders and automobile production and sales. Crude oil prices eased during the first half of August on concerns of reduced demand from EMEs due mainly to the spillover from country-specific turmoil, and accentuated by rising supplies. However, prices rebounded on expectation of reduced supplies due to sanctions on Iran and falling US stockpiles. Base metal prices witnessed selling pressure in anticipation of weak demand from major economies. Gold prices continued to slide lower on a strong US dollar, though they recovered somewhat on safe-haven demand from the mid-August lows. Inflation remained firm in the US, reflecting tightening labour market and elevated energy prices, while it persisted much below the central bank's target in Japan. In the Euro area, inflation pressures have been sustained by elevated crude prices. Inflation in many key EMEs has risen on surging crude prices and currency depreciations, caused by a firm dollar and domestic factors.

* Released on October 05, 2018.

5. Global financial markets continued to be affected by monetary policy stances in major AEs, the spreading of contagion risks from specific EMEs, and geopolitical developments. Among AEs, equity markets in the US touched a new high, driven by technology stocks, while in Japan, they were boosted by the weak yen. In contrast, stock markets in the Euro area suffered losses on signs of a slowdown and budget concerns in some member states. Sharp sell-offs have occurred on waning appetite of foreign portfolio investors for EME equities. The 10-year sovereign yield in the US has traded sideways, falling on dovish Fed guidance only to recover by end-September on robust economic data. Among other AEs, bond yields in the Euro area hardened in September on risk aversion following the sharp rise in financial market volatility in August. In contrast, bond yields in Japan moved in a narrow range, driven by the central bank's yield curve management policy. In most EMEs, yields rose due to domestic factors and/or contagion effects from the stress in other EMEs. In currency markets, the US dollar witnessed selling pressures since August on reduced investor expectations of rate hikes by the US Fed. However, it recovered in the last week of September on a rate hike by the Fed and strong economic data. The euro remained in bearish territory due to fiscal risks in some member countries and expectations of weak growth. EME currencies continued to depreciate against the US dollar.

6. On the domestic front, real gross domestic product (GDP) growth surged to a nine-quarter high of 8.2 per cent in Q1:2018-19, extending the sequential acceleration to four successive quarters. Of the constituents, gross fixed capital formation (GFCF) expanded by double digits for the second consecutive quarter, driven by the government's focus on the road sector and affordable housing. Growth in private final consumption expenditure (PFCE) accelerated to 8.6 per cent, reflecting rising rural and urban spending, supported by retail credit growth. However,

government final consumption expenditure (GFCE) decelerated, largely due to a high base. The growth of exports of goods and services jumped to 12.7 per cent, powered by non-oil exports on the back of strong global demand. In spite of import growth continuing to surge, high exports growth helped reduce the drag from net exports on aggregate demand.

7. On the supply side, growth of gross value added (GVA) at basic prices accelerated in Q1, underpinned by double-digit expansion in manufacturing activity which was robust and generalised across firm sizes. Agricultural growth also picked up, supported by robust growth in production of rice, pulses and coarse cereals alongside a sustained expansion in livestock products, forestry and fisheries. In contrast, services sector growth moderated somewhat, largely on account of a high base. Construction activity, however, maintained strong pace for the second consecutive quarter.

8. The fourth advance estimates of agricultural production for 2017-18 released in August placed foodgrains production at a high of 284.8 million tonnes, 1.9 per cent higher than the third advance estimates (released in May 2018) and 3.5 per cent higher than the final estimates for the previous year. The progress of the south-west monsoon has been marked by uneven spatial and temporal distribution, with an overall deficit of 9 per cent in precipitation. However, the first advance estimates of production of major kharif crops for 2018-19 have placed foodgrains production at 141.6 million tonnes, 0.6 per cent higher than last year's level. The live storage in major reservoirs (as on September 27) rose to 76 per cent of the full capacity, which was 17 per cent higher than last year and 5 per cent higher than the average of the last 10 years. This bodes well for the rabi sowing season.

9. Industrial growth, measured by the index of industrial production (IIP), accelerated in June-July 2018 on a year-on-year (y-o-y) basis, underpinned mainly

by high growth in consumer durables, notably two-wheelers, readymade garments, stainless steel utensils, auto components and spares, and accessories. Growth in consumer non-durables also accelerated in July. The infrastructure and construction sector continued to show solid growth. Primary goods growth accelerated, driven by mining, electricity and petroleum refinery products. Growth in capital goods production spiked in June, but decelerated sharply in July. The output of eight core industries growth remained strong in July, driven by coal, petroleum refinery products, steel and cement, but moderated in August. Capacity utilisation (CU) declined from 75.2 per cent in Q4:2017-18 to 73.8 per cent in Q1:2018-19, while seasonally adjusted CU increased by 1.8 percentage points to the long-term average of 74.9 per cent. Based on the Reserve Bank's business expectations index (BEI), the assessment for Q2:2018-19 improved, led by enhanced production, order books, exports and capacity utilisation. The August and September manufacturing purchasing managers' index (PMI) remained in expansion zone; the September print rebounded close to the July level confirming robustness of manufacturing activity.

10. High-frequency indicators of services in July and August present a mixed picture. Indicators of rural demand, viz., growth in tractor and two-wheeler sales, slowed down. Passenger vehicle sales, an indicator of urban demand, declined possibly due to rising fuel prices. However, growth in air passenger traffic – another indicator of urban demand – remained robust. Transportation sector indicators, viz., commercial vehicle sales and port cargo, expanded at an accelerated pace. Steel consumption and cement production, indicators of construction activity, showed strong growth. The services PMI remained in expansion zone in August and September, though it decelerated from July, with slower expansion in new business and employment.

11. Retail inflation, measured by the y-o-y change in the CPI, fell from 4.9 per cent in June to 3.7 per cent

in August, dragged down by a decline in food inflation. Some softening of inflation in items other than food and fuel also contributed to the decline. Adjusting for the estimated impact of an increase in house rent allowance (HRA) for central government employees, headline inflation was at 3.4 per cent.

12. Inflation in the food and beverages group declined sharply in the absence of seasonal uptick in prices of fruits and vegetables. Of the three key vegetables, the prices of tomatoes declined due to strong mandi arrivals, while those of onions and potatoes remained muted. Continued deflation in prices of pulses and sugar accentuated the decline in food inflation. Inflation in other items of food – cereals, meat and fish, milk, spices and non-alcoholic beverages – remained benign.

13. Inflation in the fuel and light group continued to rise on the back of a significant increase in liquefied petroleum gas prices, tracking international product prices. Kerosene prices rose as oil marketing companies reduced subsidies in a calibrated manner. While remaining elevated, CPI inflation excluding food and fuel moderated due to softening in inflation in housing; pan, tobacco and intoxicants; personal care; and transportation.

14. While the September round of the Reserve Bank's survey of households reported a sharp uptick of 50 basis points in three-month ahead inflation expectations over the last round, one-year ahead expectations moderated by 30 basis points. Inflation expectations for both input prices and selling prices of manufacturing firms, polled by the Reserve Bank's industrial outlook survey, firmed up in Q2:2018-19. The manufacturing and services PMIs also reported an increase in input costs and selling prices in Q2, reflecting a pass-through of higher costs to clients. On the other hand, growth in wages in the rural and organised manufacturing sectors remained contained.

15. Systemic liquidity alternated between surplus and deficit during August-September 2018, reflecting the combined impact of expansion of currency in circulation, Reserve Bank's forex operations and movements in government cash balances. From a daily net average surplus of ₹201 billion during August 1-19, 2018, liquidity moved into deficit during August 20-30. After turning into surplus during August 31-September 10 due to increased government spending, the system again moved into deficit during September 11-29 on the back of an increase in government cash balances and Reserve Bank's forex interventions. Based on an assessment of the evolving liquidity conditions, the Reserve Bank conducted two open market purchase operations in the second half of September to inject ₹200 billion of durable liquidity. LAF operations absorbed, on a daily net average basis, ₹30 billion in August, but injected ₹406 billion in September. The weighted average call rate (WACR), on an average, traded below the repo rate by 15 basis points (bps) in August and by 4 bps in September.

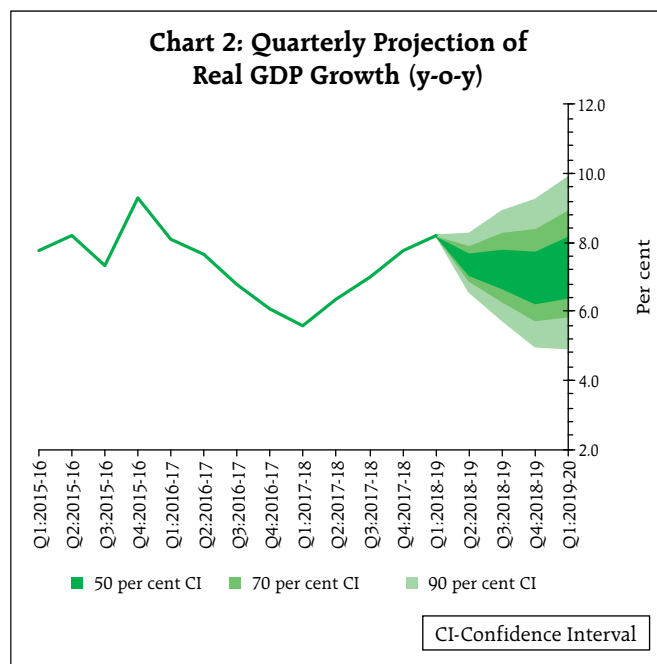
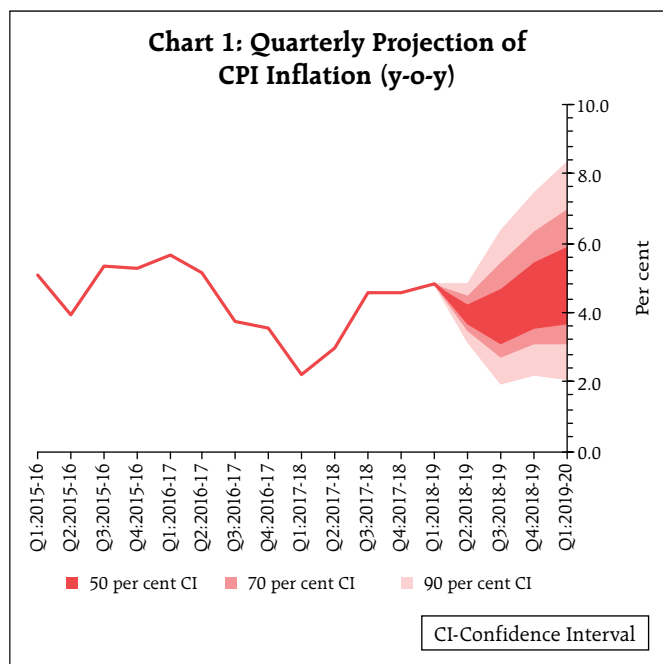
16. Exports maintained double digit growth in July and August 2018, driven mainly by petroleum products (which benefitted from elevated crude oil prices), engineering goods, gems and jewellery, drugs and pharmaceuticals, and chemicals. However, imports grew faster than exports, reflecting not only a higher oil import bill, but also higher imports of gold, coal, electronic goods and machinery. This led to a widening of the trade deficit to US\$ 35.3 billion in July-August 2018 from US\$ 24.6 billion a year ago over and above the expansion in Q1:2018-19. However, higher net services receipts and private transfer receipts helped contain the current account deficit to 2.4 per cent of GDP in Q1:2018-19 from 2.5 per cent a year ago. On the financing side, net foreign direct investment (FDI) flows improved in April-July 2018. By contrast, foreign portfolio investors have been net sellers in both the equity and debt segments so far on a cumulative basis in 2018-19 due to higher US interest rates, risk-

off sentiment in EMEs and escalation of trade wars. India's foreign exchange reserves were at US\$ 400.5 billion on September 28, 2018.

Outlook

17. In the third bi-monthly resolution of August 2018, CPI inflation was projected at 4.6 per cent in Q2:2018-19, 4.8 per cent in H2 and 5.0 per cent in Q1:2019-20, with risks evenly balanced. Excluding the HRA impact, CPI inflation was projected at 4.4 per cent in Q2:2018-19, 4.7-4.8 per cent in H2 and 5.0 per cent in Q1:2019-20. Actual inflation outcomes, especially in August, were below projections as the expected seasonal increase in food prices did not materialise and inflation excluding food and fuel moderated.

18. Going forward, the inflation outlook is expected to be influenced by several factors. First, food inflation has remained unusually benign, which imparts a downward bias to its trajectory in the second half of the year. Inflation in key food items such as pulses, edible oils, sugar, fruits and vegetables remains exceptionally soft at this juncture. The risk to food inflation from spatially and temporally uneven rainfall is also mitigated, as confirmed by the first advance estimates that have placed production of major kharif crops for 2018-19 higher than last year's record. An estimate of the impact of an increase in minimum support prices (MSPs) announced in July has been factored in the baseline projections. Secondly, the price of the Indian basket of crude oil has increased sharply, by US\$ 13 a barrel, since the last resolution. Thirdly, international financial markets remained volatile with EME currencies depreciating significantly. Finally, the HRA effect came off its peak in June and is dissipating gradually on expected lines. Taking all these factors into consideration, inflation is projected at 4.0 per cent in Q2:2018-19, 3.9-4.5 per cent in H2 and 4.8 per cent in Q1:2019-20, with risks somewhat to the upside (Chart 1). Excluding the HRA impact, CPI inflation is projected at 3.7 per cent in Q2:2018-19, 3.8 - 4.5 per cent in H2 and 4.8 per cent in Q1:2019-20.



19. Turning to the growth outlook, the GDP print of Q1:2018-19 was significantly higher than that projected in the August resolution. Private consumption has remained robust and is likely to be sustained even as the recent rise in oil prices may have a bearing on disposable incomes. Improving capacity utilisation, larger FDI inflows and increased financial resources to the corporate sector augur well for investment activity. However, both global and domestic financial conditions have tightened, which may dampen investment activity. Rising crude oil prices and other input costs may also drag down investment activity by denting profit margins of corporates. This adverse impact will be alleviated to the extent corporates are able to pass on increases in their input costs. Uncertainty surrounds the outlook for exports. Tailwinds from the recent depreciation of the rupee could be muted by the slowing down of global trade and the escalating tariff war. Based on an overall assessment, GDP growth projection for 2018-19 is retained at 7.4 per cent as in the August resolution (7.4 per cent in Q2 and 7.1-7.3 per cent in H2), with risks broadly balanced; the path in the August resolution was 7.5 per cent in Q2:2018-19 and 7.3-7.4 per cent in H2. GDP growth for Q1:2019-

20 is now projected marginally lower at 7.4 per cent as against 7.5 per cent in the August resolution, mainly due to the strong base effect (Chart 2).

20. While the projections of inflation for 2018-19 and Q1:2019-20 have been revised downwards from the August resolution, its trajectory is projected to rise above the August 2018 print. The outlook is clouded with several uncertainties. First, the government announced in September measures aimed at ensuring remunerative prices to farmers for their produce, although uncertainty continues about their exact impact on food prices. Secondly, oil prices remain vulnerable to further upside pressures, especially if the response of oil-producing nations to supply disruptions from geopolitical tensions is not adequate. The recent excise duty cuts on petrol and diesel will moderate retail inflation. Thirdly, volatility in global financial markets continues to impart uncertainty to the inflation outlook. Fourthly, a sharp rise in input costs, combined with rising pricing power, poses the risk of higher pass-through to retail prices for both goods and services. Firms covered under the Reserve Bank's industrial outlook survey report firming of input costs in Q2:2018-19 and Q3. However, global

commodity prices other than oil have moderated, which should mitigate the adverse influence on input costs. Fifthly, should there be fiscal slippage at the centre and/or state levels, it will have a bearing on the inflation outlook, besides heightening market volatility and crowding out private sector investment. Finally, the staggered impact of HRA revision by the state governments may push up headline inflation. While the MPC will look through the statistical impact of HRA revisions, there is need to be watchful for any second-round effects on inflation. The inflation outlook calls for a close vigil over the next few months, especially because the output gap has virtually closed and several upside risks persist.

21. Against this backdrop, the MPC decided to keep the policy repo rate unchanged. The MPC reiterates its commitment to achieving the medium-term target for headline inflation of 4 per cent on a durable basis.

22. The MPC notes that global headwinds in the form of escalating trade tensions, volatile and

rising oil prices, and tightening of global financial conditions pose substantial risks to the growth and inflation outlook. It is, therefore, imperative to further strengthen domestic macroeconomic fundamentals.

23. Regarding the policy repo rate, Dr. Pami Dua, Dr. Ravindra H. Dholakia, Dr. Michael Debabrata Patra, Dr. Viral V. Acharya and Dr. Urjit R. Patel voted in favour of keeping the policy repo rate unchanged. Dr. Chetan Ghate voted for an increase in the policy rate by 25 bps.

24. Regarding the stance, Dr. Pami Dua, Dr. Chetan Ghate, Dr. Michael Debabrata Patra, Dr. Viral V. Acharya and Dr. Urjit R. Patel voted in favour of changing the stance to calibrated tightening. Dr. Ravindra H. Dholakia voted to keep the neutral stance unchanged. The minutes of the MPC's meeting will be published by October 19, 2018.

25. The next meeting of the MPC is scheduled from December 3 to 5, 2018.

Statement on Developmental and Regulatory Policies

This Statement sets out various developmental and regulatory policy measures for developing and strengthening financial markets.

1. Voluntary Retention Route (VRR) for Investment by Foreign Portfolio Investors (FPIs)

The regulatory framework for FPI investment in debt has evolved over the years, influenced by trade-offs in encouraging capital flows and attendant macro-prudential considerations. Several measures have been undertaken in recent times to facilitate FPI investment in debt. To encourage FPIs willing to undertake long-term investments, a special Route called 'Voluntary Retention Route' (VRR) is being proposed. Under the proposed Route, FPIs will have more operational flexibility in terms of instrument choices as well as exemptions from regulatory provisions such as the cap on short-term investments (less than one year) at 20% of portfolio size, concentration limits, and caps on exposure to a corporate group (20% of portfolio size and 50% of a single issue). To be eligible to invest under this route, FPIs would need to voluntarily commit to retain in India a minimum required percentage of their investments for a period of their choice. FPIs would apply for investment limits under the Route through an auction process. A discussion paper on the Route

will be placed today on the Reserve Bank's website for public consultation.

2. Regulation of Financial Benchmarks

The robustness and reliability of financial benchmarks are critical for efficient pricing and valuation of financial instruments. Ensuring the credibility of benchmarks promotes their wider adoption which, in turn, facilitates efficient transmission of price signals in the financial system. Following the controversy surrounding the London Inter-Bank Offer Rate (LIBOR) fixing, the International Organization of Securities Commissions (IOSCO) laid down principles of financial benchmarks that provide the overarching framework to ensure robust and credible benchmarks in financial markets. Many regulators across jurisdictions have come up with regulations for financial benchmarks based on these principles. In India, the Report of the Committee on Financial Benchmarks had recommended, among other things, regulatory oversight of benchmark administrators. Accordingly, to improve the governance of the benchmark processes, it is proposed to introduce a regulatory framework for financial benchmarks which shall apply, initially, to benchmarks issued by the Financial Benchmarks of India Ltd. (FBIL). Draft regulations will be issued by the end of October 2018.

I. Macroeconomic Outlook

While domestic activity has continued to exhibit resilience and stability after the April 2018 Monetary Policy Report, the external environment has remained challenging and imparted downside risk to India's growth prospects. The soft headline inflation readings for July and August 2018 relative to projections imply a largely benign food prices outlook in the near term even as upside risks to inflation over the 12-month ahead horizon appear to be rising modestly due to global financial market volatility and surging oil prices.

1.1 Key Developments since April 2018 MPR

In the period following the Monetary Policy Report (MPR) of April 2018, several risks it had flagged have been materialising on an ongoing basis. The global macroeconomic and financial environment has been roiled by bouts of financial market volatility, retaliatory trade protectionism among major economies of the world, elevated and volatile crude oil prices, and recurring jitters around the efficacy of managing monetary policy normalisation in the US amidst a late-in-the-cycle US fiscal stimulus, occurring all at once, lashing emerging market economies (EMEs) as an asset class with asset price shocks and capital outflows. More recently, vulnerabilities surfacing amongst specific EMEs have produced powerful contagion effects. Taken together, these global factors appear to be increasing risks around India's growth prospects over the next 12-month horizon with a slant to the downside. Global growth itself is getting differentiated across economies and the cyclical upswing in global trade that had started in Q4:2017 is being stifled by rising trade tensions.

Meanwhile, domestic economic activity has continued to exhibit resilience and stability in these highly unsettled global conditions. On the agricultural front, the spatial distribution of south-west monsoon was

somewhat skewed, although most of the *kharif* crop growing states received normal rainfall. Industrial activity has gathered pace and the outlook for the services sector is gradually improving. Inward foreign direct investment remains buoyant. The slow firming up of private consumption and investment are expected to be sustained in H2:2018-19. The soft headline inflation readings for July and August 2018 relative to projections imply a largely benign food prices outlook in the near term; however, volatility in global financial markets and surging oil prices remain upside risks to inflation over the 12-month ahead horizon. These developments pose challenges for the setting of monetary policy in India.

Monetary Policy Committee: April-August 2018

During April-August 2018, the Monetary Policy Committee (MPC) met thrice in accordance with its bi-monthly schedule. Maintaining *status quo* in its April 2018 meeting, the MPC increased the policy repo rate by 25 basis points (bps) successively in its June and August 2018 meetings. In its June 2018 meeting, the MPC's vote was unanimous against the backdrop of rising inflation, upward revision in inflation projections, sharper than anticipated increase in crude oil prices, and hardening of households' inflation expectations.

In August, however, the MPC's vote was by a majority of 5:1. The decision by majority was influenced by further hardening of inflation and inflation expectations amidst uncertainty around the impact of the minimum support price (MSP) hikes. The MPC's voting pattern, which reflects differences in individual members' assessments and expectations as well as relative weights on policy goals, is also observed in other central banks (Table I.1).

Macroeconomic Outlook

Chapters II and III analyse developments relating to prices and costs and demand and supply conditions during the first half of 2018-19, comparing outcomes *versus* forecasts and setting reasons underlying

Table I.1 Monetary Policy Committees and Voting Patterns

Country	Policy Meetings: April - September 2018		
	Total Meetings	Meetings With Full Consensus	Meetings With Dissents
Brazil	4	4	0
Chile	4	4	0
Colombia	4	4	0
Czech Republic	4	2	2
Hungary	6	6	0
Israel	4	0	4
Japan	4	0	4
South Africa	3	2	1
Sweden	3	0	3
Thailand	4	1	3
UK	4	2	2
US	4	4	0

Sources: Central bank websites; and Bloomberg.

divergences. Turning to the outlook, developments in key macroeconomic variables over the past six months warrant revisions in the baseline assumptions (Table I.2).

First, international crude oil prices have firmed up by more than US\$ 15 per barrel over the April 2018 MPR baseline assumption. Given the current demand-supply assessment and signals extracted from the futures market, the baseline scenario assumes crude oil prices (Indian basket) to average US\$ 80 a barrel in the second half of 2018-19 (Chart I.1).

Second, the exchange rate of the Indian rupee (INR) *vis-à-vis* the US dollar has depreciated from its end-March

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

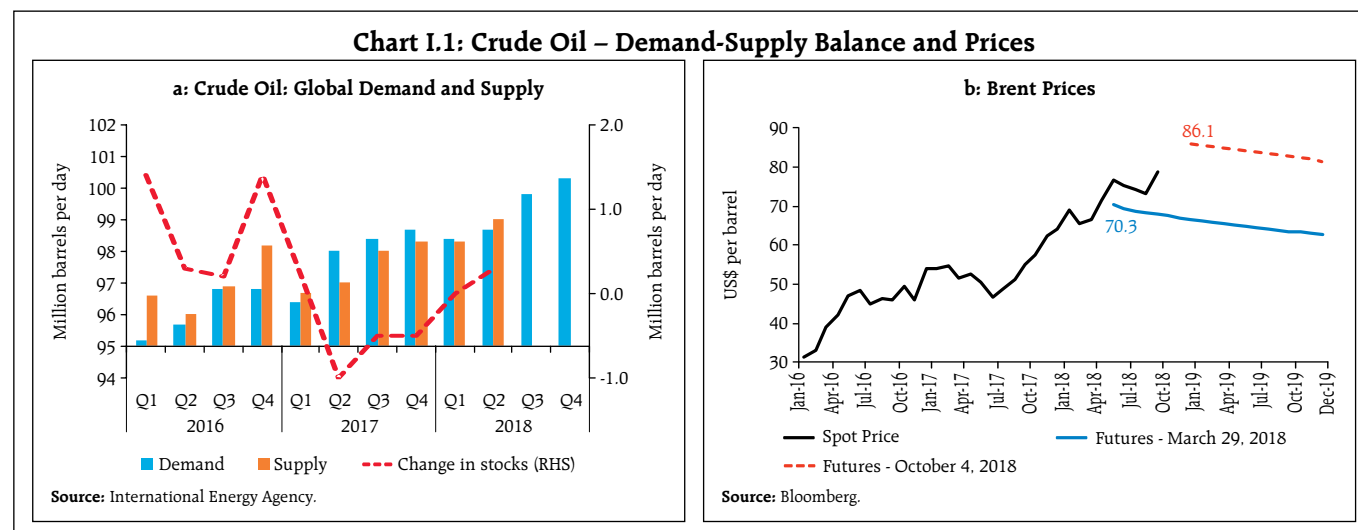
Indicator	April 2018 MPR	Current (October 2018) MPR
Crude Oil (Indian Basket)	US\$ 68 per barrel	US\$ 80 per barrel during H2:2018-19
Exchange rate	₹65.5/US\$	₹72.5/US\$
Monsoon	Normal for 2018	9 per cent below long period average
Global growth	3.9 per cent in 2018 3.9 per cent in 2019	3.9 per cent in 2018 3.9 per cent in 2019
Fiscal deficit (per cent of GDP)	To remain within BE 2018-19 Centre: 3.3 Combined (Centre and States): 6.0	To remain within BE 2018-19 Centre: 3.3 Combined (Centre and States): 5.9
Domestic macroeconomic/ structural policies during the forecast period	No major change	No major change

Notes:

1. The Indian basket of crude oil represents a derived numeraire comprising sour grade (Oman and Dubai average) and sweet grade (Brent) crude oil.
2. The exchange rate path assumed here is for the purpose of generating staff's baseline growth and inflation projections and does not indicate any 'view' on the level of the exchange rate. The Reserve Bank is guided by the objective of containing excess volatility in the foreign exchange market and not by any specific level of and/or band around the exchange rate.
3. Global growth projections are from the World Economic Outlook (January 2018 and July 2018 Updates), International Monetary Fund (IMF).
4. BE: Budget estimates.

level, reflecting (i) the general strengthening of the US dollar across major currencies; (ii) higher crude oil prices widening the trade and current account deficits;

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



(iii) portfolio outflows; and (iv) risk aversion among portfolio investors towards EMEs after the country-specific developments in Turkey and Argentina. As on October 4, the INR had depreciated by 11.8 per cent against the US dollar from its level at end-March 2018.

Third, global economic activity has expanded, broadly in line with the baseline projections given by the International Monetary Fund (IMF) in April (Chart I.2). However, it has become uneven and less synchronised across regions. Uncertainty has heightened on account of escalating protectionism and tariff wars, tightening of global financial conditions, and higher oil prices, all posing downside risks to global growth. The recovery in world trade is losing momentum.¹

Finally, the south-west monsoon rainfall (June-September 2018) was 9 per cent below long period average, *vis-à-vis* the baseline assumption of normal monsoon made in April.

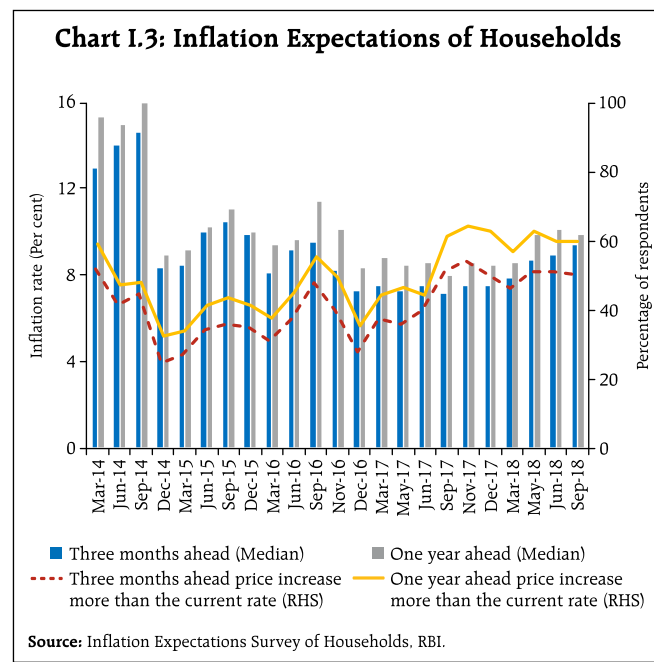
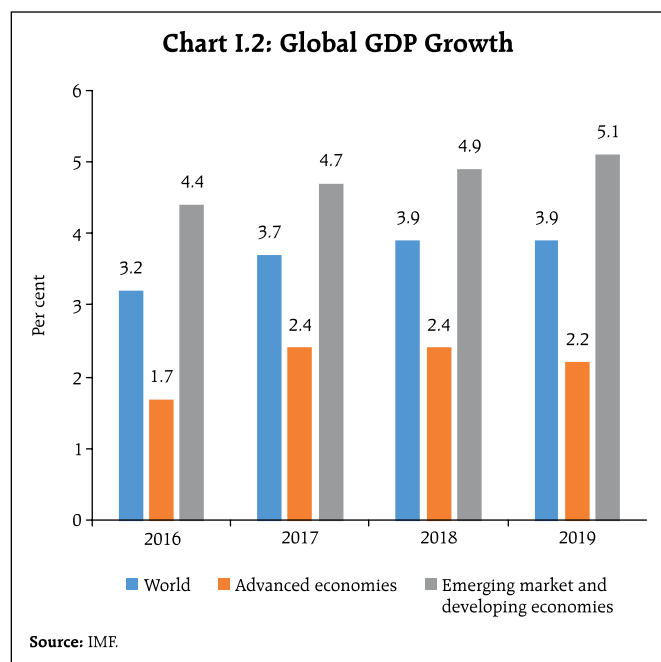
1.2 The Outlook for Inflation

Headline consumer price index (CPI) inflation averaged 4.4 per cent during 2018-19 up to August [4.1 per cent, excluding the estimated impact of house rent allowances (HRAs) for central government employees].

A broad-based uptick in inflation in respect of prices of fuel, transportation, personal care/effects, education and health services was largely offset by the unexpectedly and unseasonably benign food inflation (Chapter II).

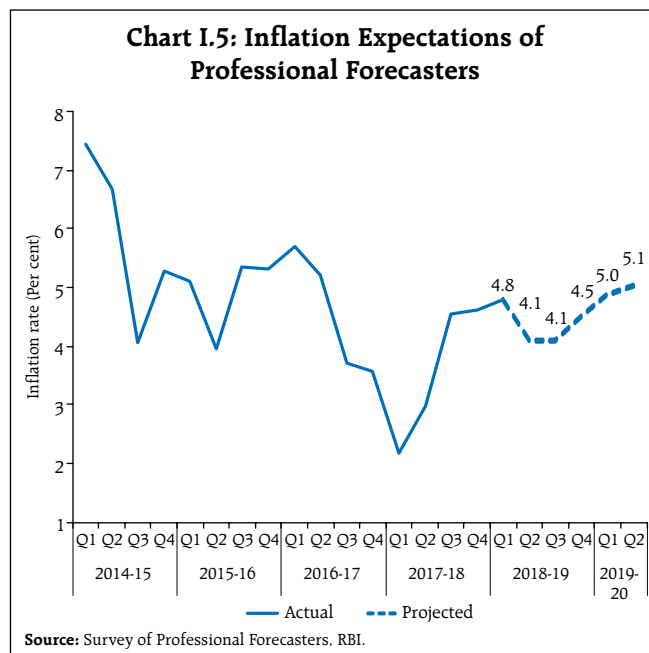
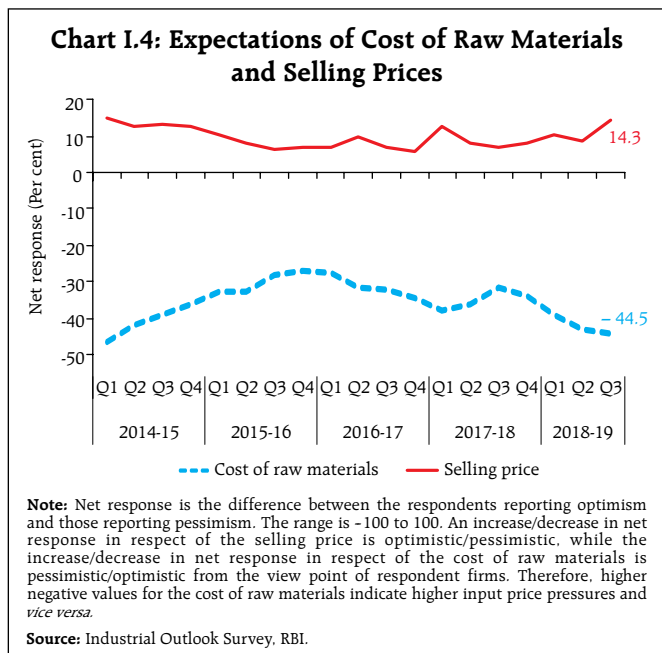
Looking ahead, it is useful to read into the signals emitted by inflation expectations of firms and households. By shaping price and wage setting behaviour, they influence future inflation. Inflation expectations also adapt to actual inflation outcomes of salient items such as food and fuel. Inflation expectations of urban households surveyed by the Reserve Bank exhibited a mixed picture in its September 2018 round²: they increased by 50 bps over the previous round for the three months ahead horizon and softened by 30 bps for the one year ahead horizon. The proportion of respondents expecting the general price level to increase by more than the current rate, however, declined marginally in the September round for the three months ahead horizon and was almost unchanged for the one year ahead horizon (Chart I.3).

Manufacturing firms polled in the July-September 2018 round of the Reserve Bank's industrial outlook survey



¹ World Trade Outlook Indicator, World Trade Organisation (WTO) (August 9, 2018).

² The Reserve Bank's inflation expectations survey of households is conducted in 18 cities and the results of the September 2018 survey are based on responses from 5,760 households.

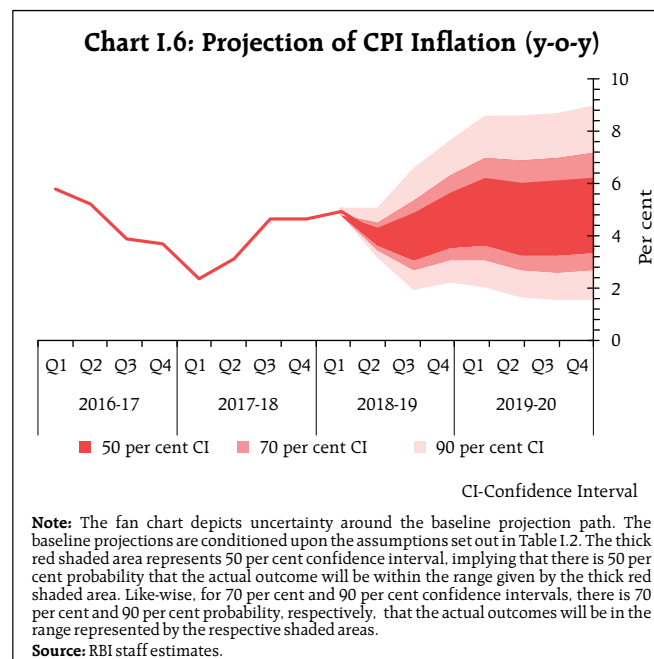


expected higher cost of raw materials in Q3:2018-19 (Chart I.4).³ Consequently, respondents anticipated input prices to firm up further and muted profit margins in spite of higher selling prices. According to the *Nikkei's* purchasing managers' survey, firms in both the manufacturing and services sectors raised output prices in September 2018 in the face of input cost pressures.

Professional forecasters surveyed by the Reserve Bank in September 2018 expected CPI inflation to fall from 4.8 per cent in Q1:2018-19 to 4.1 per cent in Q3 and then pick up to 5.1 per cent by Q2:2019-20 (Chart I.5).⁴

Taking into account the initial conditions, signals from forward-looking surveys and estimates from structural and other models⁵, CPI inflation is projected to pick up from 3.7 per cent in August 2018 to 3.9 per cent in Q3:2018-19 and 4.5 per cent in Q4:2018-19, with risks somewhat tilted to the upside (Chart I.6). The projected increase in inflation from current levels reflects the waning away of favourable base effects and anticipates the feeding through of the impact of

the increase in MSPs into retail inflation. The direct impact of the increase in HRA by central government has started waning and will fade away completely by December 2018. Excluding the estimated impact of HRA for central government employees, CPI inflation is projected at 3.8 per cent in Q3:2018-19 and 4.5 per cent in Q4:2018-19. The 50 per cent and the 70 per cent confidence intervals for headline inflation in Q4:2018-19 are 3.6-5.7 per cent and 3.1-6.4 per cent, respectively.



³ The results of July-September 2018 round of the industrial outlook survey are based on responses from 1,095 companies.

⁴ 29 panelists participated in the September 2018 round of the Reserve Bank's survey of professional forecasters.

⁵ A description of structural model is available in Benes, Jaromir, *et al.* (2016), "Quarterly Projection Model for India: Key Elements and Properties", RBI Working Paper Series, No. 08/2016.

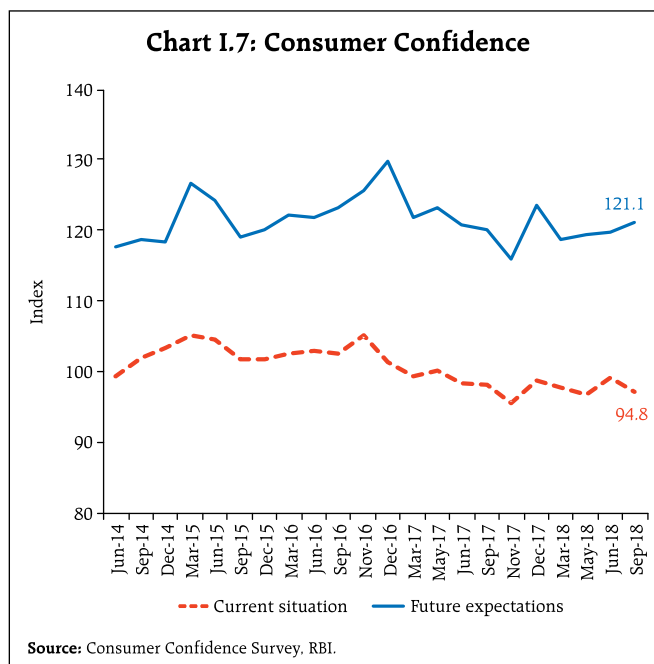
For 2019-20, structural model estimates indicate that inflation will move in a range of 4.5-4.8 per cent, assuming a normal monsoon and no major exogenous/policy shocks. The 50 per cent and the 70 per cent confidence intervals for Q4:2019-20 are 3.4-6.3 per cent and 2.7-7.2 per cent, respectively.

There are upside and downside risks to the baseline inflation path. As stated earlier, the announced increase in MSPs for *kharif* crops has been much bigger than in the recent past, but there is considerable uncertainty about the exact impact of the scale and timing of government procurement operations. Other upside risks in the context of the baseline projection include supply disruptions in the global crude oil market, volatility in international financial markets and second round effects of the staggered HRA revisions by state governments. A major downside risk to the baseline could be decline in demand for oil due to global growth slowdown on account of rising trade tensions, which may help bring down oil prices.

1.3 The Outlook for Growth

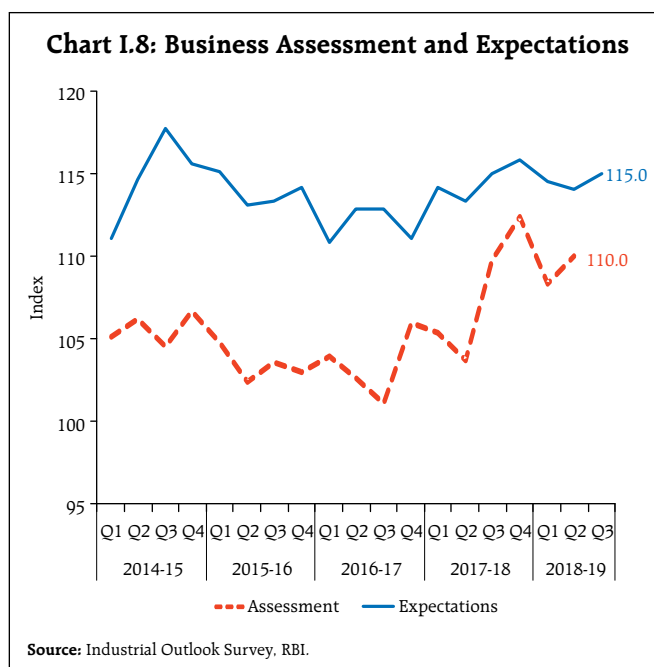
The April 2018 MPR had projected an acceleration in real gross domestic product (GDP) growth in 2018-19 on the back of: (a) the goods and services tax (GST) stabilising; (b) improving credit offtake; (c) likely boost to investment from primary market resource mobilisation; (d) the process of recapitalisation of public sector banks and resolution of distressed assets under the Insolvency and Bankruptcy Code (IBC); (e) buoyant global trade; and (f) the thrust to the rural and infrastructure sectors in the Union Budget 2018-19. Most of these have materialised, but to varying extent. However, global trade growth, as stated earlier, seems to be losing its synchronised momentum and this may hinder India’s export prospects. The uneven spatial distribution of the south-west monsoon is another factor that has also imparted some uncertainty to the agricultural outlook and inflation.

Turning to forward-looking surveys, consumer confidence over the year ahead improved marginally in the September 2018 round of the Reserve Bank’s



survey, reflecting an optimism on incomes and prices (Chart I.7).⁶

Optimism in the manufacturing sector for the quarter ahead improved in the September 2018 round of the Reserve Bank’s industrial outlook survey on account of higher order books and selling prices (Chart I.8).



⁶ The survey is conducted by the Reserve Bank in 13 cities and the September round is based on responses from 5,364 respondents.

Table I.3: Business Expectations Surveys

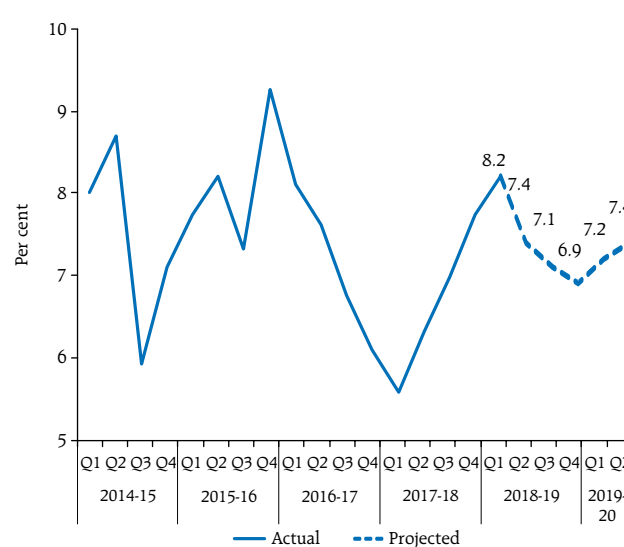
Item	NCAER Business Confidence Index (August 2018)	FICCI Overall Business Confidence Index (September 2018)	Dun and Bradstreet Composite Business Optimism Index (July 2018)	CII Business Confidence Index (September 2018)
Current level of the index	114.4	65.4	80.6	64.9
Index as per previous survey	131.4	71.0	85.0	60.1
% change (q-o-q) sequential	-12.9	-7.9	-5.2	8.0
% change (y-o-y)	-15.9	-1.1	11.7	11.3

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

Surveys by other agencies indicate a mixed picture on future business expectations (Table I.3). Firms in the manufacturing and services sectors polled in the *Nikkei's* purchasing managers' surveys (September 2018) were optimistic about their output prospects a year ahead, driven by expected improvement in demand.

In the September round of the Reserve Bank's survey, professional forecasters expected real GDP growth to decelerate from 8.2 per cent in Q1:2018-19 to 6.9 per cent in Q4 and then recover to 7.4 per cent in Q2:2019-20 (Chart I.9 and Table I.4).

Taking into account the baseline assumptions, monetary policy tightening of 50 bps during June-August 2018, survey indicators and model forecasts, real GDP growth is projected to improve from 6.7 per cent in 2017-18 to 7.4 per cent in 2018-19 – 8.2 per cent in Q1, 7.4 per cent in Q2, 7.3 per cent in Q3 and 7.1 per cent in Q4 – with risks broadly balanced around this baseline path (Chart I.10). For 2019-20, structural model estimates indicate real GDP growth at 7.6 per cent, with quarterly growth rates in the range of 7.4-7.9 per cent, assuming a normal monsoon and no major exogenous or policy shocks. Strengthening investment activity and a further pick-up in credit growth impart an upside bias to the baseline growth projections. However, recent protectionist measures by major economies, threats of currency wars and the uncertainty associated with the pace of monetary

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

Source: Survey of Professional Forecasters, RBI.

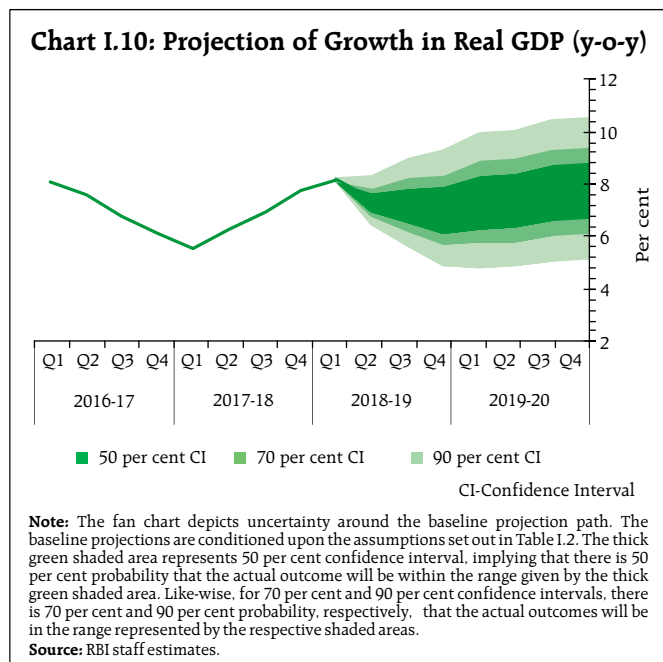
policy normalisation in the US and other major advanced economies pose downside risks to the baseline growth path.

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

	(Per cent)	
	2018-19	2019-20
Reserve Bank's Baseline Projections		
Inflation, Q4 (y-o-y)	4.5	4.6
Inflation excluding the estimated impact of HRA for central government employees, Q4 (y-o-y)	4.5	4.6
Real GDP growth	7.4	7.6
Median Projections of Professional Forecasters		
Inflation, Q4 (y-o-y)	4.5	5.1 [#]
Real GDP growth	7.4	7.5
Gross domestic saving (per cent of GNDI)	29.8	30.0
Gross fixed capital formation (per cent of GDP)	28.8	29.1
Credit growth of scheduled commercial banks	12.0	12.3
Combined gross fiscal deficit (per cent of GDP)	6.2	5.9
Central government gross fiscal deficit (per cent of GDP)	3.3	3.1
Repo rate (end-period)	7.00	7.00 [#]
Yield on 91-days treasury bills (end-period)	7.2	7.2
Yield on 10-year central government securities (end-period)	8.1	8.0
Overall balance of payments (US\$ billion)	-20.7	0.3
Merchandise export growth	10.4	9.7
Merchandise import growth	14.3	8.4
Current account balance (per cent of GDP)	-2.7	-2.5

[#]: Forecast for Q2:2019-20; GNDI: Gross National Disposable Income.

Sources: RBI staff estimates; and Survey of Professional Forecasters (September 2018).



I.4 Balance of Risks

The baseline projections of inflation and growth presented in the previous two sections are conditional on assumptions relating to key variables such as crude oil prices, external demand, exchange rate movements and fiscal stance (Table I.2) as well as the impact of higher MSPs. There are several uncertainties around the baseline assumptions, however, which could pose risks to baseline projections. The sensitivity of the baseline projections to plausible alternative scenarios is set out below.

(i) International Crude Oil Prices

Sharp swings in global crude prices over the past six months impart uncertainty to the outlook. The baseline scenario assumes crude oil prices (Indian basket) at US\$ 80 per barrel in the second half of 2018-19. Upside risks to the baseline assumption can emanate from geo-political developments and supply disruptions. For a net energy importer like India, the dynamics of international crude price movements have significant macroeconomic implications. Box I.1 presents a scenario in which the Indian basket price increases by 10 per cent to US\$ 88 per barrel, which is plausible under the current global crude oil price volatility. Under this scenario, inflation could increase by 20 bps and real GDP growth could be lower by around

15 bps in relation to their respective baselines given in Sections I.2 and I.3 (Charts I.11a and I.12a). Assuming that the Indian basket crude oil price increases by 20 per cent to US\$ 96 a barrel, inflation and GDP growth could turn out to be 40 bps above and 30 bps below their respective baselines. Conversely, crude oil prices could soften below the baseline assumption if, for instance, there is a larger than expected shale gas supply and weaker than expected global demand due to growth slowing down on account of protectionist measures. As a result, if the price of the Indian basket of crude falls by 10 per cent to US\$ 72 per barrel, inflation could ease by around 20 bps with a boost of 15 bps to growth.

(ii) Global Growth

In the baseline scenario, global growth is expected to be stronger in 2018 and 2019 relative to 2017. While the pace of global growth has been maintained in Q2:2018, it has turned uneven with new risks clouding the outlook. Escalating protectionism and rising geopolitical tensions could weigh on external demand. Tightening of financial conditions on the back of US monetary policy normalisation and expansionary US fiscal policy and uncertainty about the pace of further normalisation could also dampen global demand. If global growth slips by 50 bps, domestic growth and inflation could be around 20 bps and 10 bps below their respective baseline trajectories. However, if inflation remains benign in major advanced economies, a more gradual pace of monetary policy normalisation in these economies could boost global demand and global commodity prices. In this scenario, assuming that global growth surprises by 25 bps on the upside, domestic growth and inflation could edge higher by around 10 bps and 5 bps, respectively (Charts I.11a and I.12a).

(iii) House Rent Allowances – Implementation by States

Following the increase in pay and allowances by the central government for its employees based on the recommendations of the 7th central pay commission (CPC), some state governments have revised pay and allowances for their employees. If all state governments

Box I.1: Macroeconomics of Crude Oil Prices

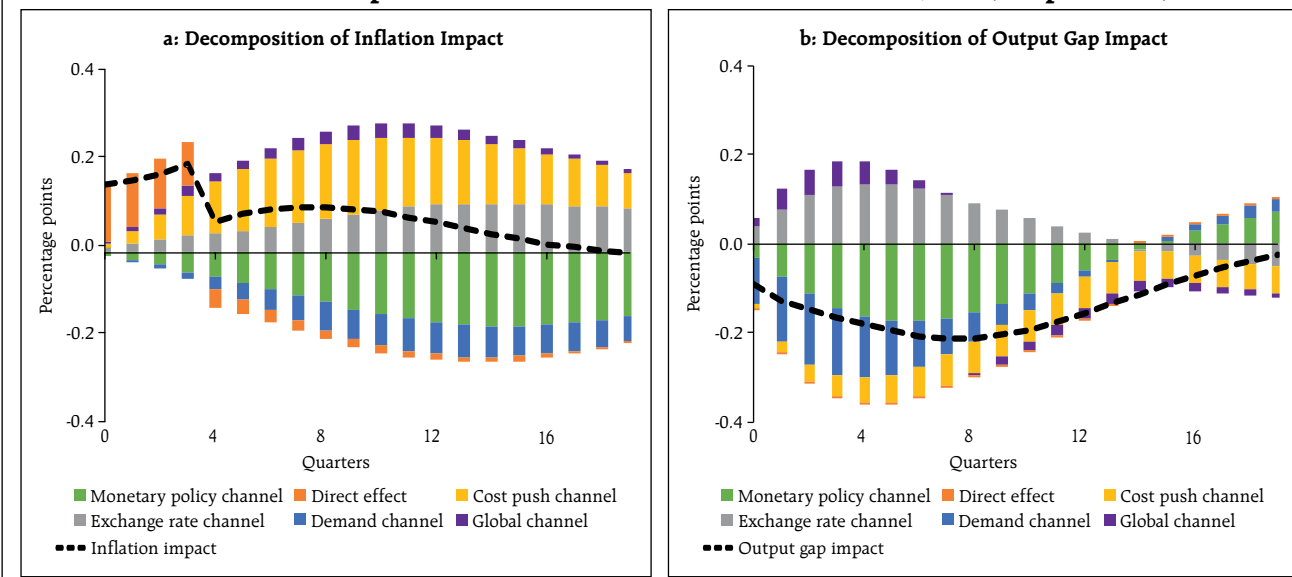
Crude oil prices (Indian basket) increased from US\$ 47 per barrel in June 2017 to US\$ 78 in September 2018, an increase of 67 per cent in a span of 15 months. It is estimated that a US\$ 10 increase in the price of international crude oil could reduce output in the OECD area by 20 bps after two years and raise inflation by 20 bps in the first year and by another 10 bps in the second year (OECD, 2011). For large net energy importers like India – 80 per cent of India’s crude oil requirement is met through imports – recent estimates suggest that real GDP growth could decline from its current trajectory, while inflation could rise significantly above target, rendering the current favourable macroeconomic conditions vulnerable. In addition, it is estimated that for every US\$ 1 increase in the price of a barrel of crude, India’s current account deficit could widen by US\$ 0.8 billion.

Increases in crude oil prices impact economic activity through a variety of channels. Therefore, it is important to examine their effects in a general

equilibrium context. The RBI’s workhorse Quarterly Projection Model (QPM) in its Forecasting and Policy Analysis System (FPAS), which draws its analytical underpinnings from new Keynesian foundations⁷, provides the flexibility to incorporate these various channels. There is the cost push channel that operates through the prices of non-administered fuel products *i.e.*, petrol and diesel, whereby energy costs impact firms’ input costs, including transportation and other intermediate services. In addition, crude price increases are transmitted to the domestic economy through reduction in global demand, adverse price movements in respect of imports and exports, and undue volatility in the exchange rate. These diverse channels produce substitutions between energy and non-energy consumption, a reduction in output and an increase in inflation. The monetary policy response to these outcomes can, in turn, set off a chain of macroeconomic adjustments.

The QPM depicts the various channels through which this transmission works (Chart I.1.1). A 10 per cent

Chart I.1.1: Decomposition of 10 Per cent Crude Oil Price Shock (at US\$ 80 per barrel)

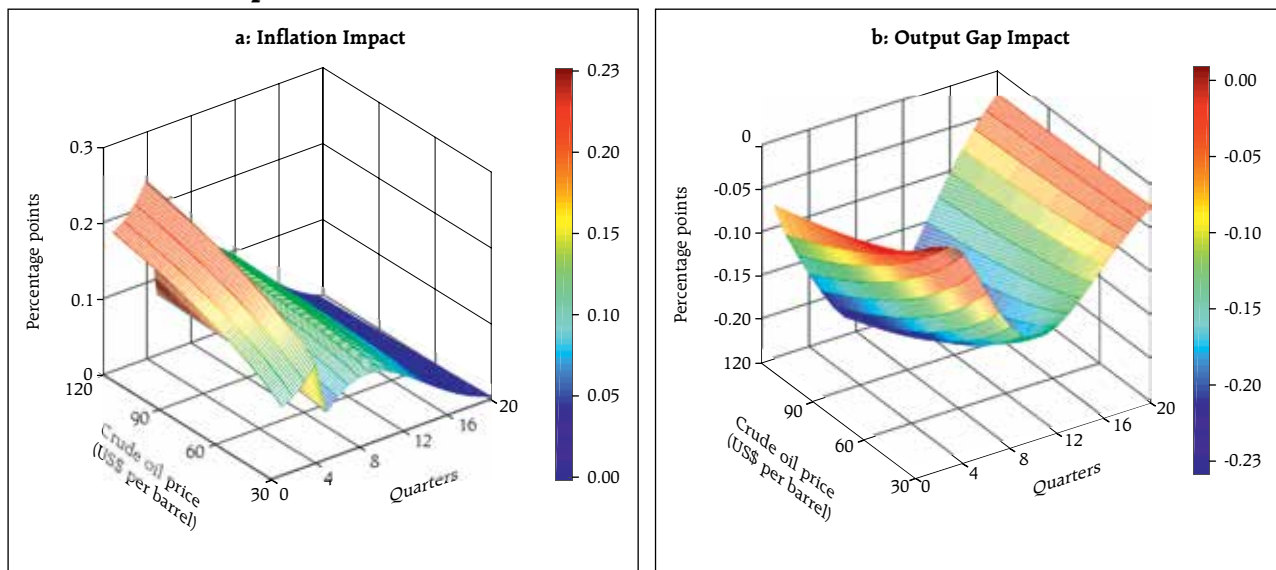


Source: RBI staff estimates.

(Contd.)

⁷ The QPM belongs to the class of new Keynesian open economy models, in which monetary policy matters for output dynamics in the short run. It has equations for the output gap (the IS curve), inflation (the Phillips curve), the short-term interest rate (a policy reaction function), and the exchange rate (an uncovered interest parity condition). The model captures key India-specific sectoral details and dynamics, such as food and fuel price dynamics and their spillovers onto non-food non-fuel components of inflation.

Chart I.1.2: Impact of 10 Per Cent Crude Oil Price Shock (at Different Levels of Crude Oil Price)



Source: RBI staff estimates.

increase in international crude prices imparts a shock to petroleum product prices. Headline inflation goes up instantaneously by 13 bps, which takes up to a year to wear off. Furthermore, an increase in petroleum prices imparts cost push effects, which contribute about 15 bps to the increase in headline inflation. People react by spending less on non-oil items of consumption, reducing demand. To the extent that firms are not able to pass through the increase in oil prices to product prices, it reduces their profit margins, cash flows and investment. As a result, aggregate demand declines, leading to a negative contribution to inflation in the range of 5-10 bps. The crude oil price increase can also lead to a deterioration in the trade deficit, which can put downward pressure on the rupee, translating into an additional 10 bps increase in inflation. Consequently, monetary policy tightening is required to bring inflation back to target. The monetary policy reaction widens the output gap, compressing demand and thereby inflation. At its peak, the impact of the 10 per cent increase in crude oil price shock is expected to reduce growth by 15 bps and push up headline inflation by around 20 bps.

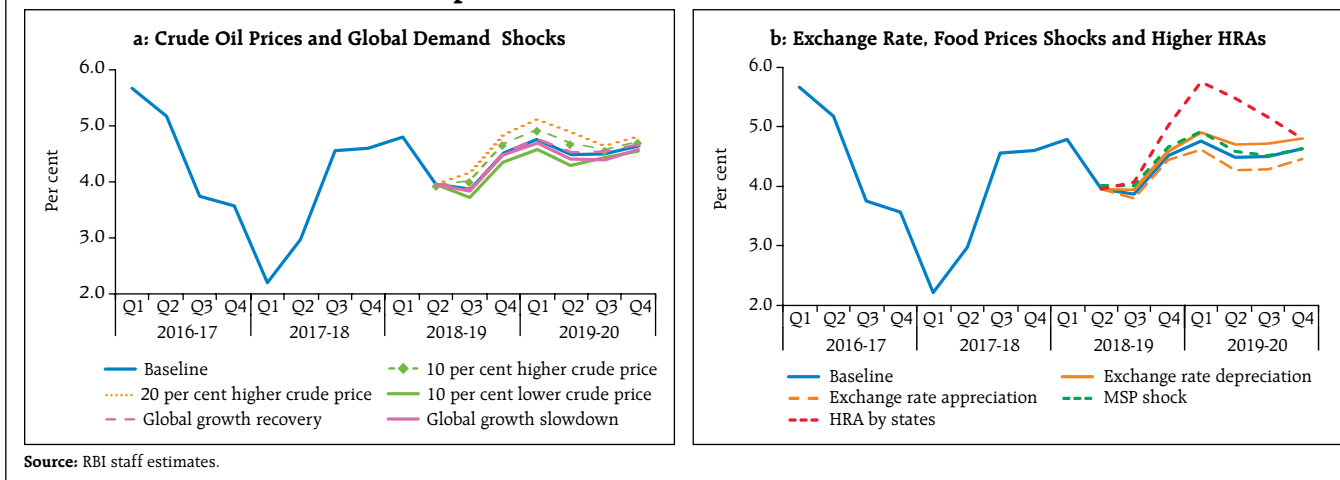
The effect of crude oil prices on domestic inflation and output depends upon not only on the extent of

the change in crude oil prices but also on their initial level. This is because retail petroleum product prices contain several elements which are largely fixed – for example, excise duty and refining costs – while the base price moves in line with the movements in international crude oil prices and the exchange rate. The value added tax component moves in line with prices charged to dealers (inclusive of excise duty). The higher the level of crude oil prices, the smaller is the proportion of fixed elements and larger is the impact of a given increase in crude oil prices on domestic petrol and diesel inflation, and hence on overall inflation and output (Chart I.1.2). For instance, an increase of 10 per cent in crude oil prices from US\$ 30 per barrel to US\$ 33 per barrel is estimated to increase inflation by 13 bps, while a similar order of increase from US\$ 100 a barrel to US\$ 110 a barrel could pull up inflation by around 22 bps.

References:

Benes, Jaromir, *et al.* (2016), "[Quarterly Projection Model for India: Key Elements and Properties](#)", RBI Working Paper Series, No. 08/2016.
 OECD (2011), "The Effects of Oil Price Hikes on Economic Activity and Inflation", OECD Economics Department Policy Notes, No. 4.

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



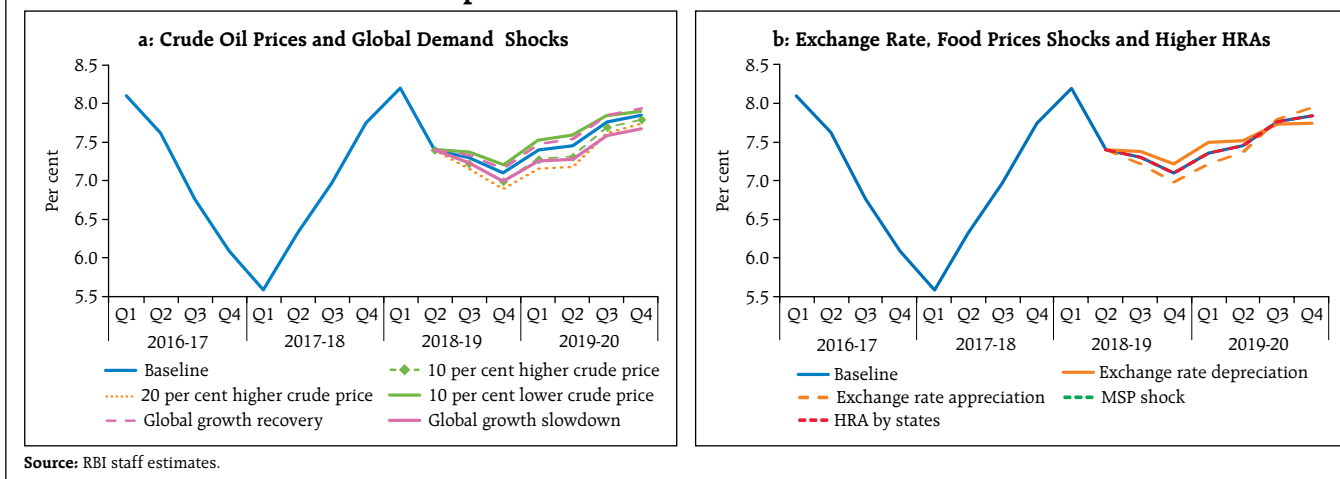
implement the increase in pay and allowances – especially HRAs – of an order similar to that of the central government, and if these get reflected in CPI, headline inflation could be around 100 bps above the baseline on account of the direct statistical effect on house rents (Chart I.11b). Additional indirect effects could also arise from higher demand and inflation expectations. As noted by the MPC in its recent resolutions, the direct statistical impact of HRA revisions will be looked through for policy purposes, while being watchful for any second-round effects.

(iv) Exchange Rate

The INR depreciated *vis-à-vis* the US dollar during April-September, reflecting both domestic and global

developments. Looking ahead, a faster pace of monetary policy normalisation by the US Fed than currently factored in by financial markets, rising trade protectionism, threat of currency wars, and higher international crude oil prices are some of the factors that could exert downward pressure on the Indian rupee. Assuming a depreciation of the Indian rupee by around 5 per cent relative to the baseline, inflation could increase by around 20 bps, while the likely boost to net exports could push up growth by around 15 bps. On the other hand, India could also attract large inflows with its reasonably sound domestic fundamentals relative to its peers and the various initiatives taken by the government to boost investment. An appreciation of the Indian rupee by 5 per cent in this scenario could

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



soften inflation by around 20 bps and GDP growth by around 15 bps in 2018-19 (Charts I.11b and I.12b).

(v) Food Inflation

The large increase in MSPs for *kharif* crops announced by the government in July 2018 can have a direct impact on food inflation and second round effects on headline inflation through relative price adjustments, higher demand on the back of higher rural incomes and increase in inflation expectations. The baseline projections incorporate the likely effect of the increase in MSPs on inflation, assuming normal procurement by the government in line with past trends (Box II.1). However, if procurement operations turn out to be larger than assumed, headline inflation could increase by around 20 bps above the baseline.

(vi) Fiscal Slippage

The baseline projections assume a fiscal stance as announced in the Union and State budgets for 2018-19. Higher MSPs combined with stepped-up food procurement operations and unbudgeted farm loan waivers by states pose upside risks to the fiscal outlook. Should there be fiscal slippage at the centre and/or state levels, it could result in greater market

volatility, crowding out of private investment and higher inflation. Quantitative estimates of these risks will, however, be reliant on incoming data right up to the April 2019 MPR.

I.5 Conclusion

To sum up, real GDP growth is expected to accelerate in 2018-19 *vis-à-vis* 2017-18, with the pace of growth easing in H2 relative to H1. Stabilisation of the goods and services tax, progress on resolution of distressed assets under the insolvency and bankruptcy code and initiatives towards strengthening of bank balance sheets are supporting economic and investment activity. However, the uncertain global environment poses an important downside risk to the domestic growth outlook.

Inflation is expected to pick up from its current levels as the MSPs for *kharif* crops feed into domestic food inflation and favourable base effects dissipate. Volatile crude oil prices and the volatility in international financial markets pose the primary upside risks to the inflation outlook.

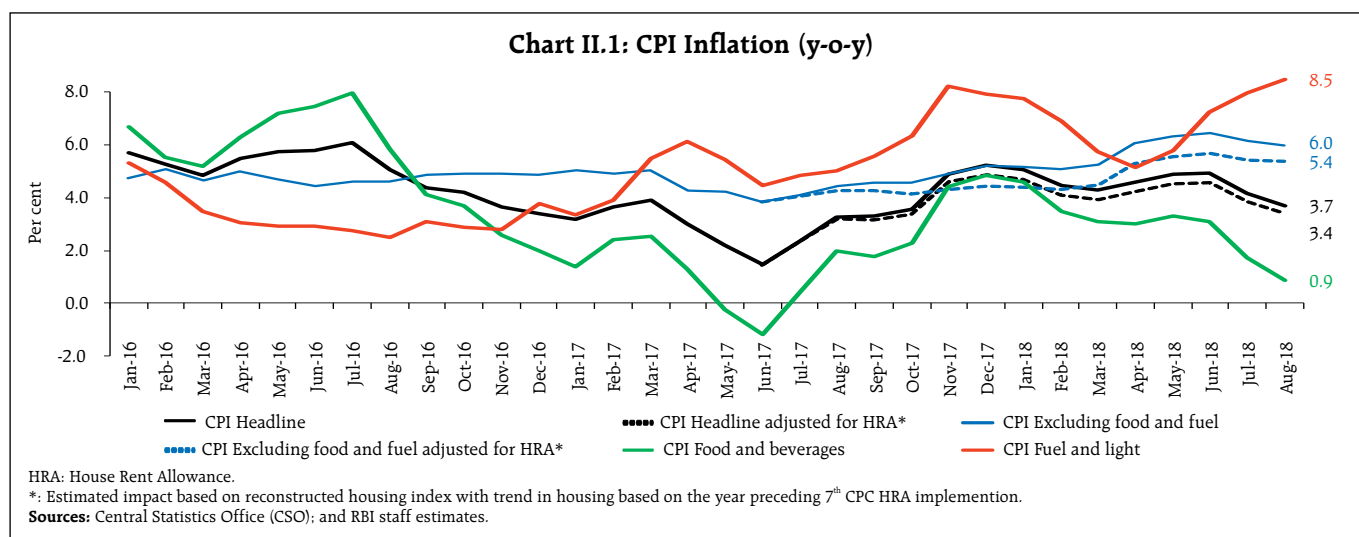
II. Prices and Costs

Inflation has eased in Q2:2018-19 on an unusual ebbing in the momentum of food prices, after rising strongly in Q1 on the back of surging prices of non-food items (including the impact of 7th CPC's HRA increase) across categories. Input costs rose sharply in Q1 and remained firm in Q2, largely due to increase in fuel prices. Wage pressures remained contained in both rural and organised sectors.

Over the first half of 2018-19, the course of consumer price index (CPI) inflation has been shaped by diverse pulls. Within major groups, while food inflation remained soft in Q1:2018-19, and declined sharply in July and August 2018, fuel and light inflation rose noticeably, tracking international prices. Inflation in CPI excluding food and fuel also firmed up in Q1:2018-19 and remained elevated through July-August, notwithstanding some softening. The impact of the increase in house rent allowances (HRA) for central government employees on headline inflation has started to ebb from July.¹ Adjusting for the HRA impact, headline inflation in August was estimated at 3.4 per cent as against the print of 3.7 per cent and

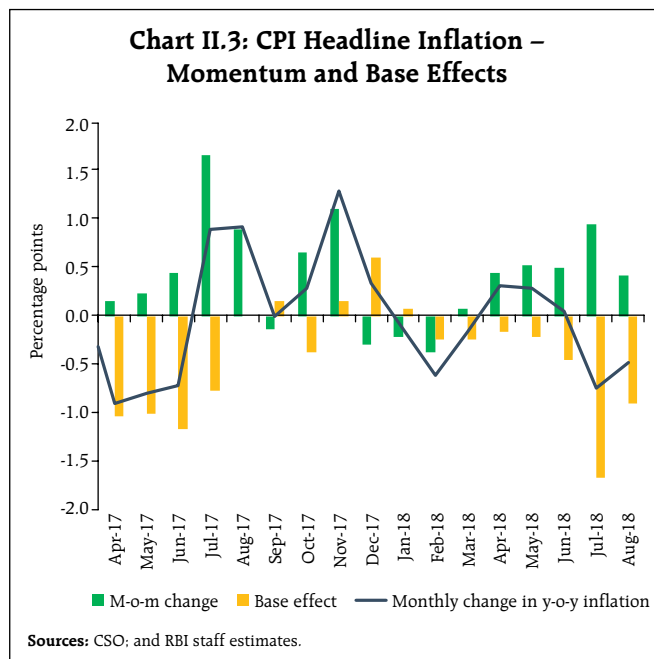
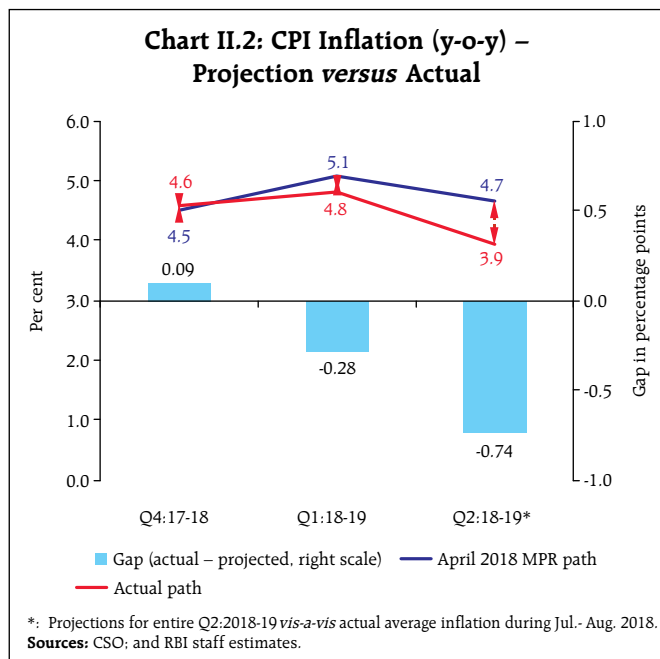
inflation in CPI excluding food and fuel was estimated at 5.4 per cent against the reading of 6.0 per cent (Chart II.1).²

The MPR of April 2018 had projected CPI inflation to increase from 4.6 per cent observed in Q4:2017-18 to 5.1 per cent in Q1:2018-19 and then moderate to 4.7 per cent in Q2. Excluding the estimated impact of HRA, CPI inflation was projected at 4.7 per cent in Q1 and then moderate to 4.4 per cent in Q2. Actual inflation outcomes have tracked these projections directionally; in terms of magnitude, however, inflation undershot projections by a considerable margin – 28 basis points (bps) in Q1 and 74 bps in Q2 up to August (Chart II.2) – entirely on account of a surprising persistence in the softening of prices of fruits, particularly in Q2, and lower than usual hardening in prices of vegetables in the summer months. Food inflation fell from 3.7 per cent in Q4:2017-18 to 3.1 per cent in Q1:2018-19. This is a significant development because it occurred on a base which reflected the after effects of demonetisation in depressing prices of fruits and vegetables in Q1 a year ago. Subsequently, food inflation plunged further to 1.3 per cent in July-August as strong favourable base effects coincided with inexplicable weak momentum



¹ The Government of India implemented the recommendation of the Seventh Central Pay Commission (CPC) of *inter alia* a 105.6 per cent increase in HRA with effect from July 2017.

² Headline inflation is measured by year-on-year changes in all-India CPI-Combined (Rural + Urban).



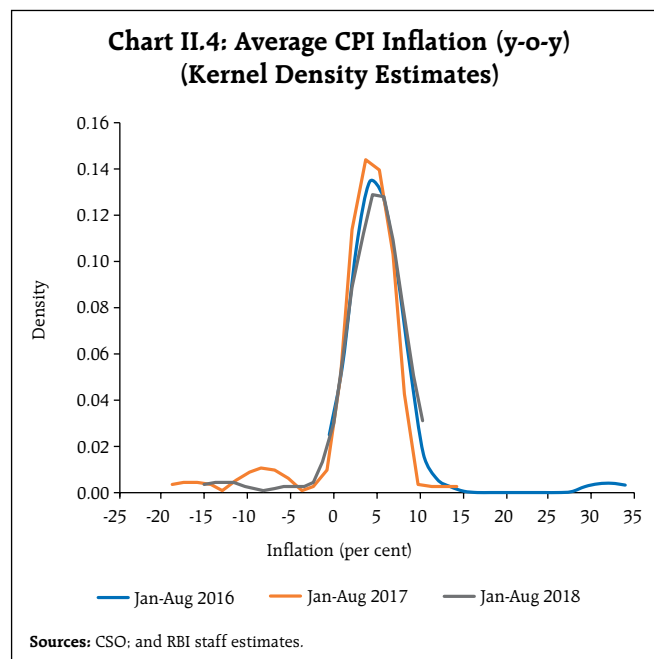
of food prices. In fact, ebbing food inflation more than offset the impact of higher than projected crude oil prices – US\$ 73.5 per barrel, on an average, during H1:2018-19 vis-à-vis the baseline assumption of US\$ 68 per barrel in April 2018.

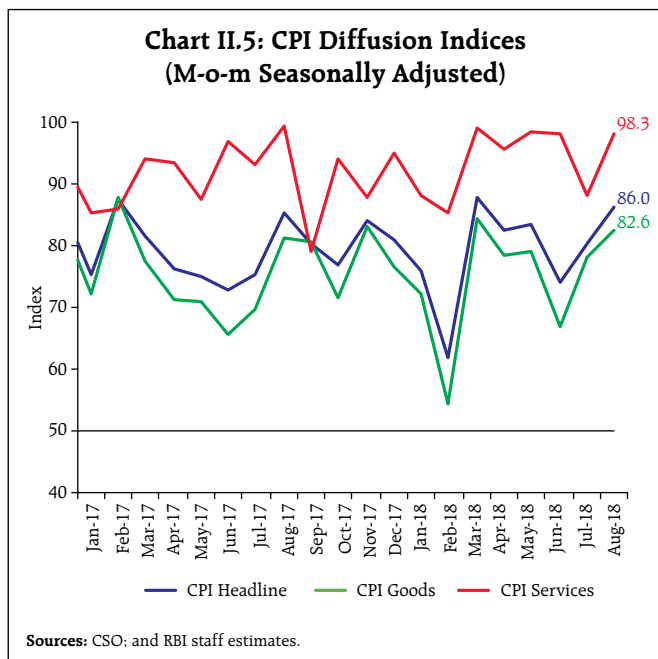
II.1 Consumer Prices

As stated earlier, headline inflation dynamics in H1:2018-19 have reflected divergent movements among constituents which are revealed when momentum and base effects are disentangled. In the case of food items, there has been an unusually low momentum in prices of vegetables and an unexpected decline in prices of fruits in H1. In Q2, base effects turned favourable and along with unseasonally low momentum pulled down food inflation to just 1.3 per cent (up to August 2018) well below its quarterly trend level of six years (7.1 per cent). In the case of items excluding food and fuel, momentum in prices remained strong during April-May in Q1. Thereafter, in Q2 so far, momentum effects have been offset by favourable base effects. As a result, the monotonic hardening of headline inflation from 4.3 per cent in March 2018 to 4.9 per cent by June reversed and inflation fell to 3.7 per cent in August (Chart II.3).

On an average, the distribution of inflation across CPI groups in 2018 so far had striking similarities with the

outcomes in 2017, a period that also saw soft inflation readings coming from moderation in food inflation in the post-demonetisation period. Median inflation rates were in the range of 4.3-4.8 per cent in both the years and inflation exhibited considerable negative skew on account of deflation in pulses and sugar prices (Chart II.4). Diffusion indices of price changes in CPI items suggest that on a seasonally adjusted basis, a broadening swathe of goods and almost all services have experienced price increases since July, implying





that soft headline inflation reading is occurring alongside generalised price increases across goods and services (Chart II.5).³

II.2 Drivers of Inflation

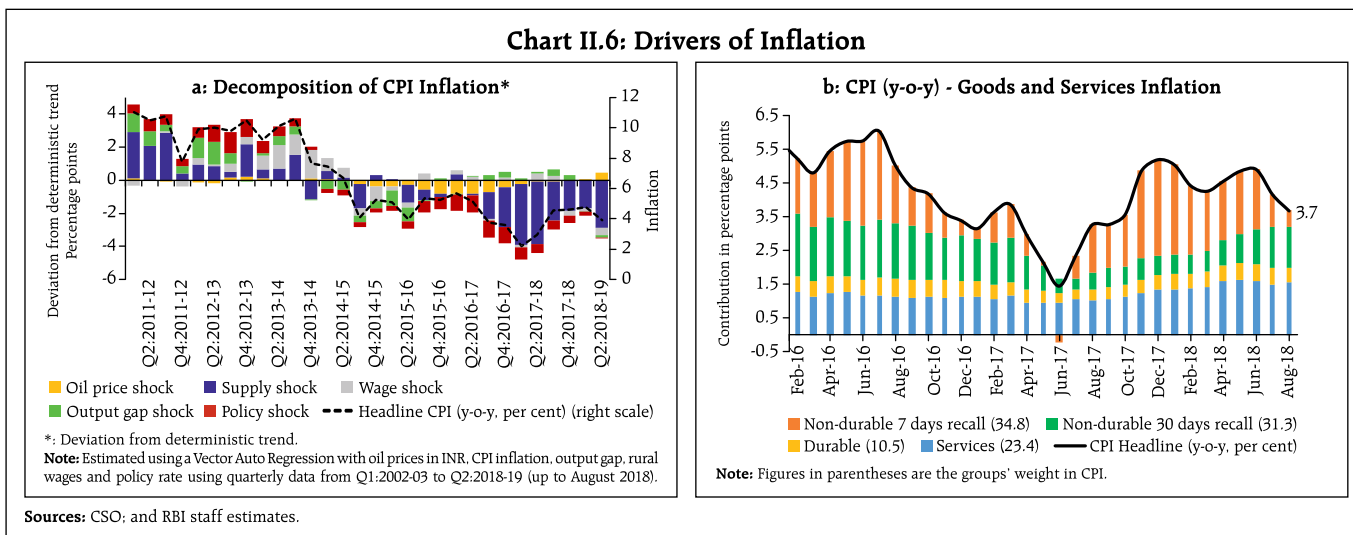
A historical decomposition of inflation shows that large and sequential supply side shocks, emanating

essentially from food group, have defined the overall change in headline inflation trajectory since Q3:2016-17. In H1:2018-19, several factors impacted inflation – a favourable food supply shock; an adverse oil price shock; and soft rural wage growth in spite of the quickening of agricultural activity and indications of firming up of rural demand (Chart II.6a).⁴

The pick-up in services inflation was led by elevated house rentals on the back of increase in HRA for central government employees. Inflation in other items of services – education, transport and medical – also firmed up. From July, however, goods inflation – especially in respect of perishables – pulled down overall inflation, helped by subdued month-on-month changes and favourable base effects (Chart II.6b).

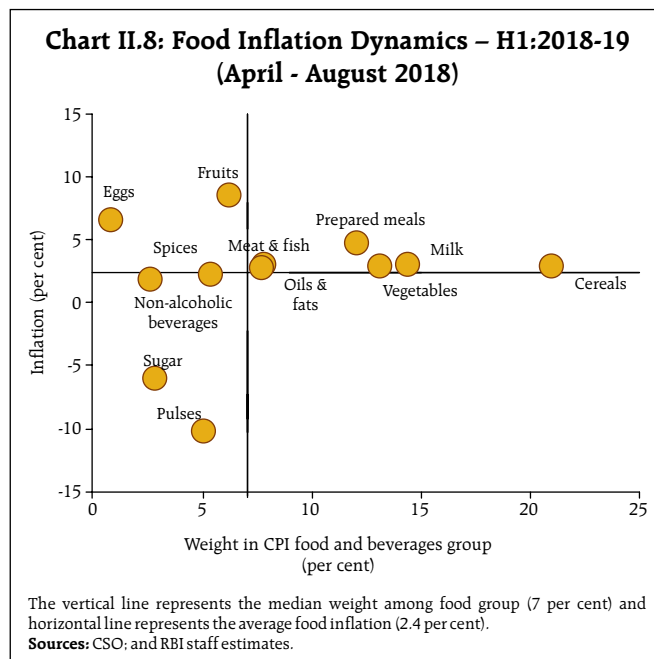
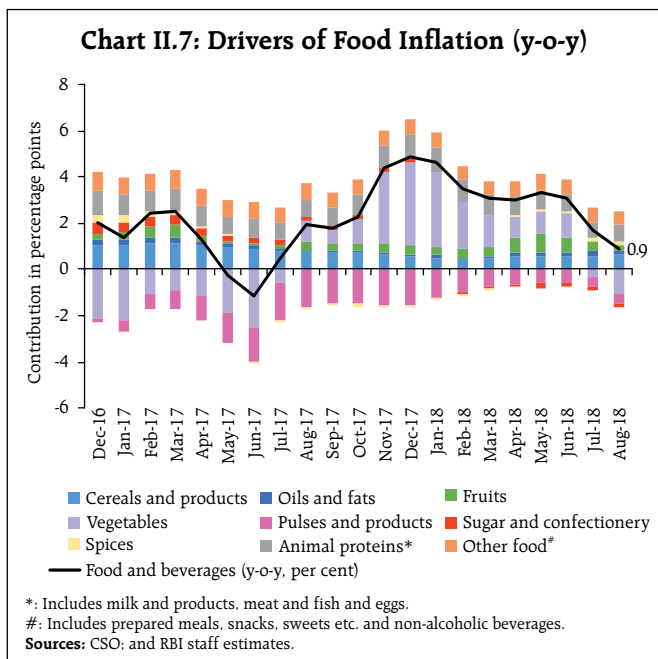
CPI Food Group

In terms of weighted contributions, the food group contributed 25.2 per cent to overall inflation during April-August 2018 in contrast to 8.9 per cent a year ago. The average contribution of food inflation to overall inflation in the last five years has been 47 per cent. Within food, inflation in cereals, which has a weight of 9.7 per cent in the CPI and 21.1 per cent in the food and beverages group, remained benign at sub-



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

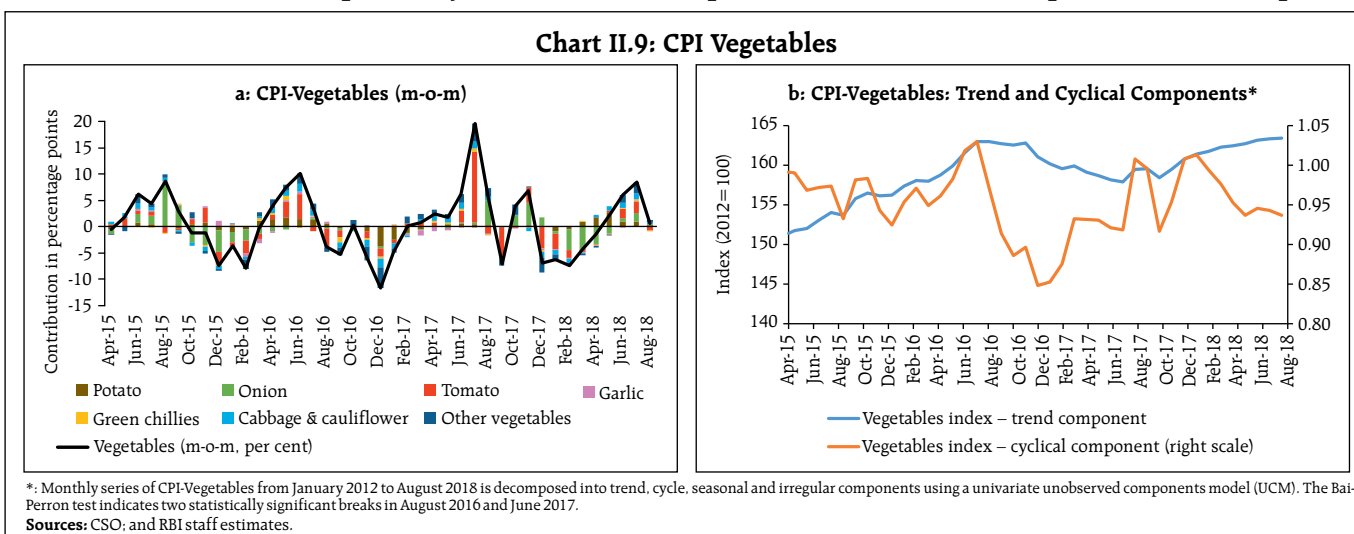
⁴ Historical decompositions are used to estimate the contribution of each shock to the movements in inflation over the sample period, based on a Vector Auto Regression (VAR) with the following variables (represented as the vector Y_t) – the annual growth rate in crude oil prices; inflation; the output gap; the annual growth rate in rural wages and the policy repo rate. The VAR can be written in reduced form as: $Y_t = c + A Y_{t-1} + e_t$; where e_t represents a vector of shocks [oil price shock; supply shock (inflation shock); output gap shock; wage shock; and policy shock]. Using Wold decomposition, Y_t can be represented as a function of its deterministic trend and sum of all the shocks e_t . This formulation facilitates decomposition of the deviation of inflation from its deterministic trend into the sum of contributions from various shocks.



3 per cent level during H1:2018-19, with production boosted by two consecutive years of record harvests, and stocks being well above buffer norms. The food inflation trajectory was largely shaped by vegetables, fruits, pulses and sugar during H1:2018-19, with its unexpected slump defying the usual seasonal uptick, especially in prices of vegetables during July-August (Charts II.7 and II.8).

Vegetables account for 6 per cent of the CPI and 13.2 per cent of the food and beverages group. A delayed winter easing of price pressures in vegetables commenced from December 2017 and extended well up to April 2018, as *mandi* arrivals, specifically of onions and

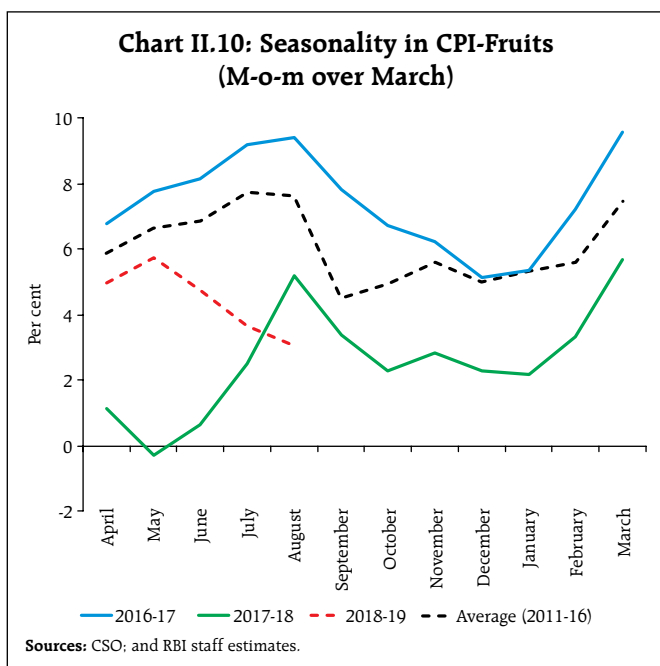
tomatoes, surged muting the usual summer upturn (Chart II.9a). Onion inflation declined from a high of 159 per cent in December 2017 to 23 per cent in May 2018, pulled down by bumper *mandi* arrivals, imports, and implementation of a minimum export price (MEP) that deterred exports, together creating persistent surplus supply conditions. Onion prices, however, picked up in July with the country-wide transporters' strike, which affected the supplies of essential food items. After remaining low during April-May, prices of tomatoes recorded an upsurge during June-July due to widespread farmers' agitations. By contrast, price pressures have been more pronounced in respect of



potatoes since March 2018 due to lower availability of stocks from cold storages, transport disruptions and protests organised by potato farmers against not receiving remunerative prices for their crops. Prices of vegetables, however, witnessed some easing in August 2018 led by a contraction in prices of tomatoes and moderation in onion price pressures as arrivals surged, which played a key role in moderating food inflation during the month.

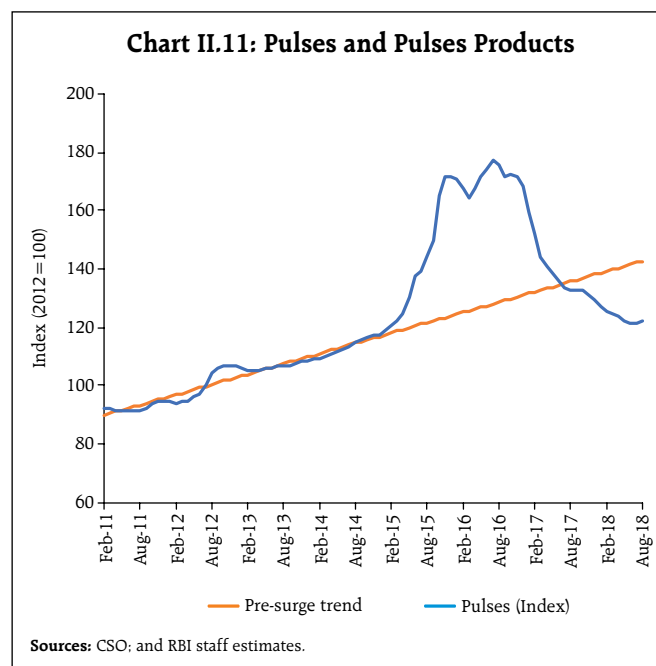
An analysis of prices of vegetables based on sectoral CPI indices suggests that there is no statistically significant difference in month-on-month changes in prices of vegetables between rural and urban areas.⁵ A decomposition of the CPI-vegetables into its trend and cyclical components reveals a rising trend since H1:2017-18, indicating that the recent softening in vegetable prices may not be structural in nature (Chart II.9b).

Fruits prices also declined during June-August, contrary to the usual seasonal pattern. Fruits have a weight of 2.9 per cent in the CPI and 6.3 per cent within the food and beverages sub-component. Healthy domestic production of major fruits like mangoes and bananas, together with imports of some fruits (particularly apples and citrus fruits) pulled down fruits prices in contrast to the usual pattern in June and July every year when they rise (Chart II.10).



Deflation in the prices of pulses persisted on the back of over-supply, though the pace of deflation moderated during H1. Pulses account for 2.4 per cent of the CPI and 5.2 per cent of the food and beverages sub-component. *Mandi* level prices of some pulses such as *arhar* and *urad* remained below their minimum support prices (MSPs) in major producing states such as Maharashtra, Madhya Pradesh, Uttar Pradesh and Karnataka. In response, several measures that had been undertaken by the government in the previous year were extended into 2018-19 such as (i) removal of the export ban on all pulses; and (ii) imposition of import duty of 60 per cent on *gram* and 30 per cent on *masoor* to provide some relief to farmers. Nonetheless, pulses prices continued to rule well below their historical trend during H1:2018-19 (Chart II.11).

Prices of sugar and confectionery also remained in deflation zone from February 2018 on account of surplus production during the sugarcane season of 2017-18 (Charts II.7 and II.8). Domestic sugar prices have closely tracked global price movements which have also been in deflation due to excess global supply. In view of the sharp decline in sugar prices, the government raised the import duty on sugar to 100 per cent, besides re-imposing stockholding limits on sugar sales and fixing the ex-mill sugar prices to ₹29 per kg in June 2018. Moreover, the customs duty



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

on export of sugar was withdrawn to encourage the sugar industry. These measures, along with supply disruptions in July following the transporters' strike, drove up sugar prices during June-August, though y-o-y inflation continued to be in the negative zone.

In the case of protein-rich items such as eggs, price pressures were visible during June-July 2018, reflecting the combined impact of the usual lower egg production during summer months and higher consumption during early monsoon months in several parts of the country. Furthermore, the country-wide truckers' strike in July also affected the supply of eggs in several states, adding to upside pressures on prices. However, prices of eggs softened in August. Among other protein-rich items, meat and fish prices experienced the usual upside pressures during May-June, followed by easing during July-August. In the case of milk and products, price pressures were subdued due to robust growth in milk production.

Among other food components, edible oil inflation recorded a pick-up in August 2018 after remaining in the range of one to three per cent since May 2017.

After an increase in import duties on all major varieties of oils in November 2017, duties were hiked further during March and June 2018 in order to curb cheap imports. Inflation in spices started rising beginning April 2018 after remaining in deflation for 10 successive months since June 2017. While pressures on black pepper prices have remained muted so far, prices of other spices like dry chillies, turmeric, *jeera*, *dhania* and tamarind have firmed up, thereby driving up overall inflation in this group (Charts II.7 and II.8). On July 4, 2018 the central government announced minimum support prices (MSPs) for all *kharif* crops of a minimum of 150 per cent of the cost of production. Increases in MSPs generally get transmitted to headline inflation through direct and second round effects and, it is in the context of the upside risks to the near-term inflation outlook that the size and span of the impact of the MSP need to be carefully evaluated (Box II.1).

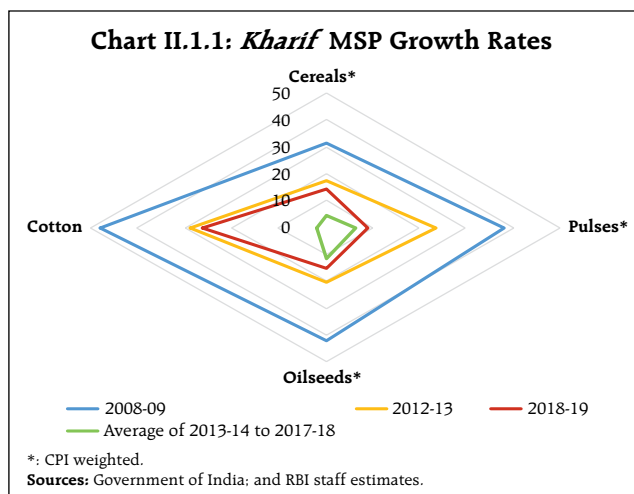
CPI Fuel Group

Fuel and light inflation increased sequentially every month from a trough of 5.2 per cent in April 2018 to

Box II.1: Assessing the Impact of MSPs on CPI Inflation

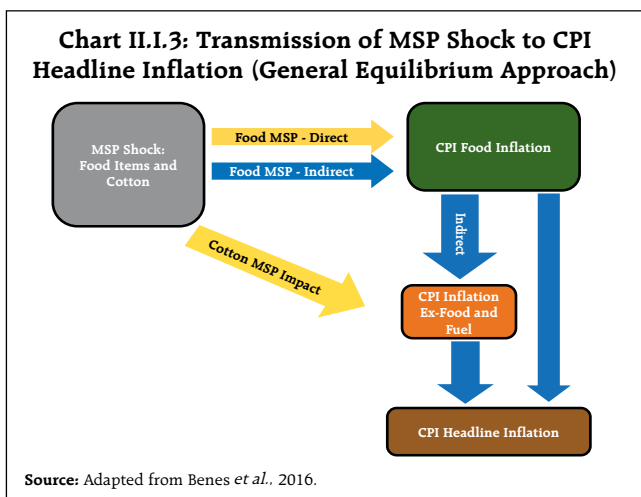
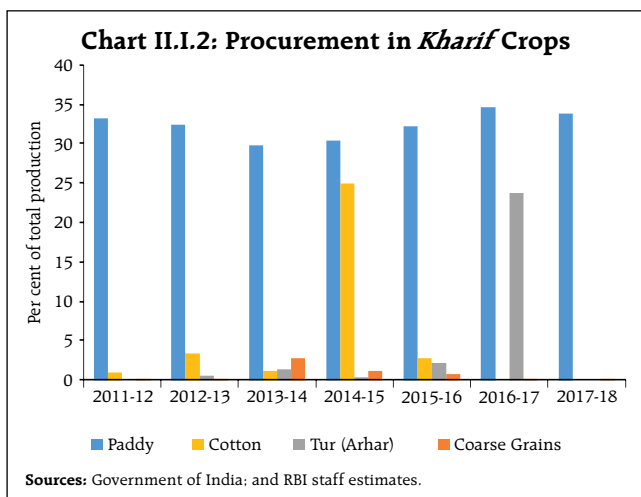
Fulfilling the announcement made in the Union Budget 2018-19, MSPs for 14 crops for the 2018-19 *kharif* season were raised to at least 1.5 times of production (A2+FL) costs.⁶ This implies a nominal MSP increase in the range of 3.7 to 52.5 per cent for different crops over their levels a year ago, an area weighted increase of 17.3 per cent, a production weighted increase of 14.0 per cent, and a CPI weighted increase of 13.3 per cent (excluding cotton, as it does not appear directly in the CPI basket). In a historical perspective, the current increase in MSPs is significantly higher than the average of the last five years, but well below the upward revisions effected in 2008-09 and 2012-13 (Chart II.1.1).

Empirically, it is observed that procurement is the channel through which higher MSPs pass through into inflation (RBI, 2018). For *kharif* crops, procurement has been the highest in respect of paddy at 32.4 per cent of production (average of last seven years),



whereas it is negligible or absent in the case of other crops; an outlier was *arhar* for which procurement increased from insignificant levels to 23.7 per cent of production in 2016-17 as a part of the government's food management strategy (Chart II.1.2). (Contd...)

⁶ A2 covers actual paid out costs, while FL is the imputed value of family labour used in production.



Estimates of the impact of the July 2018 MSP announcements on CPI inflation that are available in the public domain range from 20 bps to 110 bps. For operational purposes, however, precision in these estimates is the key since it conditions the monetary policy response to the likely deviations of inflation from its target. Illustratively, a straight-line approach of imputing the full increase in MSPs on to headline CPI inflation by using CPI weights for the crops in consideration, but without factoring in the scale of procurement operations, may overestimate the MSP impact.

The total impact of MSPs on inflation comprises a first round (direct) effect and subsequent second (indirect) round effects. The first round effect – the quantum by which individual commodities respond to MSP shock – is estimated econometrically. The second-round effects are estimated using a two-stage process: (1) A static approach that mimics time-invariant economy-wide effects, is first employed to estimate the commodity level producer price effect through a series of iterations using input-output (IO) tables for 2012-13 and mapping those effects to the wholesale price index (WPI) using WPI weights; (2) The pass-through of the wholesale price increases to CPI food inflation components is then worked out by using elasticities derived from an Autoregressive Distributed Lag (ARDL) model.

The second-round effects are also examined using RBI's quarterly projection model, which is a new Keynesian open economy gap model. It attempts to capture several inter-twined effects dynamically. A hike in MSP could trigger relative price adjustments between MSP and non-MSP food items. Higher MSPs could also lead to a rise in rural incomes which would boost food

demand. Furthermore, higher labour demand could lead to overall wage increases in the rural sector as labourers migrate from sowing/cropping of non-MSP to MSP crops. This increase in prices of food items, coupled with rising rural wages and incomes, could affect prices of non-food goods and services *via* second round effects (Ghate *et al.*, 2018). The increase in the cotton MSP could directly affect inflation through retail clothing (Chart II.1.3).

A first approximation of the inflationary impact of MSP increase from these methodologies yields 29-35 bps increase in headline CPI inflation. These estimates are highly tentative in the absence of robust information on the actual size and scale of procurement operations or more broadly on the combined effectiveness of procurement, price support/deficiency schemes and private sector participation as envisaged under the *Pradhan Mantri Annadata Aay SanraksHan Abhiyan* (PM AASHA) programme. Accordingly, these initial estimates need to be read with appropriate caveats and revisited once further details are released on actual MSP implementation.

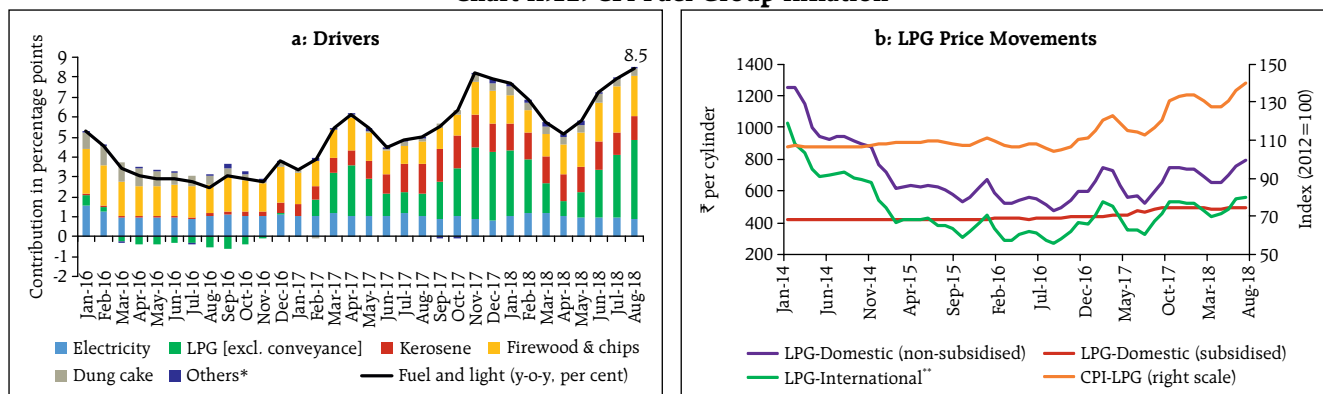
References:

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Ghate, C., S. Gupta, and D Mallick (2018). "Terms of Trade Shocks and Monetary Policy in India", *Computational Economics*, Volume 51, Issue 1, pp 75–121, January.

Reserve Bank of India (2018). "MSPs - Do They Influence Inflation Trajectory?", Box II.2.2, RBI Annual Report 2017-18.

Chart II.12: CPI Fuel Group Inflation



*: Includes diesel [excl. conveyance], coke, coal, charcoal and other fuels.

**: The international price for LPG is based on Bloomberg spot price for Saudi Butane and Propane, combined in the ratio of 60:40, respectively. These international product prices are indicative prices which are close to the benchmark prices and do not represent the actual benchmark products used by oil majors for import pricing. Further details on the international benchmark products used for LPG are available at www.ppac.org.in.

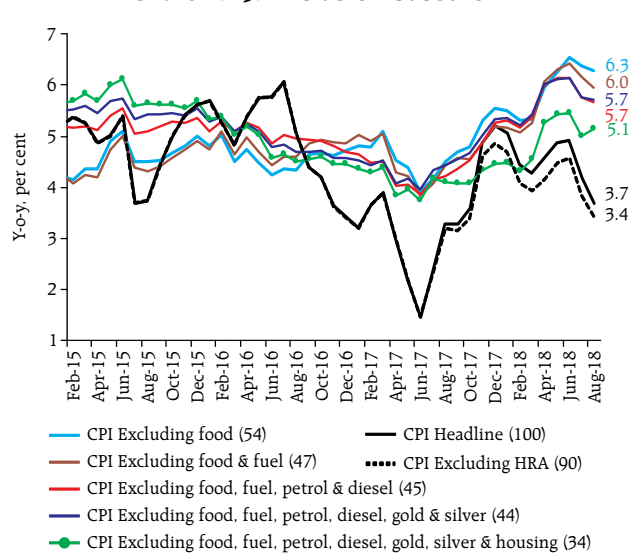
Sources: (i) For Chart II.12a, CSO; and RBI staff estimates. (ii) For Chart II.12b, Bloomberg; Indian Oil Corporation Limited (IOCL); and CSO.

7.2 per cent by June 2018 and further to 8.5 per cent by August 2018 (Chart II.12a). Domestic prices of liquefied petroleum gas (LPG) tracked rising international product prices. Since the migration of subsidy payments on LPG to bank accounts under the direct benefit transfer scheme, LPG prices in CPI mirror open market prices. As such, they now reflect international prices closely (Chart II.12b). Inflation in respect of items of rural consumption such as firewood and chips continued to be sticky and elevated. Administered kerosene prices also registered sustained increases as oil marketing companies (OMCs) raised prices regularly in a calibrated manner.

CPI Excluding Food and Fuel

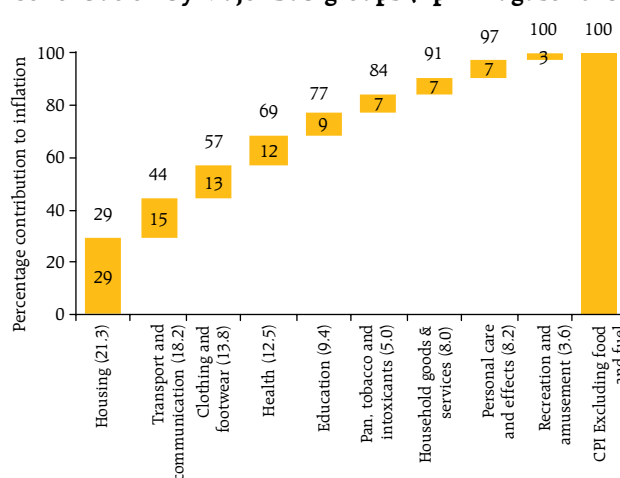
A sustained rise in CPI inflation excluding food and fuel started in H2:2017-18 and continued into H1:2018-19 – it rose from 5.1 per cent in February to 6.4 per cent in June, before moderating to 6.2 per cent in July and further to 6.0 per cent in August (Chart II.13). Adjusted for the estimated HRA impact, CPI inflation excluding food and fuel was 5.5 per cent in H1:2018-19 (up to August) – 70 bps lower than the actual outcome. Housing inflation contributed close to 30 per cent of the increase in CPI inflation excluding food and fuel in H1:2018-19 (up to August), largely reflecting the HRA increases of central government employees (Chart II.14). Adjusted for HRA,

Chart II.13: Exclusion based CPI



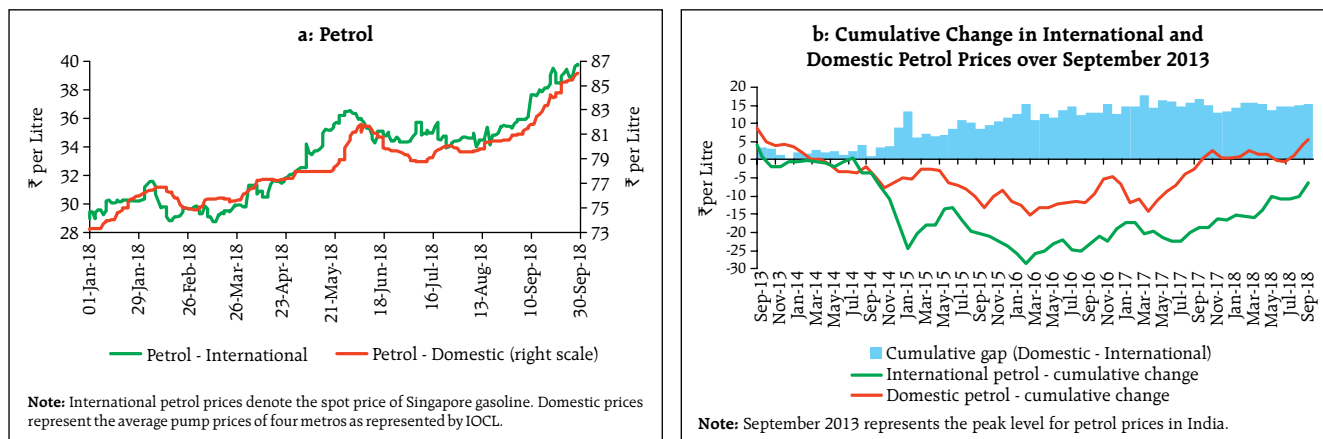
Note: Figures in parentheses indicate weights in CPI.
Sources: CSO; and RBI staff estimates.

Chart II.14: CPI Excluding Food and Fuel Inflation - Contribution by Major Sub-groups (April-August 2018)



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

Chart II.15: Movements in International and Domestic Petroleum Product Prices



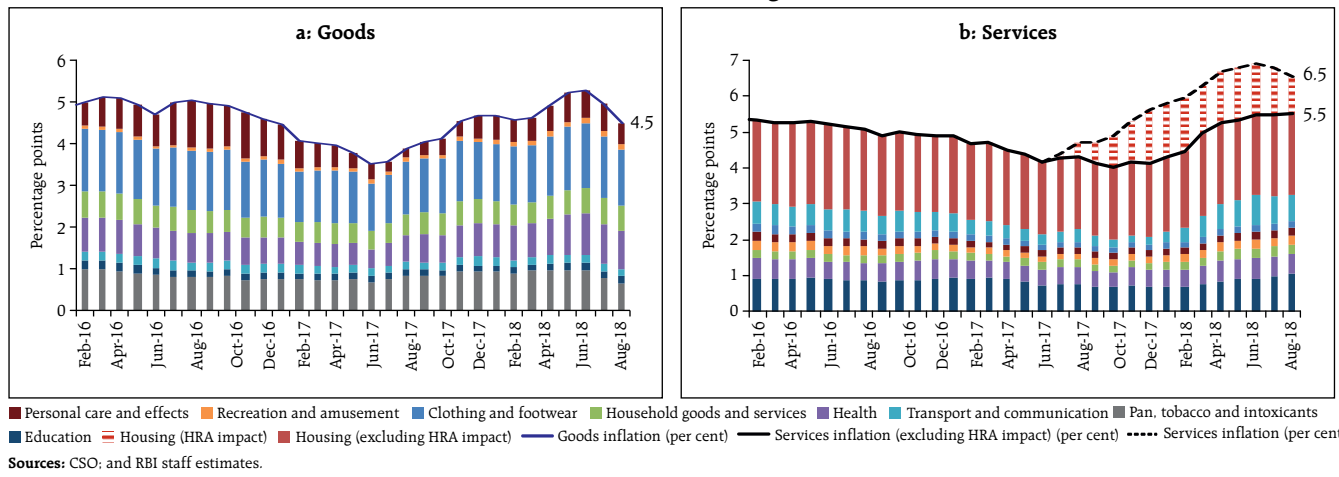
Sources: Bloomberg; IOCL; and RBI staff estimates.

the housing group still contributed a fifth of overall increase in CPI inflation excluding food and fuel. The second largest contributor in this category was the transport and communication sub-group, largely reflecting increases in petrol and diesel pump prices and second-round effects on transport fares. Petrol (and diesel) pump prices during H1:2018-19 increased sharply by about ₹10 per litre, as international prices surged (Chart II.15). As a result, the contribution of petrol and diesel (with a weight of 2.3 per cent) to CPI excluding food and fuel inflation rose from 1.7 per cent in March 2018 to 8.6 per cent in August. Accentuating the impact of petrol and diesel on inflation in the recent period has been the asymmetric pass-through of international crude oil prices to domestic prices since 2014 (Chart II.15).

Excluding food, fuel, petrol and diesel, CPI inflation increased from 5.2 per cent in February to peak at 6.2 per cent in June, before moderating to 5.8 per cent in July and to 5.7 per cent in August. Excluding the four volatile items – petrol, diesel, gold and silver – as well as housing, CPI inflation increased by 120 bps from February to 5.5 per cent in June, before moderating to 5.0–5.1 per cent in July–August (Chart II.13). The edging down of inflation in July and August was due to lower inflation prints in pan, tobacco and intoxicants, clothing and footwear, and miscellaneous groups.

Inflation in respect of both goods and services in the CPI excluding food, fuel, petrol and diesel edged up during Q1:2018-19 (Chart II.16). For goods, inflation picked up across commodity groups, particularly medicines, clothing and footwear, bedding, utensils

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



and washing powder. However, during July-August 2018, goods inflation moderated sharply by 80 bps, driven primarily by a fall in inflation in pan, tobacco and intoxicants group and personal care and effects sub-group (Chart II.16a). Services inflation rose in H1:2018-19 to reach a peak of 6.9 per cent in June, driven up largely by the HRA increases and an increase in tuition fees and prices of transportation services, as alluded to earlier. As the HRA effects started to wane, services inflation moderated to 6.5 per cent in August (Chart II.16b). Excluding the HRA impact, services inflation rose from 5.0 per cent in March and remained steady at 5.5 per cent during June-August. Communication services inflation, however, remained muted due to subdued prices in respect of cellular services.

Other Measures of Inflation

Measures of inflation other than the CPI have shown mixed movements since the April MPR. After the HRA-linked spike in January 2018, inflation in terms of CPI for industrial workers (CPI-IW) declined in line with inflation in CPI for agricultural labourers (AL) and rural labourers (RL), reflecting *inter alia* soft food inflation readings. CPI-IW reflects changes in its housing index once in six months – in January and July every year. The revision in CPI-IW housing index – from 3.0 per cent in December 2017 to 10.2 per cent in January 2018 and further to 26.1 per cent in July

– created sizeable upside impulses pushing CPI-IW inflation significantly above headline CPI inflation in July.⁷ Accordingly, as the impact of the HRA increase intensified, CPI-IW inflation shot up to 5.6 per cent in August from 3.9 per cent in June.

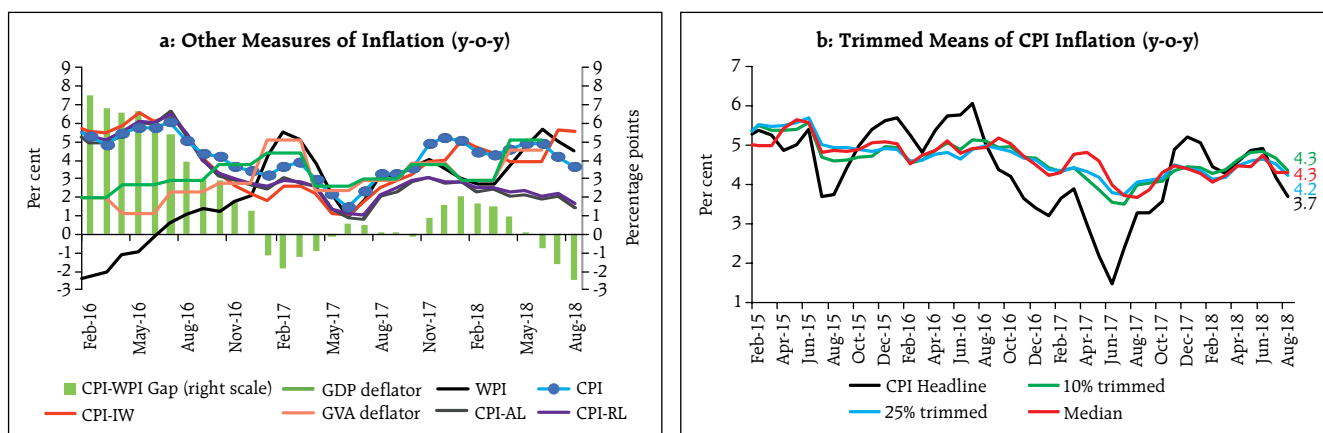
In contrast, wholesale price index (WPI) inflation firmed up significantly in Q1, driven up by international prices of crude petroleum and high speed diesel. Inflation in respect of electricity, naphtha, furnace oil, manufacture of plastic products, manufactured vegetable and animal oils and fats also fuelled WPI inflation. GDP and GVA deflators also ticked up in Q1 in line with WPI inflation (Chart II.17a) which moderated somewhat in July and August with the collapse in food inflation.

Volatile prices of items such as transport fuel, vegetables, pulses and precious metals impart high dispersion, asymmetry and non-normality to the distribution of inflation. High positive as well as negative skew and chronic fat tails in the inflation distribution could be removed by trimming the outliers. Trimmed means of CPI, including its weighted median, rose sharply in Q1:2018-19 before softening in July and August (Chart II.17b).

II.3 Costs

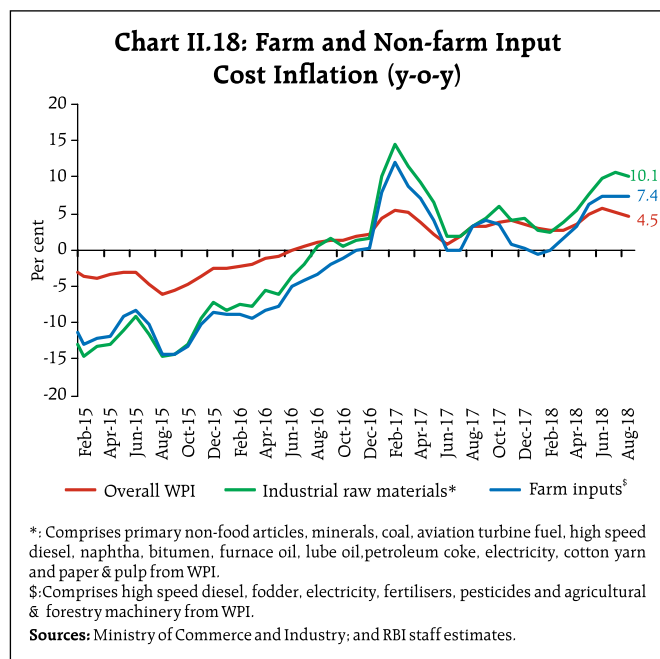
Measures of inflation have largely tracked underlying cost conditions. In the case of industrial and farm costs

Chart II.17: Alternative Measures of Inflation



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

⁷ The weight of housing in the CPI-IW is higher at 15.3 per cent than its weight of 10.1 per cent in the CPI.



in the WPI and remained elevated in Q2 so far (Chart II.18). The rise in global crude oil prices impacted domestic prices of inputs such as high speed diesel, aviation turbine fuel, naphtha, bitumen, furnace oil and petroleum coke, pushing up domestic farm and non-farm costs. Input cost pressures weakened slightly in July 2018, reflecting soft metal prices and transient easing of global crude oil prices.

Among other industrial raw materials, domestic coal inflation slowed down significantly as compared with the previous year's level. Inflation in respect of paper and paper products has also remained moderate so far, reflecting *inter alia* cheap imports of paper under free trade agreements with the Association of Southeast Asian Nations (ASEAN) and South Korea. Inflation in prices of fibres (specifically cotton, jute and mesta) after remaining in negative territory during February to May 2018, picked up subsequently due to elevated international prices and lower production estimates for 2018-19 season.

Among farm sector inputs, inflation in respect of agricultural input prices such as fertilisers increased gradually in line with international prices. Despite rising demand, prices of tractors remained stable on the back of increased competition as tractor firms aspired to expand their market shares. Inflation in

respect of pesticides and other agrochemical products was driven by uptick in inflation in insecticide and pesticide even as deflation in fungicide prices continued. Prices of fodder remained in deflation due to increased production on the back of good monsoons during the last two years. Inflation in respect of electricity, which has a high weight in both industrial and farm inputs, rose significantly during May-August, reflecting mainly the price surge on account of supply disruptions in the summer following severe dust storms in northern India and adverse base effect in August. Additionally, the distribution companies (DISCOMS) raised their tariffs, following the diversion of coal supplies by the government away from captive power producers to thermal power plants with low stocks.

Growth in rural wages, both for agricultural and non-agricultural labourers, has remained subdued since August 2017, reflecting the lagged impact of low inflation in the previous few months (Chart II.19).

Pressure from staff costs in the organised sector has broadly been contained. The uptick in staff costs growth in the manufacturing sector in Q4 was short-lived and it slid back in Q1:2018-19. The annual growth in per employee cost for the manufacturing sector

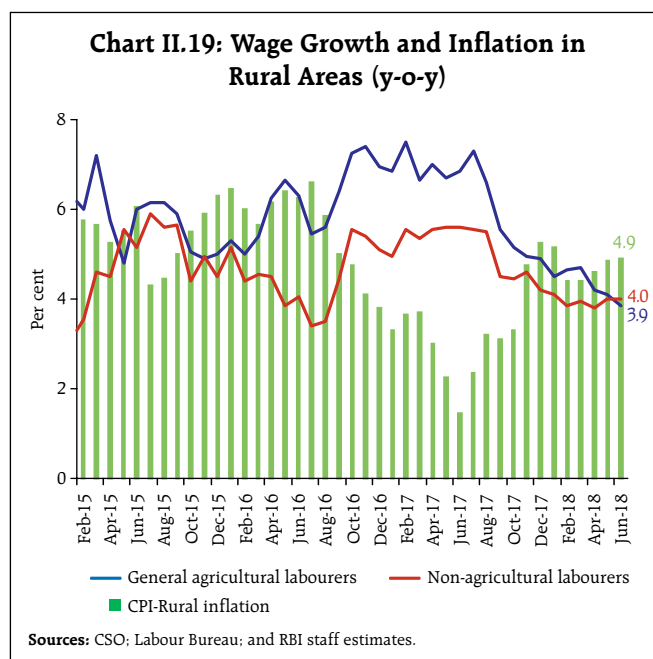
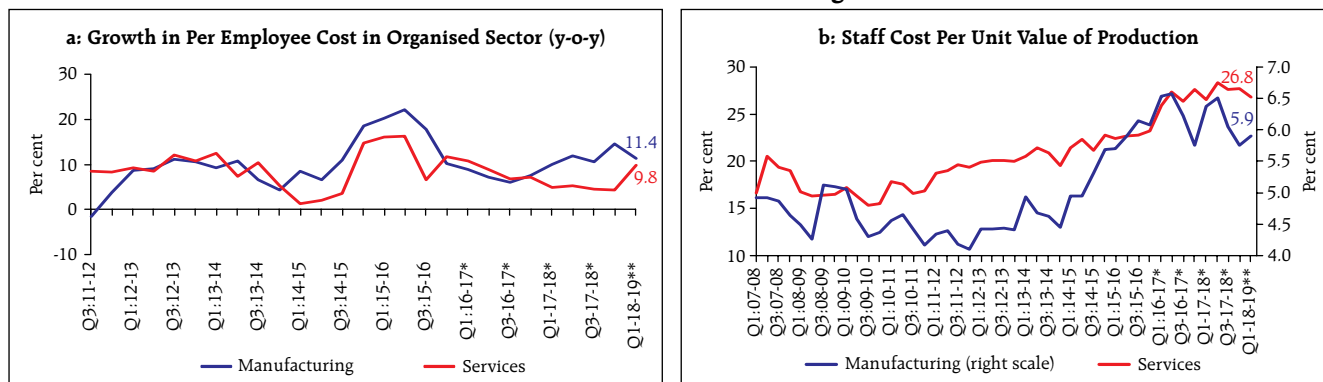


Chart II.20: Labour Cost in Manufacturing and Services



Note: Per employee cost = Total employee cost/total number of employees. Per employee cost is worked out based on total number of employees as of end-March of the previous year.
 *: Listed companies with net worth more than Rs.5 billion were required to adopt the new accounting standards, 'Ind-AS', by Q1:2016-17 and rest of the listed companies by Q1:2017-18, as mandated by the Ministry of Corporate Affairs. The impact of the transition appears muted at the aggregate level in terms of growth rates, although the same may not hold for the ratios. The data may be accordingly read with appropriate caveats.
 **: The data on number of employees as at end March-2017 has been repeated for end March-2018 since very few companies have reported this information so far. The growth rates for the latest quarter may be read with caveats.
Sources: Capitaline database; and RBI staff estimates.

stood at 11.4 per cent in Q1:2018-19. For the services sector, the sequential deceleration since Q4:2015-16 in staff cost growth was interrupted by an uptick in Q1:2018-19 when it rose by 9.8 per cent (Chart II.20a).

Unit labour costs for companies in the manufacturing sector have been volatile and remained muted in Q1:2018-19.⁸ Unit labour costs in the services sector edged down in Q1, with the growth in value of production outpacing the growth of staff cost (Chart II.20b).

Pressure from rising commodity prices was also reflected in an increase in input costs of manufacturing firms covered in the Reserve Bank's industrial outlook survey. These firms reported a rise in the cost of raw materials in Q2:2018-19 and expected it to increase further in Q3. However, they are not expecting to pass the entire cost burden to selling prices, reflecting still subdued pricing power. The manufacturing purchasing managers' index (PMI) as well as the services PMI point to an increase in the cost of raw materials in Q1 and Q2 so far. Firms covered in these indices also reported an increase in their selling prices, indicating that some pass-through of higher costs to clients may already be occurring.

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

II.4 Conclusion

Going forward, inflation outcomes will be influenced by several factors. The government has announced measures aimed at ensuring remunerative prices to the farmers for their produce. The magnitude of the impact of these measures on CPI inflation will be contingent upon the manner and effectiveness with which these measures are implemented. Risks to inflation could emanate from rising geopolitical and trade tensions, with attendant implications for global commodity prices and financial markets. The impact of the 7th CPC HRA award on headline inflation has started waning and the effect of increases in HRA by states is not yet visible. As and when HRA awards by states start showing up in the CPI, it will impact headline inflation. As in the case of the centre's HRA, second round effects will warrant vigilance. The near-term inflation expectations of households and those of businesses polled in the forward-looking surveys of the Reserve Bank of India have firmed up over successive rounds, with the potential to feed into wages and input costs. While low food inflation prints and the positive outlook on food – on account of supply management measures by government and a normal monsoon – provide comfort, it is necessary to be watchful as several upside risks to inflation persist, notably from surging oil prices and volatile financial markets.

III. Demand and Output

Aggregate demand has been underpinned by the strengthening of private consumption and investment demand. The drag from external demand has reduced with a robust pick-up in non-oil merchandise exports. Aggregate supply conditions improved with a sharp acceleration in manufacturing and the resilience in agriculture and allied activities. Raising real investment activity on a durable basis holds the key to sustaining the growth momentum, going forward.

Since the start of 2018, *i.e.*, from the January-March 2018 quarter, economic activity in India appears to be charting a step-up in its trajectory. Quarterly estimates of the Central Statistics Office (CSO) for Q1:2018-19 (April-June) confirm that gross domestic product (GDP) growth averaged 8 per cent in the January-June 2018 period, up from 6.6 per cent in the period July-December 2017. High frequency and survey-based indicators suggest that aggregate demand is fast catching up with aggregate supply. Sales growth, pick-up in capacity utilisation and the acceleration in the fast-moving consumer goods (FMCGs) space attest that the output gap has virtually closed.

Meanwhile, another engine of aggregate demand has started to pick-up with the bounce-back in merchandise exports. On the supply side, the rapid catch-up in sowing activity, backed by ample reservoir

storage, brightens the outlook for agriculture and allied activities on top of the record production in 2017-18. Industrial activity has strengthened and become more broad-based, buoyed by manufacturing. The services sector remains resilient, supported by strong growth in construction activity as well as public administration, defence and other services (PADO).

III.1 Aggregate Demand

Measured by year-on-year (y-o-y) changes in real GDP at market prices, aggregate demand strengthened to 7.7 per cent in Q4:2017-18 and surged to a nine-quarter high of 8.2 per cent in Q1:2018-19 (Table III.1). This extended its sequential acceleration to four successive quarters, beginning in Q2:2017-18. Momentum, measured by q-o-q seasonally adjusted annualised rate (SAAR), however, moderated in Q1:2018-19 (Chart III.1a).

Among its components, consumption expanded on the back of growth in private final consumption expenditure (PFCE), which reached a six-quarter high of 8.6 per cent in Q1:2018-19. Government final consumption expenditure (GFCE) decelerated to 7.6 per cent, *albeit* from a high of 16.9 per cent in Q4:2017-18. Investment demand embodied in the growth of gross fixed capital formation (GFCF) decelerated sequentially in Q1:2018-19; however, it remained reasonably strong at 10 per cent, given the

Table III.1: Real GDP Growth

(Per cent)

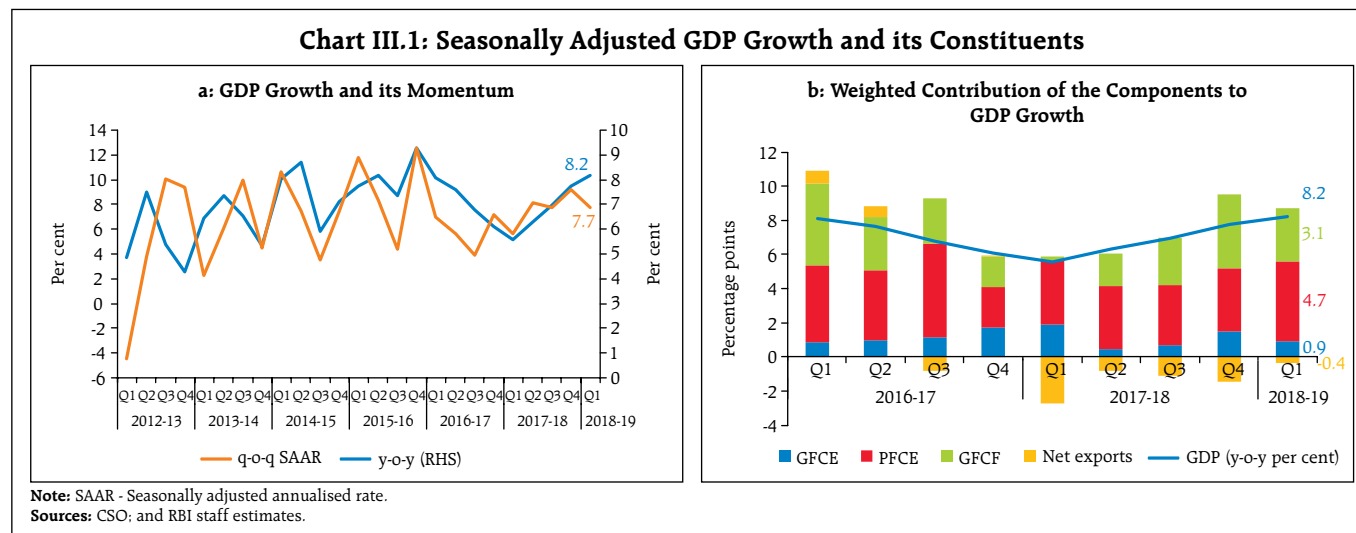
Item	2016-17	2017-18 (PE)	Weighted Contribution*		2016-17				2017-18 (PE)				2018-19
			2016-17	2017-18	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Private final consumption expenditure	7.3	6.6	4.1	3.7	8.3	7.5	9.3	4.2	6.9	6.8	5.9	6.7	8.6
Government final consumption expenditure	12.2	10.9	1.2	1.1	8.3	8.2	12.3	22.5	17.6	3.8	6.8	16.9	7.6
Gross fixed capital formation	10.1	7.6	3.1	2.4	15.9	10.5	8.7	6.0	0.8	6.1	9.1	14.4	10.0
Exports	5.0	5.6	1.0	1.1	3.6	2.4	6.7	7.0	5.9	6.8	6.2	3.6	12.7
Imports	4.0	12.4	0.9	2.7	0.1	-0.4	10.1	6.6	18.5	10.0	10.5	10.9	12.5
GDP at market prices	7.1	6.7	7.1	6.7	8.1	7.6	6.8	6.1	5.6	6.3	7.0	7.7	8.2

PE: Provisional Estimates.

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

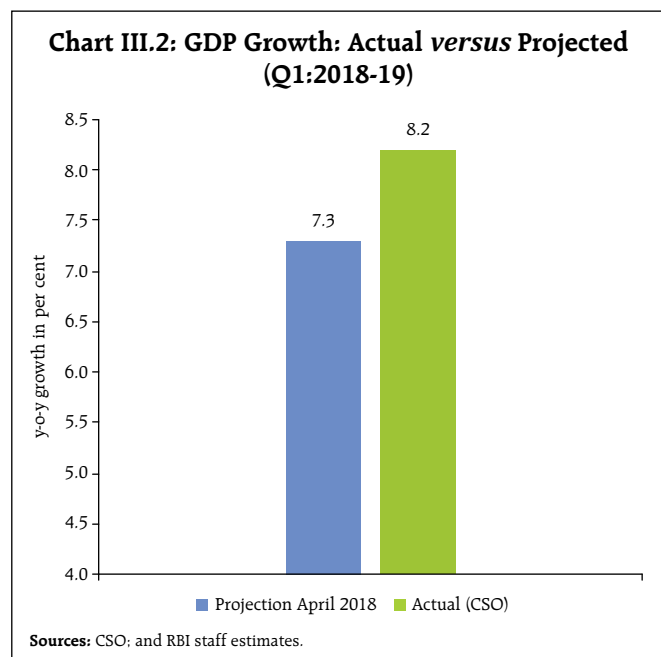
Source: Central Statistics Office (CSO), Government of India.

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



government's thrust on national highways and low-cost housing. Despite a hostile and unpredictable international trading environment, growth of exports of goods and services jumped to a 16-quarter high of 12.7 per cent in Q1:2018-19, mitigating the negative contribution of net exports to aggregate demand caused by the unrelenting surge in imports (Chart III.1b).

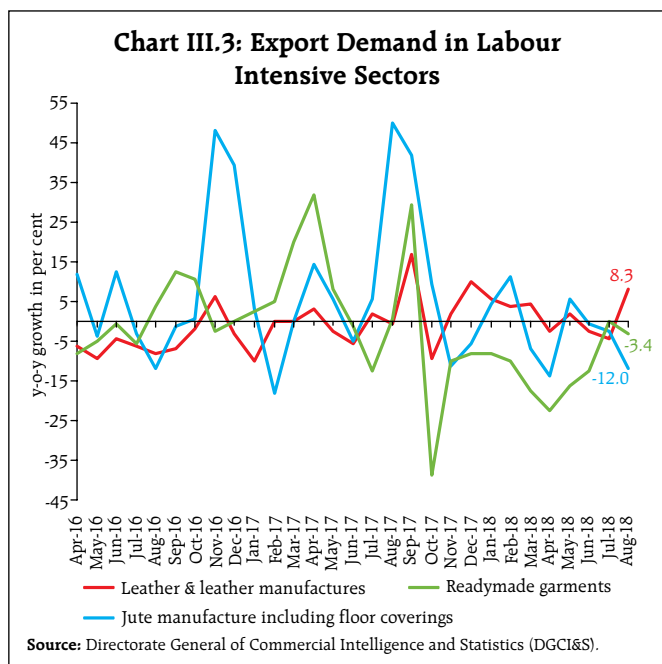
The April 2018 MPR had projected real GDP growth of 7.3 per cent for Q1:2018-19, with risks evenly balanced around the baseline path (Chart III.2).



The actual outcome for the quarter overshoot the projection by 90 basis points, reflecting larger than expected gains in most of the constituents of aggregate demand. First, private consumption demand surprised on the upside in Q1:2018-19 and touched a six-quarter peak. The April 2018 projection had assumed that lingering effects of the goods and services tax (GST) implementation would have an adverse impact on consumption demand – especially in urban areas – through loss of output and employment in unorganised activities. Furthermore, a sharp acceleration in allied activities in the agricultural sector posted a growth of 8.1 per cent in Q1:2018-19, which was significantly above trend. This is likely to have boosted rural consumption. Second, GFCF growth overshoot the projection on account of stronger than expected capital goods production and the robust recovery in the construction sector.

III.1.1 Private Final Consumption Expenditure

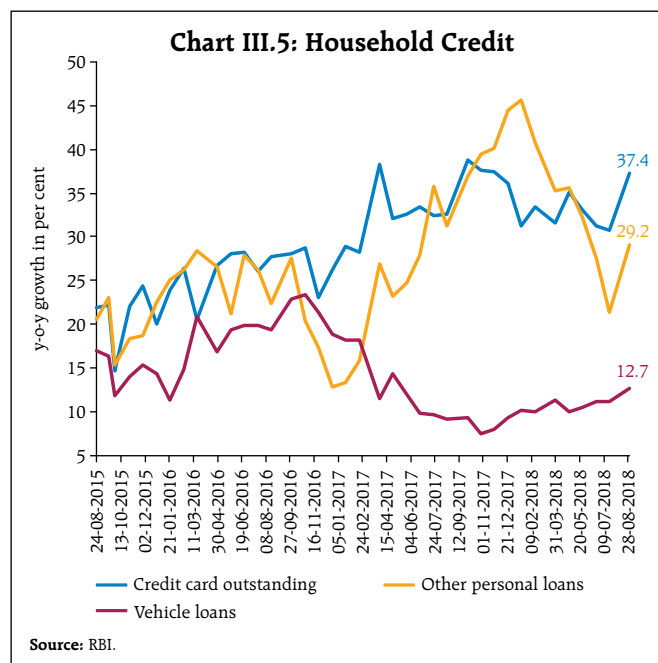
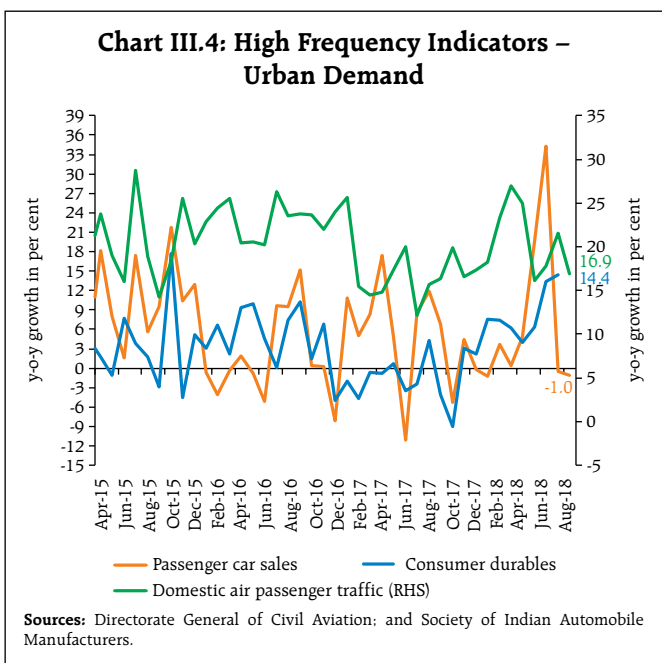
PFCE remained the mainstay of aggregate demand running ahead in Q1:2018-19 on the strength of rising rural and urban demand and undeterred by the surge in domestic prices of petroleum products. After rising since the beginning of 2017-18, wage (staff cost per employee) growth in the organised manufacturing and services sectors has remained range bound (see Chart II.20, Chapter II). However, in the information technology (IT) sector, growth

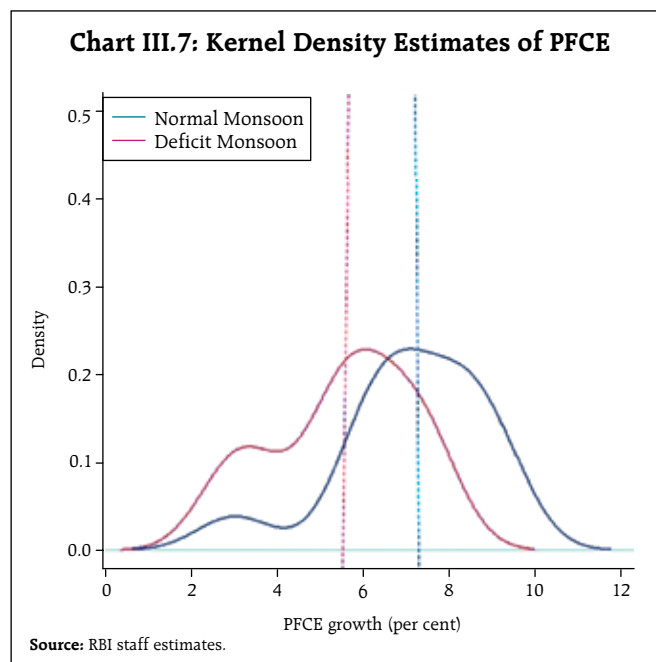
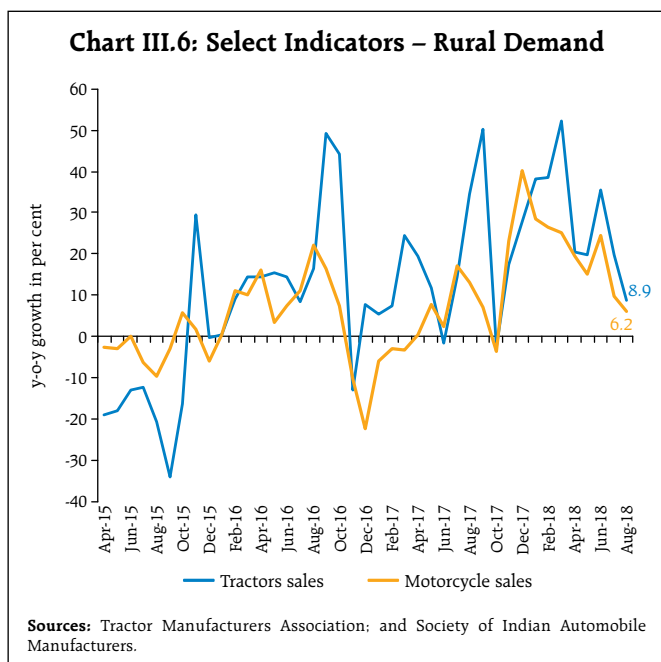


in staff cost was robust in Q1:2018-19, which could have added to the purchasing power. In contrast, anecdotal evidence suggests that following a decline in exports and moderation in domestic production, growth in wage incomes could have moderated in some of the labour-intensive segments such as readymade garments, and jute manufactures, which, in turn, might have impacted consumption demand (Chart III.3).

High frequency indicators of urban consumption present a mixed picture. While domestic air passenger traffic and production of consumer durables expanded during Q1 and Q2:2018-19 so far, sales of passenger cars contracted during July-August, after peaking in June, possibly as a response to the sharp rise in fuel prices (Chart III.4). Household credit demand in the form of personal loans and leasing of vehicles by commercial banks maintained a robust tempo (Chart III.5). Going forward, urban consumption is expected to strengthen further on the implementation of the 7th Central Pay Commission (CPC) awards by states and the recent reduction in GST rates.

High frequency indicators of rural demand seem to be indicating a slight loss of momentum in Q2:2018-19 (Chart III.6). Sales of motorcycles and tractors, which grew robustly during Q1:2018-19, decelerated in Q2 (July-August). Nevertheless, construction activity in rural areas has been buoyant since Q2:2017-18, supported by the government's thrust on rural housing and roads. Strong topline growth of FMCG companies, a sizeable part of which emanates from rural areas, also corroborates the improving dynamics of rural consumption. The latter should also benefit from the tailwinds of normal rains





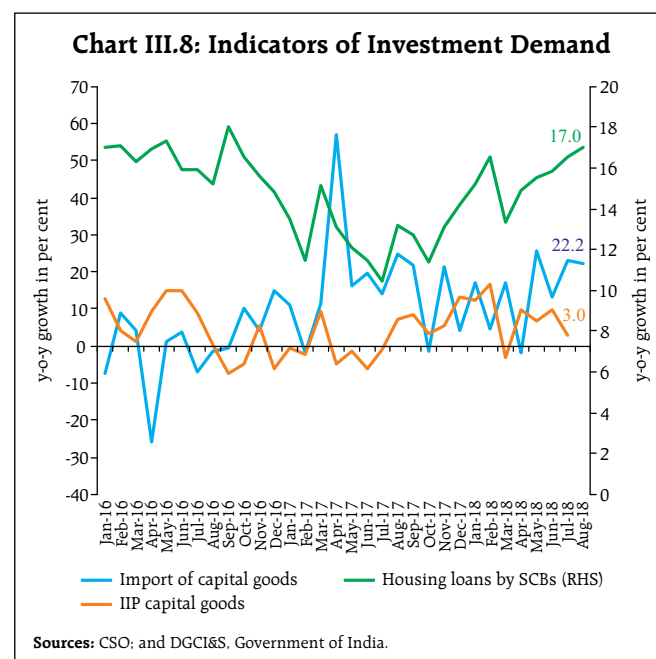
in large parts of the country, given the empirical evidence of a positive association of normal monsoon with growth in private consumption (Chart III.7).¹ The sizeable increase in MSP of *kharif* crops announced in July 2018 is expected to augment incomes of rural households if it is implemented effectively.

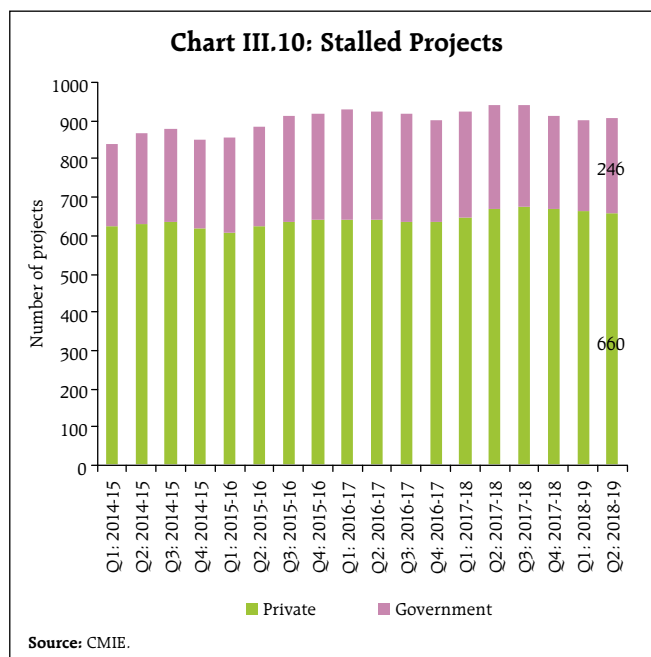
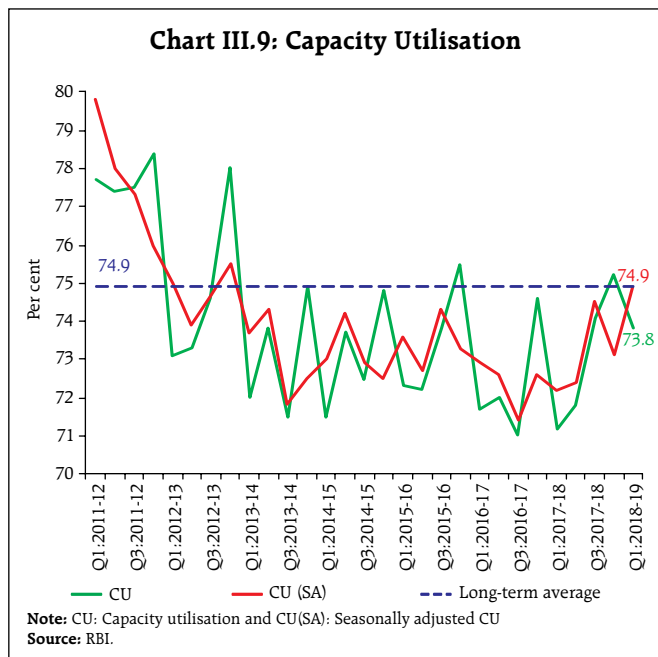
III.1.2 Gross Fixed Capital Formation

Growth in gross fixed capital formation (GFCF), which had accelerated to a seven-quarter high of 14.4 per cent in Q4:2017-18, retained double-digit growth in Q1:2018-19 with some moderation in pace relative to the previous quarter. The share of GFCF in aggregate demand in Q1:2018-19 at 31.6 per cent was higher than 31.0 per cent a year ago, indicating improving investment demand. Robust investment activity was also reflected in several high frequency indicators such as steel consumption, cement production, and import of capital goods (Chart III.8). Strong growth in housing loans disbursed by scheduled commercial banks (SCBs) and especially housing finance companies also suggests rising investment in the construction sector.

¹ The kernel density plot of annual PFCE growth for the period 1996-97 to 2017-18 shows skewed concentration of PFCE growth to the right of the x-axis (i.e., higher than average growth) in normal monsoon years.

Capacity utilisation (seasonally adjusted) gained momentum and improved to 74.9 per cent in Q1:2018-19, higher than the level recorded in the first quarter of the past year (Chart III.9). The number of stalled projects, though reported some improvement in both the private and government sectors in Q4:2017-18 and Q1:2018-19, there was a slight deterioration in government sector in Q2:2018-19 (Chart III.10).

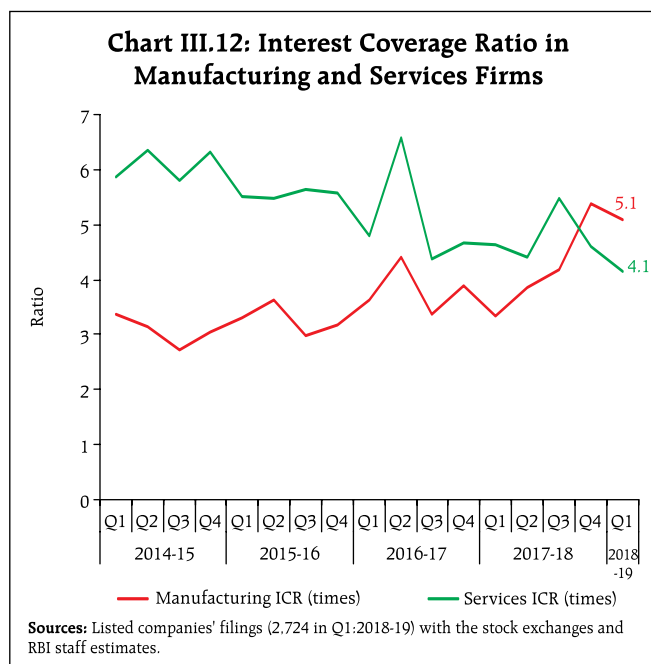
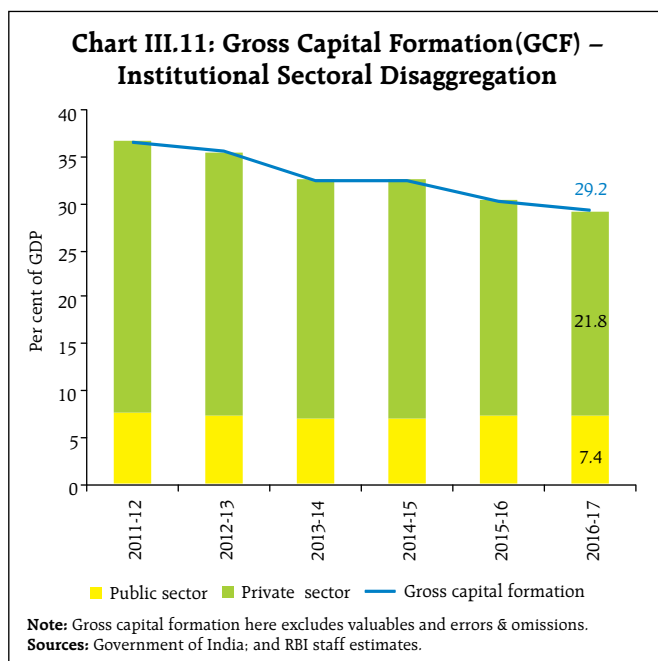




Since 2011-12, capital formation has decelerated due to the slowdown in investment in the private sector, weighed down, *inter alia*, by overhang of corporate debt (Chart III.11). Empirical analysis suggests that higher leverage constrains firms' ability to invest, resulting in slowdown in fresh investment (Box III.1). Since H2:2017-18, however, the corporate sector has been deleveraging, especially in the manufacturing

sector, which is reflected in an improvement in their interest coverage ratios (ICRs) (Chart III.12).

Recent data on investment activity and several lead/coincident indicators of investment, *viz.*, sales growth, capacity utilisation, inventory drawdown, and gradually returning pricing power suggest that the investment cycle has turned.²



² Raj, Janak; S. Sahoo; and Shiv Shankar (2018), "India's Investment Cycle: An Empirical Investigation", RBI Working Paper (*Forthcoming*).

Box III.1: Leverage and Investment

Empirical evidence on firm-level capital investment points to sales growth, leverage, growth of debt and repaying capacity of firms being its key determinants (Krznar and Matheson, 2018; Li, Magud and Valencia, 2015; Magud and Sosa, 2015). Leverage, which affects investment behaviour in multiple ways, constrains a firm's capacity to mobilise external resources for financing new and risky projects. In a scenario of high leverage, major gains from investment accrue to debt-holders, thereby discouraging promoters from undertaking further investment. In the aftermath of the global financial crisis, leverage of Indian non-financial firms, measured as the ratio of debt to equity, rose across sectors, eroding debt servicing capacity and undermining investment decisions.

In order to formally examine the impact of leverage on investment activity, firm-level data of both listed and non-listed non-financial companies for the period of 2004 to 2017 drawn from the CMIE's Prowess database were modelled in a dynamic Arellano-Bond panel regression framework that addresses the problem of potential endogeneity of regressors:

$$CapEx_{it} = \alpha + \beta CapEx_{it-1} + \gamma LEV_{it} + \delta ICR_{it} + \varphi(\Delta Sales_{it}) + \rho(\Delta OpProfit_{it}) + \theta(\Delta Debt_{it}) + \omega PBR_{it} + \varepsilon_{it} \quad (III.e.1)$$

where $CapEx_{it}$ is firm i 's investment to fixed assets ratio at time t , LEV_{it} is the firm i 's debt to equity ratio at time t indicating leverage, ICR_{it} is the firm i 's interest coverage ratio at time t , $\Delta Sales_{it}$ is the growth in sales of firm i at time t , $\Delta OpProfit_{it}$ is the growth in operating profit of firm i at time t , and $\Delta Debt_{it}$ is the growth in outstanding debt of firm i at time t , PBR_{it} is the market price to book value ratio of firm i at time t , and ε_{it} is the error term.

The results confirm the dominant negative influence of leverage in determining fixed investment while sales growth, operating profit and market price to book value positively affect investment (Table III.1.1). One percentage point increase in leverage was found to reduce fixed investment by 40 basis points.

The specification was also tested at sectoral level, *viz.*, manufacturing, construction and metals. The sectoral results also corroborate the aggregate findings. The growth of outstanding debt is found to have a positive impact on capital expenditure as firms finance long-term investment by incurring new debt. Sales growth,

Table III.1.1: Regression Results – Impact of Leverage over Firms' Capital Expenditure (2004-2017)
Dependent Variable: Investment-Fixed Asset Ratio

	Overall	Manufacturing Firms	Construction Sector Firms	Metal Sector Firms
	(1)	(2)	(3)	(4)
Investment ratio (lag)	0.133*** (0.010)	0.138*** (0.015)	0.043 (0.038)	0.112*** (0.020)
Debt to equity ratio	-0.399*** (0.093)	-0.197** (0.095)	-1.924*** (0.581)	-0.241 (0.198)
Interest coverage ratio	0.005 (0.003)	-0.005 (0.004)	0.027* (0.015)	0.001 (0.008)
Sales growth rate (y-o-y)	0.020*** (0.002)	0.020* (0.010)	0.016*** (0.005)	0.032*** (0.012)
Growth of operating profit (y-o-y)	-0.000 (0.001)	-0.002 (0.001)	0.004 (0.006)	-0.001 (0.002)
Growth of outstanding debt (y-o-y)	0.011*** (0.001)	0.012*** (0.002)	0.005 (0.005)	0.015*** (0.004)
Market price to book value ratio (annual average)	0.249** (0.103)	-0.015 (0.114)	1.182*** (0.391)	-0.189 (0.252)
Constant	5.553*** (0.299)	7.077*** (0.310)	3.392*** (0.992)	8.453*** (0.561)
Observations	20,726	13,885	1,421	4,673
Number of firms	2,693	1,669	191	558

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

Source: RBI staff estimates.

an indicator of current and future demand, also leads to further investment, supporting that the investment accelerator is at work.

To conclude, high leverage among non-financial firms leads to a slowdown of investment in the economy. Recent concerted efforts to strengthen balance sheets of both firms and banks are expected to lead to pick-up in capital formation in the medium to long term.

References:

- Krznar, I., and T. Matheson (2018), Investment in Brazil: From Crisis to Recovery, *IMF Working Paper, WP/18/6*.
- Li, D., N. Magud and F. Valencia (2015), Corporate Investment in Emerging Markets: Financing vs. Real Options Channel, *IMF Working Paper, WPIEA2015285*.
- N. Magud and S. Sosa (2015), Investment in Emerging Markets: We Are Not in Kansas Anymore...Or Are We?, *IMF Working Paper, WP/15/77*.

III.1.3 Government Expenditure

GFCE continued to support aggregate demand in Q1. The fiscal position of the central government showed an improvement in terms of key deficit indicators, as per cent of budget estimates (BE), during April-August 2018-19 as growth in revenue receipts exceeded that of expenditure (Table III.2). Tax revenues grew by 7.5 per cent, supported by higher income tax collections (Charts III.13a and b).

Notwithstanding month-over-month fluctuations, the overall indirect tax base has expanded. Ongoing simplification of procedures and rationalisation of GST rates have encouraged voluntary compliance, especially in the business-to-business segment and small enterprises. Many registrants under the GST network (GSTN) were those who fell below the GST threshold but nevertheless chose to be a part of the GST. Similarly, more than 50 percent of those who could have chosen to opt for the simpler composition scheme chose to register under the regular GST scheme.³ States' own tax revenues, comprising mainly their collection under the state goods and services tax (SGST), have stabilised in recent months, though there is some uncertainty relating to the sharing of revenues from the integrated goods and services tax

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

Indicator	As a per cent of BE		(Per cent)
	2017-18	2018-19	2018-19
1. Revenue receipts	27.0	26.9	13.3
a. Tax revenue (Net)	27.8	24.7	7.5
b. Non-tax revenue	24.0	40.1	42.0
2. Total non-debt receipts	26.6	26.4	12.7
3. Revenue expenditure	45.8	43.8	11.6
4. Capital expenditure	35.4	44.0	20.6
5. Total expenditure	44.3	43.8	12.7
6. Gross fiscal deficit	96.1	94.7	12.6
7. Revenue deficit	134.2	114.0	10.0
8. Primary deficit	1401.3	767.7	13.2

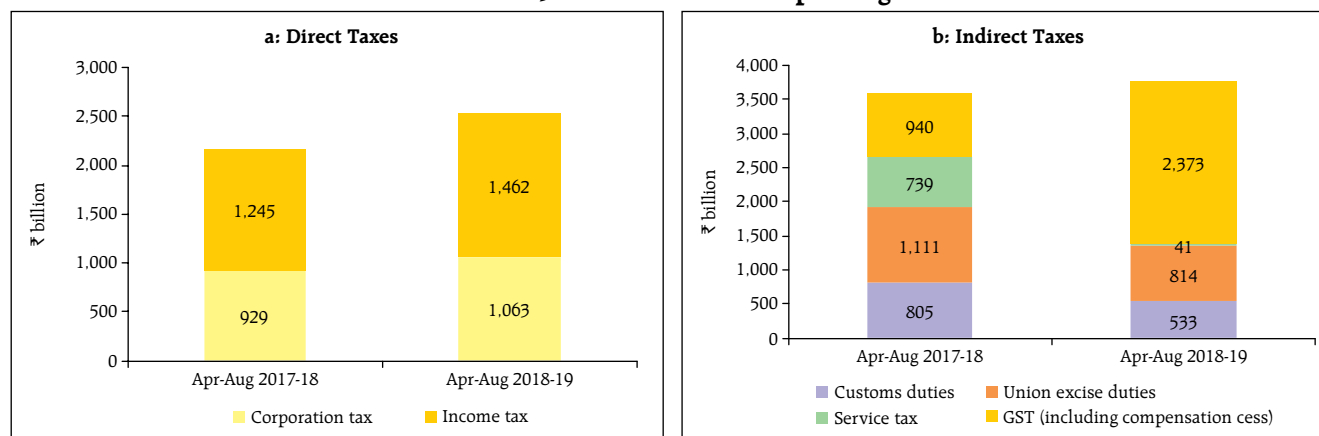
BE: Budget Estimates.

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

(IGST) between the centre and states and the transfer under GST compensation cess.⁴ Furthermore, non-tax revenues have shown a marked improvement for centre.

On the expenditure front, accounts for April-August 2018-19 reveal a marked moderation in revenue expenditure mainly due to lower subsidy outgo. The quality of expenditure improved, with growth in capital expenditure – at 20.6 per cent – outpacing

Chart III.13: Tax Collections – April-August



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

³ Economic Survey, 2017-18.

⁴ Going forward, the uncertainty associated with apportionment of IGST/GST compensation cess might dissipate given the latest amendments made in the respective Acts dated August 30, 2018.

Table III.3: Revenue Expenditure, Interest Payments and Indebtedness of All States

(Per cent)			
Year	Revenue Expenditure / Total Expenditure	Interest Payment / Revenue Expenditure	Debt / GSDP
2015-16	81.3	11.7	23.4
2016-17	80.4	12.0	23.8
2017-18 (RE)	83.2	11.6	24.0
2018-19 (BE)	82.9	11.3	24.3

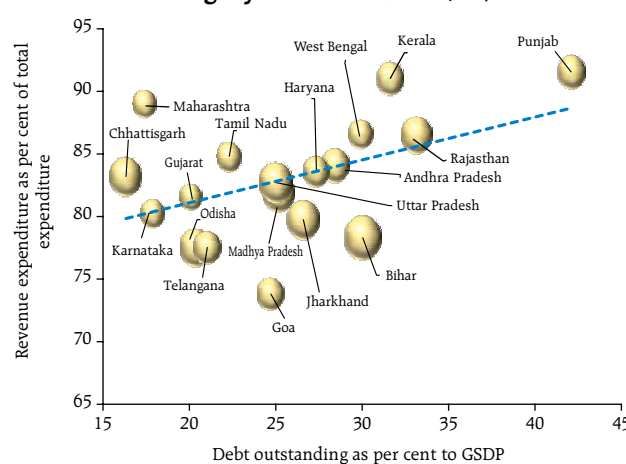
Source: RBI staff estimates.

revenue expenditure. As regards states, the share of revenue expenditure in their total expenditure was estimated slightly lower at 83 per cent in their BE for 2018-19, though still higher than in 2015-16 and 2016-17 (Table III.3).

There is a positive relationship between indebtedness of states (debt/GSDP) and their respective shares of revenue expenditure in total expenditure. This relationship is stronger in the case of non-special category states than in special category states⁵ (Chart III.14). States with high interest burden (higher interest payment as per cent of revenue expenditure) find it more difficult to control their revenue expenditure, thereby putting a strain on the quality of expenditure.

During 2017-18, the combined fiscal position of the centre and states deteriorated *vis-à-vis* BE due to elevated revenue expenditure and subdued growth in revenue collection resulting from the teething problems with the GST implementation. Consequently, the fiscal deficit of centre and states deviated significantly from BE. The combined gross fiscal deficit (GFD) is budgeted to decline to 5.9 per cent of GDP in 2018-19 from 6.6 per cent in the

⁵ The special category status to some states was given by the National Development Council (NDC) in 1969 by granting certain disadvantaged states with preferential treatment in the form of central assistance and tax concessions, though there is no such provision in the Indian Constitution for such categorization. Over time, various criteria have been devised for granting special category to a state, which, *inter alia*, include: economic and infrastructural backwardness; non-viable nature of state finances; hilly and difficult geographical terrain; low population density or sizeable share of tribal population; and strategic location along borders with neighbouring countries. At present, eleven states, *viz.*, Arunachal Pradesh, Assam, Himachal Pradesh, Jammu and Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand have been bestowed with this status.

Chart III.14: Relationship between Indebtedness and Revenue Expenditure for Non-Special Category States 2017-18 (RE)

Note: Size of bubble is based on revenue expenditure as per cent of GSDP.

Sources: Comptroller and Auditor General of India (CAG), Government of India; and RBI staff estimates.

revised estimates (RE) for 2017-18. Outstanding liabilities of the general government (centre and states) are budgeted to decline to 68.3 per cent of GDP by end-March 2019 from 68.9 per cent a year ago (RE).⁶ Concerted efforts towards consolidation will, however, be needed for achieving the revised Fiscal Responsibility and Budget Management (FRBM) targets, *i.e.*, the central government debt to GDP ratio of 40 per cent and the general government debt to GDP ratio of 60 per cent by 2024-25.

The Reserve Bank managed the centre's market borrowing programme during 2018-19 so far as per the planned issuance schedule, despite reduced demand for government securities from foreign portfolio investors (FPIs). Against the budgeted market borrowing for 2018-19 at ₹6,055 billion (about 3 per cent higher than last year), the central government completed 47.6 per cent of its budgeted gross borrowings by end-September 2018 (64.1 per cent in the corresponding period of 2017-18). It decided not to front-load market borrowings in the first half of the year in a departure from the typical pattern of market borrowings (Table III.4). It has

⁶ In the last three years (2015-16, 2016-17 and 2017-18 RE), growth in nominal GDP has exceeded the growth in combined outstanding liabilities only in 2016-17. As per budget estimates of 2018-19, growth in nominal GDP is expected to outpace the combined outstanding liabilities.

Table III.4: Government Market Borrowings

₹ billion)

	2016-17			2017-18			2018-19 (end-September 2018)		
	Centre	States	Total	Centre	States	Total	Centre	States	Total
Net borrowings	4,082	3,427	7,509	4,484	3,403	7,887	2,004	1,376	3,380
Gross borrowings	5,820	3,820	9,640	5,880	4,191	10,071	2,880	1,575	4,455

Source: Government of India and RBI staff estimates.

decided to reduce its budgeted market borrowings in the second half of the year by ₹705 billion, which will take the market borrowings for the full year to ₹5,350 billion against the budgeted ₹6,055 billion. The government expects that higher inflows in the National Small Savings Fund (NSSF) scheme and adjustments in buyback programme would enable it to meet the budgeted fiscal deficit target even with lower market borrowings. The states completed 27.6 per cent of their budgeted gross borrowings by end-September 2018 as against 36.7 per cent in the corresponding period of 2017-18. The bulk of market borrowings by the states would be in the second half of 2018-19.

A major challenge for government finances is adherence to the budgeted revenue expenditure, given impending elections in several states as well as for the centre. An analysis of GFCE growth for the period 1991-92 to 2017-18 suggests that it generally picks up in election years (Chart III.15). This highlights

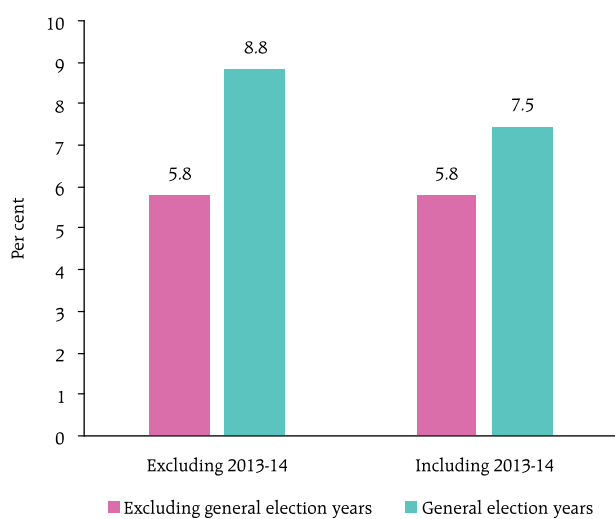
the risks of curtailment of capital expenditure and/or deviation from the GFD targets. There are also risks of overshooting of revenue expenditure in the current year due to potential outlays associated with food and fuel subsidies for the centre, debt waivers for states, and the announced increase in minimum support price (MSP) for *kharif* crops. However, the government has indicated that it does not anticipate any slippage in the fiscal deficit target and expects the revenue collection to be in line with the budget estimates.

Revenue mobilisation through better tax compliance, non-tax revenues and disinvestment holds the key to sustaining fiscal consolidation by the centre. State finances are likely to be under pressure during the current fiscal year due to rollout of farm loan waivers and implementation of impending pay commission awards and arrears.

III.1.4 External Demand

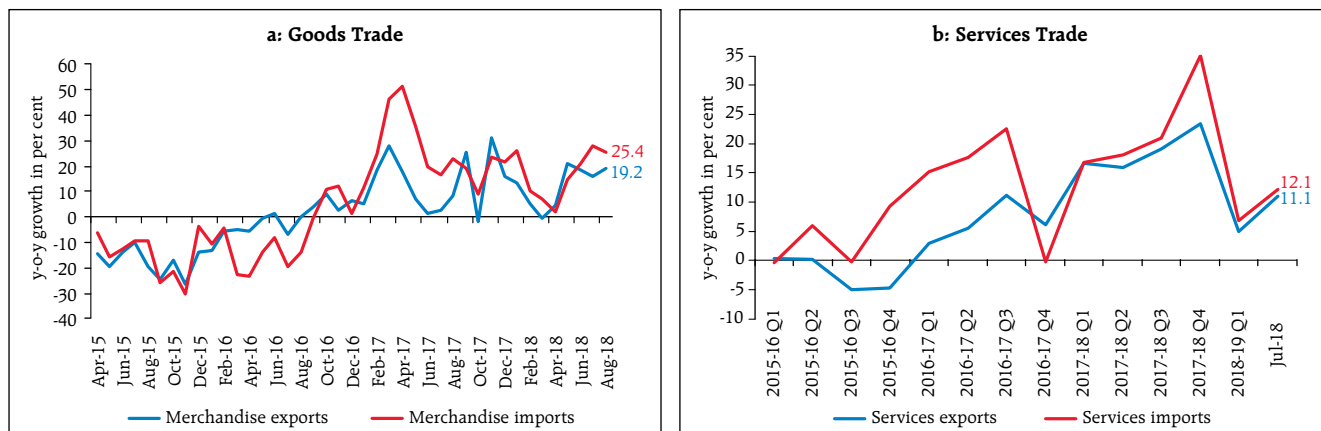
Net exports continued to drag down aggregate demand in Q1:2018-19, though on a smaller scale than in the previous four quarters. India's merchandise exports recovered smartly from the implementation effects of the GST and rode on improving global demand to expand at 14.6 per cent in US dollar terms in Q1:2018-19, a step-up from the average of 10.1 per cent in the previous four quarters (Chart III.16a). The recovery in export growth was strongly supported by non-oil exports such as engineering goods, chemicals and drugs and pharmaceuticals (Chart III.17a). Oil exports too expanded, but mainly on the back of a surge in international crude oil prices. Merchandise import growth during Q1:2018-19 was the slowest in four quarters on account of an unfavourable base effect and a decline in gold imports. There was also some moderation in non-oil non-gold imports with the decline in imports of pearls and precious

Chart III.15: Growth in GFCE in Non-election and General Election Years



Source: CSO and RBI staff estimates.

Chart III.16: Growth in Merchandise and Services Trade



Sources: Directorate General of Commercial Intelligence and Statistics (DGCI&S); and RBI.

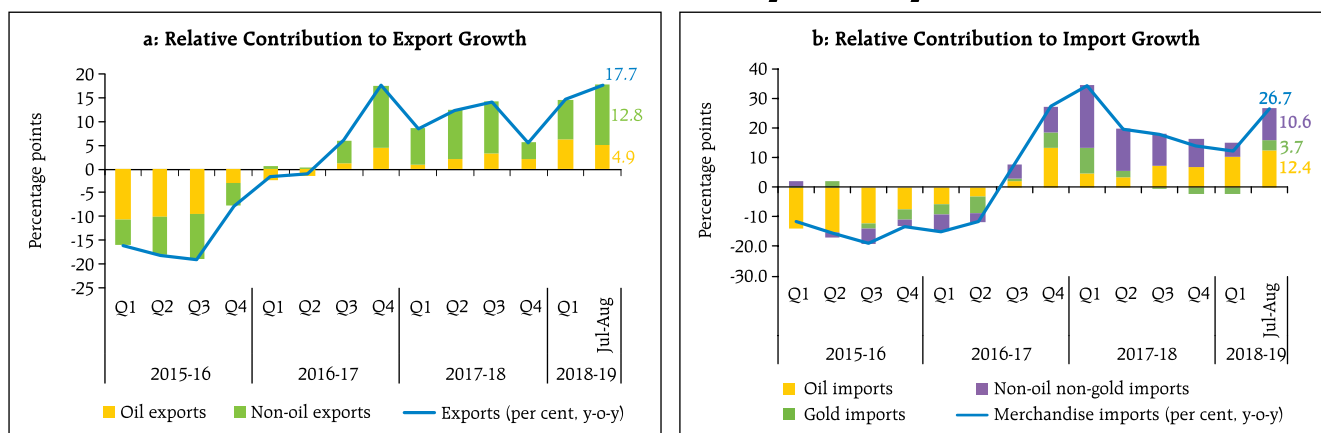
Note: Growth rate for July 2018 in Chart b is calculated based on the monthly average of the corresponding period.

stones, pulses and vegetable oil (Chart III.17b). The combined impact of the escalation in international crude oil prices and a pick-up in import volumes pushed up the oil import bill to a 15-quarter high. Notwithstanding the improved export performance, India's merchandise trade deficit during Q1:2018-19 was the highest in last 20 quarters. During July-August 2018-19, both export and import growth improved. Exports benefitted from increased shipments of petroleum products, engineering goods and gems and jewellery. Petroleum, gold, coal and electronic goods supported import growth.

In Q1:2018-19, 65 per cent of India's merchandise trade deficit was financed through invisibles, *i.e.*,

net export of services, income and remittances. Net services exports grew by 2.1 per cent on a y-o-y basis, primarily driven by exports of software and financial services. In gross terms, India's services export recorded a growth of 4.9 per cent in Q1:2018-19 (Chart III.16b). India accounts for a large share (13.1 per cent share in total exports of the top 10 exporting economies)⁷ of global exports of telecommunications, computer and information services. Major IT companies reported significant improvement in their export revenues in Q1:2018-19, which might also have extended into Q2:2018-19 in view of the weakness of the rupee. Optimistic forecasts of global IT spending in 2018 also bode well for the outlook for software

Chart III.17: Relative Contribution to Export and Import Growth



Source: RBI staff estimates.

⁷ World Trade Statistical Review, 2017.

exports. Net remittances – mainly private transfers, which supplement gross domestic disposable income – rose by 17.5 per cent in Q1:2018-19, reflecting firmer demand conditions in source countries as also rising international crude oil prices, both of which imply a favourable outlook for these flows. Despite increase in net receipts of services exports and remittances in Q1:2018-19, trade deficit caused a slight widening of the current account deficit to US\$ 15.8 billion (2.4 per cent of GDP) as compared with US\$ 15.0 billion (2.5 per cent of GDP) in Q1:2017-18.

The global growth and trade outlook is clouded by rising protectionist tensions. The direct impact of the recently announced tariffs by the US on India's exports is likely to be modest;⁸ however, the increase in US tariffs could lead to a supply glut in non-US markets and push prices down, resulting in lower export realisations for third party exporters like India. These risks appear to be materialising as the affected countries retaliate and protect domestic markets as already evident in *tit-for-tat* tariffs by the US and China. These developments could lead to a global trade slowdown with hysteresis, which, in turn, could diminish welfare, especially for countries looking to leverage on global trade to meet their growth aspirations.

As regards financial flows in 2018-19 so far, net foreign direct investment (FDI) flows increased by 2.9 per cent in April-July 2018 over the corresponding period of the previous year. By contrast, FPI flows recorded net outflows of US\$ 11.5 billion till September 28, 2018, reflecting mainly global portfolio rebalancing away from EMEs. While net receipts on account of non-resident deposits almost tripled in Q1:2018-19 from their level a year ago, both external commercial borrowings (ECBs) and short-term trade credit recorded outflows during the same period. Keeping in view the capital needs of the corporate sector, all-in-cost norms and end-use provisions were rationalised and the list of eligible borrowers was expanded for ECBs in April 2018. Despite the drawdown of reserves since April 2018, India's forex reserves at US\$ 400.5 billion as on September 28, 2018 were at a comfortable level – equivalent to 10 months of imports and 182 per cent of short-term external debt (by residual maturity).

III.2 Aggregate Supply

The growth of gross value added (GVA) at basic prices accelerated to an eight-quarter high of 8 per cent in Q1:2018-19 (Table III.5). However, GVA's momentum, measured in terms of seasonally adjusted q-o-q annualised growth, somewhat weakened, suggesting

Table III.5: Sector-wise Growth in GVA

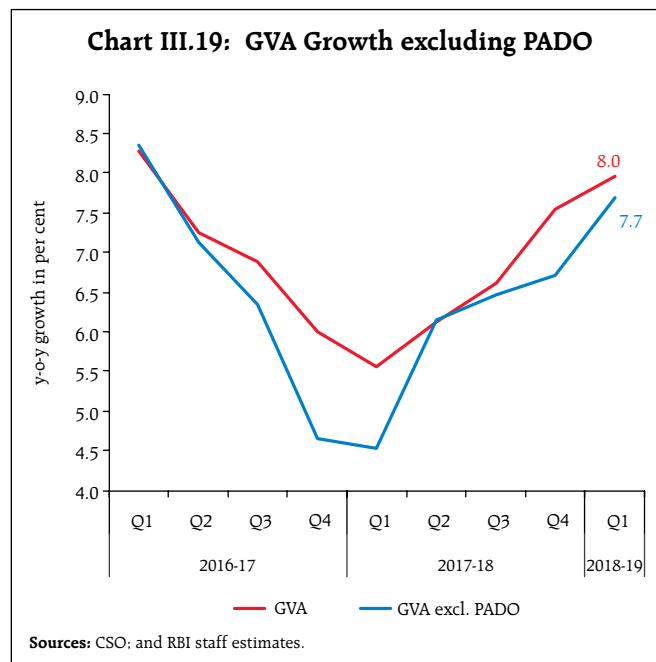
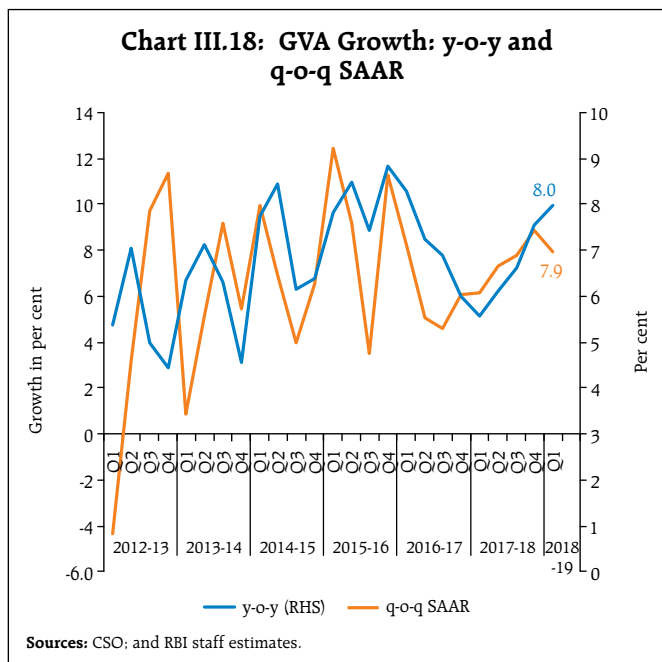
(Per cent)

Sector	2016-17	2017-18 (PE)	Weighted Contribution		2016-17				2017-18 (PE)				2018-19
			2016-17	2017-18	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Agriculture, forestry and fishing	6.3	3.4	1.0	0.5	4.3	5.5	7.5	7.1	3.0	2.6	3.1	4.5	5.3
Industry	8.7	5.5	2.0	1.3	10.2	7.8	8.8	8.1	-0.4	7.1	7.3	8.0	10.8
Mining and quarrying	13.0	2.9	0.4	0.1	10.5	9.1	12.1	18.8	1.7	6.9	1.4	2.7	0.1
Manufacturing	7.9	5.7	1.4	1.0	9.9	7.7	8.1	6.1	-1.8	7.1	8.5	9.1	13.5
Electricity, gas, water supply and other utilities	9.2	7.2	0.2	0.2	12.4	7.1	9.5	8.1	7.1	7.7	6.1	7.7	7.3
Services	6.7	7.6	4.1	4.7	8.5	7.4	6.0	4.9	8.5	6.4	7.5	8.2	7.5
Construction	1.3	5.7	0.1	0.4	3.0	3.8	2.8	-3.9	1.8	3.1	6.6	11.5	8.7
Trade, hotels, transport, communication	7.2	8.0	1.4	1.5	8.9	7.2	7.5	5.5	8.4	8.5	8.5	6.8	6.7
Financial, real estate and professional services	6.0	6.6	1.3	1.4	10.5	8.3	2.8	1.0	8.4	6.1	6.9	5.0	6.5
Public administration, defence and other services	10.7	10.0	1.3	1.3	7.7	8.0	10.6	16.4	13.5	6.1	7.7	13.3	9.9
GVA at Basic Prices	7.1	6.5	7.1	6.5	8.3	7.2	6.9	6.0	5.6	6.1	6.6	7.6	8.0

PE: Provisional Estimates.

Source: CSO.

⁸ According to the Asian Development Outlook 2018, the estimated direct impact of US tariffs on exports from India works out to be 0.06 per cent of India's total exports.



that favourable base effects were primarily at work (Chart III.18).

The acceleration of GVA growth was underpinned by manufacturing activity registering double-digit growth after eight quarters. Agricultural growth also accelerated on the back of double-digit growth in production of key crops during the *rabi* season, and sustained expansion in livestock products, forestry and fisheries during the quarter. There was some moderation in growth of services sector activity, essentially due to a high base. Construction activity maintained strong pace for the second consecutive quarter. Continued expansion in PADO was fuelled by an increase in government expenditure in Q1:2018-19 (Chart III.19).

III.2.1 Agriculture

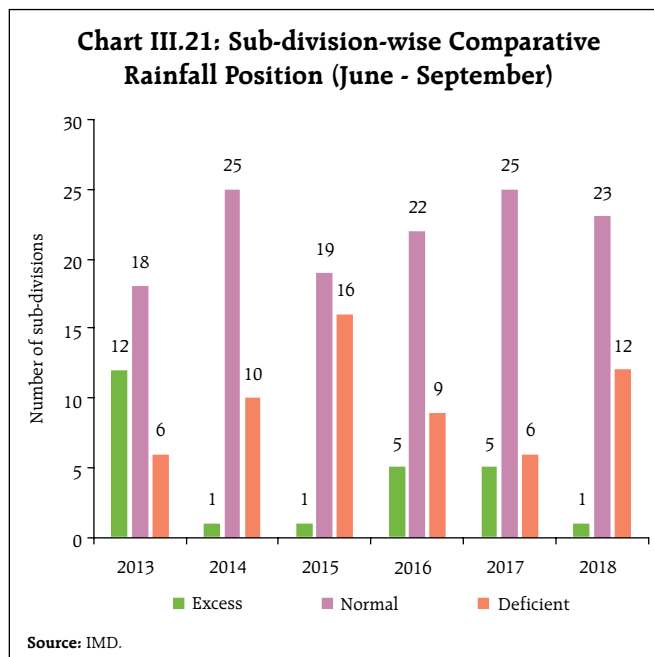
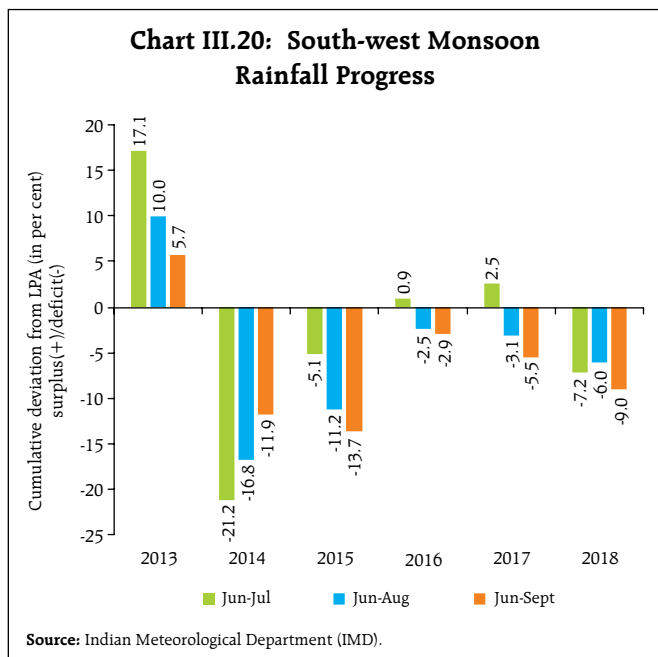
Agriculture and allied activities accelerated for the third consecutive quarter in Q1:2018-19, supported by higher production of rice, wheat, coarse cereals, pulses and oilseeds during the *rabi* season. As per the third advance estimates for 2017-18, horticulture production increased by 2.1 per cent, reaching a record of 306.8 million tonnes. The livestock products, forestry and fisheries sub-sector, which constituted around 45 per cent of GVA of agriculture

and allied activities, grew at a robust rate of 8.1 per cent in Q1:2018-19.

The fourth advance estimates of agricultural production for 2017-18 released in August placed foodgrains production at a record high of 284.8 million tonnes, 1.9 per cent higher than the third advance estimates (released in May 2018) and 3.5 per cent higher than the final estimates for the previous year. A record production of cereals for the second consecutive year and higher buffer stocks⁹ are exerting downward pressure on agriculture prices. The buffer stocks of foodgrains may also pose a logistic challenge for state agencies, including the Food Corporation of India (FCI), unless they liquidate extant stocks through open market sales.

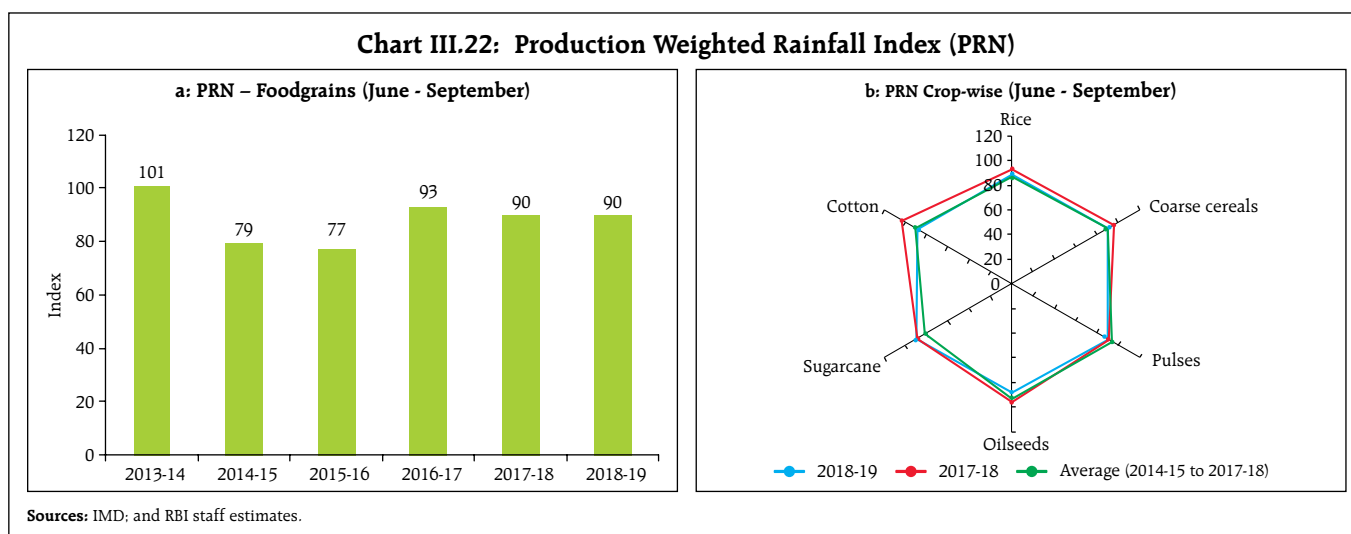
The progress of the south-west monsoon had been irregular, notwithstanding its early arrival. Starting

⁹ Foodgrain stocking norms (or buffer norms and strategic reserve) refer to the level of stock in the Central Pool that is sufficient to meet the operational requirement of foodgrains and exigencies at any point of time. At present, stocking norms are fixed by the central government on a quarterly basis consisting of operational stock (for meeting monthly distributional requirement under targeted public distribution system (TPDS) and other welfare schemes (OWS) for the quarter) and strategic reserves to take care of a shortfall in production or natural calamities. With effect from July 1, 2017, quarter-wise buffer norm for foodgrains are: 21.04 million metric tonnes as on 1st April, 41.12 million metric tonnes as on 1st July, 30.77 million metric tonnes as on 1st October, and 21.41 million metric tonnes as on 1st January.

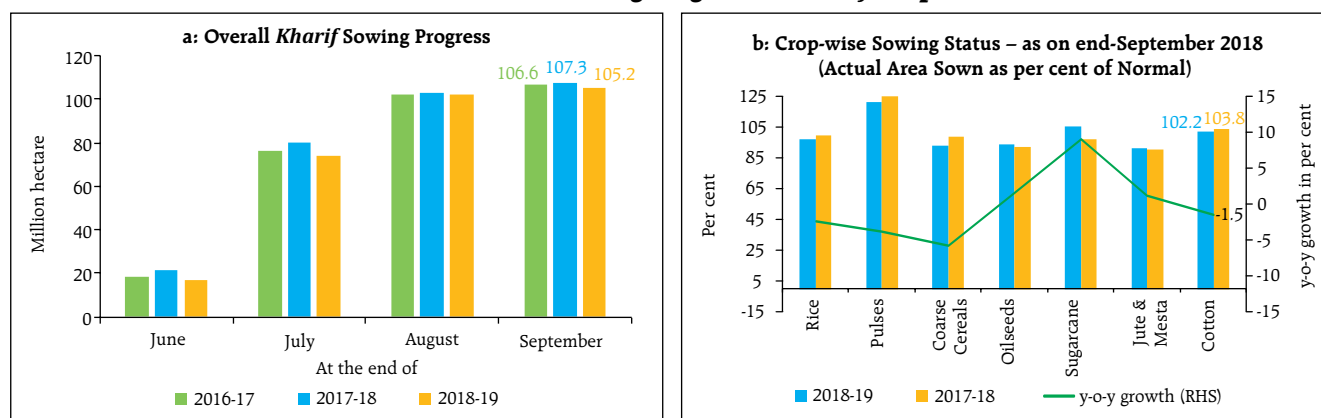


off on a weak note in June, the monsoon gained momentum in July, but was marked by uneven spatial and temporal distribution. The deficit in precipitation (June-September) at 9 per cent (below Long Period Average (LPA)) was higher than a year ago and it remained deficient in 16 out of 17 weeks, with the cumulative peak deficit reaching 10 per cent in some weeks in June, August and September (Chart III.20). As at end-September, 2018, 23 of the 36 meteorological sub-divisions in the

country received normal rainfall, one sub-division received excess rainfall and 12 sub-divisions (covering 31 per cent of the meteorological sub-divisional area of the country) received deficient rainfall (Chart III.21). The lower production-weighted rainfall index¹⁰ (PRN) for rice, pulses, coarse cereals, oilseeds and cotton in 2018-19 than a year ago may have an adverse impact on eventual production outcomes (Charts III.22 a and b).



¹⁰ The All India production-weighted rainfall index (PRN) for a crop (total foodgrains) is constructed as a ratio of the weighted averages of state-wise actual rainfall and IMD normal rainfall, expressed as a percentage. The weights used are based on five year average shares of the state-wise crop (total foodgrains) production.

Chart III.23: Sowing Progress of Kharif Crops

Note: Sowing data for 2017-18 and 2018-19 are based on fourth and first advanced estimates, respectively.
Source: Ministry of Agriculture and Farmers' Welfare, Government of India.

At the commencement of the season, *kharif* sowing was adversely affected, *inter alia*, by the delay in the announcement of MSPs, decline in wholesale prices of major food items across *mandis* on account of bumper harvest and deficient rainfall in major *kharif* growing states such as Bihar, West Bengal, Jharkhand, Odisha and Uttar Pradesh. However, sowing recovered significantly by end-August with the announcement of MSPs and improvement in precipitation (Charts III.23a and b). The increase in MSP announced for *kharif* season 2018-19 ensures a return of at least 50 per cent over the cost of production (as measured by A2 plus FL) for all the crops. The highest percentage increase in MSP over the previous year is for ragi (52.5 per cent), followed by jowar hybrid (42.9 per cent), while the lowest increase is for tur (4.1 per cent) and urad (3.7 per cent).

Farmers' sowing decisions might have been influenced more by prevailing wholesale prices rather than the announcement of higher MSPs (Table III.6). For crops such as coarse cereals, pulses and cotton, sowing continues to lag behind in major producing states, despite normal rains – the prevailing wholesale prices for these crops persist below the MSPs. Sowing in oilseeds increased primarily due to farmers shifting away from pulses and cotton in search of higher returns as market prices of oilseeds have remained firm on policy support in the form of import restrictions. Farmers also seem to have

switched to soyabean as its wholesale price increased considerably in 2018 so far. Excessive rainfall in Kerala (cumulative rainfall being 23 per cent above LPA by end-September 2018) has adversely affected plantation crops (*viz.*, tea, coffee, rubber, pepper and

Table III.6: Minimum Support Prices for Kharif Season Crops

Crop	MSP (₹/ Quintal)			Growth Rate (Per cent)		Returns over Cost (A2 plus FL) (Per cent)	
	2016-17	2017-18	2018-19	2018-19 over 2017-18	2017-18 over 2016-17	2017-18	2018-19
Paddy common	1,470	1,550	1,750	12.90	5.44	38.8	50.1
Paddy (F)/ Grade 'A'	1,510	1,590	1,770	11.32	5.30	42.3	51.8
Jowar-Hybrid	1,625	1,700	2,430	42.94	4.62	9.3	50.1
Jowar-Maldandi	1,650	1,725	2,450	42.03	4.55	10.9	51.3
Bajra	1,330	1,425	1,950	36.84	7.14	50.2	96.9
Ragi	1,725	1,900	2,897	52.47	10.14	2.1	50.0
Maize	1,365	1,425	1,700	19.30	4.40	36.5	50.3
Tur (Arhar)	5,050	5,450	5,675	4.13	7.92	64.3	65.4
Moong	5,225	5,575	6,975	25.11	6.70	30.1	50.0
Urad	5,000	5,400	5,600	3.70	8.00	65.4	62.9
Groundnut	4,220	4,450	4,890	9.89	5.45	40.9	50.0
Sunflower Seed	3,950	4,100	5,388	31.41	3.80	17.8	50.0
Soyabean	2,775	3,050	3,399	11.44	9.91	43.8	50.0
Soyabean Yellow	2,775	3,050	3,399	11.44	9.91	43.8	50.0
Sesamum	5,000	5,300	6,249	17.91	6.00	30.3	50.0
Nigerseed	3,825	4,050	5,877	45.11	5.88	3.5	50.0
Cotton	3,860	4,020	5,150	28.11	4.15	22.7	50.0
Long Staple Cotton	4,160	4,320	5,450	26.16	3.85	31.9	58.8

Note: For explanation of A2 plus FL, Chapter II may be referred.

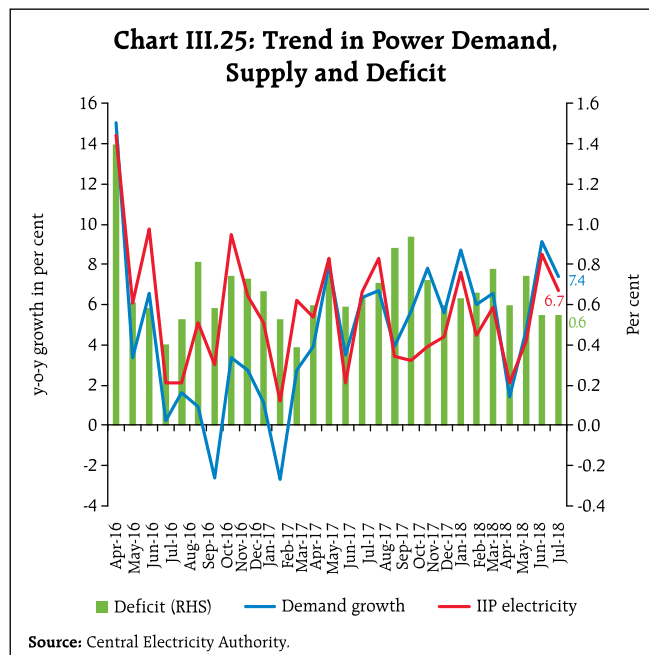
Source: Ministry of Agriculture and Farmers' Welfare, Government of India.

cardamom) in the state. Heavy rainfalls also impacted plantation of tea, coffee and rubber in Tamil Nadu, cotton crops in 11 districts of Telangana and paddy and cotton crops in Punjab and Haryana. These developments, along with below normal rainfall in Gujarat, Saurashtra and Kutch regions in Central India and the East and North-East parts of the country, may pose downside risks, even if only modest, to the outlook for agriculture. Nevertheless, the first advanced estimates of agricultural production for 2018-19 estimated total *khari* foodgrains production at 141.6 million tonnes, 0.6 per cent higher than last year.

Live storage in 91 reservoirs was nearly 117 per cent of last year's storage as on September 27, 2018 and 105 per cent of the decennial average, which augurs well for the coming *rabi* sowing season. Lower storage in western regions will, however, need to be monitored, going forward.

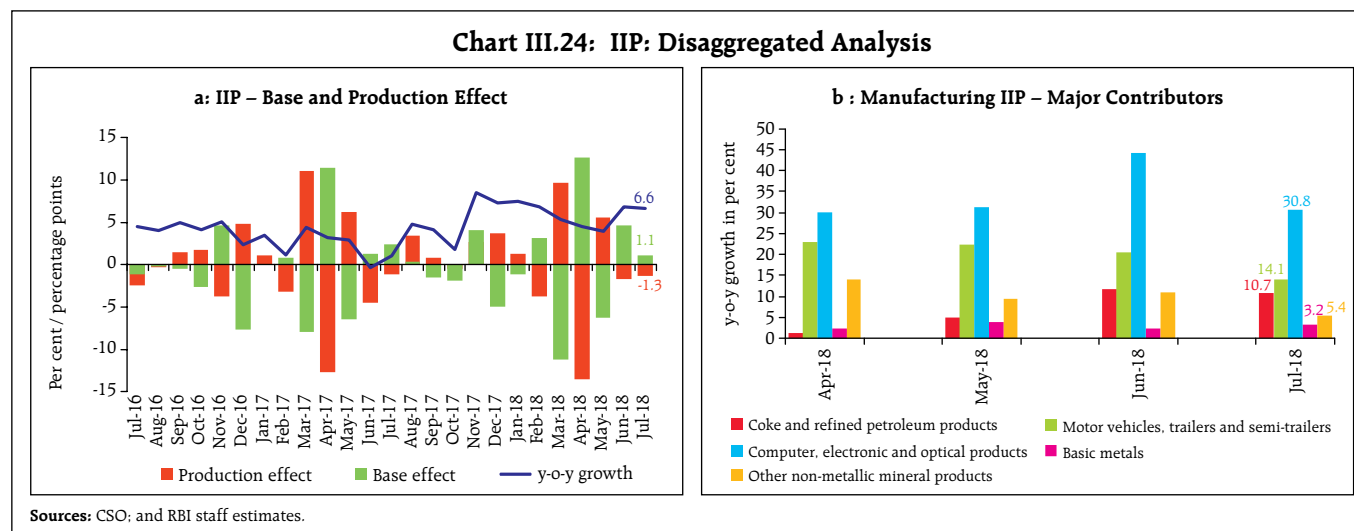
III.2.2 Industry

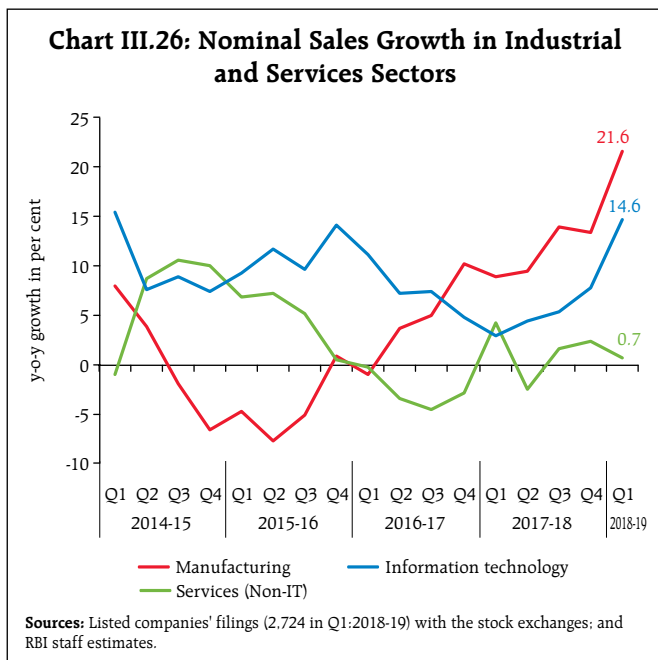
Industrial production turned broad-based during April-July, benefitting from base effect (Chart III.24a). Expansion of output occurred in 20 out of 23 manufacturing industry groups in July 2018. Petroleum products, motor vehicles, computer and electronic equipments, basic metals and other non-metallic mineral products emerged as key drivers during April-July 2018 (Chart III.24b). The index of



eight core industries (40.3 per cent weight in IIP) for April-August 2018 also shows healthy growth.

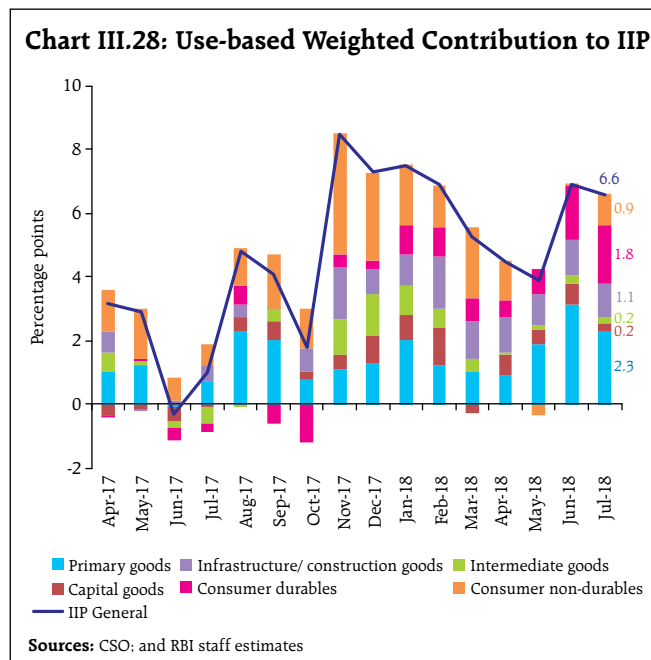
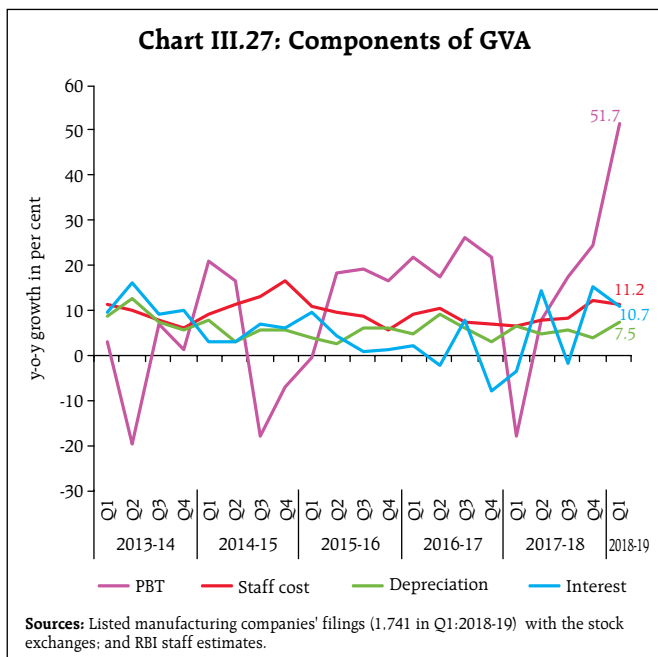
Electricity generation also gathered steam and supported industrial activity. A rise in power demand, especially from DISCOMs, coinciding with temporary shortfalls in the supply of energy from renewable sources, pushed up the demand for thermal power (Chart III.25). In response, shortages of coal in power plants are being addressed through improved supplies from Coal India Ltd., which has reduced the power deficit.





The sustained firming up of manufacturing activity was also reflected in the robust growth in nominal sales and profits before tax of listed non-government manufacturing companies in 2017-18 (Chart III.26). An analysis of 1,741 listed companies for Q1:2018-19 also attests to improvement in profitability of manufacturing firms (Chart III.27).

Based on the use-based classification, industrial production was driven by sustained acceleration in



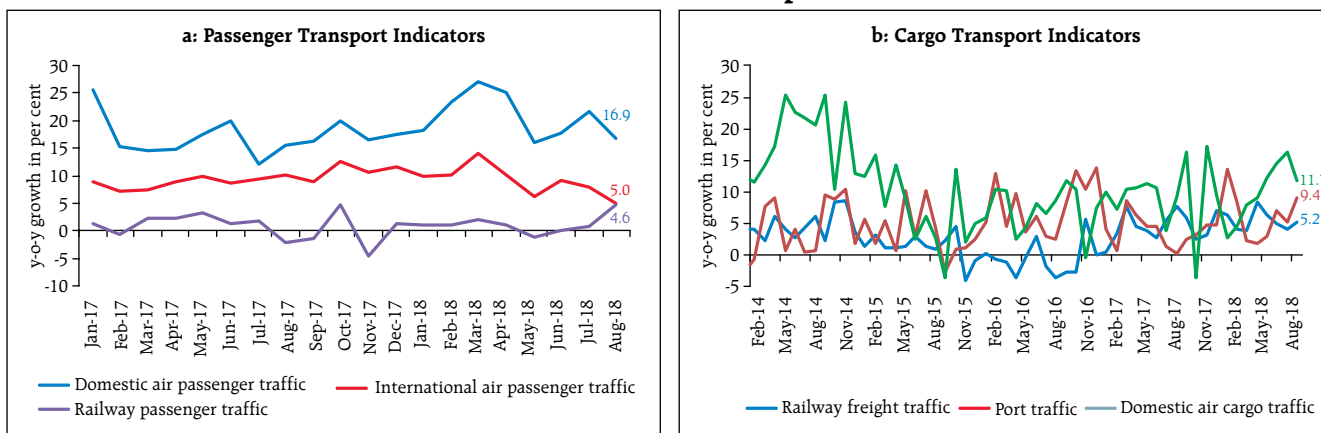
primary goods, infrastructure/construction goods, capital goods and consumer durables in Q1:2018-19 (Chart III.28). Increased production of diesel, LPG, fertilisers, mining produce and electricity helped push up the supply of primary goods. The production of steel and cement remained buoyant, underpinned by public sector infrastructure projects, including affordable housing, and a pick-up in sales and new launches of residential units. Consumer durables production is being buoyed by strong urban demand.

Overall business sentiment in the Indian manufacturing sector has remained broadly stable. The expectations based on business expectations index (BEI) improved to 115.0 for Q3:2018-19 (from 114.1 in Q2) in the 83rd round of the Reserve Bank's Industrial Outlook Survey (IOS), primarily driven by order books. The early indicators of assessment for Q2:2018-19 also point to optimism on demand conditions. The manufacturing purchasing managers' index (PMI) expanded for the fourteenth consecutive month in September, supported by higher levels of output, employment and new orders.

III.2.3 Services

Services sector activity moderated sequentially in Q1:2018-19. On the whole, however, services sector growth has remained resilient, supported by

Chart III.29: Performance of Transport Indicators



Sources: Society of Indian Automobile Manufacturers; Tractor Manufacturers Association; Ministry of Railways; Indian Ports Association; and Airports Authority of India.

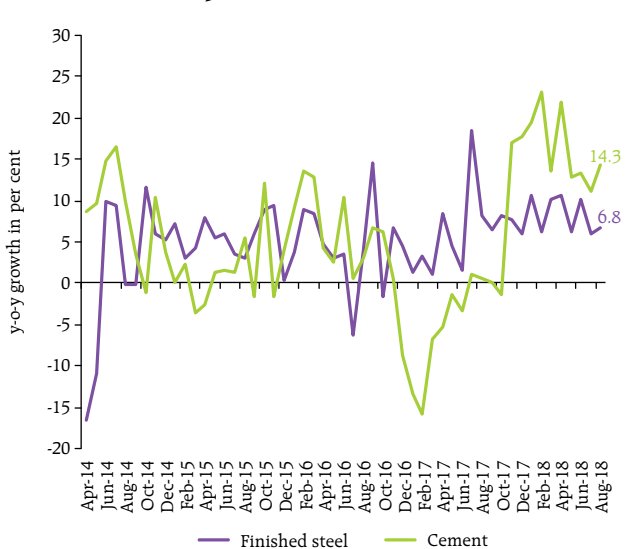
construction activity and PADO. A pick-up in real estate activity and bank credit reinforced activity in financial, real estate and professional services. In the transportation sub-sector, passenger traffic by rail and air moderated in Q1:2018-19 (Chart III.29a). Cargo transport indicators, however, accelerated (Chart III.29b). The services PMI moderated in August-September 2018 after touching a 21-month high in July (54.2).

The production of cement and consumption of steel – key indicators of construction activity – remained upbeat in April-August 2018 (Chart III.30), benefiting

from robust domestic demand in the infrastructure and construction sectors, in part, due to the impetus from the *Pradhan Mantri Awas Yojana* (PMAY). A moderation in domestic steel prices is likely to strengthen steel consumption going forward.

PADO growth moderated, reflecting subdued revenue expenditure (net of interest payments and subsidies) of the Union Government. The growth of financial, real estate and professional services accelerated sequentially in Q1:2018-19, underpinned by steady acceleration of bank credit and deposit growth (Chart III.31). Real estate activity seems to be

Chart III.30: Construction Indicators



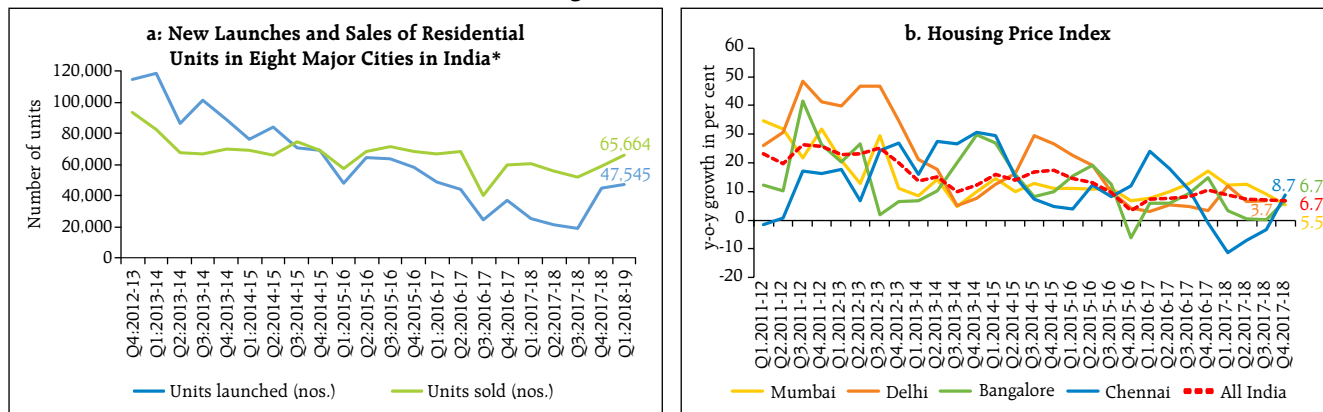
Sources: CSO; and Joint Plant Committee.

Chart III.31: Growth of Financial Services



Source: RBI.

Chart III.32: Housing Sector – Launches, Sales and Prices



*: Based on data for eight cities, viz., Mumbai, NCR, Bengaluru, Pune, Chennai, Hyderabad, Kolkata and Ahmedabad. Sources: Knight Frank Research; and RBI.

recovering as the number of housing units launched and sales both improved sequentially in Q1:2018-19 (Chart III.32a). Nevertheless, the overhang of unsold inventory and weaker demand conditions continued to have a moderating influence on residential home prices (Chart III.32b).

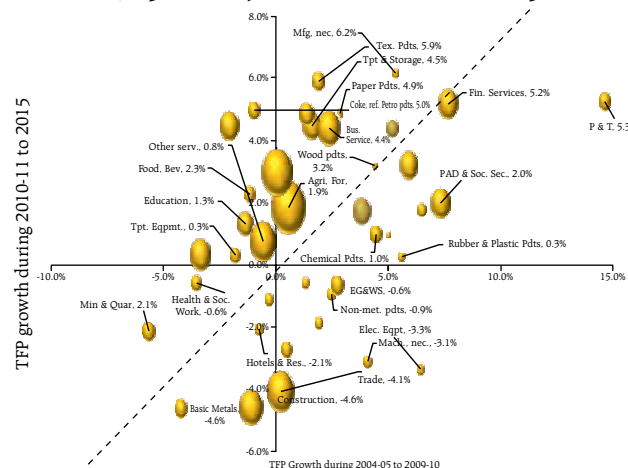
III.3 Output Gap

Potential output tends to be driven by the supply of labour and capital and the growth of total factor productivity (TFP).¹¹ Productivity is a key determinant of potential output. The KLEMS¹² database suggests that TFP growth in various sub-sectors of industry and services, with relatively higher contributions to overall GVA in the Indian economy, has improved in the post-global financial crisis period, *i.e.*, 2010-11 to 2015-16, *vis-à-vis* 2004-05 to 2009-10 (Chart III.33).

Output gap estimates (*i.e.*, the deviation of actual output from its potential level expressed as ratio of potential output) provide a summary indicator of demand-supply conditions. Both potential output and the output gap are unobservable and their estimates can be sensitive to the method of estimation. Hence, a variety of alternative approaches – univariate filters such as the Hodrick-Prescott filter; the Baxter-King filter; the Christiano-Fitzgerald filter; and multivariate

Kalman filters (MVKF), which can take into account inflation or financial conditions, have been employed for drawing robust inferences on the stage of the business cycle.¹³ The composite estimate of the output gap, obtained by using principal components analysis on the alternative estimates, suggests that the output gap has virtually closed in Q1:2018-19 (Chart III.34a). It reflects the acceleration in the pace of domestic demand from the second quarter of 2017-18, with real GDP growth increasing from 5.6 per cent in Q1:2017-18 to 8.2 per cent in Q1:2018-19.

Chart III.33: Total Factor Productivity Growth in Industry and Services Sub-sectors during 2004-05 to 2009-10 and 2010-11 to 2015-16



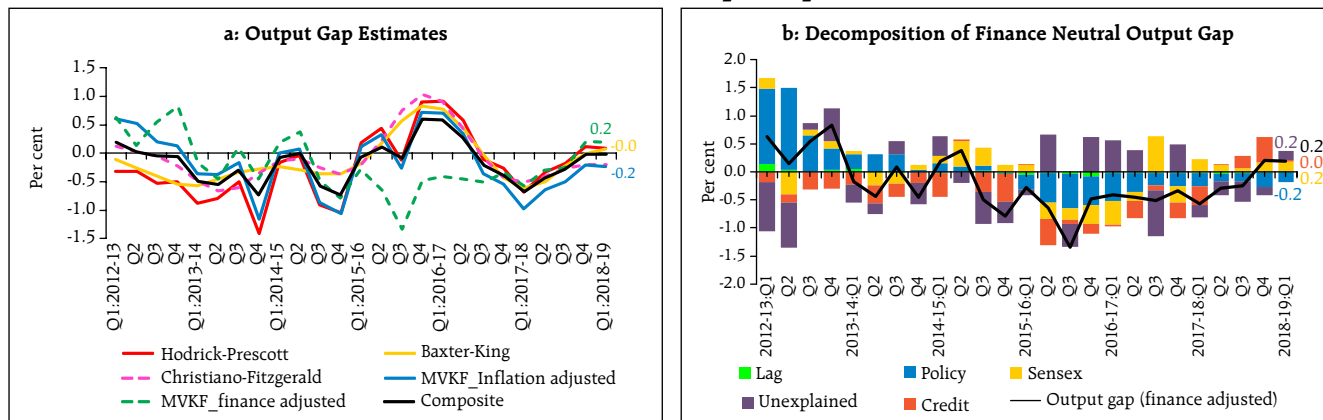
Note: Size of the bubble represents the weight of a particular sub-sector in total GVA in the economy. Source: KLEMS Database, RBI.

¹¹ Total factor productivity is attributed to that part of output growth, which cannot be explained by growth in inputs (*i.e.*, labour and capital).

¹² KLEMS is an acronym for capital (K), labour (L), energy (E), materials (M), and services (S).

¹³ Rath, Deba Prasad; Pratik Mitra; and Joice John (2018), Finance-Neutral Output Gap: Empirical Estimates for India, Mint Street Memo No. 14, RBI.

Chart III.34: Output Gap



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

The output gap dynamics are also consistent with the uptick in capacity utilisation (seasonally adjusted) in the manufacturing sector. The finance-adjusted output gap remained marginally positive in Q1:2018-19, driven by growth in overall credit and equity prices (Chart III.34b).

III.4 Conclusion

The recovery in economic activity, which began in Q2:2017-18, seems to be robust. Consumption is expected to remain resilient, buoyed by rising income levels and staggered implementation of the 7th Central Pay Commission (CPC) award at the states' level in the urban areas. Rural consumption is likely to remain strong in view of the sizeable hike in MSPs and debt waivers by the states. The record agricultural production achieved in recent years, is expected to be maintained on the back of a hike in MSPs of *kharif* crops, normal monsoon rains in most of the *kharif*

crop growing regions of the country and comfortable water reservoir storage. Easier supply conditions in the agrarian economy support backward and forward linkages and thereby brighten the prospects for the manufacturing and services sectors. Upbeat construction activity, fading away of the slack in banking sector financial intermediation activities, and higher public expenditure in an election year, suggest that stability of services sector growth would be maintained.

A more durable momentum in investment activity holds the key to sustaining the Indian economy on the higher growth path that has become evident in the last two quarters. Rising capacity utilisation and improving credit offtake bode well for investment gaining traction. The deteriorating global trade and geo-political environment are, however, negative risks to the investment outlook.

IV. Financial Markets and Liquidity Conditions

Domestic financial market segments exhibited divergent movements in the first half of 2018-19. Money markets experienced liquidity swings while the government securities and foreign exchange market segments were impacted by global spillovers. The stock market scaled new highs on buying support from domestic mutual funds. In the credit market, bank lending gained traction amidst some tightening of financing conditions.

Global financial markets were unsettled during the first half of the year by bouts of turbulence stirred up by the collision of the ongoing normalisation of monetary policy, elevated and volatile crude oil prices, geopolitical tensions and country-specific stresses. While equity markets in advanced economies (AEs) remained buoyant and undeterred by rising interest rates in the United States (US), yield curves in bond markets continued to flatten as term spreads declined. The US dollar strengthened persistently up to mid-August, leading to across-the-board depreciation of the currencies of emerging market economies (EMEs), with marked declines in some of them. As investors turned risk-averse towards EMEs as an asset class, capital outflows became pronounced, leading to corrections in their equity markets, hardening of bond yields, and increase in credit spreads. For some EMEs, country-specific factors accentuated the decline in asset prices and exodus of capital flows.

Different segments of the domestic financial market were impacted divergently by global spillovers and local developments. Overnight money markets remained immune and interest rates traded below the policy repo rate, notwithstanding oscillating liquidity conditions and two policy rate hikes in June and August. Interest rates on Treasury Bills (T-Bills), on the other hand, hardened synchronously with the spectrum of gilt yields up to the longer end, reflecting both global developments and perceptions of an oversupply of government paper. Yields on

corporate bonds tracked those on government bonds. Equity markets were driven by rallies to new highs as ebullient domestic institutional investors more than compensated the sell-off by foreign portfolio investors (FPIs), though there have been recent signs of a broad-based correction. The exchange rate of the rupee came under sporadic bouts of pressure due to capital outflows by FPIs and widening of the trade deficit. Overall, the depreciation of the Indian Rupee (INR) was "middle of the pack" in comparison with EME currency peers. Credit flows from banks gathered momentum and became broad-based even as several banks increased their lending rates to reflect the strengthening demand for bank credit and moderation of surplus liquidity in the system.

IV.1 Financial Markets

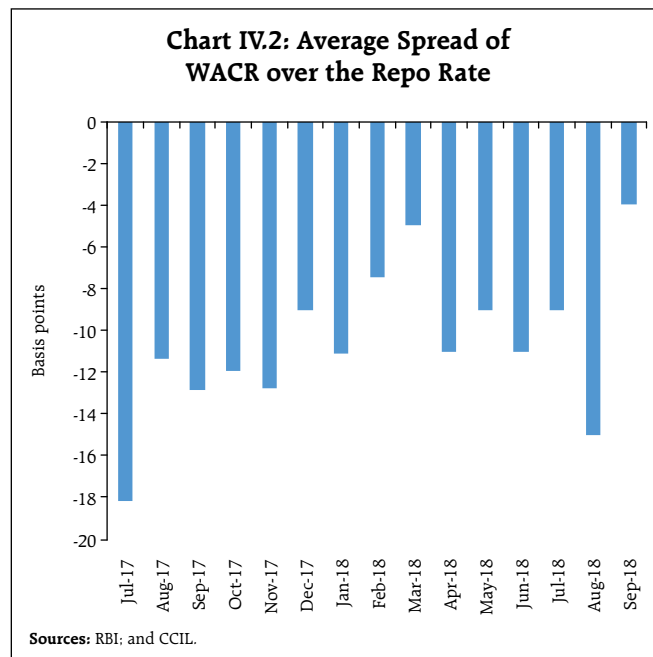
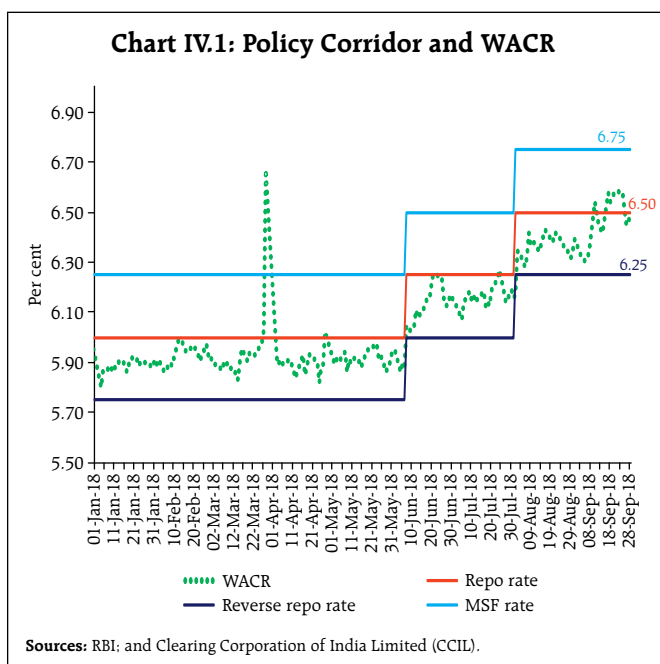
As alluded to above, there was a marked differentiation in the drivers of activity in the various constituents of the domestic financial market continuum. While the foreign exchange and bond segments were affected by the adverse mix of global developments, equity markets were a notable outlier, cushioned by domestic bullishness. Likewise, the money and credit markets were unaffected by global factors, the former insulated by persisting *albeit* shrinking systemic surplus liquidity and the latter by a steady revival of domestic demand.

IV.1.1 Money Market: Systemic liquidity underwent alternating phases in H1:2018-19. Substantial surpluses in April and May gave way to deficits for a brief period from mid-June to July 2018 due to advance tax outflows and forex operations of the Reserve Bank. Surplus conditions returned, however, in the first half of August due to increase in government spending, although from August 21 onwards, indirect tax payments whittled down excess liquidity for a brief period. Surplus conditions returned in the first ten days of September before tightening in the second half on account of advance tax outflows. Average daily net liquidity absorbed through the liquidity adjustment facility (LAF) turned from ₹496 billion in April to a net injection of ₹107 billion in July before

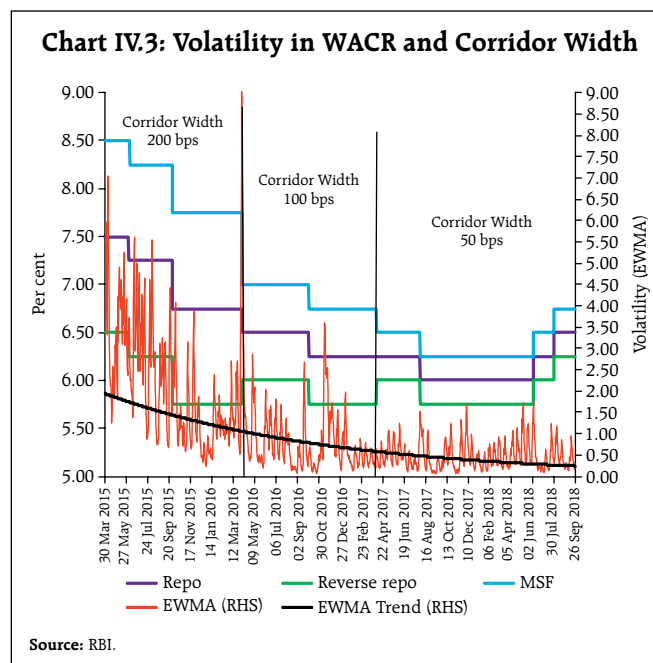
switching back into net absorption of ₹30 billion in August. The liquidity deficit in the second half of September resulted in daily net injection of liquidity through the LAF to the tune of ₹406 billion. The weighted average call rate (WACR) traded generally below the policy repo rate (Chart IV.1).

The negative spread of the WACR over the repo rate increased from 11 bps in April to 15 bps in August (notwithstanding some intermittent moderation in May and July) before moderating to 4 bps in September. Overall, the WACR, on average, remained 10 bps below the policy rate in H1: 2018-19 (Chart IV.2).

In money markets, both rates and volumes have adjusted to institutional and policy changes introduced by the Reserve Bank of India (RBI). For instance, the width of the policy corridor, which was 200 bps in May 2011, was progressively reduced to 50 bps by April 2017 as a part of ongoing refinements of the operating procedure of monetary policy. Empirical research and international evidence suggest that the width of the corridor is positively related to volatility – a wider corridor is associated with higher volatility in the inter-bank market and *vice versa* (Bindseil and Jablecki, 2011).¹

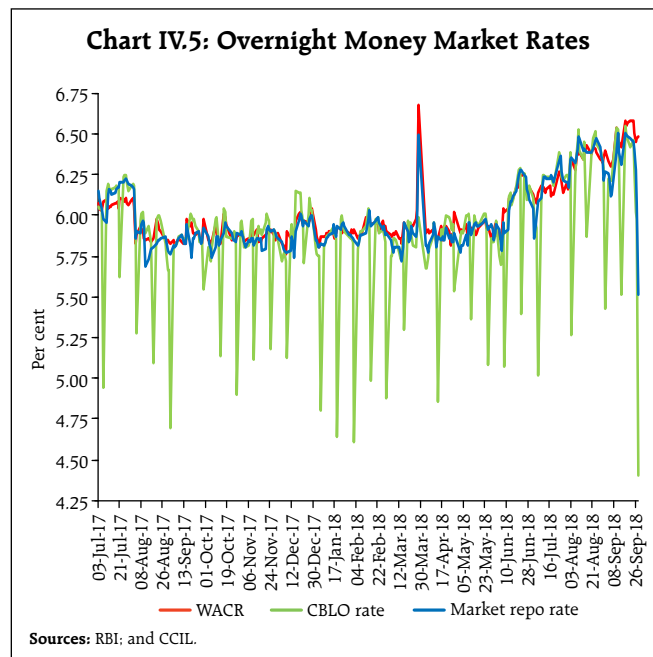
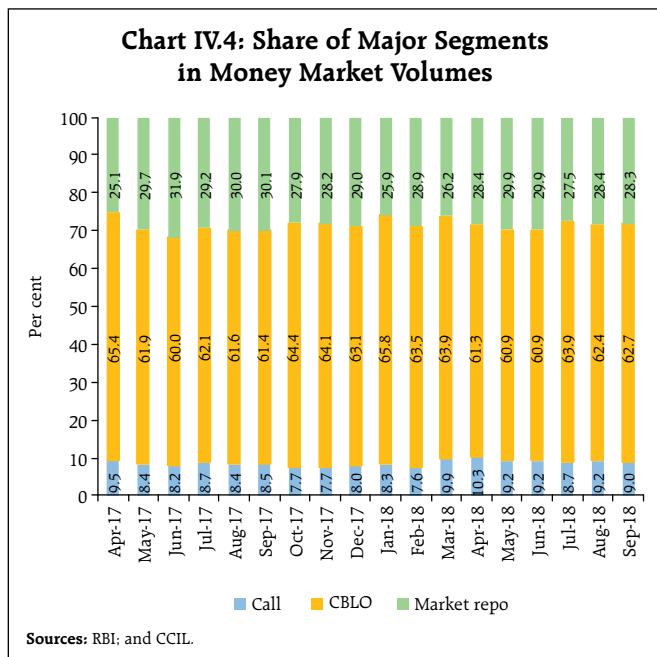


In India, the narrowing of the corridor has moderated volatility – measured by the exponential weighted moving average (EWMA) of the inter-bank call rate – significantly, corroborating the cross-country experience (Chart IV.3).²



¹ Bindseil, U. and J. Jablecki (2011), "The Optimal Width of the Central Bank Standing Facilities Corridor and Banks' day-to-day Liquidity Management", European Central Bank Working Paper No. 1350, June.

² As a measure of volatility, the EWMA is an improvement over simple variance as it assigns greater weight to more recent observations. Thus, EWMA expresses volatility as a weighted average of past volatility where the weights are higher for more recent observations.



This has, however, not produced any significant adverse impact on volumes in the uncollateralised segment – the share of the call money market in the total inter-bank overnight market turnover remained broadly unchanged at less than 10 per cent (Chart IV.4).

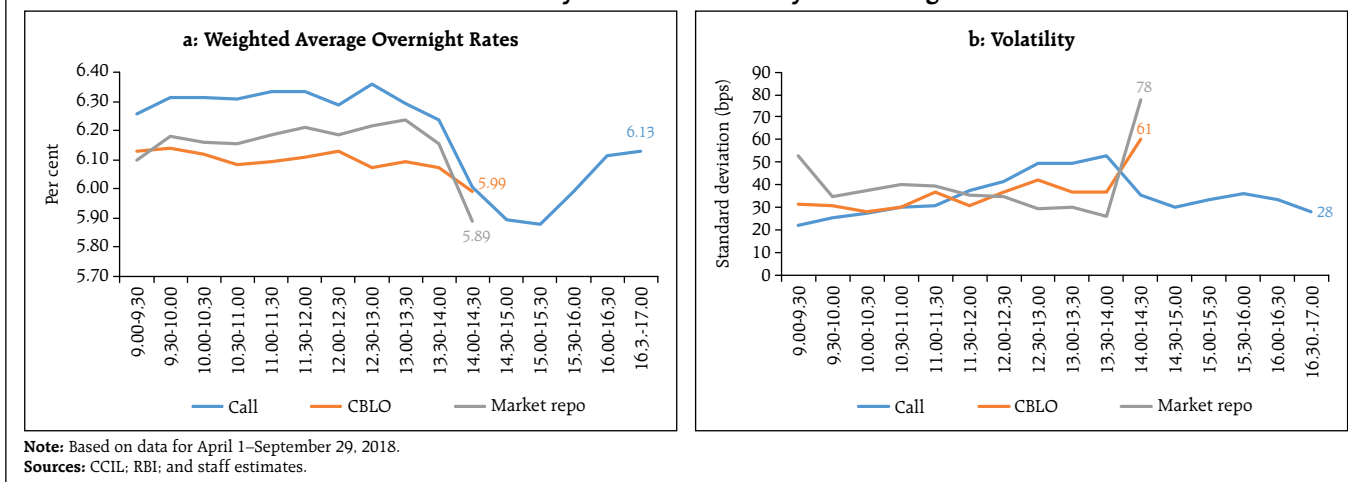
In terms of market microstructure, private banks and primary dealers (PDs) are the major borrowers in the overnight call money market, while co-operative banks and public sector banks are the major lenders. In the collateralised borrowing and lending obligations (CBLO) segment (which constitutes more than 60 per cent of the overnight market), banks are usually borrowers, while mutual funds (MFs) are major lenders. The share of MFs in CBLO lending, which had gone up to 80 per cent in March 2017 in the wake of demonetisation, gradually ebbed and stabilised at an average share of 64 per cent in H1:2018-19. In the collateralised market repo segment (which constitutes about 30 per cent of the overall overnight market turnover), MFs are major lenders, followed by foreign banks. On the other hand, PDs are the largest borrowers in this market, followed by foreign banks. During H1:2018-19, interest rates in both the collateralised segments, *i.e.*, CBLO and market repo

were, on an average, below the WACR by ten bps and three bps, respectively (Chart IV.5).

Turnover in the three overnight segments undergoes marked intra-day variations. Foreign banks and PDs – major borrowers in the market repo segment – meet around 80 per cent of their funding requirements for government securities (G-sec) trades during the first hour *i.e.*, 9:00-10:00 am, even though the market is open up to 2:30 pm (T+0 settlement). The concentration of trading activity in the first hour implies thin trading for the rest of the day, which increases intra-day volatility and spillovers on to other overnight market segments. Transactions of MFs in the CBLO segment are allowed to be routed through designated banks within banking hours (generally up to 2.30 pm) in order to provide adequate time for settlement at designated settlement banks; trading becomes thin thereafter. Consequently, demand spills over to the uncollateralised call money segment – the only active segment in late trading hours – often resulting in spikes in call rates.

Overnight interest rates in all the three segments trade at elevated levels in the early hours as most market participants rush to bridge liquidity

Chart IV.6: Intra-day Rate and Volatility of Overnight Rates



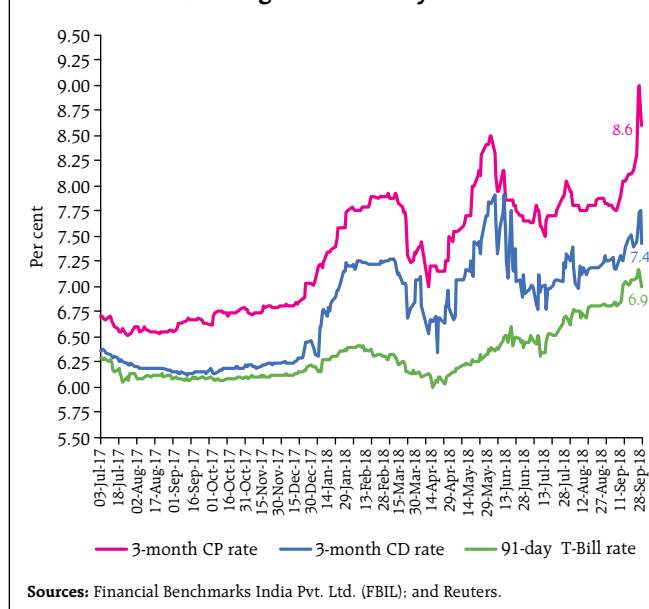
mismatches. Competitive trading in the morning hours narrows interest rate differentials across segments (Chart IV.6a). Volatility in call and the CBLO rates is also the lowest in the early hours (Chart IV.6b). Subsequently, as volumes dip and volatility rises, interest rates decline, though at different speeds, reflecting segment-specific factors. For instance, activity in the call money market in the afternoon is largely driven by co-operative banks, which typically lend at lower rates than the prevailing call rate, leading to higher volatility.

Interest rates on longer tenor money market instruments such as certificates of deposit (CDs), commercial papers (CPs) and 91-day Treasury Bills (T-Bills) moved disparately during H1:2018-19. Interest rates on CDs (3-month maturity) moderated at the beginning of April due to liquidity conditions turning into surplus with the unwinding of large government cash balances. However, they hardened until the first week of June, *i.e.*, from 6.80 per cent at end-March 2018 to 7.91 per cent as on June 5, 2018 (Chart IV.7). In its June policy announcement, when the RBI provided a deeper carve-out from the statutory liquidity ratio (SLR) to meet the liquidity coverage ratio (LCR), 3-month CD rates softened by about 37 bps as banks' requirements of bulk deposits waned. As surplus liquidity shrank in June and turned into

deficit in July, fresh issuances of CDs also increased to ₹1,988 billion during H1 (up to September 14, 2018) – as compared with ₹1,420 billion in H1:2017-18 – accompanied by higher rates. After the policy rate hike in August 2018, the 3-month CD rate inched up by about 10 bps.

Movements in CP rates were similar, but they traded above the CD rates due to strong appetite for CPs as credit substitutes in non-financial corporations for working capital needs, in view of the relatively

Chart IV.7: Long Term Money Market Rates



costlier bank loans, and as a way of keeping marginal funding costs low in non-bank financial companies. Amount of CP issuance surged and interest rates on CPs hardened through H1:2018-19. In particular, issuances of CPs increased from ₹9,316 billion in H1:2017-18 to ₹12,456 billion in H1:2018-19 (up to September 15, 2018). After the June policy announcement, 3-month CP rates declined by about 30 bps tracking the decline in CD rates. Similarly, the 3-month CP rate declined by about 15 bps after the August policy announcement (Chart IV.7).

The 91-day T-Bill rate was elevated through Q1 and following the increase in the policy rate in June, it edged up by two bps. After the rate hike in August 2018, it inched up further by about four bps.

The Infrastructure Leasing and Financial Services Limited (IL&FS), which is a systemically important non-deposit accepting core investment company (CIC-ND-SI) registered with the Reserve Bank of India, is currently owned by various institutional shareholders, including Life Insurance Corporation of India (LIC), ORIX Corporation Japan, Abu Dhabi Investment Authority, IL&FS Employees Welfare Trust, Housing Development Finance Corporation, Central Bank of India and State Bank of India. The

company has witnessed a series of rating downgrades since August 2018 and a succession of defaults on its CPs, non-convertible debentures (NCDs) and bank loans.

Consequent to the default by IL&FS on its obligations on September 14, 2018, the weighted average discount rate on CPs increased in general, and that for non banking financial companies (NBFCs), in particular. In the secondary CP market, the 3-month CP rate jumped from around 7.8 per cent at the beginning of September to 8.15 per cent on September 21, 2018, triggered also by sales of NCDs at steep discounts by an individual mutual fund on September 21, 2018, and further to 9.0 per cent on September 26, 2018. The RBI and the Securities and Exchange Board of India (SEBI) issued press releases on September 23, 2018 indicating that they are closely monitoring recent developments in financial markets and are ready to take appropriate actions, if necessary. Yields softened by 40 bps by end-September.

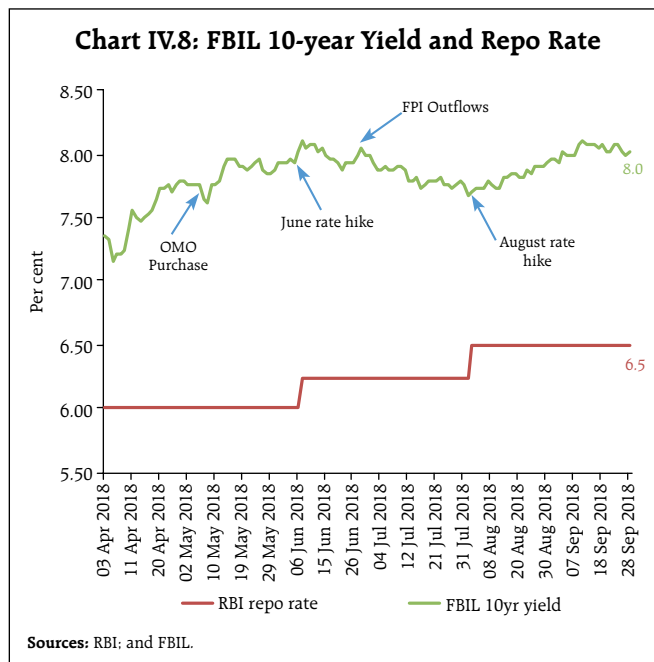
Based on the assessment of prevailing liquidity conditions, liquidity needs going forward and the expansion in currency in circulation, the RBI has taken several measures to inject liquidity into the system in the second-half of September (Box IV.1).

Box IV.1: Policy Measures by the Reserve Bank of India since mid-September 2018

Date /Month	Liquidity Measures
September 19 and 27, 2018	The RBI conducted two back-to-back open market operation (OMO) purchase of government securities for an aggregate amount of ₹100 billion each on September 19 and September 27, 2018.
September 2018	The RBI conducted several variable rate repo of longer tenors under the LAF during September 2018 in addition to the regular 14-day variable rate repos in order to provide a liberal infusion of liquidity.
September 27, 2018	The RBI decided to permit banks with effect from October 1, 2018, to reckon government securities held by them up to another 2 per cent of their net demand and time liabilities (NDTL), under the facility to avail liquidity for liquidity coverage ratio (FALLCR) within the mandatory SLR requirement, as Level 1 high-quality liquid assets (HQLA) for computing their LCR. Hence, the carve-out from SLR, under FALLCR will now be 13 per cent, taking the total carve out from SLR available to banks to 15 per cent of their NDTL. The RBI clarified that there was ample liquidity surplus in the system and that, going forward, it would stand ready to meet the durable liquidity requirements of the system through various available instruments depending on its dynamic assessment of the evolving liquidity and market conditions.
October 01, 2018	The RBI decided to conduct purchase of government securities under OMOs for an aggregate amount of ₹360 billion in the month of October 2018. The auctions would be conducted during the 2nd, 3rd and 4th week of October. The RBI retains the flexibility to change the amount, depending on the evolving liquidity and market conditions.

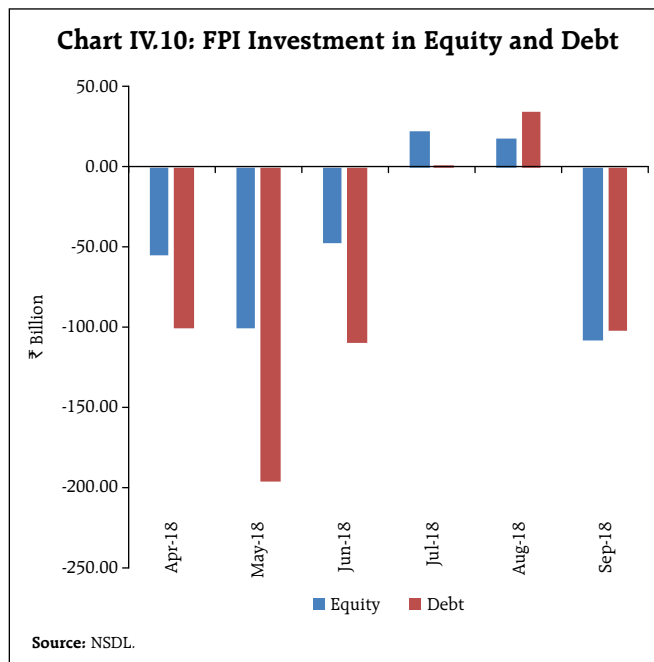
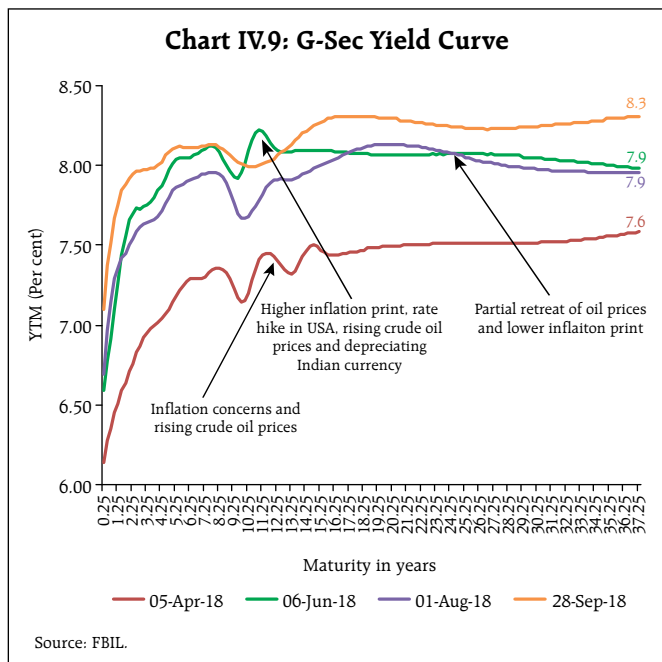
IV.1.2 Government Securities (G-sec) Market: G-sec yields eased at the beginning of 2018-19, with market sentiment buoyed by several positive developments, viz., (i) announcement of reduced market borrowings in the Union Budget along with the decision by the central government not to front load issuances in the first half of 2018-19; (ii) the RBI allowing banks to spread out mark-to-market (MTM) losses incurred during Q3:2017-18 and Q4 of 2017-18, over four ensuing quarters; (iii) no change in the repo rate by the Monetary Policy Committee (MPC) in the April 2018 policy; and (iv) a downward revision in the inflation forecast for H1:2018-19. The softening of yields by 16 bps, however, proved transitory and they hardened by 44 bps in end-April on account of several factors such as (i) the release of larger than expected borrowing calendar for state development loans (SDL); (ii) rising international crude oil prices; (iii) inflation concerns due to the revised formula for minimum support price (MSP) as announced in the Union Budget 2018-19; (iv) depreciation of the rupee; (v) rising trade protectionism; and (vi) MPC minutes which flagged upside risks to inflation.

Yields softened by 19 bps in the first week of May after the announcement of OMOs by the RBI and the decision to lift the three-year maturity cap on foreign portfolio investment (FPI) along with an increase in the overall FPI limit. Yields hardened again, however, by 31 bps in the remaining part of May on account of several factors such as (i) the firming up of US treasury yields to 3.0 per cent (first time since January 2014); (ii) the unrelenting rise in global crude oil prices breaking through the three and a half year peak; (iii) a higher than expected April CPI inflation print; and (iv) concerns on the pace of US Fed rate hikes. In June, the sentiment was initially boosted by higher than expected gross domestic product (GDP) growth in the January-March print. Thereafter, G-sec yields increased in sync with the repo rate hike of 25 bps. Bearishness set in on rising global crude oil prices and a depreciating Indian Rupee (INR), which posed risks to the domestic inflation outlook. The benchmark 10-year G-sec yield closed at 7.90 per



cent on June 29, 2018, with overall benchmark yields rising by 57 bps during Q1:2018-19.

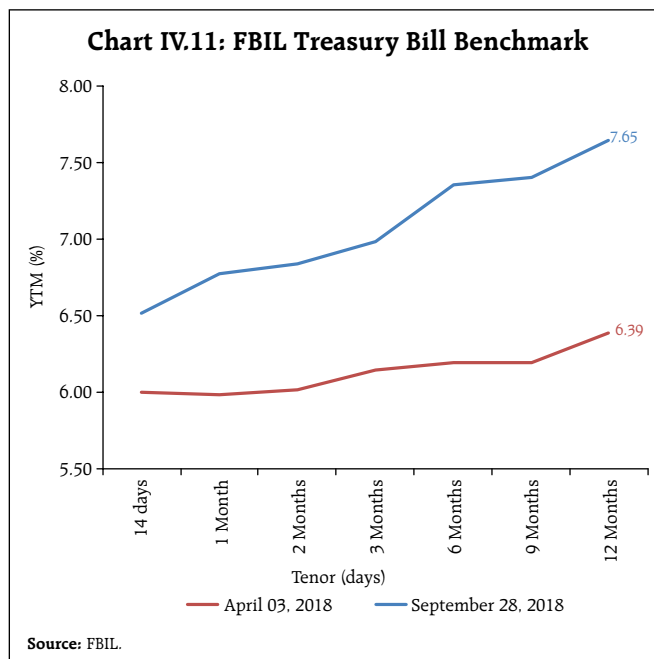
The G-sec market traded with a softening bias up to August 21, 2018, reflecting the easing of crude oil prices on expectation of increased supplies, lower than expected June inflation print and the announcement of OMO purchases. Yields, however, hardened in end-August tracking the rebound in crude oil prices and depreciation of the INR. The 10-year benchmark yield fell to 7.77 per cent in July and moderated further in the first week of August, driven down by a decline in crude prices. Notably, the 10-year benchmark yield fell by seven bps on August 1 on positive global cues, despite the rate hike by the RBI on the same day. In sync with the depreciation of the INR, however, yields peaked to a high of 8.11 per cent on September 11, 2018. Despite high volatility witnessed during the month which tracked the movements in crude oil prices and INR, yields softened towards the month end and closed at 8 per cent on September 28, 2018, reflecting the measures taken for containing INR volatility along with expectations of lower market borrowings by the central government in H2:2018-19 (Chart IV.8).



The yield curve has undergone level shifts in H1:2018-19 in response to global spillovers as well as domestic factors such as near-term inflation outlook and monetary policy measures (Chart IV.9). The rate hike of June resulted in a parallel upward shift in the yield curve, especially in the 2-year to 16-year segment, while the August rate hike induced a downward shift, in line with softening crude oil prices.

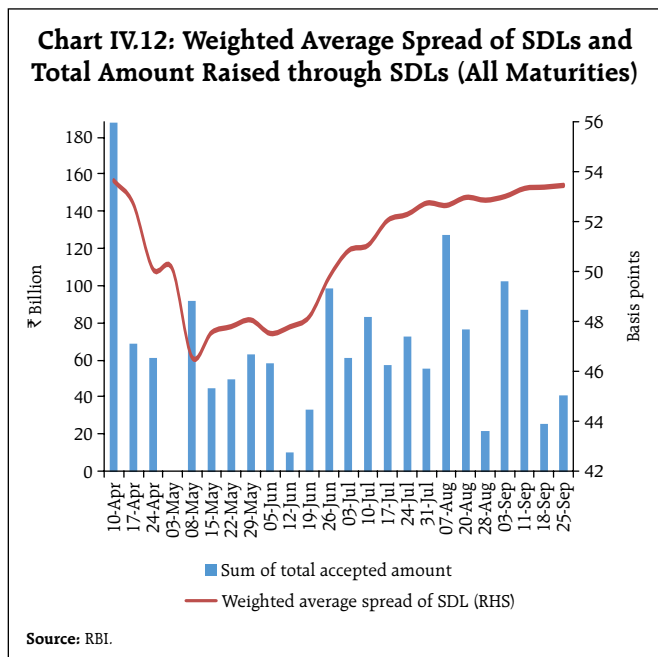
due to redemption pressure arising out of past issuances. The weighted average spread of SDLs' cut-off over the corresponding tenor G-sec yield moderated to 53 bps in H1:2018-19 from 63 bps in H1:2017-18 (Chart IV.12). The average inter-state spread on securities of 10-year tenor during H1:2018-19 was at four bps, lower than nine bps in H1:2017-18. The maximum inter-state spread peaked at 23 bps on April 10, 2018.

FPIs remained net sellers in the G-sec market during the most part of H1:2018-19, but turned net buyers in July and August (Chart IV.10). FPIs made net sales of ₹274.17 billion in the G-sec segment, including ₹30.88 billion in state development loans (SDLs).



At the shorter end of the primary market segment, yields on treasury bills tracked the benchmark 10-year G-sec yield and hardened during H1, also reflecting the increase in the policy rate by 25 bps each in June and August, concerns on liquidity, and depreciation pressure on the INR (Chart IV.11).

At the longer end, the issuance of SDLs was moderate during H1:2018-19. State government market borrowings, however, are expected to go up in H2



IV.1.3 Corporate Bond Market: Corporate bond yields have largely tracked G-sec yields (Chart IV.13a). Interest rates on AAA 5-year corporate bonds hardened significantly by 81 basis points to 8.78 per cent in Q1: 2018-19 and further by 8 basis points to 8.86 per cent in Q2. The yield spread of 5-year AAA corporate bonds over 5-year G-secs increased sharply by 21 basis points during H1:2018-19, reflecting perceptions of heightened credit risk, which was also corroborated by higher credit default swap (CDS)

spreads on State Bank of India and ICICI Bank papers in an environment of rising global uncertainty.

Average daily turnover in the corporate bond market declined marginally to ₹71.3 billion during H1:2018-19 from ₹73.0 billion during the corresponding period of the previous year. The surge in bond yields induced corporates to shift to bank credit for meeting their funding requirements. Consequently, resource mobilisation through issuances of corporate bonds in the primary market declined by 31.3 per cent to ₹1,906 billion during April-August 2018 from ₹2,773 billion during the corresponding period of the previous year (Chart IV.13b). The bulk of resource mobilisation continued to favour the private placement route – 89 per cent of the total mobilisation from the corporate bond market. Investments by FPIs in corporate bonds declined to ₹2.01 trillion at end-September 2018 from ₹2.24 trillion at end-March 2018. Consequently, FPIs' utilisation of the approved limit for investment in corporate bonds declined sharply to 75.5 per cent at end-September 2018 from 91.9 per cent at end-March 2018.

IV.1.4 Stock Market: Exuberance marked the movements in the equity market during the first five months of H1:2018-19, with the BSE Sensex rising sharply to touch a high of 38,897 at close on August 28, 2018 before moderating to 36,227 at end-September

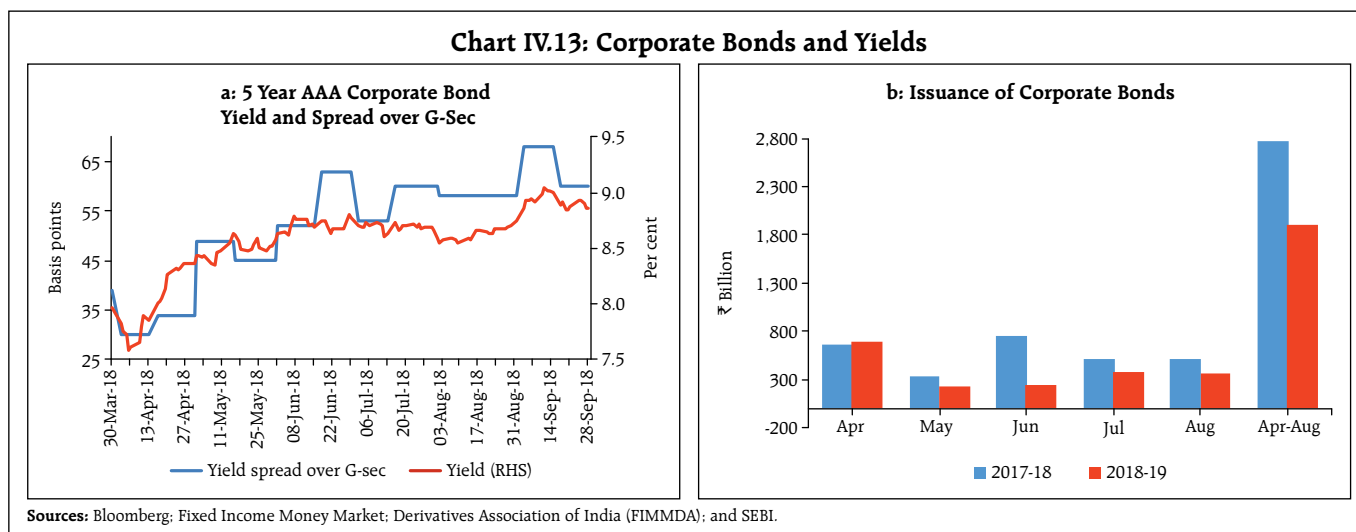
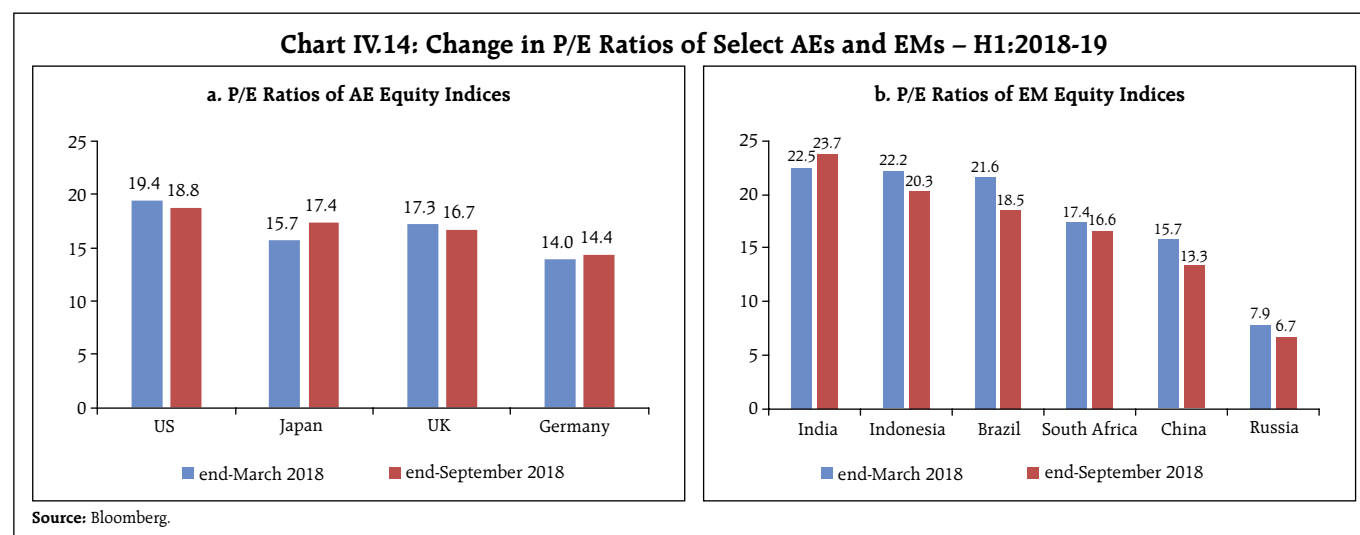


Chart IV.14: Change in P/E Ratios of Select AEs and EMs – H1:2018-19

2018, but still registering an increase of 9.9 per cent during H1:2018-19. The Indian equity market generally remained resilient in the face of sell-offs in many emerging market (EM) stocks, with the MSCI-EME index³ declining by 10.5 per cent during the period. The price earnings (P/E) ratio of Indian equity, which is an indicator of stock market valuation, has generally remained above the P/E ratios of other EM and AE stocks, indicating that investors are willing to pay a higher price for Indian stocks on higher growth expectations or anticipation of continued domestic inflows into mutual fund investments in equities. The P/E ratio of Sensex increased to 23.7 at end-September 2018 from 22.5 at end-March 2018, which was in sharp contrast to a decline in the P/E ratio in the case of other EM indices (Chart IV.14a and b).

The rally in the Indian equity market till mid-July 2018 was primarily restricted to stocks of a few blue-chip companies. This was indicative of investors' preference for quality stocks in times of heightened global uncertainty. During the period mid-July 2018 to end-August 2018, however, the rally in the equity market became more broad-based, indicative of the widening of buying interest. The equity market witnessed significant correction in September 2018 with the broader indices, *viz.*, BSE MidCap and BSE

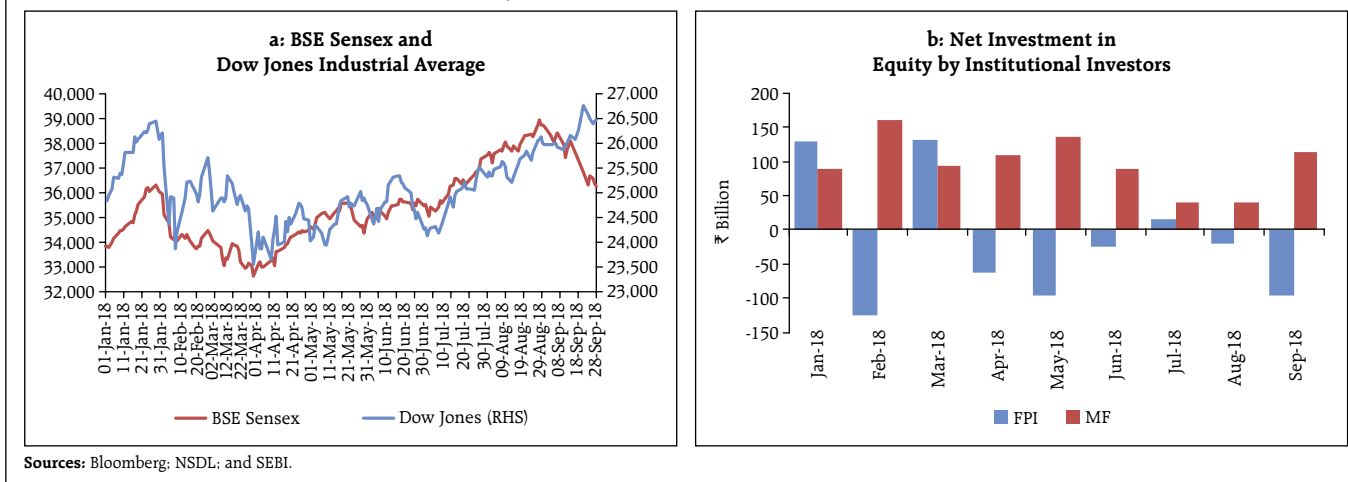
SmallCap, declining more sharply than the BSE Sensex. Overall, the BSE MidCap index and the BSE SmallCap index declined by 7.5 per cent and 15.1 per cent, respectively, during H1:2018-19.

After a sharp correction during February and March 2018, market sentiment turned positive in Q1:2018-19, with the BSE Sensex increasing sharply by 7.4 per cent, mainly on account of a lower-than-expected market borrowing programme of the Centre for H1:2018-19, better than expected corporate earnings performance in Q4:2017-18, positive economic news releases such as buoyant goods and services tax (GST) collections and higher auto sales, and sustained buying by MFs. The sharp rally in April was followed by some correction in the second half of May 2018 on uncertainty relating to the election outcome in Karnataka and trade war concerns. The market moved sideways in June 2018 on continuing trade frictions, surge in crude oil prices and interest rate hike by the US Fed on June 13, 2018, along with indications of two more hikes by the end of 2018 (Chart IV.15a).

After this brief interlude, the rally in the equity market resumed during the first two months of Q2: 2018-19 with the BSE Sensex increasing sharply by 9.1 per cent during July-August 2018, mainly on the back of domestic factors such as better corporate

³ Morgan Stanley Capital International (MSCI) Emerging Markets Index.

Chart IV.15: Stock Market Indices and Investment

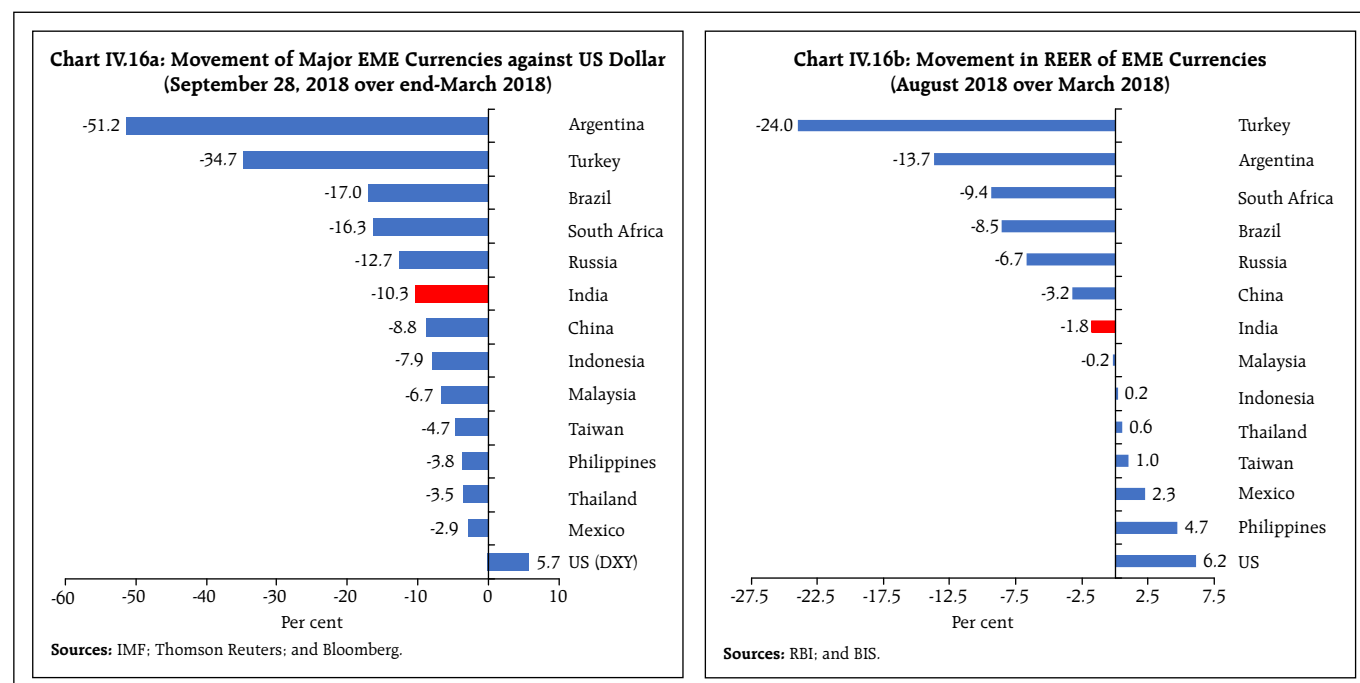


earnings results for Q1:2018-19, Government's approval of capital infusion into five public sector banks, reduction in GST rates on several items, better than expected GDP growth for Q1:2018-19 and decline in inflation in July and August. While the market underwent some decline in the second week of August mainly on concerns about potential market contagion from the crisis in Turkey, it recovered later in the month, especially after the US Fed Chairman's speech that reaffirmed a gradual approach to interest rate hikes. During September 2018, however, the market registered significant losses with the BSE Sensex declining by 2418 points (6.3 per cent), triggered by default on its debt obligations by IL&FS, which raised concerns about liquidity shortage in the NBFCs sector. Additionally, lingering concerns relating to trade war between the US and China and sharp depreciation of the INR against the US dollar, in the backdrop of higher oil prices and widening of India's current account deficit for Q1:2018-19, exacerbated the fall in the equity market. Overall, during Q2:2018-19, the BSE Sensex registered a modest increase of 2.3 per cent. During H1:2018-19, domestic institutional investors, particularly MFs, made net purchases of ₹529 billion in the equity market, while FPIs made net sales of ₹287 billion (Chart IV.15b).

In the primary segment of the equity market, resource mobilisation through public issues of equity (initial public offers and right issues) increased by 7.9 per cent to ₹120.3 billion during April-August 2018 as compared with ₹111.5 billion in the corresponding period of the previous year.

IV.1.5 Foreign Exchange Market: Since April 2018, the INR traded with a depreciating bias, dipping to a low of ₹72.81 per US dollar (reference rate) on September 25, 2018. The fall in the INR, however, was no exception as currencies of EMEs – both current account deficit and surplus countries – lost value as the US dollar strengthened during this period. In particular, sell-offs by FPIs, the ongoing monetary policy normalisation by the US Fed, and country-specific factors – China recorded its first quarterly current account deficit in Q1:2018 after 17 years – drove many EME currencies into depreciation in Q1:2018-19. Subsequently, as concerns over the sell-off in Turkish lira exacerbated in August, several EME currencies plunged to multi-year lows. Global risks for EME currencies also seem to be shifting back to China, boosting safe-haven demand for the US dollar amidst escalating concerns of trade frictions between the US and China.

While the INR depreciated by 10.3 per cent *vis-a-vis* the US dollar between end-March and end-September



2018, it was modest in comparison with the depreciation of the Brazilian Real, the South African Rand, the Turkish Lira, the Argentine Peso and the Russian Ruble (Chart IV.16a). The size of depreciation of EME currencies, including the INR, in real effective terms was far modest than in nominal terms (Chart IV.16b).

In terms of both the nominal effective exchange rate (NEER) and the real effective exchange rate (REER), the rupee depreciated by 5.6 per cent and 5.0 per cent, respectively, between March (average) and September 28, 2018 (Chart IV.16b and Table IV.1).

In the recent period, uncertainty around certain global factors has triggered episodic bouts of volatility in both the G-sec and forex markets in India (Box IV.2).

IV.1.6 Credit Market: In the credit market, non-food credit growth accelerated to reach its highest level of the last four years in August 2018 (13.5 per cent), with the momentum offsetting generally unfavorable base effects (Chart IV.17). As of September 14, 2018, non-food credit growth was placed at 12.5 per cent.

Credit extended by public sector and foreign banks has been recovering gradually and this was built upon

Table IV.1: Nominal and Real Effective Exchange Rates – Trade-based

(Base: 2004-05 = 100)

Item	Index: September 28, 2018 (P)	Appreciation (+) / Depreciation (-) (Per cent)	
		September 28, 2018 over March 2018	March 2018 over March 2017
36-currency REER	111	-5.0	-0.8
36-currency NEER	71	-5.6	-2.9
6-currency REER	119	-4.7	-3.8
6-currency NEER	61	-6.0	-6.0
₹/ US\$ (As on September 28, 2018)	73	-10.4	1.3

P: Provisional.

Note: REER figures are based on the Consumer Price Index (Combined).

Source: RBI.

Box IV.2: Bond and Forex Markets in Uncertain Times

In India, the G-sec and forex markets have turned volatile in recent months, hit by global spillovers that destabilised market sentiments and led to episodic bouts of market volatility (Chart IV.2.1). Following Belke *et al.* (2016), the impact of uncertainty on market movements has been empirically examined with daily and monthly data for the period January 1, 2009 to July 31, 2018.

In the absence of any definitive measure of day-to-day uncertainty, the India VIX, based on NIFTY index option prices, has been used as a proxy (RBI, 2018). A preliminary analysis showed evidence of volatility clustering in yields and exchange rates. The generalised autoregressive conditional heteroscedasticity (GARCH) model was estimated, which allows conditional variance to depend on its lagged values. In the GARCH (1,1) specification, the mean equation indicates the magnitude and direction of impact of the explanatory variables (one period lagged value of change in G-sec yields or percentage returns on daily exchange rates, log of India VIX index and its lags) on the dependent variable (change in G-sec yields or percentage returns on daily exchange rate). The conditional variance equation helps identify time-varying volatility of the residuals generated from the mean equation.

Accordingly, the following GARCH(1,1) mean and volatility equations were specified:

Mean equation:

$$Depvar_t = c + \rho Depvar_{t-1} + \theta_i \sum_{i=0}^2 \log(VIX_{t+i}) + \varepsilon_t \quad (1)$$

where, $Depvar_t$ is the change in daily 10-year G-sec yield or percentage returns on daily exchange rates and VIX capturing uncertainty which is reflected in day-to-day volatility.

Variance equation:

$$\sigma_t^2 = \mu + \alpha \varepsilon_{t-1}^2 + \beta \sigma_{t-1}^2 \quad (2)$$

Conditional variance σ_t^2 is expressed as a function of the autoregressive conditional heteroskedasticity (ARCH) (α) and GARCH (β) terms. For variance to remain well-behaved and stable, the sum of α and β should be less than 1.

Based on daily data, GARCH(1,1) estimates using changes in daily 10-year G-sec yield ($\Delta YLD10YR$), percentage returns on daily exchange rates (%CEXR) and day-to-day volatility (LVIX) reveal interesting insights. The mean equation suggests that an increase in uncertainty causes hardening of yields and a depreciation of the INR (Table IV.2.1). The sum of α and β coefficients in the variance equation is less than unity, implying that the model is stable.

In order to test the impact of uncertainty on G-sec yields and the INR-USD on a monthly frequency, the

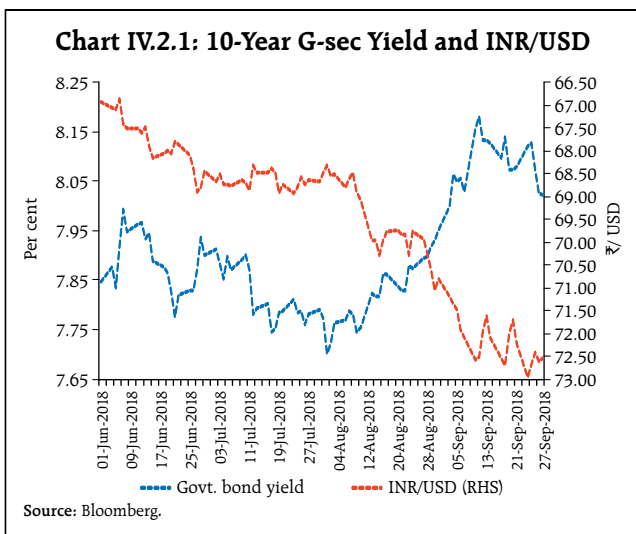
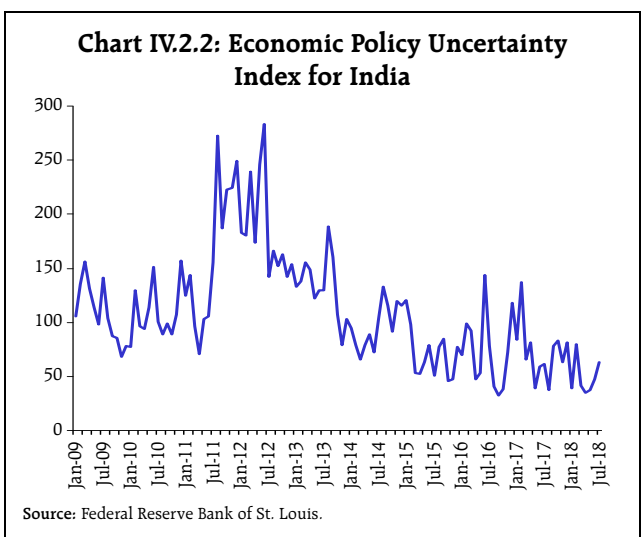


Table IV.2.1. Results from GARCH(1,1) Model

	$\Delta YLD10YR$	%CEXR
Mean Equations		
$Depvar_{t-1}$	0.010 (0.57)	-0.078 (0.00)
$LVIX_t$	0.023 (0.06)	1.028 (0.00)
$LVIX_{t-1}$	-0.021 (0.07)	-
$LVIX_{t-2}$	-	-1.021 (0.00)
C	-0.004 (0.36)	-0.006 (0.90)
Variance Equations		
C	0.000 (0.00)	0.001 (0.00)
α	0.029 (0.00)	0.040 (0.00)
β	0.964 (0.00)	0.956 (0.00)
Diagnostics		
ARCH test (p-value)	0.92	0.17

Note: Figures in parentheses are respective p-values.

(Contd...)



economic policy uncertainty index⁴ for India, based on the methodology of Baker *et al.* (2015) and available from the Federal Reserve Bank of St. Louis was used (Chart IV.2.2). To test the hypothesis of uncertainty impacting the domestic bond and forex markets, a pair-wise co-integrated vector auto-regression (VAR) model was used after checking for stationarity properties of the variables (with logarithmic transformation of all the series, excepting the G-sec yield) for the period January 2009 – July 2018.

Data were found to be non-stationary in levels but stationary in first differences in the Augmented Dickey-Fuller (ADF) tests. Johansen’s cointegration method revealed existence of pair-wise long-run relationships, *viz.*, (i) between the yield on 10-year G-sec (YLD) and the policy uncertainty index (LPUI); and (ii) between the INR-USD (LEXR) and the policy uncertainty index

(LPUI), as indicated below:

$$YLD = 0.27 + 1.63*LPUI \dots\dots (1); \text{ and}$$

$$LEXR = -0.21 + 0.47*LPUI \dots\dots (2)$$

These results suggest that the G-Sec yield increases by 16 basis points and INR-USD depreciates by 4.7 per cent for every 10 per cent increase in the policy uncertainty index (LPUI). In order to examine the short-run dynamic relationship, vector error correction models (VECMs) were estimated. The error correction terms for both the explanatory variables have statistically significant negative signs, implying that the underlying mechanisms are convergent and, therefore, correct for disequilibrium. Furthermore, to test the direction of causality, the Granger causality or Block Exogeneity Wald tests based on the VECM were carried out. The null hypothesis that policy uncertainty does not Granger cause 10-year G-sec yield was rejected (at 5 per cent level of significance), while the reverse causality was ruled out, indicating that policy uncertainty uni-directionally causes changes in the G-sec yield. Similar, uni-directional causality was also observed for policy uncertainty to INR-USD (Table IV.2.2).

These findings suggest that the impact of policy uncertainty is significant on G-sec yields and INR-USD, both at daily and monthly frequencies, as evident in recent episodes of market volatility.

References:

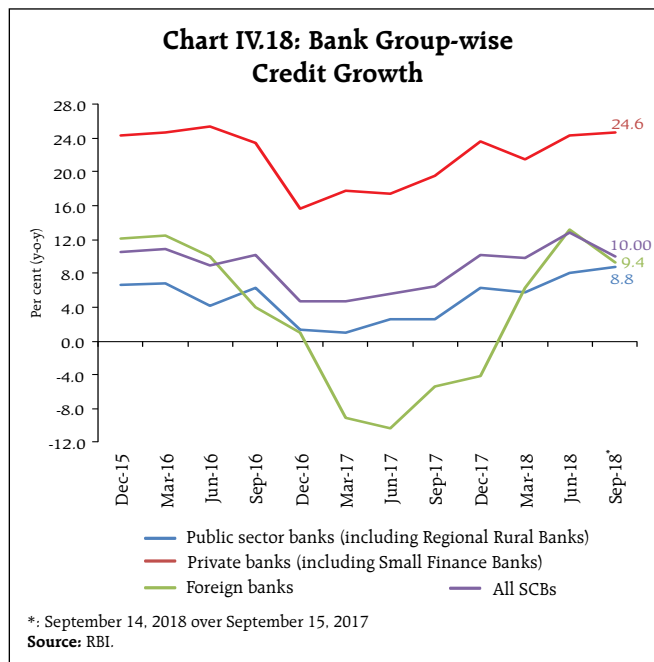
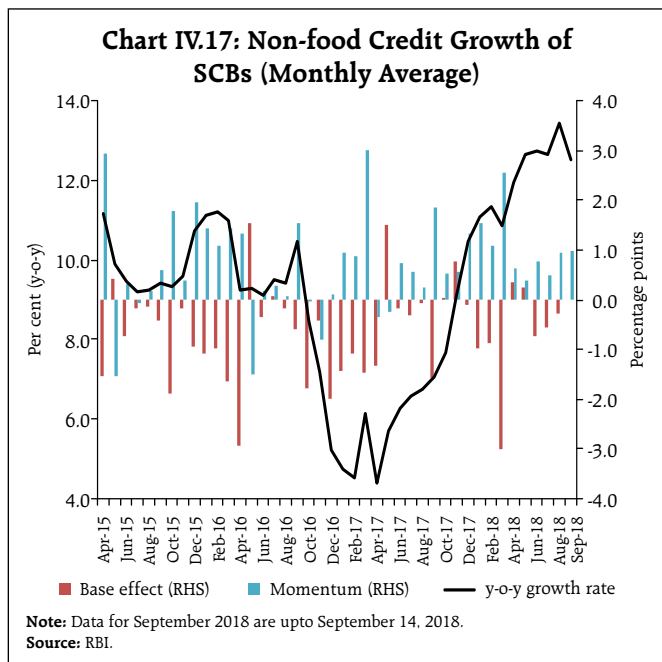
Belke, A., I. Dubova and T. Osowski (2016), "Policy Uncertainty and International Financial Markets: The Case of Brexit", *CEPS Working Document* No. 429 / November.
 Baker, S. R., N. Bloom and S. J. Davis (2015), "Measuring Economic Policy Uncertainty", *NBER Working Paper* 21633, October.
 RBI (2018), Annual Report, 2017-18, August.

Table IV.2.2: VEC Granger Causality/Block Exogeneity Wald Tests

Dependent variable: ΔYLD				Dependent variable: ΔLPUI			
	Chi-Sq	df	Prob		Chi-Sq	df	Prob
ΔLPUI	5.90	1	0.02	ΔYLD	0.97	1	0.32
Dependent variable: ΔLEXR				Dependent variable: ΔLPUI			
	Chi-Sq	df	Prob		Chi-Sq	df	Prob
ΔLPUI	4.00	1	0.04	ΔLEXR	0.60	1	0.44

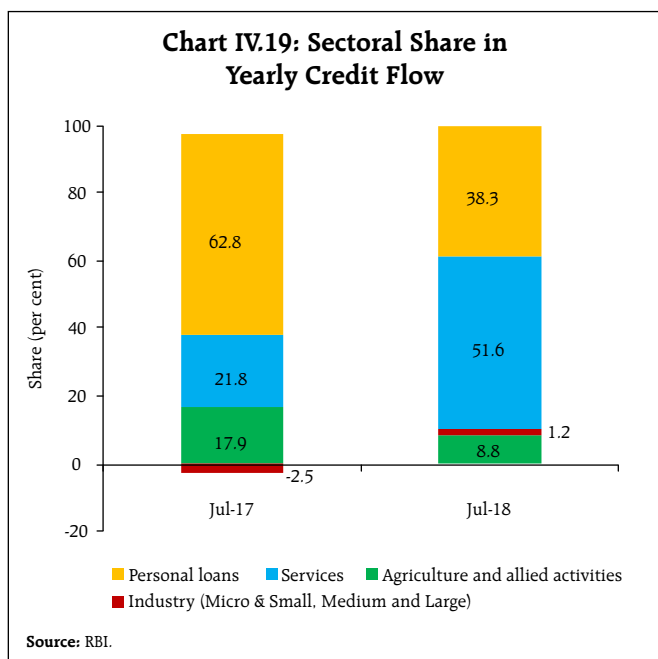
Note: Chi-Sq: Chi-square statistic; df: degrees of freedom; Prob: Probability value.

⁴ To measure policy-related economic uncertainty, an index was constructed from three types of underlying components. The first component quantifies newspaper coverage from 10 large newspapers on news articles discussing economic policy uncertainty. The second component draws on reports by the government budget office giving a measure of the level of uncertainty regarding the path that the fiscal authorities will pursue in future. Finally, the third component uses disagreement among economic forecasters about future trends in key macroeconomic data as a proxy for policy-related uncertainty. (See Federal Reserve Bank of St. Louis website: <https://fred.stlouisfed.org/search?st=Economic+Policy+Uncertainty+Index+for+India> for details).



during H1:2018-19 (Chart IV.18). Of the incremental credit extended by scheduled commercial banks as of September 2018, 57.3 per cent was provided by public sector banks and 4.1 per cent by foreign banks, which was 29.3 per cent higher and 4.1 per cent, lower respectively, a year ago.

Incremental credit flow is also getting increasingly diversified, with services accounting for the highest

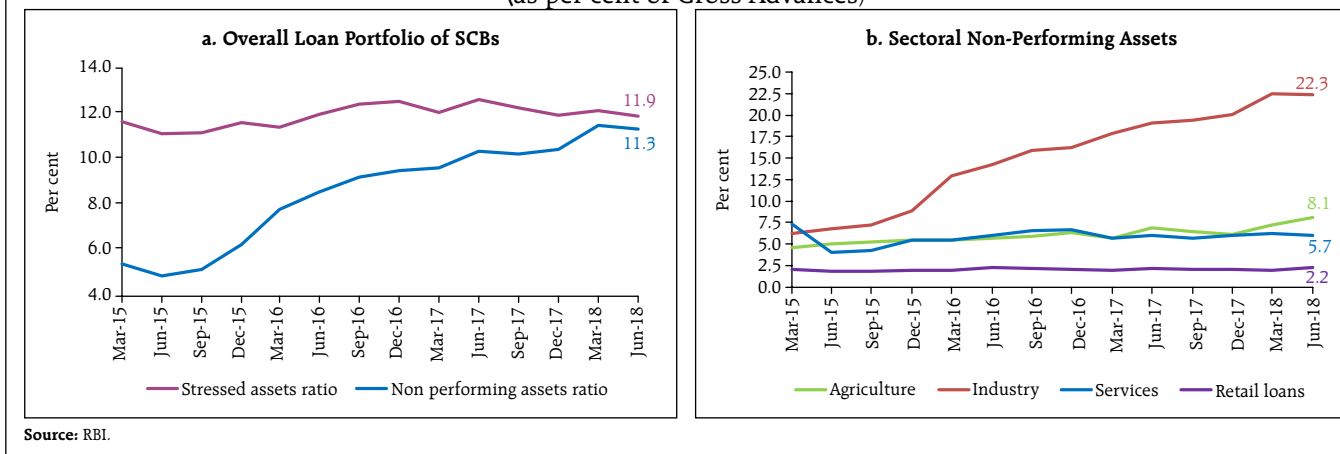


share (as of July 2018) as against personal loans a year ago (Chart IV.19). Credit growth to industry, which has been positive since November 2017, after more than a year-long contraction, showed significantly improved flows to textiles, mining and quarrying, engineering, and telecommunications. The share of credit to agriculture, however, moderated, which might be indicative of pressures in the farm sector as corroborated by agriculture debt waivers announced in some states.

While the overall non-performing assets (NPA) ratio of SCBs moderated in June when compared with end-March 2018, it deteriorated in the case of personal loans and agriculture – the sectors that received large credit flows in recent years (Chart IV.20a). In contrast, the NPA ratio dipped in June in the case of industry and services as compared with March 2018 (Chart IV.20b).

Banks' investments in commercial paper, bonds, debentures and shares of public and private corporates are reflected in non-SLR investment, which picked up in 2018-19 (up to September 14) as against a much smaller increase in the same period a year ago (Chart IV.21). This partly reflects higher issuances this year as also higher returns on these investments.

Chart IV.20: Stressed Assets Ratio and Non-Performing Assets
(as per cent of Gross Advances)



With increased flow of credit and increase in non-SLR investments, excess SLR maintained by banks moderated, mainly on account of private banks (Chart IV.22).

Apart from increased credit offtake from banks, funding flows to the commercial sector from other sources also increased, contributed mainly by foreign direct investment and a more than five-fold increase in issuances of CPs (Table IV.2).

The total flow of financial resources to the commercial sector in 2018-19 (up to September

14) from bank and non-bank sources increased significantly as compared with a modest increase during the corresponding period a year ago (Chart IV.23).

IV.2 Monetary Policy Transmission

Even before the MPC raised the policy rate in June 2018, banks had been increasing their term deposit rates from December 2017 in response to the waning of surplus liquidity in the system. The rise in term deposit rates exerted upward pressure on the cost of funding of banks in Q1:2018-19 and

Chart IV.21: Non-SLR Investment of SCBs

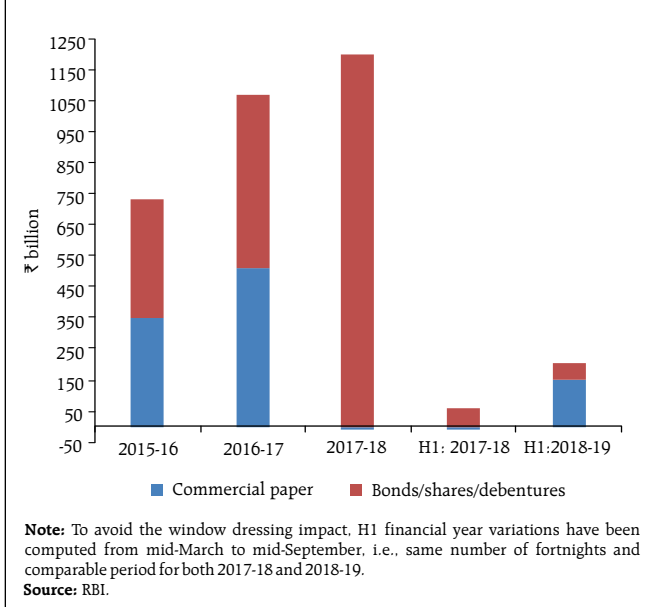


Chart IV.22: Excess Statutory Liquidity Ratio

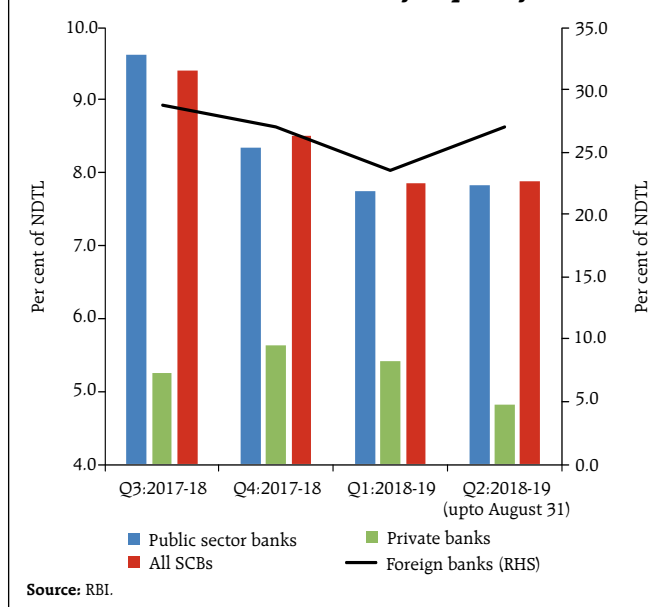


Table IV.2: Funding from Non-Bank Sources to the Commercial Sector

(Amount in ₹ billion)

Item		April to September, 14			
		2017-18		2018-19	
		Amount	Per cent to Total	Amount	Per cent to Total
A. Flow from Non-banks (A1+A2)		4,308	100.0	5,602	100.0
A1. Domestic Sources		3,375	78.3	4,717	84.2
1	Public issues by non-financial entities*	80	1.9	63	1.1
2	Gross private placement by non-financial entities*	526	12.2	551	9.8
3	Net issuance of CPs subscribed by non-banks	458	10.6	2,529	45.1
4	Net credit by housing finance companies\$	483	11.2	775	13.8
5	Total accommodation by 4 RBI regulated AIFIs*	-40	-0.9	400	7.1
6	NBFCs-NDSI (net of bank credit)#	1,724	40.0	360	6.4
7	LIC's net investment in corporate debt, infrastructure and social sector\$	143	3.3	40	0.7
A2. Foreign Sources		933	21.7	885	15.8
1	External commercial borrowings / FCCB\$	-64	-1.5	39	0.7
2	Short-term credit from abroad#	37	0.9	-234	-4.2
3	Foreign direct investment to India\$	960	22.3	1,080	19.3

*: Up to August; \$: Up to July; #: Up to June.

Sources: RBI; SEBI; NHB; LIC; BSE; NSE and Merchant Banks.

fed into the marginal cost of funds based lending rates (MCLR) of banks (Table IV.3). The reduction in the share of current account and savings account (CASA) deposits of banks from 41.1 per cent in March 2018 to 39.6 per cent in mid-September 2018, also exerted upward pressure on the cost of funding of banks (Chart IV.24). Consequently, the weighted average lending rate (WALR) on fresh rupee loans firmed up. The WALR on outstanding rupee loans, however, continued to fall till May 2018 as

the rise in interest rates on fresh loans was more than offset by the fall in interest rates on MCLR-linked loans contracted in the past and reset at lower rates.

Of the various tenors, the transmission of the policy rate hikes in June and August was the highest to lending rates of one-year tenor, with foreign banks in the lead (Chart IV.25).

After peaking in January 2017, there has been a marked decline in the interest rate spread between

Table IV.3: Transmission to Deposit and Lending Rates of SCBs

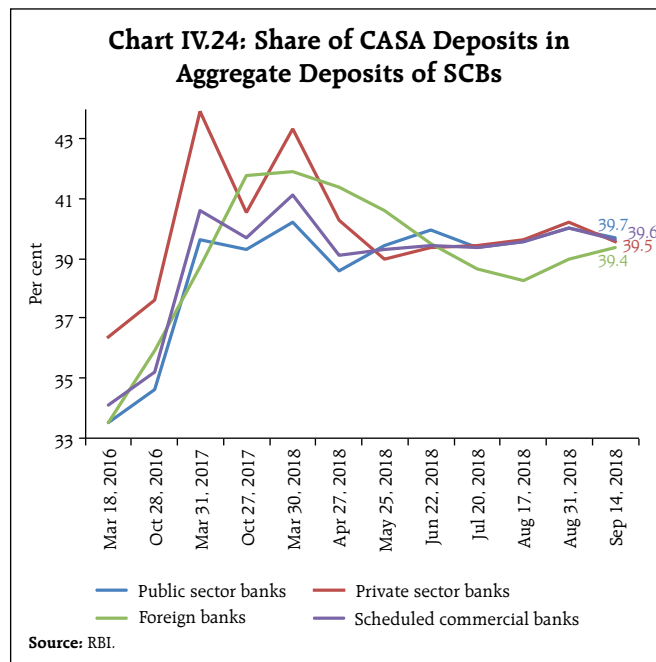
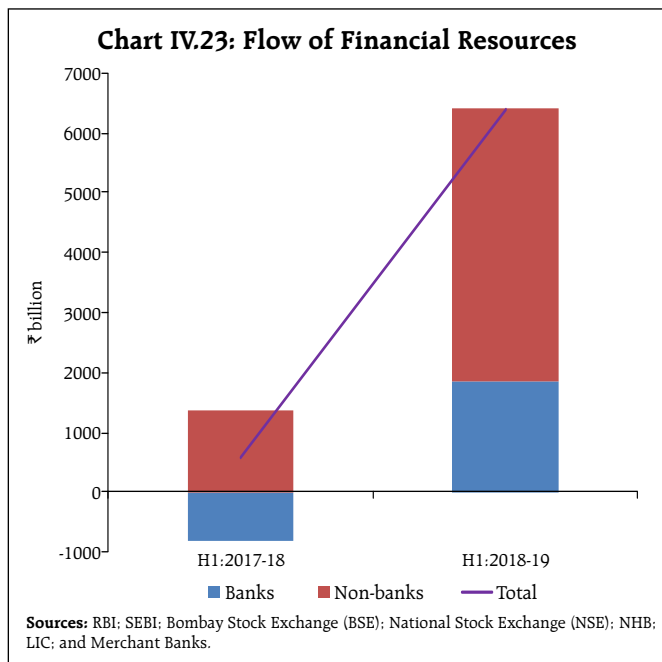
(Basis points)

Period	Repo Rate	Term Deposit Rates		Lending Rates			
		Median Term Deposit Rate	WADTDR	Median Base Rate	WALR - Outstanding Rupee Loans	WALR - Fresh Rupee Loans	1-Yr Median MCLR
January 2015 to May 2018	-200	-158	-193	-80	-154	-205	-
April 2016 to May 2018	-75	-88	-102	-20	-90	-107	-97
June 2018 to September 2018	50	16	5	0	9	23	22
Memo:							
April 2016 to December 2017	-75	-100	-120	-20	-80	-106	-115
January 2018 to May 2018	0	11	18	0	-10	-1	18

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

Note: (i) MCLR system was put in place on April 1, 2016. (ii) Latest data for WADTDR and WALR pertain to August 2018.

Source: RBI.



WALR on fresh rupee loans and the one-year MCLR during 2017-18 and 2018-19 so far (Chart IV.26). This reflected the lack of pricing power among banks as well as some risk aversion as they shifted their exposure away from sectors with high NPAs to less risky sectors.

In line with the usual pattern of pricing of credit, commercial banks charged the lowest spread (over and above the base rate or MCLR) for loans to the housing sector and the highest spread for personal loans (other than housing, vehicle and education),

which are typically unsecured and are perceived to be relatively riskier (Chart IV.27).

In the case of housing loans, the banking sector faces stiff competition from housing finance companies (HFCs), which forces banks to keep spreads at a low level (Chart IV.28). Another factor underlying lower spreads on housing loans is the relatively moderate default rate in this sector.

With bond yields rising faster than the median MCLR, AA-and AAA-rated bond yields overshoot the 1-year median MCLR from February and June 2018 onwards,

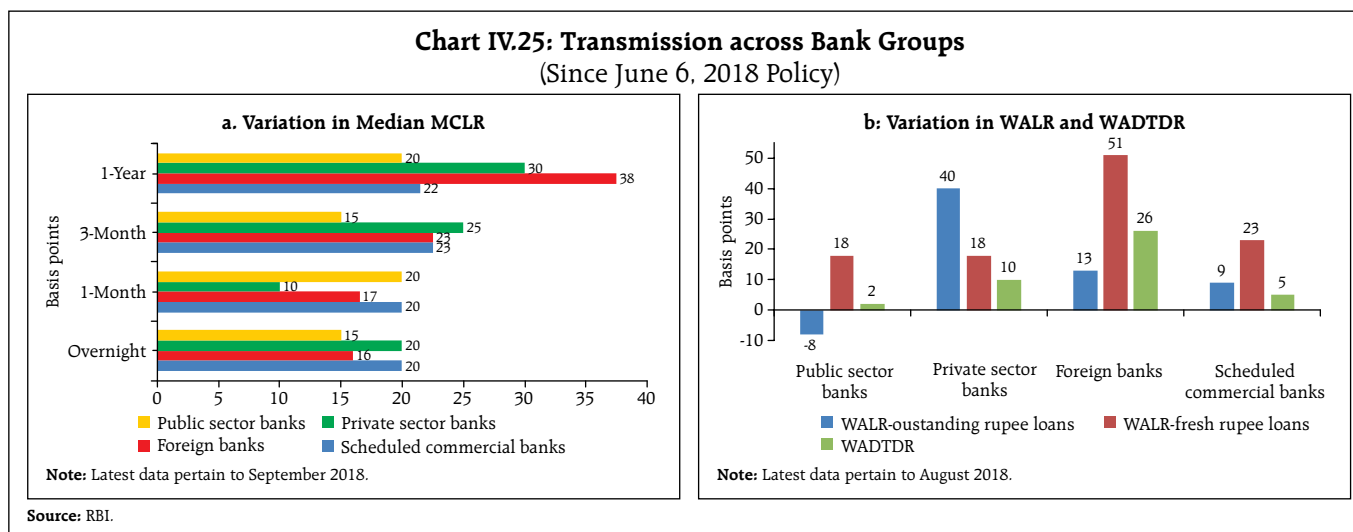
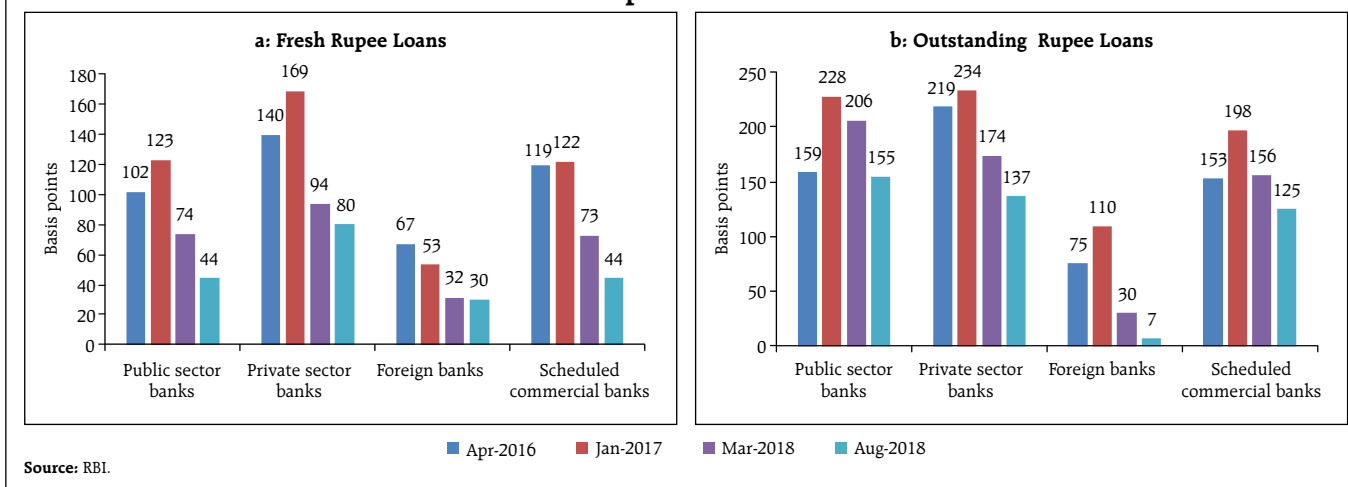


Chart IV.26: Median Spread - WALR over 1-Year MCLR



respectively. This, together with the narrowing of the spread between WALR and MCLR, encouraged corporates to access bank credit, as alluded to earlier (Chart IV.29).

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

The amended RBI Act 1934 (2016) requires the RBI to place the operating procedure relating to the implementation of monetary policy and changes thereto from time to time, if any, in the public domain. Liquidity management operations by the

RBI were aligned with the broad framework spelt in the Monetary Policy Reports of October 2017 and April 2018. During H1, the RBI resorted to fine-tuning variable rate auctions of both repos and reverse repos, in addition to the regular operations. While liquidity amounting to ₹2,296 billion was injected through variable rate repos of maturity ranging from overnight to 28-day in addition to the regular 14-day repos, liquidity absorption amounting to ₹15,172 billion was effected through reverse repos of maturity ranging from overnight to 14 days. In view of the need to inject durable liquidity given the

Chart IV.27: Sector-wise WALR (Outstanding Loans) over 1-year Median MCLR and Median Base Rate – August 2018

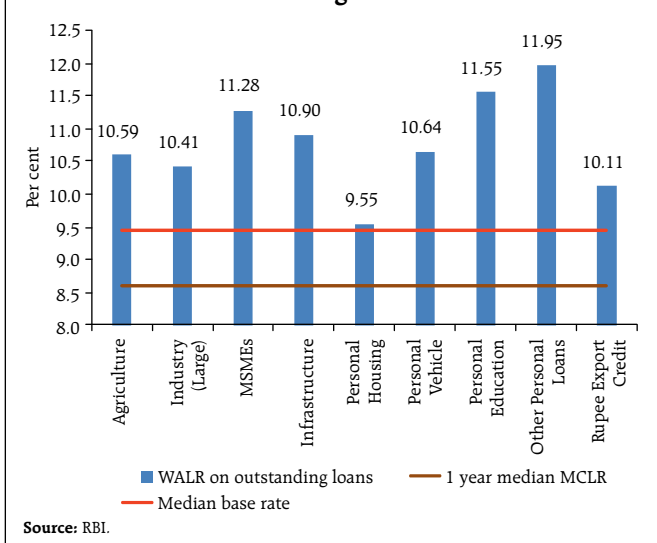
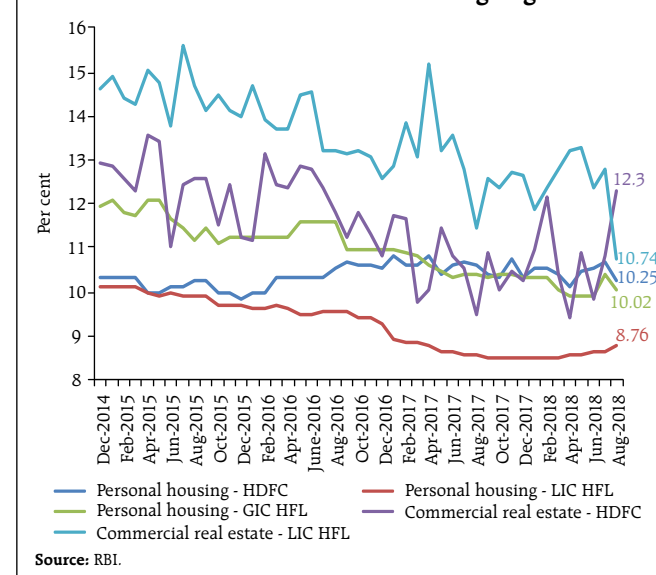
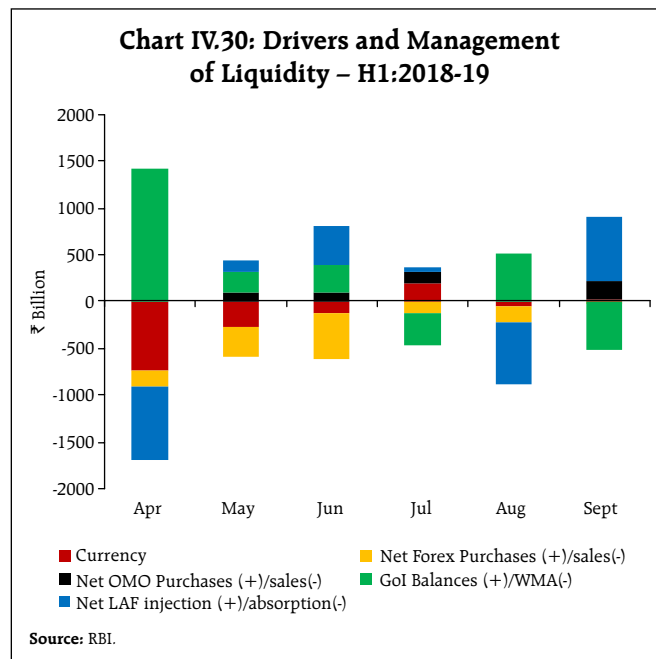
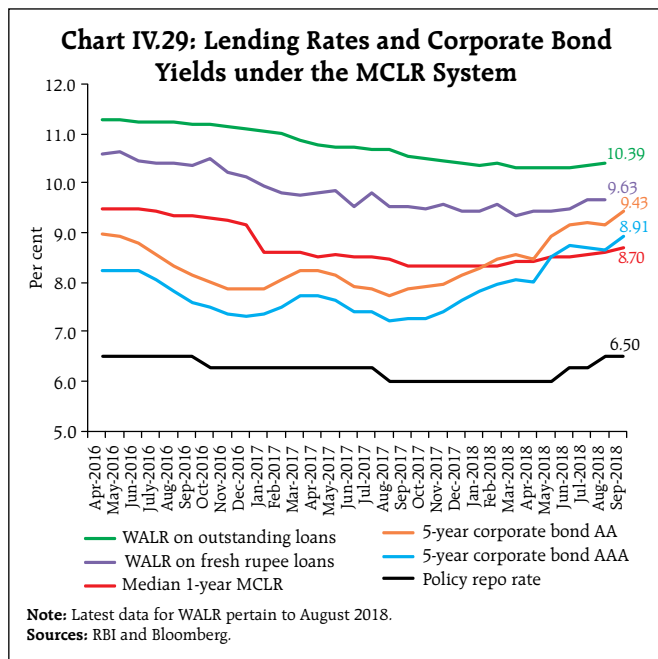


Chart IV.28: WALR of NBFCs on Fresh Loans to Personal and Commercial Housing Segments



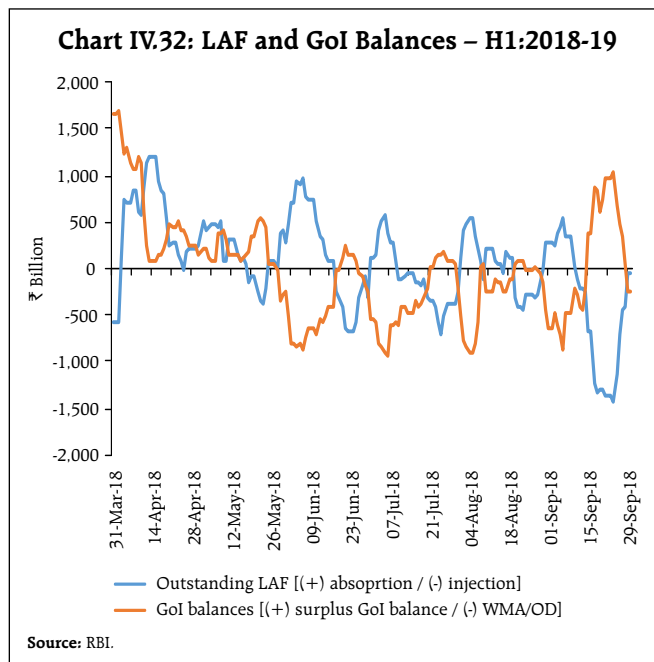
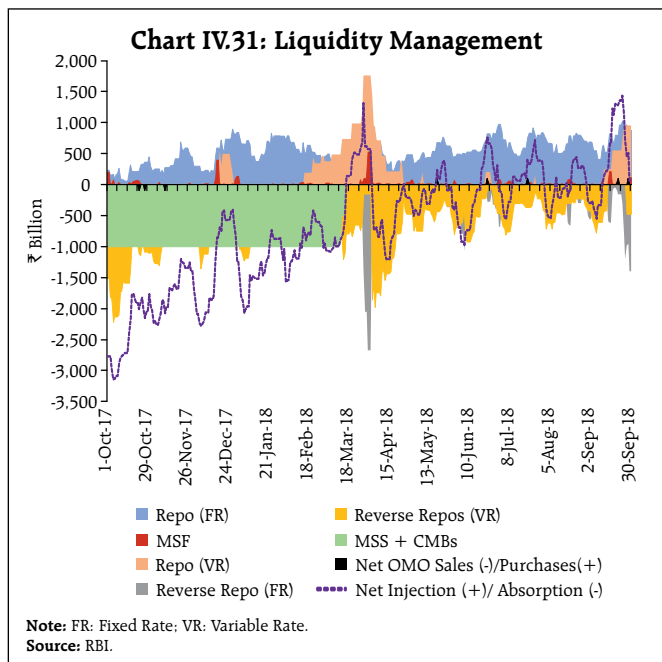


prevailing liquidity conditions, the RBI conducted five OMO purchase operations aggregating ₹500 billion during H1:2018-19. Further, based on an assessment of financial market conditions, the RBI increased FALLCR with effect from October 1, 2018, taking the total carve out from the SLR available to banks to 15 per cent of their NDTL. The increase in FALLCR would supplement the ability of individual banks to avail of liquidity, if required, from the repo market against high-quality collateral. This, in turn, will help improve the distribution of liquidity in the financial system.

During Q1:2018-19, liquidity conditions remained generally in surplus, reflecting the drawdown of government balances due to transfer of GST proceeds to states in April and higher spending by the central government in June 2018. The unwinding of large government cash balances – amounting to ₹1.4 trillion in April – more than offset the drain on liquidity caused by two other autonomous factors – currency expansion by ₹743 billion and forex sales of ₹140 billion – during the month. Although government balances continued to unwind in May, the scale of forex sales picked up in May as well as June, and currency expansion continued to be higher than expected, resulting in a liquidity deficit in the

system (Chart IV.30). Accordingly, the RBI injected liquidity through variable rate repo of various tenors, in addition to the regular 14-day repos, to tide over the liquidity tightness in the second half of June. Based on an assessment of the prevailing liquidity conditions, including the drainage of durable liquidity due to forex operations, two OMOs of ₹100 billion each were conducted by the RBI in May and June 2018. Overall, the surplus absorbed under the LAF moderated progressively during the quarter from an average daily net position of ₹496 billion in April to ₹142 billion in May and further to ₹140 billion in June.

During Q2:2018-19, liquidity conditions gyrated. In July 2018, liquidity was generally in deficit due to moderation in government spending (especially in the second half of July) and the liquidity impact of the RBI's forex sales, necessitating average daily net injection of ₹107 billion under the LAF (Chart IV.31). Besides, durable liquidity was also injected through OMO purchases amounting to ₹100 billion in July. The system again moved back into an absorption mode in August (up to August 19) due to increased spending and recourse to ways and means advances (WMA) by the government. Although systemic liquidity turned into deficit, necessitating liquidity injection between



August 20 and 30, the RBI absorbed ₹30 billion on an average daily net basis during the month. The system moved back into surplus from August 31 - September 10 as government spending increased, thereafter, it turned into deficit. As a result, the RBI injected ₹406 billion on an average daily net basis during September. While durable liquidity needs were met through two OMO purchases amounting to ₹200 billion in the second half of September, day to day systemic liquidity surplus was managed by the RBI through variable rate reverse repos auctions and occasional liquidity deficits were met through regular 14-day variable rate term repos along with variable rate repos of other tenors.

The key driver of liquidity during H1:2018-19 was the movement in government cash balances maintained with the RBI (Chart IV.32). Overall, the system liquidity remained in neutral mode for most part of H1, oscillating between surplus in the first quarter and largely deficit in the second quarter.

As a part of the RBI's continuous efforts to improve monetary policy transmission at the short-end of the money market, scheduled primary (urban) co-

operative banks were provided access to the marginal standing facility (MSF), while scheduled state co-operative banks were provided access to both the LAF and the MSF on complying with the prescribed eligibility criteria.

IV.4 Conclusion

Domestic financial markets continue to remain vulnerable to evolving global developments, and especially, volatile capital flows. Unpredictability about the direction of capital flows has rendered market sentiment risk averse and uncertain. By contrast, the equity market has surged on the back of domestic institutional investors, even as there has been some correction in the recent period. Valuations, measured by conventional metric, are stretched, *albeit* driven by optimism on forward earnings. Elsewhere, credit growth has continued to improve. Going forward, liquidity conditions would be managed consistent with the stated policy objective of aligning the WACR with the policy repo rate and ensuring durable liquidity demands of the economy are met. Ensuring better monetary transmission continues to remain a priority for the RBI.

V. External Environment

Global growth maintained pace, but asynchronously across regions. World trade growth has slowed down in recent months due to ongoing trade tensions clouding the overall outlook. Inflation pressures are building up in advanced economies (AEs) and emerging market economies (EMEs) on rising energy prices. Financial markets, particularly in EMEs, remained volatile given the ongoing normalisation of US monetary policy, crude price volatility and geopolitical tensions.

Since the Monetary Policy Report (MPR) of April 2018, uncertainties have clouded the near term outlook for the global economy on several fronts. First, world trade is showing signs of slowdown with the intensification of trade wars. Second, crude prices are experiencing high volatility at elevated levels and risks of supply disruptions have been slanted to the upside by geopolitical tensions. Third, inflation pressures are building up in some AEs as well as in many EMEs, mainly on elevated energy prices. Consequently, even as global growth has maintained pace, it has diverged amongst regions/economies – strong activity in North America and in several parts of Asia and Africa, but a weaker profile in Europe, China, Latin America and sub-Saharan Africa.

Global financial markets have been unsettled by bouts of high turbulence and volatility, and swings in investor sentiment have become more pronounced in the recent period. A brewing cocktail of the ongoing monetary policy normalisation in the US, escalating trade conflicts and geopolitical tensions, persisting fears of crude price volatility and crisis conditions in some EMEs are intermittently triggering waves of risk aversion with respect to EMEs as an asset class and flight to safety. Equity markets have reflected these swings, scaling new highs in the US but with sharp sell-offs in EMEs. Bond yields spiked in major AEs in April, but softened subsequently on safe haven demand,

while they remained elevated in EMEs, impacted by global spillovers, including technical contagion. The US dollar's persistent appreciation right up to mid-August has translated into currency depreciations in other AEs and EMEs.

V.1 Global Economic Conditions

Turning to macroeconomic conditions in major economies, annualised real GDP growth of the US surged above 4.0 per cent in Q2:2018 – the strongest in over three years – fuelled by tax cuts, robust consumer spending and steadily improving labour market conditions (Table V.1). Industrial output also strengthened, although the outlook is scoured by rising trade tensions.

The Euro area slowed down, with weak GDP growth in Q1:2018 extending into Q2. The manufacturing purchasing managers' index (PMI) has declined during Q3:2018. A similar pattern was observed in other sentiment indicators like consumer confidence and

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

Country	(Per cent)						
	Q2: 2017	Q3: 2017	Q4: 2017	Q1: 2018	Q2: 2018	2018 (P)	2019 (P)
Advanced Economies							
Canada	4.6	1.6	1.7	1.4	2.9	2.1	2.0
Euro area	2.8	2.8	2.8	1.6	1.6	2.2	1.9
Japan	2.0	2.3	0.9	-0.9	3.0	1.0	0.9
South Korea	2.4	5.6	-0.8	4.0	2.4	3.0	2.9
UK	1.2	1.6	1.6	0.4	1.6	1.4	1.5
US	3.0	2.8	2.3	2.2	4.2	2.9	2.7
Emerging Market Economies							
Brazil	1.6	2.4	0.0	0.4	0.8	1.8	2.5
China	7.6	7.2	6.4	5.6	7.2	6.6	6.4
Malaysia	5.2	6.8	4.0	5.6	1.2	5.3	5.0
Mexico	2.2	-0.4	3.3	3.9	-0.6	2.3	2.7
Russia*	2.5	2.2	0.9	1.3	1.9	1.7	1.5
South Africa	2.9	2.3	3.1	-2.6	-0.7	1.5	1.7
Thailand	5.3	4.0	1.8	8.5	4.1	3.9	3.8
Memo:	2017 (E)			2018 (P)			2019 (P)
World output	3.7			3.9			3.9
World trade volume	5.1			4.8			4.5

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

Sources: Bloomberg; and International Monetary Fund.

business sentiment. Capacity utilisation declined in Q3:2018, while the unemployment rate has inched lower during Q3 so far, amidst persisting regional disparities. Political tensions and Brexit concerns, along with the ongoing trade conflicts, pose significant risks to the overall growth outlook.

The Japanese economy expanded at a strong pace in Q2:2018 after contracting in the previous quarter, boosted by a rebound in household consumption and a rise in business spending. Capital expenditure also rose for the seventh quarter in a row. However, weak export orders and subdued business confidence indicate concerns surrounding trade protectionism.

Economic activity has weakened in several EMEs. Financial deleveraging has weighed on GDP growth in China in Q2:2018 amidst rising trade tensions, which resulted in a current account deficit during H1:2018, a first in two decades. Weak infrastructure spending and falling retail sales are accentuating the slowdown. The combination of these factors poses major risks to the outlook.

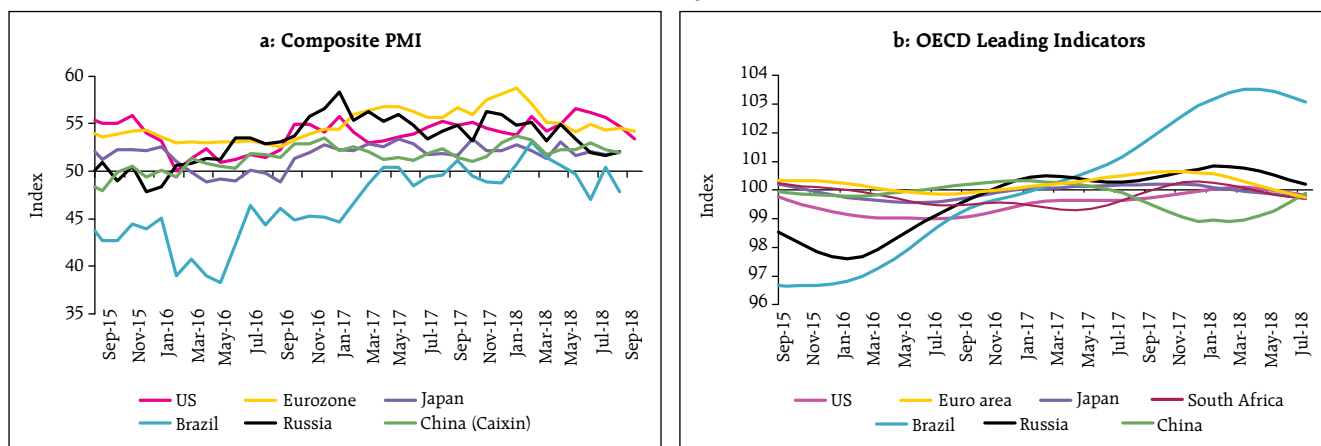
Among the other BRICS economies, headwinds from political uncertainties in May were reversed in Brazil in June, but economic activity remained subdued in Q2:2018, reflecting the lingering effects of the recession. In Russia, incoming data suggest that growth momentum was sustained in Q2:2018, supported by strong export growth and retail sales, with private consumption and improving labour

market conditions likely to be growth drivers alongside firm crude prices. South Africa slipped into recession in Q2:2018 on account of the negative contribution from agriculture (due to a very large base effect) and adverse effects of political uncertainties.

In Asia, where growth impulses have remained reasonably resilient to the global turmoil, the Indonesian economy picked up in Q2:2018, driven by private consumption and imports. In Thailand, growth moderated in Q2, pulled down by weaker government consumption although private consumption and strong farm incomes provided an offset. Growth eased in Q2 in Malaysia, dragged down by moderation in exports and strengthening import demand. Turkey is facing major downside risks from exchange rate pressures, geopolitical tensions, a widening current account deficit, soaring inflation, weakening public institutions and sovereign credit rating cuts moving it deeper into "junk" territory in August. This has heightened rollover risk with regard to US dollar denominated liabilities, especially of its corporate sector. The turbulent external sector outlook for Turkey since early August has had perverse spillovers to other EMEs due to a generalised build-up of risk aversion among investors.

The global composite PMI indicates growth slowing down in Q3:2018 across manufacturing and service sectors (Chart V.1a). Among the major OECD economies, growth is expected to strengthen in

Chart V.1: Survey Indicators



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

the US and Japan, while it is expected to weaken in the UK, the Euro area (including Germany, France and Italy) and Canada. Among major EMEs, the composite leading indicators (CLIs) point to growth strengthening in China, remaining stable in Russia, but weakening in Brazil and South Africa (Chart V.1b).

Global trade growth, in real terms, slowed down in 2018 (up to June), although the increase in commodity prices compensated for volume deceleration (Chart V.2a). For AEs, the loss of momentum has been somewhat higher than EMEs. Forward looking indicators suggest that world trade is likely to slow down further in the remaining part of 2018. The World Trade Outlook Indicator (WTOI)¹ – currently above trend – has eased in the last three quarters, dragged down by slowing export orders, international air freight and container port throughput. Movement in other indicators such as the Baltic Dry Index also point to a moderation in global trade (Chart V.2b).

Trade wars weigh heavily on the outlook for global trade. Simulation analysis by the IMF² suggests that global GDP could be lower by about 0.4 per cent in the first year and by about 0.5 per cent in the second year relative to the baseline. Tariffs on their own have a

smaller effect on global GDP, with a maximum loss of about 0.1 per cent relative to the baseline.

V.2 Commodity Prices and Inflation

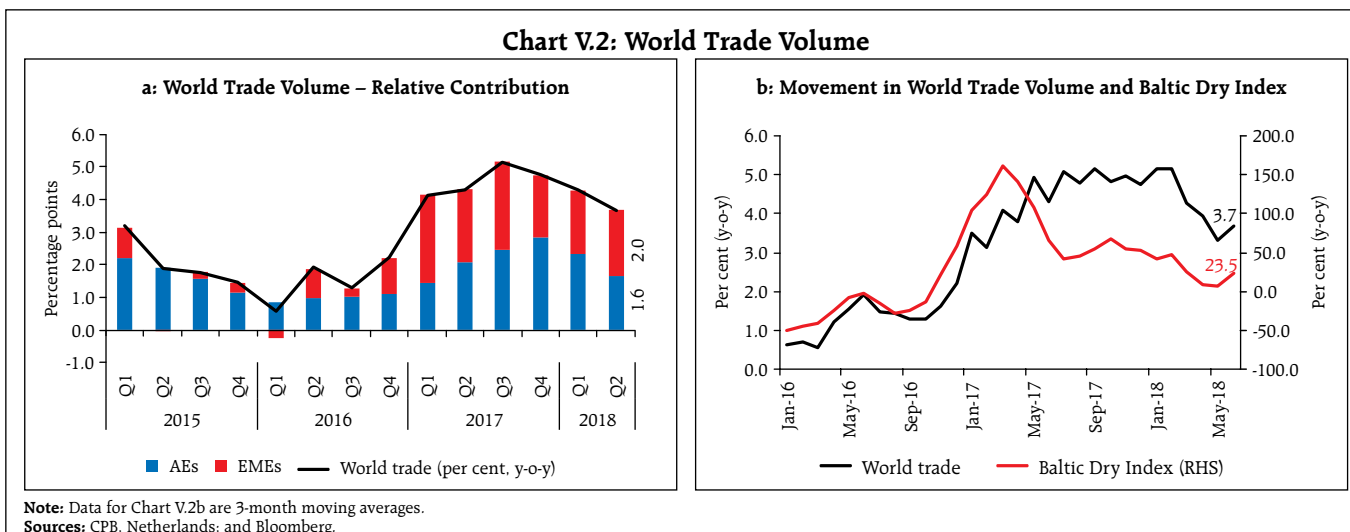
Global commodity price movements have been driven by commodity-specific demand-supply imbalances, strengthening of the US dollar and ongoing trade tensions. The Bloomberg commodity index declined by 2.6 per cent during April-September 2018.

The food price index of the Food and Agriculture Organisation (FAO) fell by 3.2 per cent between April and August 2018 on account of a decline in the prices of most food items. International sugar prices, in particular, appear to be set for accentuated contraction due to increased supply from major suppliers on their currency depreciations (Chart V.3a).

Crude oil prices surged by 20.0 per cent during April-September 2018. Brent prices rose incessantly between end-June and July on geo-political tensions relating to expected US sanctions on Iran and supply disruptions in Venezuela, Libya and Canada. Prices were also supported by robust demand (Chart V.3b).

Base metal prices, measured by the Bloomberg base metal spot index, have fallen by 8.3 per cent between April and September 2018, pulled down by bearish

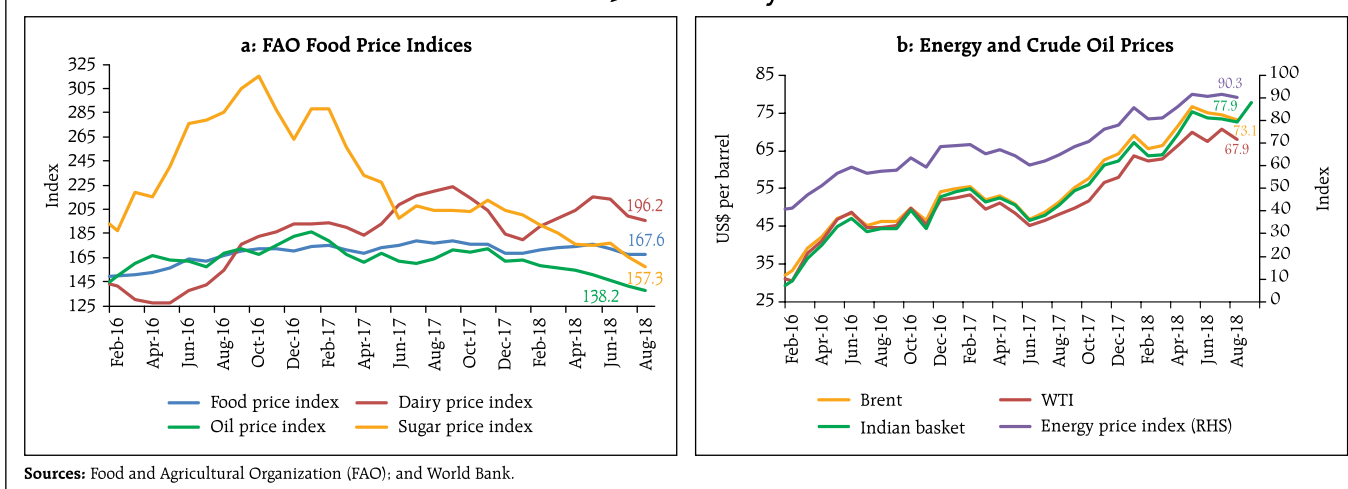
Chart V.2: World Trade Volume



¹ Combining a variety of trade-related indices, World Trade Outlook Indicator (WTOI) is designed to give an early signal of the current direction of world trade and where it is likely to go in the near future. The WTOI may signal turning point in world merchandise trade volume, which complements existing tools such as the WTO's longer-term trade forecasts.

² International Monetary Fund (2018), "G-20 Surveillance Note", G-20 Finance Ministers and Central Bank Governors' Meetings July 21-22, 2018. Available at: <http://www.imf.org/external/np/g20/071818.htm>

Chart V.3: Commodity Prices



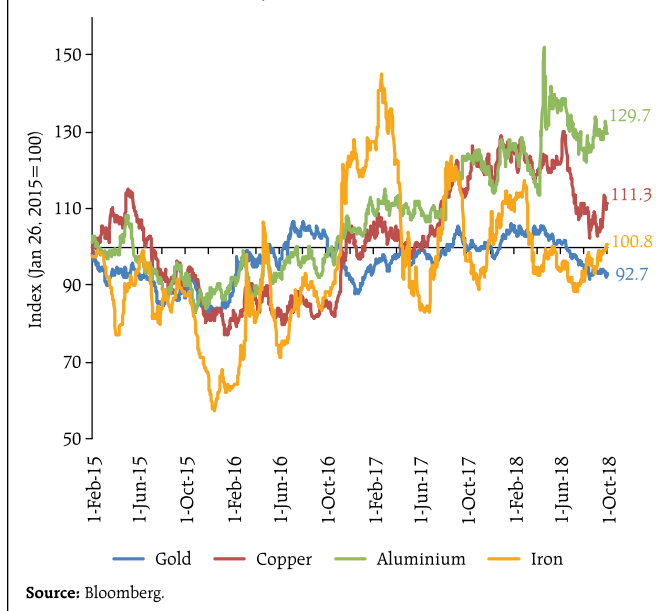
sentiment as trade tensions escalated and global risk aversion ensued on Turkish turmoil in August. Copper prices, which surged in early June, have dropped substantially on a strong US dollar, trade tensions and expectations of weaker demand triggered by the sell-offs in EMEs. Gold and silver prices have moderated on a resurgent US dollar (Chart V.4).

Inflation pressures are building up in most AEs and EMEs. Among AEs, CPI inflation in the US has remained steady at above 2.0 per cent since November 2017, supported by the tightening labour market and rising energy prices. The personal consumption expenditure (PCE), the Fed's preferred measure of

inflation, touched 2.0 per cent in May 2018 and has remained steady since then. Inflation in the Euro area has risen consistently to touch its highest level in 5½ years in July at 2.1 per cent. In Japan, inflation softened during Q2:2018 as rising energy prices were tempered by weak food prices, though an uptick was witnessed in Q3 on rising transport costs (Chart V.5a).

Inflationary pressures in EMEs are also rising (Chart V.5b). In Turkey, inflation surged to 24.5 per cent in September, indicating the impact of the sharp currency depreciation. Inflation in Russia touched its highest level in one year in August on rising food prices. In Brazil, inflation has risen during H2:2018 so far due to disruptions in supplies caused by nation-wide strikes in May and hardening energy prices. China's consumer price inflation rose to 2.3 per cent in August on higher food prices. In Indonesia, inflation remained below the central bank's target of 3.5 per cent.

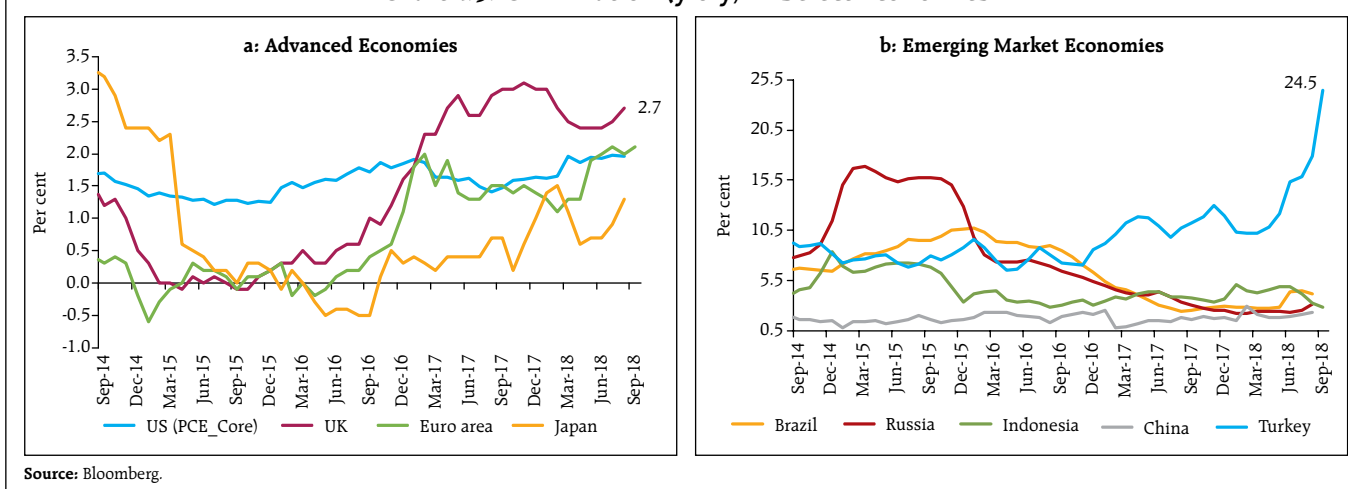
Chart V.4: Metal Price Indices



V.3 Monetary Policy Stance

Monetary policy is increasingly becoming less accommodative in most AEs and EMEs. The US Fed raised its policy rate thrice in 2018 and investors expect the rate to be raised one more time during this year and three times in 2019 (Chart V.6a). The European Central Bank (ECB) is normalising its monetary policy at a much slower pace; it will end its large scale asset purchase (LSAP) in a staggered manner by the end of 2018. The Bank of Japan (BoJ) has continued with its ultra-accommodative stance as inflation has remained well below the target. It tweaked its monetary policy operating procedures in July, providing more flexibility

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



to the movement of yields, though the target for the long-term bond yield remains unchanged at zero.

Monetary policy stances in EMEs are getting increasingly synchronised, with many central banks either increasing policy rates or keeping them unchanged. Among BRICS countries, Brazil and South Africa kept their policy rates unchanged. Russia raised its policy rate in September 2018, after a hiatus of almost four years, in response to inflationary risks. In Asia, Indonesia raised its policy rate five times since May 2018 to contain the currency's slide. The People's Bank of China has left its benchmark one-year lending and deposits rates unchanged since October 2015. However, it raised short-term interest rates in Q1:2018 and eased reserve requirements to free up liquidity in the system in June. Among other EMEs,

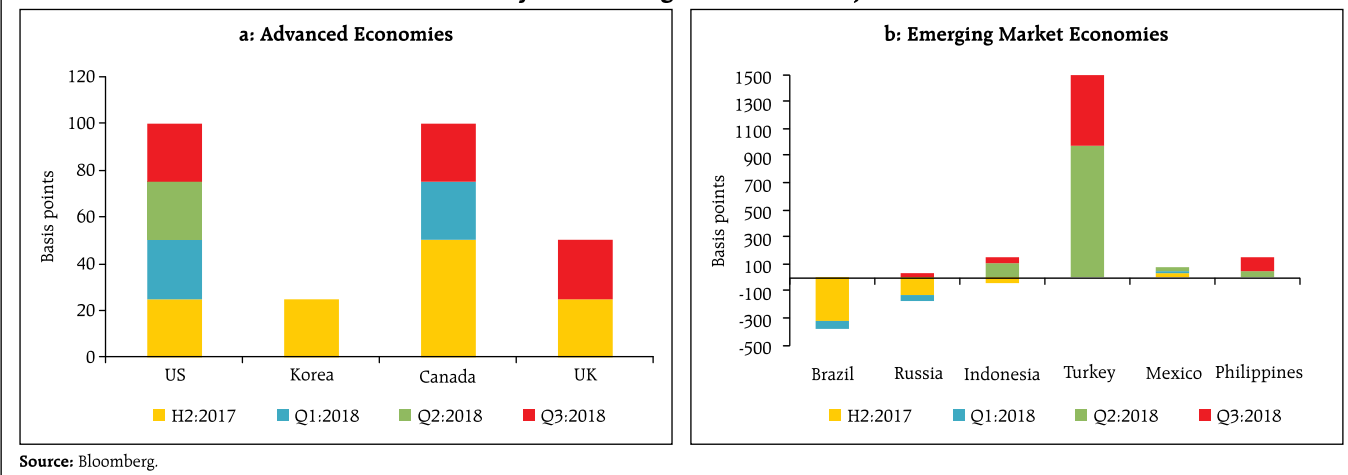
Turkey has aggressively raised its policy rate by more than 1500 bps this year, cut reserve requirement by 250 basis points across all maturity brackets and lowered reserve requirement ratios for non-core FX liabilities by 400 basis points for up to three-year maturities in August. The central banks of Mexico and the Philippines raised their policy rates during the last two quarters on a worsening inflation outlook (Chart V.6b).

V.4 Global Financial Markets

Volatility in global financial markets in H1:2018-19 has hit EMEs as an asset class, leading to capital outflows and currency depreciations.

Global equity prices have been under pressure on waning risk appetite, as geo-political developments

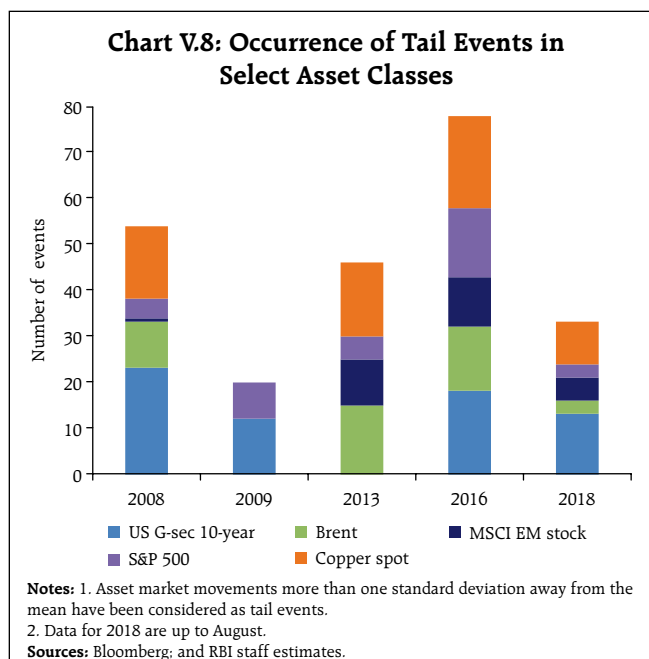
Chart V.6: Policy Rate Changes in Select Major Economies



across geographies and tightening liquidity conditions have triggered bearish sentiment and rebalancing of portfolios. Among AEs, equity prices have remained under pressure in the Euro area on slowing economic growth, trade tensions and concerns over the impact of the crisis in Turkey. Equity markets in the US have gained, largely driven by the technology sector. Equity indices have been further buoyed by the North American Free Trade Agreement (NAFTA) deal in September, despite the ongoing trade tensions. The relatively stronger performance of the US equity market *vis-a-vis* other AEs and EMEs reflected a flight to safety. In Japan, equity markets have risen encouraged by a weak currency, though subdued business confidence has capped gains. Equity markets in EMEs have declined on a general risk-off sentiment (Chart V.7).

Global bond markets were visited by bouts of volatility due to a combination of factors – accelerating US growth and a weakening of economic activity in other AEs; trade tensions; geopolitical events; and expectations around an expansionary fiscal policy in the US. Sovereign bond yields have risen in most AEs and EMEs. 10-year bond yields are rising in the US on strong macroeconomic data, despite the ongoing trade tensions.

The global financial crisis (GFC) has revealed that asset prices do not follow a normal distribution, which understates the dynamic nature of volatility. They show fatter tails, implying the occurrence of extreme events, often correlated across various assets. Such



events have occurred more often in the US 10-year government securities since 2008 than in other asset classes, *viz.*, stocks or commodities. The bond market in the US alone witnessed extreme outcomes several times in 2018. (Chart V.8).

In the Euro area, the benchmark 10-year German bond yield moderated on worries over weak economic growth and budget concerns in Italy. In Japan, bond yields, which remained largely range bound during the year, have surged since end-July as the BoJ kept its long-term bond yield target unchanged at around zero per cent (Chart V.9a). Bond yields in EMEs reflected *inter alia* country-specific factors, though they have

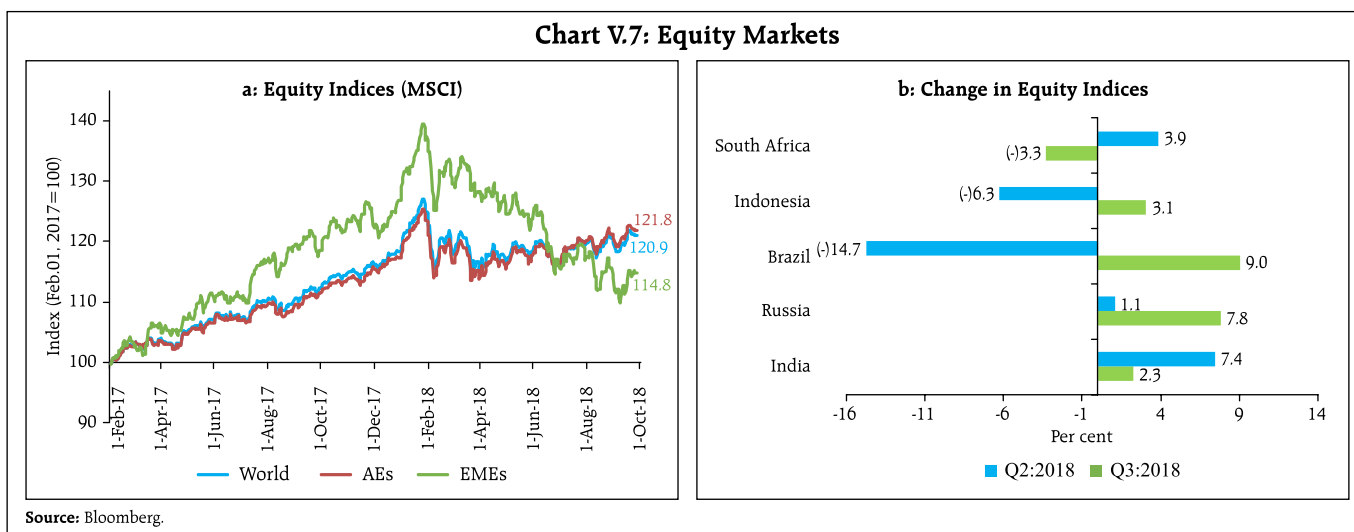
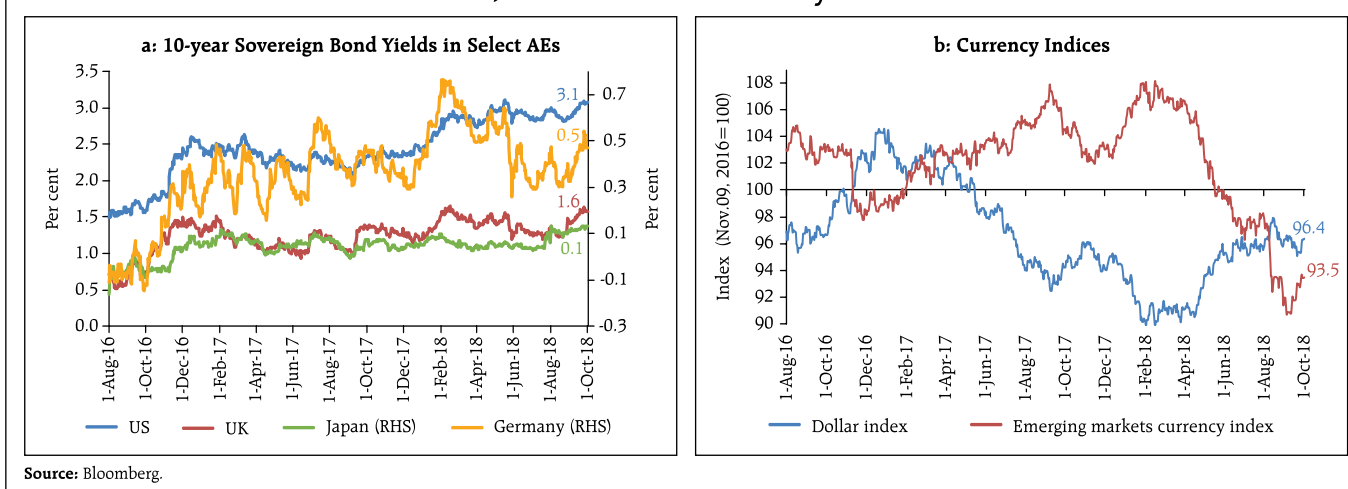


Chart V.9: Bond Yields and Currency Movements



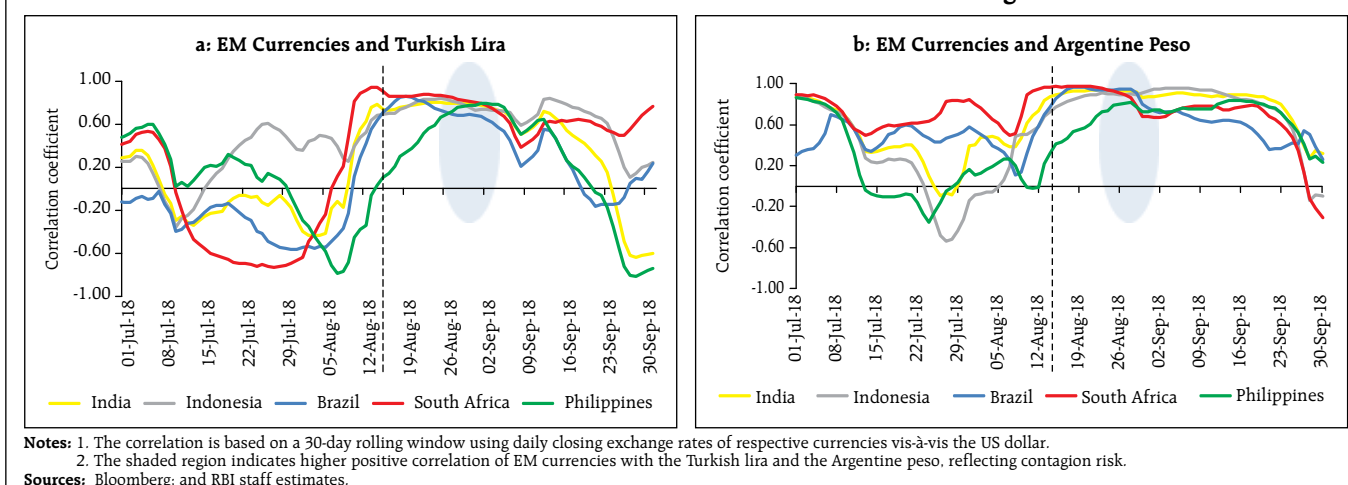
risen recently in most countries on expectations of shrinking global liquidity and tighter domestic monetary policy stances.

Currency markets have been driven largely by monetary policy stances in the systemically important AEs – particularly in the US, geo-political developments and country-specific factors. The US dollar appreciated between April and September on policy rate hikes thrice during the year, signalling the US Fed's view that economic activity is growing at a robust clip. The euro lost ground to the US dollar on growth differentials and political tensions in some member states, with the recent Turkish turmoil and significant exposures to Turkey of European banks, exerting downward pressure on the euro.

The Japanese yen depreciated driven by widening growth differentials with the US and accommodative monetary policy. Most EM currencies depreciated on capital outflows driven by global spillovers that also impacted bond markets (Chart V.9b). Between April and September 2018, the MSCI Emerging Market Currency Index declined by 7.0 per cent.

Contagion from the collapse of the Turkish lira and the Argentine peso led to large depreciations across EM currencies in the second half of August 2018 as correlations with the Turkish lira and Argentine peso increased (Chart V.10). Many bystander central banks among EMEs undertook large scale forex interventions and/or monetary policy measures to contain volatility and calm currency markets.

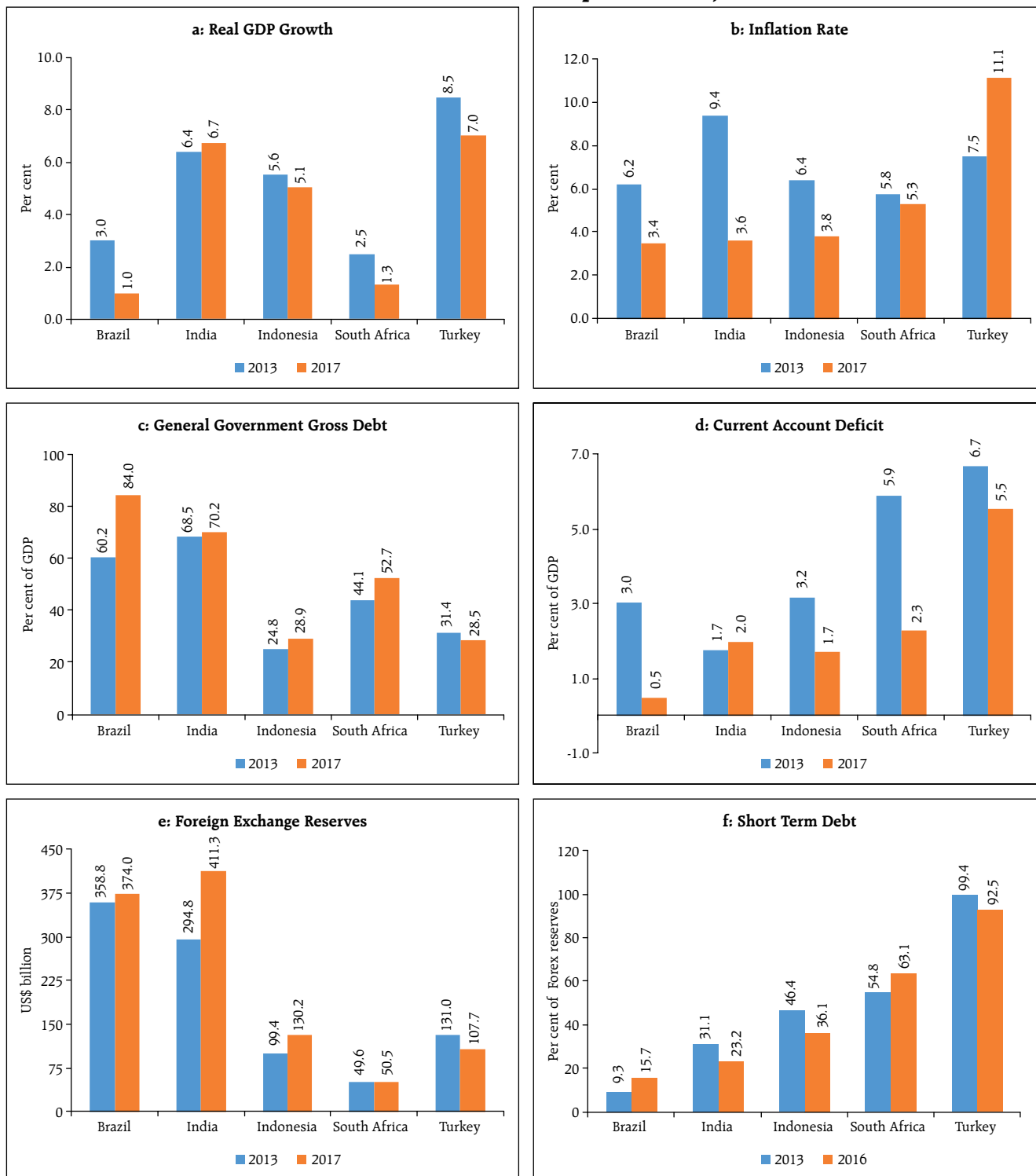
Chart V.10: Correlation of EM Currencies with Turkish Lira and Argentine Peso



Against the backdrop of episodes of spillover to the EMEs, a comparison of current macroeconomic conditions *vis-à-vis* those characterising the taper

tantrum of 2013 across five EMEs suggests that although economic fundamentals have generally improved, some weak spots still remain (Chart V.11).

Chart V.11: Macroeconomic Developments in Major EMEs



Sources: IMF; and World Bank.

A noteworthy pattern that has emerged in the period following the GFC is that commodity prices have a significant bearing on movements in financial markets with strong inter-linkages across

asset classes (Box V.1). This pattern implies important risk in the form of correlated volatility across financial markets, especially for EMEs, from the surging oil prices.

Box V.1: Global Commodity Prices and Financial Markets in EMEs

The sharp increase in commodity prices, especially of crude oil and base metals since the early 2000s, has led to financialisation of commodities through the rapid development of futures and other derivatives markets. Investors in these markets include banks, institutional investors, insurance companies, pension funds and individuals trying to optimise the risk-return profiles of their portfolios through index trading in derivatives. While doing so, they exploit arbitrage opportunities in commodity derivatives markets. While investment in commodity indices has increased significantly since the early 2000s, the impact of financialisation and risk spillovers has become clearer only after the GFC (European Central Bank, 2011; de Boyrie and Pavlova, 2016).

Against this backdrop, the dynamic relationship between global energy market and other asset markets was examined in a vector autoregression (VAR) framework using monthly data from January 2001 to July 2018. In order to explore the role of financialisation, the VAR analysis is undertaken for two sub-samples, *i.e.*, January 2001 to July 2008 (pre-GFC period) and August 2009 to July 2018 (post-GFC period). The World Bank energy (WBE) and World Bank non-energy (WBNE) indices were used to represent global commodity prices. The MSCI Emerging Market Equity Index³ (EMEQ) represents the performance of large- and mid-cap securities in 24 emerging markets and the MSCI Emerging Market Currency Index (EMCU) measures the total return of 25 emerging market currencies relative to the US dollar. These two indices were taken as proxies for the equity and currency markets, respectively.

The J. P. Morgan Emerging Market Bond Index⁴ (EMBI) was taken as proxy for the bond market. As energy prices are more volatile than non-energy prices, a variable representing energy market financialisation, *i.e.*, open active oil contracts (OILAC) was also included in the VAR model. Market volatility and policy-related uncertainty were proxied by the implied volatility of the S&P 500 index options (VIX) and the Economic Policy Uncertainty⁵ (EPU) index, respectively, as exogenous (pre-determined) variables.

As all the endogenous variables were found to be non-stationary of order one, cointegrating relationship between them was examined through a vector error correction model (VECM) and impulse responses were formulated using the reduced form VAR model as given below:

$$Y_t = A + BY_{t-p} + DX_t + \xi_t,$$

where p is the order of the VAR model; and Y_t is the vector of endogenous variables, *viz.*, WBE, WBNE, EMEQ, EMCU, EMBI, OILAC; and X_t is the vector of exogenous variables, *viz.*, VIX and EPU.

The restricted cointegration rank tests (trace and maximum eigenvalue) confirm the presence of a single long-run cointegrating relationship among the variables with a lag of two, based on Akaike Information Criteria. The presence of a cointegrating relationship indicates that there exists a long-term relationship between the commodity price movements and other financial asset classes. As a robustness check, the VECM model confirms that residuals are not serially correlated.

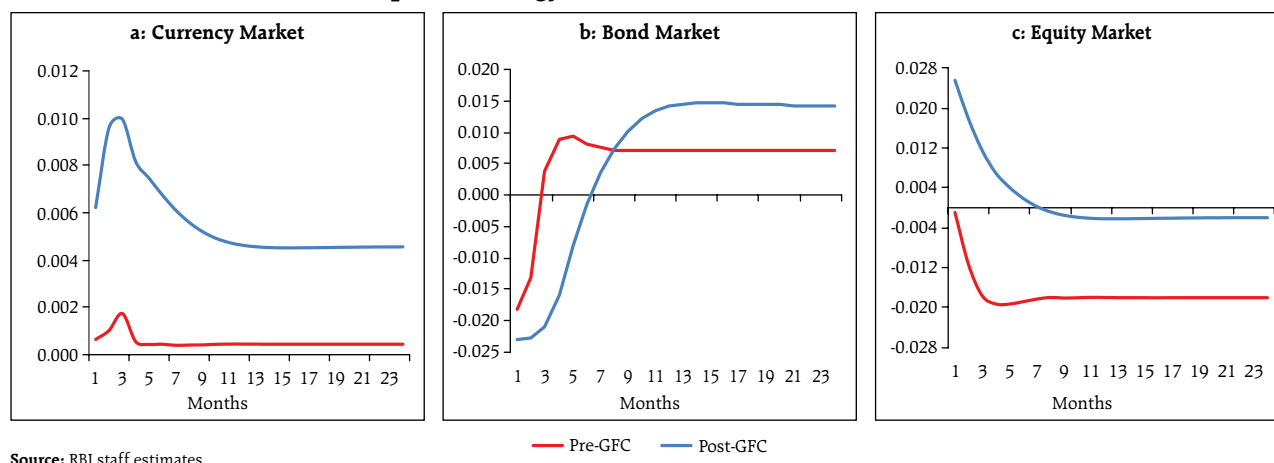
The reaction of a particular financial market segment to the initial commodity price shocks is examined

(Contd...)

³ As of March 2018, this index had more than 830 constituents and covered approximately 85.0 per cent of the free float-adjusted market capitalisation in each country. Over 60 percent weight has been accorded to China, South Korea, Taiwan and India.

⁴ This sovereign debt benchmark index measures the total return performance of international government bonds issued by EMEs and provides over 50 percentage weight to three Latin American export-oriented economies (Argentina, Brazil and Mexico).

⁵ See footnote 4, Chapter IV.

Chart V.1.1: Impact of Energy Price Shocks on Financial Markets in EMEs

through impulse response functions. Based on Cholesky decomposition, the impulse response analysis reveals that an energy price shock impacts the sovereign bond, currency and equity markets (Chart V.1.1). Bond yields rise due to expectation of tightening of monetary policy following the adverse impact of energy prices on inflation and the impact is found to be somewhat higher in the post-GFC period. Similarly, EME currencies depreciate and the impact is seen to be stronger during the post-GFC period, though the extent of depreciation varies depending on the quantum of imports of energy requirements. Equity markets are found to be affected adversely in the pre-GFC period as higher commodity prices may lower profit margins of corporates due to increase in input costs and also due to higher interest rates as central banks raise rates to contain inflation. In the post-GFC period, however, equity prices increase in the first few months after a shock to energy prices. One reason for this positive co-movement, as argued by Bernanke (2016), could be that both energy and equity prices are "reacting to a common factor, namely,

a softening of global aggregate demand, which hurts both corporate profits and demand for oil".

Thus, the empirical analysis shows that energy price shocks have impacted the currency and bond markets in EMEs more in the post GFC period vis-à-vis pre-GFC period, underlining the greater role of financialisation of commodity markets.

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V.5 Conclusion

In sum, global economic activity has so far remained resilient to ongoing trade conflicts, geo-political tensions and tightening financial conditions. However, financial market volatility has increased as investors continuously reassess the impact of

unfolding events. More ominously, global trade growth has begun to slow down. The inflation outlook has deteriorated in many AEs and EMEs. These developments taken together will pose a major challenge to global growth prospects in the coming quarters and years.

SPEECH

Preventive Vigilance – The Key Tool of Good Governance at
Public Sector Institutions

Urjit R. Patel

*Preventive Vigilance – The Key Tool of Good Governance at Public Sector Institutions**

Urjit R. Patel

*'He is most free from danger, who even when safe,
is on his guard.'*

- Publilius Syrus (1st Century B.C.)

It is an accepted norm of organising human societies that with the right to liberty comes good governance, the latter being designed around laws (formal governance) or norms (informal governance) restricting excessive exertions of the right to liberty: where individual actions are deemed to create adverse spillovers ('negative externalities') on the rest of the society, laws or norms – backed by an enforcement machinery – draw a line as to what is acceptable human behaviour. Governance could be for the society as a whole or an individual firm or entity or a group of entities (e.g., the public sector). An important term we all come across in our functioning, especially in the public sector, is *Vigilance*, which is the essence of what all of you are attempting to achieve at the Central Vigilance Commission, established in 1964 by the Government of India, to address corruption in the government sector.

Vigilance is defined in dictionaries as '*action or state of keeping careful watch for possible danger or difficulties.*' It takes several forms, which are often classified as:

- (1) Preventive vigilance, which is aimed at reducing the occurrence of a lapse (violation of a law, a norm, or, broadly speaking, a governance requirement);

- (2) Detective vigilance, which is aimed at identifying and verifying the occurrence of a lapse; and, finally,
- (3) Punitive vigilance, which is aimed at deterring the occurrence of a lapse.

The first part of what follows will provide a conceptual framework, based on the economic theory of incentives, which helps understand these various aspects of vigilance, how they interact with each other, and why preventive vigilance often takes centre stage in the government or public sector institutions as an essential tool of good governance.

Gary Becker's 'Crime and Punishment'

The modern economic theory of corruption and how to prevent it emanates largely from Gary Becker's insightful and seminal pieces on *Crime and Punishment* during 1968-1974. Gary Becker, a young economist at the University of Chicago, took the theory away from moral and ethical basis to one based on optimal human behaviour in response to the presented economic incentives. He examined his own behaviour with regard to undertaking parking violations when rushing to work, which involved trading off the expected cost of illegal parking in a convenient spot, which he roughly calculated as the likelihood of getting a parking ticket violation multiplied by the parking fine (assuming non-payment of the fine would be too costly not to pay up) against the benefit in the form of convenience and reaching his class in time. Often, this calculation prompted him to opt for the parking violation, as legal parking in an inconveniently located garage did not seem economically attractive!

Becker extrapolated from his own daily behaviour to an important economic insight. [As an aside, 'economics' derives from the Greek word 'oikonomika' (οἰκονομία), which means 'household management' and was the name of a treatise by Aristotle.] The insight was that criminals in society do the same calculation of the probability of getting caught times the potential

* Urjit R. Patel, Governor, Reserve Bank of India, Speech delivered at the Central Vigilance Commission in New Delhi on September 20, 2018.

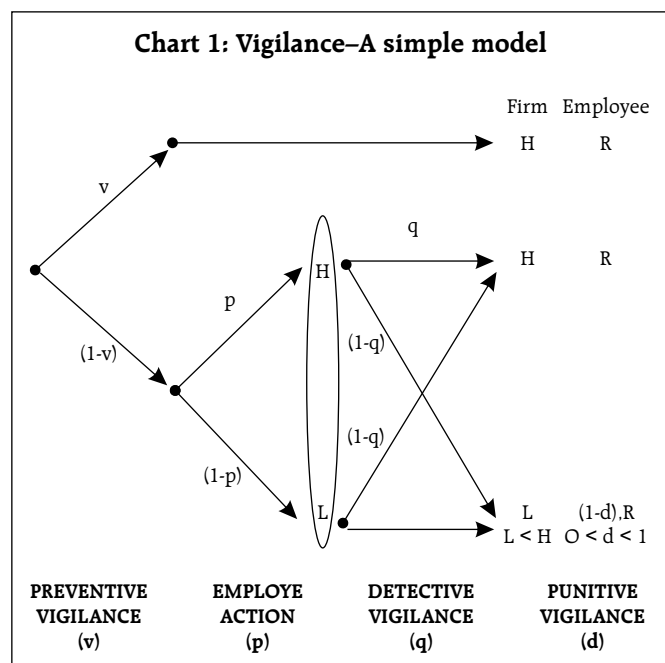
Author's note: The Lecture is in memory of Deena Khatkhate, who served in the RBI, 1955-1968. I would like to thank Viral Acharya and Lily Vadera for their help in preparing this Lecture.

punishment while determining whether to choose a criminal lifestyle and what crimes to engage in; conversely, if criminals responded in this manner to economic incentives rather than (only) because they had character flaws or mental illnesses, then how should laws and their enforcement be organised taking into account the costs of enforcement, and might it be excessively costly and economically undesirable in practice to reduce crime rates to zero?

Building on this fundamental insight that governance lapses may be rational choices rather than mental illnesses or character flaws in transgressors, we could consider a simple but instructive conceptual framework that may help understand how preventive, detective and punitive vigilance work with each other and should be designed given the rational best response of citizens or employees, who given the incentives, will all be treated uniformly as potential offenders.

A conceptual framework

The framework is illustrated in the following schematic of how vigilance and employee actions are sequenced in a typical institutional setting. Let us walk through it step by step (Chart 1).



The employee is in control of an action whose outcome can be 'good' or 'bad'. If the outcome is good, the firm's cash flow or value is higher at H as compared to L , when the outcome is bad ($L < H$). The employee's 'effort' is denoted as p and determines in part the likelihood that the outcome would be good (the rest being purely due to chance or background noise). The employee bears an exertion cost from undertaking this effort (so all else equal, prefers shirking), or alternatively has some private gains (side benefits from a bad-outcome for the institution). This cost creates a potential wedge between what is privately optimal for the employee and what is optimal for the institution.

Recognising this wedge, the institution (or its regulator) puts in place preventive vigilance (v), detective vigilance (q) and punitive vigilance (d):

Preventive vigilance (v) reduces the likelihood of employee control over the action in the first place, *i.e.*, it puts in place safeguards such that employee lapses are less likely to occur.

Detective vigilance comes into play before the outcome has actually been realised (this is shown in the schematic as the oval box around the outcomes H and L). Its precision is denoted by q . The higher the q is, more precise is detective vigilance in identifying the good (bad) outcome indeed as the good (bad) outcome; conversely, $(1-q)$ captures the error rate of detective vigilance whereby it detects the good (bad) outcome as bad (good). [There are alternative ways of modeling detective vigilance. For instance, it may seek not just to identify when the outcome would have turned out to be low, but also aim to 'nip it in the bud' so as to reverse it to a good outcome. In other words, detective vigilance in some cases may catch lapses and correct them. In yet another variant, detective vigilance could also be modeled as identifying only the low outcome possibility with some likelihood but not being able to reverse the outcome. Depending on the setting, one formulation may be more suitable than the others.]

Punitive vigilance reduces the employee reward in the good-outcome scenario, denoted as R , to $(1-d)R$, in the bad-outcome scenario, where $d > 0$. The punishment dR serves an incentive for the employee to invest in increasing the good outcome likelihood. Typically, in such setups, the value of $R < H$ is pinned down based on the employee contract being attractive enough relative to reservation opportunities such as alternative job offers for employees or payoffs from remaining unemployed.

An example can help visualise the structure more concretely. Consider for instance procurement at a government institution. Efficient procurement would lead to a higher value for the institution by ensuring quality is met at the cheapest cost. In order to reduce employee discretion in the procurement process which could potentially lead to compromised choices, preventive vigilance is put in place in terms of designing the procurement process ('LI'), requiring procurement be undertaken only through, *e.g.*, an electronic tendering process, *etc.* Detective vigilance is also put in place in the form of a concurrent/internal audit within each department of the institution that tries to ensure lapses are caught and fixed before they lead to the final procurement decision. Finally, in case of a violation of procurement guidelines is found *ex post* in spite of the other vigilance mechanisms, the central vigilance office of the institution undertakes a disciplinary action against the involved employee.

Technical assumptions

Let us then come back to the conceptual framework for vigilance. To derive the equilibrium solution in the setup and understand its properties, the following intuitive assumptions are made:

- Employee effort (p) leads to exertion cost that is progressively costly (increasing and sufficiently convex) so as to rule out the corner solution that perfect governance can be implemented in practice.
- Similarly, investing in preventive vigilance (v) and detective vigilance (q) become prohibitively expensive beyond a point, *i.e.*, the costs of increasing v and q are increasing and convex enough so as to rule out the corner solution of perfect governance.
- In similar vein, there are limits on punishment levels: one being that there is limited liability so that employee's pecuniary reward even in the bad-outcome scenario can only be positive ($d < 1$) even if it is lower than the reward in case of the good outcome; further, there may be lower bounds on the bad-outcome reward as the institution may be constrained by (un-modeled) side-effects such as the costs of dealing with grievance redressal and legal recourse being undertaken by the employee in case the punishment for low-outcome scenario being realised is too severe.

Key 'insights'

Along the lines of Gary Becker's seminal analysis, this simple framework for understanding vigilance leads to the following insights:

1. Detective and punitive vigilance are strategic complements: The greater the punishment, the more useful it is to detect. Conversely, having a high penalty is ineffective (given concomitant side-effects or costs) when the quality of detection is poor.
2. Preventive and detective (as well as punitive) vigilance are strategic substitutes: The lower the detection and punishment, the more useful it is to prevent lapses at the outset since detective and punitive vigilance do not provide adequate incentives. This is important and will be discussed further in the context of public sector institutions.
3. Preventive vigilance dominates other forms for dealing with lapses outside of control: The above

schematic potentially allows the analysis of how to tackle vigilance design with human effort (which is under one's control) versus human error (which is outside one's control). As an extreme case, suppose that there is no control under the employee to affect the outcomes (p is fixed). Then punishment achieves absolutely nothing in improving outcomes. In this case, preventive vigilance which effectively reduces the chance of a lapse in the first place dominates detective and punitive vigilance. Detective vigilance may nevertheless be effective in identifying lapses which occur due to pure chance and possibly for reversing the bad outcomes to good ones.

Dynamic considerations

Outside of the simple one-period or static model outlined above, there are important dynamic considerations that may be important in real-world design of vigilance processes.

One, it might be attractive for an institution to undertake punitive vigilance beyond what is desirable in a purely myopic sense for the purposes of setting a 'precedent'; in other words, so as to deter recurrence and build a reputation or create a credible culture for zero or low tolerance for repetitive lapses.

Two, in practice poor governance outcomes may not simply be due to optimal incentive-based behaviour, but also due to the presence of habitual offenders (an employee 'type', so to speak). In such a setting, there may be learning over time on a given employee's type that can help separate type from pure background noise; when this is the case, some weeding out may be necessary based on initial detection phase which only after a few periods leads to a punitive vigilance outcome as it becomes certain that employee type is above a threshold in terms of repetitive lapses that cannot be attributed over time to just chance.

Let us now turn to why these observations imply an essential role for preventive vigilance in good governance, especially in public sector institutions.

What vigilance is likely to work the best in a public sector institution?

Punitive vigilance is difficult in a public sector institution for several reasons. The rewards are low to start with, thereby limiting the possibility of downward revisions. Given this constraint, disciplinary actions that limit the chances of career progression are often the preferred punishment. However, this has the misfortune of demotivating employees beyond the point of their career when punitive vigilance action is undertaken. This could, in principle, be dealt with a 'golden handshake'; however, the insurance that public sector jobs offer is often a key attractive feature of these jobs given the lack of significant upside pecuniary incentives and career-based rewards for greater effectiveness even within these constraints, it is fair to conclude that their 'bite' is not as strong as in the private sector.

In turn, given the first insight (Key insight 1) from the model, detective vigilance too is rendered somewhat ineffective. Put simply, detection does not lead to punitive outcomes (except perhaps in extreme or egregious cases and over time) so that investment in detective vigilance does not guarantee the desired reduction in incidence of lapses, even though it might help in some cases arrest the slide and contain with remedial measures.

As a result, given the second insight (Key insight 2) from the model, preventive vigilance takes center stage and becomes a key effective tool of governance in a public sector institution. When lapses can arise due to background noise outside of the employee control (which is often the case in public sector due to the complexity of the interaction with a multitude of other public sector entities), punitive vigilance becomes even less attractive due to further demotivation that it might induce; in turn, so does detective vigilance. In other words, while not taking away from the need

to engage in some detective and punitive vigilance, preventive vigilance is conceptually likely to be the most effective governance mechanism at public sector institutions.

These observations have substantive relevance for understanding how one might tighten governance in practice, for instance, in lending outcomes (underwriting or screening, monitoring and recovering post default) at public sector banks, a setting that is beset with many of the features highlighted above. That is for another day. For now, let us turn to how vigilance is organised at the Reserve Bank of India, the central role that preventive vigilance takes at the Bank, and the measures that we have adopted to date in this regard.

Vigilance functions at the Reserve Bank of India (RBI)

The overall responsibility for vigilance work at the Reserve Bank vests with the Central Vigilance Cell (C. V. Cell or just Cell), which exercises its jurisdiction over all employees of the Bank and co-ordinates the activities of the 49 Branch Vigilance Units. The Cell maintains liaison with the Central Vigilance Commission (CVC) and the Central Bureau of Investigation (CBI). The focus of the Cell is to have a comprehensive preventive vigilance setup supported by an audit framework so that vigilance issues are minimised and to sensitise our employees to various aspects of vigilance administration.

The guidelines on vigilance, issued by the CVC, are aimed at greater transparency, promoting a culture of honesty and probity in public life, and improving the overall vigilance administration in the organisations within its purview. The Central Vigilance Cell at the Reserve Bank, led by the CVO, follows the guidelines issued by the CVC (the Commission) from time to time. The Chief Vigilance Officers (CVOs), who are the extended arms of the Commission in their respective organisations, decide upon the possibility of a vigilance angle in individual cases in an organisation. Not only the financial propriety of transactions, but

certain non-financial aspects arising, *inter alia*, from conflicts of interest, nepotism and considerations of post-retirement employment as a *quid pro quo*, are also required to be examined from a vigilance angle.

As mentioned earlier, the Bank's vigilance administration focuses on preventive vigilance functions by inculcating a sense of honesty and integrity among its employees and ensuring that sound internal systems and controls are laid down, which act as a defense against intended mala fide activity by any employee. This is borne out by the fact that the incidence of vigilance cases in the Bank has been negligible. Over the last four years, the percentage of vigilance cases against RBI employees' *vis-à-vis* the total staff strength of the Bank stood on average at 0.004 per cent. Further, in terms of complaint cases received against RBI/RBI employees over this same period, the percentage that required punitive vigilance action stood on average at 0.081 per cent. We continue to endeavor to maintain high standards of integrity. Let me highlight some of the preventive measures taken by the Bank as a part of this endeavour.

Preventive vigilance measures at the RBI

The RBI Staff Regulations 1948 constitute one of the earliest attempts at prescribing preventive vigilance measures. The Regulations contain various 'Do's and Don'ts' for the staff. A Code of Ethics was also framed subsequently in 2013 titled 'Ethics at Work.' Preventive vigilance measures emanating from these Regulations and the Code are enforced partly at the individual level, and, partly at the organisational level.

At the individual level, instructions are in place requiring an officer to obtain prior permission for certain transactions (*e.g.*, acquisition of immovable property and taking a loan from a financial institution); reporting of certain transactions (acquisition of movable assets above a monetary limit and employment of family members in financial institutions); and upfront disclosure when the employee has a personal interest in any official transaction which (s)he is dealing with.

At the organisational level, the preventive vigilance measures in place include identification of sensitive posts, surprise visits by senior officers to vigilance sensitive areas, incorporating vigilance related sessions in the Human Resource (HR) related training programmes at the Bank's training establishments, sensitising new recruits on various aspects of vigilance and proper conduct, periodical rotation of staff, well laid down recruitment procedures and procurement policies, close monitoring through CCTV of sensitive areas in the cash department, institution of an effective grievance redressal machinery for the staff and persons who have official interaction with the Bank, *etc.*

As part of these preventive vigilance measures at the organisational level,

- The Central Vigilance Cell brought out a Compendium of instructions on Tenders and other vigilance matters for the benefit of the staff. The Premises Department of the Bank also has a manual for all procurement. The Cell, during the course of the Vigilance Awareness Week 2017, launched a separate site on our intranet site (called the 'EKP') where all vigilance related information is available in one place.
- In March 2017, the Cell organised a training programme at the College of Agricultural Banking (CAB), Pune, wherein the Chief Technical Examiner of the Commission addressed the officers of the Bank dealing with procurement activities and provided them with valuable tips on addressing vigilance issues that arise during the process of procurement.
- Another training programme for the senior officers of the Bank was organised in September 2017 at the CBI Academy in Ghaziabad to sensitise officers on the investigative aspects of vigilance.
- A workshop on 'Principles of procurement and related case studies' was recently conducted at Mumbai for the benefit of officers dealing with

procurement. Further, a Video Conference was held to enhance awareness and to review the status of implementation of e-tendering.

An important feature of preventive vigilance at the Bank is internal governance, *i.e.*, involvement of employees themselves for disciplining each other. For instance, as a step towards further strengthening preventive vigilance in the area of procurement, the Bank has introduced the concept of 'Integrity Pact' (IP) for large value procurement (exceeding ₹5 crores) and the pact is overseen by an Independent External Monitor (IEM) appointed by the Bank with the concurrence of the Commission. The Integrity Pact (IP) is an agreement between the prospective bidder (vendor) and the buyer not to resort to any corrupt practices in any stage of the contract. The Pact between the vendor and the buyer involves their primarily agreeing to refrain from bribery, collusion, *etc.*, during the entire process of the contract. The Independent External Monitor independently reviews whether and to what extent parties to the Pact have complied with their obligations under the Pact. In case of a suspicion, the IEMs examine all complaints received for breach of Pact and furnish their views to the Chief Executive of the organisation or directly forward the findings to the CVO and the Commission.

Several other measures are also aimed at instilling strong internal governance. To ease lodging of vigilance related complaints, the name, address, telephone/fax number and e-mail address of the CVO is displayed on the website of the Bank. The Cell has also put in place a whistle blower policy for the Bank so that instances of corruption can be exposed by an employee without fear of retribution, or without the complainant's identity being disclosed.

Finally, with a view to promoting transparency in our functioning and restricting ad-hoc exercise of powers, the Bank has taken additional measures such as:

- Providing substantial disclosure on the Bank's website regarding its functioning; the

procedures followed in its decision-making; and the timeframe for granting approvals and permissions.

- Departments that have public interface are required to display a Citizen's Charter, which indicates time schedules for diverse activities; for deficiency in service, a publicised grievance redressal system is in place.
- Requirement that whenever any monetary penalty is imposed on a regulated entity, such decisions are taken by a Committee unconnected with the underlying operation, and not by any individual officer, after following a due process; the details of the penalties are also disclosed on the Bank's website.
- All tenders that are floated or awarded by the Bank above a certain monetary limit are displayed on the website.

Conclusion

Let me conclude. Being a public sector institution, and as argued conceptually above, the Reserve Bank

of India considers preventive vigilance measures as the lynchpin of its efforts for good governance. The extant preventive vigilance measures at the Bank have helped its employees adhere to its Regulations and the Code, with any deviations being carefully detected, scrutinised and remedied. The Central Vigilance Cell at the Bank will continue in its endeavour to preserve the highest level of integrity at the Bank by sustaining and strengthening these preventive vigilance measures further. We look forward to the Commission's support and guidance as we seek – in the ever-increasing complexity of the Bank's environment – to strengthen its preventive vigilance framework, by simplifying rules and procedures as also by leveraging technology to ensure compliance. Thank you.

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ARTICLES

Recent Developments in India's Mutual Fund Industry

Inflation Expectations Survey of Households: 2017-18

*Recent Developments in India's Mutual Fund Industry**

Mutual fund (MF) industry in India is maturing with broad-basing of investors and increasing geographical spread. MFs in India have become major players in the equity and corporate bond markets and are also providing crucial liquidity support to the money market. Consequently, their influence on price movements in equity and debt markets as also domestic liquidity conditions has increased over time. While the penetration of the MF industry in India, as measured by the Assets under Management (AUM)/GDP ratio, is still low compared with the global average, favourable demographics, a history of high savings propensity and regulatory reforms brighten the outlook for the industry.

Introduction

In recent years, credit intermediation is shifting, with the traditional dominance of the banking sector yielding ground to non-bank intermediaries, including the asset management industry. Within this silent transformation, the MF industry is turning out to be the fastest growing and the most competitive segment of India's financial sector, offering operational flexibility and attractive returns to investors (RBI, 2017). AUM of MFs in India has registered a compound annual growth rate (CAGR) of 25 per cent over the last five years (2013-2018), outstripping the CAGR of only 11 per cent registered by aggregate bank deposits of scheduled commercial banks (SCBs).

With growing formalisation and financialisation of the Indian economy, household savings have

been shifting from physical assets to financial assets and within financial assets, from bank deposits to securities. As investment in capital market instruments involves risks, and individual investors lack expertise with regard to portfolio construction, stock selection and market timing, MFs step in to pool money from a wide cross-section of investors and diversify risk by investing in a portfolio of stocks, bonds and/or money market instruments. These investments are actively managed by professional portfolio managers who undertake strategic transactions to take advantage of current or expected market conditions. In the process, MFs provide a steady flow of income and capital appreciation along with tax benefits to otherwise risk averse lay investors. Not surprisingly, therefore, household preference for MFs over other avenues of investment has increased dramatically since 2016. While the penetration of the MF industry in India, as measured by the AUM/GDP ratio, is still low compared with the global average, favourable demographics, a history of high savings propensity and regulatory reforms brighten the outlook for the industry. In addition, MFs play an important role in equity, debt and money markets as efficient allocators of resources. The debt portfolio of MFs mainly comprises corporate debt instruments, which include floating rate bonds (FRBs), non-convertible debentures (NCDs) and PSU bonds. In the money market segment, MFs are the major lenders in the collateralised borrowing and lending obligation (CBLO) segment, accounting for over 60 per cent of lending in this segment. As major domestic institutional investors, they operate in both primary and secondary segments of the capital market, providing a buffer against market volatility.

Against this backdrop, this article attempts to analyse recent developments in the Indian MF industry, *i.e.*, up to end-March 2018, with a view to situating it in the changing landscape of financialisation in India. As we show, there are various facets of the industry

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that are less known and even less understood. Our view is that the MFs bridge an important information asymmetry pertaining to investments in the markets and by doing so, they facilitate efficient channelisation of savings, expand investment opportunities, foster market development and catalyse higher investment and growth in the economy.

The article is structured into four sections. Section II sets out the policy environment in which the Indian MF industry operates, focusing on various regulatory initiatives taken by the Securities and Exchange Board of India (SEBI) in the recent years to develop the industry. Section III discusses growing financialisation of savings, recent trends in resource mobilisation by MFs, their investments in equity and debt markets in India and how the industry stacks up in relation to the global MF industry. Section IV provides some concluding observations.

II. The Policy Environment

The origins of MFs in India can be traced back to the second half of the 19th century when the first investment trust - the Financial Association of India and China - was formed in 1869. The first Industrial Investment Trust was established in 1933 by M/s Premchand Roychand in Bombay. Many other industrial houses also established trusts, which worked as investment companies and mobilised funds from industrial group companies and promoters. However, a solid foundation for the industry was laid in 1963 with the establishment of the Unit Trust of India (UTI) at the initiative of the Reserve Bank of India (RBI) and the Government of India (GoI). It was not until 1987 that new entrants began to shape the evolution of the industry, interspersed with phases of consolidation.

According to AMFI¹, there are five broad phases of the development of the industry. The first phase (1964-1987) started with the formation of the UTI by

¹ Association of Mutual Funds in India.

an Act of the Parliament and Unit Scheme 1964 (US' 64) was the first MF scheme launched by it in 1964. By the end of 1988, UTI had AUM of ₹67.0 billion. The second phase (1987-1993) marked the emergence of public sector financial companies as MFs, beginning with the establishment of State Bank of India (SBI) MF in 1987. Several other public sector banks, the Life Insurance Corporation of India (LIC) and the General Insurance Corporation of India (GIC) also set up their MFs and the industry's AUM reached ₹470.0 billion by end-1993. With the establishment of the SEBI in 1992 to protect investors' interest and to develop and regulate securities markets in India, a new era in the Indian MF industry began in 1993. In the third phase (1993- 2003), private players were allowed to enter the industry and the Indian securities market began to provide Indian investors a variety of MF products. In 1993, SEBI started regulating the MF industry, except UTI, as per SEBI (Mutual Funds) regulations, 1993, which were comprehensively revised and the new regulations notified in 1996. A number of foreign sponsored MFs came into the market and many mergers took place during this phase. At the end of January 2003, there were 33 MFs with total AUM of ₹1,218.1 billion. The fourth phase (2003-April 2014), which began with the repeal of the UTI Act 1963 in February 2003 and bifurcation of the UTI into a Specified Undertaking of the Unit Trust of India (SUUTI) and the UTI Mutual Fund, witnessed several mergers among private sector funds that led to further consolidation and growth of the MF industry, which was interrupted in the years following the global financial crisis. The fifth phase (May 2014 onwards) witnessed a revival of the industry with steady growth in inflows and AUM, supported by the SEBI's regulatory measures, enhanced reach through better distribution networks and greater investor education.

The SEBI has taken various measures in recent years to establish a comprehensive and credible regulatory regime for the industry, while improving

accessibility of MF products, re-energising the distribution system, ensuring greater transparency, addressing issues concerning investor protection and awareness.

Under the SEBI's initiatives, a new cadre of distributors was formed in September 2012, which includes postal agents, retired government officials, retired teachers and bank officers who were awarded certificates by the National Institute of Securities Markets (NISM) for distribution of simple MF products. MF distributors were also allowed to use recognised stock exchange platforms to purchase and redeem MF units directly from MFs on behalf of their clients from October 2013. In order to reduce the cost of trading for Asset Management Companies (AMCs) in debt segment, MFs were allowed to directly trade on debt platforms of the stock exchanges by registering themselves under the 'proprietary trading members' category on behalf of schemes managed by them from August 2013. Additional distribution channels through online investment facilities and the burgeoning mobile-only mode for direct investment in MF products were allowed from April 2014 to tap internet savvy users. SEBI registered investment advisors (RIAs) were also allowed to use the infrastructure of recognised stock exchanges to purchase and redeem MF units directly from AMCs on behalf of their clients, including direct plans, from October 2016.

Provisions for separate plans for direct investments, *i.e.*, investments not routed through a distributor, in existing as well as new schemes by MFs, were made available from 2012-13. In September 2012, MFs were incentivised to enhance their reach in small cities beyond the top 15 cities by allowing them to charge additional total expense ratio (TER) up to 30 basis points on daily net assets under the scheme if the new inflows from beyond top 15 cities were at least 30 per cent of the gross new inflows in the scheme or 15 per cent of the average AUM (year to date) of the scheme, whichever is higher.

In order to enhance the reach of MF products amongst small investors, cash transactions in MFs to the extent of ₹20,000 per investor per MF per financial year were allowed in September 2012 and this was further increased to ₹50,000 in May 2014. Investment in MFs through e-wallets has been introduced in April 2017 to channelise household savings into the capital market as well as to promote digital payments in the MF industry. In July 2013, the SEBI mandated that MFs should label their schemes in terms of maturity (short/medium/long term), investment objective and level of risk with three colour codes to depict low, moderate and high levels of risk. In order to address the issue of mis-selling of MF products and for providing investors an easy understanding of the type of product/scheme, product labelling in MFs was further rationalised in July 2015 by replacing risk depiction through colour codes with a pictorial meter named 'Riskometer', which appropriately depicts five levels of risk in any specific scheme. From September 2012, AMCs were required to disclose half yearly financial results of MFs on their websites and through advertisement in at least one national English daily newspaper and one regional newspaper in order to increase transparency and enhance the quality of disclosure for investors. Disclosure of information pertaining to average AUM of various categories of schemes, various investor types, contributions from sponsors and their associates on a monthly basis on their website was also mandated in April 2014. In October 2012, the SEBI stipulated that MFs should annually set apart at least 2 basis points of daily net assets within the maximum limit of TER for investor education and awareness initiatives. Printed literature on MFs in regional languages was also mandated and MFs are encouraged to introduce investor awareness campaigns using electronic media in regional languages.

In 2017-18, SEBI undertook measures for categorisation and rationalisation of MF schemes in order to bring uniformity across MFs and to standardise the scheme categories and characteristics.

The earlier provision of additional TER of up to 30 basis points for inflows from beyond top 15 cities has now been permitted only for inflows from beyond top 30 cities. AMC's are required to disclose on a daily basis the TER of all schemes under a separate head 'Total Expense Ratio of Mutual Fund Schemes' on their websites in order to bring uniformity in disclosure of actual TER charged in respect of MF schemes and to enable the investors to take informed decisions. The performance of the MF schemes needs to be benchmarked to the total return variant of the index chosen as a benchmark going forward instead of the present system of benchmarking to the price return variant of the index, which only captures capital gains of the index constituents. This is intended to enable the investors to compare the performance of a scheme *vis-à-vis* the total return generated by the benchmark index².

III. Recent Trends in Resource Mobilisation

At end-March 2018, there were 45 MF companies registered with the SEBI which managed an AUM of ₹21,360.4 billion. Of the total AUM, 83 per cent was held by private sector MFs and 17 per cent by public sector MFs. The ratios of AUM of MFs to GDP and net mobilisation by MFs to gross domestic savings have increased significantly over the years (Table 1).

Table 1: Ratios of MF AUM as per cent of GDP and Net Mobilisation by MFs as per cent of Gross Domestic Savings

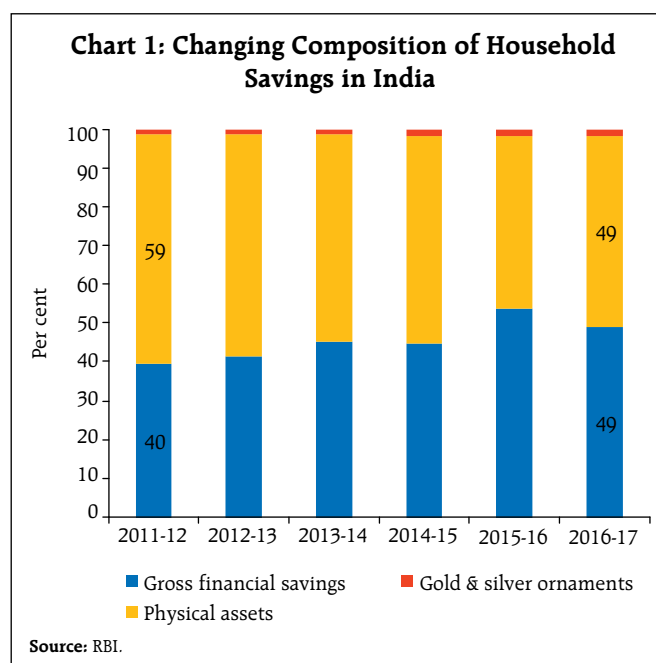
Year	MF AUM % of GDP	Net Mobilisation by MFs as % of Gross Savings
2011-12	6.7	-0.7
2012-13	7.1	2.3
2013-14	7.3	1.5
2014-15	8.7	2.6
2015-16	9.0	3.1
2016-17	11.5	7.5
2017-18	12.7	-

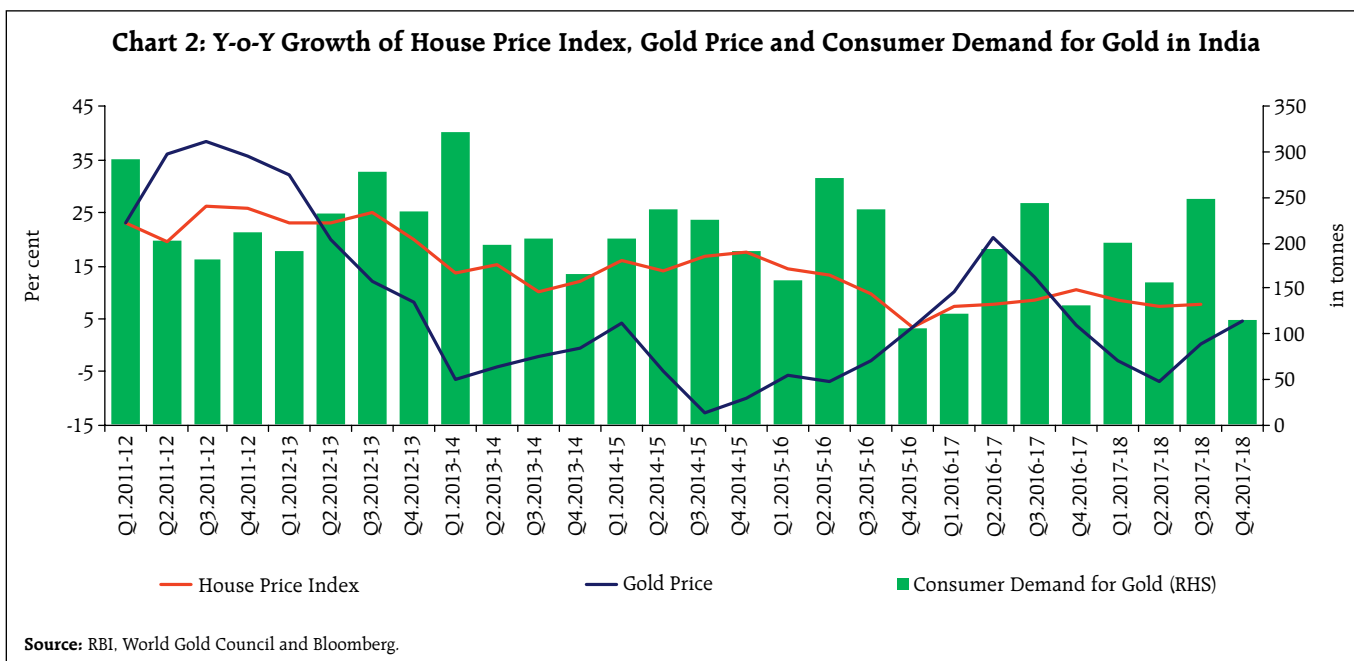
Source: Ministry of Statistics and Programme Implementation (MOSPI) and AMFI.

² Benchmark indices include BSE Sensex, Nifty 50, BSE 100, BSE 200, etc.

This remarkable transformation has greatly facilitated shifts in household saving patterns. Indian households, which contributed 54.0 per cent of the gross savings of the economy in 2016-17, have historically been risk-averse, preferring investments in physical assets and gold. However, this pattern is slowly changing in the backwash of demonetisation in November 2016 and shifts towards MFs have become large. With increasing development of the financial sector, the household sector's savings in physical assets and gold & silver ornaments taken together declined significantly from 60 per cent in 2011-12 to 51 per cent in 2016-17 (Chart 1).

In addition to demonetisation, implementation of new regulations such as the Real Estate (Regulation and Development) Act, 2016 (RERA) and the Benami Transactions (Prohibition) Amendment Act, 2016 have also contributed to greater formalisation of the economy causing shifts in savings from physical to financial investments. This has energised non-bank intermediaries like MFs, which give relatively higher returns on liquid investments than housing and/or gold (Chart 2). The consumer demand for gold in India declined by around 24 per cent from 1,002 tonnes in 2010 to 763 tonnes in 2017.





III.1. Resource Mobilisation

MFs appear to have emerged as a preferred investment avenue for individuals as well as corporates. While the flow of resources to banks generally declined during the period 2013-18, the flow of resources to small savings schemes registered modest increase. In comparison, the flow of resources to MFs and insurance companies registered a significant increase

during the period (Chart 3). During the period 2013-2018, the CAGR of bank deposits and small savings were 11 per cent and 6 per cent, respectively, which was much lower than CAGR of AUM of MFs (25 per cent). Bank term deposits by corporates registered a much lower CAGR of 2 per cent during 2013-2017. Along with increasing levels of economic development, deep and liquid capital markets and sound regulations are

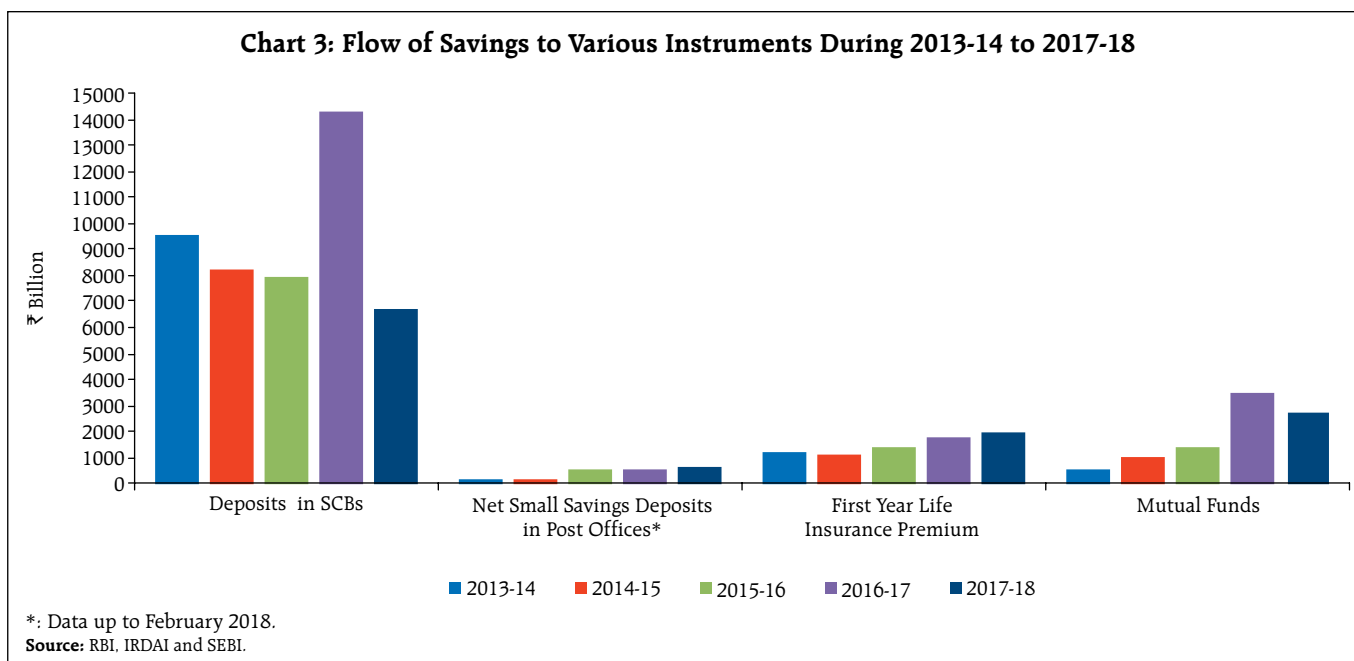


Table 2a: Bank and Post Office Deposit Rates (Yearly average returns)

(Per cent)

Year	Bank Deposit (1-3 years)	Bank Deposit (3-5 years)	Post Office Monthly Income Scheme	NSC VIII issue	Post Office RD Account	Post Office Time Deposit (1 year)
2013-14	9.25	9.10	8.40	8.50	8.30	8.20
2014-15	8.75	8.75	8.40	8.50	8.40	8.40
2015-16	7.50	7.50	8.40	8.50	8.40	8.40
2016-17	7.00	6.90	7.80	8.10	7.40	7.10
2017-18	6.75	6.50	7.60	7.90	7.20	6.90

Source: RBI.

catalysing the change in preference of investors not only from metro cities but also from small cities. MF investments are also becoming broad-based in terms of spatial distribution and investor profile.

The bank deposit rates on 1-3 years declined by 250 basis points from 9.25 per cent in 2013-14 to 6.75 per cent in 2017-18. Similarly, interest rates on post office monthly income scheme and NSC VIII issue declined by 80 basis points and 60 basis points, respectively, during the same period (Table 2a). On the other hand, the CRISIL - AMFI Mutual Fund Performance Indices, which track the performance of various MFs adjusted for corporate actions, show that the returns on broader schemes

Table 2b: CRISIL - AMFI Mutual Fund Performance Index (Yearly returns)

(Per cent)

Year	Equity Fund	ELSS Fund	Debt Fund	Income Fund	Money Market Fund	Liquid Fund	Balanced Fund	Hybrid Fund
2013-14	21.1	24.0	5.6	3.3	9.4	9.4	18.5	13.2
2014-15	43.8	46.5	12.5	14.8	9.0	9.0	37.2	31.1
2015-16	-6.7	-7.7	7.1	5.5	8.3	8.2	-2.6	-1.3
2016-17	25.9	24.3	10.2	11.0	7.6	7.2	22.1	20.8
2017-18	10.6	10.9	6.0	4.2	6.7	6.7	8.9	8.5
CAGR (2013-14 to 2017-18)	17.7	18.2	8.2	7.7	8.2	8.1	16.1	13.9

ELSS: Equity Linked Savings Scheme.

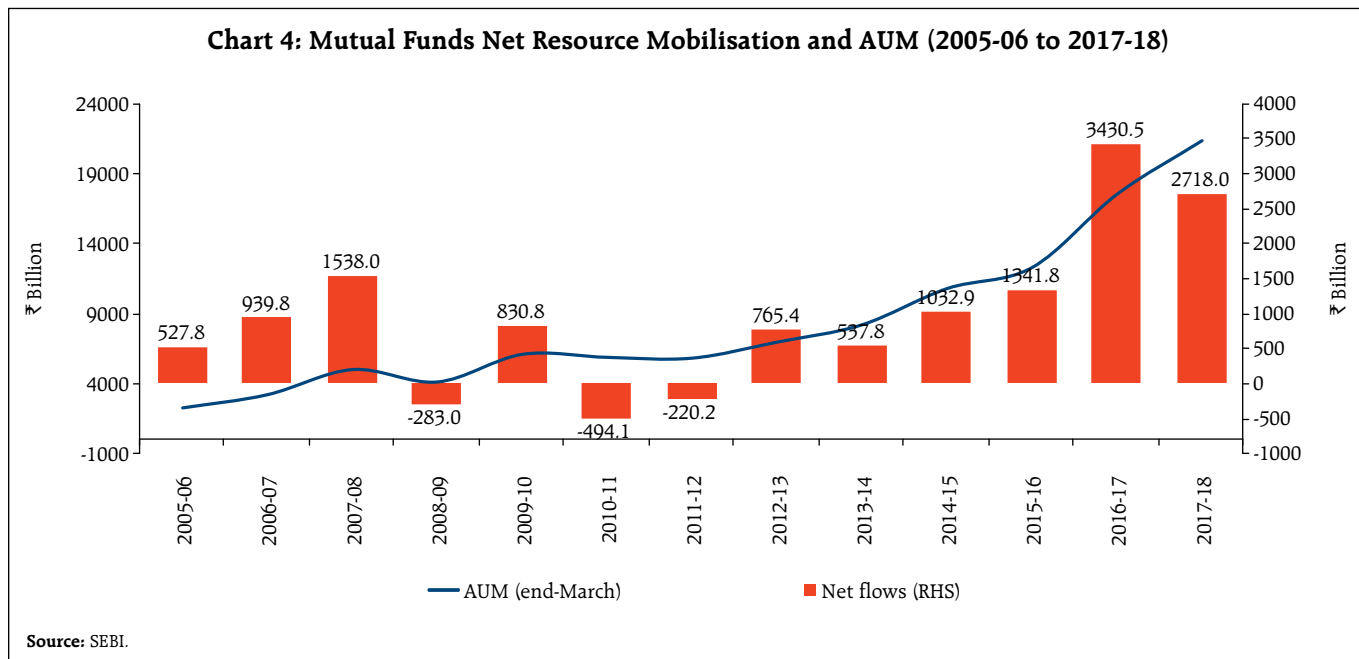
Source: CRISIL.

over the last five years are higher than other financial instruments (Table 2b).

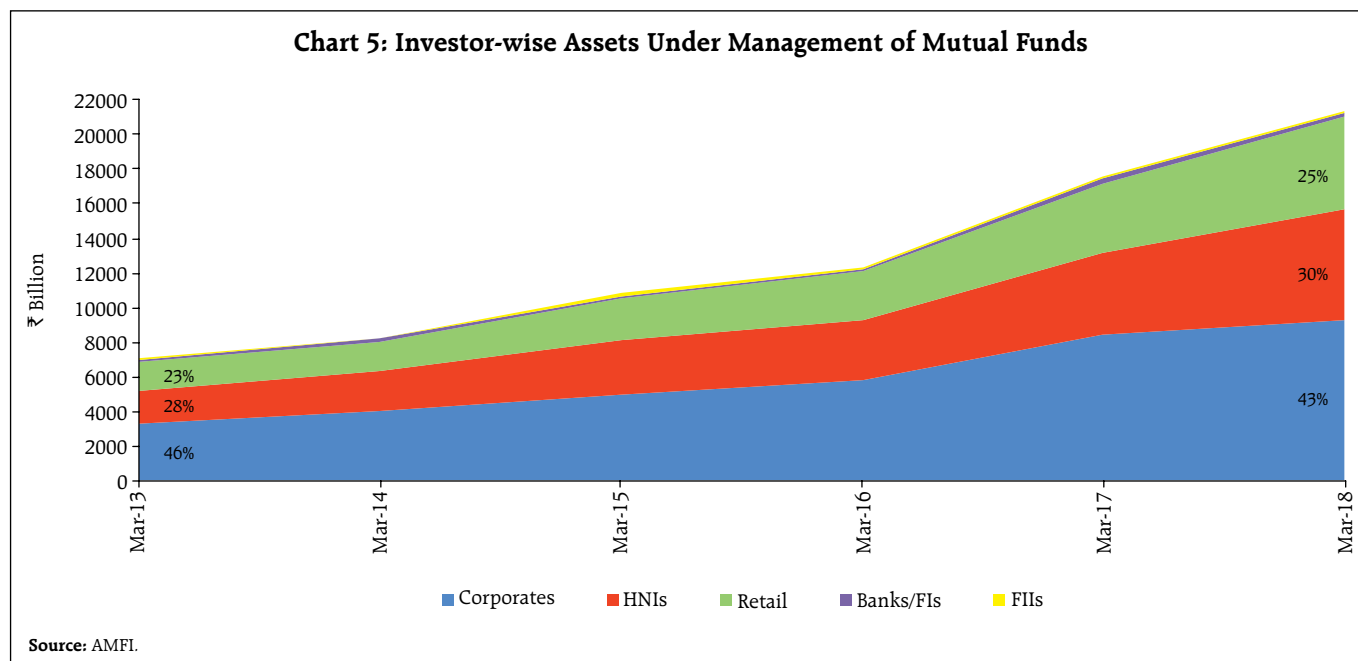
III.2 Investor Profile

During the period 2013-18, average yearly funds mobilised by MFs was significantly higher at ₹1,812.2 billion as compared with ₹119.8 billion during 2008-13. Fund mobilisation by MFs reached a record in 2016-17, increasing by almost 3 times over the previous year, in the wake of demonetisation in November 2016 (Chart 4). However, there was a decline in fund mobilisation in 2017-18 mainly on account of higher

Chart 4: Mutual Funds Net Resource Mobilisation and AUM (2005-06 to 2017-18)



Source: SEBI.



net outflows from debt/income schemes on higher redemptions by corporate/institutional investors.

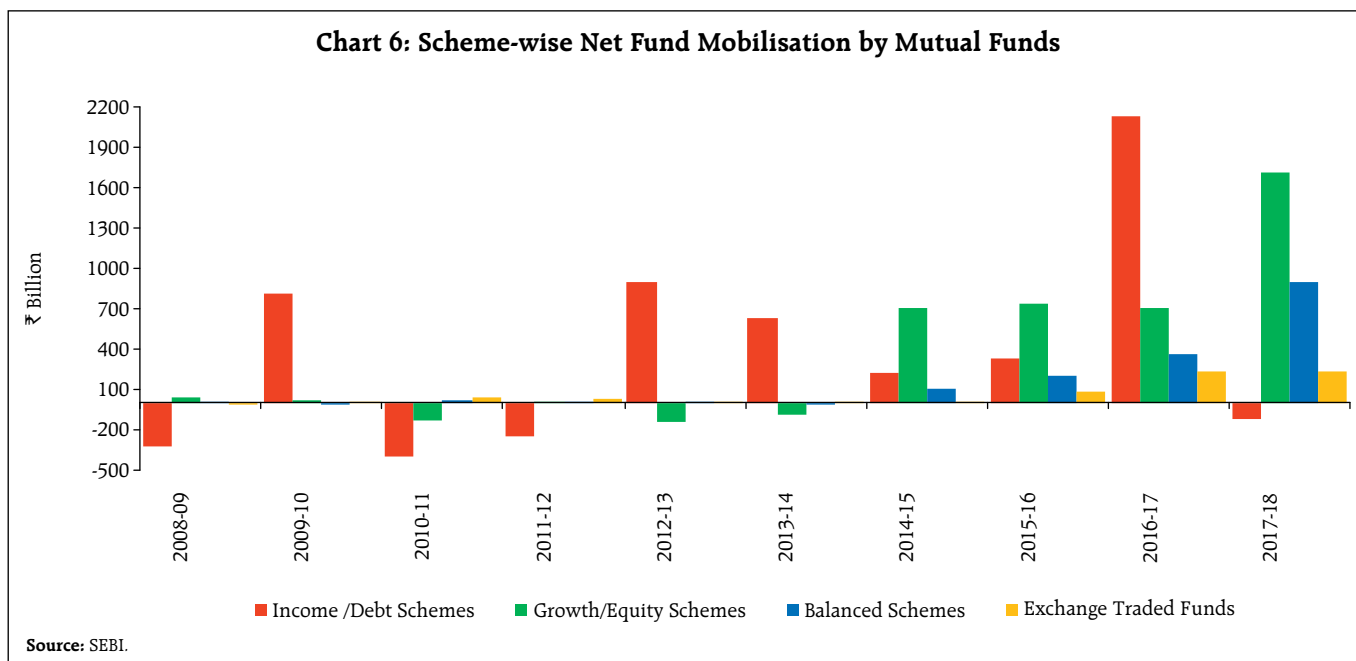
Higher mobilisation through systematic investment plans (SIPs) has contributed significantly to the expansion of MFs in India. During 2017-18, SIPs' contribution increased by 53.0 per cent to ₹671.9 billion from ₹439.2 billion in 2016-17. Increasing investment from smaller cities (other than metros), which accounted for 18.7 per cent share in AUM of MFs at end-March 2018, and overwhelming interest from the new generation have been contributing to this phenomenal growth. With increasing fund mobilisation, the Indian MF industry has registered exponential growth of AUM during the last five years to ₹21.4 trillion at end-March 2018. The AUM of MF industry has witnessed a CAGR of 25 per cent during 2013-2018, which is considerably higher than CAGR of 7 per cent registered during 2008-2013.

The unit holding pattern shows that individual investors held 99.4 per cent of the total 7.1 crore accounts in the MF industry at end-March 2018. However, in terms of AUM of the industry, corporate investors have the largest share at end-March 2018, followed by high net worth individuals (HNIs) and retail investors. While the share of corporates in assets

of MFs has been declining, there has been a steady increase in the share of HNIs and retail investors in the recent years (Chart 5). During 2013-18, the assets of HNIs and retail investors registered a CAGR of 27 per cent each as compared with the CAGR of 23 per cent for corporate investors. Corporates investments in MFs, which primarily consist of investment in debt/income schemes of MFs (79.7 per cent of their total investments in MFs), witnessed an unprecedented growth during 2016-17. Retail investors have higher investment in equity/growth-oriented schemes with a share of 71.7 per cent of their investments in MFs at end-March 2018. On the other hand, HNIs investments are diversified with an investment share of 44.4 per cent in debt/income schemes and 40.7 per cent in equity-oriented schemes.

III.3 Scheme-wise Profile

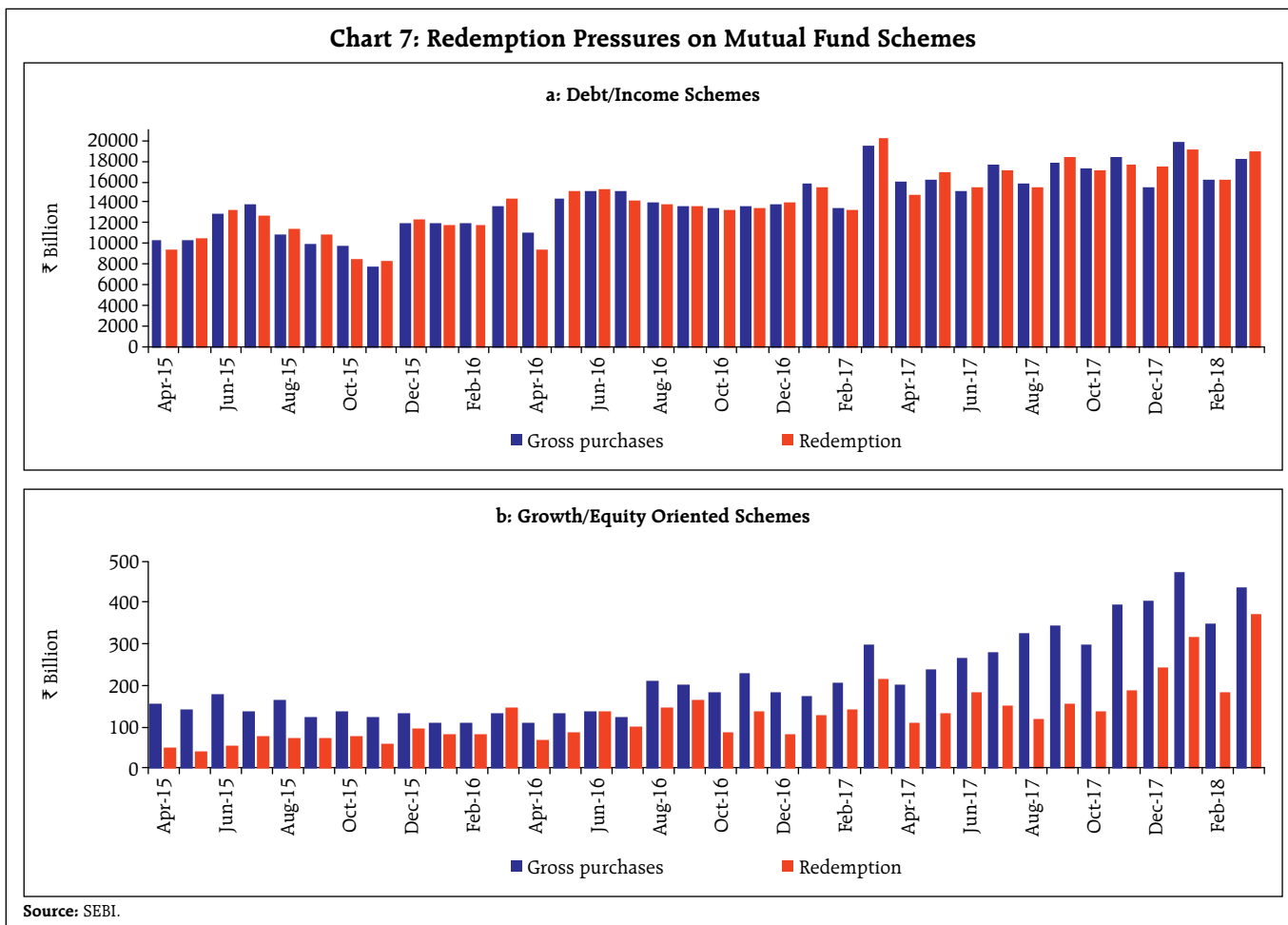
Over the last four years (2014-15 to 2017-18), net flows were positive for all categories of MF schemes, except for funds invested in overseas schemes. Reversing the earlier trend of high concentration of fund mobilisations through debt/income schemes, there has been an increasing contribution to other schemes of the MFs since 2014-15 (Chart 6). Fund mobilisation under growth/equity oriented schemes



turned positive in 2014-15 and has been continuously registering higher net inflows, touching a peak of ₹1,710.7 billion in 2017-18, strongly backed by investments from retail investors and HNIs mainly due to buoyancy in stock market, increasing preferences towards equity shares along with SEBI's various initiatives. It has also been observed that flows into equity MFs tend to be higher even during episodes of market turmoil mainly on the back of greater presence of individual investors who invest in MFs for longer-term, making stable contributions through periodic investments. During 2017-18, monthly average number of SIP accounts opened was 0.97 million as against 0.63 million in the previous year. As at end-March 2018, there were about 21.1 million SIP accounts in existence. Measures announced in the Union Budget 2013-14, such as reduction in securities transaction tax (STT) on equities and MFs and easing of norms for the Rajiv Gandhi Equity Savings Scheme (RGESS) to enable first time investors to invest in MFs may have contributed to significant increase in resource mobilisation by MFs in equity/growth-oriented schemes in the recent years.

Mobilisation under income/debt-oriented schemes, which mainly comprise corporate bonds (37 per cent of AUM) and liquid/money market schemes

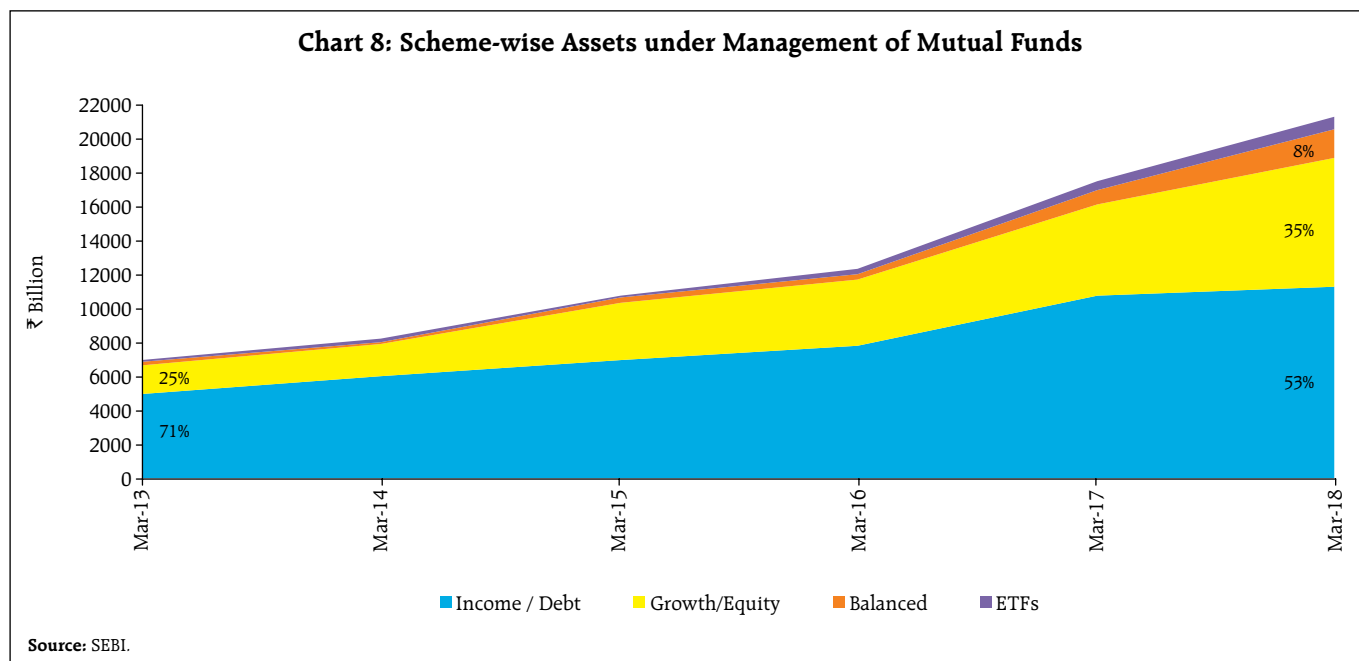
(16 per cent of AUM), has remained positive during the last five years, barring 2017-18. During 2016-17, fund mobilisation under debt/income schemes registered unprecedented growth with a record high mobilisation of ₹2,131.5 billion, constituting 62.1 per cent of the overall net resource mobilisation. However, the trend could not be sustained in 2017-18 following net outflows of 117.2 billion mainly due to higher redemptions by corporate/institutional investors. The higher share of corporate investors in debt/income schemes leads to yearly fluctuations in fund mobilisation in these schemes with no clear trends, as corporates generally invest in MFs to manage their cash flows and liquidity requirements. This also results in higher redemption pressure, particularly in the case of liquid/money market schemes, at the end of every quarter in order to meet corporate tax payment obligations and dividend payments (Chart 7 a & b). In view of increasing risk from high redemptions, SEBI has mandated the AMCs to impose provisional restrictions during episodes of excessive redemption requests. Further, as a part of risk management framework, MFs need to carry out stress test of their portfolios, particularly for debt schemes. Liquid/money market MFs are required to have effective liquidity management and carry out periodic stress



tests, at least once in a month or more frequently depending on the market conditions. This would help in evaluating potential vulnerabilities on account of sudden adverse developments and provide early warning signal regarding the health of the schemes.

Balanced schemes have also registered a steady increase in fund mobilisation mainly on the back of increasing participation from HNIs with a share of 54 per cent of AUM of the schemes followed by retail investors with 35 per cent share at end-March 2018. Similarly, Exchange Traded Funds (ETFs) are becoming more popular among corporate investors (corporates accounted for 86 per cent of ETF's AUM) and are witnessing significant increase in fund mobilisation from 2015-16 onwards, mainly supported by increasing contribution from retirement funds and disinvestment by GoI through ETF route.

In terms of number of schemes, income/debt schemes accounted for 67.9 per cent of the total 1998 MF schemes as at end-March 2018, followed by equity schemes (25.7 per cent) and ETFs (3.4 per cent). While income/debt schemes contribute a major portion of the total assets of MFs, the share of other schemes in the total assets has also increased over the last five years (Chart 8). During 2013-18, total assets under income/debt schemes grew at a CAGR of 18 per cent, which is considerably lower than CAGR of 60 per cent for balanced schemes, CAGR of 43 per cent for ETFs and CAGR of 34 per cent for growth/equity-oriented schemes. The relatively lower growth of AUM of debt/income schemes in the recent years could, to an extent, be attributed to increase in long-term capital gains tax on transfer of MF units other than equity funds to 20 per cent along with increase in the holding period in respect of such units to 36 months from 12 months introduced in the Union Budget, 2014-15.

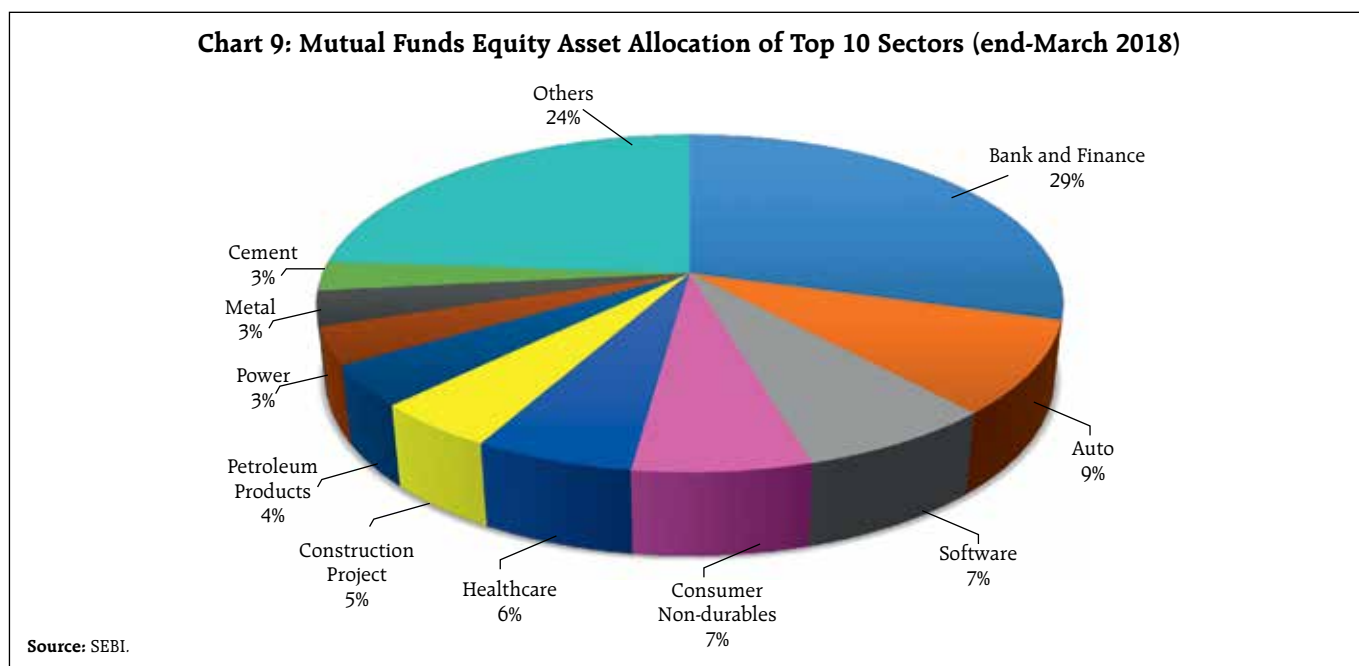


III.4 Investments in Equity, Debt and Money Market Instruments in India

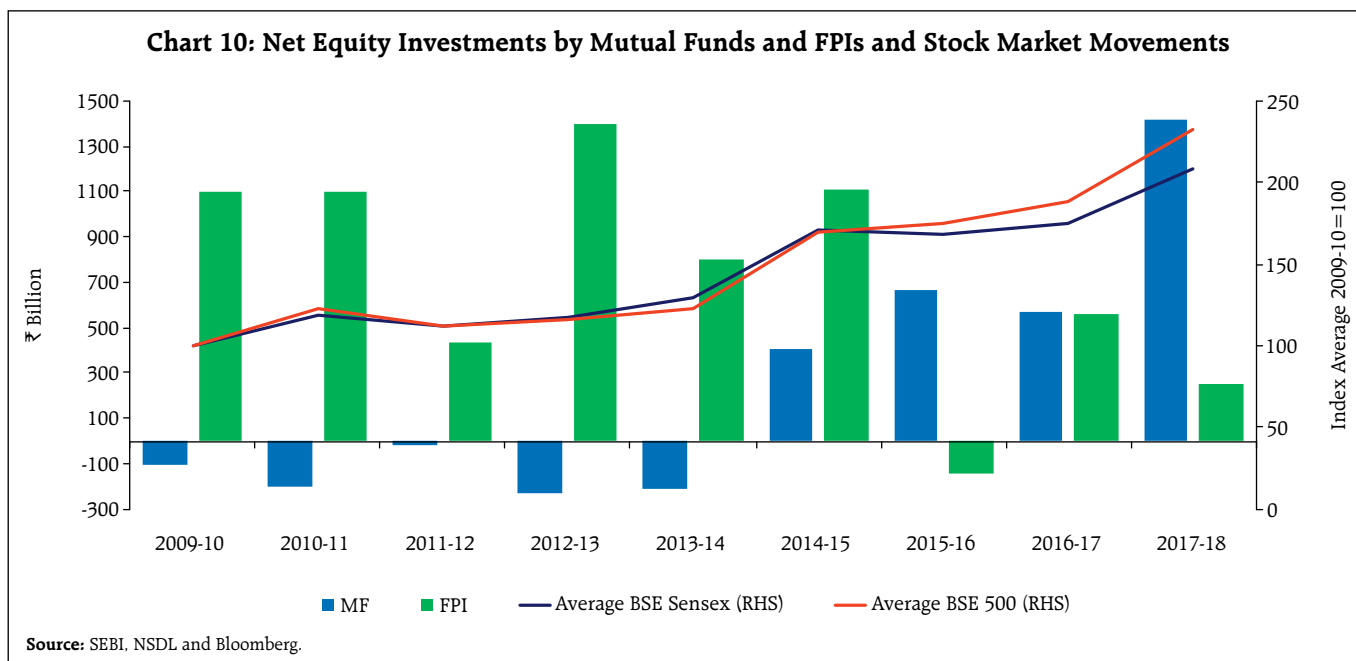
Equity Market

MFs' investment in equities stood at ₹8.9 trillion at end-March 2018, which accounted for 6.2 per cent of market capitalisation of the BSE listed companies (2.8 per cent at end-March 2014). Of the total free float

market capitalisation³, the share of MFs was about 15 per cent. This increase has mainly been due to higher investments by MFs in equities in the last few years on the back of higher mobilisations by equity-oriented MF schemes. Top 10 sectors accounted for 76 per cent of the total equity assets of MFs (Chart 9). The banking and finance sector has the highest weight in MFs' portfolio.



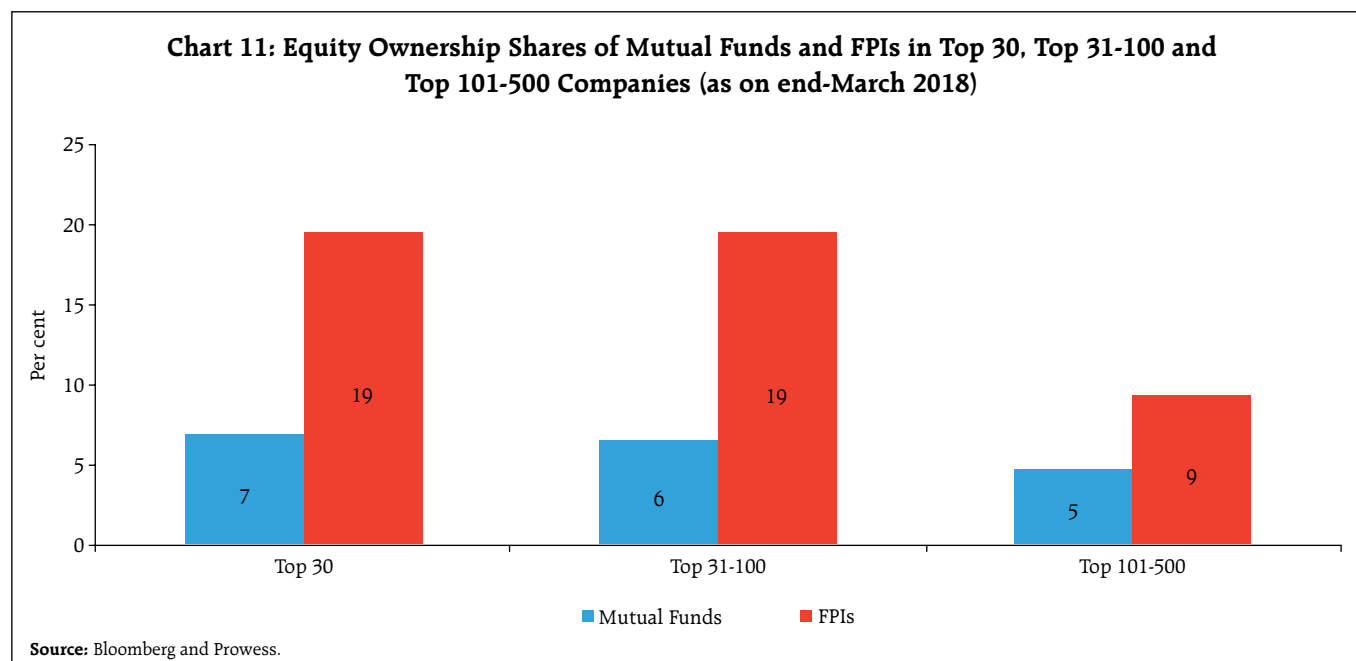
³ Free-float market capitalisation of BSE 500 companies.

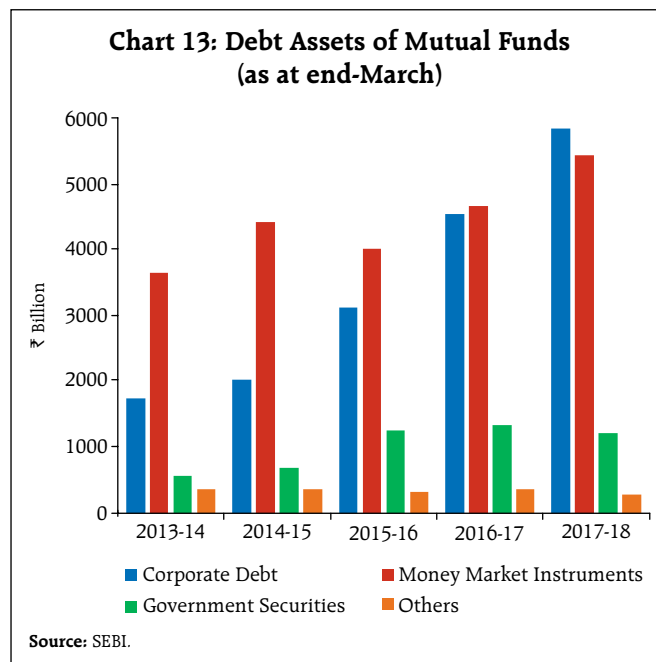
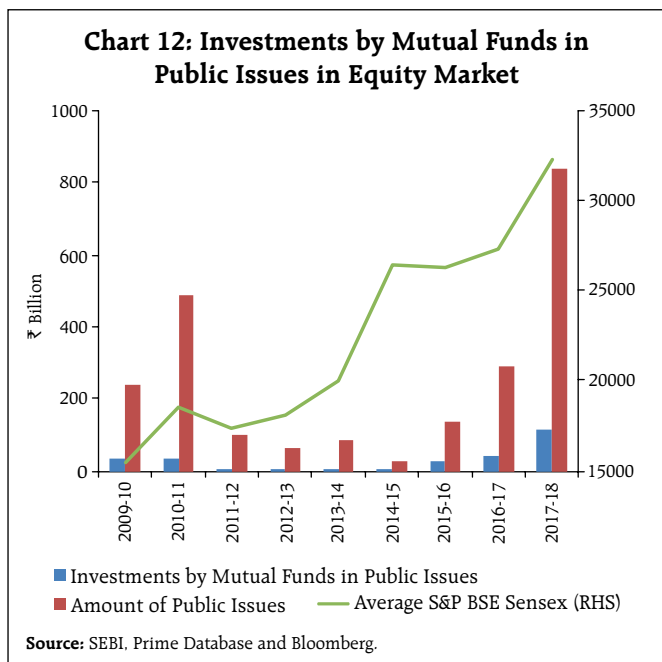


During the period 2014-15 to 2017-18, there was sustained net buying by MFs in the equity market, which lent support to the domestic equity market. The MFs have emerged as a counter balance to foreign portfolio investors (FPIs), especially during episodes of large net selling by FPIs. (Chart 10). During the period, the benchmark BSE indices also registered sharp increases. In terms of share in secondary market transactions, MFs accounted for 7.9 per cent of the

monthly turnover on an average in the cash segment of the BSE during 2017-18 as compared to a lower share of 2.3 per cent in 2012-13.

Data on equity ownership pattern of BSE 500 companies suggest that MFs have fairly similar share in ownership of companies of different sizes, *i.e.*, 5-7 per cent. This is in contrast with FPIs, which have relatively higher share in the top 100 companies as compared to the top 101-500 companies (Chart 11).





The preference of FPIs for larger companies possibly results in MFs having a significant influence on share price movements of top 101-500 companies.

In the primary market, MFs' investments in the public issues⁴ have risen, particularly since 2015-16, as more number of companies came up with their public issues to take advantage of the buoyant secondary market conditions. During 2017-18, MFs' investment accounted for 14.4 per cent of the total size of public issues (Chart 12).

Debt and Money Markets

MFs have historically been investing more in debt than in equity market on account of greater mobilisations under debt/income schemes. The debt assets of MFs mainly comprise corporate debt and money market instruments with a share of 49.1 per cent and 41.2 per cent, respectively, as at end-March 2018. The debt portfolio of MF industry has witnessed a shift towards corporate debt instruments, which include floating rate bonds (FRBs), non-convertible debentures (NCDs) and PSU bonds (Chart 13). MFs' investment in corporate bonds as a share of total

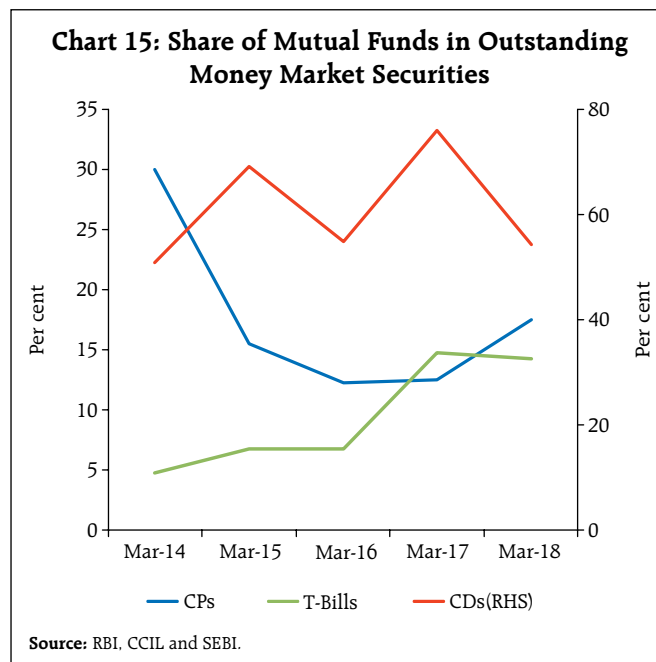
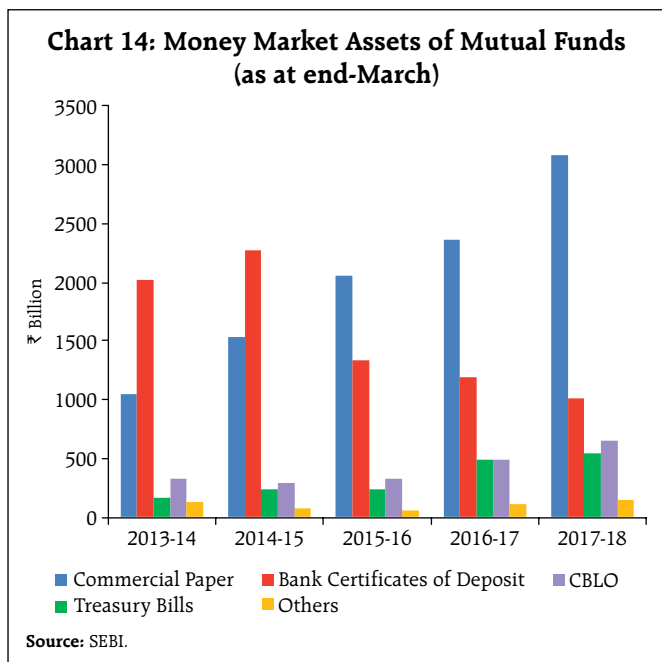
outstanding corporate bond issuances nearly doubled to 22.7 per cent at end-March 2018 from 11.8 per cent at end-March 2014.

MFs' investments in money market instruments include treasury bills, commercial paper (CP), certificates of deposit (CDs), CBLO, etc. A shift in their investments from CDs to CPs is clearly evident mainly due to the rising dependence of the commercial sector on non-bank sources of credit (commercial papers, corporate bonds, etc.) in the backdrop of asset quality concerns facing banks and the associated sluggish growth of bank credit as well as search for higher returns by the MFs (Chart 14). The share of MFs in outstanding money market instruments is significant at present (Chart 15). MFs are the biggest lenders in the CBLO segment accounting for 63.2 per cent of the total lending.

III.5 India's Mutual Fund Industry in the Global Context

The global MF industry has witnessed steady expansion in size over the years on the back of higher levels of economic development, deep and liquid capital markets and emergence of defined contribution systems that encourage participants to invest in MFs in

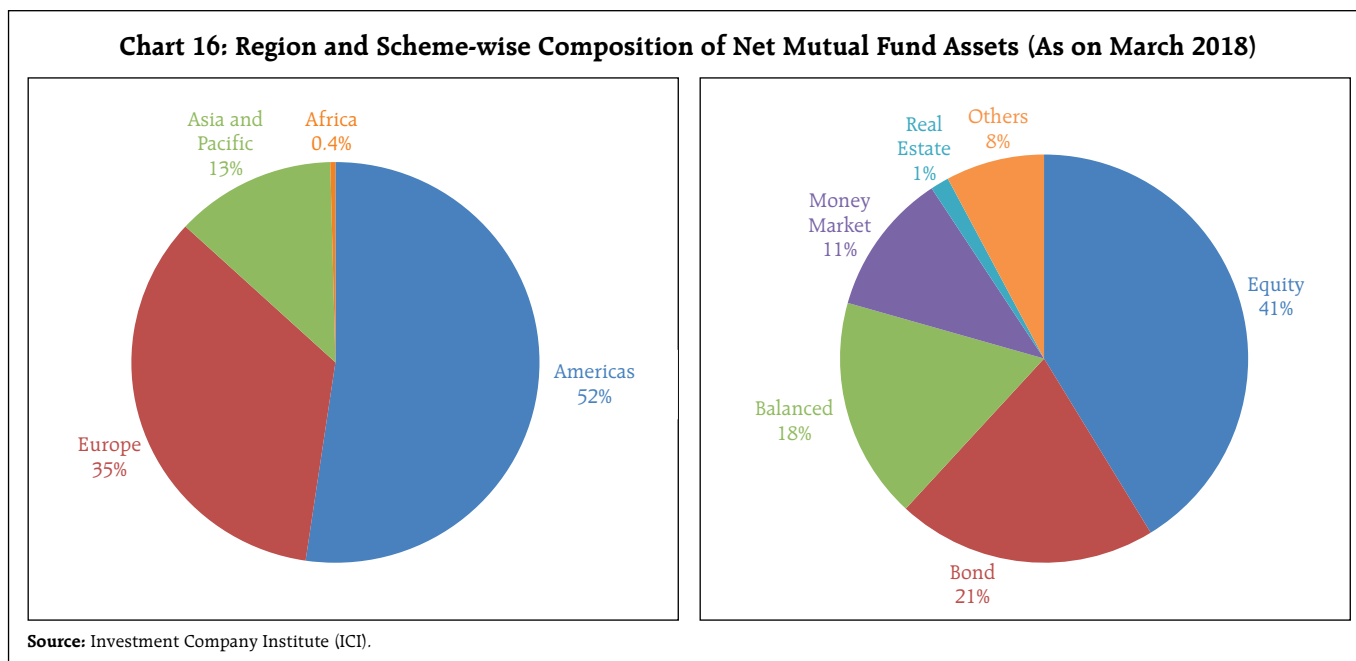
⁴ Includes investments by MFs in initial public offers (IPOs) and follow-on public offers (FPOs) as anchor investors and as Qualified Institutional Buyers (QIBs).

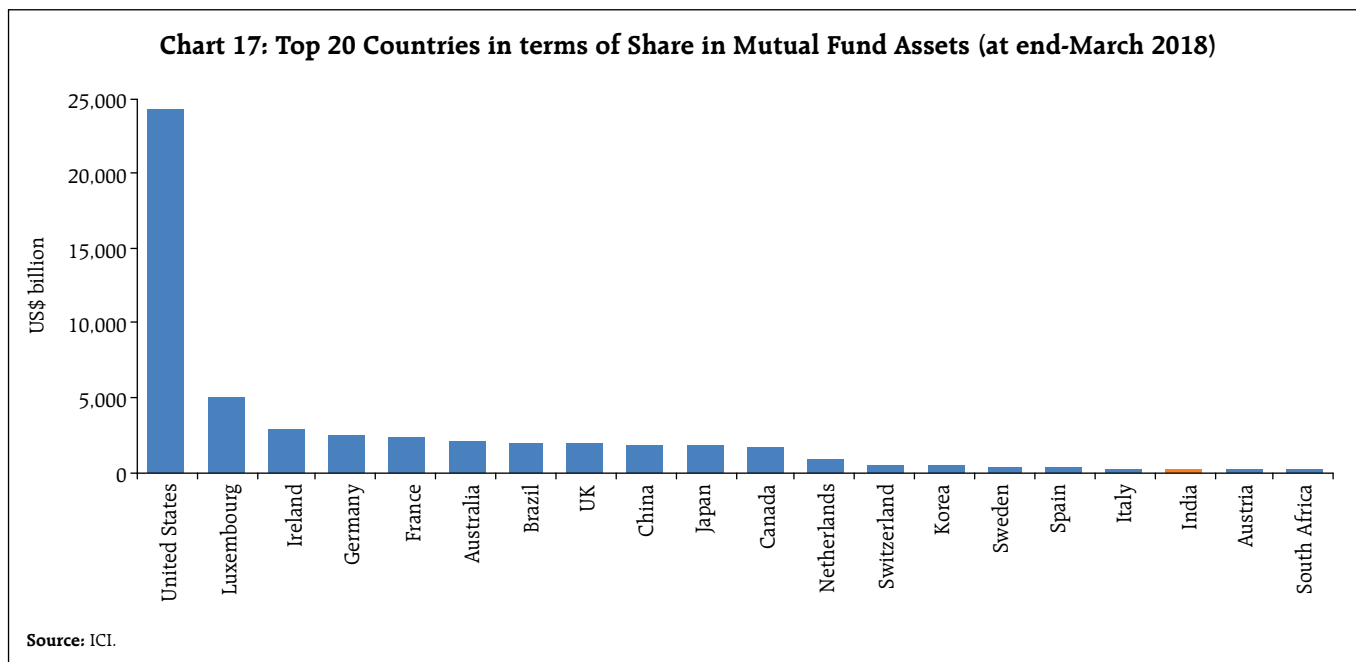


an atmosphere of investor friendly robust regulation. According to the Investment Company Institute, global MF assets (open-end fund) registered an increase of 16.2 per cent in 2017-18 to reach a level of \$53.9 trillion at end-March 2018. Top 5 countries accounted for 69.1 per cent of total global assets of MFs at end-March 2018. With assets of \$24.3 trillion, the US MF industry was the largest in the world, accounting for a share of 45.1 per cent of the total global MF

assets at end-March 2018. In comparison, MFs in Asia accounted for 12.7 per cent of total global MF assets (Chart 16).

India is among the top 20 countries in the world in terms of share in total global MF assets (it accounts for about 0.6 per cent of total global MF assets) (Chart 17). Its AUM/GDP ratio (11.8 per cent), which is a measure of penetration, however, is low relative to

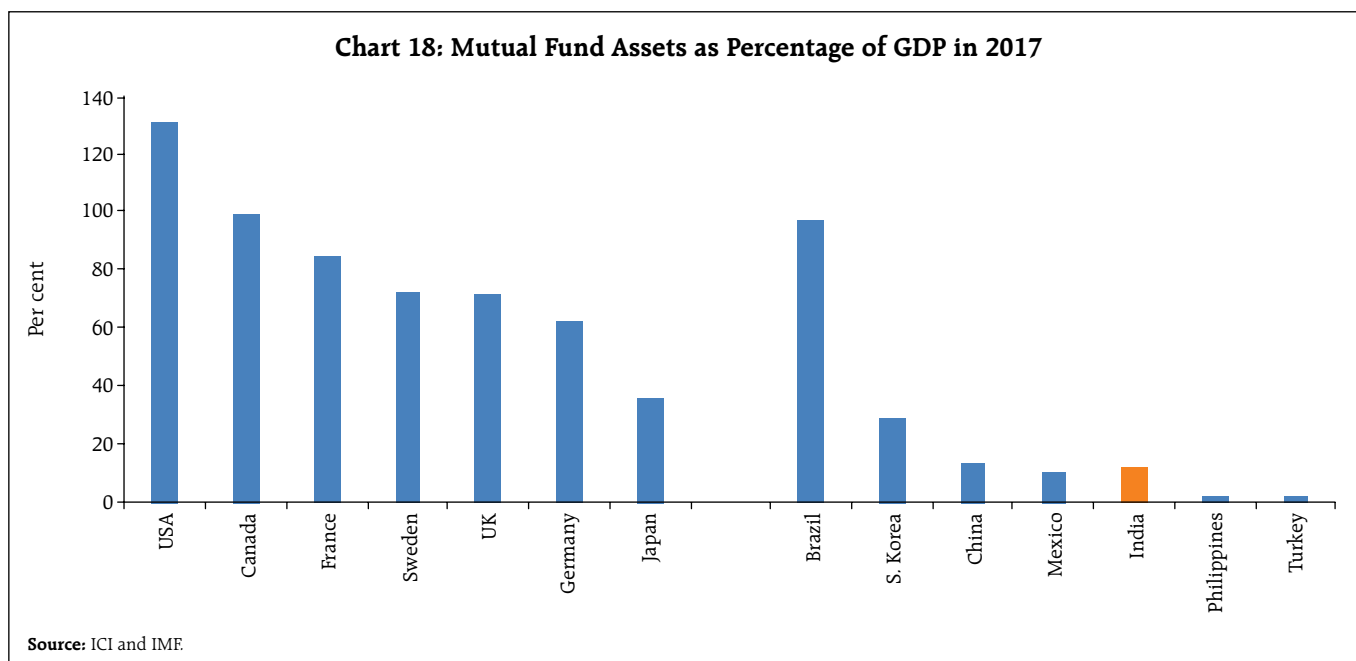




several emerging market peers (Chart 18). In terms of growth in AUM, India's MF industry's growth of 41.6 per cent in 2017 was nevertheless one of the highest in the world. Globally, the composition of MF assets shows that at end-March 2018, equity constituted a major share of 41.3 per cent (32.8 per cent in India). MFs' assets under bonds in India at 32.4 per cent is much higher than 20.6 per cent globally.

Conclusion

The MF industry in India has emerged over time as one of the fastest growing and competitive segments of the financial system. Notwithstanding higher risks in such investments, MFs have been attracting investors due to their professional management and the scope for earning better returns relative to traditional saving instruments. A robust regulatory



framework that is guided by the goal of protecting the interest of investors has also contributed to the shift in preference of households away from alternative financial and physical modes of savings in favour of MFs. The SEBI's regulatory reform initiatives such as strengthening of the distribution network, greater disclosure requirements from AMCs, and increased emphasis on investor education and awareness have also helped in deepening MF penetration in India. MFs as an asset class is maturing in India with broad-basing of investors and increasing geographical spread. MFs in India have become major players in the equity and corporate bond markets, besides providing crucial liquidity support to the money market, given that they are the biggest lenders in the CBLO segment. As a result, their ability to influence price movements in equity and debt markets as also domestic liquidity conditions has increased over time. Notwithstanding 25 per cent CAGR in AUM over the last five years (2013-18), a comparison with the current state of global MF industry suggests that the penetration level of MFs in India needs to increase on a sustained basis with wider participation of retail investors.

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*Inflation Expectations Survey of Households: 2017-18**

This article analyses the results of four quarterly rounds of the inflation expectations survey of households that were conducted during 2017-18. The analysis suggests that households' inflation expectations are largely adaptive, but use of information on inflation expectations for forecasting inflation can improve efficiency in terms of narrowing the confidence band. The study of dispersion in individual survey responses also provides additional information on the expected build-up of inflationary pressure.

Introduction

Inflation expectations are views of economic agents on future price developments. Accordingly, gauges of how people expect inflation to evolve provide important inputs for the conduct of monetary policy, especially in an inflation targeting framework. The Reserve Bank of India (RBI) has been conducting its Inflation Expectations Survey of Households (IESH) since September 2005, widening its coverage and bringing in methodological improvements, including in sampling design¹, over the ensuing years (Annex 1). The survey elicits qualitative and quantitative responses from households regarding their expectations on changes in price levels and inflation three months ahead as well as a year ahead². At the time when this article went to print, the survey is being conducted in 18 cities and covers a sample of about 5,500 households

* This article is prepared by Dr. A. R. Jayaraman, Ms. Purnima Shaw and Shri D. P. Singh under the guidance of Dr. Goutam Chatterjee in the Division of Household Surveys of the Department of Statistics and Information Management. The valuable inputs and suggestions provided by Dr. Michael D Patra, Executive Director are gratefully acknowledged. The authors would also like to thank Shri Deven N. Valecha, Research Intern for his remarkable contribution to this article. The views expressed in the article are those of the authors and do not represent the views of the Reserve Bank of India.

¹ A two-stage sampling procedure has been adopted and will be applied from the September 2018 round of the survey. Briefly, in two-stage probability sampling scheme, polling booths are selected as first stage units and households as second stage units.

² Households' inflation expectations are not comparable with official measures of inflation, since they relate to their own consumption baskets.

in each round³. So, how did households anticipate that prices and inflation would form in 2017-18?

This article accumulates and analyses the results of four quarterly rounds of the survey that were conducted during the year in Section II. Households' inflation expectations are benchmarked against movements in the Consumer Price Index-Urban (CPI-U) in order to evaluate lead tracking performance by hindsight in Section III. As individual responses tend to be heterogeneous, an attempt to measure the level of disagreement in qualitative and quantitative expectations is presented in Section IV. Section V summarizes the article and offers some policy perspectives.

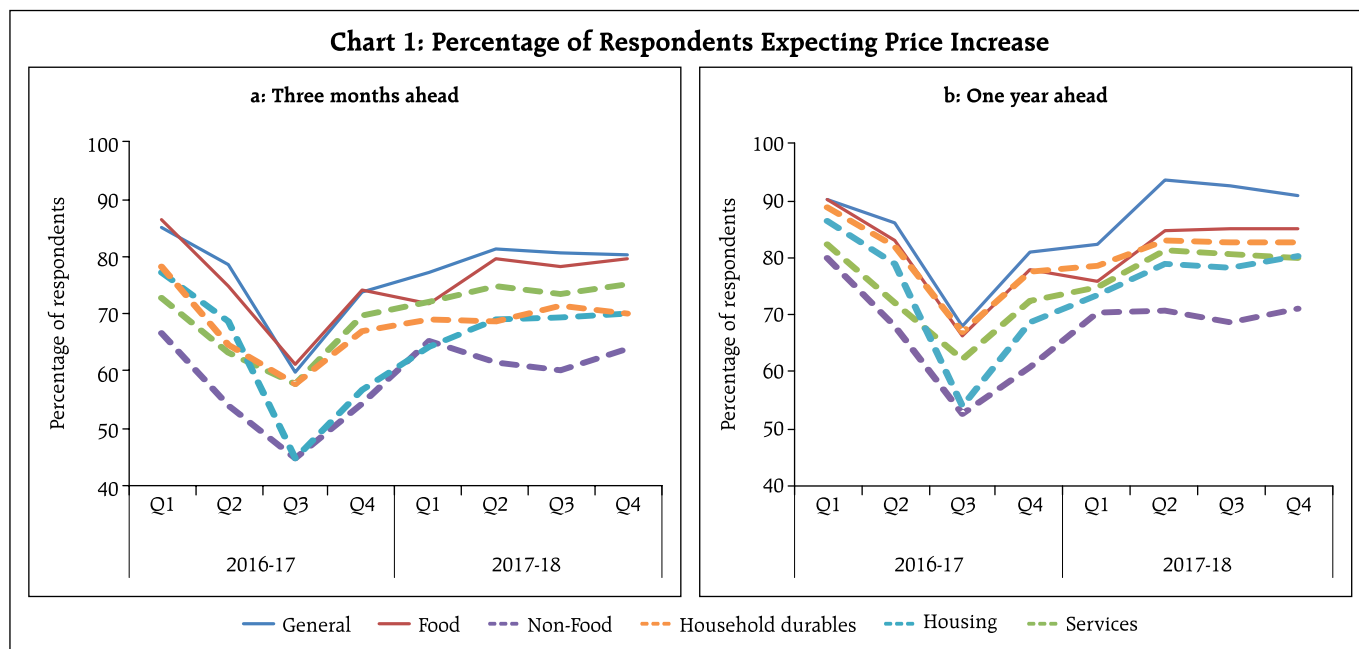
II. Drilling Down into Households' Minds

Inflation expectations of households remained elevated in 2017-18 in relation to a year ago. The proportion of respondents expecting general prices to rise three months ahead and a year ahead picked up in Q2:2017-18 and ruled above the preceding year's level through Q4:2017-18. More than 80 per cent of households expected prices to rise on a year-on-year basis in each round, with an inflexion point located in Q2 as stated earlier in terms of higher percentage of respondents expecting prices to increase at more than the current rate (Chart 1 and 2).

Qualitative responses on product group price expectations revealed that after a sharp correction in Q3:2016-17, households firmed up their expectations gradually through 2017-18. Although there was some moderation in respect of prices of food items, household durables, housing and services in Q4:2017-18, the proportion of respondents expecting prices to rise at more than the current rate was higher in Q4:2017-18 than a year ago.

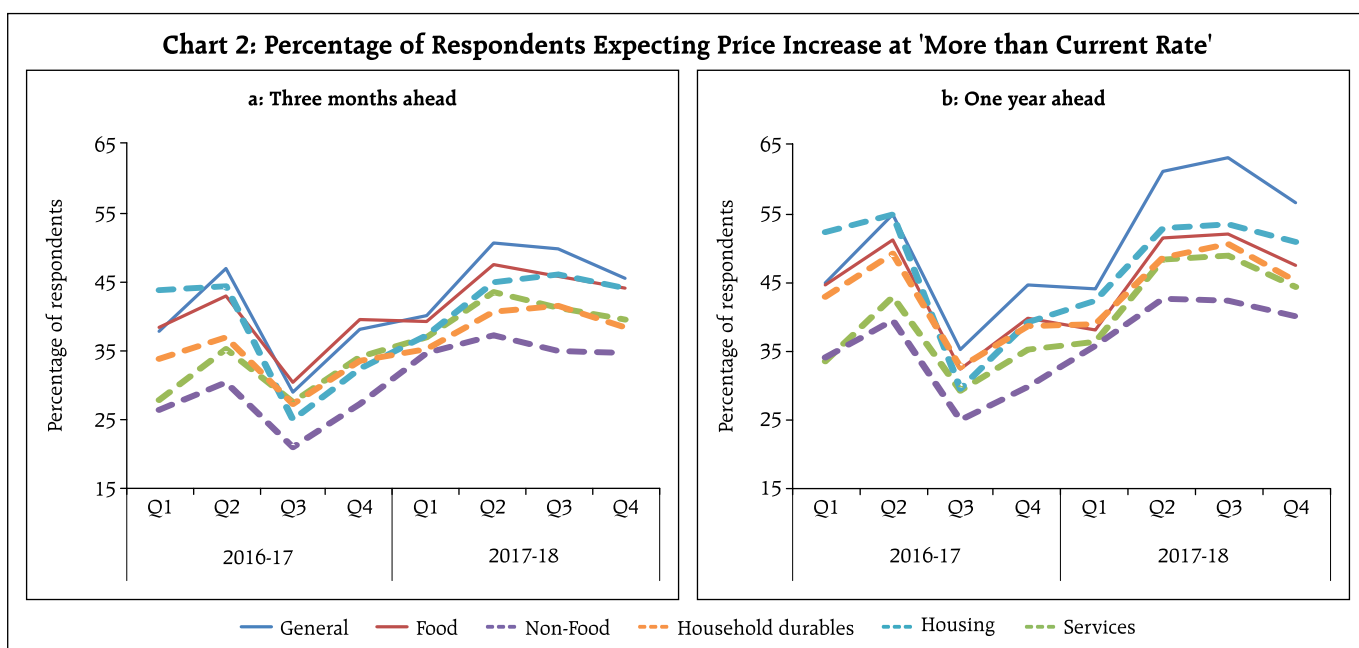
In terms of quantitative responses, households' median inflation expectations ranged between 7.2 per cent and 7.8 per cent for the three months ahead period, and between 8.0 per cent and 8.6 per cent, for the

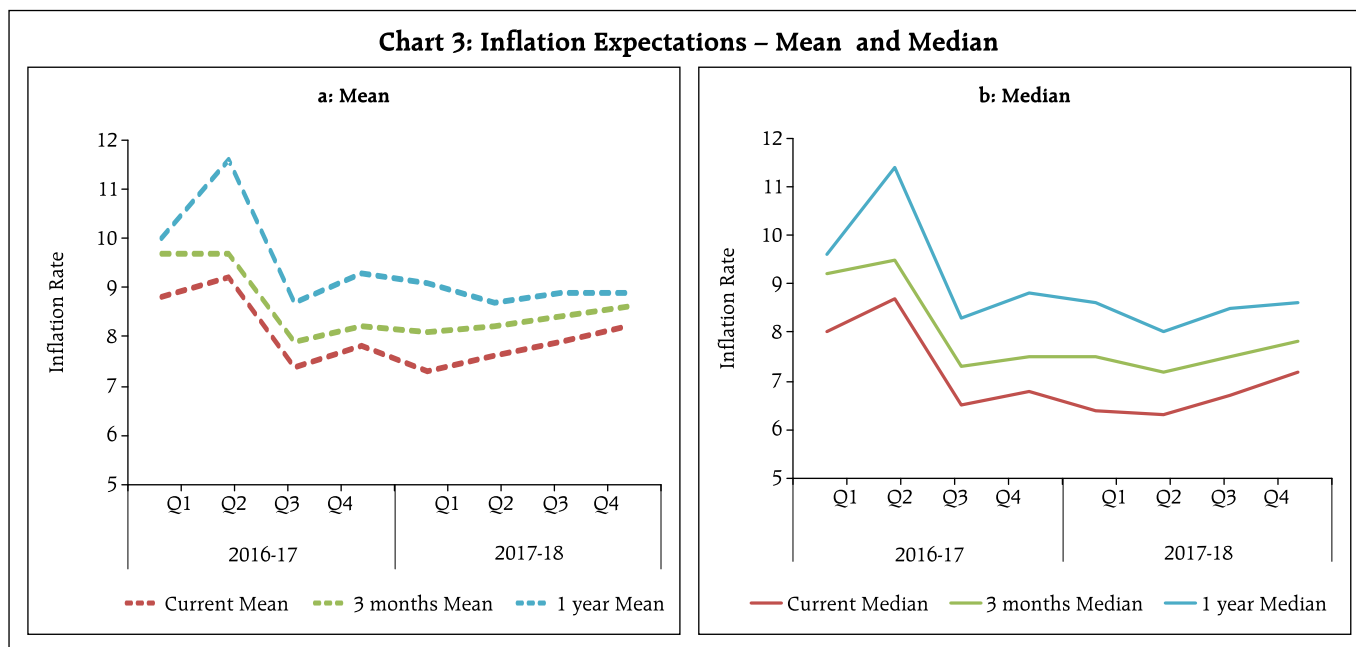
³ Besides quarterly rounds of the survey, the RBI introduced two additional rounds of IESH in May and November from 2014.



one year ahead period. Median inflation expectations polled a record low in the survey's history in Q2:2017-18, barring the global financial crisis period. Compared with the corresponding period of 2016-17, median inflation expectations fell by 230 and 340 basis points for the three months ahead and one year ahead, respectively, in Q2:2017-18. Thereafter, inflation expectations inched up as households' perceptions on current inflation hardened (Chart 3).

Among the cities covered in the survey, respondents in Bengaluru were relatively optimistic in their inflation expectations, whereas respondents in Bhubaneswar, Chennai, Guwahati and Kolkata were the most pessimistic, polling double-digit inflation expectations for the one year horizon throughout 2017-18. Daily workers, retired persons, homemakers and other employees polled higher median inflation expectations than financial sector employees. The





bootstrap confidence intervals (99 per cent) for mean inflation expectations⁴ were reasonably small with a width of 0.30. This indicates that estimates from the survey are quite robust with respect to the choice of sample (Annex 2 - Table 8).

III. Do Urban Households Anticipate or Adapt?

IESH collects opinions of respondents on changes in prices and also on their rates of change. It is observed that there is reasonably strong correlation (0.6) between respondents' expectations on the price levels and movements in changes in price index (CPI-U). This correlation weakens (0.2), however, when inflation expectations of households are tracked against changes in the actual CPI-U inflation. More generally, the larger the change in CPI-U, the higher is the proportion of respondents expecting prices to increase in the future.

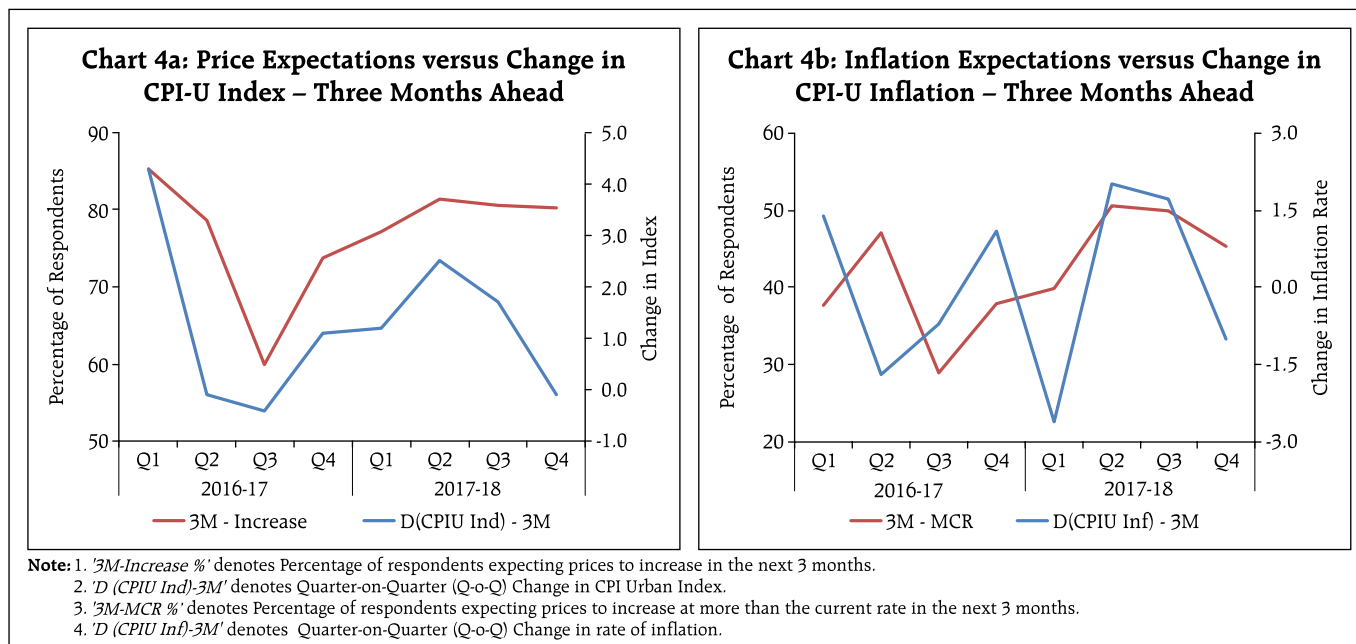
Diving down into specific aspects of co-movement between near-term expectations on the price level and actual outcomes in terms of change in the CPI-U, it is noteworthy that three months ahead expectations on changes in the general price level tracked quarter-

on-quarter (Q-o-Q) change in the CPI-U up to Q2:2017-18 reasonably well. Thereafter, the unusual plunge in the Q-o-Q change in CPI-U in the second half of 2017-18 was not fully reflected in households' expectations. Similarly, one year ahead expectations on changes in price levels tracked year-on-year (Y-o-Y) changes in the CPI-U index, except in Q1:2017-18 (Chart 4a and 5a).

The correlation between households' expectations on the rate of price change and change in (urban) retail inflation was however weaker. As inflation shot up sharply from Q1:2017-18 to Q2:2017-18, the proportion of respondents expecting prices to rise at a faster rate in the next three months also rose from 39.1 per cent to 47.5 per cent (Chart 4b). As the pace of rise in inflation moderated in the next two quarters, that proportion fell in tandem. Similar co-movement was observed in the yearly change in urban inflation and the proportion of respondents expecting prices to rise at a faster rate in the next one year. This suggests that households' inflation expectations are largely adaptive in nature.

In view of the foregoing, it is useful to investigate whether the incorporation of households' mean inflation expectations can improve inflation

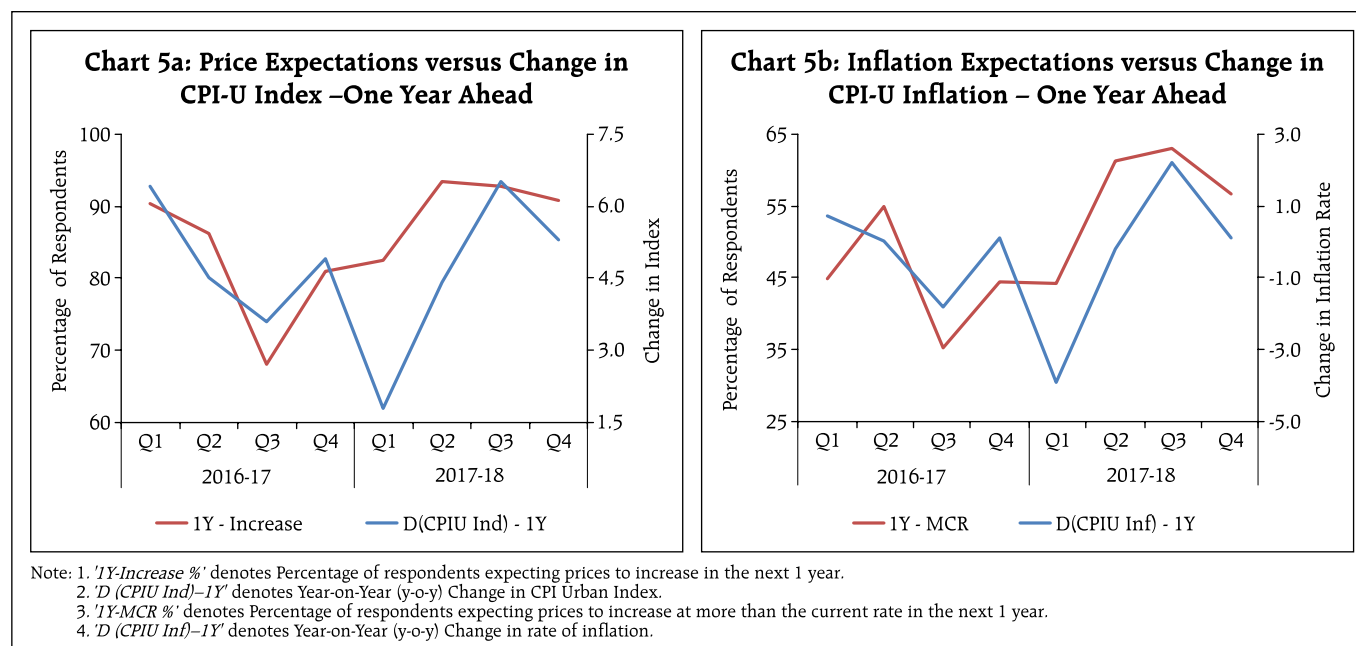
⁴ Bootstrap confidence intervals for mean inflation (99 per cent) were calculated by drawing 10,000 re-samples using simple random sampling with replacement (SRSWR)

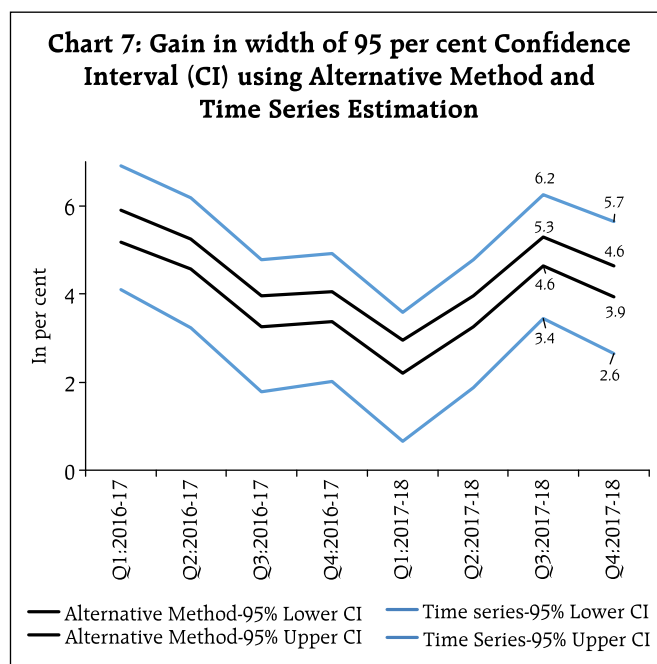
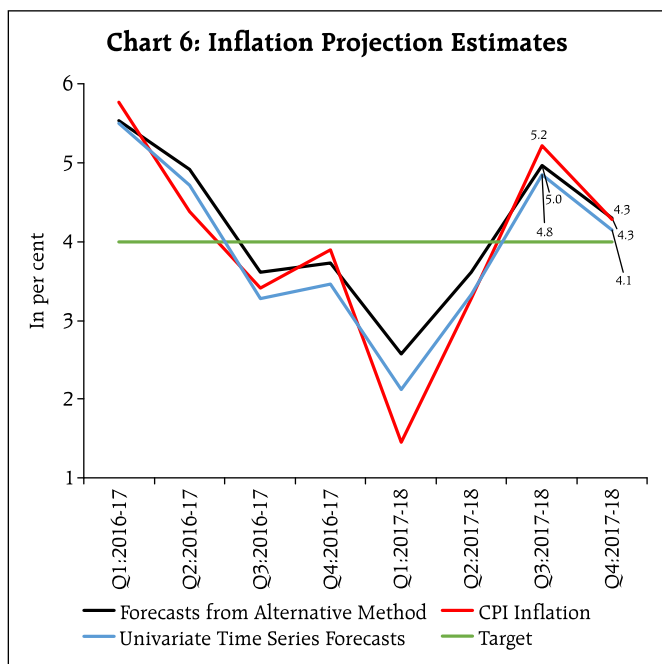


projections in a Bayesian framework thereby attesting their forward looking behavior. It has been shown that modelling households' inflation expectations as a function of past inflation, the inflation target and a measure of probability that the target will be achieved – the credibility of monetary policy – can help to evaluate if households' expectations are efficient or rational and, therefore, useful inputs into forecasting frameworks (Batchelor in Sinclair's edited, 2010). This

framework can be exploited to derive the posterior distribution of inflation, and the mean value from the posterior distribution can be used as a forecast of inflation.

A comparison with forecasts based on a simple univariate time-series model [ARIMA (1, 1, 2)] reveals that although gains in terms of forecast accuracy are limited, the 95 per cent confidence bands around the Bayesian forecasts are narrower (67 basis points) than





for the ARIMA forecasts (286 basis points), indicative of efficiency gains (Chart 6 and 7).

IV. Measuring Disagreement

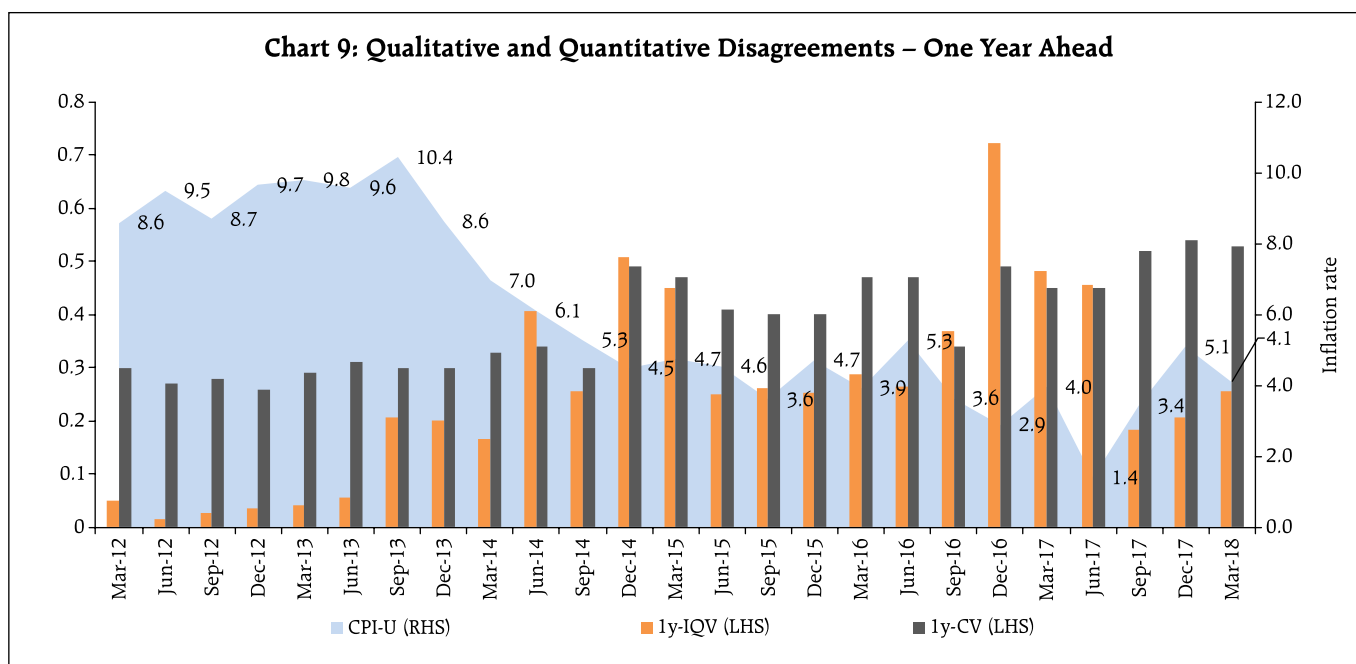
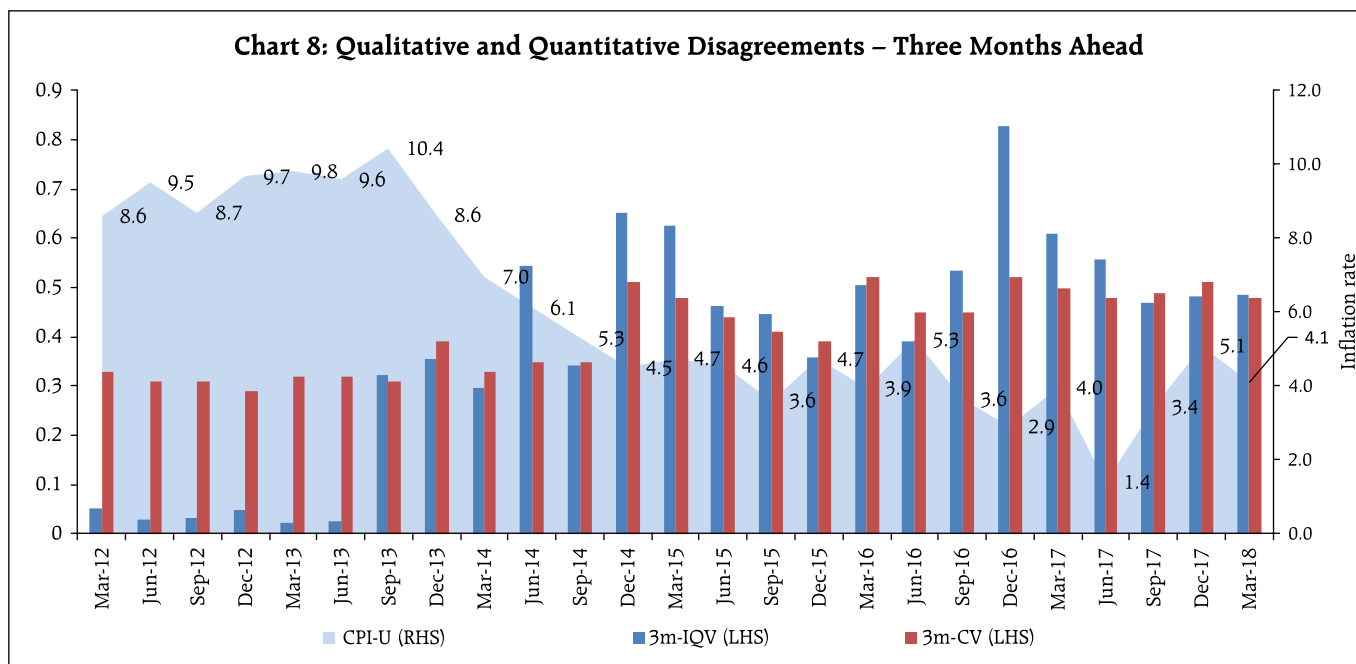
While the results of the household surveys on inflation expectations are usually reported through an average (mean or median), there is a growing literature which suggests that the dispersion in individual responses also have considerable information content. Inflation expectations among households differ due to differences in the consumption baskets and income levels as well as dissimilarities in the information that households refer to at the time of expectations formation (Mokinski *et al.*, 2015; Drager and Lamla, 2015).

In an attempt to measure the extent of disagreement among the respondents of the IESH in the recent period, disagreement in quantitative responses are measured through the coefficient of variation (CV) while for the qualitative responses, disagreement is measured through an index of qualitative variation (IQV) (details are in Annex 3). An IQV closer to zero indicates greater consensus in respondents' views on future price movements and its value rises as the views become more divergent.

In general, disagreement levels are lower for the three months ahead period than for the one year ahead horizon (Charts 8 and 9), implying greater consensus in the formation of nearer term expectations. Further, when CPI-U inflation prints are at an elevated level, qualitative disagreement in expectations are low and stable. In contrast, when inflation are on a declining trajectory, respondents expressed more divergent views. This could be due to the fact that all households are sensitive to a rise in inflation, whereas some households tend to discount declines as a temporary phenomenon. A similar pattern is observed in respect of quantitative disagreement, but the extent of variation was relatively less.

V. Summary

Households' inflation expectations, both in qualitative and quantitative terms, remained elevated in 2017-18 and were largely adaptive. Occasional lack of co-movement between inflation expectations of households and CPI-U inflation largely reflected the volatility in food inflation – particularly sharp decline in food inflation in some months during 2017-18 – which did not pull inflation expectations



down as households might have perceived them as temporary. Quantitative responses from the IESH may not help much in projecting the headline CPI-Urban inflation number but they could reduce the forecast band. Besides average level of inflation expectations, there is some merit in looking at the extent of disagreement among the respondents of the IESH as it may foretell building up of an inflationary pressure.

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Annex 1

Inflation Expectations Survey of Households - Sample Coverage and Survey Schedule

The quarterly rounds of the survey were conducted in 18 cities covering a sample size of 5500 households in each round, with 500 households each from four metropolitan cities, *viz.*, Delhi, Kolkata, Mumbai and Chennai, and 250 households each from fourteen major cities *viz.*, Ahmedabad, Bengaluru, Bhopal, Bhubaneswar, Chandigarh, Guwahati, Hyderabad, Jaipur, Lucknow, Nagpur, Patna, Raipur, Ranchi, and Thiruvananthapuram⁵. Inconsistent responses are excluded from the analysis.

The survey schedule of IESH is organised into four blocks. Block 1 collects information on respondent's profile like name, gender, age, category of respondent, etc. Blocks 2 and 3 capture qualitative responses on price expectations for general and various product groups, for three months and one year ahead, respectively, wherein, the respondent's price expectations are captured using five options, *viz.*, (i) price increase *more than current rate*, (ii) price increase *similar to current rate*, (iii) price increase *less than current rate*, (iv) *no change in prices*, and (v) *decline in prices*. Block 4 collects quantitative response on current and expected inflation rates for three months ahead and one year ahead periods, wherein, the inflation rate ranges from '*less than 1 per cent*' to '*16 per cent and above*', with intermediate class intervals of size 100 basis points.

⁵ Spread of samples across the cities and adequate representation of samples from occupation groups were ensured.

Annex 2 – Tables

**Table 1: Cross-tabulation of General Price Expectations for Three-Month Ahead and One-Year Ahead
Q1: 2017-18**

One Year Ahead	Three-month Ahead						Total
		Price increase more than current rate	Price increase similar to current rate	Price increase less than current rate	No change in prices	Decline in prices	
Price increase more than current rate		33.6	4.9	1.0	3.9	0.6	44.1
Price increase similar to current rate		3.5	18.2	2.2	3.8	0.5	28.2
Price increase less than current rate		0.5	1.4	6.3	1.5	0.4	10.1
No change in prices		1.4	1.6	0.8	6.2	1.2	11.2
Decline in prices		0.8	0.5	0.4	1.3	3.3	6.4
Total		39.9	26.6	10.7	16.8	6.0	100.0

General price expectations for one year ahead dependent on general price expectations for three months ahead at 5 per cent level of significance, across the study period (Table 1-4)

**Table 2: Cross-tabulation of General Price Expectations for Three-month Ahead and One-year Ahead
Q2: 2017-18**

One Year Ahead	Three-month Ahead						Total
		Price increase more than current rate	Price increase similar to current rate	Price increase less than current rate	No change in prices	Decline in prices	
Price increase more than current rate		46.0	6.8	1.0	6.7	0.6	61.2
Price increase similar to current rate		3.5	16.8	1.5	5.2	0.3	27.3
Price increase less than current rate		0.5	0.7	2.5	1.1	0.2	5.0
No change in prices		0.3	0.8	0.2	2.3	0.4	4.1
Decline in prices		0.2	0.3	0.2	0.5	1.3	2.5
Total		50.5	25.4	5.4	15.8	2.9	100.0

**Table 3: Cross-tabulation of General Price Expectations for Three-month Ahead and One-year Ahead
Q3: 2017-18**

One Year Ahead	Three-month Ahead						Total
		Price increase more than current rate	Price increase similar to current rate	Price increase less than current rate	No change in prices	Decline in prices	
Price increase more than current rate		45.8	7.6	1.6	7.6	0.4	63.0
Price increase similar to current rate		2.9	14.8	1.2	4.8	0.2	23.9
Price increase less than current rate		0.5	0.8	3.1	1.3	0.2	5.8
No change in prices		0.5	1.0	0.2	3.2	0.3	5.3
Decline in prices		0.2	0.3	0.2	0.6	0.8	2.0
Total		49.8	24.6	6.1	17.4	2.0	100.0

**Table 4: Cross-tabulation of General Price Expectations for Three-Month Ahead and One-Year Ahead
Q4: 2017-18**

One Year Ahead	Three-month Ahead						Total
		Price increase more than current rate	Price increase similar to current rate	Price increase less than current rate	No change in prices	Decline in prices	
Price increase more than current rate		40.6	7.4	1.4	7.0	0.3	56.7
Price increase similar to current rate		3.1	17.6	1.8	5.1	0.2	28.0
Price increase less than current rate		0.3	0.9	3.8	1.1	0.1	6.2
No change in prices		1.2	1.1	0.3	3.9	0.5	7.0
Decline in prices		0.2	0.2	0.2	0.5	1.1	2.2
Total		45.4	27.2	7.5	17.8	2.1	100.0

Table 5: Distribution of Inflation Rate – Perceptions and Expectations (2017-18)

(in per cent)

Inflation Rate	Current				Three Months ahead				One Year ahead			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<1	1.7	0.6	0.9	0.7	1.5	1.5	2.0	1.7	1.3	6.4	7.8	9.5
1-2	2.0	1.1	1.4	0.8	1.9	0.9	1.3	0.9	1.3	0.3	0.5	0.6
2-3	5.2	4.6	5.3	4.2	4.7	3.5	3.7	3.5	3.4	2.2	2.0	1.8
3-4	7.3	5.0	7.5	4.8	5.9	4.6	6.2	3.9	4.4	2.6	3.5	2.5
4-5	8.2	8.4	9.1	6.1	5.6	6.7	8.3	6.0	5.1	4.6	6.4	4.0
5-6	21.4	27.6	19.5	21.8	12.4	16.3	13.8	16	9.5	12.1	10.2	10.9
6-7	11.1	11.0	8.5	9.7	11.0	13.6	9.5	9.1	7.7	9.5	7.2	6.8
7-8	8.6	9.1	8.8	9.8	13.7	13.0	10.9	11.1	10.7	12.5	8.6	9.1
8-9	7.2	6.6	6.4	7.1	9.9	8.0	7.8	8.3	10.5	10.3	8.1	7.7
9-10	3.2	2.5	3.7	4.3	5.6	4.0	4.7	5.5	6.9	5.5	6.0	5.8
10-11	11.8	9.1	12.6	14.3	8.9	9.1	9.5	11.7	13.1	9.7	11.6	13.7
11-12	1.6	1.3	1.0	1.6	2.5	1.7	2.2	2.3	3.5	2.0	2.5	3.2
12-13	1.2	0.7	0.9	1.6	4.2	2.7	3.3	3.5	4.5	3.3	3.8	4.2
13-14	0.4	0.4	0.3	0.4	1.1	1.0	1.2	1.4	1.7	1.2	1.1	1.2
14-15	0.3	0.8	0.5	0.6	0.6	0.7	0.6	0.9	1.4	1.4	1.3	1.2
15-16	2.6	2.0	2.8	2.8	3.6	2.9	3.8	4.1	5.5	4.1	4.9	5.1
>=16	6.2	9.2	10.8	9.4	6.7	9.6	11.1	10	9.4	12.2	14.5	12.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6: Inflation Rate – Mean, Median and Std. Dev.

Quarter	Current			Expectation					
				Three Months Ahead			One Year Ahead		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Q1:2016-17	8.8	8.0	4.4	9.7	9.2	4.4	10.0	9.6	4.7
Q2:2016-17	9.2	8.7	4.0	9.7	9.5	4.4	11.6	11.4	3.9
Q3:2016-17	7.4	6.5	3.9	7.9	7.3	4.1	8.7	8.3	4.3
Q4:2016-17	7.8	6.8	4.0	8.2	7.5	4.1	9.3	8.8	4.2
Q1:2017-18	7.3	6.4	3.8	8.1	7.5	3.9	9.1	8.6	4.1
Q2:2017-18	7.6	6.3	3.9	8.2	7.2	4.0	8.7	8.0	4.5
Q3:2017-18	7.9	6.7	4.2	8.4	7.5	4.3	8.9	8.5	4.8
Q4:2017-18	8.2	7.2	4.0	8.6	7.8	4.1	8.9	8.6	4.7

Table 7: City-wise Median Inflation Perceptions and Expectations

City	Current				Three Months ahead				One Year ahead			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Ahmadabad	7.6	7.4	10.1	8.9	8.3	9.2	10.4	10.1	8.7	9.4	10.8	10.5
Bengaluru	4.8	4.3	3.0	5.5	5.4	4.7	3.8	5.8	5.8	5.1	4.5	4.8
Bhopal	5.5	6.5	6.9	5.8	7.9	7.5	7.4	5.9	9.7	6.9	7.8	5.7
Bhubaneswar	6.0	10.1	6.3	7.7	8.7	10.8	8.6	9.1	10.6	12.5	10.9	10.8
Chennai	5.9	8.1	10.3	7.6	7.5	10.3	10.9	9.1	10.6	12.5	15.0	11.1
Delhi	5.7	6.1	6.3	8.1	6.6	6.5	6.6	8.0	7.1	6.5	6.6	8.4
Guwahati	10.6	16.0	14.1	11.4	10.1	12.4	7.1	10.2	10.1	15.3	8.1	10.3
Hyderabad	6.3	5.7	7.8	6.8	6.9	6.7	8.5	7.6	7.8	7.9	9.7	8.8
Jaipur	7.9	5.9	7.4	7.5	9.0	6.0	7.6	6.9	10.7	6.5	8.4	7.2
Kolkata	8.3	8.3	10.2	9.5	9.6	9.3	10.6	10.1	10.9	10.4	11.3	10.4
Lucknow	5.8	5.8	6.2	6.3	7.2	6.7	6.8	7.0	7.8	8.1	7.2	7.5
Mumbai	8.5	6.6	7.6	8.0	8.6	7.4	8.3	8.1	9.5	7.8	9.0	8.7
Nagpur	5.0	6.0	5.9	5.7	5.7	6.8	7.2	7.0	6.7	7.6	8.0	7.5
Patna	6.2	6.2	5.7	6.9	7.0	6.8	5.9	7.3	8.2	7.4	6.3	8.1
Trivandrum	8.3	6.6	6.7	7.8	9.8	7.8	7.9	10.0	12.3	8.5	9.1	10.1
Chandigarh	7.2	5.5	4.7	6.2	7.9	5.9	5.9	7.0	8.1	6.5	7.6	7.6
Ranchi	3.4	5.4	5.3	6.4	4.0	5.6	6.3	7.1	5.5	6.0	6.3	7.4
Raipur	5.7	5.5	5.2	5.4	7.1	6.1	5.5	5.7	7.8	7.1	6.3	6.8

Table 8: Bootstrap Confidence Intervals (BCI) based on 10,000 Resamples - 99 Percent

Survey Quarter	Current		Three Months ahead		One Year ahead	
	BCI for Mean	Interval Width	BCI for Mean	Interval Width	BCI for Mean	Interval Width
Q1:2017-18	(7.21,7.48)	0.27	(7.94,8.23)	0.29	(8.90,9.21)	0.31
Q2:2017-18	(7.46,7.74)	0.28	(8.02,8.30)	0.28	(8.52,8.85)	0.33
Q3:2017-18	(7.75,8.04)	0.29	(8.21,8.51)	0.3	(8.73,9.07)	0.34
Q4:2017-18	(8.01,8.29)	0.28	(8.44,8.74)	0.3	(8.69,9.04)	0.35

Annex 3 – Methodology

A. Measuring Disagreement

Households' disagreement in qualitative and quantitative expectations are measured to study how well measures of disagreement in qualitative expectations reflect corresponding disagreement in quantitative expectations (Mokinski *et al.*, 2015, Drager and Lamla, 2015). To measure the disagreement in qualitative expectations, the following three measures are used. The index of qualitative variation (IQV) is defined as:

$$IQV = \frac{K}{K-1} \left(1 - \sum_{i=1}^K s_i^2 \right) \quad (1)$$

where K is the number of categories (increase, no change, decrease) and s_i is the percentage of responses in category $i = 1$ to 3. The measure is in the range (0, 1), where a value of 0 implies all the respondents chose the same option and reaches maximum when the responses of qualitative questions are distributed evenly across the three options.

B. Inflation Projection

- Information – 1:** Let y_{it} be the specific estimate of inflation of i^{th} household/ group of respondents, for quarter 't', made in the previous quarter *i.e.*, $t - 3$. Let y_t be the target variable, *i.e.*, inflation at quarter 't'. The household-specific estimate is modelled by Batchelor in Sinclair's edited (2010) as:

$$y_{it} = y_t + u_{it}, u_{it} \sim N(0, \tau_{it}^2) \\ (y_{it} | y_t) \sim N(y_t, \tau_{it}^2) \quad (2)$$

u_{it} is the unexplained part of the above model and τ_{it}^2 is the variability in the responses.

The data for this information is taken as city-wise mean of three months ahead inflation expectations, from Q1:2016-17 to Q4:2017-18.

- Information – 2:** The second information available to the households is y_{ht} , the time series prediction of target variable for quarter t . The third information is y_{gt} , the Government policy target. Batchelor in Sinclair's edited (2010) models the target variable as:

$$y_t = y_{gt} \text{ with probability } \pi_{it} \\ = y_{ht} + u_{ht}, u_{ht} \sim N(0, \tau_{ht}^2) \text{ with probability } (1 - \pi_{it}) \quad (3)$$

u_{ht} being the error in prediction of target variable for quarter t . π_{it} is the probability that the Government target will be enforced, defined as an index of the policy credibility. The probability π_{it} differs among households/ group of respondents due to differences in individual political affiliations.

The y_{ht} 's are the inflation forecasts for the period Q1:2016-17 to Q4:2017-18 based on univariate time-series model ARIMA (1, 1, 2)⁶ using CPI data from January 2011 onwards.

⁶ The model was selected based on Akaike Information Criteria. The residuals were found to be white noise.

The model for ARIMA (1, 1, 2) is:

$$\Delta y_t = \alpha_1 + \alpha_2 \Delta y_{t-1} + \epsilon_t + \beta_1 \epsilon_{t-1} + \beta_2 \epsilon_{t-2}$$

where ϵ_t are the error terms.

Since quantitative inflation expectations are collected in the form of ranges, consider,

$$I_{it} = \frac{(\text{proportion expecting } 3\% - 4\% + \text{proportion expecting } 4\% - 5\%)}{2}$$

Then, $\pi_{it}^* = \frac{1}{n} \sum_{i=1}^n I_{it}$ can be considered as a proxy for π_{it} , n being the number of respondents in the i^{th} city.

3. Information – 3: The inflation target, *i.e.*, y_{gt} taken as four per cent.

4. Posterior Distribution

$$(y_t | y_{it}) \sim N[\mu_{it}, \sigma_{it}^2]; \text{ where}$$

$$\sigma_{it}^2 = \frac{\tau_{it}^2 (1 - \pi_{it}) \{ \pi_{it} (y_{gt} - y_{ht})^2 + \tau_{ht}^2 \}}{\tau_{it}^2 + (1 - \pi_{it}) \{ \pi_{it} (y_{gt} - y_{ht})^2 + \tau_{ht}^2 \}} \quad (4)$$

$$\mu_{it} = \frac{\sigma_{it}^2}{\tau_{it}^2} y_{it} + \frac{\sigma_{it}^2 \{ \pi_{it} y_{gt} + (1 - \pi_{it}) y_{ht} \}}{(1 - \pi_{it}) \{ \pi_{it} (y_{gt} - y_{ht})^2 + \tau_{ht}^2 \}}$$

PRESS RELEASE OF WORKING PAPERS AND OCCASIONAL PAPERS

Economic Activity and its Determinants: A Panel Analysis of Indian States

Nowcasting Real Estate Activity in India using Google Trend Data

Volatility Spillovers between Forex and Stock Markets in India

Inter-temporal Calculative Trust Design to Reduce Collateral
Need for Business Credits

Global Liquidity and Foreign Portfolio Flows to India:
An Empirical Assessment

Economic Activity and its Determinants: A Panel Analysis of Indian States

This paper assesses the impact of both monetary and fiscal policy along with other macroeconomic determinants on economic activity using state-level Indian data. Since economic activity can vary across states due to local factors and state government policies, a state-level empirical analysis, by providing more variability in both the dependent

variable and the potential explanatory variables, can help better identify the underlying economic relationships. The empirical analysis confirms the role for a countercyclical monetary policy in stabilising economic activity. Bank credit expansion supports economic activity, suggesting the operation of credit channel of transmission in addition to the interest rate channel. Public investment is found to crowd-in economic activity, while other fiscal spending crowds out economic activity. Thus, a prudent fiscal policy, in conjunction with spending oriented towards capital outlays, can boost output.

Nowcasting Real Estate Activity in India using Google Trend Data

This paper by Pratik Mitra, Anirban Sanyal and Sohini Choudhury explains that despite the real estate sector being among the major drivers of economic growth in India and contributing around 11 per cent to Gross Value Added growth since 2011-12, non-

availability of data in a timely manner hinders an objective assessment of the sector's performance. This paper attempts to bridge this gap by employing Big Data Analytics to nowcast the sales growth of real estate companies using Google search data. The paper concludes that the search intensity information improves precision relative to other benchmark approaches while nowcasting the current quarter performance.

Volatility Spillovers between Forex and Stock Markets in India

This paper by Sudarsana Sahoo, Harendra Behera and Pushpa Trivedi investigates the price and volatility spillovers between the Indian foreign exchange market

(forex) and stock markets. The response of the forex market to volatility spillovers from stock markets is asymmetric, i.e., negative shocks from the stock markets result in higher volatility in the forex market vis-à-vis the positive shocks. The evidence on volatility spillovers during highly volatile periods indicates possible 'contagion' impact that amplifies the volatility and exacerbates the stress in the financial system.

Inter-temporal Calculative Trust Design to Reduce Collateral Need for Business Credits

Silu Muduli and Shridhar Kumar Dash highlight that credit rationing arising out of informational asymmetry and lack of collateral is a well-recognised economic constraint in credit markets. It focuses on

the dimension of trustworthiness (calculative trust) by designing an inter-temporal incentivised payment structure that will induce economic agents to reveal the private information available about a project or true intentions of paying up the credit that is going to fund the project. The model dynamically estimates the collateral needed by taking into account the truthfulness of the borrower. The simulation result also finds that building trust helps small business owners to significantly reduce the need for collateral.

Global Liquidity and Foreign Portfolio Flows to India: An Empirical Assessment

In this paper, Amarendra Acharya, Prakash Salvi and Sunil Kumar examine the role of global liquidity as a driver of external financial flows into India. They find that the influence of global liquidity conditions

is stronger on foreign portfolio investment flows to India than on foreign direct investment and external commercial borrowings. Furthermore, the liquidity channel of transmission of accommodative monetary policies of the advanced economies to India is found to be more pronounced, while the portfolio balance channel and the confidence channel do not exhibit any statistically significant impact on portfolio flows into India.

CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

Contents

No.	Title	Page
1	Select Economic Indicators	129
	Reserve Bank of India	
2	RBI – Liabilities and Assets	130
3	Liquidity Operations by RBI	131
4	Sale/ Purchase of U.S. Dollar by the RBI	132
4A	Maturity Breakdown (by Residual Maturity) of Outstanding Forwards of RBI (US\$ Million)	133
5	RBI's Standing Facilities	133
	Money and Banking	
6	Money Stock Measures	134
7	Sources of Money Stock (M ₃)	135
8	Monetary Survey	136
9	Liquidity Aggregates	136
10	Reserve Bank of India Survey	137
11	Reserve Money – Components and Sources	137
12	Commercial Bank Survey	138
13	Scheduled Commercial Banks' Investments	138
14	Business in India – All Scheduled Banks and All Scheduled Commercial Banks	139
15	Deployment of Gross Bank Credit by Major Sectors	140
16	Industry-wise Deployment of Gross Bank Credit	141
17	State Co-operative Banks Maintaining Accounts with the Reserve Bank of India	142
	Prices and Production	
18	Consumer Price Index (Base: 2012=100)	143
19	Other Consumer Price Indices	143
20	Monthly Average Price of Gold and Silver in Mumbai	143
21	Wholesale Price Index	144
22	Index of Industrial Production (Base: 2011-12=100)	147
	Government Accounts and Treasury Bills	
23	Union Government Accounts at a Glance	147
24	Treasury Bills – Ownership Pattern	148
25	Auctions of Treasury Bills	148
	Financial Markets	
26	Daily Call Money Rates	149
27	Certificates of Deposit	150
28	Commercial Paper	150
29	Average Daily Turnover in Select Financial Markets	150
30	New Capital Issues by Non-Government Public Limited Companies	151

No.	Title	Page
External Sector		
31	Foreign Trade	152
32	Foreign Exchange Reserves	152
33	NRI Deposits	152
34	Foreign Investment Inflows	153
35	Outward Remittances under the Liberalised Remittance Scheme (LRS) for Resident Individuals	153
36	Indices of Real Effective Exchange Rate (REER) and Nominal Effective Exchange Rate (NEER) of the Indian Rupee	154
37	External Commercial Borrowings (ECBs)	154
38	India's Overall Balance of Payments (US \$ Million)	155
39	India's Overall Balance of Payments (₹ Billion)	156
40	Standard Presentation of BoP in India as per BPM6 (US \$ Million)	157
41	Standard Presentation of BoP in India as per BPM6 (₹ Billion)	158
42	International Investment Position	159
Payment and Settlement Systems		
43	Payment System Indicators	160
Occasional Series		
44	Small Savings	161
45	Ownership Pattern of Central and State Governments Securities	162
46	Combined Receipts and Disbursements of the Central and State Governments	163
47	Financial Accommodation Availed by State Governments under various Facilities	164
48	Investments by State Governments	165
49	Market Borrowings of State Governments	166

Notes: .. = Not available.

– = Nil/Negligible.

P = Preliminary/Provisional. PR = Partially Revised.

No. 1: Select Economic Indicators

Item	2017-18	2016-17	2017-18		2018-19	
			Q4	Q1	Q4	Q1
	1	2	3	4	5	
1 Real Sector (% Change)						
1.1 GVA at Basic Prices	6.5	6.0	5.6	7.6	8.0	
1.1.1 Agriculture	3.4	7.1	3.0	4.5	5.3	
1.1.2 Industry	5.5	8.1	-0.4	8.0	10.8	
1.1.3 Services	7.6	4.9	8.5	8.2	7.5	
1.1a Final Consumption Expenditure	7.2	6.4	8.7	8.1	8.4	
1.1b Gross Fixed Capital Formation	7.6	6.0	0.8	14.4	10.0	
	2017-18	2017		2018		
		Jul.	Aug.	Jul.	Aug.	
	1	2	3	4	5	
1.2 Index of Industrial Production	4.3	1.0	4.8	6.6	-	
2 Money and Banking (% Change)						
2.1 Scheduled Commercial Banks						
2.1.1 Deposits	6.2	9.5	8.9	8.7	9.9	
2.1.2 Credit	10.0	5.7	6.2	12.3	14.2	
2.1.2.1 Non-food Credit	10.2	6.5	7.1	12.5	14.2	
2.1.3 Investment in Govt. Securities	9.5	16.1	16.6	6.8	6.5	
2.2 Money Stock Measures						
2.2.1 Reserve Money (M0)	27.4	-6.2	-4.7	20.6	19.0	
2.2.2 Broad Money (M3)	9.6	6.7	6.7	9.9	10.8	
3 Ratios (%)						
3.1 Cash Reserve Ratio	4.00	4.00	4.00	4.00	4.00	
3.2 Statutory Liquidity Ratio	19.50	20.00	20.00	19.50	19.50	
3.3 Cash-Deposit Ratio	5.1	4.8	5.0	4.7	4.7	
3.4 Credit-Deposit Ratio	75.5	72.3	72.6	74.7	75.4	
3.5 Incremental Credit-Deposit Ratio	117.3	**	**	-8.9	70.5	
3.6 Investment-Deposit Ratio	29.0	30.5	31.0	30.0	30.1	
3.7 Incremental Investment-Deposit Ratio	43.0	*	*	136.9	84.4	
4 Interest Rates (%)						
4.1 Policy Repo Rate	6.00	6.25	6.00	6.25	6.50	
4.2 Reverse Repo Rate	5.75	6.00	5.75	6.00	6.25	
4.3 Marginal Standing Facility (MSF) Rate	6.25	6.50	6.25	6.50	6.75	
4.4 Bank Rate	6.25	6.50	6.25	6.50	6.75	
4.5 Base Rate	8.65/9.45	9.00/9.55	9.00/9.55	8.75/9.45	8.75/9.45	
4.6 MCLR (Overnight)	7.80/7.95	7.75/8.10	7.75/8.10	7.90/8.05	7.90/8.05	
4.7 Term Deposit Rate >1 Year	6.25/6.75	6.25/6.90	6.25/6.75	6.25/7.00	6.25/7.25	
4.8 Savings Deposit Rate	3.50/4.00	4.00	3.50/4.00	3.50/4.00	3.50/4.00	
4.9 Call Money Rate (Weighted Average)	5.94	6.08	5.93	6.21	6.36	
4.10 91-Day Treasury Bill (Primary) Yield	6.11	6.15	6.11	6.69	6.81	
4.11 182-Day Treasury Bill (Primary) Yield	6.33	6.25	6.22	6.97	7.02	
4.12 364-Day Treasury Bill (Primary) Yield	6.49	6.29	6.25	7.27	7.33	
4.13 10-Year G-Sec Par Yield (FBIL)	7.42	6.56	6.65	7.76	7.95	
5 Reference Rate and Forward Premia						
5.1 INR-US\$ Spot Rate (Rs. Per Foreign Currency)	65.04	64.15	64.07	68.70	70.93	
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)	80.62	74.98	75.58	79.78	82.84	
5.3 Forward Premia of US\$ 1-month (%)	4.61	4.68	4.68	4.37	4.40	
3-month (%)	4.37	4.61	4.53	4.37	4.34	
6-month (%)	4.21	4.60	4.48	4.40	4.22	
6 Inflation (%)						
6.1 All India Consumer Price Index	3.6	2.4	3.3	4.2	3.7	
6.2 Consumer Price Index for Industrial Workers	3.1	1.8	2.5	5.6	5.6	
6.3 Wholesale Price Index	2.9	1.9	3.2	5.1	4.5	
6.3.1 Primary Articles	1.4	0.6	3.0	1.7	-0.1	
6.3.2 Fuel and Power	8.2	4.4	9.9	18.1	17.7	
6.3.3 Manufactured Products	2.7	2.1	2.4	4.3	4.4	
7 Foreign Trade (% Change)						
7.1 Imports	16.2	16.8	23.1	28.0	25.4	
7.2 Exports	5.7	2.8	8.1	16.4	19.3	

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.

** Denominator and numerator negative.

* Denominator negative/negligible.

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

(₹ Billion)

Item	As on the Last Friday/ Friday						
	2017-18	2017	2018				
			Sep.	Aug. 31	Sep. 7	Sep. 14	Sep. 21
	1	2	3	4	5	6	7
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	18,044.20	15,632.51	19,019.37	19,145.55	19,228.51	19,179.71	18,995.47
1.1.2 Notes held in Banking Department	0.15	0.17	0.13	0.13	0.12	0.13	0.13
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	18,044.35	15,632.67	19,019.50	19,145.68	19,228.63	19,179.84	18,995.60
1.2 Assets							
1.2.1 Gold Coin and Bullion	733.81	694.14	720.80	720.79	720.80	720.80	720.80
1.2.2 Foreign Securities	17,303.70	14,930.00	18,289.47	18,415.72	18,498.72	18,449.95	18,265.75
1.2.3 Rupee Coin	6.84	8.53	9.23	9.17	9.11	9.09	9.05
1.2.4 Government of India Rupee Securities	–	–	–	–	–	–	–
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	9,854.76	8,890.26	6,315.62	5,971.39	6,097.51	6,635.96	7,210.22
2.1.1.1 Central Government	68.08	28.91	1.00	1.01	1.01	1.00	1.00
2.1.1.2 Market Stabilisation Scheme	–	946.73	–	–	–	–	–
2.1.1.3 State Governments	6.51	0.42	0.42	0.42	0.42	0.43	0.43
2.1.1.4 Scheduled Commercial Banks	5,256.86	4,534.06	4,754.61	4,594.89	4,825.38	4,871.39	5,051.27
2.1.1.5 Scheduled State Co-operative Banks	48.28	35.17	36.37	34.35	50.22	34.55	35.76
2.1.1.6 Non-Scheduled State Co-operative Banks	25.49	16.78	19.11	19.63	19.70	20.14	21.36
2.1.1.7 Other Banks	305.66	258.75	276.49	275.69	274.53	275.70	285.71
2.1.1.8 Others	4,143.88	3,069.43	1,220.55	1,034.74	926.25	1,425.51	1,800.20
2.1.1.9 Financial Institution Outside India	–	–	7.07	10.66	–	7.24	14.49
2.1.2 Other Liabilities	9,141.27	9,043.04	10,622.14	10,947.21	10,998.04	11,125.93	11,294.72
2.1/2.2 Total Liabilities or Assets	18,996.03	17,933.30	16,937.76	16,918.60	17,095.55	17,761.89	18,504.94
2.2 Assets							
2.2.1 Notes and Coins	0.15	0.17	0.13	0.13	0.12	0.13	0.13
2.2.2 Balances held Abroad	8,887.95	9,825.65	8,619.82	8,799.12	8,759.18	8,912.30	9,276.52
2.2.3 Loans and Advances							
2.2.3.1 Central Government	–	–	439.92	480.62	210.24	–	–
2.2.3.2 State Governments	7.39	16.36	4.45	11.11	51.98	–	2.45
2.2.3.3 Scheduled Commercial Banks	2,739.78	405.30	616.61	366.96	805.58	1,474.04	1,796.16
2.2.3.4 Scheduled State Co-op.Banks	0.35	–	0.35	0.35	0.35	0.35	0.35
2.2.3.5 Industrial Dev. Bank of India	–	–	–	–	–	–	–
2.2.3.6 NABARD	–	–	–	–	–	–	–
2.2.3.7 EXIM Bank	–	–	–	–	–	–	–
2.2.3.8 Others	106.75	40.86	61.87	53.08	57.69	57.69	58.24
2.2.3.9 Financial Institution Outside India	–	–	7.07	10.66	–	7.24	14.49
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	6,976.11	6,416.08	6,416.57	6,417.17	6,514.16	6,558.79
2.2.6 Other Assets	883.90	668.85	771.46	780.00	793.24	795.98	797.81
2.2.6.1 Gold	673.37	630.46	709.22	714.33	724.68	727.26	727.26

* 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	
Aug. 1, 2018	77.56	465.95	–	1.65	0.60	–	–	–	–	–389.44
Aug. 2, 2018	48.96	430.70	–	420.15	–	–0.70	–	–	–	–802.59
Aug. 3, 2018	59.38	545.16	22.37	251.79	11.00	–	–	–	–	–704.20
Aug. 4, 2018	–	44.97	–	–	0.20	–	–	–	–	–44.77
Aug. 6, 2018	44.16	289.94	–	155.50	–	–	–	–	–	–401.28
Aug. 7, 2018	42.81	103.20	67.25	30.04	–	–	–	–	–	–23.18
Aug. 8, 2018	89.41	37.47	–	–	17.23	–0.60	–	–	–	68.57
Aug. 9, 2018	194.80	85.93	–	–	–	0.85	–	–	–	109.72
Aug. 10, 2018	38.41	260.24	149.50	239.62	0.55	–	–	–	–	–311.40
Aug. 13, 2018	35.46	102.81	–	193.89	14.60	–	–	–	–	–246.64
Aug. 14, 2018	125.50	115.75	174.75	21.85	–	–	–	–	–	162.65
Aug. 16, 2018	52.21	313.80	215.67	87.68	1.85	–	–	–	–	–131.75
Aug. 17, 2018	–	301.43	–	–	71.96	–	–	–	–	–229.47
Aug. 18, 2018	126.25	42.28	–	–	0.63	–	–	–	–	84.60
Aug. 20, 2018	39.21	85.85	–	154.92	28.70	–	–	–	–	–172.86
Aug. 21, 2018	112.26	85.16	129.39	53.49	8.02	–1.70	–	–	–	109.32
Aug. 23, 2018	156.56	156.19	–	17.50	1.70	–4.87	–	–	–	–20.30
Aug. 24, 2018	76.49	296.34	197.67	–	0.30	6.57	–	–	–	–15.31
Aug. 27, 2018	39.48	225.94	–	155.73	2.02	–1.48	–	–	–	–341.65
Aug. 28, 2018	51.51	209.42	117.75	69.50	14.30	1.48	–	–	–	–93.88
Aug. 29, 2018	36.66	227.90	–	84.22	2.00	–	–	–	–	–273.46
Aug. 30, 2018	35.16	287.77	–	67.06	–	–1.91	–	–	–	–321.58
Aug. 31, 2018	53.01	501.07	155.50	47.05	1.25	1.91	–	–	–	–336.45

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

i) Operations in OTC segment

Item	2017-18	2017	2018	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US \$ Million) (1.1-1.2)	33,689.00	3,226.00	-1,874.00	-2,323.00
1.1 Purchase (+)	52,068.00	4,556.00	4,129.00	3,680.00
1.2 Sale (-)	18,379.00	1,330.00	6,003.00	6,003.00
2 ₹ equivalent at contract rate (₹ Billion)	2,228.28	207.52	-136.00	-170.23
3 Cumulative (over end-March) (US \$ Million)	33,689.00	15,042.00	-16,308.00	-18,631.00
(₹ Billion)	2,228.27	985.32	-1,112.19	-1,282.43
4 Outstanding Net Forward Sales (-)/ Purchase (+) at the end of month (US \$ Million)	20,853.00	32,823.00	10,689.00	5,730.00

ii) Operations in currency futures segment

Item	2017-18	2017	2018	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Net Purchase/ Sale of Foreign Currency (US \$ Million) (1.1-1.2)	0.00	0.00	0.00	0.00
1.1 Purchase (+)	3,935.00	0.00	692.00	1,350.00
1.2 Sale (-)	3,935.00	0.00	692.00	1,350.00
2 Outstanding Net Currency Futures Sales (-)/ Purchase (+) at the end of month (US \$ Million)	0.00	0.00	0.00	-1,135.00

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

Item	As on August 31, 2018		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	1,012	828	184
2. More than 1 month and upto 3 months	1,636	1,888	-252
3. More than 3 months and upto 1 year	9,194	3,396	5,798
4. More than 1 year	0	0	0
Total (1+2+3+4)	11,842	6,112	5,730

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday								
	2017-18	2017	2018					Aug. 31	Sep. 28
			Sep. 29	Apr. 27	May 25	Jun. 22	Jul. 20		
	1	2	3	4	5	6	7	8	
1 MSF	–	194.8	31.2	–	20.4	29.8	1.3	42.0	
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	19.3	23.5	23.3	23.9	24.3	23.9	19.0	
4 Others									
4.1 Limit	–	–	–	–	–	–	–	–	
4.2 Outstanding	–	–	–	–	–	–	–	–	
5 Total Outstanding (1+2.2+3.2+4.2)	25.4	214.1	54.7	23.3	44.4	54.2	25.1	61.0	

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		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	17,597.1	14,896.5	18,589.3	18,663.9	18,468.4
1.1 Notes in Circulation	18,037.0	15,457.6	19,109.3	19,171.3	19,019.4
1.2 Circulation of Rupee Coin	249.1	246.3	249.6	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	814.9	777.0	764.3	807.9
2 Deposit Money of the Public	15,076.2	12,380.5	12,989.1	13,170.3	13,667.1
2.1 Demand Deposits with Banks	14,837.1	12,175.7	12,759.1	12,940.0	13,420.4
2.2 'Other' Deposits with Reserve Bank	239.1	204.8	230.0	230.3	246.7
3 M₁ (1 + 2)	32,673.3	27,277.0	31,578.5	31,834.3	32,135.5
4 Post Office Saving Bank Deposits	1,066.9	968.8	1,066.9	1,066.9	1,066.9
5 M₂ (3 + 4)	33,740.3	28,245.8	32,645.4	32,901.2	33,202.5
6 Time Deposits with Banks	106,952.6	101,549.6	109,150.2	109,716.6	110,578.5
7 M₃ (3 + 6)	139,625.9	128,826.6	140,728.6	141,550.8	142,714.0
8 Total Post Office Deposits	2,954.0	2,717.2	2,954.0	2,954.0	2,954.0
9 M₄ (7 + 8)	142,579.8	131,543.8	143,682.6	144,504.8	145,667.9

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		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
1 Net Bank Credit to Government	40,014.0	41,570.4	43,313.7	43,831.9	43,947.1
1.1 RBI's net credit to Government (1.1.1–1.1.2)	4,759.6	6,448.3	6,624.8	6,686.9	6,834.6
1.1.1 Claims on Government	6,435.6	7,396.5	6,626.3	6,688.3	6,836.0
1.1.1.1 Central Government	6,418.4	7,352.8	6,626.3	6,632.8	6,831.5
1.1.1.2 State Governments	17.2	43.7	0.0	55.5	4.5
1.1.2 Government deposits with RBI	1,676.0	948.2	1.4	1.4	1.4
1.1.2.1 Central Government	1,675.6	947.7	1.0	1.0	1.0
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	35,122.1	36,688.8	37,145.1	37,112.5
2 Bank Credit to Commercial Sector	92,137.2	82,498.4	92,006.3	92,607.6	93,689.9
2.1 RBI's credit to commercial sector	140.3	75.3	95.6	94.8	95.4
2.2 Other banks' credit to commercial sector	91,996.9	82,423.0	91,910.8	92,512.8	93,594.5
2.2.1 Bank credit by commercial banks	86,254.2	76,811.4	86,097.4	86,731.6	87,807.5
2.2.2 Bank credit by co-operative banks	5,666.0	5,526.8	5,690.2	5,689.1	5,701.6
2.2.3 Investments by commercial and co-operative banks in other securities	76.7	84.9	123.2	92.0	85.5
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	29,223.0	26,342.7	29,467.0	29,695.7	29,952.3
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	27,607.8	25,208.2	27,851.8	28,080.6	28,337.2
3.1.1 Gross foreign assets	27,609.9	25,210.1	27,854.0	28,082.7	28,339.3
3.1.2 Foreign liabilities	2.1	1.9	2.1	2.1	2.1
3.2 Other banks' net foreign exchange assets	1,615.1	1,134.5	1,615.1	1,615.1	1,615.1
4 Government's Currency Liabilities to the Public	256.5	253.8	257.0	257.0	257.0
5 Banking Sector's Net Non-monetary Liabilities	22,004.8	21,838.6	24,315.3	24,841.4	25,132.2
5.1 Net non-monetary liabilities of RBI	9,069.9	8,423.5	10,321.9	10,261.3	10,606.8
5.2 Net non-monetary liabilities of other banks (residual)	12,934.9	13,415.1	13,993.5	14,580.2	14,525.4
M₃ (1+2+3+4–5)	139,625.9	128,826.6	140,728.6	141,550.8	142,714.0

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2017-18	2017	2018		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
Monetary Aggregates					
NM ₁ (1.1 + 1.2.1+1.3)	32,673.3	27,277.0	31,578.5	31,834.3	32,135.5
NM ₂ (NM ₁ + 1.2.2.1)	80,142.1	72,377.6	79,974.8	80,478.8	81,160.0
NM ₃ (NM ₂ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	141,816.7	130,471.8	142,652.1	143,441.7	144,701.9
1 Components					
1.1 Currency with the Public	17,597.1	14,896.5	18,589.3	18,663.9	18,468.4
1.2 Aggregate Deposits of Residents	120,323.4	112,399.4	120,306.6	121,038.9	122,363.6
1.2.1 Demand Deposits	14,837.1	12,175.7	12,759.1	12,940.0	13,420.4
1.2.2 Time Deposits of Residents	105,486.3	100,223.7	107,547.5	108,098.9	108,943.2
1.2.2.1 Short-term Time Deposits	47,468.8	45,100.7	48,396.4	48,644.5	49,024.4
1.2.2.1.1 Certificates of Deposit (CDs)	1,931.1	1,162.1	1,709.9	1,654.1	1,688.6
1.2.2.2 Long-term Time Deposits	58,017.4	55,123.0	59,151.1	59,454.4	59,918.8
1.3 'Other' Deposits with RBI	239.1	204.8	230.0	230.3	246.7
1.4 Call/Term Funding from Financial Institutions	3,657.1	2,971.2	3,526.2	3,508.6	3,623.2
2 Sources					
2.1 Domestic Credit	139,941.3	130,975.6	143,686.5	145,060.1	146,239.2
2.1.1 Net Bank Credit to the Government	40,014.0	41,570.4	43,313.7	43,831.9	43,947.1
2.1.1.1 Net RBI credit to the Government	4,759.6	6,448.3	6,624.8	6,686.9	6,834.6
2.1.1.2 Credit to the Government by the Banking System	35,254.4	35,122.1	36,688.8	37,145.1	37,112.5
2.1.2 Bank Credit to the Commercial Sector	99,927.3	89,405.2	100,372.9	101,228.2	102,292.1
2.1.2.1 RBI Credit to the Commercial Sector	140.3	75.3	95.6	94.8	95.4
2.1.2.2 Credit to the Commercial Sector by the Banking System	99,787.1	89,329.9	100,277.3	101,133.3	102,196.8
2.1.2.2.1 Other Investments (Non-SLR Securities)	7,728.5	6,837.7	8,256.5	8,511.2	8,510.7
2.2 Government's Currency Liabilities to the Public	256.5	253.8	257.0	257.0	257.0
2.3 Net Foreign Exchange Assets of the Banking Sector	26,931.6	24,734.8	26,285.8	26,689.6	27,071.1
2.3.1 Net Foreign Exchange Assets of the RBI	27,607.8	25,208.2	27,851.8	28,080.6	28,337.2
2.3.2 Net Foreign Currency Assets of the Banking System	-676.2	-473.4	-1,566.1	-1,391.0	-1,266.1
2.4 Capital Account	20,705.2	19,245.5	22,295.3	22,970.3	23,318.2
2.5 Other items (net)	4,607.6	6,246.8	5,281.8	5,594.7	5,547.1

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2017-18	2017	2018		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 NM₃	141,816.7	130,471.8	142,310.9	142,652.1	144,701.9
2 Postal Deposits	2,954.0	2,717.2	2,954.0	2,954.0	2,954.0
3 L₁ (1 + 2)	144,770.6	133,189.1	145,264.9	145,606.1	147,655.9
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)	144,799.9	133,218.4	145,294.2	145,635.4	147,685.2
6 Public Deposits with Non-Banking Financial Companies	313.6	..	313.6
7 L₃ (5 + 6)	145,113.5	..	145,607.8

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		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
1 Components					
1.1 Currency in Circulation	18,293.5	15,711.4	19,366.3	19,428.3	19,276.3
1.2 Bankers' Deposits with the RBI	5,655.3	4,719.9	5,169.3	4,976.9	5,086.6
1.2.1 Scheduled Commercial Banks	5,269.1	4,409.8	4,832.3	4,631.8	4,754.6
1.3 'Other' Deposits with the RBI	239.1	204.8	230.0	230.3	246.7
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	24,187.8	20,636.2	24,765.7	24,635.5	24,609.6
2 Sources					
2.1 RBI's Domestic Credit	5,393.4	3,597.7	6,978.7	6,559.2	6,622.3
2.1.1 Net RBI credit to the Government	4,759.6	6,448.3	6,624.8	6,686.9	6,834.6
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	6,405.1	6,625.3	6,631.8	6,830.5
2.1.1.1.1 Loans and Advances to the Central Government	–	96.0	217.7	201.4	439.9
2.1.1.1.2 Investments in Treasury Bills	–	–	–	–	–
2.1.1.1.3 Investments in dated Government Securities	6,411.5	7,251.6	6,399.3	6,422.1	6,382.4
2.1.1.1.3.1 Central Government Securities	6,411.5	7,251.6	6,399.3	6,422.1	6,382.4
2.1.1.1.4 Rupee Coins	6.9	5.2	9.3	9.3	9.2
2.1.1.1.5 Deposits of the Central Government	1,675.6	947.7	1.0	1.0	1.0
2.1.1.2 Net RBI credit to State Governments	16.8	43.2	-0.4	55.1	4.0
2.1.2 RBI's Claims on Banks	493.5	-2,925.9	258.3	-222.5	-307.7
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	493.5	-2,925.9	258.3	-222.9	-308.0
2.1.3 RBI's Credit to Commercial Sector	140.3	75.3	95.6	94.8	95.4
2.1.3.1 Loans and Advances to Primary Dealers	25.4	18.1	24.3	23.9	23.9
2.1.3.2 Loans and Advances to NABARD	–	–	–	–	–
2.2 Government's Currency Liabilities to the Public	256.5	253.8	257.0	257.0	257.0
2.3 Net Foreign Exchange Assets of the RBI	27,607.8	25,208.2	27,851.8	28,080.6	28,337.2
2.3.1 Gold	1,397.4	1,277.9	1,449.7	1,422.1	1,430.0
2.3.2 Foreign Currency Assets	26,210.6	23,930.4	26,402.3	26,658.7	26,907.3
2.4 Capital Account	8,584.3	7,800.1	9,656.8	10,080.7	10,415.5
2.5 Other Items (net)	485.6	623.4	665.1	180.5	191.3

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	2017-18	Outstanding as on March 31/ last Fridays of the month/ Fridays						
		2017		2018				
		Sep. 1	Jul. 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31
		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	20,450.7	24,522.4	24,569.0	24,650.2	24,635.5	24,815.2	24,609.6
1 Components								
1.1 Currency in Circulation	18,293.5	15,650.5	19,225.0	19,220.0	19,361.7	19,428.3	19,387.5	19,276.3
1.2 Bankers' Deposits with RBI	5,655.3	4,610.8	5,065.6	5,115.4	5,059.0	4,976.9	5,188.8	5,086.6
1.3 'Other' Deposits with RBI	239.1	189.3	231.9	233.6	229.5	230.3	239.0	246.7
2 Sources								
2.1 Net Reserve Bank Credit to Government	4,759.6	6,420.9	6,335.7	7,299.8	6,689.1	6,686.9	6,463.3	6,834.6
2.2 Reserve Bank Credit to Banks	493.5	-3,249.7	349.5	-530.0	-246.6	-222.5	233.2	-307.7
2.3 Reserve Bank Credit to Commercial Sector	140.3	73.9	96.3	96.1	95.8	94.8	96.6	95.4
2.4 Net Foreign Exchange Assets of RBI	27,607.8	25,462.0	27,732.4	27,665.2	27,601.0	28,080.6	28,076.5	28,337.2
2.5 Government's Currency Liabilities to the Public	256.5	254.2	257.0	257.0	257.0	257.0	257.0	257.0
2.6 Net Non- Monetary Liabilities of RBI	9,069.9	8,510.6	10,248.5	10,219.0	9,746.1	10,261.3	10,311.3	10,606.8

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		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	112,794.2	104,958.4	112,768.6	113,494.1	114,829.8
1.1.1 Demand Deposits	13,702.8	11,037.1	11,622.0	11,799.1	12,290.3
1.1.2 Time Deposits of Residents	99,091.4	93,921.3	101,146.7	101,695.1	102,539.5
1.1.2.1 Short-term Time Deposits	44,591.1	42,264.6	45,516.0	45,762.8	46,142.8
1.1.2.1.1 Certificates of Deposits (CDs)	1,931.1	1,162.1	1,709.9	1,654.1	1,688.6
1.1.2.2 Long-term Time Deposits	54,500.3	51,656.7	55,630.7	55,932.3	56,396.7
1.2 Call/Term Funding from Financial Institutions	3,657.1	2,971.2	3,526.2	3,508.6	3,623.2
2 Sources					
2.1 Domestic Credit	127,142.0	116,659.8	129,050.4	130,356.8	131,369.7
2.1.1 Credit to the Government	33,174.1	33,009.9	34,622.9	35,070.3	35,034.7
2.1.2 Credit to the Commercial Sector	93,967.9	83,649.9	94,427.5	95,286.5	96,335.1
2.1.2.1 Bank Credit	86,254.2	76,811.4	86,097.4	86,731.6	87,807.5
2.1.2.1.1 Non-food Credit	86,086.9	76,268.0	85,591.0	86,190.1	87,318.9
2.1.2.2 Net Credit to Primary Dealers	64.3	71.7	112.6	112.0	94.2
2.1.2.3 Investments in Other Approved Securities	10.5	18.7	50.5	21.3	12.3
2.1.2.4 Other Investments (in non-SLR Securities)	7,638.9	6,748.1	8,166.9	8,421.5	8,421.1
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	–676.2	–473.4	–1,566.1	–1,391.0	–1,266.1
2.2.1 Foreign Currency Assets	2,018.0	1,591.1	1,363.6	1,542.6	1,645.4
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	1,466.3	1,325.9	1,602.7	1,617.7	1,635.2
2.2.3 Overseas Foreign Currency Borrowings	1,227.9	738.6	1,327.0	1,315.9	1,276.2
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	5,321.8	8,049.0	5,249.5	5,520.8	5,772.3
2.3.1 Balances with the RBI	5,256.9	4,409.8	4,832.3	4,631.8	4,754.6
2.3.2 Cash in Hand	600.6	713.3	675.5	666.2	709.7
2.3.3 Loans and Advances from the RBI	535.7	–2,925.9	258.3	–222.9	–308.0
2.4 Capital Account	11,879.3	11,203.7	12,396.8	12,647.9	12,661.0
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	3,457.1	5,102.2	4,042.2	4,836.1	4,761.9
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	4,360.8	4,251.5	3,336.8	3,786.4	3,929.3
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	–268.2	–334.4	–413.2	–428.6	–432.8

No. 13: Scheduled Commercial Banks' Investments

(₹ Billion)

Item	As on March 30, 2018	2017	2018		
		Aug. 18	Jul. 20	Aug. 17	Aug. 31
	1	2	3	4	5
1 SLR Securities	33,184.5	33,028.6	34,673.5	35,091.6	35,047.0
2 Commercial Paper	1,159.4	1,084.1	1,187.6	1,254.7	1,281.4
3 Shares issued by					
3.1 PSUs	118.7	107.4	117.8	115.5	113.7
3.2 Private Corporate Sector	745.3	670.2	744.6	746.1	726.0
3.3 Others	42.1	41.8	42.5	42.5	61.3
4 Bonds/Debentures issued by					
4.1 PSUs	1,399.7	1,097.3	1,230.2	1,309.9	1,271.3
4.2 Private Corporate Sector	2,222.3	1,655.7	2,253.1	2,259.1	2,247.2
4.3 Others	994.6	684.2	1,126.4	1,191.6	1,198.4
5 Instruments issued by					
5.1 Mutual funds	177.3	786.4	695.8	737.4	708.1
5.2 Financial institutions	895.8	731.8	769.5	764.8	813.8

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	
		Aug.	Jul.	Aug.		Aug.	Jul.	Aug.
1	2	3	4	5	6	7	8	
Number of Reporting Banks	223	220	223	223	149	146	149	149
1 Liabilities to the Banking System	2,344.9	2,039.9	2,338.2	2,406.7	2,282.0	1,983.9	2,291.7	2,349.3
1.1 Demand and Time Deposits from Banks	1,667.5	1,523.8	1,659.9	1,529.5	1,615.6	1,470.5	1,615.5	1,484.9
1.2 Borrowings from Banks	611.7	459.1	609.8	717.9	601.2	458.7	609.4	708.7
1.3 Other Demand and Time Liabilities	65.7	57.1	68.5	159.4	65.2	54.7	66.8	155.7
2 Liabilities to Others	126,658.9	117,867.1	127,396.9	128,428.2	123,506.3	114,814.8	124,240.9	125,293.9
2.1 Aggregate Deposits	117,285.4	108,864.8	118,315.9	119,457.2	114,260.5	105,937.1	115,298.7	116,465.2
2.1.1 Demand	13,994.8	11,248.4	12,597.1	12,575.1	13,702.8	10,964.0	12,311.3	12,290.3
2.1.2 Time	103,290.6	97,616.4	105,718.7	106,882.0	100,557.7	94,973.1	102,987.5	104,174.8
2.2 Borrowings	3,693.9	3,510.3	4,166.4	3,671.7	3,657.1	3,474.4	4,117.4	3,623.2
2.3 Other Demand and Time Liabilities	5,679.7	5,492.0	4,914.7	5,299.3	5,588.7	5,403.3	4,824.8	5,205.5
3 Borrowings from Reserve Bank	2,740.1	32.7	763.0	617.0	2,739.8	32.7	763.0	616.6
3.1 Against Usance Bills /Promissory Notes	–	–	–	–	–	–	–	–
3.2 Others	2,740.1	32.7	763.0	617.0	2,739.8	32.7	763.0	616.6
4 Cash in Hand and Balances with Reserve Bank	6,029.2	5,433.2	5,594.2	5,605.7	5,857.5	5,287.8	5,453.1	5,464.3
4.1 Cash in Hand	616.3	772.7	735.2	727.8	600.65	752.4	714.6	709.7
4.2 Balances with Reserve Bank	5,412.9	4,660.5	4,859.1	4,877.9	5,256.9	4,535.5	4,738.6	4,754.6
5 Assets with the Banking System	3,011.8	2,851.2	3,183.9	3,231.4	2,614.6	2,411.8	2,809.5	2,876.4
5.1 Balances with Other Banks	2,041.9	1,928.7	2,186.8	2,125.0	1,860.5	1,739.1	2,022.2	1,958.2
5.1.1 In Current Account	156.0	129.6	159.1	116.7	123.1	109.6	138.8	96.4
5.1.2 In Other Accounts	1,885.9	1,799.1	2,027.7	2,008.4	1,737.4	1,629.6	1,883.4	1,861.9
5.2 Money at Call and Short Notice	360.5	329.8	315.8	460.2	182.4	155.9	152.2	314.8
5.3 Advances to Banks	284.1	290.7	375.2	349.3	282.0	289.8	372.6	339.5
5.4 Other Assets	325.3	301.9	306.1	296.9	289.6	226.9	262.5	263.9
6 Investment	34,124.7	33,864.9	35,555.7	35,991.6	33,184.5	32,904.4	34,614.0	35,047.0
6.1 Government Securities	34,067.4	33,799.5	35,482.1	35,925.6	33,174.1	32,886.0	34,595.0	35,034.7
6.2 Other Approved Securities	57.3	65.4	73.6	66.1	10.5	18.4	19.0	12.3
7 Bank Credit	88,785.3	79,339.0	88,702.2	90,394.0	86,254.2	76,911.9	86,162.3	87,807.5
7a Food Credit	611.4	670.9	739.0	718.8	419.9	479.4	508.8	488.5
7.1 Loans, Cash-credits and Overdrafts	86,451.5	77,283.5	86,502.3	88,196.0	83,984.8	74,917.0	84,010.7	85,656.9
7.2 Inland Bills-Purchased	230.3	196.2	215.2	214.4	203.9	183.4	197.8	198.6
7.3 Inland Bills-Discounted	1,417.3	1,285.8	1,379.8	1,383.9	1,387.5	1,243.6	1,355.7	1,360.0
7.4 Foreign Bills-Purchased	266.0	213.0	239.7	243.5	263.0	211.6	237.9	241.4
7.5 Foreign Bills-Discounted	420.3	360.4	365.2	356.2	415.0	356.2	360.1	350.6

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
		Aug. 18	Jul. 20	Aug. 31	2018-19	2018
	1	2	3	4	5	6
1 Gross Bank Credit	77,303	69,659	76,734	78,191	1.1	12.2
1.1 Food Credit	419	542	458	488	16.5	-10.0
1.2 Non-food Credit	76,884	69,117	76,276	77,704	1.1	12.4
1.2.1 Agriculture & Allied Activities	10,302	9,777	10,385	10,419	1.1	6.6
1.2.2 Industry	26,993	26,112	26,371	26,621	-1.4	1.9
1.2.2.1 Micro & Small	3,730	3,571	3,594	3,664	-1.8	2.6
1.2.2.2 Medium	1,037	989	1,035	1,053	1.5	6.5
1.2.2.3 Large	22,226	21,552	21,741	21,904	-1.4	1.6
1.2.3 Services	20,505	16,375	20,075	20,740	1.1	26.7
1.2.3.1 Transport Operators	1,213	1,103	1,243	1,256	3.6	13.9
1.2.3.2 Computer Software	186	176	181	183	-1.5	4.2
1.2.3.3 Tourism, Hotels & Restaurants	365	363	362	370	1.4	1.9
1.2.3.4 Shipping	63	71	66	68	7.5	-5.1
1.2.3.5 Professional Services	1,554	1,284	1,549	1,586	2.0	23.5
1.2.3.6 Trade	4,669	4,096	4,625	4,751	1.7	16.0
1.2.3.6.1 Wholesale Trade	2,052	1,754	2,029	2,105	2.6	20.0
1.2.3.6.2 Retail Trade	2,618	2,342	2,597	2,646	1.1	13.0
1.2.3.7 Commercial Real Estate	1,858	1,761	1,818	1,872	0.8	6.3
1.2.3.8 Non-Banking Financial Companies (NBFCs)	4,964	3,405	4,735	4,902	-1.3	43.9
1.2.3.9 Other Services	5,633	4,115	5,496	5,752	2.1	39.8
1.2.4 Personal Loans	19,085	16,854	19,445	19,924	4.4	18.2
1.2.4.1 Consumer Durables	197	172	205	32	-83.8	-81.4
1.2.4.2 Housing	9,746	8,906	10,063	10,419	6.9	17.0
1.2.4.3 Advances against Fixed Deposits	725	600	644	668	-7.8	11.4
1.2.4.4 Advances to Individuals against share & bond	56	53	60	58	5.1	10.6
1.2.4.5 Credit Card Outstanding	686	571	743	785	14.4	37.4
1.2.4.6 Education	697	706	689	698	0.1	-1.2
1.2.4.7 Vehicle Loans	1,898	1,735	1,918	1,955	3.0	12.7
1.2.4.8 Other Personal Loans	5,080	4,111	5,124	5,309	4.5	29.2
1.2A Priority Sector	25,532	23,642	25,324	25,633	0.4	8.4
1.2A.1 Agriculture & Allied Activities	10,216	9,753	10,322	10,359	1.4	6.2
1.2A.2 Micro & Small Enterprises	9,964	8,741	9,717	9,881	-0.8	13.0
1.2A.2.1 Manufacturing	3,730	3,571	3,594	3,664	-1.8	2.6
1.2A.2.2 Services	6,234	5,170	6,122	6,217	-0.3	20.3
1.2A.3 Housing	3,756	3,625	3,893	3,936	4.8	8.6
1.2A.4 Micro-Credit	264	150	208	212	-19.7	41.4
1.2A.5 Education Loans	607	593	574	578	-4.9	-2.6
1.2A.6 State-Sponsored Orgs. for SC/ST	3	3	4	3	17.9	37.4
1.2A.7 Weaker Sections	5,690	5,312	5,825	5,871	3.2	10.5
1.2A.8 Export Credit	283	415	219	205	-27.5	-50.6

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
			Aug. 18	Jul. 20		
	1	2	3	4	5	6
1 Industry	26,993	26,112	26,371	26,621	-1.4	1.9
1.1 Mining & Quarrying (incl. Coal)	413	318	415	414	0.2	30.1
1.2 Food Processing	1,554	1,402	1,466	1,427	-8.2	1.8
1.2.1 Sugar	290	280	272	261	-10.0	-7.0
1.2.2 Edible Oils & Vanaspati	211	183	215	206	-2.5	12.5
1.2.3 Tea	45	42	51	53	18.4	24.3
1.2.4 Others	1,008	896	927	907	-10.0	1.3
1.3 Beverage & Tobacco	156	168	136	129	-16.9	-22.9
1.4 Textiles	2,099	1,932	2,015	1,981	-5.6	2.5
1.4.1 Cotton Textiles	1,057	968	1,010	982	-7.2	1.4
1.4.2 Jute Textiles	22	27	21	19	-12.3	-29.1
1.4.3 Man-Made Textiles	243	222	241	238	-2.2	7.3
1.4.4 Other Textiles	776	715	743	742	-4.4	3.7
1.5 Leather & Leather Products	113	107	111	113	-0.2	5.4
1.6 Wood & Wood Products	109	102	111	112	3.1	9.5
1.7 Paper & Paper Products	306	310	302	298	-2.5	-3.8
1.8 Petroleum, Coal Products & Nuclear Fuels	651	486	580	538	-17.4	10.8
1.9 Chemicals & Chemical Products	1,630	1,554	1,627	1,673	2.6	7.7
1.9.1 Fertiliser	306	241	274	292	-4.5	21.3
1.9.2 Drugs & Pharmaceuticals	484	452	496	511	5.6	13.0
1.9.3 Petro Chemicals	387	437	365	368	-4.9	-15.8
1.9.4 Others	453	424	492	502	10.7	18.4
1.10 Rubber, Plastic & their Products	424	387	416	430	1.4	11.0
1.11 Glass & Glassware	85	79	98	100	18.3	25.9
1.12 Cement & Cement Products	526	543	520	514	-2.4	-5.5
1.13 Basic Metal & Metal Product	4,160	4,166	3,808	3,840	-7.7	-7.8
1.13.1 Iron & Steel	3,262	3,246	2,905	2,947	-9.7	-9.2
1.13.2 Other Metal & Metal Product	898	920	904	894	-0.5	-2.9
1.14 All Engineering	1,553	1,460	1,537	1,547	-0.4	6.0
1.14.1 Electronics	344	314	339	351	2.1	11.9
1.14.2 Others	1,210	1,146	1,198	1,196	-1.1	4.4
1.15 Vehicles, Vehicle Parts & Transport Equipment	787	707	751	754	-4.2	6.7
1.16 Gems & Jewellery	727	709	681	692	-4.8	-2.3
1.17 Construction	901	811	902	878	-2.5	8.4
1.18 Infrastructure	8,909	8,859	9,077	9,237	3.7	4.3
1.18.1 Power	5,196	5,217	5,268	5,299	2.0	1.6
1.18.2 Telecommunications	846	820	909	907	7.2	10.5
1.18.3 Roads	1,665	1,713	1,618	1,712	2.8	-0.0
1.18.4 Other Infrastructure	1,202	1,109	1,282	1,319	9.7	18.9
1.19 Other Industries	1,890	2,012	1,819	1,943	2.8	-3.4

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					2017-18
		Jul, 28	May, 25	Jun, 08	Jun, 22	Jun, 29	Jul, 06	Jul, 20	
	1	2	3	4	5	6	7	8	9
Number of Reporting Banks	31	31	31	30	31	30	31	31	30
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	540.9	522.2	559.4	527.5	558.0	533.6	554.4	571.0	539.3
2 Demand and Time Liabilities									
2.1 Demand Liabilities	158.0	165.3	169.3	159.7	172.1	167.4	165.5	186.4	167.3
2.1.1 Deposits									
2.1.1.1 Inter-Bank	41.7	39.2	48.8	44.2	40.9	49.0	47.8	50.6	47.5
2.1.1.2 Others	89.9	101.0	88.8	77.5	93.3	83.2	85.7	102.9	86.7
2.1.2 Borrowings from Banks	1.2	0.0	6.1	6.6	11.9	8.7	3.7	3.2	3.7
2.1.3 Other Demand Liabilities	25.2	25.1	25.5	31.5	25.9	26.5	28.3	29.7	29.4
2.2 Time Liabilities	797.9	869.2	904.3	882.3	897.8	872.3	895.4	892.3	870.0
2.2.1 Deposits									
2.2.1.1 Inter-Bank	336.5	439.4	424.7	420.6	417.8	415.0	414.1	410.2	410.5
2.2.1.2 Others	451.0	421.2	470.5	450.0	464.7	450.4	468.7	468.1	452.6
2.2.2 Borrowings from Banks	3.1	0.0	2.4	5.4	8.6	0.0	6.6	7.3	0.0
2.2.3 Other Time Liabilities	7.3	8.6	6.7	6.4	6.6	6.8	6.0	6.7	6.9
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 Borrowings from a notified bank / Government	404.8	438.4	435.7	429.2	425.0	429.8	428.6	424.3	432.0
4.1 Demand	112.3	168.8	146.4	146.4	145.4	152.6	148.1	147.6	157.2
4.2 Time	292.5	269.7	289.3	282.8	279.6	277.3	280.6	276.8	274.9
5 Cash in Hand and Balances with Reserve Bank	55.6	45.7	47.6	47.1	47.4	47.5	45.8	58.1	45.4
5.1 Cash in Hand	2.8	3.4	3.0	2.6	3.0	3.1	3.1	3.1	2.9
5.2 Balance with Reserve Bank	52.8	42.4	44.5	44.5	44.4	44.4	42.7	55.0	42.5
6 Balances with Other Banks in Current Account	15.0	7.4	7.4	6.2	8.2	10.4	7.7	7.7	8.4
7 Investments in Government Securities	295.6	309.8	322.8	315.7	316.4	311.4	316.1	315.4	530.8
8 Money at Call and Short Notice	208.8	211.7	200.0	182.9	193.6	186.8	184.6	191.2	173.2
9 Bank Credit (10.1+11)	434.4	480.2	553.5	539.0	551.6	546.5	543.8	533.8	538.9
10 Advances									
10.1 Loans, Cash-Credits and Overdrafts	434.4	480.2	553.5	539.0	551.5	546.5	543.8	533.8	538.9
10.2 Due from Banks	668.5	716.0	701.8	693.4	692.8	693.3	692.1	690.1	692.8
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	Aug. 17	Jul. 18	Aug. 18	Aug. 17	Jul. 18	Aug. 18	Aug. 17	Jul. 18	Aug. 18
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	138.6	137.4	138.1	140.6	142.0	142.8	140.5	140.3	140.1	140.6	141.4	141.8
1.1 Cereals and products	135.2	133.7	134.7	134.8	138.4	139.2	133.2	135.6	136.5	134.3	137.5	138.3
1.2 Meat and fish	142.7	143.8	143.1	143.1	149.3	148.9	143.9	148.6	146.4	143.4	149.1	148.0
1.3 Egg	134.4	134.1	134.3	130.0	139.3	139.3	128.3	139.1	136.6	129.3	139.2	138.3
1.4 Milk and products	140.3	138.6	139.6	139.4	143.4	143.6	138.3	141.0	141.2	139.0	142.5	142.7
1.5 Oils and fats	121.7	114.8	119.2	120.5	124.1	125.0	114.1	116.7	117.4	118.1	121.4	122.2
1.6 Fruits	146.2	137.0	141.9	148.0	153.3	154.7	142.7	149.7	146.2	145.5	151.6	150.7
1.7 Vegetables	146.8	154.3	149.3	162.9	154.2	156.5	179.8	159.2	157.3	168.6	155.9	156.8
1.8 Pulses and products	136.4	123.6	132.1	137.4	126.4	126.8	123.5	112.6	113.6	132.7	121.7	122.4
1.9 Sugar and confectionery	119.8	120.2	119.9	120.8	114.3	115.3	122.1	111.8	113.3	121.2	113.5	114.6
1.10 Spices	135.0	139.2	136.4	134.7	138.2	138.7	137.5	140.3	141.1	135.6	138.9	139.5
1.11 Non-alcoholic beverages	131.1	125.0	128.5	131.6	132.8	133.8	124.6	126.8	127.4	128.7	130.3	131.1
1.12 Prepared meals, snacks, sweets	149.4	145.1	147.4	148.7	154.8	155.1	144.5	149.4	150.4	146.8	152.3	152.9
2 Pan, tobacco and intoxicants	150.0	153.8	151.0	149.0	156.1	156.3	152.1	161.4	162.1	149.8	157.5	157.8
3 Clothing and footwear	145.3	132.4	140.2	144.5	150.6	151.2	131.4	137.9	138.3	139.3	145.6	146.1
3.1 Clothing	146.1	133.8	141.3	145.3	151.5	152.1	132.7	139.6	140.0	140.3	146.8	147.3
3.2 Footwear	140.0	124.7	133.7	139.2	145.1	145.9	124.3	128.9	129.0	133.0	138.4	138.9
4 Housing	--	136.4	136.4	--	--	--	134.4	143.6	144.6	134.4	143.6	144.6
5 Fuel and light	138.6	123.0	132.7	136.4	146.8	147.5	118.9	128.1	129.7	129.8	139.7	140.8
6 Miscellaneous	130.4	124.4	127.5	129.7	136.0	136.5	123.8	130.2	131.0	126.8	133.2	133.8
6.1 Household goods and services	137.7	128.2	133.2	137.3	143.1	143.7	127.7	133.6	134.4	132.8	138.6	139.3
6.2 Health	133.9	126.6	131.1	133.0	139.0	139.4	125.7	133.6	134.8	130.2	137.0	137.7
6.3 Transport and communication	121.2	115.3	118.0	120.3	127.5	128.2	114.6	120.1	120.7	117.3	123.6	124.3
6.4 Recreation and amusement	132.1	124.6	127.9	131.5	138.4	138.6	124.1	129.0	129.8	127.3	133.1	133.6
6.5 Education	139.7	135.9	137.4	140.2	145.8	146.8	135.7	144.0	145.3	137.6	144.7	145.9
6.6 Personal care and effects	126.5	124.1	125.5	125.4	131.4	131.3	123.3	128.2	128.3	124.5	130.1	130.1
General Index (All Groups)	137.2	132.5	135.0	137.8	141.8	142.5	132.7	137.5	138.0	135.4	139.8	140.4

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

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2017-18	2017	2018	
				Aug.	Jul.	Aug.
	1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63	284	285	301	301
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89	889	894	902	907
3 Consumer Price Index for Rural Labourers	1986-87	—	895	900	910	915

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	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Standard Gold (₹ per 10 grams)	29,300	28,893	30,097	29,644
2 Silver (₹ per kilogram)	39,072	38,637	38,592	37,374

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	
			Aug.	Jun.	Jul. (P)	Aug. (P)
			1	2	3	4
I ALL COMMODITIES	100.000	114.9	114.8	119.1	119.7	120.0
I.1 PRIMARY ARTICLES	22.618	130.6	135.3	132.5	134.9	135.1
I.1.1 FOOD ARTICLES	15.256	143.2	150.9	141.8	144.7	144.8
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	142.6	143.0	141.0	142.7	145.0
1.1.1.2 Fruits & Vegetables	3.475	155.9	191.4	145.9	155.5	155.6
1.1.1.3 Milk	4.440	139.7	139.7	142.5	143.2	143.7
1.1.1.4 Eggs,Meat & Fish	2.402	135.7	134.9	138.2	139.3	135.7
1.1.1.5 Condiments & Spices	0.529	125.2	122.9	129.6	130.6	131.1
1.1.1.6 Other Food Articles	0.948	144.0	140.3	142.2	140.8	141.3
I.1.2 NON-FOOD ARTICLES	4.119	119.6	120.8	122.5	123.5	125.0
1.1.2.1 Fibres	0.839	119.0	119.0	127.3	129.9	130.8
1.1.2.2 Oil Seeds	1.115	129.9	127.1	137.3	138.1	140.1
1.1.2.3 Other non-food Articles	1.960	110.9	114.3	110.6	109.6	110.7
1.1.2.4 Floriculture	0.204	148.7	155.2	136.1	151.4	155.3
I.1.3 MINERALS	0.833	122.5	120.8	123.2	129.6	123.2
1.1.3.1 Metallic Minerals	0.648	109.1	107.6	105.6	114.9	105.6
1.1.3.2 Other Minerals	0.185	169.3	166.9	184.6	181.2	184.6
I.1.4 CRUDE PETROLEUM & NATURAL GAS	2.410	73.0	66.0	94.1	94.4	94.9
I.2 FUEL & POWER	13.152	93.3	89.1	104.4	104.4	104.9
I.2.1 COAL	2.138	118.7	117.5	123.0	123.0	123.0
1.2.1.1 Coking Coal	0.647	134.1	135.5	132.0	132.0	132.0
1.2.1.2 Non-Coking Coal	1.401	112.5	110.7	119.0	119.0	119.0
1.2.1.3 Lignite	0.090	104.2	95.0	120.0	120.0	120.0
I.2.2 MINERAL OILS	7.950	82.5	77.0	97.3	97.5	98.3
I.2.3 ELECTRICITY	3.064	103.7	100.6	109.6	109.6	109.6
I.3 MANUFACTURED PRODUCTS	64.231	113.8	112.8	117.3	117.4	117.8
I.3.1 MANUFACTURE OF FOOD PRODUCTS	9.122	127.4	127.4	128.5	129.0	129.0
1.3.1.1 Processing and Preserving of meat	0.134	134.4	132.7	137.6	137.5	137.3
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	128.1	128.2	124.4	123.6	124.7
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	119.1	119.4	116.1	117.2	116.5
1.3.1.4 Vegetable and Animal oils and Fats	2.643	109.4	106.3	120.6	120.3	119.0
1.3.1.5 Dairy products	1.165	142.1	143.4	138.3	137.4	136.6
1.3.1.6 Grain mill products	2.010	137.4	137.4	137.8	138.5	140.2
1.3.1.7 Starches and Starch products	0.110	112.6	111.7	110.1	110.4	110.4
1.3.1.8 Bakery products	0.215	128.8	128.4	127.9	128.9	129.9
1.3.1.9 Sugar, Molasses & honey	1.163	128.0	133.4	110.5	114.3	114.3
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	126.1	127.0	125.2	125.9	124.4
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	131.4	130.4	131.5	133.6	133.9
1.3.1.12 Tea & Coffee products	0.371	129.1	131.3	144.8	143.2	141.9
1.3.1.13 Processed condiments & salt	0.163	118.2	114.8	121.3	119.7	121.8
1.3.1.14 Processed ready to eat food	0.024	127.2	127.0	128.8	129.0	125.7
1.3.1.15 Health supplements	0.225	141.1	142.7	138.9	139.8	140.2
1.3.1.16 Prepared animal feeds	0.356	153.0	152.9	153.4	154.9	156.6
I.3.2 MANUFACTURE OF BEVERAGES	0.909	118.9	118.6	119.3	119.6	120.0
1.3.2.1 Wines & spirits	0.408	113.8	114.1	112.1	112.6	112.9
1.3.2.2 Malt liquors and Malt	0.225	117.9	117.8	119.4	119.8	120.3
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	127.4	125.8	129.9	129.8	130.2
I.3.3 MANUFACTURE OF TOBACCO PRODUCTS	0.514	148.4	149.7	150.8	149.3	150.1
1.3.3.1 Tobacco products	0.514	148.4	149.7	150.8	149.3	150.1
I.3.4 MANUFACTURE OF TEXTILES	4.881	113.4	113.7	116.2	117.1	117.6
1.3.4.1 Preparation and Spinning of textile fibres	2.582	106.2	106.3	109.0	109.9	110.5
1.3.4.2 Weaving & Finishing of textiles	1.509	122.0	123.1	125.3	126.5	126.8
1.3.4.3 Knitted and Crocheted fabrics	0.193	108.6	107.2	112.2	114.3	115.0
1.3.4.4 Made-up textile articles, Except apparel	0.299	124.6	124.4	126.5	126.8	129.6
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	141.7	141.9	137.6	138.5	138.1
1.3.4.6 Other textiles	0.201	117.5	116.4	117.6	116.5	115.9
I.3.5 MANUFACTURE OF WEARING APPAREL	0.814	136.9	136.1	139.7	138.2	139.1
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	137.8	137.5	140.5	139.4	139.9
1.3.5.2 Knitted and Crocheted apparel	0.221	134.5	132.2	137.7	135.2	137.0

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

Commodities	Weight	2017-18	2017	2018		
			Aug.	Jun.	Jul. (P)	Aug. (P)
			1	2	3	4
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	0.535	120.1	119.3	123.1	123.0	122.5
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	110.9	109.0	117.0	116.5	114.1
1.3.6.2 Luggage, Handbags, Saddlery and Harness	0.075	131.2	128.5	134.2	134.2	134.4
1.3.6.3 Footwear	0.318	121.6	121.8	123.1	123.3	123.4
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	0.772	131.5	132.2	132.7	132.0	132.8
1.3.7.1 Saw milling and Planing of wood	0.124	120.5	120.5	123.4	122.7	122.2
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	131.5	131.4	134.6	134.1	135.4
1.3.7.3 Builder's carpentry and Joinery	0.036	159.8	163.3	158.3	156.5	156.5
1.3.7.4 Wooden containers	0.119	134.5	138.4	126.7	125.8	125.9
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	1.113	118.9	118.1	121.3	121.8	122.6
1.3.8.1 Pulp, Paper and Paperboard	0.493	122.3	120.2	126.4	126.7	127.5
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	116.1	117.1	115.1	116.3	117.7
1.3.8.3 Other articles of paper and Paperboard	0.306	116.2	115.9	119.3	119.5	119.7
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	0.676	143.7	143.8	147.0	145.3	147.9
1.3.9.1 Printing	0.676	143.7	143.8	147.0	145.3	147.9
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	6.465	112.5	111.1	117.6	118.1	118.6
1.3.10.1 Basic chemicals	1.433	111.2	107.7	123.1	124.2	124.5
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	117.1	116.5	118.7	119.0	120.0
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	113.0	111.3	117.7	118.1	118.4
1.3.10.4 Pesticides and Other agrochemical products	0.454	115.3	114.9	117.9	119.1	120.2
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	108.6	108.8	111.8	110.3	110.3
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	115.2	115.5	114.7	115.8	115.6
1.3.10.7 Other chemical products	0.692	110.1	108.4	115.9	116.2	117.4
1.3.10.8 Man-made fibres	0.296	97.5	96.3	104.0	104.5	104.3
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	1.993	121.2	120.7	122.2	121.8	123.5
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	121.2	120.7	122.2	121.8	123.5
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	2.299	107.6	107.6	108.9	109.4	109.2
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	100.3	100.5	97.2	97.9	98.8
1.3.12.2 Other Rubber Products	0.272	91.0	91.3	90.5	91.6	91.5
1.3.12.3 Plastics products	1.418	113.9	113.8	117.5	117.7	117.1
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	3.202	112.7	111.4	115.2	115.7	115.9
1.3.13.1 Glass and Glass products	0.295	117.2	118.6	119.1	118.7	121.1
1.3.13.2 Refractory products	0.223	113.2	111.4	112.1	110.8	111.6
1.3.13.3 Clay Building Materials	0.121	94.0	89.0	95.2	90.2	91.8
1.3.13.4 Other Porcelain and Ceramic Products	0.222	112.5	113.0	112.5	112.4	112.5
1.3.13.5 Cement, Lime and Plaster	1.645	113.8	113.0	113.5	114.4	114.2
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	118.9	118.4	121.5	122.3	121.8
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	117.2	116.3	118.0	118.9	118.4
1.3.13.8 Other Non-Metallic Mineral Products	0.169	89.9	78.4	131.2	136.9	137.3
1.3.14 MANUFACTURE OF BASIC METALS	9.646	101.4	98.5	112.9	112.1	111.6
1.3.14.1 Inputs into steel making	1.411	98.2	93.7	112.9	113.5	113.2
1.3.14.2 Metallic Iron	0.653	99.4	95.1	118.6	117.5	117.3
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	93.2	92.1	100.8	99.5	99.5
1.3.14.4 Mild Steel - Long Products	1.081	95.6	92.0	110.8	110.5	108.1
1.3.14.5 Mild Steel - Flat products	1.144	104.9	99.9	120.6	120.9	119.7
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	97.3	92.3	111.3	110.3	109.5
1.3.14.7 Stainless Steel - Semi Finished	0.924	98.2	95.4	116.9	113.6	112.9
1.3.14.8 Pipes & tubes	0.205	116.1	112.6	126.5	124.8	125.8
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	107.9	105.9	114.7	113.8	112.4
1.3.14.10 Castings	0.925	104.8	104.2	107.6	107.1	109.2
1.3.14.11 Forgings of steel	0.271	118.4	117.5	115.3	112.5	115.5
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	3.155	109.5	106.3	114.1	114.6	115.5
1.3.15.1 Structural Metal Products	1.031	105.9	104.1	110.6	111.5	113.5
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	122.6	117.5	128.3	128.0	129.1
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	109.0	109.4	108.5	108.5	106.8
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	90.7	87.5	95.9	94.1	96.8
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	102.3	93.5	99.9	99.5	99.7
1.3.15.6 Other Fabricated Metal Products	0.728	114.8	112.0	120.8	123.0	122.3
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	2.009	110.1	109.5	111.2	110.9	112.2
1.3.16.1 Electronic Components	0.402	103.7	104.0	100.4	101.3	100.5
1.3.16.2 Computers and Peripheral Equipment	0.336	127.4	127.4	127.3	127.3	135.1

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

Commodities	Weight	2017-18	2017	2018		
			Aug.	Jun.	Jul. (P)	Aug. (P)
			1	2	3	4
1.3.16.3 Communication Equipment	0.310	110.6	104.7	117.4	116.4	116.2
1.3.16.4 Consumer Electronics	0.641	103.1	104.5	104.6	103.7	105.3
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	106.9	105.9	109.2	109.2	105.1
1.3.16.6 Watches and Clocks	0.076	137.8	136.6	137.4	137.4	138.9
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	102.9	102.6	103.7	103.0	103.0
1.3.16.8 Optical instruments and Photographic equipment	0.008	108.0	105.1	111.8	111.8	112.1
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	2.930	109.6	109.9	111.8	111.7	111.7
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	105.8	106.5	107.4	107.3	107.5
1.3.17.2 Batteries and Accumulators	0.236	117.4	115.2	118.0	117.4	118.3
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	116.5	122.9	127.3	127.3	125.7
1.3.17.4 Other electronic and Electric wires and Cables	0.428	105.7	104.5	111.9	111.6	110.5
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	109.9	111.6	108.2	108.9	108.7
1.3.17.6 Domestic appliances	0.366	121.3	121.5	122.9	122.9	122.9
1.3.17.7 Other electrical equipment	0.206	107.2	105.4	107.6	107.3	107.9
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	4.789	108.9	108.5	110.5	110.5	111.1
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	102.3	102.8	102.1	102.6	103.5
1.3.18.2 Fluid power equipment	0.162	115.3	115.0	117.4	117.3	117.7
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	108.6	107.2	109.1	107.2	108.9
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	109.0	110.2	111.7	112.1	112.4
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	78.5	79.6	79.3	79.1	79.1
1.3.18.6 Lifting and Handling equipment	0.285	105.8	103.8	109.5	111.5	109.5
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	126.8	130.2	130.1	130.2
1.3.18.9 Agricultural and Forestry machinery	0.833	112.8	112.3	114.6	115.3	116.4
1.3.18.10 Metal-forming machinery and Machine tools	0.224	99.6	100.9	97.5	99.0	100.6
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	75.0	75.0	74.1	73.9	74.0
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	121.1	119.5	124.1	121.9	121.5
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	117.4	115.7	121.8	122.4	122.2
1.3.18.14 Other special-purpose machinery	0.468	119.5	119.2	123.4	123.1	123.7
1.3.18.15 Renewable electricity generating equipment	0.046	70.4	70.9	67.2	67.0	67.0
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	4.969	110.7	110.4	111.7	112.5	113.3
1.3.19.1 Motor vehicles	2.600	112.6	113.3	112.5	113.1	113.9
1.3.19.2 Parts and Accessories for motor vehicles	2.368	108.6	107.3	111.0	111.8	112.5
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	1.648	110.2	109.1	110.6	110.8	111.2
1.3.20.1 Building of ships and Floating structures	0.117	158.8	158.8	158.8	158.8	158.8
1.3.20.2 Railway locomotives and Rolling stock	0.110	104.0	103.6	105.2	105.3	103.9
1.3.20.3 Motor cycles	1.302	105.3	104.1	105.4	105.6	106.1
1.3.20.4 Bicycles and Invalid carriages	0.117	121.3	119.8	125.2	125.8	126.6
1.3.20.5 Other transport equipment	0.002	119.9	119.1	121.3	121.6	123.8
1.3.21 MANUFACTURE OF FURNITURE	0.727	120.3	120.3	124.6	125.1	125.5
1.3.21.1 Furniture	0.727	120.3	120.3	124.6	125.1	125.5
1.3.22 OTHER MANUFACTURING	1.064	109.2	105.0	106.9	104.7	106.6
1.3.22.1 Jewellery and Related articles	0.996	106.7	102.1	103.8	101.8	103.7
1.3.22.2 Musical instruments	0.001	171.0	173.0	173.7	167.9	174.3
1.3.22.3 Sports goods	0.012	126.0	125.7	126.2	126.3	126.6
1.3.22.4 Games and Toys	0.005	128.2	128.3	129.2	129.8	131.0
1.3.22.5 Medical and Dental instruments and Supplies	0.049	151.9	153.5	160.4	154.9	155.1
2 FOOD INDEX	24.378	137.3	142.1	136.8	138.8	138.9

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-July		July	
				2017-18	2018-19	2017	2018
	1	2	3	4	5	6	7
General Index	100.00	120.0	125.3	119.9	126.4	118.0	125.8
1 Sectoral Classification							
1.1 Mining	14.37	102.5	104.9	97.9	102.8	92.4	95.8
1.2 Manufacturing	77.63	121.0	126.6	120.6	127.3	119.3	127.6
1.3 Electricity	7.99	141.6	149.2	152.0	160.1	151.9	162.1
2 Use-Based Classification							
2.1 Primary Goods	34.05	117.5	121.8	117.7	124.9	115.7	123.7
2.2 Capital Goods	8.22	101.5	105.6	96.2	103.3	96.5	99.4
2.3 Intermediate Goods	17.22	122.3	125.1	120.7	121.9	119.8	121.2
2.4 Infrastructure/ Construction Goods	12.34	125.0	132.0	127.7	138.1	124.6	135.1
2.5 Consumer Durables	12.84	122.6	123.6	119.9	131.2	117.0	133.8
2.6 Consumer Non-Durables	15.33	126.5	139.9	130.2	133.7	128.3	135.5

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

(₹ Billion)

Item	Financial Year	April - August			
	2018-19 (Budget Estimates)	2018-19 (Actuals)	2017-18 (Actuals)	Percentage to Budget Estimates	
				2018-19	2017-18
1	2	3	4	5	
1 Revenue Receipts	17,257.4	4,645.5	4,098.7	26.9	27.0
1.1 Tax Revenue (Net)	14,806.5	3,662.2	3,406.1	24.7	27.8
1.2 Non-Tax Revenue	2,450.9	983.3	692.6	40.1	24.0
2 Capital Receipts	7,164.8	6,063.1	5,405.8	84.6	85.7
2.1 Recovery of Loans	122.0	56.0	55.6	45.9	46.6
2.2 Other Receipts	800.0	94.2	99.7	11.8	13.8
2.3 Borrowings and Other Liabilities	6,242.8	5,912.9	5,250.5	94.7	96.1
3 Total Receipts (1+2)	24,422.1	10,708.6	9,504.5	43.8	44.3
4 Revenue Expenditure	21,417.7	9,386.4	8,408.0	43.8	45.8
4.1 Interest Payments	5,758.0	2,191.1	1,963.9	38.1	37.5
5 Capital Expenditure	3,004.4	1,322.2	1,096.5	44.0	35.4
6 Total Expenditure (4+5)	24,422.1	10,708.6	9,504.5	43.8	44.3
7 Revenue Deficit (4-1)	4,160.3	4,740.9	4,309.3	114.0	134.2
8 Fiscal Deficit {6-(1+2.1+2.2)}	6,242.8	5,912.9	5,250.5	94.7	96.1
9 Gross Primary Deficit (8-4.1)	484.8	3,721.8	3,286.5	767.7	1401.3

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

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2016-17	2017	2018					
		Sep. 1	Jul. 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31
	1	2	3	4	5	6	7	8
1 91-day								
1.1 Banks	323.7	405.9	511.7	495.5	471.5	439.6	469.8	401.8
1.2 Primary Dealers	243.5	155.4	212.2	205.5	227.0	209.1	220.7	209.5
1.3 State Governments	146.2	714.5	784.1	744.1	762.1	762.1	646.1	665.3
1.4 Others	343.4	784.7	437.9	490.8	523.3	602.8	591.0	699.5
2 182-day								
2.1 Banks	216.2	364.2	326.5	341.9	385.9	381.0	390.5	393.6
2.2 Primary Dealers	316.5	263.0	442.2	378.9	384.6	360.8	353.5	338.6
2.3 State Governments	193.6	194.0	352.9	351.5	341.5	341.5	333.0	333.8
2.4 Others	120.9	143.8	204.2	252.1	212.0	241.3	249.0	260.1
3 364-day								
3.1 Banks	512.3	444.8	401.0	382.4	395.5	385.4	405.1	375.5
3.2 Primary Dealers	551.8	514.0	799.7	751.1	831.8	751.0	830.9	742.5
3.3 State Governments	26.3	29.7	149.4	149.4	149.4	149.4	157.9	157.9
3.4 Others	326.4	424.3	451.4	498.5	444.4	515.4	455.7	553.7
4 14-day Intermediate								
4.1 Banks	–	–	–	–	–	–	–	–
4.2 Primary Dealers	–	–	–	–	–	–	–	–
4.3 State Governments	1,560.6	1,064.5	1,335.5	1,039.0	838.5	749.9	1,424.2	1,361.5
4.4 Others	5.1	5.3	5.9	5.3	3.5	3.6	3.4	4.4
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #	3,320.8	4,438.2	5,073.4	5,041.8	5,129.1	5,139.3	5,103.4	5,131.9

#: 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

(₹ 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										
Aug. 1	100	47	401.89	16.66	21	100.00	16.66	116.66	98.35	6.7292
Aug. 8	100	64	997.50	23.60	31	100.00	23.60	123.60	98.36	6.6877
Aug. 14	100	45	664.78	15.00	18	100.00	15.00	115.00	98.34	6.7706
Aug. 21	100	53	604.41	25.00	33	100.00	25.00	125.00	98.33	6.8121
Aug. 29	100	56	698.94	120.01	28	100.00	120.01	220.00	98.33	6.8121
182-day Treasury Bills										
2018-19										
Aug. 1	40	42	169.84	24.67	9	40.00	24.67	64.67	96.65	6.9513
Aug. 8	40	46	200.40	0.00	19	40.00	0.00	40.00	96.64	6.9727
Aug. 14	40	38	164.55	0.00	14	40.00	0.00	40.00	96.63	6.9942
Aug. 21	40	38	143.19	10.00	18	40.00	10.00	50.00	96.62	7.0157
Aug. 29	40	35	144.15	40.00	4	40.00	40.00	80.00	96.62	7.0157
364-day Treasury Bills										
2018-19										
Aug. 1	40	59	155.23	0.00	19	40.00	0.00	40.00	93.24	7.2700
Aug. 8	40	75	201.57	0.00	35	40.00	0.00	40.00	93.23	7.2816
Aug. 14	40	63	139.54	0.00	22	40.00	0.00	40.00	93.21	7.3046
Aug. 21	40	71	181.51	8.50	29	40.00	8.50	48.50	93.20	7.3162
Aug. 29	40	52	124.70	0.00	20	40.00	0.00	40.00	93.19	7.3277

Financial Markets

No. 26: Daily Call Money Rates

(Per cent per annum)

As on		Range of Rates	Weighted Average Rates
		Borrowings/ Lendings	Borrowings/ Lendings
		1	2
August	1, 2018	4.90-6.35	6.17
August	2, 2018	5.20-6.50	6.34
August	3, 2018	5.20-6.50	6.34
August	4, 2018	5.00-6.50	5.95
August	6, 2018	5.10-6.50	6.28
August	7, 2018	5.10-6.50	6.32
August	8, 2018	5.10-6.65	6.42
August	9, 2018	5.20-6.55	6.37
August	10, 2018	5.20-6.55	6.38
August	13, 2018	5.00-6.50	6.34
August	14, 2018	5.10-6.50	6.37
August	16, 2018	5.00-6.55	6.43
August	18, 2018	4.50-6.60	6.11
August	20, 2018	5.00-6.60	6.38
August	21, 2018	5.00-6.60	6.41
August	23, 2018	5.00-6.65	6.41
August	24, 2018	5.00-6.60	6.38
August	27, 2018	5.00-6.61	6.34
August	28, 2018	5.00-6.50	6.34
August	29, 2018	5.00-6.50	6.32
August	30, 2018	5.00-6.50	6.35
August	31, 2018	5.00-6.55	6.39
September	1, 2018	5.00-6.45	6.22
September	3, 2018	5.10-6.70	6.33
September	4, 2018	5.00-6.45	6.32
September	5, 2018	5.00-6.45	6.30
September	6, 2018	5.10-6.50	6.31
September	7, 2018	5.00-6.50	6.35
September	10, 2018	5.00-6.75	6.54
September	11, 2018	5.00-6.85	6.49
September	12, 2018	5.00-6.65	6.45
September	14, 2018	5.00-6.50	6.42
September	15, 2018	5.00-6.75	6.57

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2017	2018			
	Aug. 18	Jul. 20	Aug. 3	Aug. 17	Aug. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	1,147.1	1,638.5	1,666.5	1,586.6	1,639.8
1.1 Issued during the fortnight (₹ Billion)	121.3	97.4	140.4	114.6	241.3
2 Rate of Interest (per cent)	6.16-6.70	6.65-8.60	6.70-8.90	6.80-8.10	6.95-8.90

No. 28: Commercial Paper

Item	2017	2018			
	Aug. 31	Jul. 15	Jul. 31	Aug. 15	Aug. 31
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	3,695.8	5,630.9	6,395.3	5,978.4	6,323.0
1.1 Reported during the fortnight (₹ Billion)	996.5	995.5	1,677.1	1,478.5	1,561.2
2 Rate of Interest (per cent)	6.05-11.25	6.03-10.71	6.19-12.47	6.53-15.79	6.44-10.40

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2017-18	2017	2018					
		Sep. 1	Jul. 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31
	1	2	3	4	5	6	7	8
1 Call Money	245.5	326.5	259.7	279.0	242.9	236.8	254.4	244.3
2 Notice Money	36.6	5.3	3.7	85.2	5.2	190.6	2.7	123.5
3 Term Money	9	10.4	7.5	8.1	10.1	11.2	8.5	10.5
4 CBLO	2,130.1	2,428.2	2,108.8	2,298.6	2,085.7	2,167.0	2,289.9	2,521.7
5 Market Repo	1,921.8	2,165.1	1,642.4	2,587.2	1,578.7	2,334.6	1,697.6	2,407.1
6 Repo in Corporate Bond	3.8	2.8	2.6	10.3	6.4	8.0	6.1	3.6
7 Forex (US \$ million)	55,345	62,775	66,402	69,923	59,367	77,854	68,761	71,096
8 Govt. of India Dated Securities	808.7	706.0	498.0	709.8	530.0	730.0	463.2	558.1
9 State Govt. Securities	45.3	56.7	34.0	23.2	55.2	16.6	28.8	32.1
10 Treasury Bills								
10.1 91-Day	35.5	32.4	30.8	46.3	54.0	50.4	46.9	54.8
10.2 182-Day	10.2	26.4	4.3	10.5	17.7	27.2	8.3	13.1
10.3 364-Day	10.3	14.1	6.3	3.5	4.0	2.5	2.5	3.7
10.4 Cash Management Bills	13	0.6	10.9	11.9	11.5	36.4	24.0	10.0
11 Total Govt. Securities (8+9+10)	923.0	836.4	584.3	805.3	672.4	863.1	573.6	671.8
11.1 RBI	–	28.3	0.0	9.3	0.1	2.3	0.2	0.2

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

(₹ Billion)

Security & Type of Issue	2017-18		2017-18 (Apr.-Aug.)		2018-19 (Apr.-Aug.)*		Aug. 2017		Aug. 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	55	84.9	68	115.7	10	2.6	11	12.6
1A Premium	211	657.8	54	81.3	66	112.5	9	2.2	10	12.0
1.1 Public	193	466.0	51	78.0	64	104.4	10	2.6	11	12.6
1.1.1 Premium	190	448.7	50	75.1	62	102.0	9	2.2	10	12.0
1.2 Rights	21	213.9	4	6.9	4	11.3	–	–	–	–
1.2.1 Premium	21	209.1	4	6.2	4	10.5	–	–	–	–
2 Preference Shares	–	–	–	–	–	–	–	–	–	–
2.1 Public	–	–	–	–	–	–	–	–	–	–
2.2 Rights	–	–	–	–	–	–	–	–	–	–
3 Debentures	7	49.5	4	39.0	7	210.5	1	2.1	–	–
3.1 Convertible	–	–	–	–	–	–	–	–	–	–
3.1.1 Public	–	–	–	–	–	–	–	–	–	–
3.1.2 Rights	–	–	–	–	–	–	–	–	–	–
3.2 Non-Convertible	7	49.5	4	39.0	7	210.5	1	2.1	–	–
3.2.1 Public	7	49.5	4	39.0	7	210.5	1	2.1	–	–
3.2.2 Rights	–	–	–	–	–	–	–	–	–	–
4 Bonds	–	–	–	–	–	–	–	–	–	–
4.1 Public	–	–	–	–	–	–	–	–	–	–
4.2 Rights	–	–	–	–	–	–	–	–	–	–
5 Total (1+2+3+4)	221	729.5	59	123.9	75	326.2	11	4.8	11	12.6
5.1 Public	200	515.6	55	117.0	71	314.9	11	4.8	11	12.6
5.2 Rights	21	213.9	4	6.9	4	11.3	–	–	–	–

* : 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			
			Aug.	Apr.	May	Jun.	Jul.	Aug.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	19,565.1	1,494.0	1,683.1	1,958.2	1,852.1	1,782.7	1,938.5
	US \$ Million	303,526.2	23,355.1	25,642.8	28,993.7	27,320.4	25,952.1	27,873.1
1.1 Oil	₹ Billion	2,414.3	185.4	177.4	355.6	275.0	276.8	267.8
	US \$ Million	37,465.1	2,898.0	2,702.9	5,264.8	4,055.8	4,028.9	3,850.6
1.2 Non-oil	₹ Billion	17,150.8	1,308.6	1,505.7	1,602.6	1,577.2	1,506.0	1,670.7
	US \$ Million	266,061.1	20,457.1	22,940.0	23,728.9	23,264.6	21,923.1	24,022.5
2 Imports	₹ Billion	30,010.3	2,307.4	2,599.5	2,963.4	3,037.8	3,008.2	3,146.0
	US \$ Million	465,581.0	36,070.6	39,604.4	43,876.4	44,809.3	43,792.3	45,235.8
2.1 Oil	₹ Billion	7,003.2	499.1	685.1	778.7	865.6	848.3	822.7
	US \$ Million	108,658.7	7,802.6	10,438.6	11,529.1	12,767.6	12,348.6	11,830.1
2.2 Non-oil	₹ Billion	23,007.1	1,808.3	1,914.3	2,184.7	2,172.2	2,160.0	2,323.2
	US \$ Million	356,922.3	28,268.1	29,165.9	32,347.3	32,041.7	31,443.7	33,405.7
3 Trade Balance	₹ Billion	-10,445.2	-813.4	-916.4	-1,005.2	-1,185.6	-1,225.5	-1,207.5
	US \$ Million	-162,054.8	-12,715.5	-13,961.6	-14,882.7	-17,488.9	-17,840.3	-17,362.6
3.1 Oil	₹ Billion	-4,588.9	-313.7	-507.7	-423.1	-590.6	-571.5	-554.9
	US \$ Million	-71,193.6	-4,904.5	-7,735.7	-6,264.3	-8,711.8	-8,319.6	-7,979.5
3.2 Non-oil	₹ Billion	-5,856.3	-499.7	-408.6	-582.1	-595.0	-654.0	-652.6
	US \$ Million	-90,861.2	-7,811.0	-6,225.9	-8,618.4	-8,777.1	-9,520.6	-9,383.1

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

No. 32: Foreign Exchange Reserves

Item	Unit	2017		2018				
		Sep. 15	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sep. 7	Sep. 14
		1	2	3	4	5	6	7
1 Total Reserves	₹ Billion	25,787	27,621	28,101	28,098	28,359	28,670	28,724
	US \$ Million	402,509	400,881	400,848	401,293	400,102	399,282	400,490
1.1 Foreign Currency Assets	₹ Billion	24,218	25,931	26,404	26,397	26,649	26,951	26,994
	US \$ Million	378,011	376,265	376,205	376,592	375,987	375,099	376,155
1.2 Gold	₹ Billion	1,325	1,420	1,422	1,425	1,430	1,435	1,446
	US \$ Million	20,692	20,691	20,728	20,763	20,162	20,234	20,378
1.3 SDRs	SDRs Million	1,063	1,054	1,054	1,054	1,054	1,054	1,054
	₹ Billion	97	101	103	103	105	106	106
1.4 Reserve Tranche Position in IMF	US \$ Million	1,513	1,466	1,463	1,472	1,477	1,476	1,478
	₹ Billion	147	170	172	173	176	178	178
	US \$ Million	2,293	2,458	2,452	2,467	2,476	2,474	2,478

No. 33: NRI Deposits

(US\$ Million)

Scheme	Outstanding				Flows	
	2017-18	2017	2018		2017-18	2018-19
		Aug.	Jul.	Aug.	Apr.-Aug.	Apr.-Aug.
	1	2	3	4	5	6
1 NRI Deposits	126,182	118,585	124,866	123,028	556	5,701
1.1 FCNR(B)	22,026	20,223	22,777	22,623	-779	597
1.2 NR(E)RA	90,035	85,883	88,111	86,507	1,661	4,119
1.3 NRO	14,121	12,478	13,977	13,899	-327	986

No. 34: Foreign Investment Inflows

(US\$ Million)

Item	2017-18	2017-18	2018-19	2017	2018	
		Apr.-Aug.	Apr.-Aug.	Aug.	Jul.	Aug.
	1	2	3	4	5	6
1.1 Net Foreign Direct Investment (1.1.1-1.1.2)	30,286	19,025	13,414	7,682	1,937	1,781
1.1.1 Direct Investment to India (1.1.1.1-1.1.2)	39,431	22,809	18,470	7,919	3,035	2,432
1.1.1.1 Gross Inflows/Gross Investments	60,974	30,117	24,938	9,348	4,352	3,749
1.1.1.1.1 Equity	45,521	23,501	18,291	8,057	2,823	2,562
1.1.1.1.1.1 Government (SIA/FIPB)	7,797	6,288	1,558	5,897	3	14
1.1.1.1.1.2 RBI	29,569	14,000	14,198	1,604	1,978	2,182
1.1.1.1.1.3 Acquisition of shares	7,491	2,951	2,272	503	788	311
1.1.1.1.1.4 Equity capital of unincorporated bodies	664	262	262	54	54	54
1.1.1.1.2 Reinvested earnings	12,542	4,953	5,249	1,014	1,014	1,014
1.1.1.1.3 Other capital	2,911	1,663	1,398	276	515	173
1.1.1.2 Repatriation/Disinvestment	21,544	7,307	6,468	1,429	1,317	1,317
1.1.1.2.1 Equity	21,325	7,163	6,434	1,418	1,307	1,307
1.1.1.2.2 Other capital	219	145	34	11	11	11
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	3,785	5,056	237	1,099	651
1.1.2.1 Equity capital	5,254	2,284	3,028	222	586	209
1.1.2.2 Reinvested Earnings	2,853	1,189	1,204	238	238	238
1.1.2.3 Other Capital	4,525	1,731	1,282	134	366	295
1.1.2.4 Repatriation/Disinvestment	3,487	1,419	458	356	91	91
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3-1.2.4)	22,115	13,898	-7,817	560	281	48
1.2.1 GDRs/ADRs	-	-	-	-	-	-
1.2.2 FIIs	22,165	13,616	-8,729	684	304	72
1.2.3 Offshore funds and others	-	-	-	-	-	-
1.2.4 Portfolio investment by India	50	-283	-913	124	24	24
1 Foreign Investment Inflows	52,401	32,923	5,597	8,242	2,217	1,829

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

(US\$ Million)

Item	2017-18	2017	2018		
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 Outward Remittances under the LRS	11,333.6	1,096.8	1,030.6	1,222.9	1,426.9
1.1 Deposit	414.9	28.7	25.8	33.3	32.2
1.2 Purchase of immovable property	89.6	8.8	7.7	5.6	6.6
1.3 Investment in equity/debt	441.8	30.2	25.2	27.6	47.2
1.4 Gift	1,169.7	81.3	107.8	113.4	116.3
1.5 Donations	8.5	0.8	0.6	0.4	2.4
1.6 Travel	4,022.1	450.2	380.5	449.8	533.6
1.7 Maintenance of close relatives	2,937.4	240.7	208.5	232.5	241.2
1.8 Medical Treatment	27.5	2.1	2.1	2.5	1.7
1.9 Studies Abroad	2,021.4	240.7	257.2	343.6	419.1
1.10 Others	200.6	13.2	15.2	14.3	26.7

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

Item	2016-17	2017-18	2017	2018	
			September	August	September
	1	2	3	4	5
36-Currency Export and Trade Based Weights (Base: 2004-05=100)					
1 Trade-Based Weights					
1.1 NEER	74.65	76.94	76.46	73.37	71.16
1.2 REER	114.51	119.71	119.16	114.88	111.40
2 Export-Based Weights					
2.1 NEER	76.38	78.89	78.40	75.10	72.83
2.2 REER	116.44	121.94	121.46	116.88	113.35
6-Currency Trade Based Weights					
1 Base: 2004-05 (April-March) =100					
1.1 NEER	66.86	68.13	67.61	64.04	61.54
1.2 REER	125.17	129.87	129.20	124.35	119.38
2 Base: 2016-17 (April-March) =100					
2.1 NEER	100.00	101.90	101.12	95.78	92.04
2.2 REER	100.00	103.75	103.22	99.34	95.38

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

(US\$ Million)

Item	2017-18	2017	2018	
		Aug.	Jul.	Aug.
	1	2	3	4
1 Automatic Route				
1.1 Number	769	80	85	90
1.2 Amount	20,397	1,541	1,175	3,685
2 Approval Route				
2.1 Number	38	2	1	4
2.2 Amount	8,471	102	1,000	1,141
3 Total (1+2)				
3.1 Number	807	82	86	94
3.2 Amount	28,868	1,643	2,175	4,827
4 Weighted Average Maturity (in years)	6.10	4.70	5.20	4.80
5 Interest Rate (per cent)				
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans	1.34	1.29	1.33	0.94
5.2 Interest rate range for Fixed Rate Loans	0.00-12.25	0.00-11.00	0.00-12.00	0.00-12.00

No. 38: India's Overall Balance of Payments

(US \$ Million)

Item	Apr-Jun 2017 (PR)			Apr-Jun 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	295,676	284,272	11,405	286,801	298,140	-11,338
1 CURRENT ACCOUNT (1.1+ 1.2)	139,941	154,920	-14,979	155,693	171,522	-15,829
1.1 MERCHANDISE	73,130	115,066	-41,936	83,389	129,137	-45,748
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	66,811	39,854	26,957	72,304	42,384	29,920
1.2.1 Services	45,916	27,607	18,308	48,174	29,475	18,699
1.2.1.1 Travel	6,242	4,851	1,391	6,448	5,907	541
1.2.1.2 Transportation	4,159	4,072	87	4,863	4,776	87
1.2.1.3 Insurance	622	352	270	606	373	233
1.2.1.4 G.n.i.e.	156	152	4	170	278	-108
1.2.1.5 Miscellaneous	34,737	18,181	16,557	36,087	18,140	17,947
1.2.1.5.1 Software Services	18,592	1,136	17,457	19,930	1,516	18,414
1.2.1.5.2 Business Services	8,467	8,279	188	9,436	9,461	-26
1.2.1.5.3 Financial Services	1,174	1,218	-44	1,111	744	367
1.2.1.5.4 Communication Services	548	237	310	522	232	290
1.2.2 Transfers	16,148	1,657	14,491	18,803	1,772	17,031
1.2.2.1 Official	92	204	-112	41	225	-184
1.2.2.2 Private	16,056	1,453	14,603	18,763	1,547	17,216
1.2.3 Income	4,747	10,590	-5,842	5,327	11,138	-5,811
1.2.3.1 Investment Income	3,605	10,043	-6,438	4,183	10,538	-6,355
1.2.3.2 Compensation of Employees	1,143	547	596	1,144	600	544
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	155,736	128,790	26,946	131,108	125,846	5,262
2.1 Foreign Investment (2.1.1+2.1.2)	92,604	73,008	19,595	77,565	76,014	1,551
2.1.1 Foreign Direct Investment	15,305	8,161	7,144	17,112	7,416	9,697
2.1.1.1 In India	14,597	4,449	10,148	16,836	3,834	13,003
2.1.1.1.1 Equity	10,563	4,327	6,236	12,907	3,821	9,085
2.1.1.1.2 Reinvested Earnings	2,924	-	2,924	3,220	-	3,220
2.1.1.1.3 Other Capital	1,110	122	988	710	12	698
2.1.1.2 Abroad	708	3,712	-3,004	276	3,582	-3,306
2.1.1.2.1 Equity	708	1,760	-1,052	276	2,233	-1,957
2.1.1.2.2 Reinvested Earnings	-	713	-713	-	729	-729
2.1.1.2.3 Other Capital	0	1,239	-1,239	0	621	-621
2.1.2 Portfolio Investment	77,299	64,847	12,452	60,453	68,598	-8,145
2.1.2.1 In India	76,134	64,213	11,921	59,138	68,244	-9,106
2.1.2.1.1 FIIs	76,134	64,213	11,921	59,138	68,244	-9,106
2.1.2.1.1.1 Equity	57,425	56,726	699	49,357	52,107	-2,749
2.1.2.1.1.2 Debt	18,709	7,487	11,222	9,781	16,137	-6,356
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	1,165	634	530	1,315	354	961
2.2 Loans (2.2.1+2.2.2+2.2.3)	34,680	33,752	927	18,763	22,394	-3,630
2.2.1 External Assistance	1,826	1,141	685	1,876	1,350	526
2.2.1.1 By India	14	31	-17	12	31	-19
2.2.1.2 To India	1,812	1,110	702	1,864	1,319	545
2.2.2 Commercial Borrowings	6,380	6,719	-338	4,738	5,405	-666
2.2.2.1 By India	2,438	2,283	156	1,718	1,519	199
2.2.2.2 To India	3,942	4,436	-494	3,020	3,886	-866
2.2.3 Short Term to India	26,474	25,893	580	12,149	15,639	-3,490
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	25,735	25,893	-159	5,613	15,639	-10,026
2.2.3.2 Suppliers' Credit up to 180 days	739	0	739	6,536	0	6,536
2.3 Banking Capital (2.3.1+2.3.2)	21,607	14,801	6,807	28,806	18,745	10,061
2.3.1 Commercial Banks	21,607	14,383	7,225	28,806	18,231	10,575
2.3.1.1 Assets	7,589	1,217	6,373	11,158	5,690	5,468
2.3.1.2 Liabilities	14,018	13,166	852	17,648	12,541	5,106
2.3.1.2.1 Non-Resident Deposits	12,799	11,561	1,237	15,578	12,067	3,512
2.3.2 Others	0	418	-418	0	513	-513
2.4 Rupee Debt Service	0	23	-23	0	23	-23
2.5 Other Capital	6,845	7,205	-360	5,974	8,672	-2,697
3 Errors & Omissions	-	562	-562	-	772	-772
4 Monetary Movements (4.1+ 4.2)	0	11,405	-11,405	11,338	0	11,338
4.1 I.M.F.	-	-	-	-	-	-
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	11,405	-11,405	11,338	0	11,338

No. 39: India's Overall Balance of Payments

(₹ Billion)

Item	Apr-Jun 2017 (PR)			Apr-Jun 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	19,059	18,324	735	19,213	19,972	-760
1 CURRENT ACCOUNT (1.1+ 1.2)	9,020	9,986	-966	10,430	11,490	-1,060
1.1 MERCHANDISE	4,714	7,417	-2,703	5,586	8,651	-3,065
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	4,307	2,569	1,738	4,844	2,839	2,004
1.2.1 Services	2,960	1,780	1,180	3,227	1,974	1,253
1.2.1.1 Travel	402	313	90	432	396	36
1.2.1.2 Transportation	268	262	6	326	320	6
1.2.1.3 Insurance	40	23	17	41	25	16
1.2.1.4 G.n.i.e.	10	10	0	11	19	-7
1.2.1.5 Miscellaneous	2,239	1,172	1,067	2,417	1,215	1,202
1.2.1.5.1 Software Services	1,198	73	1,125	1,335	102	1,234
1.2.1.5.2 Business Services	546	534	12	632	634	-2
1.2.1.5.3 Financial Services	76	78	-3	74	50	25
1.2.1.5.4 Communication Services	35	15	20	35	16	19
1.2.2 Transfers	1,041	107	934	1,260	119	1,141
1.2.2.1 Official	6	13	-7	3	15	-12
1.2.2.2 Private	1,035	94	941	1,257	104	1,153
1.2.3 Income	306	683	-377	357	746	-389
1.2.3.1 Investment Income	232	647	-415	280	706	-426
1.2.3.2 Compensation of Employees	74	35	38	77	40	36
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	10,038	8,302	1,737	8,783	8,430	352
2.1 Foreign Investment (2.1.1+2.1.2)	5,969	4,706	1,263	5,196	5,092	104
2.1.1 Foreign Direct Investment	987	526	460	1,146	497	650
2.1.1.1 In India	941	287	654	1,128	257	871
2.1.1.1.1 Equity	681	279	402	865	256	609
2.1.1.1.2 Reinvested Earnings	188	0	188	216	0	216
2.1.1.1.3 Other Capital	72	8	64	48	1	47
2.1.1.2 Abroad	46	239	-194	18	240	-221
2.1.1.2.1 Equity	46	113	-68	18	150	-131
2.1.1.2.2 Reinvested Earnings	0	46	-46	0	49	-49
2.1.1.2.3 Other Capital	0	80	-80	0	42	-42
2.1.2 Portfolio Investment	4,983	4,180	803	4,050	4,595	-546
2.1.2.1 In India	4,907	4,139	768	3,962	4,572	-610
2.1.2.1.1 FIIs	4,907	4,139	768	3,962	4,572	-610
2.1.2.1.1.1 Equity	3,702	3,656	45	3,306	3,491	-184
2.1.2.1.1.2 Debt	1,206	483	723	655	1,081	-426
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	75	41	34	88	24	64
2.2 Loans (2.2.1+2.2.2+2.2.3)	2,235	2,176	60	1,257	1,500	-243
2.2.1 External Assistance	118	74	44	126	90	35
2.2.1.1 By India	1	2	-1	1	2	-1
2.2.1.2 To India	117	72	45	125	88	37
2.2.2 Commercial Borrowings	411	433	-22	317	362	-45
2.2.2.1 By India	157	147	10	115	102	13
2.2.2.2 To India	254	286	-32	202	260	-58
2.2.3 Short Term to India	1,706	1,669	37	814	1,048	-234
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,659	1,669	-10	376	1,048	-672
2.2.3.2 Suppliers' Credit up to 180 days	48	0	48	438	0	438
2.3 Banking Capital (2.3.1+2.3.2)	1,393	954	439	1,930	1,256	674
2.3.1 Commercial Banks	1,393	927	466	1,930	1,221	708
2.3.1.1 Assets	489	78	411	747	381	366
2.3.1.2 Liabilities	904	849	55	1,182	840	342
2.3.1.2.1 Non-Resident Deposits	825	745	80	1,044	808	235
2.3.2 Others	0	27	-27	0	34	-34
2.4 Rupee Debt Service	0	1	-1	0	2	-2
2.5 Other Capital	441	464	-23	400	581	-181
3 Errors & Omissions	0	36	-36	0	52	-52
4 Monetary Movements (4.1+ 4.2)	0	735	-735	760	0	760
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	735	-735	760	0	760

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

(US \$ Million)

Item	Apr-Jun 2017 (PR)			Apr-Jun 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	139,935	154,900	-14,966	155,692	171,499	-15,807
1.A Goods and Services (1.A.a+1.A.b)	119,045	142,673	-23,628	131,563	158,612	-27,049
1.A.a Goods (1.A.a.1 to 1.A.a.3)	73,130	115,066	-41,936	83,389	129,137	-45,748
1.A.a.1 General merchandise on a BOP basis	73,098	103,799	-30,702	84,567	120,694	-36,127
1.A.a.2 Net exports of goods under merchandising	32	-	32	-1,178	-	-1,178
1.A.a.3 Nonmonetary gold	-	11,266	-11,266	-	8,444	-8,444
1.A.b Services (1.A.b.1 to 1.A.b.13)	45,916	27,607	18,308	48,174	29,475	18,699
1.A.b.1 Manufacturing services on physical inputs owned by others	26	9	17	25	10	15
1.A.b.2 Maintenance and repair services n.i.e.	57	153	-96	40	207	-167
1.A.b.3 Transport	4,159	4,072	87	4,863	4,776	87
1.A.b.4 Travel	6,242	4,851	1,391	6,448	5,907	541
1.A.b.5 Construction	675	286	388	1,010	649	361
1.A.b.6 Insurance and pension services	622	352	270	606	373	233
1.A.b.7 Financial services	1,174	1,218	-44	1,111	744	367
1.A.b.8 Charges for the use of intellectual property n.i.e.	162	1,954	-1,792	228	2,087	-1,859
1.A.b.9 Telecommunications, computer, and information services	19,210	1,476	17,734	20,556	1,882	18,673
1.A.b.10 Other business services	8,467	8,279	188	9,436	9,461	-26
1.A.b.11 Personal, cultural, and recreational services	402	467	-65	496	565	-69
1.A.b.12 Government goods and services n.i.e.	156	152	4	170	278	-108
1.A.b.13 Others n.i.e.	4,566	4,339	227	3,185	2,535	651
1.B Primary Income (1.B.1 to 1.B.3)	4,747	10,590	-5,842	5,327	11,138	-5,811
1.B.1 Compensation of employees	1,143	547	596	1,144	600	544
1.B.2 Investment income	2,679	9,876	-7,197	3,534	10,361	-6,827
1.B.2.1 Direct investment	1,504	4,686	-3,182	1,760	4,383	-2,624
1.B.2.2 Portfolio investment	70	2,298	-2,228	34	2,361	-2,326
1.B.2.3 Other investment	186	2,891	-2,705	210	3,606	-3,395
1.B.2.4 Reserve assets	919	0	919	1,530	12	1,518
1.B.3 Other primary income	925	167	759	650	177	472
1.C Secondary Income (1.C.1+1.C.2)	16,142	1,638	14,504	18,803	1,750	17,053
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	16,056	1,453	14,603	18,763	1,547	17,216
1.C.1.1 Personal transfers (Current transfers between resident and/	15,504	1,121	14,382	18,172	1,141	17,031
1.C.1.2 Other current transfers	553	332	221	591	406	184
1.C.2 General government	86	185	-99	40	203	-163
2 Capital Account (2.1+2.2)	114	102	12	111	94	17
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	75	39	35	66	16	51
2.2 Capital transfers	39	63	-23	45	78	-33
3 Financial Account (3.1 to 3.5)	155,628	140,111	15,516	142,336	125,775	16,561
3.1 Direct Investment (3.1A+3.1B)	15,305	8,161	7,144	17,112	7,416	9,697
3.1.A Direct Investment in India	14,597	4,449	10,148	16,836	3,834	13,003
3.1.A.1 Equity and investment fund shares	13,487	4,327	9,160	16,126	3,821	12,305
3.1.A.1.1 Equity other than reinvestment of earnings	10,563	4,327	6,236	12,907	3,821	9,085
3.1.A.1.2 Reinvestment of earnings	2,924	-	2,924	3,220	-	3,220
3.1.A.2 Debt instruments	1,110	122	988	710	12	698
3.1.A.2.1 Direct investor in direct investment enterprises	1,110	122	988	710	12	698
3.1.B Direct Investment by India	708	3,712	-3,004	276	3,582	-3,306
3.1.B.1 Equity and investment fund shares	708	2,473	-1,765	276	2,961	-2,686
3.1.B.1.1 Equity other than reinvestment of earnings	708	1,760	-1,052	276	2,233	-1,957
3.1.B.1.2 Reinvestment of earnings	-	713	-713	-	729	-729
3.1.B.2 Debt instruments	-	1,239	-1,239	-	621	-621
3.1.B.2.1 Direct investor in direct investment enterprises	-	1,239	-1,239	-	621	-621
3.2 Portfolio Investment	77,299	64,847	12,452	60,453	68,598	-8,145
3.2.A Portfolio Investment in India	76,134	64,213	11,921	59,138	68,244	-9,106
3.2.1 Equity and investment fund shares	57,425	56,726	699	49,357	52,107	-2,749
3.2.2 Debt securities	18,709	7,487	11,222	9,781	16,137	-6,356
3.2.B Portfolio Investment by India	1,165	634	530	1,315	354	961
3.3 Financial derivatives (other than reserves) and employee stock options	4,737	5,946	-1,209	3,631	5,113	-1,482
3.4 Other investment	58,287	49,752	8,535	49,802	44,648	5,153
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	12,799	11,980	819	15,578	12,580	2,998
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	418	-418	0	513	-513
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	12,799	11,561	1,237	15,578	12,067	3,512
3.4.2.3 General government	-	-	-	-	-	-
3.4.2.4 Other sectors	-	-	-	-	-	-
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	17,015	10,680	6,334	19,842	12,919	6,923
3.4.3.A Loans to India	14,562	8,367	6,196	18,112	11,369	6,743
3.4.3.B Loans by India	2,452	2,314	138	1,730	1,550	180
3.4.4 Insurance, pension, and standardized guarantee schemes	14	589	-575	102	635	-533
3.4.5 Trade credit and advances	26,474	25,893	580	12,149	15,639	-3,490
3.4.6 Other accounts receivable/payable - other	1,986	610	1,376	2,131	2,875	-745
3.4.7 Special drawing rights	-	-	-	-	-	-
3.5 Reserve assets	0	11,405	-11,405	11,338	0	11,338
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	11,405	-11,405	11,338	0	11,338
4 Total assets/liabilities	155,628	140,111	15,516	142,336	125,775	16,561
4.1 Equity and investment fund shares	77,535	70,695	6,840	70,807	64,991	5,816
4.2 Debt instruments	76,106	57,402	18,705	58,060	57,908	152
4.3 Other financial assets and liabilities	1,986	12,015	-10,029	13,469	2,875	10,594
5 Net errors and omissions	-	562	-562	-	772	-772

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

(₹ Billion)

Item	Apr-Jun 2017 (PR)			Apr-Jun 2018 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)	9,020	9,985	-965	10,430	11,489	-1,059
1.A Goods and Services (1.A.a+1.A.b)	7,673	9,196	-1,523	8,813	10,625	-1,812
1.A.a Goods (1.A.a.1 to 1.A.a.3)	4,714	7,417	-2,703	5,586	8,651	-3,065
1.A.a.1 General merchandise on a BOP basis	4,712	6,691	-1,979	5,665	8,085	-2,420
1.A.a.2 Net exports of goods under merchandising	2	-	2	-79	-	-79
1.A.a.3 Nonmonetary gold	-	726	-726	-	566	-566
1.A.b Services (1.A.b.1 to 1.A.b.13)	2,960	1,780	1,180	3,227	1,974	1,253
1.A.b.1 Manufacturing services on physical inputs owned by others	2	1	1	2	1	1
1.A.b.2 Maintenance and repair services n.i.e.	4	10	-6	3	14	-11
1.A.b.3 Transport	268	262	6	326	320	6
1.A.b.4 Travel	402	313	90	432	396	36
1.A.b.5 Construction	43	18	25	68	43	24
1.A.b.6 Insurance and pension services	40	23	17	41	25	16
1.A.b.7 Financial services	76	78	-3	74	50	25
1.A.b.8 Charges for the use of intellectual property n.i.e.	10	126	-116	15	140	-125
1.A.b.9 Telecommunications, computer, and information services	1,238	95	1,143	1,377	126	1,251
1.A.b.10 Other business services	546	534	12	632	634	-2
1.A.b.11 Personal, cultural, and recreational services	26	30	-4	33	38	-5
1.A.b.12 Government goods and services n.i.e.	10	10	0	11	19	-7
1.A.b.13 Others n.i.e.	294	280	15	213	170	44
1.B Primary Income (1.B.1 to 1.B.3)	306	683	-377	357	746	-389
1.B.1 Compensation of employees	74	35	38	77	40	36
1.B.2 Investment income	173	637	-464	237	694	-457
1.B.2.1 Direct investment	97	302	-205	118	294	-176
1.B.2.2 Portfolio investment	5	148	-144	2	158	-156
1.B.2.3 Other investment	12	186	-174	14	242	-227
1.B.2.4 Reserve assets	59	0	59	102	1	102
1.B.3 Other primary income	60	11	49	44	12	32
1.C Secondary Income (1.C.1+1.C.2)	1,040	106	935	1,260	117	1,142
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1,035	94	941	1,257	104	1,153
1.C.1.1 Personal transfers (Current transfers between resident and/	999	72	927	1,217	76	1,141
1.C.1.2 Other current transfers	36	21	14	40	27	12
1.C.2 General government	6	12	-6	3	14	-11
2 Capital Account (2.1+2.2)	7	7	1	7	6	1
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	5	3	2	4	1	3
2.2 Capital transfers	3	4	-2	3	5	-2
3 Financial Account (3.1 to 3.5)	10,032	9,031	1,000	9,535	8,426	1,109
3.1 Direct Investment (3.1A+3.1B)	987	526	460	1,146	497	650
3.1.A Direct Investment in India	941	287	654	1,128	257	871
3.1.A.1 Equity and investment fund shares	869	279	590	1,080	256	824
3.1.A.1.1 Equity other than reinvestment of earnings	681	279	402	865	256	609
3.1.A.1.2 Reinvestment of earnings	188	0	188	216	0	216
3.1.A.2 Debt instruments	72	8	64	48	1	47
3.1.A.2.1 Direct investor in direct investment enterprises	72	8	64	48	1	47
3.1.B Direct Investment by India	46	239	-194	18	240	-221
3.1.B.1 Equity and investment fund shares	46	159	-114	18	198	-180
3.1.B.1.1 Equity other than reinvestment of earnings	46	113	-68	18	150	-131
3.1.B.1.2 Reinvestment of earnings	0	46	-46	0	49	-49
3.1.B.2 Debt instruments	0	80	-80	0	42	-42
3.1.B.2.1 Direct investor in direct investment enterprises	0	80	-80	0	42	-42
3.2 Portfolio Investment	4,983	4,180	803	4,050	4,595	-546
3.2.A Portfolio Investment in India	4,907	4,139	768	3,962	4,572	-610
3.2.1 Equity and investment fund shares	3,702	3,656	45	3,306	3,491	-184
3.2.2 Debt securities	1,206	483	723	655	1,081	-426
3.2.B Portfolio Investment by India	75	41	34	88	24	64
3.3 Financial derivatives (other than reserves) and employee stock options	305	383	-78	243	343	-99
3.4 Other investment	3,757	3,207	550	3,336	2,991	345
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	825	772	53	1,044	843	201
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	0	27	-27	0	34	-34
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	825	745	80	1,044	808	235
3.4.2.3 General government	-	-	-	-	-	-
3.4.2.4 Other sectors	-	-	-	-	-	-
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	1,097	688	408	1,329	865	464
3.4.3.A Loans to India	939	539	399	1,213	762	452
3.4.3.B Loans by India	158	149	9	116	104	12
3.4.4 Insurance, pension, and standardized guarantee schemes	1	38	-37	7	43	-36
3.4.5 Trade credit and advances	1,706	1,669	37	814	1,048	-234
3.4.6 Other accounts receivable/payable - other	128	39	89	143	193	-50
3.4.7 Special drawing rights	-	-	-	-	-	-
3.5 Reserve assets	0	735	-735	760	0	760
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	735	-735	760	0	760
4 Total assets/liabilities	10,032	9,031	1,000	9,535	8,426	1,109
4.1 Equity and investment fund shares	4,998	4,557	441	4,743	4,354	390
4.2 Debt instruments	4,906	3,700	1,206	3,889	3,879	10
4.3 Other financial assets and liabilities	128	774	-646	902	193	710
5 Net errors and omissions	-	36	-36	-	52	-52

No. 42: International Investment Position

(US \$ Million)

Item	As on Financial Year /Quarter End							
	2017-18		2017		2018			
			Jun.		Mar.		Jun.	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
	1	2	3	4	5	6	7	8
1 Direct Investment Abroad/in India	157,373	379,279	151,233	353,366	157,373	379,279	160,680	372,193
1.1 Equity Capital and Reinvested Earnings	103,734	363,190	100,879	337,476	103,734	363,190	106,419	356,508
1.2 Other Capital	53,640	16,089	50,354	15,890	53,640	16,089	54,260	15,685
2 Portfolio Investment	2,665	272,409	2,084	251,123	2,665	272,409	1,704	254,506
2.1 Equity	1,246	155,106	2,021	154,913	1,246	155,106	1,477	144,433
2.2 Debt	1,418	117,303	63	96,210	1,418	117,303	227	110,073
3 Other Investment	48,235	400,636	42,415	378,569	48,235	400,636	44,264	392,078
3.1 Trade Credit	1,696	103,155	1,154	89,580	1,696	103,155	1,357	99,582
3.2 Loan	8,225	159,289	5,217	158,214	8,225	159,289	8,268	157,662
3.3 Currency and Deposits	20,790	126,456	18,051	118,476	20,790	126,456	16,294	124,506
3.4 Other Assets/Liabilities	17,524	11,736	17,994	12,299	17,524	11,736	18,345	10,328
4 Reserves	424,545	–	386,539	–	424,545	–	405,740	–
5 Total Assets/ Liabilities	632,818	1,052,324	582,272	983,058	632,818	1,052,324	612,387	1,018,778
6 IIP (Assets - Liabilities)		–419,505		–400,786		–419,505		–406,390

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2017-18	2018			2017-18	2018		
		Jun.	Jul.	Aug.		Jun.	Jul.	Aug.
	1	2	3	4	5	6	7	8
1 RTGS	124.46	11.43	10.97	11.01	1,467,431.99	142,541.58	138,628.54	138,236.20
1.1 Customer Transactions	120.71	11.14	10.69	10.74	1,036,698.74	101,133.89	99,646.35	97,993.53
1.2 Interbank Transactions	3.72	0.29	0.28	0.27	130,426.03	13,065.14	12,366.56	11,220.57
1.3 Interbank Clearing	0.024	0.002	0.002	0.002	300,307.22	28,342.55	26,615.63	29,022.11
2 CCIL Operated Systems	3.50	0.30	0.31	0.30	1,074,802.02	92,619.44	95,221.90	91,744.59
2.1 CBLO	0.20	0.02	0.02	0.02	283,307.58	24,828.84	27,040.28	24,676.92
2.2 Govt. Securities Clearing	1.12	0.08	0.08	0.08	370,363.78	30,639.42	29,828.79	29,516.02
2.2.1 Outright	0.92	0.06	0.06	0.06	113,998.80	6,670.83	6,654.82	7,284.65
2.2.2 Repo	0.199	0.020	0.020	0.018	256,364.98	23,968.60	23,173.97	22,231.38
2.3 Forex Clearing	2.17	0.21	0.21	0.20	421,130.66	37,151.17	38,352.83	37,551.65
3 Paper Clearing	1,171.31	97.30	95.38	91.11	81,934.93	7,196.71	6,833.38	6,427.01
3.1 Cheque Truncation System (CTS)	1,138.05	96.39	94.19	90.07	79,451.24	7,092.78	6,749.96	6,355.16
3.2 MICR Clearing	—	—	—	—	—	—	—	—
3.2.1 RBI Centres	—	—	—	—	—	—	—	—
3.2.2 Other Centres	—	—	—	—	—	—	—	—
3.3 Non-MICR Clearing	33.27	0.91	1.19	1.04	2,483.68	103.92	83.42	71.85
4 Retail Electronic Clearing	5,467.29	533.59	564.94	587.20	192,017.98	21,261.25	19,621.33	21,071.67
4.1 ECS DR	1.54	0.13	0.04	0.41	9.72	0.77	0.28	9.73
4.2 ECS CR (includes NECS)	6.14	0.40	0.57	0.05	118.64	12.35	13.90	0.29
4.3 EFT/NEFT	1,946.36	177.15	180.60	193.20	172,228.52	19,017.08	17,321.40	18,712.45
4.4 Immediate Payment Service (IMPS)	1,009.80	120.49	127.38	133.58	8,924.98	1,130.12	1,171.67	1,237.34
4.5 National Automated Clearing House (NACH)	2,503.46	235.41	256.35	259.96	10,736.12	1,100.94	1,114.09	1,111.87
5 Cards	13,358.62	1,248.26	1,294.92	1,307.74	38,214.64	3,626.27	3,648.13	3,733.16
5.1 Credit Cards	1,412.97	136.73	145.81	145.04	4,626.33	466.29	481.31	483.68
5.1.1 Usage at ATMs	7.81	0.75	0.80	0.84	36.68	3.53	3.72	3.86
5.1.2 Usage at POS	1,405.16	135.98	145.01	144.20	4,589.65	462.76	477.58	479.82
5.2 Debit Cards	11,945.65	1,111.53	1,149.11	1,162.69	33,588.31	3,159.98	3,166.82	3,249.48
5.2.1 Usage at ATMs	8,602.26	752.71	781.76	805.52	28,987.61	2,680.75	2,683.76	2,759.76
5.2.2 Usage at POS	3,343.39	358.82	367.35	357.17	4,600.70	479.23	483.06	489.72
6 Prepaid Payment Instruments (PPIs)	3,459.05	332.95	351.80	372.94	1,416.34	163.46	175.19	189.81
6.1 m-Wallet	3,025.98	309.62	325.18	340.65	1,086.75	146.32	152.02	155.73
6.2 PPI Cards	432.63	23.31	26.62	32.29	310.41	16.65	23.16	34.08
6.3 Paper Vouchers	0.44	0.02	—	—	19.19	0.49	—	—
7 Mobile Banking	1,872.26	306.42	340.49	365.79	14,738.54	1,894.66	2,091.86	2,069.27
8 Cards Outstanding	898.56	983.64	1,002.15	1,021.22	—	—	—	—
8.1 Credit Card	37.48	39.37	40.15	41.03	—	—	—	—
8.2 Debit Card	861.08	944.27	962.00	980.19	—	—	—	—
9 Number of ATMs (in actuals)	222247	226452	227586	228422	—	—	—	—
10 Number of POS (in actuals)	3083067	3311184	3268817	3332484	—	—	—	—
11 Grand Total (1.1+1.2+2+3+4+5+6)	23,584.20	2,223.83	2,318.31	2,370.29	2,555,510.68	239,066.15	237,512.84	232,380.35

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.

Occasional Series

No. 44: Small Savings

(₹ Billion)

Scheme		2016-17	2017		2018	
			Feb.	Dec.	Jan.	Feb.
		1	2	3	4	5
1 Small Savings	Receipts	4,341.75	418.42	75.86	69.79	59.21
	Outstanding	7,312.73	7,244.24	7,791.39	7,860.86	7,919.97
1.1 Total Deposits	Receipts	3,879.55	307.76	66.42	57.38	46.20
	Outstanding	4,689.77	4,661.62	5,094.14	5,151.52	5,197.72
1.1.1 Post Office Saving Bank Deposits	Receipts	2,474.46	183.34	21.91	23.88	15.11
	Outstanding	920.64	926.38	1,027.95	1,051.83	1,066.94
1.1.2 MGNREG	Receipts	0.00	0.00	0.00	0.00	0.00
	Outstanding	0.00	0.00	0.00	0.00	0.00
1.1.3 National Saving Scheme, 1987	Receipts	0.56	0.04	-0.25	-0.24	-0.19
	Outstanding	33.01	32.73	30.75	30.51	30.32
1.1.4 National Saving Scheme, 1992	Receipts	0.01	0.00	-0.05	-0.04	-0.68
	Outstanding	-0.48	-0.36	0.26	0.22	-0.46
1.1.5 Monthly Income Scheme	Receipts	353.34	32.40	4.64	6.35	5.27
	Outstanding	1,800.66	1,800.78	1,796.39	1,802.74	1,808.01
1.1.6 Senior Citizen Scheme 2004	Receipts	100.02	10.23	9.24	10.16	10.39
	Outstanding	294.53	284.14	385.35	395.51	405.90
1.1.7 Post Office Time Deposits	Receipts	476.65	44.02	20.38	19.88	15.00
	Outstanding	796.58	782.52	939.02	958.90	973.90
1.1.7.1 1 year Time Deposits	Outstanding	518.38	514.82	577.61	585.35	590.68
1.1.7.2 2 year Time Deposits	Outstanding	36.58	35.66	44.30	45.07	45.59
1.1.7.3 3 year Time Deposits	Outstanding	51.77	51.22	58.38	59.50	60.36
1.1.7.4 5 year Time Deposits	Outstanding	189.85	180.82	258.73	268.98	277.27
1.1.8 Post Office Recurring Deposits	Receipts	474.51	37.83	11.11	-2.61	1.30
	Outstanding	844.53	835.13	914.88	912.27	913.57
1.1.9 Post Office Cumulative Time Deposits	Receipts	0.00	-0.10	-0.56	0.00	0.00
	Outstanding	0.08	0.08	-0.68	-0.68	-0.68
1.1.10 Other Deposits	Receipts	0.00	0.00	0.00	0.00	0.00
	Outstanding	0.22	0.22	0.22	0.22	0.22
1.2 Saving Certificates	Receipts	289.85	34.64	6.60	8.35	7.90
	Outstanding	1,989.35	1,976.30	2,043.70	2,051.73	2,059.53
1.2.1 National Savings Certificate VIII issue	Receipts	120.63	18.11	3.81	6.15	5.83
	Outstanding	872.39	869.85	850.07	856.22	862.05
1.2.2 Indira Vikas Patras	Receipts	0.00	0.00	2.35	0.00	-0.01
	Outstanding	8.86	8.89	11.05	11.05	11.04
1.2.3 Kisan Vikas Patras	Receipts	-0.01	0.04	-19.25	-15.70	-12.80
	Outstanding	535.72	548.69	417.27	401.57	388.77
1.2.4 Kisan Vikas Patras - 2014	Receipts	169.23	16.49	19.72	17.95	14.89
	Outstanding	460.23	435.58	654.99	672.94	687.83
1.2.5 National Saving Certificate VI issue	Receipts	0.00	0.00	-0.03	-0.05	0.00
	Outstanding	-1.12	-1.09	-1.40	-1.45	-1.45
1.2.6 National Saving Certificate VII issue	Receipts	0.00	0.00	0.00	0.00	-0.01
	Outstanding	-0.62	-0.63	-0.63	-0.63	-0.64
1.2.7 Other Certificates	Outstanding	113.89	115.01	112.35	112.03	111.93
1.3 Public Provident Fund	Receipts	172.35	76.02	2.84	4.06	5.11
	Outstanding	633.61	606.32	653.55	657.61	662.72

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	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(A) Total (in ₹ Billion)	50430.94	51451.83	52813.50	53967.78	54556.81
1 Commercial Banks	39.68	40.37	41.40	42.68	41.84
2 Non-Bank PDs	0.31	0.33	0.33	0.29	0.33
3 Insurance Companies	23.13	23.49	23.63	23.49	24.24
4 Mutual Funds	1.44	1.86	1.33	1.00	1.13
5 Co-operative Banks	2.65	2.62	2.69	2.57	2.59
6 Financial Institutions	0.73	0.78	0.82	0.90	0.93
7 Corporates	1.29	1.04	1.09	0.91	1.09
8 Foreign Portfolio Investors	4.29	4.58	4.53	4.35	3.84
9 Provident Funds	6.13	5.99	5.32	5.88	5.79
10 RBI	14.29	12.84	11.94	11.62	11.63
11. Others	6.07	6.11	6.92	6.30	6.58
11.1 State Governments	1.91	1.92	1.91	1.91	1.97

State Governments Securities					
Category	2017			2018	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(B) Total (in ₹ Billion)	21467.07	22488.35	23329.53	24288.29	24954.61
1 Commercial Banks	37.94	37.64	38.13	35.79	35.02
2 Non-Bank PDs	0.45	0.38	0.51	0.51	0.75
3 Insurance Companies	33.53	34.00	33.35	34.13	34.24
4 Mutual Funds	1.89	1.92	1.68	1.64	1.20
5 Co-operative Banks	4.82	4.82	4.78	4.78	4.79
6 Financial Institutions	0.27	0.22	0.22	0.35	0.35
7 Corporates	0.11	0.11	0.13	0.15	0.16
8 Foreign Portfolio Investors	0.08	0.16	0.21	0.23	0.15
9 Provident Funds	18.10	18.37	17.05	19.67	20.34
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	2.81	2.37	3.94	2.76	2.99
11.1 State Governments	0.00	0.00	0.01	0.05	0.06

Treasury Bills					
Category	2017			2018	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(C) Total (in ₹ Billion)	6135.01	5704.50	5102.82	3798.76	5280.07
1 Commercial Banks	53.96	52.15	48.40	60.74	55.30
2 Non-Bank PDs	1.14	1.38	1.67	2.17	1.41
3 Insurance Companies	3.20	4.32	5.22	4.17	3.66
4 Mutual Funds	15.31	12.44	10.40	2.27	7.03
5 Co-operative Banks	2.48	2.33	2.05	2.42	1.29
6 Financial Institutions	2.60	3.54	3.97	3.55	2.36
7 Corporates	1.54	1.64	2.12	2.45	1.88
8 Foreign Portfolio Investors	0.00	0.00	0.00	0.00	0.00
9 Provident Funds	0.06	0.20	0.02	0.11	0.21
10 RBI	0.00	0.00	0.00	0.00	0.00
11. Others	19.72	22.01	26.17	22.12	26.87
11.1 State Governments	16.71	18.73	21.81	16.35	23.11

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 August-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	4.82	18	9.78	14	-	-
2	Arunachal Pradesh	-	-	-	-	-	-
3	Assam	-	-	-	-	-	-
4	Bihar	-	-	-	-	-	-
5	Chhattisgarh	-	-	-	-	-	-
6	Goa	0.68	14	0.75	7	-	-
7	Gujarat	-	-	-	-	-	-
8	Haryana	-	-	-	-	-	-
9	Himachal Pradesh	-	-	-	-	-	-
10	Jammu & Kashmir	-	-	2.50	6	-	-
11	Jharkhand	-	-	1.55	7	-	-
12	Karnataka	-	-	-	-	-	-
13	Kerala	-	-	-	-	-	-
14	Madhya Pradesh	-	-	6.65	4	-	-
15	Maharashtra	-	-	-	-	-	-
16	Manipur	-	-	-	-	-	-
17	Meghalaya	-	-	-	-	-	-
18	Mizoram	-	-	-	-	-	-
19	Nagaland	0.50	1	0.03	1	-	-
20	Odisha	-	-	-	-	-	-
21	Puducherry	-	-	-	-	-	-
22	Punjab	0.07	24	5.63	24	1.38	7
23	Rajasthan	-	-	-	-	-	-
24	Tamilnadu	-	-	-	-	-	-
25	Telangana	2.63	14	4.78	11	0.75	3
26	Tripura	-	-	-	-	-	-
27	Uttar Pradesh	-	-	-	-	-	-
28	Uttarakhand	0.01	17	1.91	17	-	-
29	West Bengal	-	-	-	-	-	-

- 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 August 2018			
		Consolidated Sinking Fund (CSF)	Guarantee Redemption Fund (GRF)	Government Securities	Auction Treasury Bills (ATBs)
	1	2	3	4	5
1	Andhra Pradesh	71.06	7.03	0.10	0
2	Arunachal Pradesh	8.44	0.01	--	0
3	Assam	43.78	0.41	0	37.00
4	Bihar	53.05	--	0	50.00
5	Chhattisgarh	34.65	--	0.01	2.17
6	Goa	4.94	2.47	--	0
7	Gujarat	117.33	4.11	0	0
8	Haryana	17.91	10.20	0	0
9	Himachal Pradesh	--	--	--	0
10	Jammu & Kashmir	--	--	--	0
11	Jharkhand	0	--	0	0
12	Karnataka	26.57	--	0	110.00
13	Kerala	18.44	--	0	0
14	Madhya Pradesh	--	7.95	0.00	0
15	Maharashtra	299.37	--	--	390.00
16	Manipur	3.24	0.86	0	0
17	Meghalaya	4.78	0.22	0.09	0
18	Mizoram	4.56	0.21	--	0
19	Nagaland	12.72	0.28	--	0
20	Odisha	114.71	12.42	0.72	196.50
21	Puducherry	2.73	--	--	9.65
22	Punjab	0	0	0.08	0
23	Rajasthan	--	--	1.29	72.92
24	Tamilnadu	56.91	--	0.46	288.85
25	Telangana	41.26	6.02	0.07	0
26	Tripura	3.86	0.04	--	0
27	Uttar Pradesh	--	--	1.87	0
28	Uttarakhand	25.69	0.68	0.01	0
29	West Bengal	91.07	3.59	2.14	0
	Total	1057.07	56.50	6.84	1157.09

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	June		July		August		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	20.00	17.08	30.63	30.63	35.01	29.17	136.17	127.42
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	-	-	10.00	10.00	15.00	15.00	40.00	40.00
4	Bihar	177.00	168.15	100.00	89.08	-	-	-	-	-	-	-	-
5	Chhattisgarh	42.00	38.98	81.00	81.00	-	-	-	-	-	-	-	-
6	Goa	13.20	11.71	18.00	14.00	1.50	1.50	1.50	1.50	1.50	1.50	7.50	7.50
7	Gujarat	247.20	209.44	240.00	157.85	-	-	-	-	10.00	10.00	60.00	60.00
8	Haryana	158.00	153.59	166.40	158.40	-	-	45.00	40.00	-	-	50.25	45.25
9	Himachal Pradesh	34.00	21.63	46.00	25.51	8.00	8.00	-	-1.03	-	-0.87	15.00	13.10
10	Jammu & Kashmir	27.90	18.99	62.00	39.74	5.00	5.00	7.00	7.00	3.00	3.00	27.00	21.36
11	Jharkhand	51.54	47.25	60.00	48.07	-	-	-	-	5.00	5.00	5.00	5.00
12	Karnataka	280.07	240.26	220.98	173.48	-	-	-	-	-	-	-	-
13	Kerala	173.00	146.86	205.00	162.03	10.00	10.00	10.00	10.00	40.00	37.00	115.00	103.15
14	Madhya Pradesh	161.00	145.51	150.00	131.25	-	-	10.00	10.00	10.00	10.00	50.00	50.00
15	Maharashtra	400.00	364.72	450.00	364.80	-	-	18.84	18.84	40.00	40.00	108.69	108.69
16	Manipur	6.30	4.78	5.25	2.78	-	-	-	-	-	-	3.50	3.50
17	Meghalaya	10.01	7.18	11.16	9.20	-	-	-	-	-	-	-	-
18	Mizoram	1.70	-0.35	4.24	2.77	-	-	-	-	-	-0.27	-	-0.27
19	Nagaland	10.70	7.33	11.35	7.66	-	-	-	-	-	-	2.00	0.40
20	Odisha	76.20	69.90	84.38	84.38	10.00	10.00	10.00	10.00	5.00	5.00	40.00	40.00
21	Puducherry	5.25	5.25	8.25	4.88	-	-	-	-	-	-	-	-
22	Punjab	136.00	121.44	174.70	133.49	5.00	5.00	20.29	15.29	22.00	12.00	83.54	68.54
23	Rajasthan	160.54	143.25	249.14	167.77	50.30	27.18	25.00	25.00	35.00	35.00	150.30	127.18
24	Sikkim	7.44	5.74	9.95	7.45	-	-	3.00	3.00	-	-	3.00	3.00
25	Tamilnadu	372.50	349.94	409.65	360.23	25.00	25.00	30.00	30.00	35.00	35.00	146.70	146.70
26	Telangana	218.61	205.79	246.00	218.28	10.00	7.92	12.50	12.50	17.50	13.33	105.00	98.75
27	Tripura	9.90	7.53	11.37	11.37	-	-	-	-	2.00	2.00	7.00	7.00
28	Uttar Pradesh	410.50	369.05	416.00	371.78	30.00	20.00	-	-	-	-10.00	80.00	50.00
29	Uttarakhand	54.50	50.81	66.60	58.30	5.00	5.00	10.50	10.50	4.50	4.50	31.00	26.50
30	West Bengal	344.31	312.30	369.11	253.04	20.00	12.00	30.00	30.00	-	-8.00	50.00	5.47
	Grand Total	3819.79	3426.92	4191.00	3402.81	199.80	153.68	274.26	263.23	280.51	238.37	1320.64	1162.24

- : 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>)

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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