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MONETARY POLICY STATEMENT FOR 2017-18

Fourth Bi-monthly Monetary Policy Statement, 2017-18

Monetary Policy Report – October 2017

***Fourth Bi-monthly Monetary Policy Statement, 2017-18
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 6.0 per cent.

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

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

Assessment

2. Since the MPC's meeting in August 2017, global economic activity has strengthened further and become broad-based. Among advanced economies (AEs), the US has continued to expand with revised Q2 GDP growing at its strongest pace in more than two years, supported by robust consumer spending and business fixed investment. Recent hurricanes could, however, weigh on economic activity in the near-term. In the Euro area, the economic recovery gained

further traction and spread, underpinned by domestic demand. While private consumption benefited from employment gains, investment rose on the back of favourable financing conditions. The Euro area purchasing managers' index (PMI) for manufacturing soared to its highest reading in more than six years. The Japanese economy continued on a path of healthy expansion despite a downward revision in growth since March 2017 on weaker than expected capital expenditure.

3. Among the major emerging market economies (EMEs), strong growth in Q2 in China was powered by retail sales, and imports grew at a rapid pace, suggesting robust domestic demand; investment activity, however, slowed down. The Brazilian economy expanded for two consecutive quarters in Q2 on improving terms of trade, even as the impact of recession persists on the labour market. Economic activity in Russia recovered further, supported by strengthening global demand, firming up of oil prices and accommodative monetary policy. Although South Africa has emerged out of recession in Q2, the economy faces economic and political challenges.

4. The latest assessment by the World Trade Organisation (WTO) indicates a significant improvement in global trade in 2017 over the lacklustre growth in 2016, backed by a resurgence of Asian trade flows and rising imports by North America. Crude oil prices hit a two-year high in September on account of the combined effect of a pick-up in demand, tightening supplies due to production cuts by the Organisation of the Petroleum Exporting Countries (OPEC) and declining crude oil inventories in the US. Metal prices have eased since mid-September on weaker than expected Chinese industrial production data. Bullion prices touched a year's high in early September on account of safe-haven demand due to geo-political tensions, before weakening somewhat in the second half. Weak non-oil commodity prices and

* Released on October 04, 2017.

low wage growth kept inflation pressures low in most AEs and subdued in several EMEs, largely reflecting country-specific factors.

5. Global financial markets have been driven mainly by the changing course of monetary policy in AEs, generally improving economic prospects and oscillating geo-political factors. Equity markets in most AEs have continued to rise. In EMEs, equities generally gained on improved global risk appetite, supported by upbeat economic data and expectations of a slower pace of monetary tightening in major AEs. While bond yields in major AEs moved sideways, they showed wider variation in EMEs. In currency markets, the US dollar weakened further and fell to a multi-month low in September on weak inflation, though it recovered some lost ground in the last week of September on a hawkish US Fed stance and tensions around North Korea. The euro surged to a two and a half year high against the US dollar towards end-August on positive economic data, whereas the Japanese yen experienced sporadic bouts of volatility triggered by geo-political risks. Emerging market currencies showed divergent movements and remained highly sensitive to monetary policies of key AEs. Capital flows to EMEs have continued, but appear increasingly vulnerable to the normalisation of monetary policy by the US Fed.

6. On the domestic front, real gross value added (GVA) growth slowed significantly in Q1 of 2017-18, cushioned partly by the extensive front-loading of expenditure by the central government. GVA growth in agriculture and allied activities slackened quarter-on-quarter in the usual first quarter moderation, partly reflecting deceleration in the growth of livestock products, forestry and fisheries. Industrial sector GVA growth fell sequentially as well as on a y-o-y basis. The manufacturing sector – the dominant component of industrial GVA – grew by 1.2 per cent, the lowest in the last 20 quarters. The mining sector, which showed signs of improvement in the second half of 2016-17, entered into contraction mode again in Q1 of 2017-18,

on account of a decline in coal production and subdued crude oil production. Services sector performance, however, improved markedly, supported mainly by trade, hotels, transport and communication, which bounced back after a persistent slowdown throughout 2016-17. Construction picked up pace after contracting in Q4 of 2016-17. Financial, real estate and professional services turned around from their lacklustre performance in the second half of 2016-17. Of the constituents of aggregate demand, growth in private consumption expenditure was at a six-quarter low in Q1 of 2017-18. Gross fixed capital formation exhibited a modest recovery in Q1 in contrast to a contraction in the preceding quarter.

7. Turning to Q2, the south-west monsoon, which arrived early and progressed well till the first week of July, lost momentum from mid-July to August – the crucial period for kharif sowing. By end-September, the cumulative rainfall was deficient by around 5 per cent relative to the long period average, with 17 per cent of the geographical area of the country receiving deficient rainfall. The live storage in reservoirs fell to 66 per cent of the full capacity as compared with 74 per cent a year ago. The uneven spatial distribution of the monsoon was reflected in the first advance estimates of kharif production by the Ministry of Agriculture, which were below the level of the previous year due to lower area sown under major crops including rice, coarse cereals, pulses, oilseeds, jute and mesta.

8. The index of industrial production (IIP) recovered marginally in July 2017 from the contraction in June on the back of a recovery in mining, quarrying and electricity generation. However, manufacturing remained weak. In terms of the use-based classification, contraction in capital goods, intermediate goods and consumer durables pulled down overall IIP growth. In August, however, the output of core industries posted robust growth on the back of an uptick in coal production and electricity generation. The manufacturing PMI moved into expansion zone in

August and September 2017 on the strength of new orders.

9. On the services side, the picture remained mixed. Many indicators pointed to improved performance even as the services PMI continued in the contraction zone in August due to low new orders. In the construction segment, steel consumption was robust. In the transportation sector, sales of commercial and passenger vehicles as well as two and three-wheelers, railway freight traffic and international air passenger traffic showed significant upticks. However, cement production, cargo handled at major ports, domestic air freight and passenger traffic showed weak performance.

10. Retail inflation measured by year-on-year change in the consumer price index (CPI) edged up sequentially in July and August to reach a five month high, due entirely to a sharp pick up in momentum as the favourable base effect tapered off in July and disappeared in August. After a decline in prices in June, food inflation rebounded in the following two months, driven mainly by a sharp rise in vegetable prices, along with the rise in inflation in prepared meals and fruits. Cereals inflation remained benign, while deflation in pulses continued for the ninth successive month. Fuel group inflation remained broadly unchanged in August even as inflation in liquefied petroleum gas (LPG), kerosene, firewood and chips rose. Petroleum product prices tracked the hardening of international crude oil prices.

11. CPI inflation excluding food and fuel also increased sharply in July and further in August, reversing from its trough in June 2017. The increase was broad-based in both goods and services. Housing inflation hardened further in August on account of higher house rent allowances for central government employees under the 7th central pay commission award. Inflation in household goods and services in health, recreation and clothing & footwear sub-groups increased. Quantitative inflation expectations

of households eased in the September 2017 round of the Reserve Bank's survey. However, in terms of qualitative responses, the proportion of respondents expecting the general price level to increase by more than the current rate rose markedly for the three-month as well as one-year ahead horizons. Farm and industry input costs picked up in August. Real wages in the rural and organised sectors continued to edge up. The Reserve Bank's industrial outlook survey showed that corporate pricing power for the manufacturing sector remained weak. In contrast, firms polled for the services sector PMI reported a sharp rise in prices charged.

12. Surplus liquidity in the system persisted through Q2 even as the build-up in government cash balances since mid-September 2017 due to advance tax outflows reduced the size of the surplus liquidity significantly in the second half of the month. Currency in circulation increased at a moderate pace during Q2, by ₹ 569 billion as against ₹ 1,964 billion during Q1, reflecting the usual seasonality. Consistent with the guidance given in April 2017 on liquidity, the Reserve Bank conducted open market sales operations on six occasions during Q2 to absorb ₹ 600 billion of surplus liquidity on a durable basis, in addition to the issuances of treasury bills (of tenors ranging from 312 days to 329 days) under the market stabilisation scheme (MSS) during April and May of ₹ 1 trillion. As a result, net average absorption of liquidity under the LAF declined from ₹ 3 trillion in July to ₹ 1.6 trillion in the second half of September. The weighted average call rate (WACR), which on an average, traded below the repo rate by 18 basis points (bps) during July, firmed up by 5 bps in September on account of higher demand for liquidity around mid-September in response to advance tax outflows.

13. Reflecting improving global demand, merchandise export growth picked up in August 2017 after decelerating in the preceding three months. Engineering goods, petroleum products and chemicals

were the major contributors to export growth in August 2017; growth in exports of readymade garments and drugs & pharmaceuticals too returned to positive territory. However, India's export growth continued to be lower than that of other emerging economies such as Brazil, Indonesia, South Korea, Turkey and Vietnam, some of which have benefited from the global commodity price rebound. Import growth remained in double-digits for the eighth successive month in August and was fairly broad-based. While the surge in imports of crude oil and coal largely reflected a rise in international prices, imports of machinery, machine tools, iron and steel also picked up. Gold import volume has declined sequentially since June 2017, though the level in August was more than twice that of a year ago. The sharper increase in imports relative to exports resulted in a widening of the current account deficit in Q1 of 2017-18, even as net services exports and remittances picked up. Net foreign direct investment at US\$ 10.6 billion in April-July 2017 was 24 per cent higher than during the same period of last year. While the debt segment of the domestic capital market attracted foreign portfolio investment of US\$ 14.4 billion, there were significant outflows in the equity segment in August-September on account of geo-political uncertainties and expected normalisation of Fed asset purchases. India's foreign exchange reserves were at US\$ 399.7 billion on September 29, 2017.

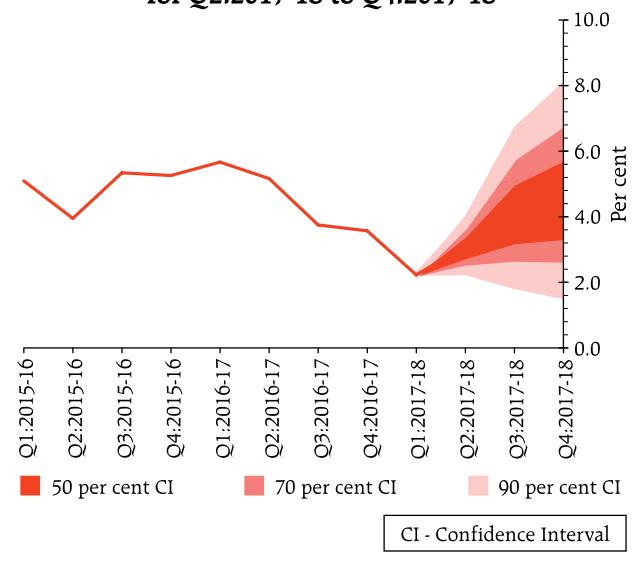
Outlook

14. In August, headline inflation was projected at 3 per cent in Q2 and 4.0-4.5 per cent in the second half of 2017-18. Actual inflation outcomes so far have been broadly in line with projections, though the extent of the rise in inflation excluding food and fuel has been somewhat higher than expected. The inflation path for the rest of 2017-18 is expected to be shaped by several factors. First, the assessment of food prices going forward is largely favourable, though the first

advance estimates of kharif production pose some uncertainty. Early indicators show that prices of pulses which had declined significantly to undershoot trend levels in recent months, have now begun to stabilise. Second, some price revisions pending the goods and services tax (GST) implementation have been taking place. Third, there has been a broad-based increase in CPI inflation excluding food and fuel. Finally, international crude prices, which had started rising from early July, have firmed up further in September. Taking into account these factors, inflation is expected to rise from its current level and range between 4.2-4.6 per cent in the second half of this year, including the house rent allowance by the Centre (Chart 1).

15. As noted in the August policy, there are factors that continue to impart upside risks to this baseline inflation trajectory: (a) implementation of farm loan waivers by States may result in possible fiscal slippages and undermine the quality of public spending, thereby exerting pressure on prices; and (b) States' implementation of the salary and allowances award is not yet considered in the baseline projection; an increase by States similar to that by the Centre could

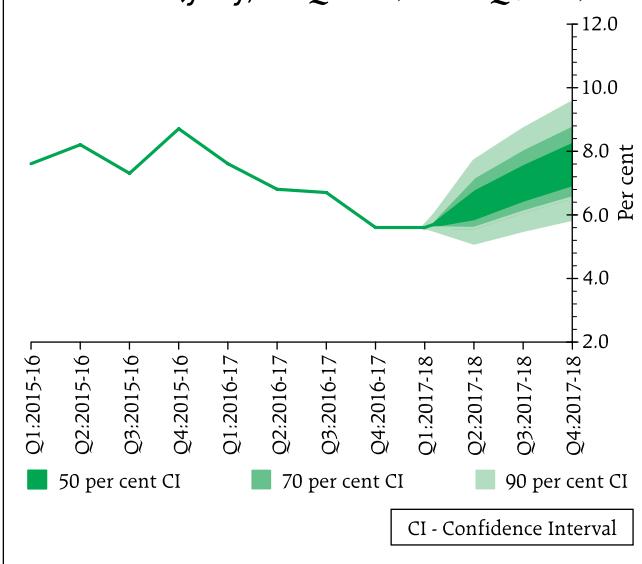
Chart 1: Quarterly Projection of CPI Inflation (y-o-y) for Q2:2017-18 to Q4:2017-18



push up headline inflation by about 100 basis points above the baseline over 18-24 months, a statistical effect that could have potential second round effects. However, adequate food stocks and effective supply management by the Government may keep food inflation more benign than assumed in the baseline.

16. Turning to growth projections, the loss of momentum in Q1 of 2017-18 and the first advance estimates of kharif foodgrains production are early setbacks that impart a downside to the outlook. The implementation of the GST so far also appears to have had an adverse impact, rendering prospects for the manufacturing sector uncertain in the short term. This may further delay the revival of investment activity, which is already hampered by stressed balance sheets of banks and corporates. Consumer confidence and overall business assessment of the manufacturing and services sectors surveyed by the Reserve Bank weakened in Q2 of 2017-18; on the positive side, firms expect a significant improvement in business sentiment in Q3. Taking into account the above factors, the projection of real GVA growth for 2017-18 has been revised down to 6.7 per cent from the August 2017 projection of 7.3 per cent, with risks evenly balanced (Chart 2).

Chart 2: Quarterly Projection of Growth in GVA at Basic Prices (y-o-y) for Q2:2017-18 to Q4:2017-18



17. Imparting an upside to this baseline, household consumption demand may get a boost from upward salary and allowances revisions by states. Teething problems linked to the GST and bandwidth constraints may get resolved relatively soon, allowing growth to accelerate in H2. On the downside, a faster than expected rise in input costs and lack of pricing power may put further pressure on corporate margins, affecting value added by industry. Moreover, consumer confidence of households polled in the Reserve Bank's survey has weakened in terms of the outlook on employment, income, prices faced and spending incurred.

18. The MPC observed that CPI inflation has risen by around two percentage points since its last meeting. These price pressures have coincided with an escalation of global geo-political uncertainty and heightened volatility in financial markets due to the US Fed's plans of balance sheet unwinding and the risk of normalisation by the European Central Bank. Such juxtaposition of risks to inflation needs to be carefully managed. Although the domestic food price outlook remains largely stable, generalised momentum is building in prices of items excluding food, especially emanating from crude oil. The possibility of fiscal slippages may add to this momentum in the future. The MPC also acknowledged the likelihood of the output gap widening, but requires more data to better ascertain the transient versus sustained headwinds in the recent growth prints. Accordingly, the MPC decided to keep the policy rate unchanged. The MPC also decided to keep the policy stance neutral and monitor incoming data closely. The MPC remains committed to keeping headline inflation close to 4 per cent on a durable basis.

19. The MPC was of the view that various structural reforms introduced in the recent period will likely be growth augmenting over the medium- to long-term by improving the business environment, enhancing transparency and increasing formalisation of the

economy. The Reserve Bank continues to work towards the resolution of stressed corporate exposures in bank balance sheets which should start yielding dividends for the economy over the medium term.

20. The MPC reiterated that it is imperative to reinvigorate investment activity which, in turn, would revive the demand for bank credit by industry as existing capacities get utilised and the requirements of new capacity open up to be financed. Recapitalising public sector banks adequately will ensure that credit flows to the productive sectors are not impeded and growth impulses not restrained. In addition, the following measures could be undertaken to support growth and achieve a faster closure of the output gap: a concerted drive to close the severe infrastructure gap; restarting stalled investment projects, particularly in

the public sector; enhancing ease of doing business, including by further simplification of the GST; and ensuring faster rollout of the affordable housing program with time-bound single-window clearances and rationalisation of excessively high stamp duties by states.

21. Dr. Chetan Ghate, Dr. Pami Dua, Dr. Michael Debabrata Patra, Dr. Viral V. Acharya and Dr. Urjit R. Patel were in favour of the monetary policy decision, while Dr. Ravindra H. Dholakia voted for a policy rate reduction of at least 25 basis points. The minutes of the MPC's meeting will be published by October 18, 2017.

22. The next meeting of the MPC is scheduled on December 5 and 6, 2017.

I. Macroeconomic Outlook

Inflation is expected to pick up from its recent lows as favourable base effects reverse and enhanced house rent allowances are disbursed to central government employees. Economic activity is expected to recover, with an improvement in the services sector, even as investment activity remains anaemic.

Since the Monetary Policy Report (MPR) of April 2017, the macroeconomic setting for the conduct of monetary policy has undergone significant shifts. The gradual firming up of global growth, especially in advanced economies (AEs), has whetted a renewed search for returns that has buoyed global financial markets. Capital flows to emerging market economies (EMEs) have resumed strongly, *albeit* with some differentiation in favour of jurisdictions that have relatively resilient fundamentals. These flows are likely to abate to an extent due to the upcoming unwinding of quantitative easing (QE) by the US Federal Reserve.

In India, the slowdown of economic activity that set in from Q1 of 2016-17 and became pronounced in the second half of the year appears to have extended into the first half of 2017-18. Looking ahead, some improvement in services may counterbalance the persisting weakness in industrial production. Inflation underwent a dramatic decline, reaching a historic low in June, but as the prints for July and August portend, a gradually rising trajectory may take hold over the rest of 2017-18. Alongside these developments, there has been an improvement in external viability; the foreign exchange reserves were around 11.5 months of imports in September 2017 and over 4 times short-term external debt.

Monetary Policy Committee: April-August 2017

Against this backdrop, the monetary policy committee (MPC) met in June and August under its pre-announced bi-monthly schedule. Following up

on its decision to keep the policy rate unchanged in April 2017, the MPC maintained *status quo* in its June 2017 meeting. While taking note of the significant easing of inflation, the MPC observed that there is considerable uncertainty around the evolving inflation trajectory. Accordingly, it persevered with a neutral stance, while remaining watchful of incoming data, and noted that premature action risked disruptive policy reversals later and loss of credibility. In its August 2017 meeting, the MPC decided to reduce the policy repo rate by 25 basis points (bps), noting that (i) the baseline path of headline inflation excluding the impact of house rent allowances (HRA) awarded under the recommendation of the seventh central pay commission (CPC) was likely to fall below the projection made in June to a little above 4 per cent by Q4; (ii) inflation excluding food and fuel had fallen significantly since May after remaining sticky through 2016-17; (iii) the roll-out of the GST during July 2017 had been relatively smooth; and (iv) the monsoon was expected to be normal. It judged, therefore, that several upside risks to the baseline inflation path had either reduced or not materialised. These factors opened up some space for monetary accommodation, especially after accounting for risks to the growth outlook.

An interesting development has been the changing profile of voting in the MPC. After a unanimous vote in its April meeting, the MPC's decision in June was by a majority. While five members voted for keeping the policy repo rate unchanged, one member voted in favour of a 50 bps cut in the policy repo rate. In the August meeting of the MPC, four members voted for a policy repo rate cut of 25 bps, one member voted for a cut in the policy repo rate by 50 bps and one member voted for *status quo*. These patterns reflect diversity, individual experiences and intellectual independence. This development is in consonance with the cross-country evidence on MPCs with external membership (Table I.1).

Table I.1: Monetary Policy Committees and Voting Patterns

Country	Number of policy meetings during April-September 2017		
	Total meetings	Meetings with full consensus	Meetings with dissent
Brazil	4	4	0
Chile	6	3	3
Colombia	6	0	6
Czech Republic	4	3	1
Hungary	6	6	0
Japan	4	0	4
Thailand	4	4	0
Sweden	3	3	0
UK	4	0	4
US	4	3	1

Source: Central bank websites.

Macroeconomic Outlook

Chapters II and III present analyses of macroeconomic developments during 2017-18 so far that explain why inflation and growth of gross value added (GVA) undershot staff's projections set out in the April 2017 MPR. Moving on to the outlook, staff's assessment of the likely evolution of domestic and global macroeconomic and financial conditions over the forecast horizon remains broadly consistent with the baseline assumptions made in the April 2017 MPR (Table I.2).

First, the spatial and temporal distribution of the south-west monsoon has been uneven and deficient in some parts of the country, which is expected to lead to a decline in *kharif* output. Second, global crude oil prices have moved in a relatively wide range of US\$ 44-57 per barrel over the past six months. Futures prices juxtaposed with the outlook for global production, demand and inventories suggest that crude prices could be around US\$ 55 per barrel during the second half of 2017-18 (Chart I.1). Third, the exchange rate of the rupee has exhibited two-way movements *vis-à-vis* the US dollar since March 2017 with an appreciating bias until July 2017, given the strength

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

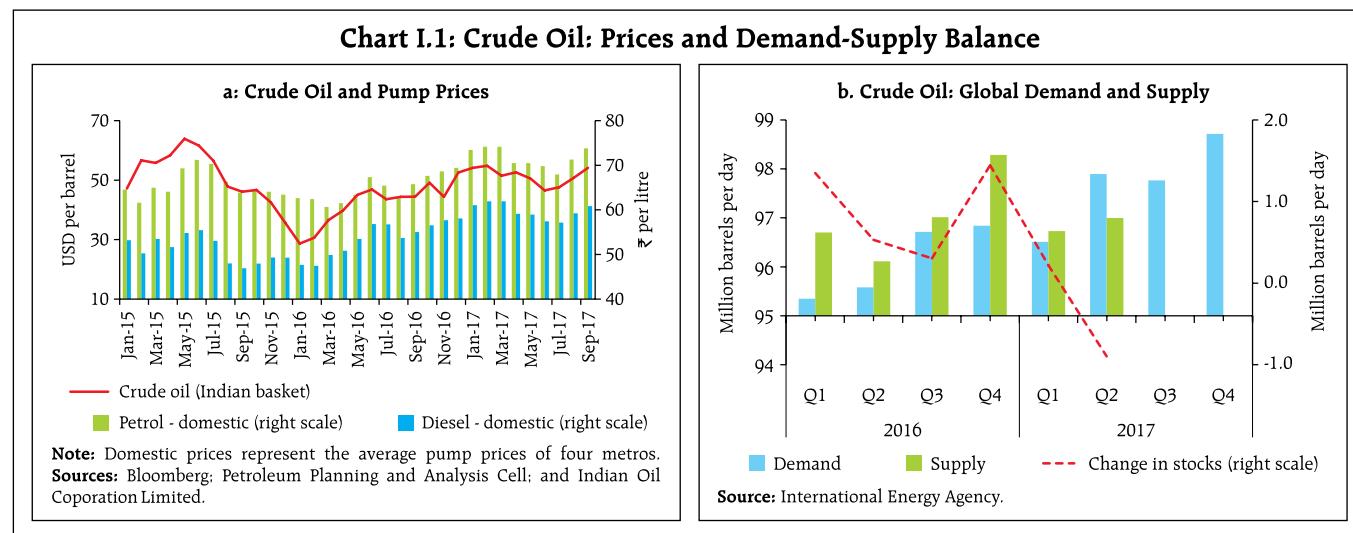
Variable	April 2017 MPR	Current (October 2017) MPR
Crude oil (Indian Basket)	US\$ 50 per barrel during FY 2017-18	US\$ 55 per barrel during 2017-18: H2
Exchange rate	₹65/US\$	Current level
Monsoon	Normal for 2017	5 per cent below LPA
Global growth	3.4 per cent in 2017 3.6 per cent in 2018	3.5 per cent in 2017 3.6 per cent in 2018
Fiscal deficit	To remain within BE 2017-18 (3.2 per cent of GDP)	To remain within BE 2017-18 (3.2 per cent of GDP)
Domestic macroeconomic/structural policies during the forecast period	No major change	No major change

Notes:

1. The Indian basket of crude oil represents a derived numeraire comprising sour grade (Oman and Dubai average) and sweet grade (Brent) crude oil processed in Indian refineries in the ratio of 72:28.
2. The exchange rate path assumed here is for the purpose of generating staff's baseline growth and inflation projections and does not indicate any 'view' on the level of the exchange rate. The Reserve Bank is guided by the need to contain volatility in the foreign exchange market and not by any specific level of/band around the exchange rate.
3. Global growth projections are from the World Economic Outlook (January 2017 and July 2017 updates), International Monetary Fund (IMF).
4. BE: Budget estimates.
5. LPA: Long period average (average rainfall during 1951-2000).

of capital inflows and the weakening of the US dollar *vis-à-vis* other major currencies. The rupee has, however, reversed some recent gains with the announcement of the unwinding of QE by the Fed.

Fourth, the outlook for global growth and trade remains broadly unchanged from the April 2017 assessment, with some acceleration relative to 2016 for both AEs and emerging market and developing economies (EMDEs) (Chart I.2). During 2018, AEs are expected to lose some momentum, with fiscal policy in the US projected to be less expansionary than expected in April. In contrast, EMDEs are expected to sustain the recent pick-up in growth. Increases in international air freight and container port throughput along with the plateauing of export orders suggest that the world trade volume growth, after some strengthening in the third quarter of 2017, could moderate towards the end



of the year.¹ This could have implications for staff's baseline outlook for external demand.

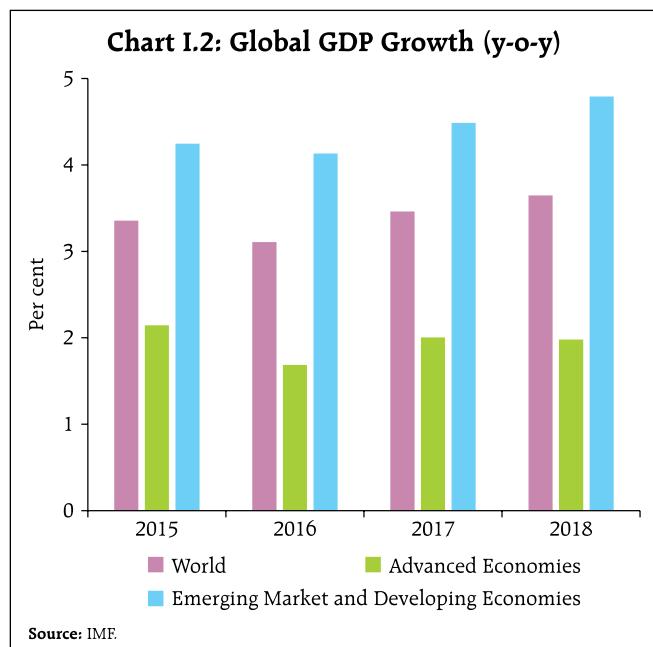
I.1 The Outlook for Inflation

The softness in headline inflation observed during April-June 2017 is projected to reverse in the coming months. First, the prices of food items, especially of vegetables – which declined sharply in Q1 (April-June) as against the typical seasonal firming

up in these months – have started edging higher. Second, the Central Government has implemented the increase in HRA for its employees effective July 2017. Third, there was a broad-based rebound in the various underlying measures of inflation in July-August 2017, reversing in large part the softness seen during April-June.

Inflation expectations of economic agents play a key role in shaping the actual outcome through wages and price-setting behaviour. Quantitative inflation expectations of urban households eased by 30-60 bps in the September 2017 round of the Reserve Bank's survey from the June 2017 round.² Respondent households expected inflation to be 7.2 per cent three months ahead and 8.0 per cent a year ahead. In terms of qualitative responses, however, the proportion of respondents expecting the general price level to increase by more than the current rate rose over both the three-month and the one year horizons (Chart I.3).

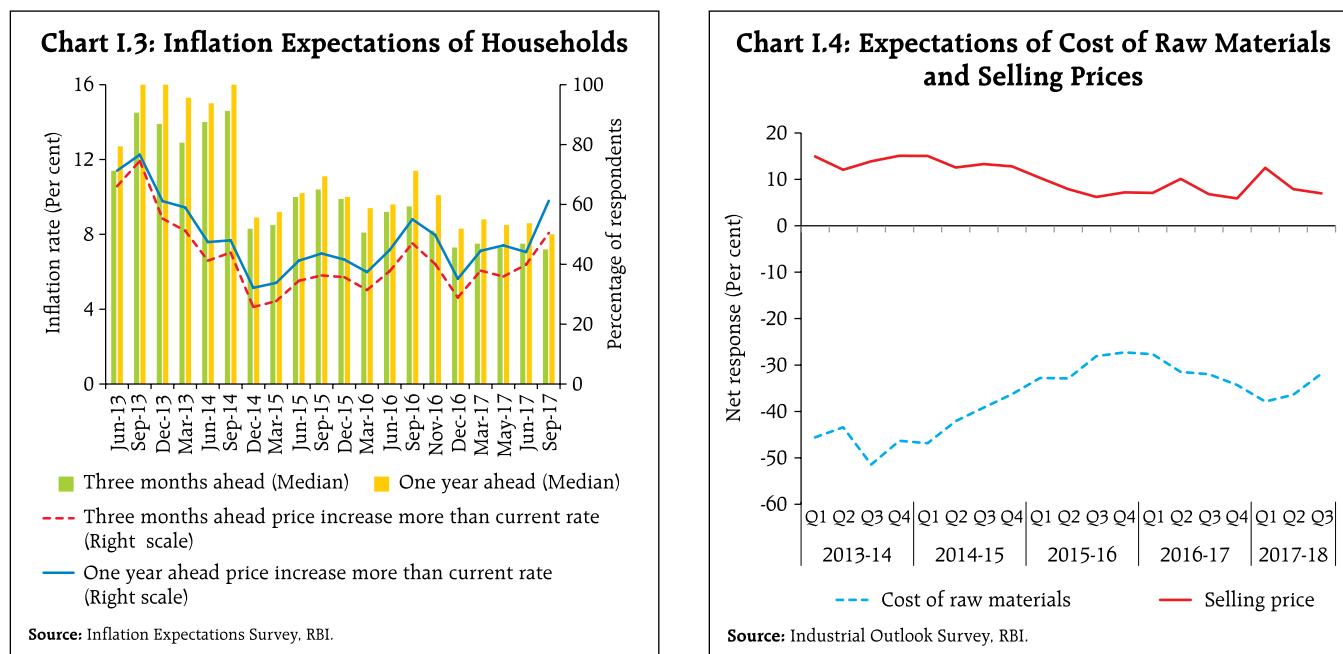
Manufacturing firms polled in the September 2017 round of the Reserve Bank's industrial outlook survey expected some softening in inputs costs a quarter ahead, both for raw materials and staff costs.³



¹ *World Trade Outlook Indicator*, August 7, 2017, World Trade Organisation (WTO).

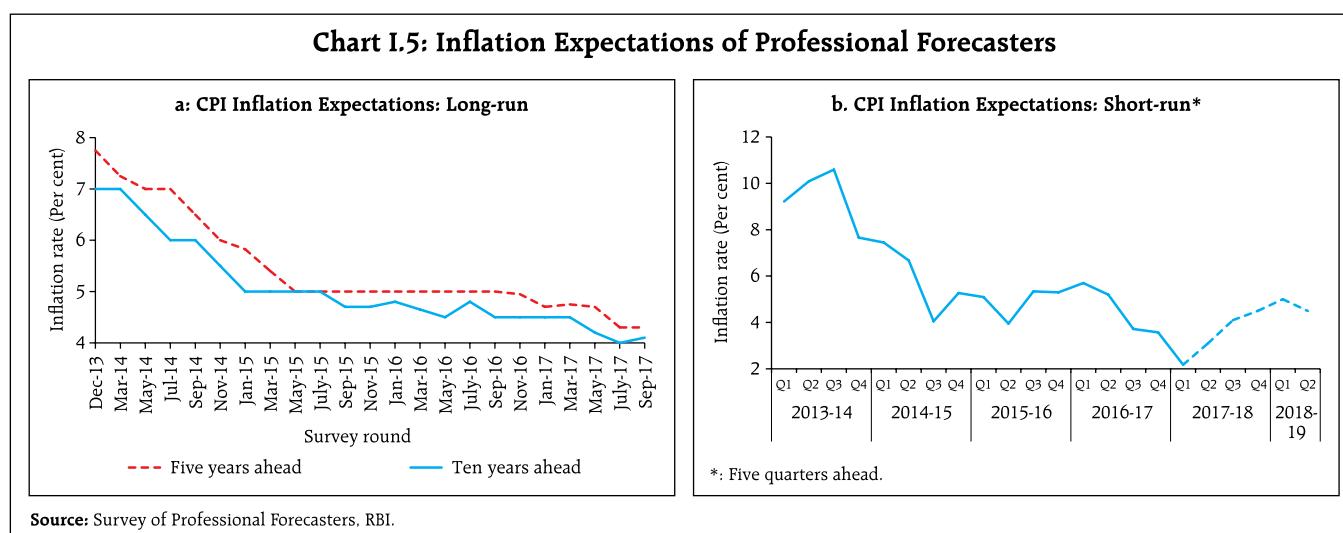
² The Reserve Bank's inflation expectations survey of households is conducted in 18 cities and the results of the September 2017 survey are based on responses from 4,996 households.

³ The September round results are based on responses from 1,141 companies.

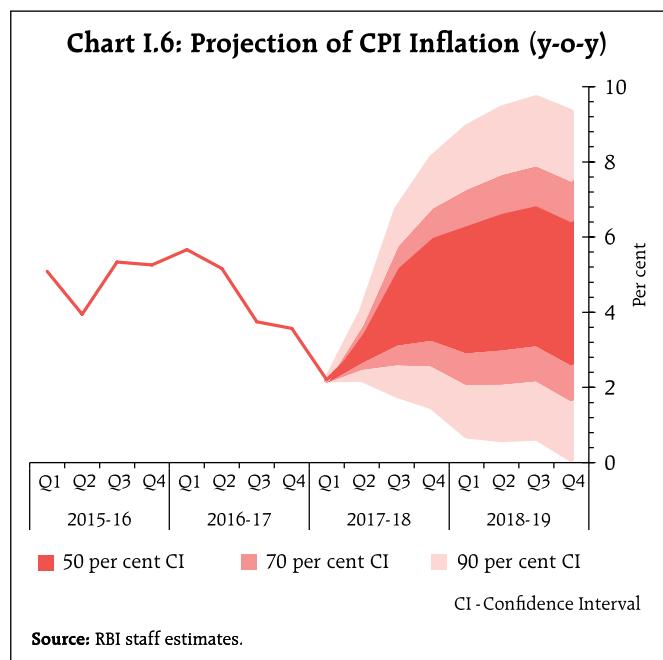


The respondents also expected some moderation in selling prices, indicating weak pricing power (Chart I.4). In the *Nikkei's* purchasing managers' survey for September 2017, firms in the manufacturing sector faced input and output price pressures from higher tax rates and prices of steel and petroleum products; firms in the services sector in August 2017 faced price pressures from higher tax rates.

Professional forecasters surveyed by the Reserve Bank in September 2017 expected CPI inflation to pick up to 4.5 per cent by Q4:2017-18, with the ebbing away of favourable base effects (Chart I.5)⁴. Their medium-term inflation expectations (5 years ahead) remained unchanged at 4.3 per cent, while the longer-term inflation expectations (10 years ahead) rose by 10 bps to 4.1 per cent.



⁴ 30 forecasters participated in the September round of the Reserve Bank's survey of professional forecasters.



Taking into account the revised assumptions on initial conditions, signals from forward looking surveys and estimates from structural and other models, CPI inflation is projected to pick up from 3.4 per cent during August 2017 to 4.2 per cent in Q3:2017-18 and 4.6 per cent in Q4, reflecting the combined

effects of unfavourable base effects, the upturn in food prices and the impact of the increase in the HRA (a statistical effect on the CPI index) announced by the Central Government (Chart I.6). The 50 per cent and the 70 per cent confidence intervals for inflation in Q4:2017-18 are 3.3-6.0 per cent and 2.6-6.8 per cent, respectively. For 2018-19, assuming a normal monsoon and no major exogenous shocks, structural model estimates indicate that inflation is expected to increase from 4.6 per cent in Q1 to 4.9 per cent in Q3 and then soften to 4.5 per cent by Q4:2018-19 as the statistical impact of the Central Government's HRA enhancement fades. The 50 per cent and the 70 per cent confidence intervals for Q4:2018-19 are 2.7-6.5 per cent and 1.7-7.5 per cent, respectively.

There are upside as well as downside risks to these baseline forecasts. The major upside risks emanate from the expected increases in salaries and allowances by State Governments; the possible fiscal slippages due to farm loan waivers by some States and potential stimulus measures by the Central Government (Box I.1); short-term uncertainty around the GST

Box I.1: Farm Loan Waivers, Fiscal Stimulus and Inflation

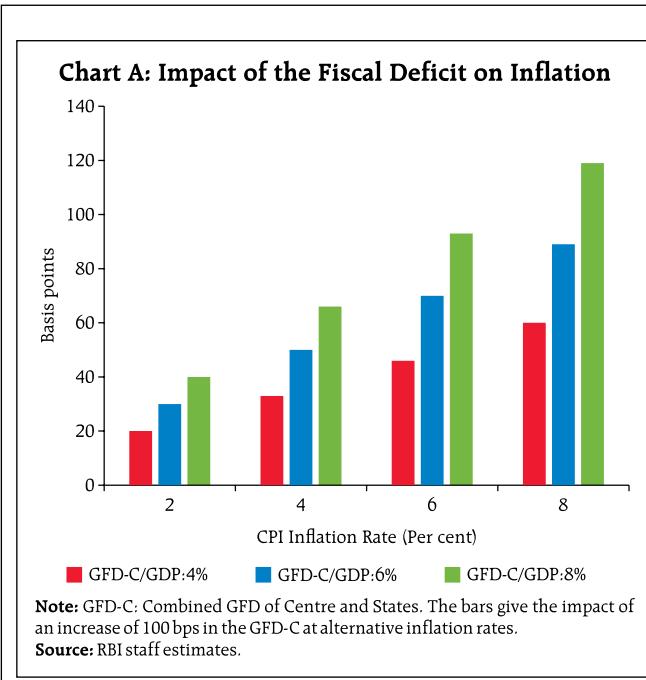
Five States – Maharashtra, Uttar Pradesh, Punjab, Karnataka and Rajasthan – have announced farm loan waivers in 2017-18 so far. Two of these states – Uttar Pradesh and Punjab – have made provisions for the likely increase in expenditure in their budgets for 2017-18. During 2014-2016, three States – Andhra Pradesh, Telangana, and Tamil Nadu – had announced farm loan waivers aggregating ₹470 billion, but staggered over five years. There are reports of a few more States considering farm loan waivers.

Furthermore, against the backdrop of the growth slowdown, there are reports that the Central Government might undertake policy actions to provide a boost to growth. Slowing growth could also have some adverse impact on tax revenues. The Central Government's fiscal deficit could potentially widen on account of these factors. Taking these developments

into considerations, the combined (Centre plus States) fiscal deficit to GDP ratio may increase by around 100 bps in 2017-18.

Higher fiscal deficits *per se* can lead to an increase in inflation expectations and actual inflation (Catao and Terrones, 2005). Moreover, budget constraints might force some of the States to reduce their capital expenditure. If capital/infrastructural constraints are binding, a reduction in capital expenditure may turn out to be inflationary as costs – including time value/opportunity cost of delays and material damages – go up as a result of capacity restraints becoming even more acute and due to attendant "congestion charges". Higher market borrowings on the back of higher deficits can also put upward pressure on borrowing costs for the Centre and the States, which could spill over to the broader economy.

(Contd..)



Empirical assessment suggests that: (a) there exists a long-run relationship between fiscal deficits and inflation in India; (b) causality runs from fiscal deficits

impact; and the expected decline in the production of *kharif* foodgrains. In terms of downside risks, adequate food stocks and effective supply management measures by the government could keep food inflation lower than expected and pull down headline inflation below the baseline.

I.2 The Outlook for Growth

The April 2017 MPR had projected an acceleration in real GVA for 2017-18 on the back of (a) a recovery in discretionary spending spurred by the pace of remonetisation; (b) the reduction in banks' lending rates on fresh loans brought about by demonetisation-induced liquidity; (c) the growth stimulating proposals in the Union Budget 2017-18; (d) a normal southwest monsoon; and (e) an improvement in external demand. Stressed balance sheets of banks and the possibility of higher global commodity prices were seen as downside risks to growth prospects.

to inflation; and (c) the impact of fiscal deficits on inflation is non-linear, *i.e.*, higher the initial levels of the fiscal deficit and inflation, higher is the impact of an increase in the fiscal deficit on inflation (Mitra *et al.*, 2017) (Chart A).⁵ With the combined fiscal deficit budgeted at 5.9 per cent for 2017-18, empirical estimates suggest that an increase in the fiscal deficit to GDP ratio by 100 bps could lead to a permanent increase of about 50 bps in inflation.

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Catao, L.A. and M.E. Terrones (2005), "Fiscal Deficits and Inflation", *Journal of Monetary Economics*, 52(3), 529-554.

Mitra, P., I. Bhattacharyya, J. John, I. Manna and A.T. George (2017), "Farm Loan Waivers, Fiscal Deficit and Inflation", Mint Street Memo No.5, Reserve Bank of India.

Pesaran, M.H., Y. Shin and R.J. Smith (2001), "Bounds Testing Approaches to the Analysis of Level Relationships", *Journal of Applied Econometrics*, 16(3), 289-326.

Some of these expectations have materialised, whereas the recovery in discretionary and investment spending has been weaker than expected and *kharif*

⁵ The empirical relationship between inflation and fiscal deficit – the long-run as well as the short-run dynamics – is examined using the Autoregressive Distributed Lag (ARDL) Cointegration approach proposed by Pesaran *et al.* (2001) as follows:

$$\Pi_t = a + b * X_t \quad (1)$$

$$\Delta \Pi_t = C_{01} + C_{11} * \Pi_{t-1} + C_{21} * X_{t-1} + C_{31} * \Delta \Pi_{t-1} + C_{41} * \Delta X_t + C_{51} * OG_{t-2} + C_{61} * OG_{t-3} + C_{71} * ALC_t + C_{81} * \Delta LE_t + \varepsilon_t \quad (2a)$$

$$\Delta X_t = C_{02} + C_{12} * \Pi_{t-1} + C_{22} * X_{t-1} + C_{32} * \Delta X_{t-1} + C_{42} * \Delta \Pi_t + C_{52} * OG_{t-2} + C_{62} * OG_{t-3} + C_{72} * ALC_t + C_{82} * \Delta LE_t + \varepsilon_t \quad (2b)$$

Equation 1 captures the long-run relationship and equations 2a-2b capture the error correction (short-run) dynamics. The variables are defined as follows:

$\Pi = \log(1 + \text{CPI Inflation})$; $X = (\text{GFD}/\text{GDP})^2$; $OG = \text{Output gap}$; $LC = \log$ of crude oil prices; $LE = \log$ of exchange rate (Rupees per US dollar). The non-linear relationship between inflation and fiscal deficit is captured by using log of inflation as the dependent variable and including the square of the fiscal deficit/GDP ratio as an explanatory variable. These data transformations allow for the inflation-fiscal deficit elasticity to change across inflation rates and fiscal deficit ratios. The empirical analysis uses quarterly data for 2006-17.

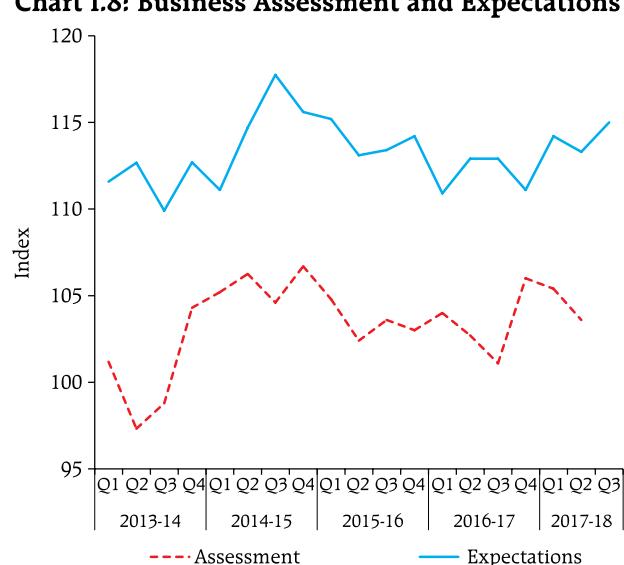
foodgrains production is expected to be lower than last year in view of the shortfall and irregular rainfall during the south-west monsoon this year. The uncertainty about the implementation of GST also appears to have had some impact on economic activity, although it is expected to be offset by productivity-enhancing effects in the medium- and long-run.

Consumer confidence dipped in the September 2017 round of the RBI's survey on declining optimism about prospects of income and employment a year ahead (Chart I.7).⁶

Overall optimism in the manufacturing sector for the quarter ahead improved in the September round of the RBI's industrial outlook survey on account of better prospects for production, order books, capacity utilisation, exports and profit margins, even as the current assessment dropped further (Chart I.8).

Surveys conducted by other agencies indicate a dip in business confidence over the previous round (Table I.3). In the *Nikkei's* purchasing managers' survey, firms in the manufacturing

Chart I.8: Business Assessment and Expectations



sector (September 2017) and the services sector (August 2017) were optimistic about future output prospects.

In the September round of the RBI's survey, professional forecasters expected real GVA growth to pick up from 5.6 per cent in Q1:2017-18 to 7.2 per cent in Q4:2017-18 and to 7.5 per cent in Q2:2018-19, led by improvement in industry and services sector activity (Chart I.9 and Table I.4).

Chart I.7: Consumer Confidence

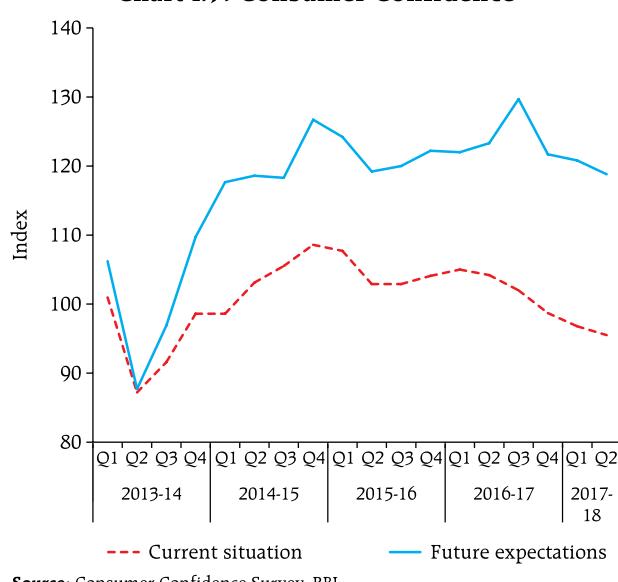


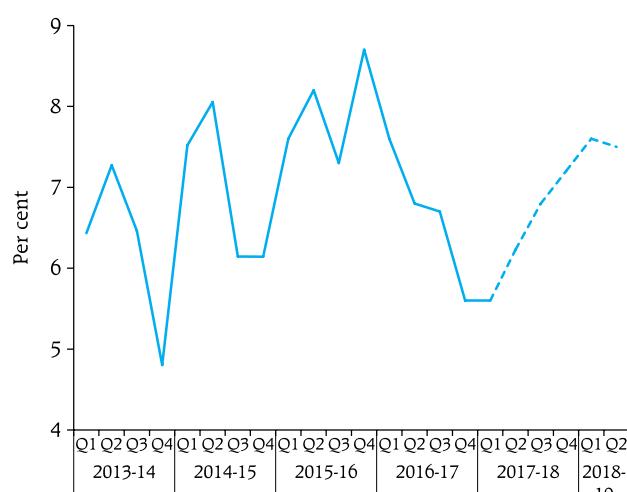
Table I.3: Business Expectations Surveys

Item	NCAER Business Confidence Index (July 2017)	FICCI Overall Business Confidence Index (August 2017)	Dun and Bradstreet Composite Business Optimism Index (June 2017)	CII Business Confidence Index (September 2017)
Current level of the index	136.0	66.1	72.1	58.3
Index as per previous Survey	139.5	68.3	78.9	64.4
% change (q-o-q) sequential	-2.5	-3.2	-8.6	-9.5
% change (y-o-y)	9.4	-1.8 ^(a)	-13.3	0.5

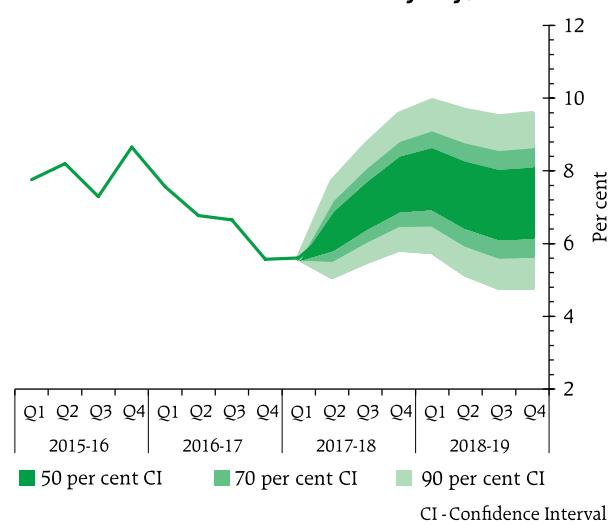
Notes:

1. NCAER: National Council of Applied Economic Research.
 2. FICCI: Federation of Indian Chambers of Commerce and Industry.
 3. CII: Confederation of Indian Industry.
- ^(a): Change over the October 2016 round.

⁶ The survey is conducted by the Reserve Bank in six metropolitan cities and the September round elicited responses from 5,100 respondents.

Chart I.9: Professional Forecasters' Projection of GVA Growth

Source: Survey of Professional Forecasters, RBI.

Chart I.10: Projection of Real Gross Value Added Growth (y-o-y)

Source: RBI staff estimates.

Taking into account the outturn in the first half, the baseline assumptions, survey indicators and

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

(Per cent)

	2017-18	2018-19
Reserve Bank's Baseline Projections		
Inflation, Q4 (y-o-y)	4.6	4.5
Real Gross Value Added (GVA) Growth	6.7	7.4
Assessment of Professional Forecasters[@]		
Inflation, Q4 (y-o-y)	4.5	4.5 [#]
GVA Growth	6.6	7.4
Agriculture and Allied Activities	3.2	3.0
Industry	4.8	7.0
Services	8.1	8.7
Gross Domestic Saving (per cent of GNDI)	31.2	32.3
Gross Fixed Capital Formation (per cent of GDP)	26.5	27.6
Credit Growth of Scheduled Commercial Banks	8.0	10.0
Combined Gross Fiscal Deficit (per cent of GDP)	6.5	6.0
Central Government Gross Fiscal Deficit (per cent of GDP)	3.2	3.0
Repo Rate (end period)	6.00	6.00 [#]
Yield on 91-days Treasury Bills (end period)	6.0	6.1
Yield on 10-years Central Government Securities (end period)	6.7	6.9
Overall Balance of Payments (US \$ billion.)	30.0	25.0
Merchandise Export Growth	6.5	7.9
Merchandise Import Growth	11.5	9.5
Current Account Balance (per cent of GDP)	-1.5	-1.8

@: Median forecasts; GNDI: Gross National Disposable Income.

#: Forecast for Q2:2018-19.

Source: RBI staff estimates; and Survey of Professional Forecasters (September 2017).

model forecasts, real GVA growth is projected at 6.7 per cent for 2017-18 – 6.4 per cent in Q2, 7.1 per cent in Q3 and 7.7 per cent in Q4 – with risks evenly balanced around this baseline path. For 2018-19, structural model estimates indicate that real GVA may grow by 7.4 per cent, assuming a normal monsoon, fiscal consolidation in line with the announced trajectory, and no major exogenous/policy shocks (Chart I.10).

Dynamic Stochastic General Equilibrium (DSGE) models are workhorse tools for policy analysis by a number of central banks. In the RBI, efforts are underway to develop such a model to enrich analytical inputs for the conduct of future monetary policy (Box I.2).

I.3 Balance of Risks

The baseline projections of growth and inflation are *inter alia* conditional on the assumptions set out in Table I.1. A caveat is that the baseline growth and inflation trajectories do not incorporate the impact of the likely increases in pay and allowances by State Governments for their employees. This section makes an assessment of the balance of risks around the baseline projections from a set of plausible alternative scenarios.

Box I.2: Towards a Prototype Dynamic Stochastic General Equilibrium (DSGE) Model for India

Built on microeconomic foundations, DSGE models emphasise agents' inter-temporal choice and assign a central role to agents' expectations around the determination of macroeconomic outcomes. These models are able to generate outcomes from policy simulations (or counterfactuals) that are not explicitly susceptible to the Lucas (1976) critique of traditional macro-econometric models using reduced-form representations that may not be robust to shifts in the underlying economic structure induced by changes in policy. Given the general equilibrium nature, the DSGE models can capture the interplay between policy actions and agents' behaviour (Sbordone *et al.*, 2010). The earliest DSGE model, representing an economy without distortions, was the real business cycle model that focused on the effects of productivity shocks (Kydland and Prescott, 1982). Since then, there has been considerable improvement in specification and estimation techniques. Current DSGE models embody a wider set of distortions and shocks than earlier generation efforts (Christiano *et al.*, 2005; Smets and Wouters, 2007).

Several central banks, both in AEs and EMEs – Bank of Canada; Bank of England; European Central Bank; Central Bank of Chile to name a few – have developed such models for policy analysis and employ them extensively to evaluate alternative policy scenarios and instrument choices.

A prototype New Keynesian DSGE model for India would need to be calibrated to country specific conditions. Drawing on Ireland (2004), the economy is hypothesised to be inhabited by a representative household which maximises a lifetime expected utility function, subject to an inter-temporal budget constraint. The felicity function⁷ depends

on consumption (C) and labour (l) supplied to the intermediate goods producing sector. The first-order condition of household optimisation consists of (i) the Euler equation which relates the real interest rate to the inter-temporal marginal rate of substitution; and (ii) an inter-temporal optimality condition linking the real wage to the marginal rate of substitution between leisure and consumption.

$$\beta r_t E_t [C_t / (\pi_{t+1} C_{t+1})] = 1 \quad (1)$$

$$I_t^{\mu-1} = W_t / C_t \quad (2)$$

where β is the subjective discount factor, μ is the inverse of the Frisch inter-temporal elasticity, W stands for real wages, π_t is the rate of inflation and r_t is the gross nominal interest rate.

There is a continuum of intermediate goods producing firms that manufacture $Y_t(i)$ units of differentiated intermediate good i using the following technology:

$$Y_t(i) = z_t I_t(i) \quad (3)$$

where z_t is an exogenous productivity shock which follows a random walk with drift. The representative intermediate goods producing firm chooses the price $P_t(i)$ to maximise the total market value, subject to the demand schedule of the final goods producer, technology constraint and quadratic price adjustment cost given by $\frac{\Omega}{2} [\frac{P_t(i)}{\pi P_{t-1}(i)} - 1]^2 Y_t$, where Ω is the degree of price adjustment cost. Solving the first order condition of this optimisation exercise produces the non-linear new Keynesian Phillips curve given by

$$\Omega (\pi_t / \pi_{t-1}) \pi_t / \pi = (1-\tau) [\frac{P_t(i)}{P_{t-1}}]^{-\tau} + (W_t / P_t) (P_t(i) / P_{t-1})^{-(1+\tau)} \tau + \beta \Omega E_t [(C_t / C_{t+1}) (\pi_{t+1} / \pi_t) (\pi_{t+1} Y_{t+1} / \pi Y_t)] \quad (4)$$

where τ is the price elasticity of output⁸. The equation states that the firm sets prices as a mark-up over marginal costs, taking into consideration quadratic

(Contd..)

⁷ The household maximises $E_0 \sum_{t=0}^{\infty} \{\ln(C_t) - (\frac{1}{\mu}) l_t^\mu\}$ subject to $C_t + \frac{B_t}{r_t} \leq B_{t-1} + W_t l_t + T_t$. The household enters period t with B_{t-1} bonds which provides B_{t-1} units of currency upon maturity. The household uses this money to purchase new bonds of value $\frac{B_t}{r_t}$, where r_t is the gross nominal interest rate between t and $t+1$. T_t is the nominal profits from intermediate goods producing firms.

⁸ π is the steady state inflation, W_t are the real wages, Y_t is output and P_t is the price level.

price adjustment costs (Mumtaz and Zanetti, 2013). As Ireland (2004) explains, the intermediate firm fixes its mark-up of price $P_t(i)$ over marginal cost in proportion to $\tau/(\tau-1)$ in the absence of costly price adjustment. With price adjustment cost, a firm's actual mark-up would deviate from the desired mark-up and gravitate towards the latter over time.

The central bank sets the nominal interest rate according to the Taylor rule:

$$r_t = \beta_r r_{ss} + (1 - \beta_r) r_{t-1} + (1 - \beta_r) \beta_\pi (\pi_t - \pi) + (1 - \beta_r) \beta_y (y_t - y_{ss}) + \varepsilon_i t \quad (5)$$

where r_{ss} and y_{ss} are the steady-state interest rate and steady-state output, respectively, and ε_t is an exogenous policy shock. Equations (1)-(5), along with the market-clearing condition, constitute the system of equations which can be solved using standard DSGE methods.⁹

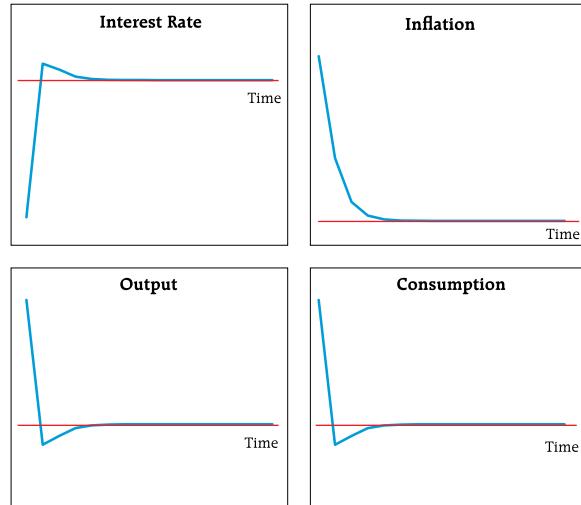
The model parameters can be calibrated to various Indian studies (Patra and Kapur, 2012). In this prototype

model, it is possible then to run counter-factual exercises, e.g., simulate the economy wide effect of an expansionary monetary policy *a la* the reduction in the policy repo rate as in the third bi-monthly monetary policy statement of August 2, 2017. An expansionary monetary policy shock reduces interest rate and raises output, consumption and inflation, as illustrated in Chart B.

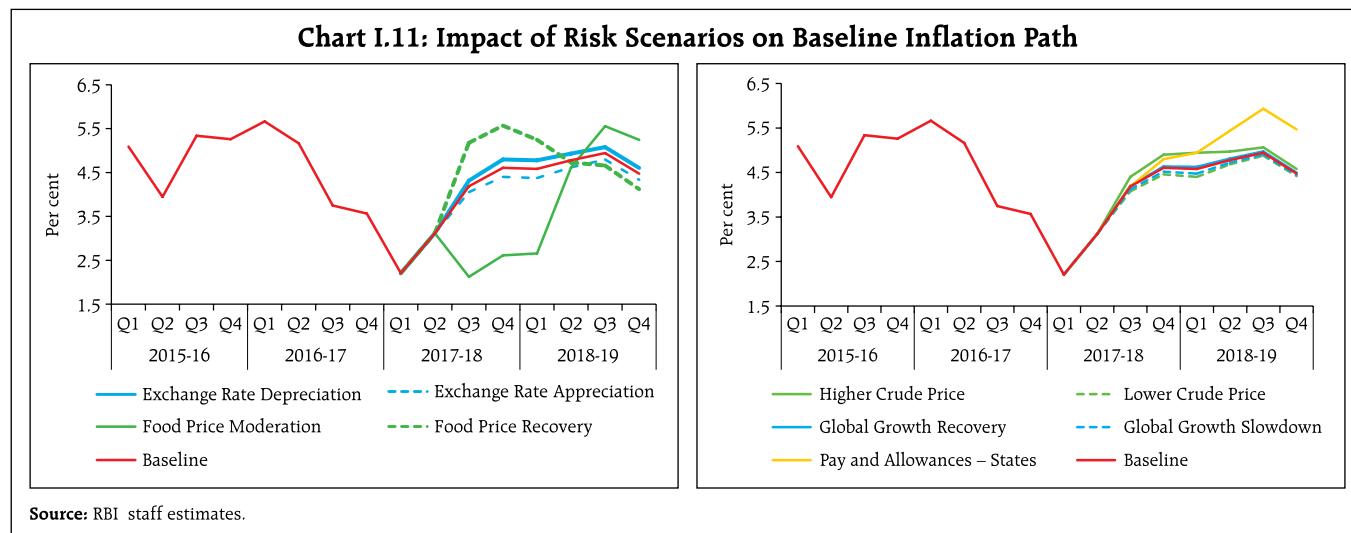
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Chart B: Response to Expansionary Monetary Policy Shock



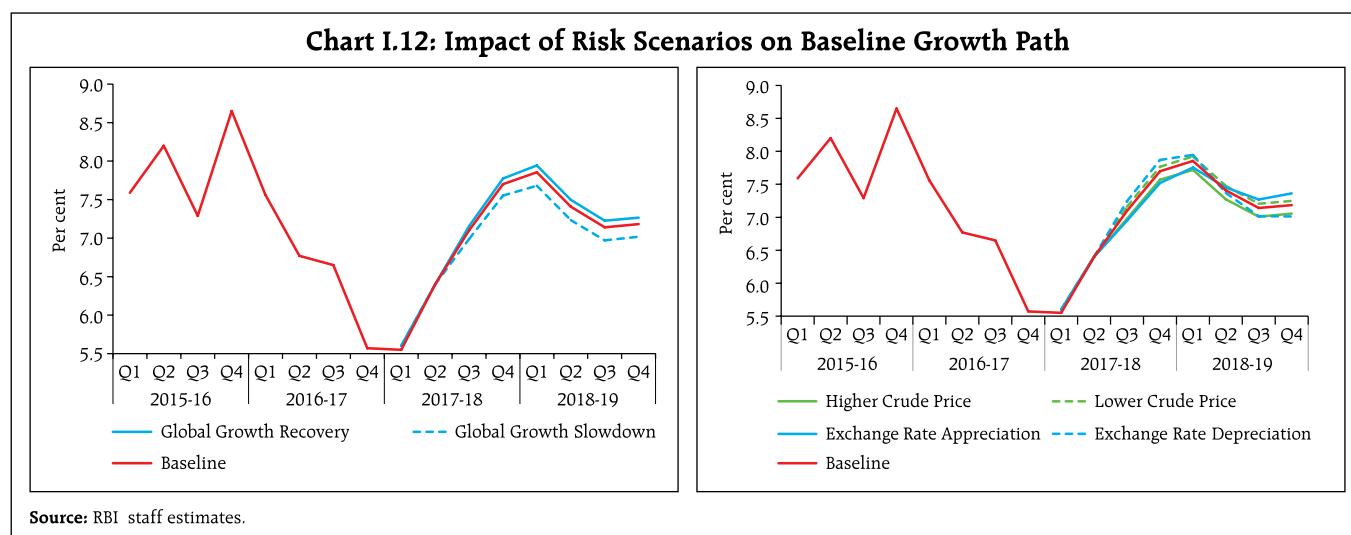
⁹ A multi-sectoral model can enrich the dynamics by accommodating financial frictions reflecting the role of credit from banks as well as non-bank financial institutions, the external sector, the agriculture sector and the Government sector. Illustratively, such models can replicate the economic implications of fiscal stimulus or pass-through of international shocks.



(i) International Crude Oil Prices

In the baseline forecasts, the crude oil (Indian basket) price is assumed to average around US\$ 55 per barrel in the second half of 2017-18 on the expectation that the global oil supply would be sufficient to meet increasing global demand. However, supply disruptions due to geo-political developments with oil demand remaining robust could push crude oil prices higher. The upward pressures on oil prices could, however, get mitigated by the increased production of shale gas in response to higher prices. Assuming that crude oil prices reach US\$ 65 in the second half

of 2017-18 in this scenario, inflation could be higher by about 30 bps in 2017-18. Real GVA growth could weaken by around 15 bps in 2017-18 due to the direct impact of higher input costs as well as spillovers from lower world demand. If, in contrast, crude oil prices soften below the baseline due to oversupply by the Organisation of the Petroleum Exporting Countries (OPEC) and/or weaker than anticipated global demand and in particular, fall to around US\$ 50, inflation may moderate by about 15 bps, with a boost to real GVA growth of around 5-10 bps above the baseline in 2017-18 (Charts I.11 and I.12).



(ii) Global Demand

Global demand is expected to be higher in 2017 and 2018 in the baseline scenario with both upside and downside risks to the outlook. On the downside, the expected demand boost from expansionary US fiscal policy may not materialise, given recent developments in the US. In China, growth has remained resilient, but concerns over its sustainability remain in view of the large overhang of debt. Persisting disconnect between market participants' assessment and that of the US Federal Open Market Committee (FOMC) over the pace of US monetary policy normalisation could trigger volatility in financial markets, especially in view of stretched market valuations. The ensuing tightening of global financial conditions in a milieu of inward-looking protectionist tendencies could amplify downside risks, especially for EMEs. Assuming global growth turns out to be 50 bps below the baseline, domestic growth and inflation could fall below the baseline forecasts by around 20 bps and 10 bps, respectively. However, reduced political risks in the euro area could lead to a more sustained and stronger cyclical rebound, providing a boost to global growth. Assuming that global growth is higher by 25 bps, real GVA growth and inflation could turn out to be around 10 bps and 5 bps, respectively, above the baseline.

(iii) Exchange Rate

The exchange rate of the Indian rupee has exhibited two-way movements *vis-à-vis* the US dollar during the first half of 2017-18. Going forward, the normalisation of monetary policy in the US (and possibly other central banks in AEs) and protectionist policies of major AEs and EMEs could lead to some volatility in the foreign exchange market and downward pressures on the exchange rate. A depreciation of the Indian rupee by around 5 per cent relative to the baseline could raise inflation by around 20 bps in 2017-18, while producing some positive impact on net exports and growth. On the other hand, in view of the

robust growth prospects of the Indian economy in a cross-country perspective and the various initiatives to attract foreign direct investment, India is likely to remain an attractive destination for foreign investors and this could lead to an appreciation of the domestic currency. An appreciation of the Indian rupee by 5 per cent could soften inflation by around 20 bps but also deliver a negative impact of 10-15 bps on real GVA growth.

(iv) Food Inflation

The substantial softening of headline inflation in the first quarter of 2017-18 reflected the absence of the usual seasonal pick up in food prices in the post-winter period, especially pulses and vegetables. These food price dynamics may have both structural and cyclical elements, although it is difficult to disentangle them at this juncture. If the softening in food inflation observed since the second half of 2016 is largely structural, then the momentum in food prices in the rest of 2017-18 could be negligible and headline inflation could be below the baseline by up to 2 percentage points. If however, low food inflation turns out to be largely cyclical, food prices are likely to revert to trend. Assuming that the momentum in the food prices in the coming months is in line with the average of the past five years, headline inflation may turn out to be 100 bps above the baseline.

(v) Pay and Allowances – Implementation by States

The impact of increased salaries and pensions of Central Government employees in 2016 and the implementation of HRA effective July 2017 has been embedded in the baseline forecasts. Assuming that State Governments implement a similar order of increase in their pay and allowances, CPI inflation could go up to 100 bps above the baseline on account of the direct statistical effect of higher house rents with possible indirect effects emanating from higher demand and increase in inflation expectations.

(vi) Fiscal Slippage

As noted earlier, there are upside risks to the Central Government's fiscal deficit from possible measures to provide a boost to domestic demand and from lower tax revenues. Assuming that the Central Government's fiscal deficit/GDP ratio widens by 50 bps in 2017-18, inflation could be around 25 bps above the baseline.

To conclude, the growth outlook is expected to improve in the second half of 2017-18, although it could be weighed down by still sluggish investment

and export activity. Higher food prices and the increase in house rent allowances by the Central Government for its employees are expected to result in an increase in headline inflation in the second half of 2017-18. There are upside risks to the inflation outlook from (i) the lower *kharif* foodgrains output; (ii) farm loan waivers by some State Governments and possibility of Central Government stimulus; and (iii) the implementation of higher pay and allowances by the State Governments for their employees, which will impact the baseline projections of growth and inflation as they materialise.

II. Prices and Costs

Consumer price inflation fell sharply in the first quarter of 2017-18, driven down by a collapse in food inflation and a marked moderation in inflation in other components. The trajectory reversed in July and August as vegetable prices spiked and prices of other goods and services firmed up. Input costs tracked movements in international commodity prices, while wage growth in the organised and rural sectors firmed up modestly.

The MPR of April 2017 had projected consumer price index (CPI) inflation¹ to increase to 4.2 per cent in Q1:2017-18 and further to 4.7 per cent in Q2 on the expectation that the compression imposed by demonetisation on perishable food prices would wane, and the usual seasonal uptick that characterises pre-monsoon months would take over. In the event, inflation developments in the first half of 2017-18 were foreshadowed by the prolonged impact of food supply shocks. Consequently, actual inflation outcomes were pushed much below their projected path. First, food prices sank into deflation in May and June 2017. Second, crude prices fell in April, remaining soft and range-bound in ensuing months; combined with an appreciating exchange rate, this resulted in a sharp disinflation in petrol and diesel

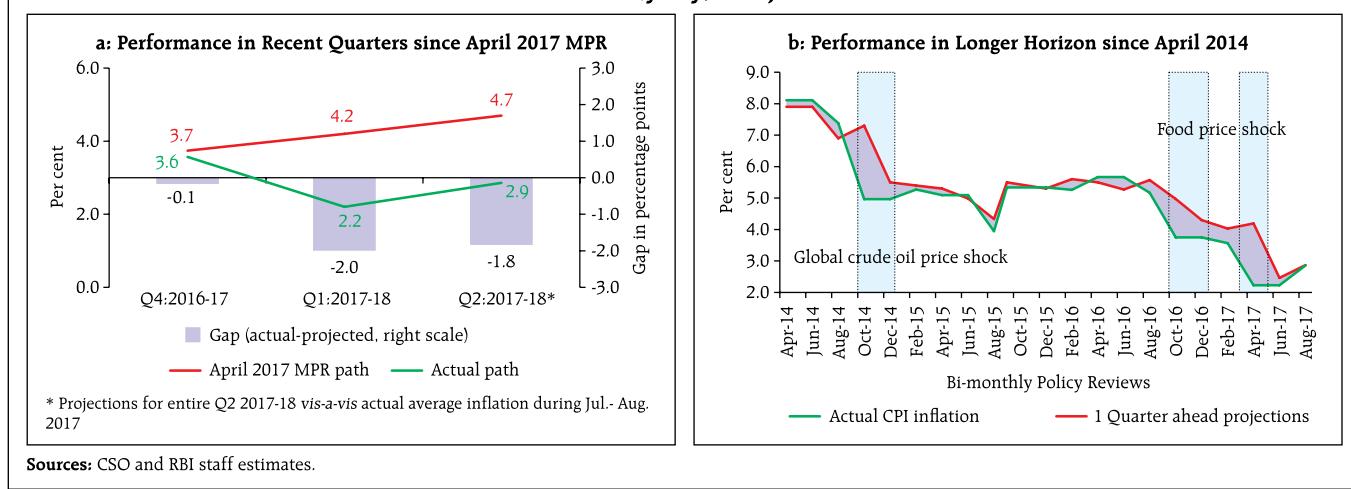
prices in the early part of 2017-18. In the fuel group, liquefied petroleum gas (LPG) prices declined in the first quarter of 2017-18, tracking international prices. Third, inflation excluding food and fuel also eased significantly in Q1:2017-18, pending price revisions ahead of goods and services tax (GST) implementation. The cumulative impact was that headline inflation plunged to 2.2 per cent in Q1:2017-18 and 2.9 per cent in the first two months of Q2 – significantly lower than the assessment made at the time of the April MPR. Although these forces continue to drive a wedge between actual and projected inflation in terms of levels, a directional alignment is gradually occurring since July (Chart II.1a).

Large and unanticipated supply shocks have produced at least two systematic deviations of actual and projected inflation in terms of the new index (Chart II.1b). Both capture significant underlying shifts in demand-supply balances in key inflation-sensitive goods and services, which should have warranted policy responses of a scale and range beyond the narrow remit of monetary policy.

II.1 Consumer Prices

After the January 2017 trough, consumer price inflation increased for two months in succession

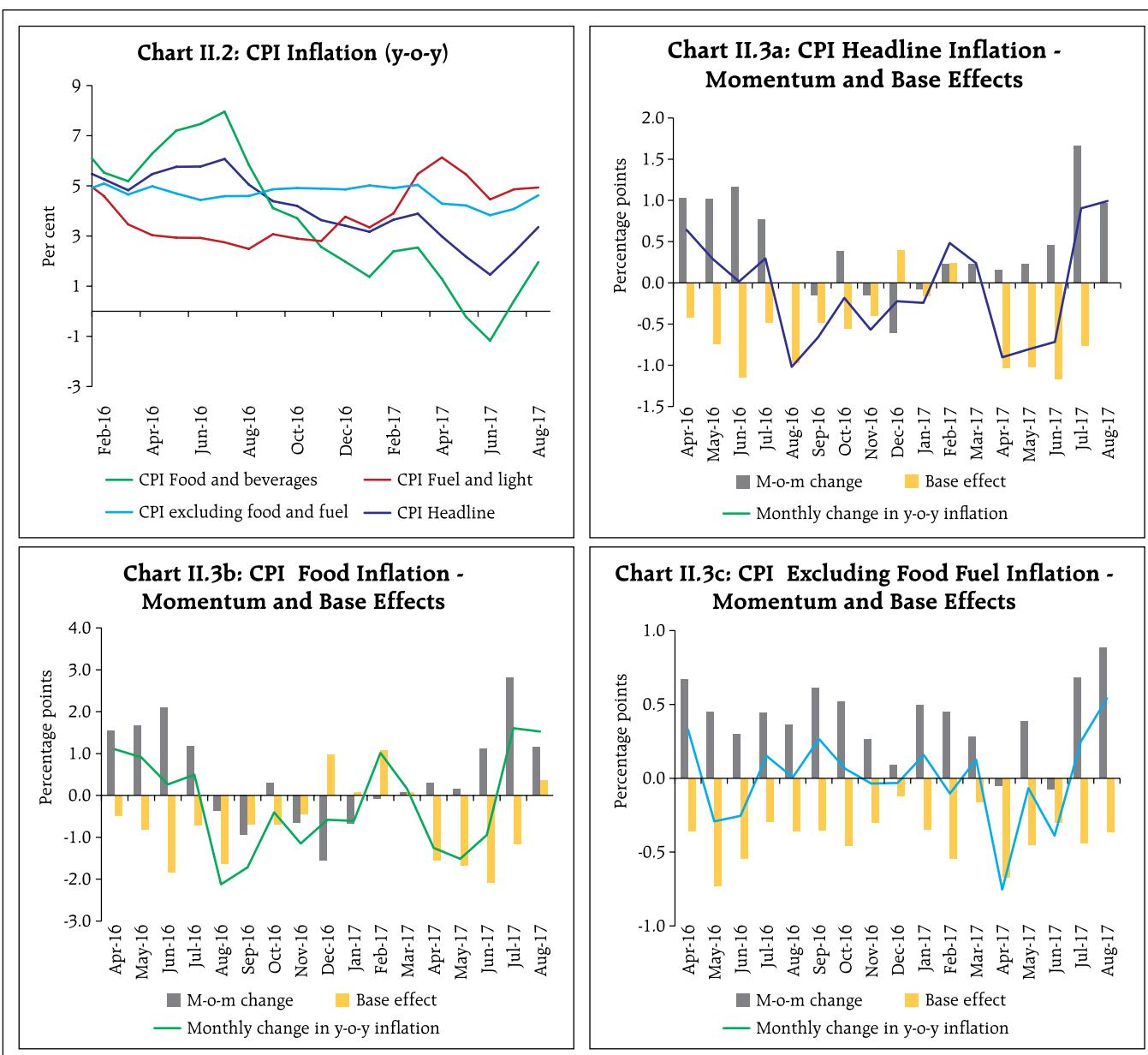
Chart II.1: CPI Inflation (y-o-y): Projection versus Actual



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

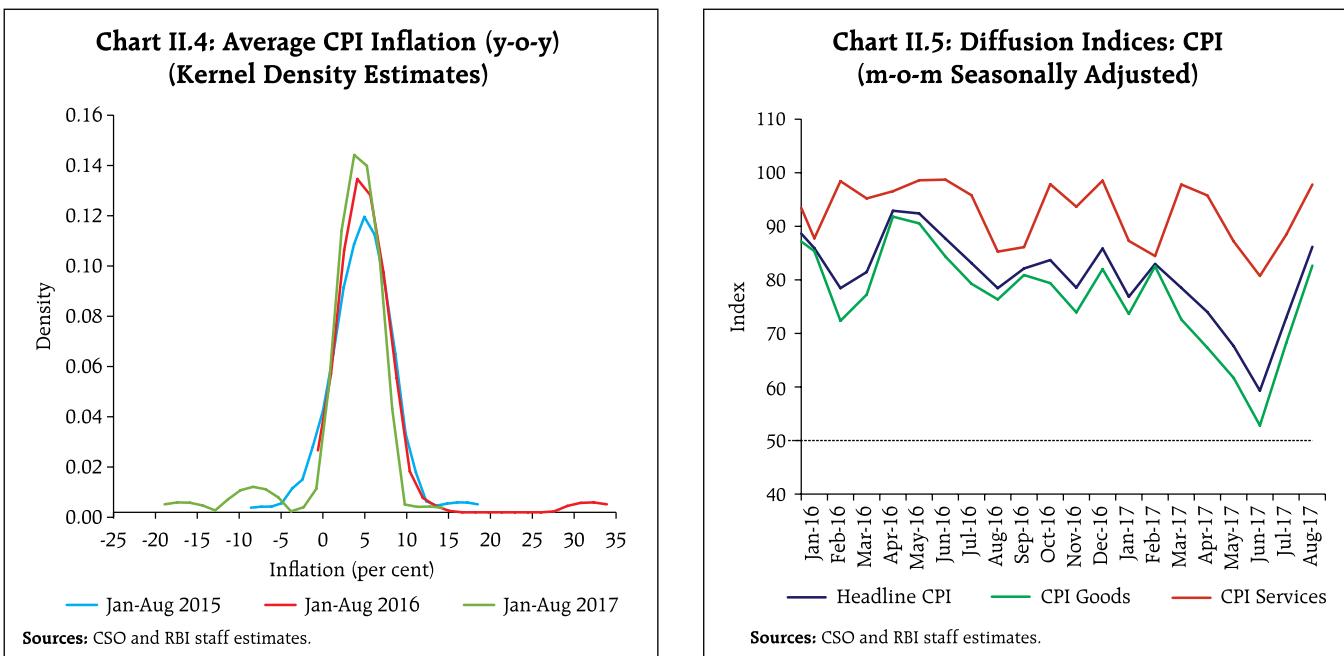
to reach 3.9 per cent in March. Thereafter, inflation started declining sharply to reach a historic low of 1.5 per cent in June (Chart II.2), driven by the sequential decline in the momentum of food prices and the overwhelming downward pull of favourable base effects that took the prices of food items down into a deflation of (-)1.2 per cent by June. This dramatic decline was accentuated by the dampening of the usual seasonal spikes in prices of vegetables that typically

manifest ahead of the onset of the monsoon. Inflation excluding food and fuel also declined sharply from 5 per cent in March to 3.8 per cent by June, after a long hiatus of stickiness. The sharp disinflation during April to June 2017 in prices of goods and services constituting this category came from favourable base effects offsetting positive but weak momentum (Chart II.3a, b and c).



Note: Change in CPI y-o-y inflation between any two months can be approximated as the difference between the current m-o-m change in the price index (momentum) and the m-o-m change in the price index 12 months earlier (base effect). For more details see Box I.1 of the MPR, September 2014.

Sources: CSO and RBI staff estimates.



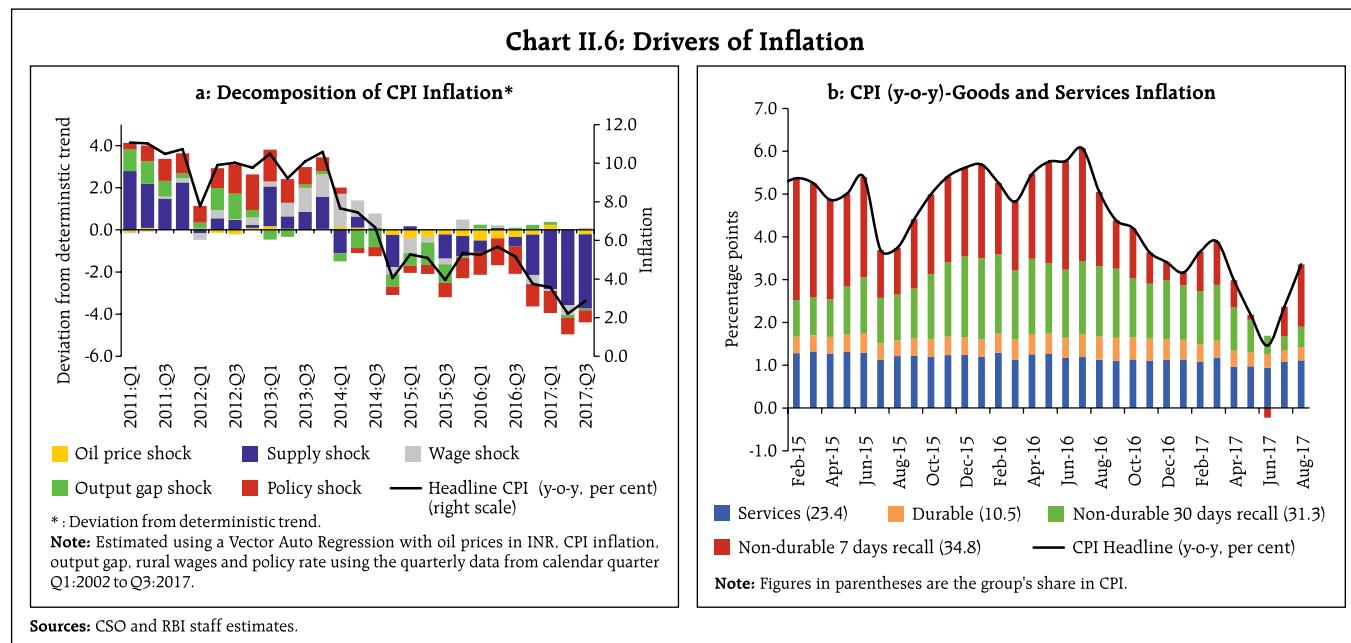
The sharp disinflation in CPI from 3.7 per cent in the second half of 2016-17 to 2.5 per cent in the first half of this year impacted the inflation distribution. The moderation in the central tendency of the distribution was also accompanied by an increase in kurtosis and a considerable negative skew, as against a positive skew during the corresponding period a year ago (Chart II.4). On a seasonally adjusted basis, prices of most items registered increases and the diffusion indices² for goods, services and the overall CPI were well above 50 (Chart II.5). In July and August 2017, the incidence of delayed spikes in prices of vegetables within an overall firming up of prices of goods and services in the run up to the GST implementation reversed the trajectory of headline inflation and diffusion indices rose sharply, indicating renewed broad-basing of price pressures.

² 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.

II.2 Drivers of Inflation

A historical decomposition³ of inflation shows that large supply shocks dominated the disinflation of the first half of 2017-18, contributing 3.6 percentage points to it. This confirms the vulnerability of the Indian economy to exogenous shocks, *viz.*, oil prices, and disruptions impacting the agriculture sector in spite of the diversification and weather proofing of the agricultural sector sought to be achieved by policy interventions over time. These developments may warrant a re-appraisal of the scope and quality of food management strategies that seem prone to failure in the face of shocks in either direction. In the past too,

³ Historical decompositions are used to estimate the individual contribution of each shock to movements in inflation over the sample period based on a Vector Auto Regression (VAR) with the following variables (represented as the vector \mathbf{Y}_t): annual growth rate in crude oil prices in Indian rupees, inflation, output gap measured by using the Hodrick-Prescott filter, annual growth rate of rural wages and the policy repo rate. The VAR can be written in companion form as: $\mathbf{Y}_t = \mathbf{c} + \mathbf{A} \mathbf{Y}_{t-1} + \mathbf{e}_t$; where \mathbf{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, \mathbf{Y}_t can be represented as a function of deterministic trend and sum of all the shocks \mathbf{e}_t . This formulation allows to decompose the deviation of inflation from the deterministic trend as the sum of contributions from various shocks.

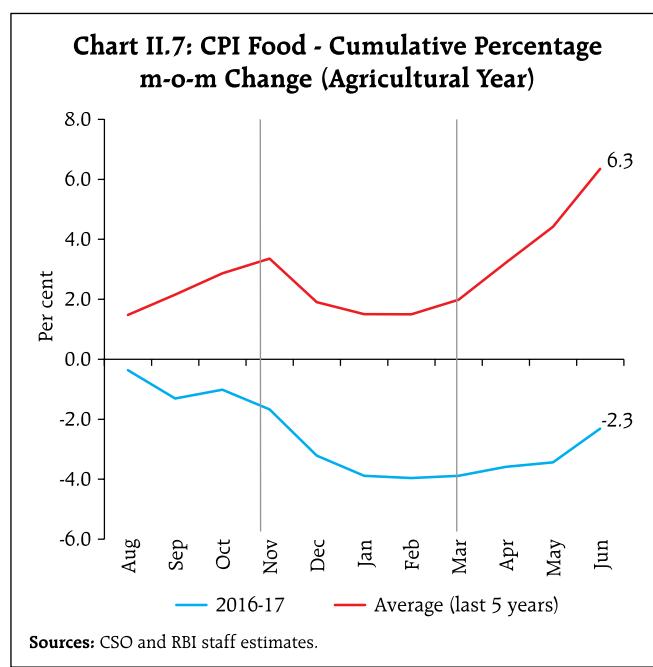


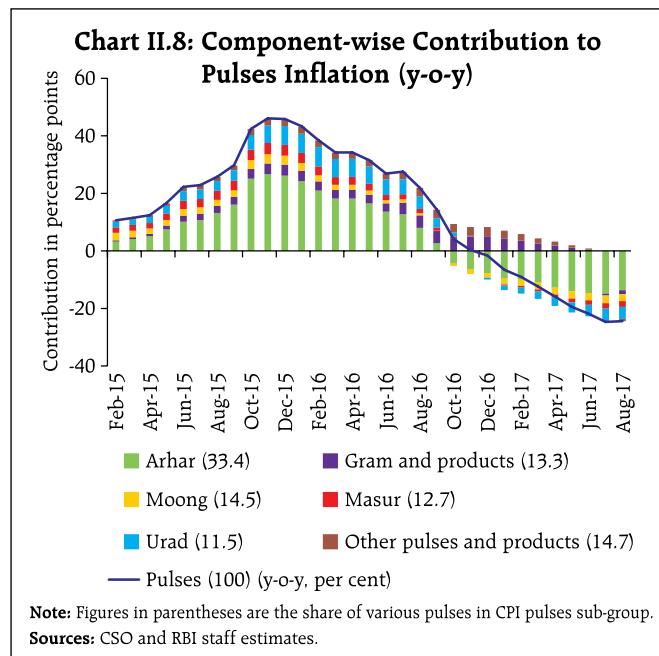
supply shocks, of which large one-sided deviations of inflation from projections are merely a symptom, drove disinflation episodes. The softening of oil prices in conjunction with exchange rate appreciation and the negative output gap, possibly due to weak credit growth, also contributed to the disinflation (Chart II.6a).

Drilling down into granular constituents, non-durable goods, which account for 66 per cent of the CPI basket and include items such as petrol and diesel in addition to food items, were the main drivers of the disinflation. The contribution of services, on the other hand, remained broadly unchanged. The reversal in July and August was driven by inflation in non-durables which rebounded, led by food prices (Chart II.6b).

Turning to a disaggregated analysis of food inflation, this recent experience with a disinflation episode yields several lessons that should inform the setting of macroeconomic policies going forward in order to pre-empt widespread distress in the farm economy or at least, to mitigate it. The precipitous decline in food prices appears to have overwhelmed supply management efforts, despite the fact that the

downshift in momentum commenced as early as the second half of 2016-17 and continued well into the first quarter of 2017-18, affording lead time for course corrections. This decline in food prices during August 2016 to June 2017 [(-)2.3 per cent] was in stark contrast to the pattern of the last five years (2011-12 to 2015-16) when food prices increased at an average annual rate of 6.3 per cent (Chart II.7). Two factors stand out





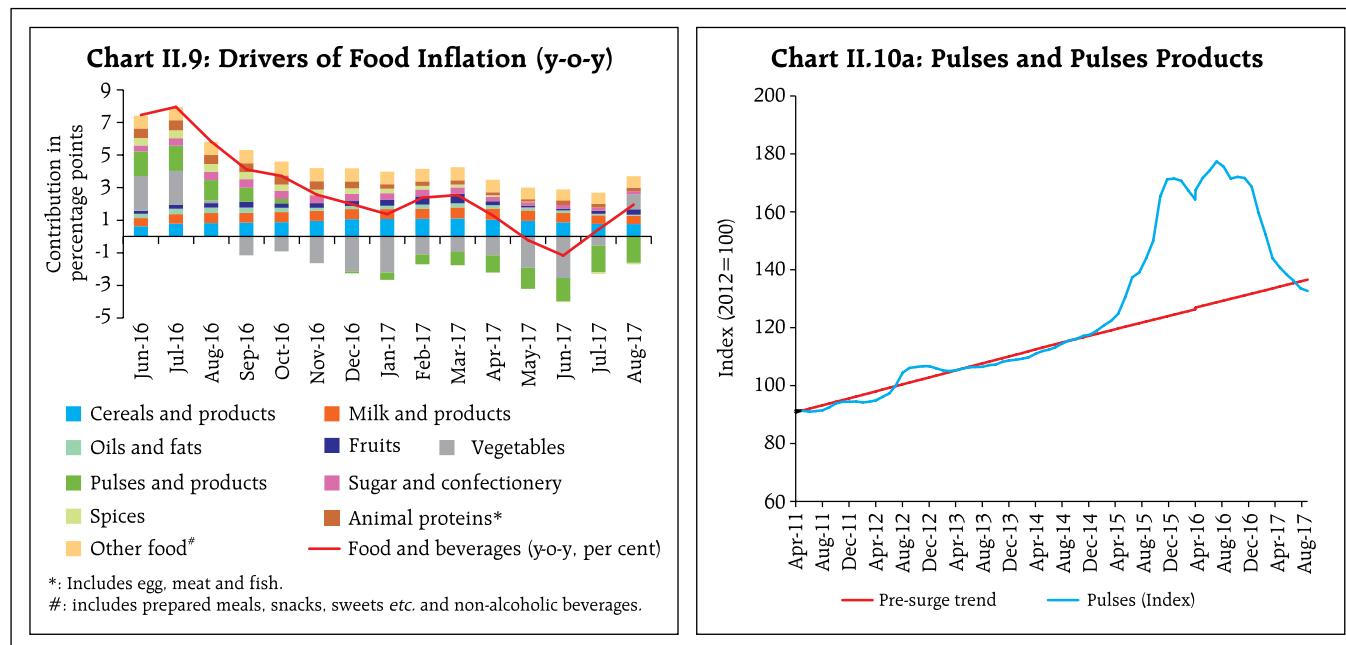
in this experience as noteworthy. First, the unusually low and delayed seasonal upticks in vegetables prices coincided with larger than usual arrivals in *mandis* which did not get contemporaneously picked up by agri-information alerts. Also highly unusual were the spillovers to prices of vegetables other than the usual suspects – potatoes; onions; tomatoes – indicating the extent of dislocation caused by oversupply, since other vegetables do not typically exhibit significant seasonal swings. Second, there was a massive deflation in respect of prices of pulses – (-)24.6 per cent by July-August 2017 contributed by all items in the pulses group (Chart II.8). It was preceded, however, by a steady and sizable disinflation from the second half of 2015-16 which should have flashed in lead monitors of the pulses economy. In the absence of corrective action, the combination of augmented availability and inadequate procurement/marketing operations yielded a supply glut with which food supply management logistics failed to cope.

As regards specific components in the food category, pulses constitute 2.4 per cent of the CPI and 5.2 per cent of the food category. The decline in prices of pulses contributed (-)1.4 percentage points

to the food deflation during May and June and (-)0.7 percentage points to headline disinflation (Chart II.9). Historically, domestic production and imports of pulses have consistently lagged behind the level of domestic demand, resulting in inflationary pressures on the headline. Drawing upon this experience, the Government put in place several measures to augment supply during 2016-17, which *inter alia* included increasing the minimum support prices (MSPs) to incentivise farmers to increase acreage (MSP for *kharif* and *rabi* pulses increased in the range of 7.7-9.2 per cent and 14.3-16.2 per cent, respectively, in 2016-17); continuing zero import duty on pulses to augment domestic availability of pulses at reasonable prices (import duty of 10 per cent was imposed on *tur* in March 2017 to prevent prices from falling below MSPs); restricting exports (*tur*, moong and urad dal have been made free for exports, effective September 15, 2017); creating buffer stocks of pulses for the first time through involvement of agencies such as the Food Corporation of India (FCI), the National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED), and the Small Farmers' Agri Business Consortium (SFAC); discouraging hoarding by putting stock limits on pulses for traders (which were lifted in May 2017); and taking measures for revitalising the agriculture sector in general.⁴

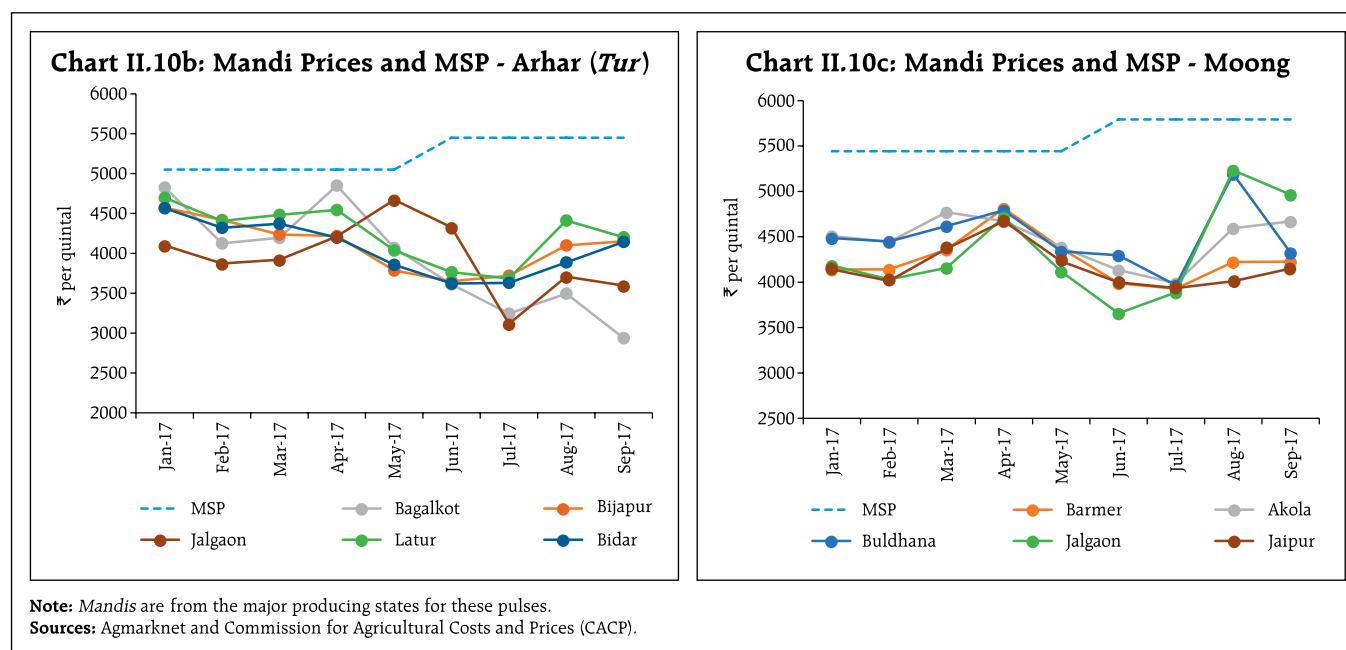
With the domestic availability of pulses (domestic production and imports) increasing to 29.6 million tonnes in 2016-17 from 22.2 million tonnes in 2015-16, the prices of pulses declined below their long-term trend as well as the MSPs in several *mandis*

⁴ Measures, *inter alia*, include issuing soil health cards to all farmers to provide information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility; *Pradhan Mantri Krishi Sinchayee Yojana* to help expand cultivated area with assured irrigation, reducing wastage of water and improving water use efficiency; onboarding 455 markets (out of 585 regulated market) in 13 states on the e-marketing platform under the National Agriculture Market scheme (eNAM) – as on September 8, 2017, 47.95 lakh farmers and 91,500 traders have registered on the e-NAM portal.



(Charts II.10a, b and c). This reflected the large gap in procurement relative to supply and the unanticipated shock to farmers' expectations on price support.

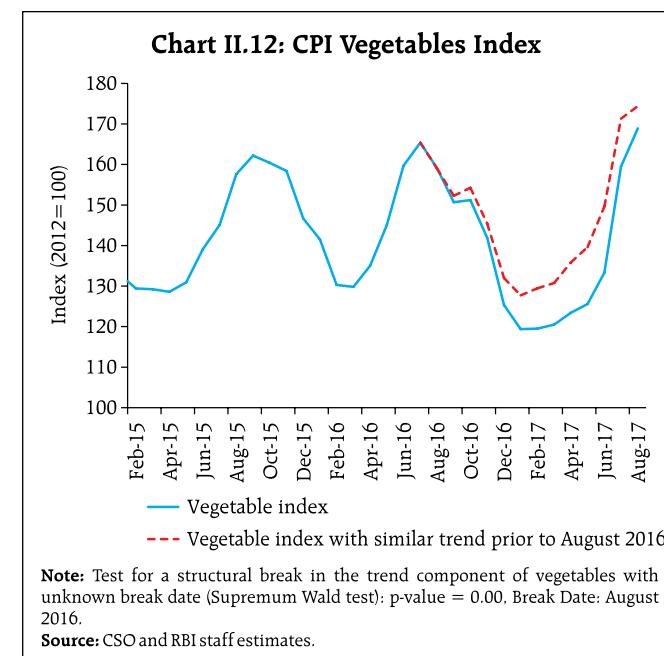
In the case of vegetables, prices fell significantly since August 2016, with statistical tests suggesting a trend break⁵ that altered their evolution incipiently



⁵ Monthly series of the CPI vegetable price index from January 2012 to June 2017 is decomposed into trend, cyclical, seasonal and irregular components using a univariate unobserved components model (UCM). The Supremum Wald test indicates a statistically significant break in August 2016, with the post-break trend sloping negatively. Comparing the observed vegetable price index with an index constructed by imputing the pre-break trend on to the post-break decomposition reveals a 6-10 percentage points deviation in inflation in 2017. Several caveats are in order: (i) the break is at the end of the sample; (ii) the post-break trend is negative sloping which means that reduction in prices on an enduring basis, controlling for other shocks and seasonality, is unlikely; and (iii) the July and August 2017 data already indicate a sharp reversal in vegetable prices. These need to be considered while interpreting the break as a structural change represented as a function of deterministic trend and sum of all the shocks e_t . This formulation allows the decomposition of the deviation of inflation from its deterministic trend as the sum of contributions from various shocks.

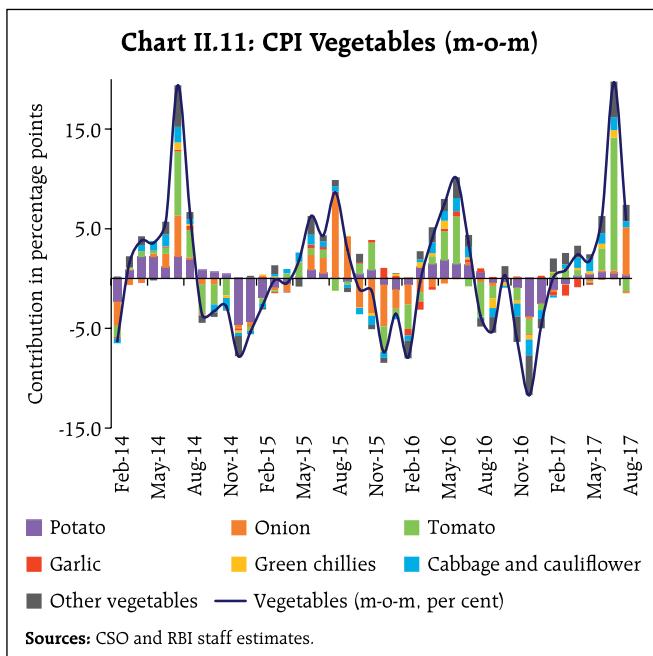
under the cover of the transitory effects of demonetisation. A sequence of positive shocks brought about this sub-trend deviation. What started off as the reversal of the summer spike in August was followed by the sharp and more than seasonal winter price correction. Fire-sales post demonetisation set the stage for a plunge in the prices of other vegetables (cabbage; cauliflower; *palak*/other leafy vegetables; brinjal; gourd, peas and beans) during November-December 2016, which usually exhibit little seasonality, as stated earlier. Finally, there has been an unusually soft pickup in vegetable prices during the early months of 2017 (Charts II.11 and II.12). This was due to large arrivals of key vegetables during these months. These developments underscore the need for high frequency data and monitoring of prices, *mandi* arrivals, supply-demand balances and stock positions, especially with respect to horticulture.

In Q2 so far, food inflation has edged up on the back of a sharp rise in vegetables prices, driven by a spike in tomato and onion prices (Chart II.11). In the case of tomatoes, sudden price movements propelled inflation in the item from (-)40.8 per cent in June 2017 to 49.9 per cent in July and further to 94.0 per cent in August. This was mainly on account of supply



disruptions due to farmers' agitations in Maharashtra in June and adverse weather conditions in important production centres. In early August, upside pressures also built up in onion prices, pushing onion inflation to 49.3 per cent in August from (-)10 per cent in July, reportedly due to damage caused by July rains and large procurement by a few State Governments. The sharp increase in these prices in retail markets reflects a statistically significant increase in margins⁶ in Q2:2017-18. Further analysis based on CPI regional prices data suggests that there is no significant difference in the changes in vegetable prices in urban and rural areas – the spike in vegetable prices has uniformly impacted rural and urban India.⁷

Among other food items, prices of spices moved into deflation territory since June 2017 on account of a fall in prices of chillies, *dhania* and black pepper. As per the 3rd advance estimates of the Ministry of Agriculture, production of spices recorded a growth



⁶ Margin is measured as the difference between the retail and the wholesale price. The increase in margins is statistically significant at 5 per cent level. The kernel density function also suggests significant increases in onion and tomato prices and margins across a majority of the centres during July and August as compared to May and June 2017.

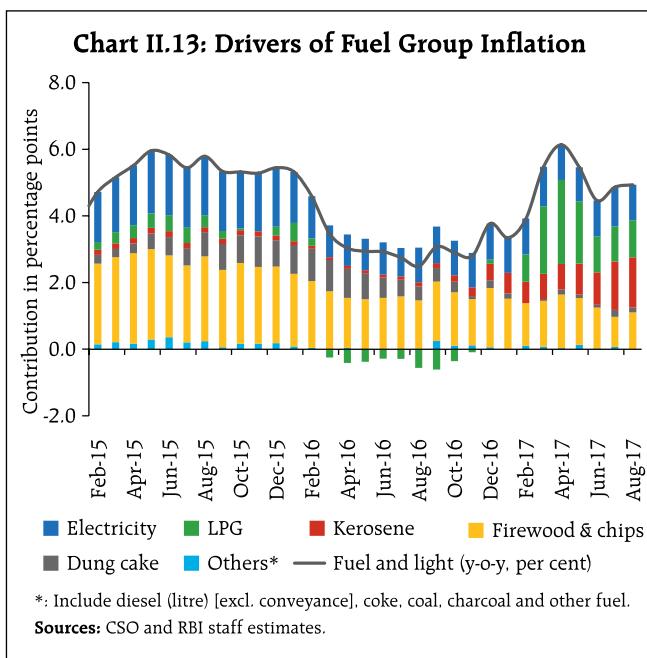
⁷ Based on analysis of variance (ANOVA) framework.

of 17.4 per cent in 2016-17, up from 14.4 per cent a year ago. Sugar inflation, which was in double digits during 2016-17 (averaging 20 per cent), also eased in 2017-18 so far (up to August), largely due to measures facilitating imports and on expectations of higher domestic production. Inflation in prices of animal proteins and milk has declined as momentum was weak and base effects favourable. Cereal inflation remained low and moved with a softening bias due to higher availability – production was higher and stocks were up by 5.09 million tonnes.⁸ Import duty on wheat that was reduced to zero in December 2016 was re-imposed in March 2017.

In the fuel and light group, inflation picked up at the start of the financial year but softened transiently in May-June before resuming an upturn in July and August. The decision to allow oil marketing companies (OMCs) to raise subsidised kerosene and LPG prices in a calibrated manner has enhanced the responsiveness of prices of domestic household fuel items to international price benchmarks. The contribution of electricity to overall fuel inflation remained more or less unchanged in H1:2017-18 in relation to the corresponding period of last year, while that of firewood moderated (Chart II.13). Growth in electricity generation⁹ decelerated during Q1:2017-18 to 5.3 per cent (from a robust base of 10 per cent last year) on account of subdued performance of the manufacturing sector; though it has accelerated significantly in the months of July and August with a growth rate of 7.5 per cent (from 2.1 per cent last year) with reports of surge in rural demand for irrigation. The long-term thermal-based power tariff through power purchasing agreements (PPA) by distribution companies (DISCOMs), the dominant source of electricity, has remained broadly unchanged. However, spot price of electricity reported on energy exchanges,

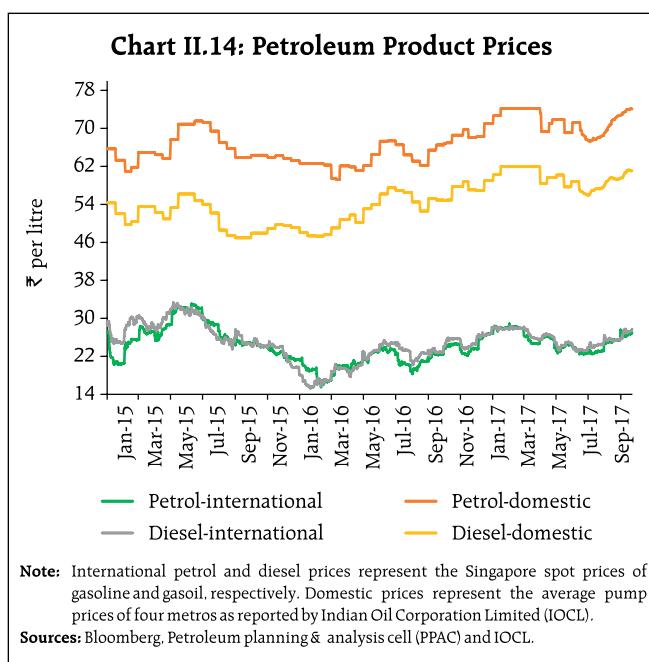
⁸ Total stock of rice, wheat and coarse cereals as at end-August 2017 compared to end-August 2016.

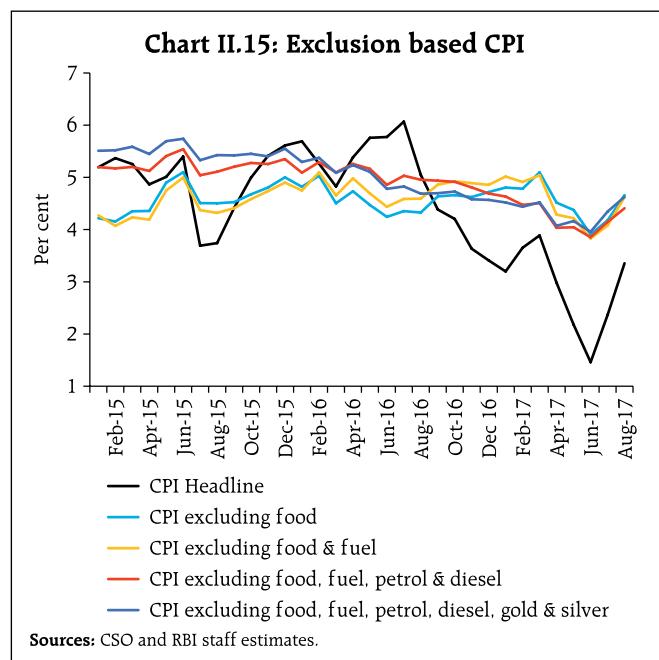
⁹ Electricity generation is based on the index of industrial production (IIP).



which was broadly the same as last year till April 2017, have started rising from May 2017 onwards.

Turning to the underlying inflation dynamics, CPI inflation excluding food and fuel edged down by 120 basis points during the year up to June. The softness in prices of petrol and diesel within the transport and communication group contributed substantially to the observed moderation in Q1 (Chart II.14). Excluding





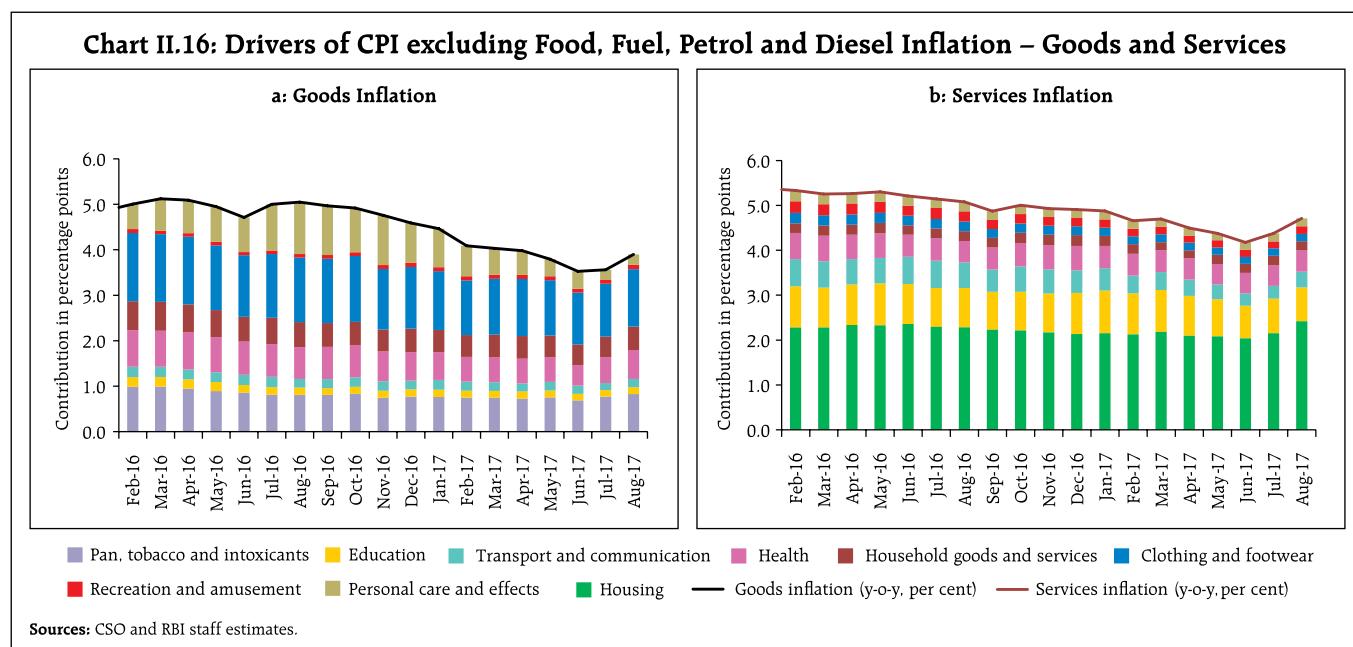
petrol and diesel prices from this category too, inflation moderated (Chart II.15).

The sudden and sharp decline in inflation excluding food, fuel, petrol and diesel in Q1:2017-18 was driven by goods as well as services. Among goods, much of the moderation was in prices of personal care and effects due to a fall in the rate of change of domestic gold prices in tandem with international

prices. Inflation in respect of goods within the health sub-group and clothing also eased, pending price revisions held back ahead of GST, while clearance sales depressed inflation in the case of clothing (Chart II.16a).

Services inflation eased during Q1:2017-18 in a broad-based manner. Inflation in respect of education services moderated significantly, possibly on account of the revised school fee payment cycle for central school boards for the academic year. Lower inflation was recorded in transportation fares as fuel prices remained range-bound, coupled with food inflation – a major determinant of the cost of living – being lower than in the recent past. Prices of mobile communication expenses eased significantly, triggered by pricing war in the telecommunication sector. Housing inflation also moderated in Q1, reflecting lower rates of increase in rentals (Chart II.16b).

Thereafter, in July and August, there was a broad based pickup in CPI inflation excluding food and fuel. Inflation in transport and communication registered sharp increase driven by petrol and diesel (Chart II.14). Household goods and services; pan,



tobacco and intoxicants; health; recreation; and clothing and footwear sub-groups also rose. This partly reflected the hike in the service tax rate under GST and the impact of GST on certain goods, especially packaged/processed food; clothing and footwear; and recreation and amusement services. Housing inflation reversed with the implementation of house rent allowance (HRA) increases by the Centre from July.

As a result, all other exclusion based measures also registered a pickup in Q2 so far (Chart II.15). The GST was rolled out in July 2017. The assessment at the current juncture is that price changes are not likely to have any material impact on headline inflation. However, in case the price increases show downward rigidity due to uncertainty in GST implementation, inflationary impact may emerge (Box II.1).

Box II.1: Impact of GST on CPI Inflation

The goods and services tax (GST) has been implemented from July 1, 2017 with the GST Council broadly approving a five-tier rate structure, *viz.*, 0 per cent for commodities such as fruits, vegetables, milk, handloom, select agricultural implements and newspapers; 5 per cent for coal, sugar, tea, coffee, edible oil, economy air fares among others; 12 per cent for select processed foods among others; 18 per cent for non-durables and most of the services; and 28 per cent for most consumer durable goods and recreation services. Non-processed food items, education, health care, real estate, electricity and fuel items like petrol and diesel are exempted from the GST. A rate of 3 per cent has also been specified for gold. The major indirect taxes that were subsumed under the GST include the excise duty, the service tax, Central sales tax and State value added tax (VAT).

In order to arrive at the direct impact of the GST structure on the CPI, a comparison of the existing excise and State VAT/sales tax rates on CPI items *vis-à-vis* the GST rate structure is in order. Almost half of the CPI basket comprises food items that attracted zero excise and sales tax and they continue to be taxed at the zero rate under the new GST rate structure. Furthermore, petrol and diesel are outside the purview of the GST on which the existing taxation system (VAT and central excise duty) will continue. Hence, the impact of GST on CPI stems mainly from the tax rate differentials in respect of the remaining elements of the CPI basket.

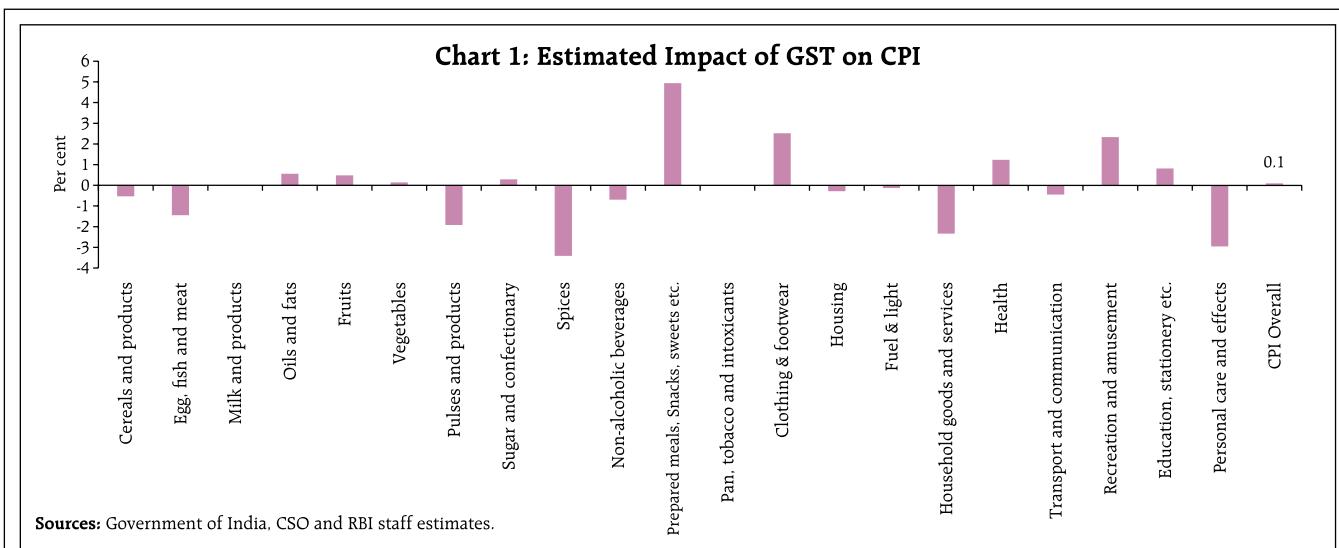
From an item level mapping of the earlier tax rates and the new GST rate structure, it is observed that among the major sub-groups, much of the increase in prices post-GST is estimated to occur in prepared meals, clothing and footwear and other sub-groups dominated by services such as recreation and amusement. The increase in prices of these items is to a large extent likely to be offset by declines in post-GST goods prices – particularly those in the household goods and services sub-group and personal care and effects as well as in select food sub-groups such as spices and pulses.

Overall, taking into account the weighted contribution of the changes in the major sub-groups, CPI prices could increase by around 10 basis points on account of the new GST rate structure (Chart 1). As such, it is not expected to have any significant impact on CPI inflation. Estimates by other agencies also point to a muted impact of the new GST rate structure on CPI inflation¹⁰.

However, as noted in the October 2016 MPR (Box II.I: Inflation Impact of GST – Cross Country Evidence), the cross-country experience shows a one-off increase in prices in the first year following the introduction of GST. This is likely on account of firms choosing to increase prices initially in response to the uncertainties surrounding the implementation of a new tax system and its impact on business processes. Similar behaviour

(contd.)

¹⁰ The Economic Survey 2016-17 expects that the impact of GST will be deflationary in nature. While some analysts see CPI inflation recording a marginal uptick on the back of pickup in prices of food and tobacco, and services, few analysts expect that the impact of GST on inflation will depend on a variety of factors such as the efficiency with which the input tax credit mechanism works and producers pass on tax cuts into final prices.



by firms in India in response to GST implementation could result in some upside risk to the inflation assessment presented here.

A dip stick survey was conducted by the Reserve Bank in select cities to assess the impact of implementation of GST on prices of eighteen commodities. The survey results suggest that the weighted average price of these commodities, with a weight of around 10.0 per cent in

the CPI basket, is likely to have gone up by 0.8 per cent including the regular price change. Post-GST price rise is witnessed in textiles, footwear and utensils, whereas prices of two-wheelers and some fast moving consumer goods (FMCG) items have moderated. In case prices of commodities that have gone up show downward rigidity, the weighted average price increase could be higher at 1.5 per cent [Table 1, Column (4)].

Table 1: Impact of GST on Inflation Based on Survey Conducted by the RBI in mid-September 2017

Items	Weights in CPI basket	Per cent change	Max [0, Per cent change]	
			(1)	(2)
Biscuits	0.9	3.9		3.9
Ice Cream	0.0	7.6		7.6
Prepared Sweets	0.6	2.5		2.5
Tea	1.0	-1.5		0.0
Edible Oil	3.0	0.1		0.1
Shirts	0.6	3.7		3.7
Sarees	0.9	5.7		5.7
Leather Shoes	0.2	4.6		4.6
Rubber / PVC Footwear	0.3	3.6		3.6
Televisions	0.2	1.0		1.0
Refrigerators	0.1	0.6		0.6
Stainless steel utensils	0.2	2.3		2.3
Pressure-cooker/ Pan	0.0	1.9		1.9
Electric-bulb / Tubelight	0.2	0.8		0.8
Washing-soap / Powder	0.9	-2.3		0.0
Motorcycle / Scooter	0.8	-2.9		0.0
Hair-oil / Shampoo	0.5	0.9		0.9
Toothpaste	0.4	-4.1		0.0
Total	10.4	0.8		1.5

Source: RBI survey.

Other Measures of Inflation

In May 2017, the base year of wholesale price index (WPI) was revised from 2004-05 to 2011-12 to align it with the base year of other macroeconomic indicators such as gross domestic product (GDP) and the index of industrial production (IIP). The revision in the base year is also intended to capture structural changes in the economy and to improve the quality, coverage and representativeness of the index. In addition to an updated item basket, the revised WPI has included two new features in line with international best practices: (i) the use of the geometric mean for compilation of item-level indices; and (ii) the exclusion of indirect taxes from wholesale prices, thus bringing it conceptually closer to a producer price index. Reflecting these changes, headline WPI inflation in the new series declined by an average of one percentage point as compared with inflation calculated from the index with 2004-05 as base year during April 2013 to March 2017.

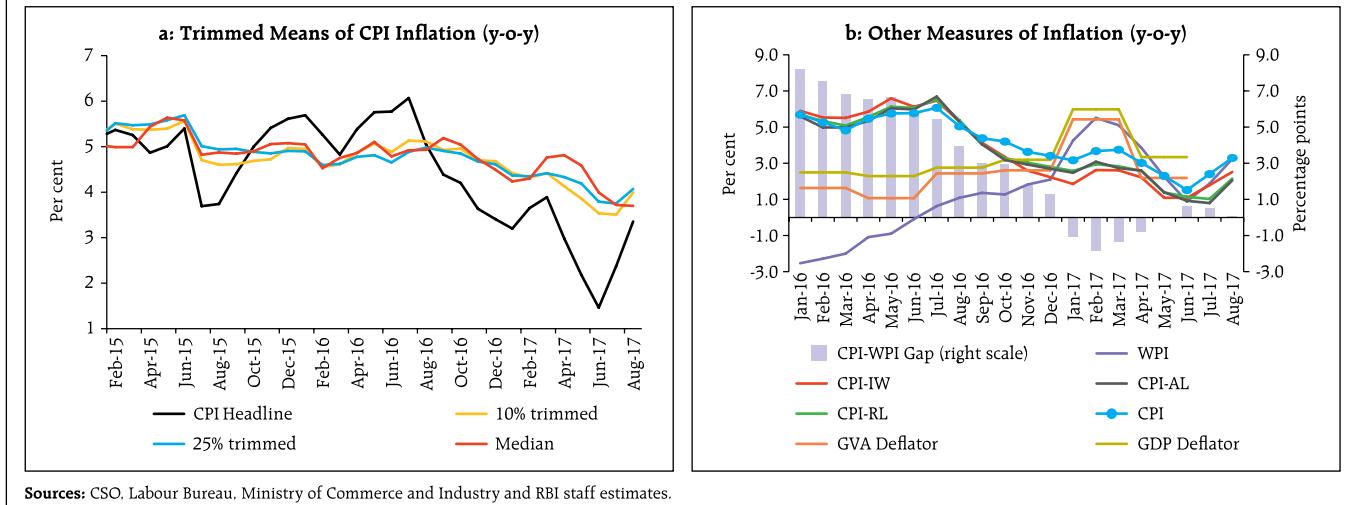
After peaking in February, WPI inflation fell sharply up to June, but ticked up again in July and

August following a sharp pickup in food prices. Between April and July, CPI trimmed means¹¹ have softened; however, in August these registered an increase. Median inflation, a particular case of the trimmed mean, also declined, averaging 4.2 per cent since March 2017 (Chart II.17a). Inflation measured by sectoral consumer price indices continued to undershoot headline CPI inflation, reflecting inter alia the higher weight of food in the former. Changes in GDP and gross value added (GVA) deflators have moved along with WPI inflation since the beginning of the year (Chart II.17b). In July and August, the movement in WPI inflation was consistent with that of headline CPI and all sectoral CPIs.

II.3 Costs

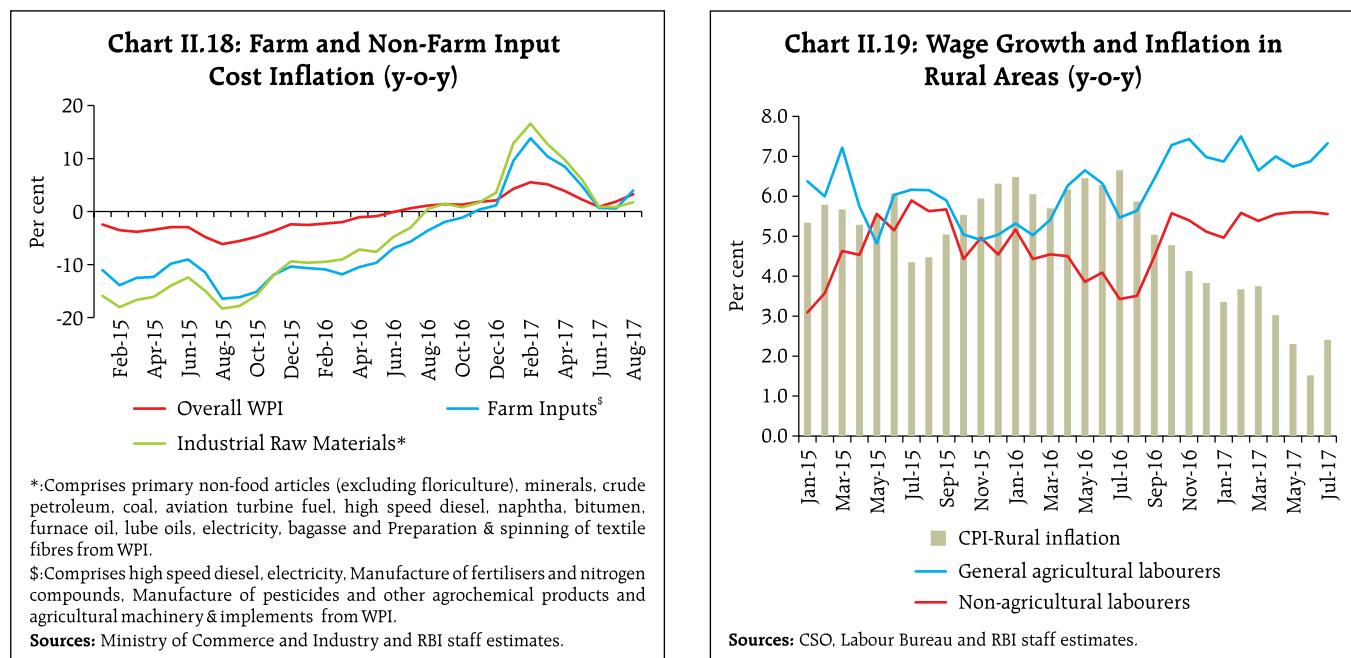
Underlying cost conditions have largely co-moved with measures of inflation, with the pickup in the last quarter of 2016-17 turning out to be transient. Industrial and farm costs captured under the WPI eased significantly in Q1:2017-18 (Chart II.18). The fall in global crude oil prices and the easing of metal prices due to the slowdown of demand from China¹²,

Chart II.17: Measures of Inflation



¹¹ Trimmed means lessen noise by removing select proportions of upper and lower ends of the distribution corresponding to a chosen percentage of trim. They are used as indicators of underlying inflation behaviour.

¹² This is due to China's efforts to rein in its shadow banking sector from which credit in the form of off-balance sheet lending has gone to the metal sector through wealth management products. With the tightening of credit, China's economy and its metal demand have been slowing (IMF *Commodity Market Monthly*, June 9, 2017).



the world's biggest metals consumer, also contributed to the significant decline in domestic farm and non-farm input costs as they got passed on to inputs such as high speed diesel, aviation turbine fuel, naphtha, bitumen, furnace oil and lube oils. In Q2, metal prices rose from the June trough, underpinned by expectations of strong global demand, particularly from China. However, prices moderated somewhat by end-September.

Among other industrial raw materials, domestic coal prices remained range-bound while prices of other inputs such as fibres, oil seeds and pulp either declined or moved with a softening bias; and among farm sector inputs, diesel prices declined sharply, tracking international prices. Prices of other agricultural inputs such as electricity, fertilisers, pesticides and tractors softened. Due to excess inventory, supply of fertiliser remained comfortable despite deceleration in production in Q1:2017-18 which softened prices. Tractor shipments decelerated to 8.0 per cent in Q1:2017-18 (12.1 per cent last year) largely due to destocking in the pre-GST period, with discounts imparting low momentum to prices. However, the decline in inflation in both farm inputs and industrial

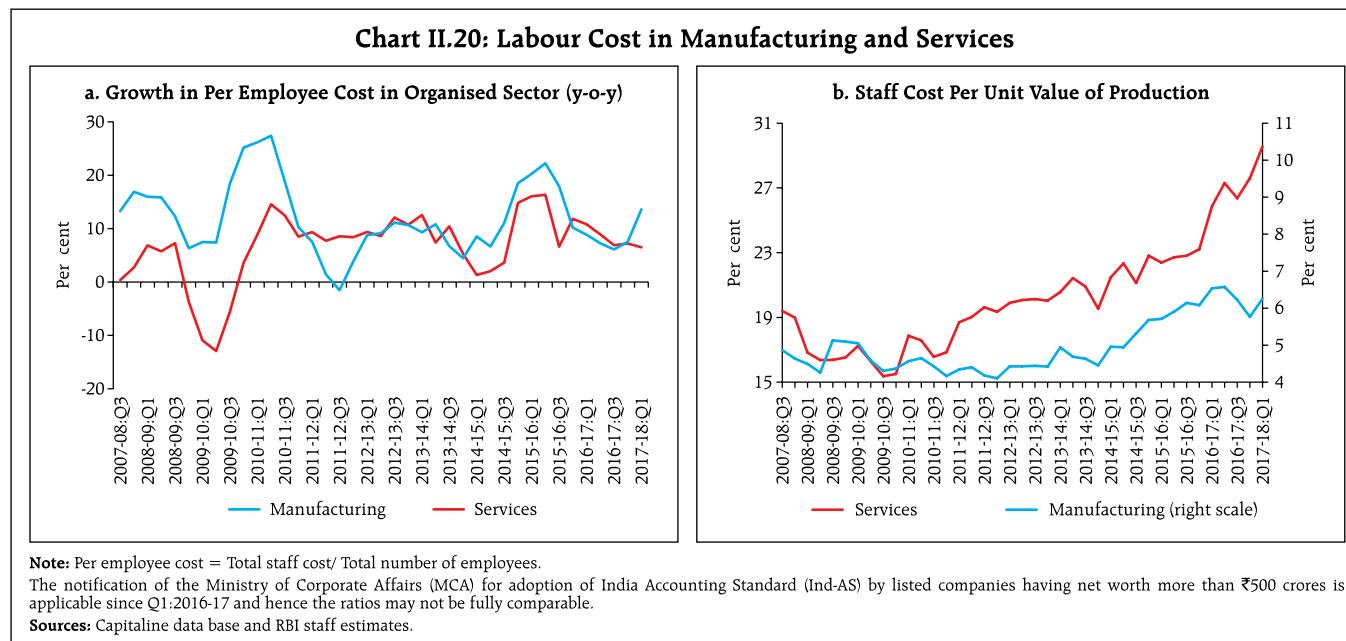
raw materials was arrested in the August prints as the prices of urea, high speed diesel and other minerals oil rose tracking international prices.

Following the monsoon and the pickup in agricultural activity, demand for agricultural labourers remained strong in 2017-18. This was reflected in a modest increase in the rate of wage growth for rural agricultural labourers, a key determinant of farm costs (Chart II.19). In the organised sector, the decline in growth of unit employee costs in listed private sector companies in manufacturing during 2016-17 reversed to register an uptick in Q1:2017-18. However, unit employee costs for companies in the services sector continued to decline in a pattern that has set in since Q2:2016-17.¹³ Unit labour costs¹⁴ in the manufacturing sector continued to rise as staff cost growth outpaced the growth in value of production.¹⁵ The growth in the ratio of staff costs to value of production in the manufacturing sector accelerated modestly in the

¹³ Results for Q1:2017-18 are provisional.

¹⁴ Unit labour costs is defined here as the ratio of staff cost to value of production.

¹⁵ Results for Q1:2017-18 are based on 363 common set of services companies and are provisional.



first quarter of 2017-18¹⁶ after declining for the last two quarters of 2016-17 (Chart II.20). The value of production for manufacturing companies declined (probably due to de-stocking undertaken by the companies with respect to pre-GST sales) and staff costs rose marginally.

The cost of raw materials, based on responses of manufacturing firms covered in the Reserve Bank's industrial outlook survey, remained high in Q1:2017-18, *albeit* with some moderation in relation to the previous quarter, possibly reflecting softer commodity prices. Firms assessed that the cost of raw materials remained elevated in Q2 as well; however, their inability to increase selling prices suggests that pricing power is still weak. The manufacturing purchasing managers' index (PMI) also suggest that the cost of raw materials remained high in Q1 and Q2:2017-18, but failed to impact selling prices in view of weak pricing power. In contrast, the services PMI reported a sharp

pickup in prices charged in Q2 – the upward revision in prices likely reflecting higher tax rates under GST.

Globally, low inflation across AEs and EMEs is co-existing with a modest strengthening of demand. In India, uncertainty surrounds the path of inflation over the rest of the year. Overall inflation outcomes going forward will depend on the durability of the recent disinflation in food, given that base effects have turned unfavourable from August. Furthermore, there are likely headwinds from temporary price adjustments post-GST, the direct and second round impact of HRA increases (see MPR, April 2017, Chapter 1) and a recovery in demand in the second half of 2017-18 which would narrow the output gap. Consequently, the inflation trajectory is poised to firm up over the rest of the year. Finally, considerable upside risk to inflation stems also from the rather large scale of state level farm loan waivers and the reports of a likely fiscal stimulus (Chapter I, Box I.1).

¹⁶ Results for Q1:2017-18 are based on 992 common set of manufacturing companies and are provisional.

III. Demand and Output

Aggregate demand has been impacted by slowing consumption demand, still subdued investment and a slump in export performance in the early months of 2017-18. Manufacturing activity, which was dragged down by one-off effects of the implementation of GST, weighed heavily on aggregate supply conditions. Notwithstanding initial deceleration, agricultural prospects remain stable and acceleration in services sector activity could impart resilience to the overall supply situation in the rest of 2017-18.

Aggregate demand slackened in Q1:2017-18 in a sequence that began a year ago; yet, it surprised expectations on the downside. Restrained by languishing investment and a distinct slowdown in exports, real GDP growth fell below 6 per cent in Q1:2017-18 for the first time in thirteen quarters. The deceleration in economic activity would have been more pronounced, but for the front loading of public spending which boosted government consumption and provided a cushion. Private consumption demand, still the fulcrum of overall demand in the economy, started losing momentum in Q4:2016-17 and slumped further in Q1:2017-18. Although gross fixed capital formation (GFCF) broke out of the steady decline since the beginning of 2016-17, the uptick in Q1:2017-18 was weak and will warrant more incoming data to confirm if a reversal has commenced.

Aggregate supply conditions were flattened by the loss of momentum in agriculture and allied activities in spite of a sharp rise in *rabi* production. Industrial GVA slumped to a 20-quarter low in Q1:2017-18, impacted by one-off effects of the implementation of the goods and services tax (GST), rising input costs and the deepening weakness in aggregate demand. In the services sector, however, an upturn spread to several constituent parts. Looking ahead, supply conditions are poised to receive some boost from the agricultural

sector and rising expectations of a durable upswing in services. The decline in momentum in manufacturing activity remains an area of significant concern.

III.1 Aggregate Demand

Measured by year-on-year (y-o-y) changes in real gross domestic product (GDP) at market prices, aggregate demand decelerated to 6.1 per cent in Q4:2016-17 and further to a thirteen-quarter low of 5.7 per cent in Q1:2017-18, extending the protracted slowdown that has already spanned five consecutive quarters. The loss of momentum was also evident on a seasonally adjusted basis (Chart III.1). Excluding the support from the robust growth of government final consumption expenditure (GFCE), real GDP growth would have slumped to a mere 4 per cent in Q4:2016-17 and 4.3 per cent in Q1:2017-18, respectively. Demand conditions were debilitated by a collapse in GFCF that set in from Q2:2016-17; even though GFCF recovered from contraction, its growth was feeble in Q1:2017-18. Private final consumption expenditure (PFCE) slumped in Q1:2017-18 to record the slowest growth over the last six quarters. The high growth of exports in Q4:2016-17 could not be sustained and a levelling off in Q1:2017-18 appears to have prolonged

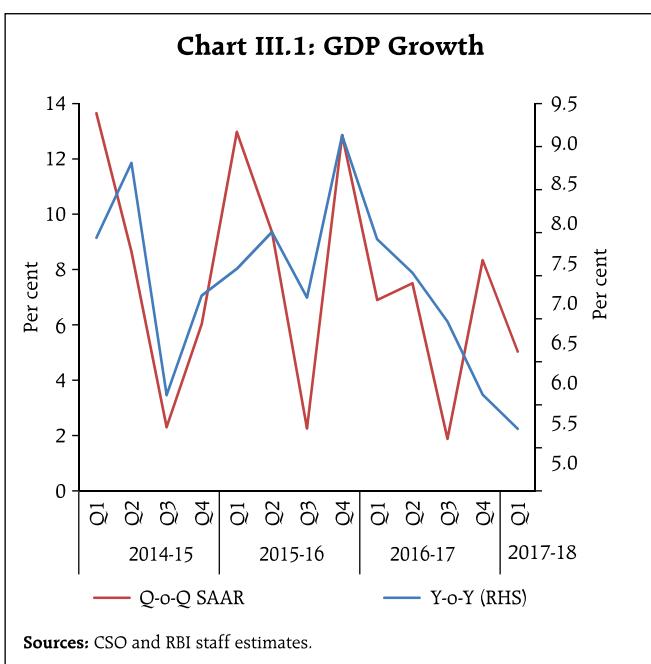


Table III.1: Real GDP Growth

(Per cent)

Item	2015-16	2016-17	Weighted contribution to growth in 2016-17 (percentage points)*	2015-16				2016-17				2017-18 Q1
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Private Final Consumption Expenditure	6.1	8.7	4.8	2.8	5.2	6.7	9.3	8.4	7.9	11.1	7.3	6.7
Government Final Consumption Expenditure	3.3	20.8	2.0	0.9	4.3	4.2	4.1	16.6	16.5	21.0	31.9	17.2
Gross Fixed Capital Formation	6.5	2.4	0.7	4.3	3.4	10.1	8.3	7.4	3.0	1.7	-2.1	1.6
Net Exports	15.1	37.4	0.4	1.6	-5.3	27.4	95.3	36.6	59.3	30.8	-	-
Exports	-5.3	4.5	0.9	-6.1	-4.1	-8.7	-2.3	2.0	1.5	4.0	10.3	1.2
Imports	-5.9	2.3	0.5	-5.9	-3.4	-9.9	-4.3	-0.5	-3.8	2.1	11.9	13.4
GDP at Market Prices	8.0	7.1	7.1	7.6	8.0	7.2	9.1	7.9	7.5	7.0	6.1	5.7

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

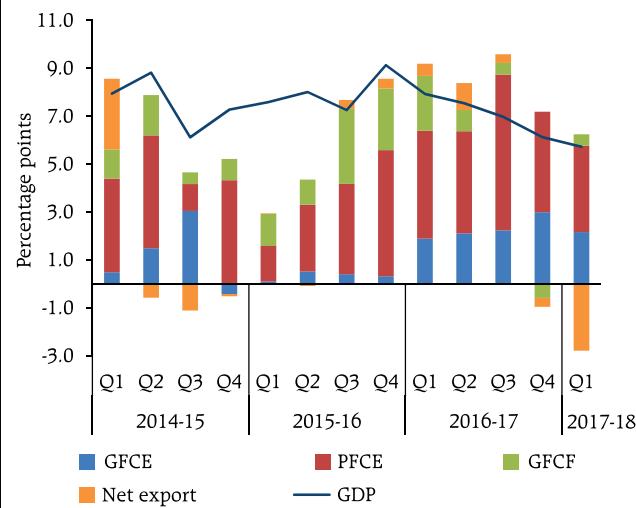
Source: Central Statistics Office (CSO).

into Q2 as well. Consequently, net exports depleted aggregate demand in the economy (Table III.1).

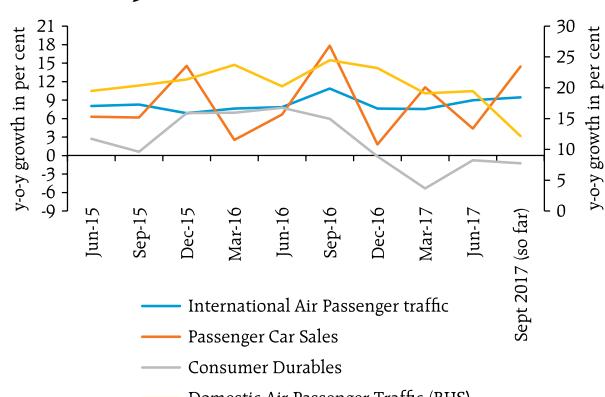
III.1.1 Private Final Consumption Expenditure

Even as PFCE remained the key driver of aggregate demand in the economy, contributing 54 per cent to real GDP, a marked deceleration has characterised its evolution in Q4:2016-17 and Q1:2017-18 in comparison with the preceding three quarters (Chart III.2).

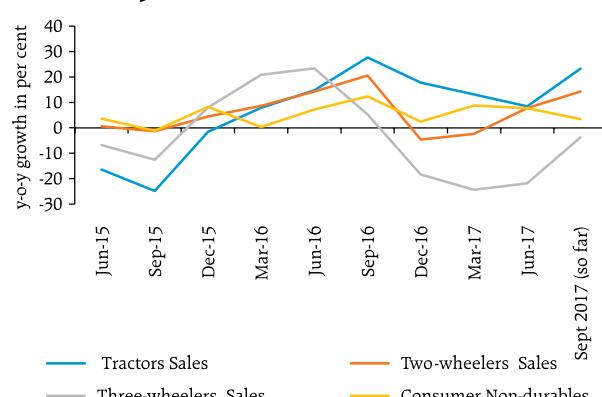
High frequency indicators for urban consumption paint a mixed picture, with sales of passenger cars and international air passenger traffic remaining robust, but consumer durables production having contracted (Chart III.3a). Going forward, urban consumption is

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

Sources: CSO and RBI staff estimates.

Chart III.3 a: Select Indicators – Urban Demand

Sources: CSO and CMIE.

Chart III.3 b: Select Indicators – Rural Demand

Sources: SIAM and CSO.

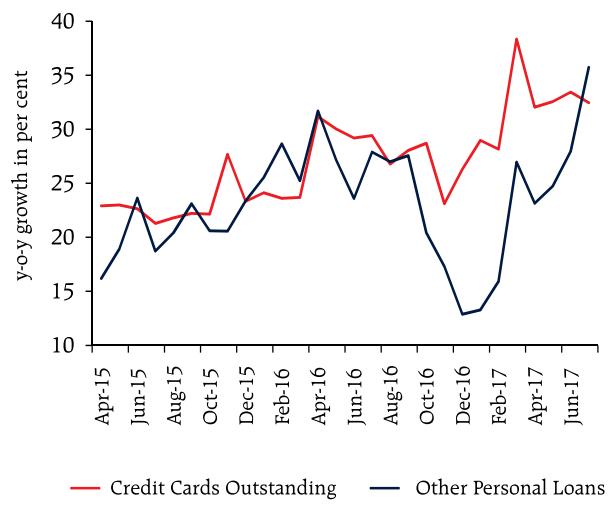
expected to revive, following the upward revision in house rent allowances (HRA) for central government employees as also the likely implementation of the 7th Central Pay Commission (CPC) award at the sub-national level. High frequency indicators of rural demand, *viz.*, growth in sales of two-wheelers and tractors, have witnessed sequential improvement in the recent months. The production of consumer non-durables, representing cash-intensive fast moving consumer goods (FMCG) demand, has, however, decelerated, though still exhibiting high growth among the components of industrial production (Chart III.3b).

Retail consumption activity, reflected in drawals of personal loans from scheduled commercial banks (SCBs), suggests that underlying conditions are supportive of consumption demand, going forward (Chart III.4).

III.1.2 Investment Demand

Investment demand remained depressed, with its share in GDP declining from 34.3 per cent in 2011-12 to 29.5 per cent in 2016-17. Although GFCF exhibited a slender recovery in Q1:2017-18, the overall investment climate remains bleak. Subdued levels of investment activity were also reflected in the contraction of capital goods production, notwithstanding robust growth in imports of certain capital goods (III.5a).

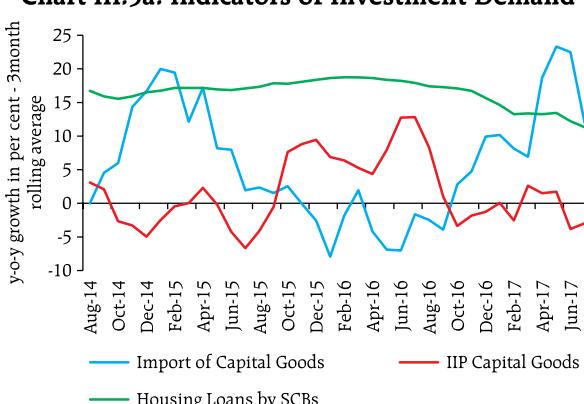
Chart III.4: Personal Loans Extended by Scheduled Commercial Banks



Source: RBI.

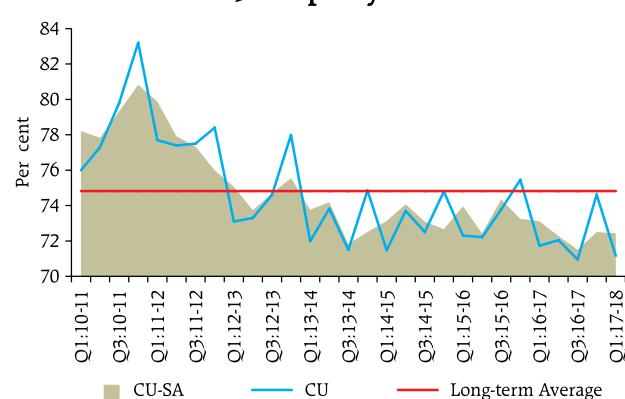
The corporate investment cycle is weighed down by excess capacity in the manufacturing sector. Capacity utilisation (CU) improved in Q4:2016-17, but it again dipped in Q1:2017-18, reflecting weak demand (Chart III.5b). High levels of stress in the balance sheets of banks and corporations continued to act as a drag on investment activity. Besides, households' investment in dwellings, other buildings and structures also remained subdued due to high levels of inventories of residential houses and expectations of correction in prices.

Chart III.5a: Indicators of Investment Demand

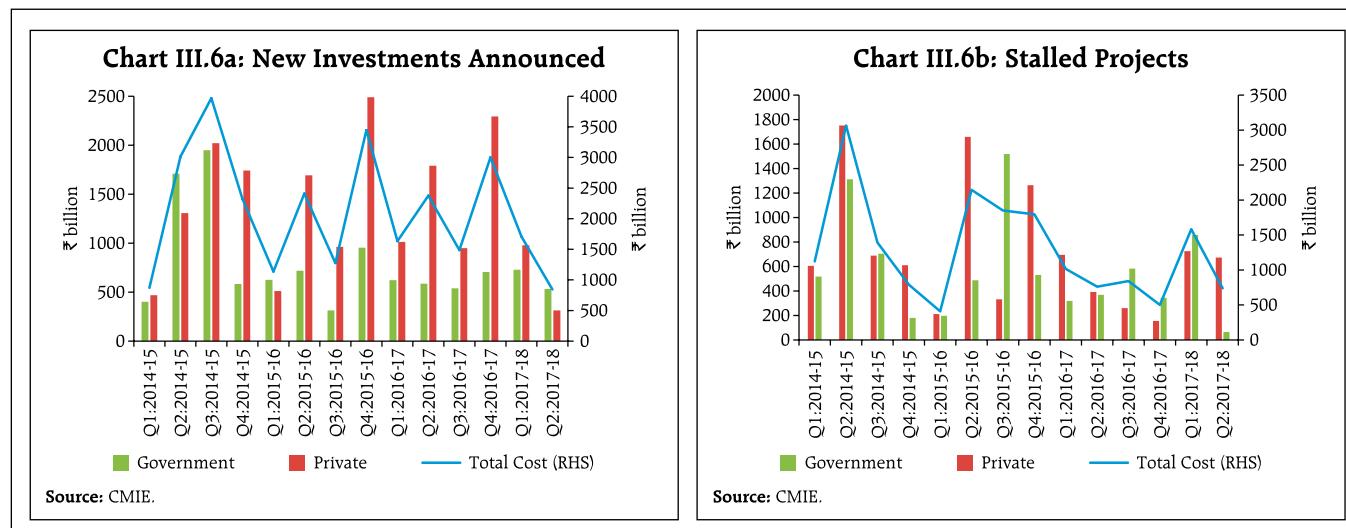


Sources: CSO, DGCIS and RBI.

Chart III.5b: Capacity Utilisation



Source: RBI.



According to the Centre for Monitoring Indian Economy (CMIE), new investment proposals significantly declined in Q2: 2017-18 in terms of both numbers and value (Chart III.6a). Only 403 new projects were announced, the lowest since Q1:2004-05. The implementation of stalled projects still lacks adequate traction – there was a significant increase in stalled projects in Q1:2017-18; however, an improvement was reported in Q2:2017-18 (Chart III.6b).

At the same time, anecdotal evidence suggests that awarding and construction of highway projects in the road sector have reached an all-time high and the daily additions of road construction have touched a peak. Some momentum in investment activity is also visible in sectors such as electricity transmission, roads and renewable power. Going forward, an increase in allocation of capital expenditure by 6.7 per cent in 2017-18 is expected to generate some multiplier and crowding-in effects, although a durable turnaround in the investment cycle largely hinges on a revival in private investment appetite.

III.1.3 Government Expenditure

As stated earlier, the slowdown in aggregate demand in Q1:2017-18 was cushioned by GFCE. Following advancement of the announcement of

the Union Budget, the Centre undertook massive frontloading of expenditure. The disbursement of subsidies during April-August 2017, in particular, increased sharply. Consequently, revenue expenditure accounted for about 46 per cent of the budgeted expenditure (Table III.2). During Q2 so far (July-August 2017), revenue expenditure propped up GFCE with y-o-y growth of 4.4 per cent (-7.6 per cent in July-August 2016).

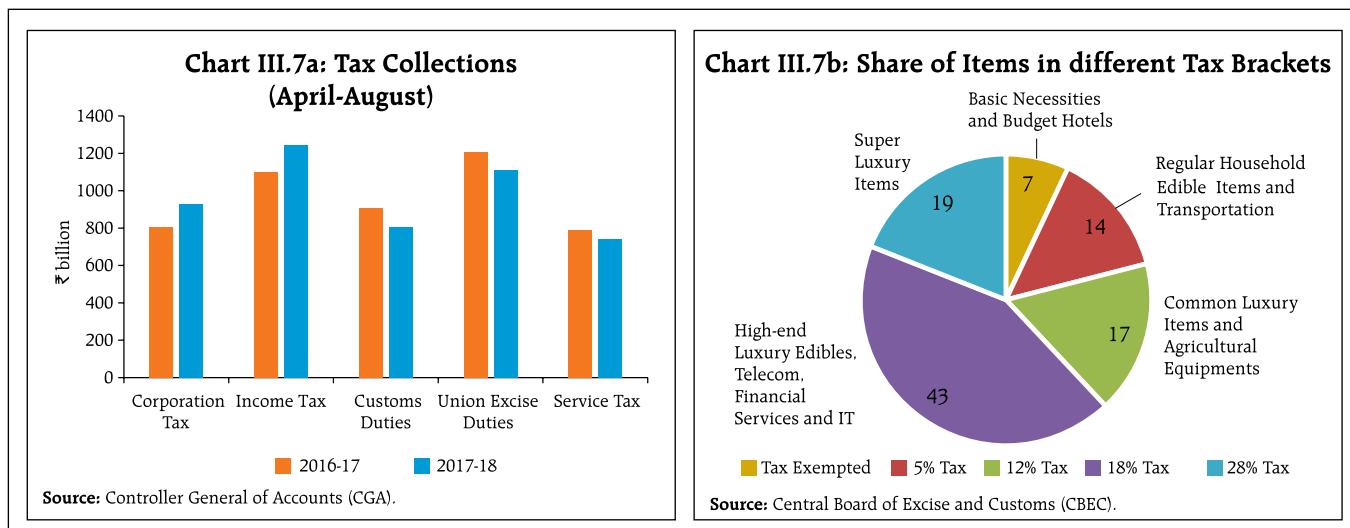
Tax revenues (net) were higher during April-August 2017 than their levels a year ago on account of higher collections under corporate and income taxes. Receipts under customs duties, union excise

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

Indicator	Actual as per cent of BE	
	2016-17	2017-18
1. Revenue Receipts	28.0	27.0
a. Tax Revenue (Net)	26.6	27.8
b. Non-Tax Revenue	32.5	24.0
2. Total Non-Debt Receipts	12.7	18.4
3. Revenue Expenditure	41.0	45.8
4. Capital Expenditure	37.0	35.4
5. Total Expenditure	40.5	44.3
6. Gross Fiscal Deficit	76.4	96.1
7. Revenue Deficit	91.8	134.2
8. Primary Deficit	565.9	1401.3

BE: Budget estimates.

Source: Controller General of Accounts (CGA).



duties and service tax moderated, however, mainly due to the ongoing migration of select indirect taxes to the GST (Chart III.7a). Uncertainty on the revenue front can have adverse implications for the viability of government finances, going ahead.

The GST Council recommended a four-tier rate structure – 5, 12, 18 and 28 per cent – for the fitment of all 1,211 items of goods and services, including exemptions on basic necessities (Chart III.7b). After the introduction of the GST, the total tax incidence on motor vehicles (GST *plus* Compensation Cess) has come down *vis-a-vis* the total tax incidence in the pre-GST regime. Accordingly, the GST Council has recommended that the central government moves legislative amendments for increasing the maximum ceiling of cess to be levied on motor vehicles to 25 per cent from 15 per cent. Meanwhile, the government has also indicated that it would further rationalise rates, depending on the progress of implementation. The number of new taxpayers who registered with the GSTN up to August 29, 2017 reached around 1.9 million. As per the latest information (up to September 25, 2017), revenue collections under GST for the month of August amounted to ₹906.7 billion as against ₹940.6 billion for the month of July, 2017.¹

Going forward, the gains from expansion of the tax base due to introduction of the GST and improved tax compliance post-demonetisation are expected to improve tax buoyancy over the medium-term.

Nevertheless, businesses have been facing some IT challenges during the initial stage of implementation which are being looked into by the GST Council. After GST implementation, exporters can avail input tax credit only after sale within the domestic tariff area or after sending their shipments outside the country. They can subsequently claim the unutilised credit as refund, a process in which their working capital gets immobilised, thereby raising their operating cost. As exporters raised concerns over blockage of refunds and working capital on account of rollout of GST, the government has decided to refund substantial amount of taxes paid by them to provide immediate relief. In view of the difficulties being faced by taxpayers in filing returns, the dates for filing various GSTR have been extended. Furthermore, comprehending GST provisions and their impact on business along with the requirements for GST-compliance is still premature. Moreover, provisions for anti-profiteering as well as the now-deferred e-way bill which tracks consignments across states are unclear. After the fitment committee observed anomalies in GST levied on 40 items, the GST Council

¹ Press Information Bureau, MoF, GoI, September 26, 2017.

Table III.3: Government Market Borrowings

(₹ billion)

Item	2015-16			2016- 17			2017- 18 (up to Sept 29)		
	Centre	States	Total	Centre	States	Total	Centre	States	Total
Net Borrowings	4,406	2,594	7,000	4,082	3,426	7,508	2,493	1,598	4,091
Gross Borrowings	5,850	2,946	8,796	5,820	3,820	9,640	3,720	1,779	5,499

Source: RBI.

has lowered taxes on these products. In view of the above, it may be challenging to realise the projected tax revenues in the Union Budget 2017-18.

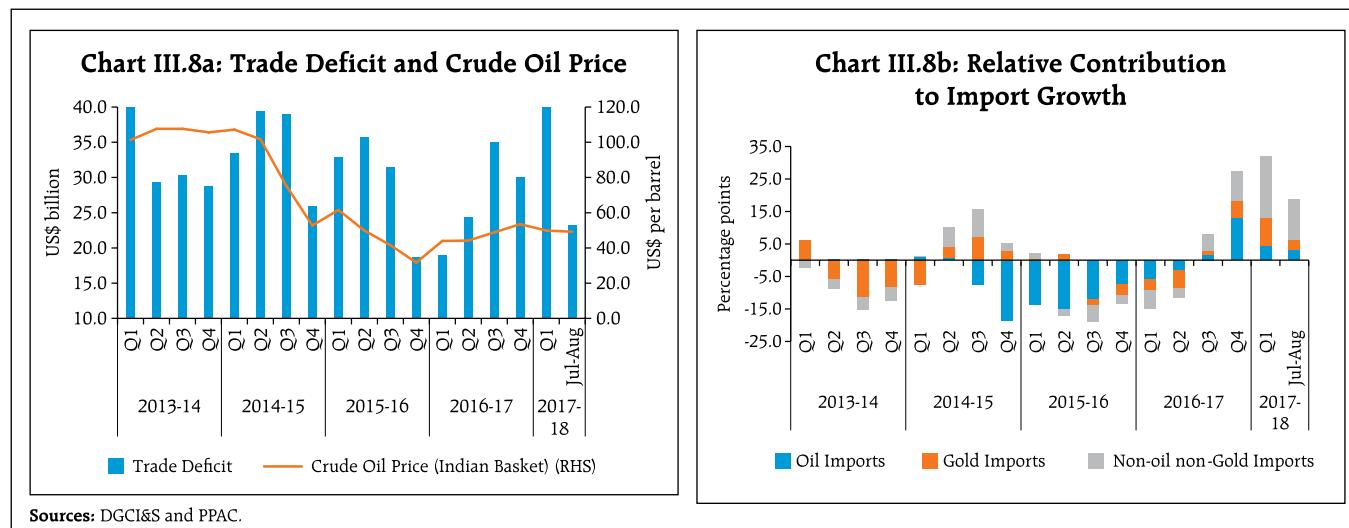
The Centre's borrowing programme was conducted as per the planned issuance schedule within the overall contour of its debt management strategy. Following the strategy of front loading of issuances, the central government completed 64.1 per cent (58.6 per cent in corresponding period of 2016-17) of its budgeted gross borrowings (₹5,800 billion) by September 2017 (Table III.3). The spate of increased borrowing by the state governments may, however, exert pressure on the finite pool of investible resources and crowd out private investment.

Consolidated state finances are budgeted to improve in 2017-18 on account of a lower gross fiscal deficit-GDP ratio. While the capital expenditure-GDP ratio is budgeted to be lower in 2017-18 than in the previous year, capital outlay is projected to remain unchanged, which augurs well for the quality of expenditure. State finances, however, are likely to come under stress during 2017-18 from farm loan waivers announced during the year so far, which are estimated at around 0.5 per cent of GDP, and partial implementation of the seventh pay commission recommendations. This, in turn, has to be financed by additional market borrowings which push up interest rates, not just for the States but for the entire economy. A collateral damage could be that private borrowers are crowded out as the cost of borrowing rises. Even if the loan waiver is accommodated within budgetary provisions, it may force cutbacks in other

heads of expenditure. Experience has shown that the most vulnerable category is capital expenditure. Illustratively, Uttar Pradesh, which presented its budget after the announcement of the loan waiver, has built in a decline in capital outlay and capital expenditure by 26.2 per cent and 30.4 per cent, respectively, during 2017-18. On the other hand, Maharashtra, which presented its budget before the announcement, projected a decline of around 4.2 per cent in capital expenditure. This, in turn, might entail deterioration in the quality of expenditure with attendant implications for productivity.

III.1.4 External Demand

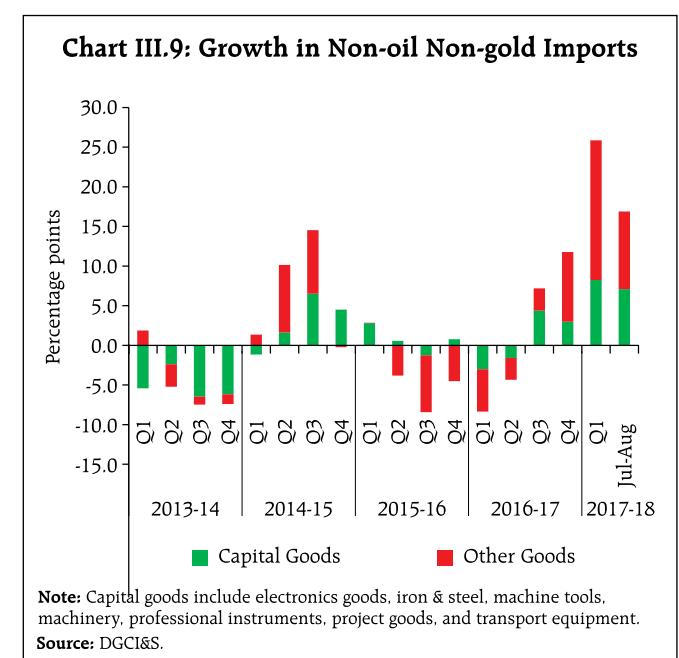
With import growth far outpacing that of exports, the contribution of net external demand to GDP turned negative in Q1:2017-18, as in the preceding quarter. The slowdown in exports in Q1: 2017-18 was broad-based and encompassed oil and non-oil segments accounting for 74 per cent of the export basket. During July 2017, export growth slowed further despite a sharp increase in oil exports, but revived in August 2017 largely due to an increase in engineering goods, electronic goods and drugs and pharmaceuticals exports. Merchandise import growth accelerated in Q1:2017-18, taking the trade deficit to its highest level since Q2:2013-14, despite crude oil prices being half the level that prevailed in 2013-14 (Chart III.8a). In July-August too, the merchandise trade deficit expanded unrelentingly on the back of sustained import demand. Notwithstanding declining oil import volumes, gold imports grew strongly in Q1:2017-18 in anticipation of GST implementation.



However, they moderated sequentially during June-August 2017 as stockpiling eased, while remaining high on a y-o-y basis (Chart III.8b).

Among non-oil non-gold imports, which have been growing in double digits since Q4:2016-17, pearls and precious stones, electronics goods, coal and other goods contributed sizably, underlining the role of international commodity prices and increased domestic demand for electric, construction and dairy machinery even as a decline in imports of transport equipment coincided with an increase in domestic production (Chart III.9). While there has been a contraction in domestic production of capital goods, imports of capital goods, except transport equipment, gradually increased during April-August 2017. Similarly, higher imports of sugar reflected domestic consumption exceeding production in 2016-17.

Net services receipts increased by 15.7 per cent on a y-o-y basis during Q1: 2017-18 largely driven by a rise in net earnings from travel, construction and other business services. While outflows of primary income remain a drag on the current account deficit (CAD), a modest rise in secondary income, primarily in the form of workers' remittances, provided a partial offset.



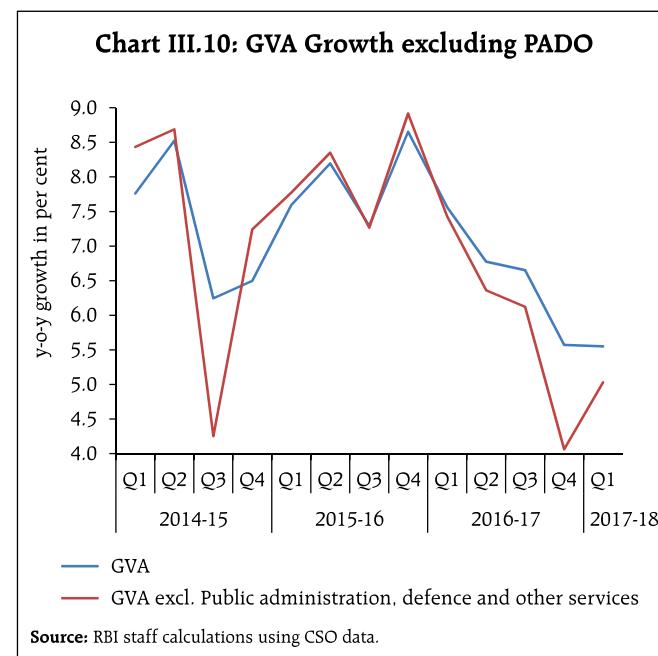
Both net FDI and net FPI flows to India rose during Q1:2017-18 over their levels a year ago, attesting to the attractiveness of the Indian economy as an investment destination. External commercial borrowings (ECBs) inflows also picked up modestly on the back of a sharp increase in issuance of rupee denominated bonds. In contrast, net accretion to NRI deposits declined marginally, reflecting lower inflows into Non-Resident External (NRE) rupee accounts. Reflecting external sector resilience, foreign

exchange reserves reached a level of US\$ 399.7 billion on September 29, 2017 equivalent to 11.5 months of imports.²

III.2 Aggregate Supply

The cyclical slowdown that set in at the beginning of 2016-17 pulled the growth of output measured by gross value added (GVA) at basic prices down to 5.6 per cent in Q1:2017-18, flat at the level of the preceding quarter (Table III.4).

Underlying this subdued performance was the depressed state of industrial activity, particularly manufacturing. Although agricultural and allied activities also decelerated sequentially from Q3:2016-17, they were in alignment with the typical outturn in the first quarter of the year. Services sector activity, however, posted a strong performance, dispelling the slack that had manifested itself through 2016-17. In fact, the deceleration of GVA was cushioned by continuing strong growth in public administration, defence and other services (PADO) growth, a constituent of the services sector which has been buoyed by frontloading of Government expenditure



in Q1:2017-18. Excluding this component, the GVA growth would have slipped to 5 per cent in Q1:2017-18 (Chart III.10). However, seasonally adjusted q-o-q annualised GVA growth suggests a modest strengthening of momentum in Q1:2017-18 *vis-à-vis* Q4:2016-17 (Chart III.11).

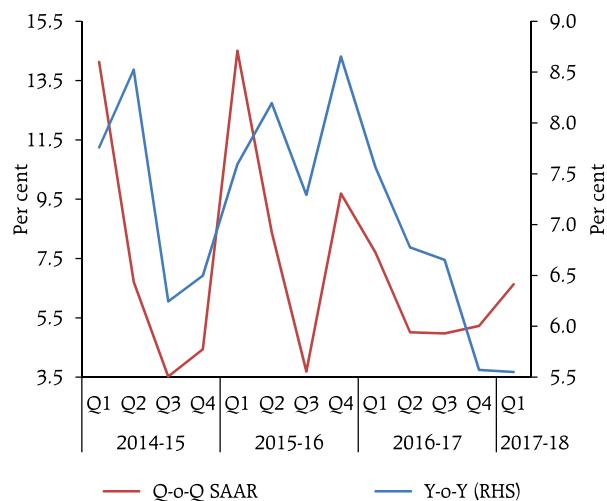
Table III.4: Sector-wise Growth in GVA

(Per cent)

Sector	Weighted Contribution 2016-17	2015-16	2016-17	2015-16				2016-17				2017-18
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Agriculture and Allied Activities	0.8	0.7	4.9	2.4	2.3	-2.1	1.5	2.5	4.1	6.9	5.2	2.3
Industry	1.6	10.2	7.0	7.7	9.2	12.0	11.9	9.0	6.5	7.2	5.5	1.5
Mining and Quarrying	0.1	10.5	1.8	8.3	12.2	11.7	10.5	-0.9	-1.3	1.9	6.4	-0.7
Manufacturing	1.4	10.8	7.9	8.2	9.3	13.2	12.7	10.7	7.7	8.2	5.3	1.2
Electricity, gas, water supply and other utilities	0.2	5.0	7.2	2.8	5.7	4.0	7.6	10.3	5.1	7.4	6.1	7.0
Services	4.3	9.1	6.9	8.9	9.0	9.0	9.4	8.2	7.4	6.4	5.7	7.8
Construction	0.1	5.0	1.7	6.2	1.6	6.0	6.0	3.1	4.3	3.4	-3.7	2.0
Trade, hotels, transport, communication	1.5	10.5	7.8	10.3	8.3	10.1	12.8	8.9	7.7	8.3	6.5	11.1
Financial, real estate and professional services	1.2	10.8	5.7	10.1	13.0	10.5	9.0	9.4	7.0	3.3	2.2	6.4
Public administration, defence and other services	1.4	6.9	11.3	6.2	7.2	7.5	6.7	8.6	9.5	10.3	17.0	9.5
GVA at Basic Prices	6.6	7.9	6.6	7.6	8.2	7.3	8.7	7.6	6.8	6.7	5.6	5.6

Source: Central Statistics Office (CSO).

² Calculated using imports of four quarters up to June 2017.

Chart III.11 : GVA Growth: YoY and Q-o-Q SAAR

Source: RBI staff calculations using CSO data.

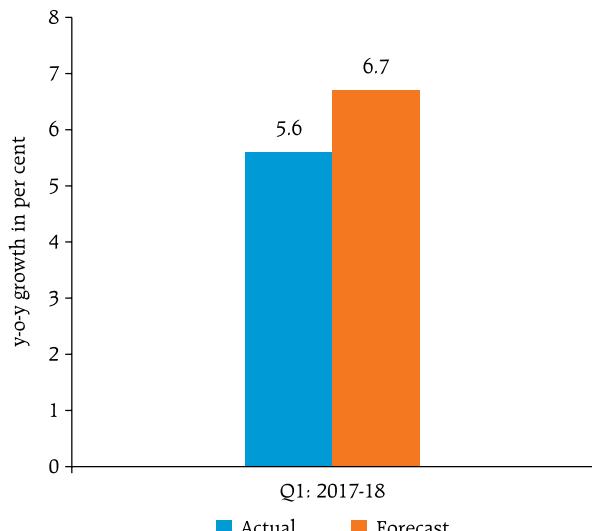
The April MPR had projected GVA growth of 6.7 per cent for Q1:2017-18. The actual outcome undershot this projection by more than a full percentage point, indicative of the larger than expected loss of momentum (Chart III.12). The unexpected moderation in allied activities weighed heavily on the rate of growth of agricultural sector. In addition, the deceleration in the manufacturing sector reflected

uncertainties surrounding GST implementation and higher than expected rise in input costs.

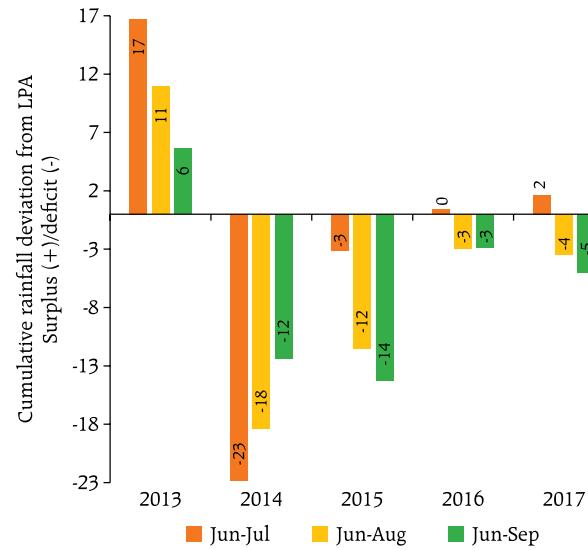
III.2.1 Agriculture

Agriculture and allied activities recorded a significant deceleration in Q1:2017-18 from Q4:2016-17, notwithstanding the jump of 8.5 per cent in *rabi* foodgrain production, the highest growth recorded in the last 13 years. Moreover, the area under horticulture grew by 2.6 per cent in 2016-17 from a year ago, while production increased by 4.8 per cent, reaching a record of 300 million tonnes. The moderation in agricultural GVA growth in relation to the preceding quarters mainly reflects the slowdown in 'livestock products, forestry and fisheries'.

South-west monsoon rainfall was higher than the long period average (LPA) till the fourth week of July, but turned significantly weak thereafter (Chart III.13). As of September 30, 2017, out of the 36 sub-divisions in the country, 30 divisions received excess/normal rainfall, while the remaining divisions (east and west UP, Haryana, Chandigarh & Delhi, Punjab, east MP and Vidarbha), covering 17 per cent of the sub-divisional area of the country, received

Chart III.12: GVA Growth: Actual Versus Projected

Source: RBI staff calculations.

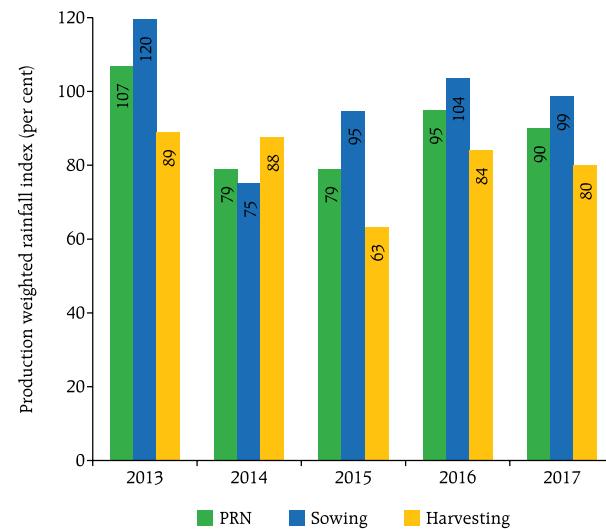
Chart III.13: South-west Rainfall Progress

Source: India Meteorological Department (IMD).

deficient rainfall. In terms of the production weighted rainfall index (PRN), rainfall was lower than the previous year by 5 per cent, resulting in contraction in the area sown under key crops (Chart III.14).

Although *kharif* sowing started on a high note, the momentum slowed down in August due to a lull in the south-west monsoon and lower than expected increase in MSPs (Table III.5) and decline in wholesale prices of major food items across *mandis* on account of the bumper harvest. The latest data suggest that sowing picked up again in September; however, *kharif* sowing for the year as a whole has remained lower than last year's acreage (Chart III.15). In terms of crops, sown area was lower in the case of rice, coarse cereals, oilseeds pulses and jute and mesta, but it was higher in the case of sugarcane and cotton (Chart III.16). According to the first advance estimate (AE), the production of *kharif* foodgrains for 2017-18 at 134.7 million tonnes was 2.8 per cent lower than last year (4th AE).

Chart III.14: Production Weighted Rainfall Index (PRN) (upto September)



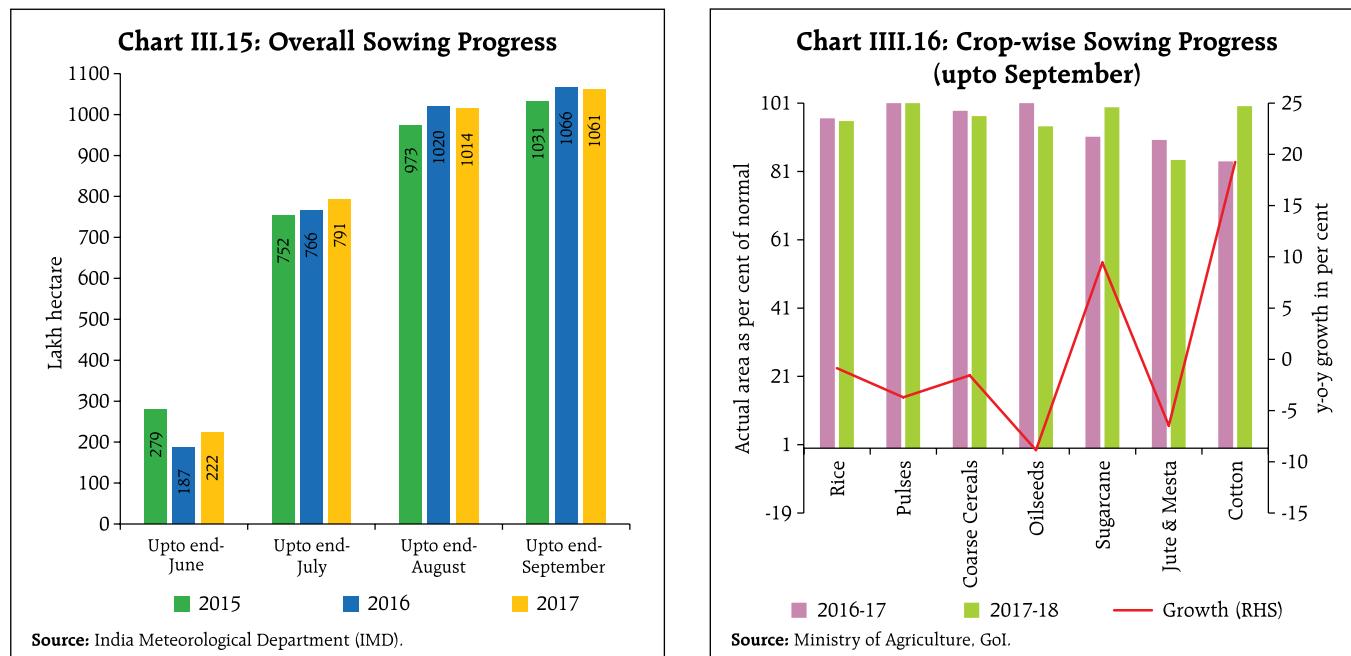
Source: RBI.

Water storage levels in 91 reservoirs across the country were lower at 66 per cent of the full reservoir level (74 per cent last year) as on September 28, 2017. Apart from the northern region, reservoirs in all other

Table III.5: Minimum Support Price (MSP) for Kharif Crops

	MSP (Rs/Quintal)			y-o-y growth in per cent	
	2015-16	2016-17	2017-18	2016-17	2017-18
Paddy Common	1410	1470	1550	4.3	5.4
Paddy (F)/Grade 'A'	1450	1510	1590	4.1	5.3
Jowar-Hybrid	1570	1625	1700	3.5	4.6
Jowar-Maldandi	1590	1650	1725	3.8	4.5
Bajra	1275	1330	1425	4.3	7.1
Ragi	1650	1725	1900	4.5	10.1
Maize	1325	1365	1425	3.0	4.4
Tur (Arhar)	4625	5050	5450	9.2	7.9
Moong	4850	5225	5575	7.7	6.7
Urad	4625	5000	5400	8.1	8.0
Groundnut	4030	4220	4450	4.7	5.5
Sunflower Seed	3800	3950	4100	3.9	3.8
Soyabean Black	2600	2775	3050	6.7	9.9
Soyabean Yellow	2600	2775	3050	6.7	9.9
Sesamum	4700	5000	5300	6.4	6.0
Nigerseed	3650	3825	4050	4.8	5.9
Medium Staple Cotton	3800	3860	4020	1.6	4.1
Long Staple Cotton	4100	4160	4320	1.5	3.8

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



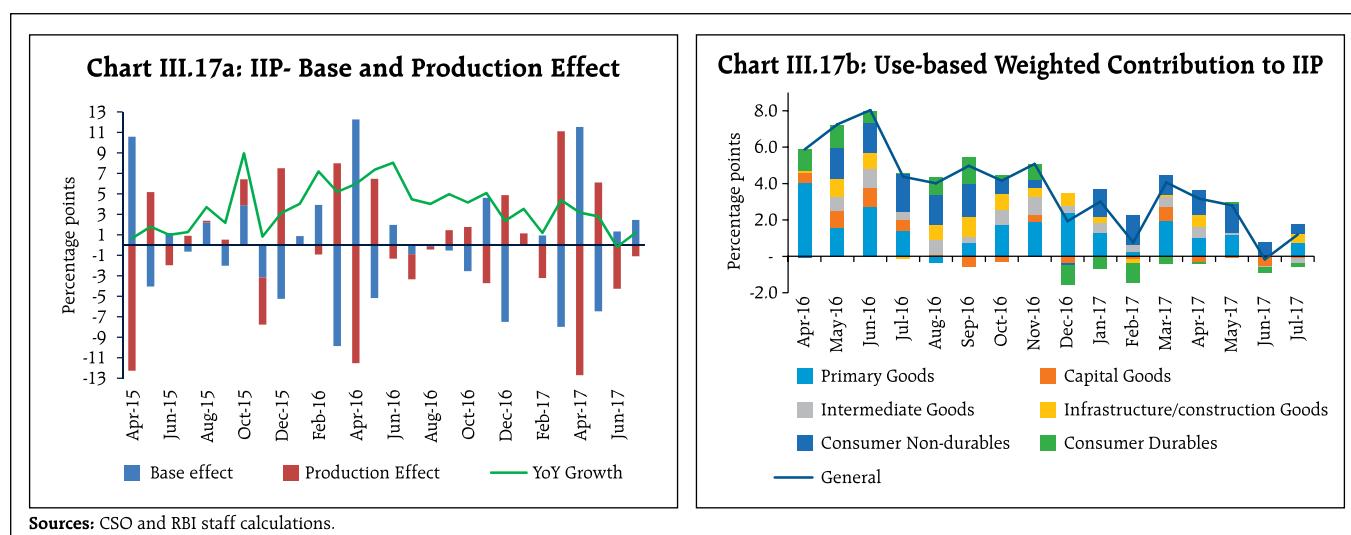
regions received less water than in the corresponding period last year. This could pose a challenge to the attainment of the crop production target set at 274.6 million tonnes for 2017-18.

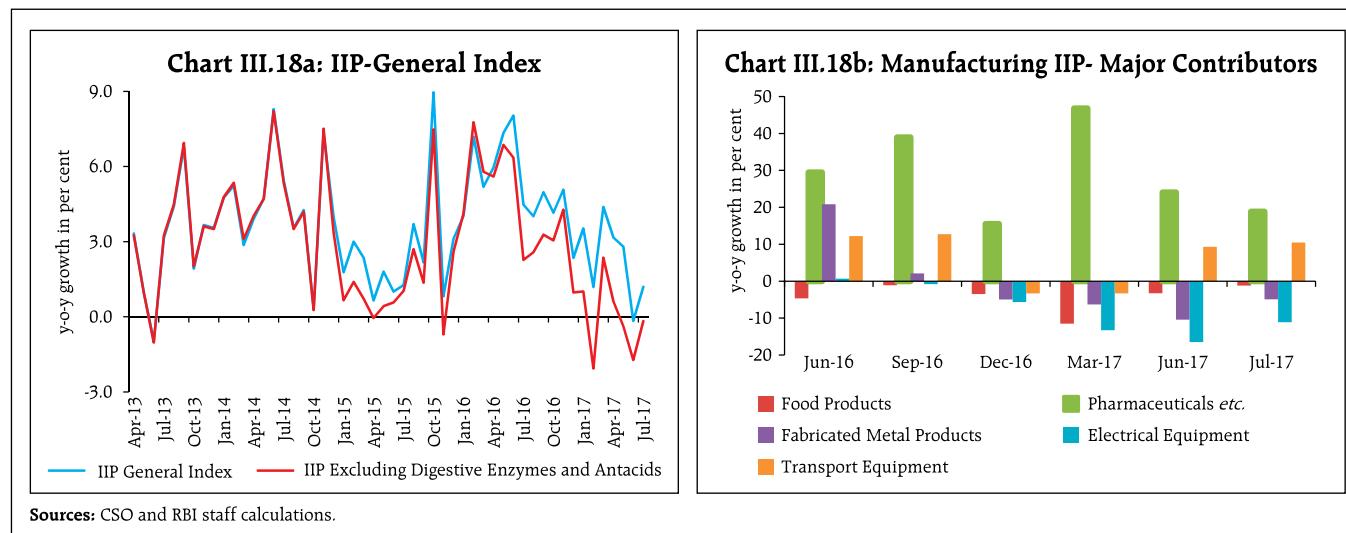
III.2.2 Industrial Sector

Industrial GVA growth dipped to 1.5 per cent in Q1 of 2017-18 – the lowest in the last 20 quarters, mainly due to GST-related uncertainties. The index of industrial production (IIP) exhibited a broad-based deceleration in Q1. Large negative production effects

partly offset positive base effects, especially in April and July (Chart III.17a). On a use-based analysis, the output of both capital goods and consumer durables contracted, highlighting weak investment appetite and slowing consumption demand. In terms of weighted contributions, the slowdown was led by capital goods, followed by intermediate goods (Chart III.17b).

Acceleration in consumer non-durables was driven mainly by the contribution of a single item, *viz.*, digestive enzymes and antacids (DEA); excluding this



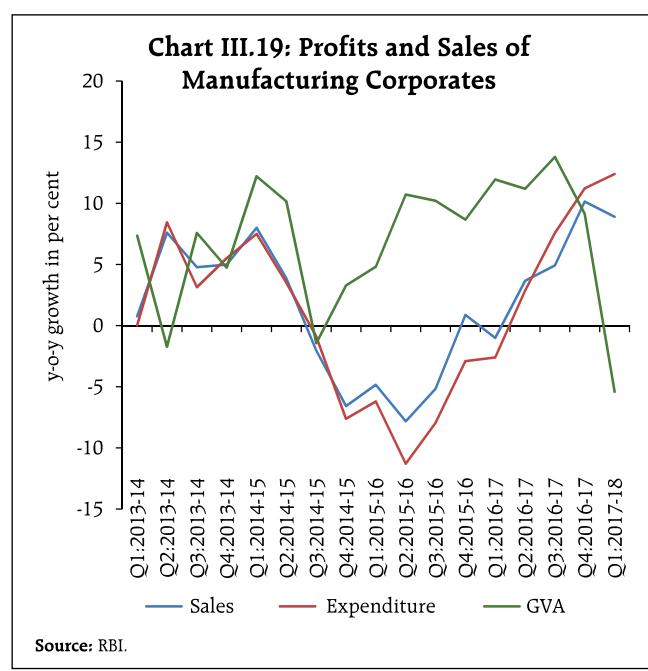


component, the overall index would have contracted by 0.2 per cent in July 2017 as compared with the growth of 2.2 per cent in July 2016 (Chart III.18a). Of the 23 industry groups that form the manufacturing sector, production in 15 industries contracted during July 2017. The strong performance in a few industries such as pharmaceuticals and transport equipment was pulled down by a broad-based slowdown in other industries, most notably electrical equipment (Chart III.18b).

The sharp deceleration in manufacturing in Q1:2017-18 was due to a combination of factors playing out simultaneously. While the uncertainties relating to GST implementation affected overall business sentiment, value added declined as sales decelerated and expenditure accelerated (Chart III.19).

The mining and quarrying segment, which showed some signs of revival in the second half of 2016-17, sank back again to contraction mode in Q1:2017-18. Although natural gas production has sustained the revival that set in from the second half of the previous year, contraction in crude oil production and subdued coal production pulled down mining output. Contraction in coal production was on account of lower demand for electricity generation, which has undergone significant transformation in

the recent period. While renewable energy has made rapid strides due to falling costs and Government's incentives, reports suggest that some of these projects are facing challenges in terms of collapse in prices resulting in low tariffs/renegotiations of tariffs, weak demand and exhausted tax benefits. These factors have raised concerns about the viability of such projects. Going forward, this segment may remain subdued until there is a significant pick-up in demand.



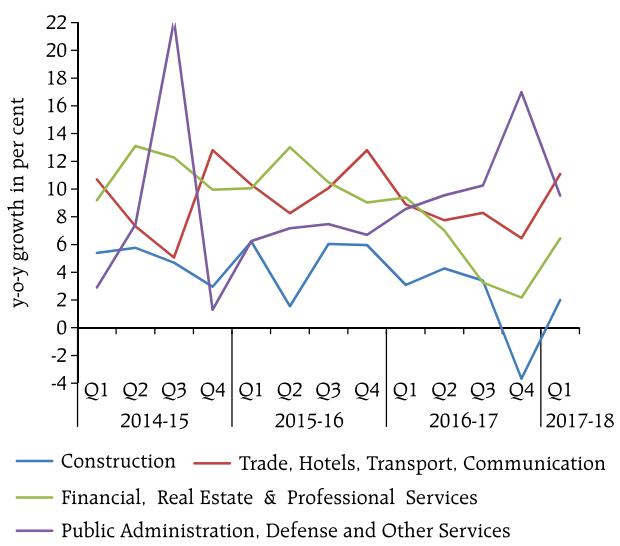
The slowdown in IIP mirrored the lukewarm performance of eight core industries, except natural gas, coal and electricity. Contraction in cement, fertilisers and crude oil accentuated the overall slowdown. Early indicators for 2017-18 point to subdued industrial activity. The 79th round of the Reserve Bank's Industrial Outlook Survey (IOS) signaled subdued demand conditions in Q2:2017-18.

III.2.3 Services

The services sector, which decelerated sequentially through 2016-17, recorded a significant improvement in Q1:2017-18 (7.8 per cent, up from 5.7 per cent in Q4:2016-17), driven mainly by trade, hotels, transport and communication as well as public administration, defence and other services. Financial, real and professional services also showed improvement in Q1:2017-18. Although the construction sector switched from contraction mode in Q4:2016-17 into expansion, it may be too early to conclude that the upturn is durable (Chart III.20).

In the housing sector, new units launched have slowed down although units sold have shown an uptick in some cities in recent quarters (Chart III.21a and b). This is expected to continue as the industry gears up for further consolidation, and as greater clarity on the implementation of Real Estate Regulatory Act (RERA) across States emerges.

Chart III.20: Services Sector Components

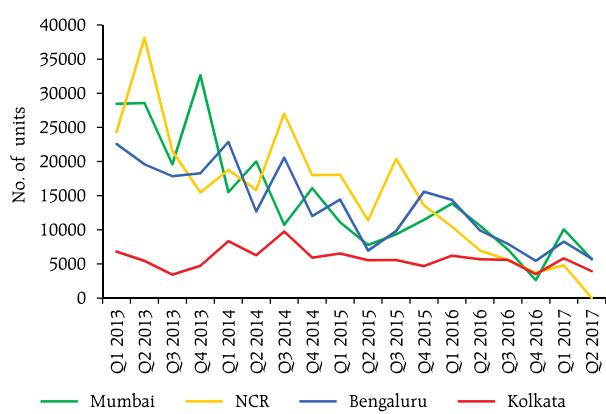


Sources: CSO and RBI staff calculations.

With large unsold inventories, property prices showed a correction in Q4:2016-17 in major cities (Chart III.22a). Cement production – an indicator of construction activity – is still in contraction mode, while steel consumption improved in recent months (Chart III.22b).

Activity in trade, hotels, transport and communication, which was affected post-demonetisation, bounced back to register a five-quarter high growth of 11.1 per cent in Q1:2017-18. Indirect taxes, a major indicator of activity of this

Chart III.21a: New Launches of Residential Units



Sources: Various publications of Knight Frank Research.

Chart III.21b: Sales of Residential Units

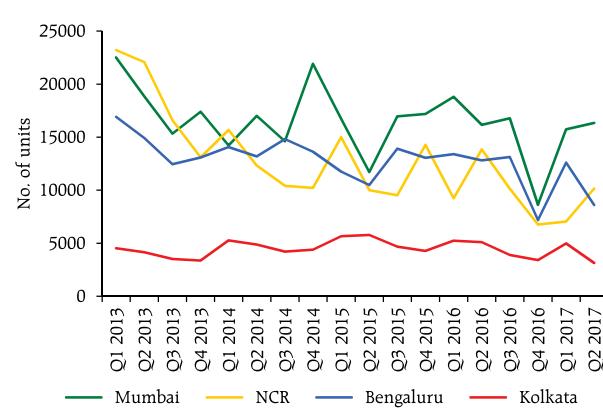
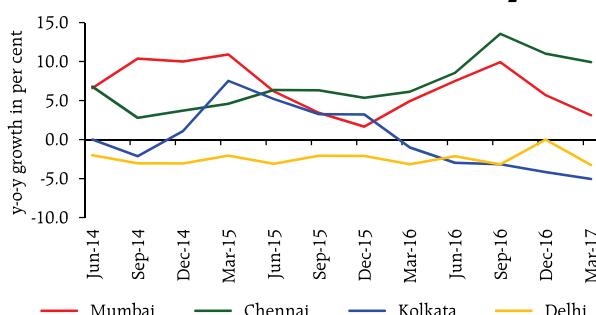


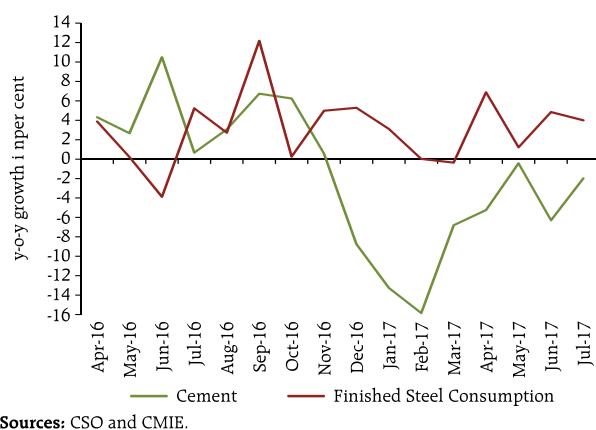
Chart III.22a: Housing Price Index - Market Prices for Under-construction Properties



Note: Price indices for residential properties based on actual market prices for ongoing construction.

Source: National Housing Bank.

Chart III.22b: Construction Indicators

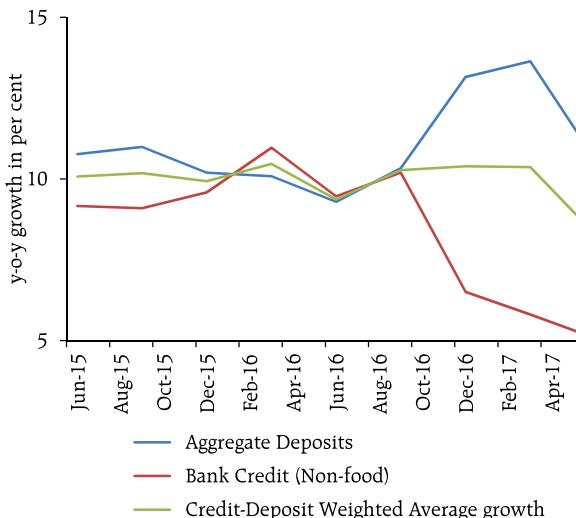


segment, grew by 14 per cent in Q1:2017-18. Most of the lead indicators of activity in this segment, viz., foreign tourist arrivals, international passenger and air freight traffic, railway traffic, and telephone subscribers showed an uptick in recent months. Financial, real estate and professional services also accelerated in Q1:2017-18, partly reflecting robust value addition by information technology companies in the professional services segment.

The financial sector's growth decelerated in the recent period, mirrored in weak growth in aggregate

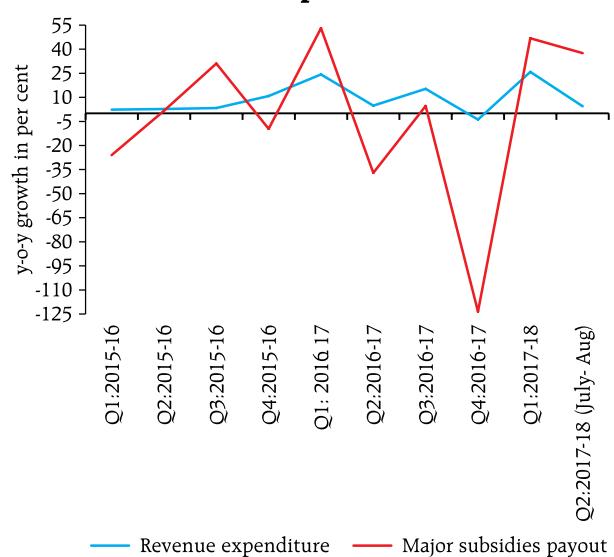
deposits and bank credit. Notwithstanding low credit growth, high deposit growth in the second half of 2016-17 had helped in propping up activity in this sub-sector, maintaining the weighted average of the two. In Q1:2017-18, however, both credit growth and deposit growth declined, pulling down the sub-sectoral activity (Chart III.23). As in the previous quarter, public administration, defence and other services benefitted from higher revenue expenditure of the Centre in Q1 and continued to provide support to GVA growth (Chart III.24).

Chart III.23: Growth of Financial Sector



Source: RBI.

Chart III.24: Revenue Expenditure of Government



Source: CGA.

III.3 Output Gap

The output gap measured by the deviation of actual output from its potential level and expressed as a percentage of potential output, is a gauge of demand conditions. Despite its usefulness as a summary measure of the cyclical component of aggregate demand, infirmities arise from the fact that the output gap is unobservable and needs to be estimated from the data. As different filtering techniques are highly sensitive to the choice of

period, methodology and the availability of data, a pragmatic approach is followed by staff that involves various methodologies including univariate filters like Baxter-King (BK), Hodrick-Prescott (HP) and Christiano-Fitzgerald (CF), Multivariate Kalman filters (MVKF) and production functions. A finance adjusted measure of the output gap, which controls for the imbalances emanating from the financial sector, has also been introduced in this MPR (Box III.1). All these output gap measures are aggregated by using principal

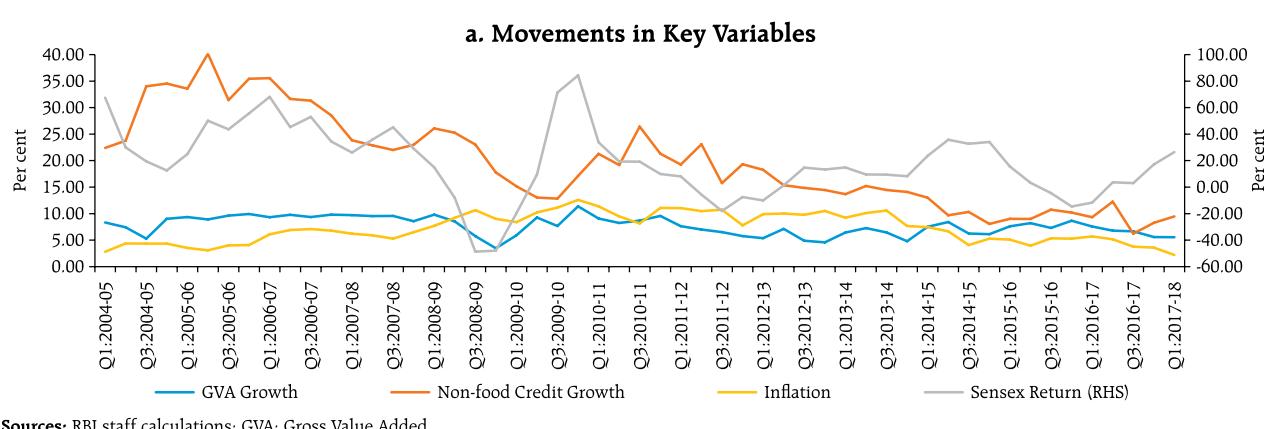
Box III.1: Finance Neutral Output Gap

The estimation of potential output - the level of output that an economy can produce sustainably over the medium-term consistent with low and stable inflation – enables an assessment of the output gap as the deviation of actual output from this potential level. Conventional estimates of the output gap largely ignore the role of financial sector (Borio *et al.*, 2016). The pre-global financial crisis (GFC) period was characterised by high output growth, benign inflation and financial sector imbalances emanating from rapid growth in credit and asset prices, which eventually culminated in the GFC in 2008. It is plausible for inflation to remain low and stable in times when output growth is on an unsustainable path due to buildup of imbalances in financial sector. Taking these into consideration Borio *et al.* (2016) present an alternate measure of the output

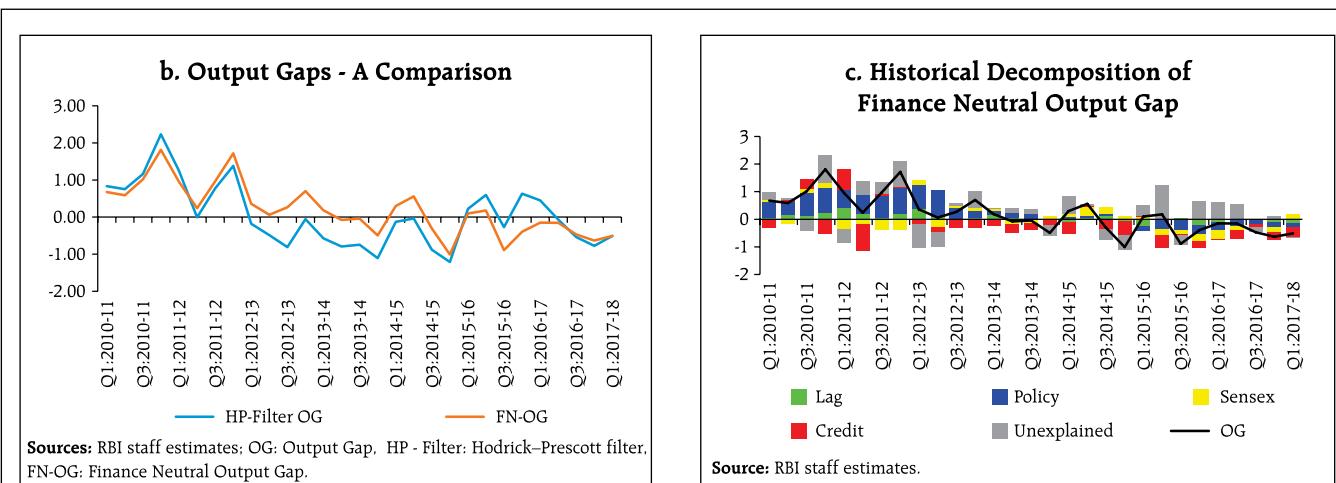
gap – “finance neutral output gap” – which incorporates the role of financial sector variables in the evolution of economic cycles.

India also recorded high credit and asset prices growth along with rising output growth and moderately low inflation in the pre-GFC period. For instance, during 2002-03 to 2007-08 the average annual growth in non-food credit and annual return on assets (measured by the Sensex) were 27 per cent and 32 per cent, respectively, while the CPI inflation was, on an average, about 5 per cent. Output growth was close to double digits during 2005-06 to 2007-08 (Chart a).

Guided by empirical evidence of a significant relationship between financial factors and business cycles, real credit growth and real asset price growth



(Contd...)



were included along with the real policy rate to estimate the output gap in a semi-structural multivariate Kalman filter framework.

The finance neutral output gap was estimated using quarterly data from Q1:2006-07 to Q1:2017-18 by the quasi maximum likelihood method on the following state space model:

$$y_t = Y_t - \bar{Y}_t \quad (1)$$

$$\bar{Y}_t = \bar{Y}_{t-1} + G_{t-1} + \epsilon_t^{\bar{Y}} \quad (2)$$

$$y_t = \emptyset y_{t-1} + \gamma x_t + \epsilon_t^y \quad (3)$$

y_t represents output gap whereas Y_t and \bar{Y}_t denote GVA at basic prices and potential output respectively (both in log term). G_t represents growth rate of potential output and x_t is a vector of explanatory variables – real policy rate, real credit growth and real asset price returns with appropriately chosen lags³; $\epsilon_t^{\bar{Y}}$ and ϵ_t^y each represent normally and independently distributed error terms. The set of equations (1) to (3) represents an approximation of economic theory, incorporating financial sector developments. The output gap obtained by this methodology remained mostly negative over the last two years. In 2015-16 and the

first half of 2016-17, the finance neutral output gap was lower relative to the output gap estimated from a one sided Hodrick-Prescott filter. However, the two output gap measures have converged in recent quarters (Chart b).

The historical decomposition of the output gap, portraying the contribution of various factors on its evolution, suggests that financial factors have been contributing negatively to the output gap since 2012-13 (Rath *et.al.*, 2017) (Chart c). High inflation and low real interest rates during the period 2010-13 contributed positively to the output gap. More recently, subdued credit growth has contributed negatively to demand conditions.

References:

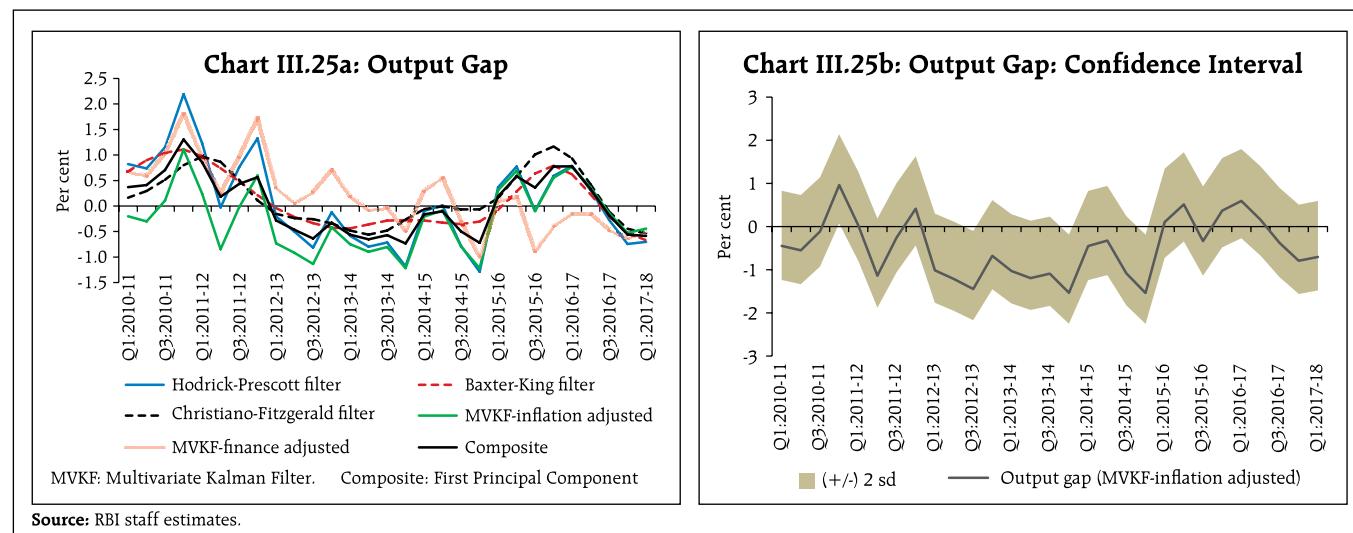
Borio, C., Disyatat, P., & Juselius, M. (2016), "Rethinking Potential Output: Embedding Information about the Financial Cycle", *Oxford Economic Papers*, 69(3), 655-677.

Rath, D.P., Mitra, P. and John, J. (2017), "A Measure of Finance-Neutral Output Gap for India", RBI Working Paper Series, WPS (DEPR): 03 / 2017.

component analysis in order to construct a composite measure (Chart III.25 a and b). This measure

indicates that the output gap has been negative since Q3:2016-17.

³ Lags are chosen based on the univariate analysis, cross correlations and OLS regression, while ensuring convergence of the optimisation algorithm.



Conclusion

Early indicators for Q2:2017-18 point to subdued industrial activity, in particular in the manufacturing sector. While many high frequency services sector indicators show signs of improvement, some others such as port traffic and domestic air freight traffic still show tepid growth. The Government's initiatives in essential infrastructure, affordable housing, improved customer protection and transparency through the real estate regulatory act should be positive for construction activity, if they are implemented with speed and efficiency. The GST is likely to result in greater formalisation of the economy in due course as firms register to receive input tax credits even though teething problems

remain a challenge at the current juncture. Improved prospects for rural incomes during 2017-18, higher MSPs, and large budgetary allocations for MGNREGA could lead to improvement in rural demand. Household consumption demand in urban areas may get a boost from the upward revision in HRA for government employees and implementation of the 7th CPC announced by States. The key to achieving a higher growth trajectory lies, however, in reviving investment activity. Major structural reforms already initiated, including the GST, enactment of the Insolvency and Bankruptcy Code (IBC), the likely recapitalisation of public sector banks and speedy resolution of stressed assets augur well for the outlook.

IV. Financial Markets and Liquidity Conditions

Financial market conditions in the first half of 2017-18 remained stable, with the weighted average call money rate (WACR) moving progressively closer to the policy repo rate, stock markets scaling new highs, bond yields oscillating with fluctuations in inflation readings and the foreign exchange market buoyed by large portfolio flows. Credit offtake from risk-averse banks remained low, though monetary policy transmission strengthened for new loans in conditions of sizable surplus liquidity.

Through the first half of 2017-18, global financial markets were lifted by record low volatility, declining credit spreads and stretched market valuations, as concerns about the pace of reflation and normalisation of monetary policy in advanced economies (AEs) receded. Equity markets scaled new peaks relative to earnings, propelled by a renewed reach for returns. Bond yields, which had firmed up till early 2017, reversed course from April on softer than expected commodity prices and expectations of a more relaxed pace of monetary policy normalisation in the US on easing inflation risks. The US dollar depreciated against major currencies, partly correcting for the upside it had gained post-Presidential elections in the US. Geopolitical risks, however, sparked bouts of volatility in August. Global financial markets remained largely resilient to the September communication of the Federal Reserve on its balance sheet normalisation. Financial markets in emerging market economies (EMEs) remained tranquil, with equity markets surging and the return of large portfolio flows exerting appreciation pressures on their currencies.

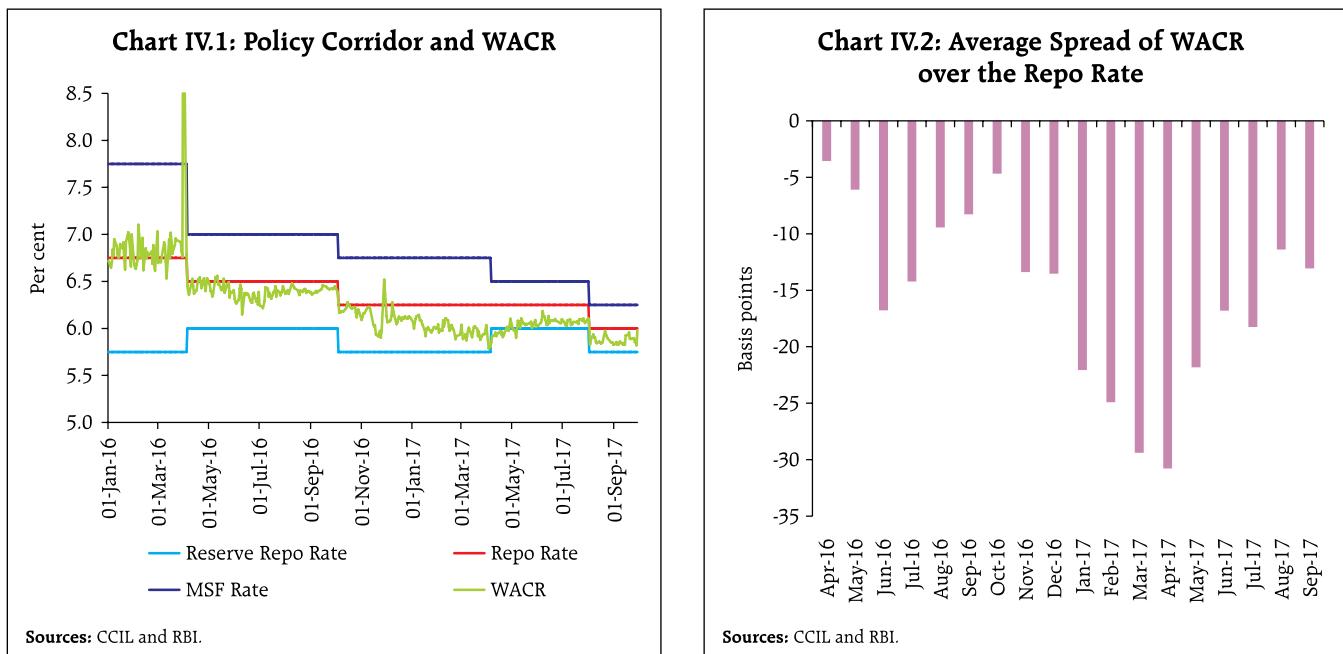
Domestic financial markets were influenced by a variety of factors: the dramatic swings in inflation; surplus liquidity conditions; the implementation of GST; and remonetisation. The weighted average call money rate (WACR) – the operating target of

monetary policy – moved closer to the policy repo rate, notwithstanding persistent surplus liquidity conditions. Equity markets were buoyed to new peaks by a surge in investment by mutual funds, even as foreign portfolio investment reached close to exhausting macro-prudential limits in some debt markets. Corporate bond yields softened, tracking G-sec yields and moderation in credit spreads. The exchange rate of the rupee moved in a narrow range, with an appreciating bias on the back of waves of portfolio flows. Markets were impacted in September by the announcement of the Fed that it will initiate balance sheet normalisation in October and certain domestic developments, in particular, higher inflation print and concerns about the rise in the fiscal deficit, leading to hardening of yields, correction in stock prices and depreciation of the rupee. Deposit rates declined as banks were flush with liquidity. Credit flows from banks improved modestly, though still hamstrung by stressed assets induced deleveraging and weak investment demand. A cumulative 200 basis points (bps) cut in the repo rate since January 2015 has been, by and large, transmitted to lending rates on new loans; however, transmission to past loans remains incomplete.

IV.1 Financial Markets

Different market segments in the domestic financial system responded variedly to domestic cues, with the impact of global spillovers remaining relatively contained until mid-September. Excess liquidity in money markets, high valuations in the bond and equity markets and an upside tone in the forex market co-existed with subdued activity in the credit market in the first half of 2017-18.

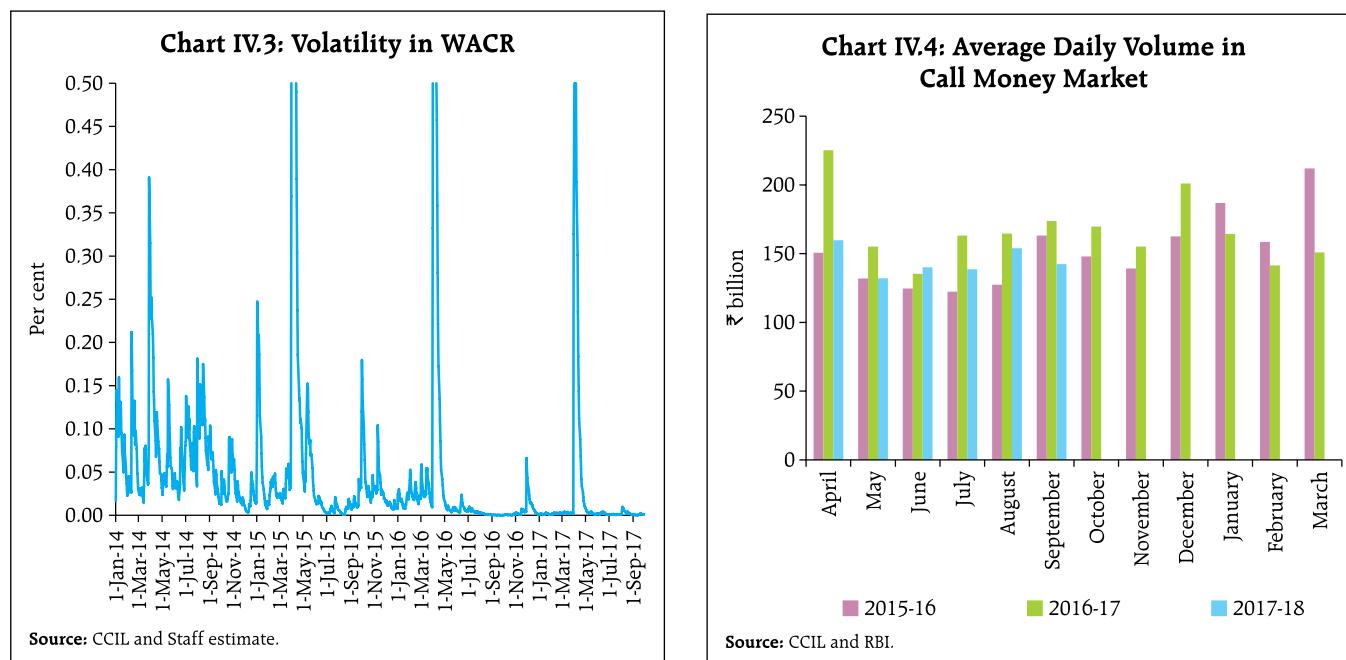
IV.1.1 Money Market: A large liquidity overhang, fuelled mainly by the front-loading of government spend, which necessitated frequent recourse to ways and means advances (WMAs) and overdrafts (ODs) over the greater part of this period, imparted a downside bias to overnight money market rates in H1 of 2017-18. While the liquidity adjustment facility



(LAF) corridor was narrowed from +/- 50 bps to +/- 25 bps in April 2017, active liquidity operations (described in Section IV.3) progressively whittled away at the overhang and narrowed the spread between the WACR and the policy rate from 31 bps in April to 13 bps in September (Charts IV.1 and IV.2). In combination with the liquidity impact of the RBI's forex operations and scheduled redemptions of G-secs, these autonomous

flows more than offset the liquidity tightening impact of remonetisation.

Money market rates adjusted seamlessly to the narrowing of the LAF corridor. Virtually no effect was observed on volumes traded in the call money market (Charts IV.3 and IV.4). Empirical evidence suggests that volatility in the WACR has a relatively muted role in monetary policy transmission (Box IV.1).



Box IV.1: Operating Target Volatility and Monetary Policy Transmission

High volatility in the operating target can potentially dampen transmission of monetary policy. Changes in long-term interest rates, which are vital to monetary policy transmission for influencing aggregate demand, are conditioned by the expected path of future short-term rates and variations in the term premium. Higher volatility in overnight rates can potentially spillover into the term premium, thereby influencing "equilibrium levels of nominal and real long-term rates and disturbing the transmission mechanism of monetary policy impulses" (Colarossi and Zaghini, 2009). In the empirical literature, the transmission of volatility from the overnight interest rate along the yield curve is typically validated by the statistical significance of conditional volatility relating the overnight rate in variants of generalised autoregressive conditional heteroscedasticity (GARCH) specifications. Country experiences yield scant evidence of transmission of volatility from the overnight rate. Pro-active liquidity management and greater transparency along with more effective communication may help in better anchoring of market expectations (Osborne, 2016).

With a view to studying the impact of conditional volatility of the WACR – the operating target of monetary policy in India – on interest rates across the term structure, the following GARCH (1,1) mean and volatility equations were specified.

Mean equation:

$$\Delta r_t = c + \rho (r - o)_{t-1} + \sum_i \beta_i \Delta r_{t-i} + \sum_j \gamma_{t-j} \Delta o_{t-j} + \theta liq_t + \omega DX_t + \varepsilon_t \quad \dots(1)$$

Variance equation:

$$\sigma_t^2 = \mu + \alpha \varepsilon_{t-1}^2 + \delta \sigma_{t-1}^2 + \tau DX_t \quad \dots(2)$$

where r_t denotes the daily WACR, o_t is the policy repo rate, liq_t is the daily net LAF position and Δ represents daily change in respective variables. The impact of specific developments on the WACR – such as the taper tantrum, demonetisation, year-end liquidity effects, and fortnightly reserve maintenance patterns of banks – are controlled for through the use of dummy variables represented by DX_t .

The conditional variance equation (2) helps identify the time-varying volatility of the residuals generated from the mean equation (1). σ_t^2 is expressed as a function of the weighted average of its long-term average (the constant term), the last period forecast variance (the GARCH term), and volatility observed in the previous period (the ARCH term), which is augmented to capture the impact of dummies mentioned earlier. The results suggest that the volatility in the WACR is persistent (Table IV.B.1).

Table IV.B.1: Conditional Volatility of WACR using GARCH (1,1)*

Dependent Variable: $\Delta WACR$

	Co-efficient	p-value		Co-efficient	p-value
Mean Equation		Volatility Equation			
Constant	-0.001	0.19	RESID(-1) ²	0.244	0.00
$\Sigma WACR$	-0.24	0.00	GARCH(-1) ²	0.756	0.00
$\Sigma Repo\ Rate$	0.8	0.03	Dum_March	0.342	0.00
Net Liquidity	0.002	0.00			
ECM	-0.050	0.00			
Dum_March	1.186	0.00			
Dum_April	-1.413	0.00			
Dum_Taper	0.136	0.00			
D3	0.039	0.00			
D10	0.004	0.09			
D11	-0.010	0.00			
D13	-0.004	0.04			
T-DIST. DOF	3.244	0.000			
Q(10)	12.446	0.256			
Q(20)	23.144	0.282			
ARCH LM (5)	0.430	0.828			

*: Using daily data since January 2009.

Source: RBI staff estimates.

Conditional volatility of the WACR extracted from equations (1) and (2) is then used as an explicit determinant of daily change in other interest rates (*i.e.*, nominal yield on government paper of 3-month, 6-month, 9-month, 12-month, 2-year and 10-year maturities), in their respective mean and volatility equations, while retaining the same structural specifications as in equations 1 and 2. The coefficients of conditional volatility of WACR in the mean and variance equations of other interest rates are reported in Table IV.B.2.

(contd...)

Table IV.B.2: Impact of WACR Volatility Across the Term-structure of Interest Rates*

(coefficients)

	3-month TB	6-month TB	9-month TB	12-month TB	2-year G-sec	10-year G-sec
Mean equation	-0.0059 (0.31)	-0.0019 (0.65)	-0.0042 (0.35)	-0.0044 (0.42)	-0.0001 (0.52)	-0.0003 (0.94)
Variance equation	0.0004 (0.00)	0.0002 (0.00)	0.0003 (0.00)	0.0008 (0.00)	0.0000 (0.04)	0.0001 (0.00)

*: Using daily data since January 2009.

Note: Figures in parentheses indicate the p-values.

Source: RBI staff estimates.

Two inferences could be derived from these results: (a) WACR volatility is not a statistically significant determinant of the mean values of daily changes in other interest rates across the yield curve; and (b) even while WACR volatility has a statistically significant conditioning influence on the volatility of other interest rates, particularly up to one year tenor, the values of the relevant coefficients are too small to impact the transmission of monetary policy. A one percentage point increase in volatility of the WACR is estimated to increase the volatility of short-term yields by about 0.02 to 0.08 bps, while the impact on volatility of longer-term yields is even more negligible. These findings suggest that occasional surges in

volatility triggered by specific developments are likely anticipated and contained quickly through proactive liquidity management, which helps avert any potential impediments to the transmission of monetary policy.

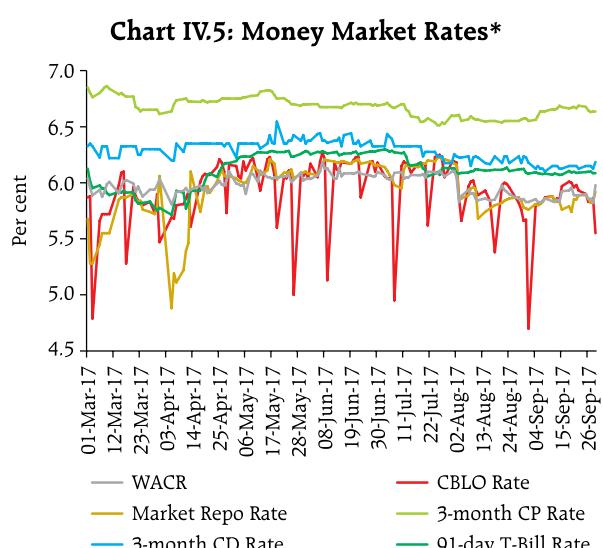
References:

Matthew Osborne (2016), "Monetary Policy and Volatility in the Sterling Money Market", *Bank of England Staff Working paper No. 588*, April.

Silvio Colarossi, and Andrea Zaghini (2009), "Gradualism, Transparency and the Improved Operational Framework: A Look at Overnight Volatility Transmission", *International Finance*, Volume 12, Issue 2, Summer, Pages 151–170.

Other money market rates traded in alignment with the WACR (Chart IV.5). In view of comfortable

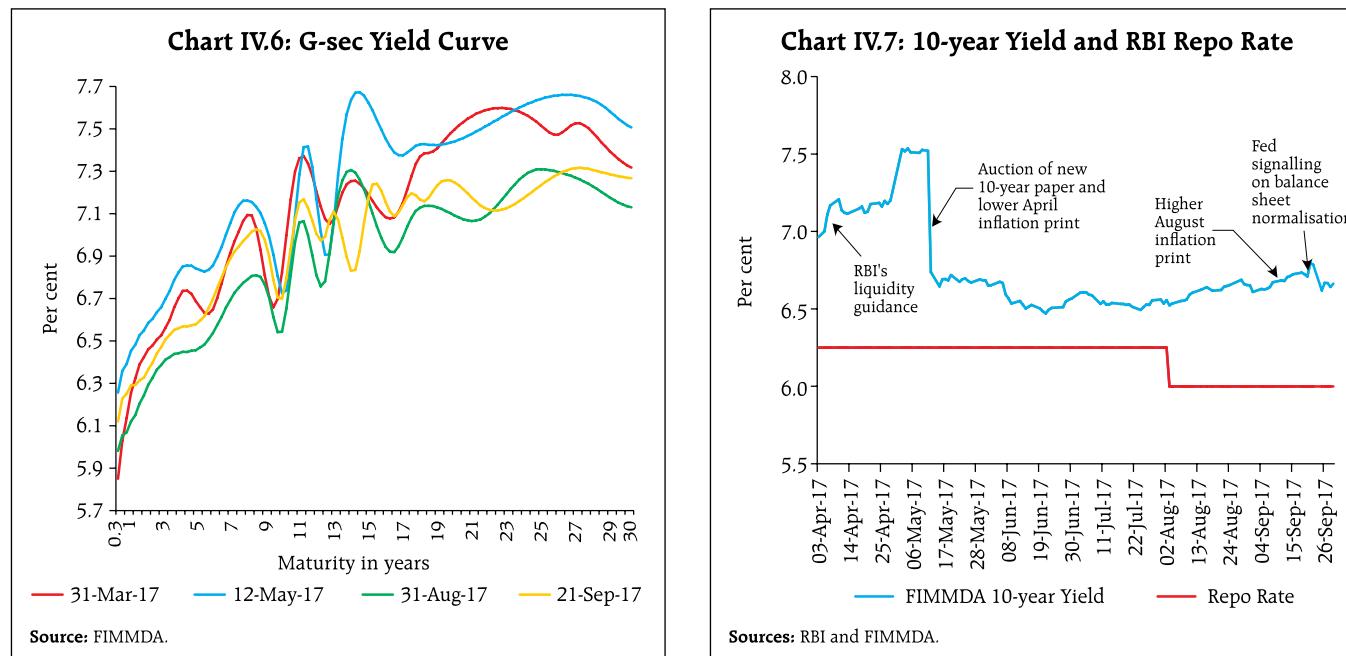
access to liquidity and weak demand for credit, banks reduced their recourse to certificates of deposit (CDs). Fresh issuances of CDs were lower at ₹1,302 billion during H1 of 2017-18 (up to September 1, 2017) as against ₹1,518 billion during the corresponding period of 2016-17. With the lower-than-expected CPI inflation reading in May 2017, money market rates traded with an easing bias, especially in the secondary segments. Since May 12, 2017, 3-month commercial paper (CP), 3-month CDs and 91-day Treasury Bill (T-Bill) rates declined by 15 bps, 20 bps and 20 bps, respectively. After the repo rate was cut in August 2017, the 3-month CD and 91-day T-Bill rates declined by about 10 bps and 5 bps, respectively, while the 3-month CP rate inched up by about 4 bps, indicating that markets had already priced in a repo rate cut.



* The CBLO rate drops on reporting Fridays as the volumes shift to call and market repo segments to take advantage of cash reserve ratio (CRR) norms.

Sources: CCIL and Bloomberg.

IV.1.2 Government Securities (G-sec) Market: G-sec yields generally softened during the most part of H1



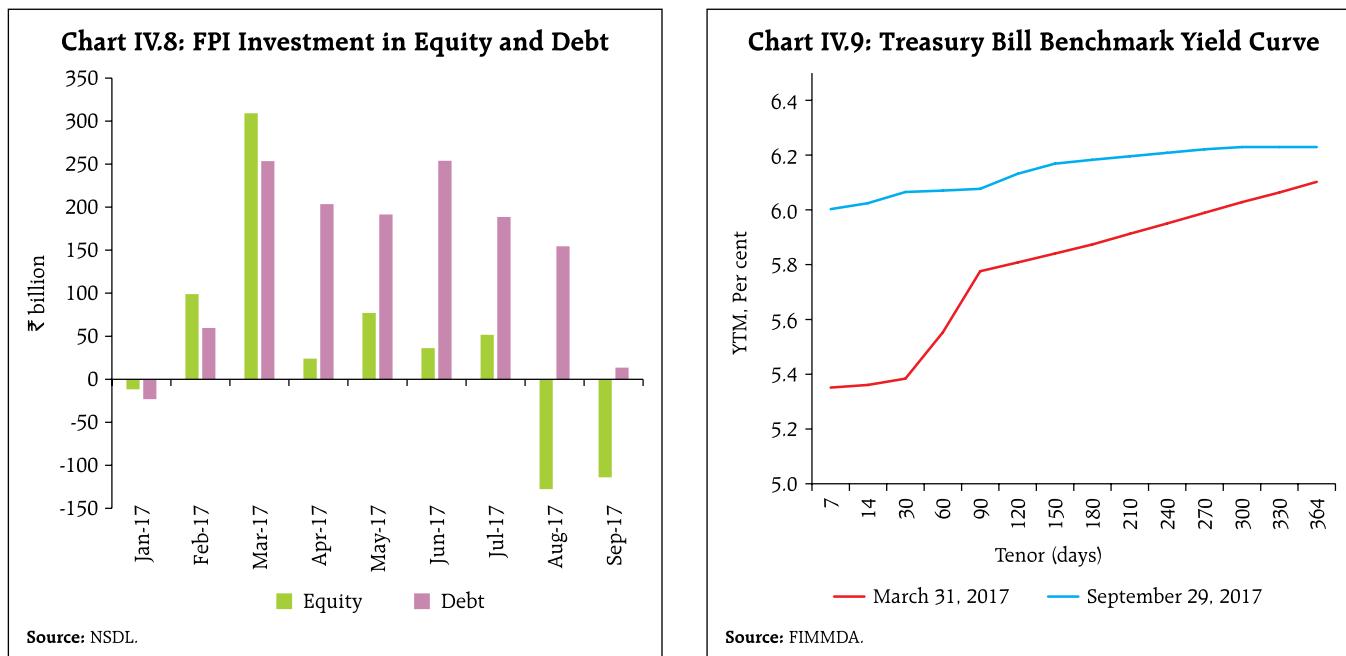
of 2017-18, driven by lower inflation data, sustained demand from foreign portfolio investors, and the 25 bps cut in the repo rate by the Monetary Policy Committee (MPC) in August 2017. However, G-sec yields hardened thereafter reacting to the higher-than-expected August inflation print and the Fed communication on September 20, 2017 signalling one more possible rate hike in 2017 and the initiation of balance sheet normalisation from October 2017 (Chart IV.6). Market concerns about the likely increase in the domestic fiscal deficit due to a possible fiscal stimulus to boost the economy also impacted yields.

G-sec yields hardened by 12 bps in early April in anticipation of oversupply of paper because of the likely use of market stabilisation scheme (MSS) and open market operations (OMOs) by the RBI to absorb surplus liquidity. Two developments in the month of May, however, contributed to considerable softening of yields (Chart IV.7). First, a new benchmark Government of India Security of 10-year tenor (NI GS 2027) was auctioned on May 12, 2017 at a cut-off of 6.79 per cent, evincing an enthusiastic bid-cover ratio of 6.61. Second, the CSO's May 12 release on CPI – coinciding with the date of auction of the new

benchmark – showed headline inflation softening in April 2017. In June, yields softened even further in response to headline inflation for May 2017 printing lower.

In Q2, CPI inflation's historic low reading for June 2017 at 1.5 per cent combined with the normal progress of the monsoon further boosted sentiment in the G-sec market. With the July CPI inflation moving up, however, expectations reversed and yields commenced hardening in August, notwithstanding the 25 bps cut in the repo rate. Notably, the normalisation of the US monetary policy during H1 of 2017 (on March 15 and on June 14) did not have much influence on domestic yields. However, G-sec yields hardened thereafter on the faster-than-expected rise in August headline inflation, the prospect of a fiscal stimulus in India, and the Fed communication of September 20, 2017, as mentioned earlier.

Persisting positive yield differentials with the rest of the world and the stable exchange rate of the rupee created congenial conditions for foreign portfolio inflows. Net foreign portfolio investment in G-secs was ₹617 billion (including investment in state development loans of ₹26.2 billion) during H1,

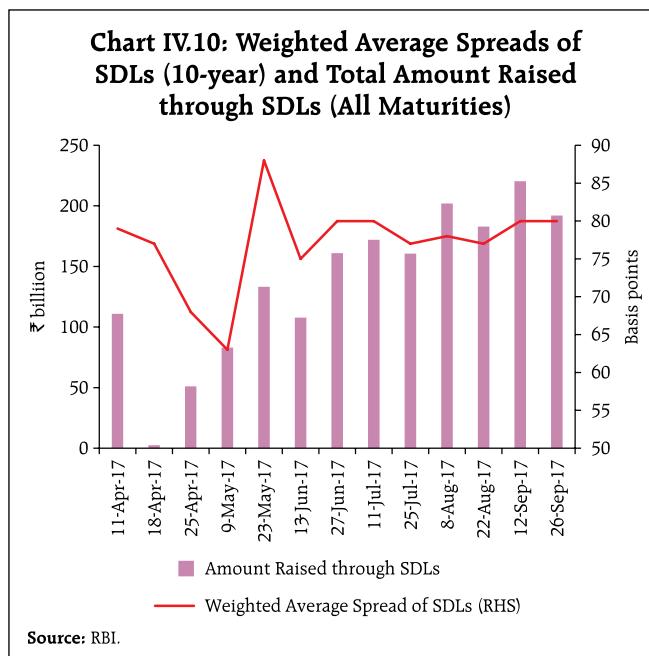


resulting in 99 per cent of the limit for FPI investment in G-secs being utilised¹. FPIs continued to be net buyers in the debt market in every month during H1 (Chart IV.8).

In the short end of the G-sec market, the impact of the larger supply of paper – issuances of T-Bills of ₹1 trillion under the MSS and of cash management bills (CMBs) cumulatively aggregating to ₹2.5 trillion – was reflected in the hardening of T-Bills rates during H1 (Chart IV.9).

Issuances of state development loans (SDLs) remained subdued in Q1 of 2017-18, but picked up in Q2. The spread of SDLs' cut-off over the 10-year G-sec remained in the range of 74-87 bps in September 2017 as compared with 77-81 bps in April 2017 (Chart IV.10). In H1 of 2017-18, there were no issuances of Ujwal DISCOM Assurance Yojana (UDAY) bonds in contrast to 2016-17 when thirteen States issued UDAY bonds of ₹1,091 billion as against ₹990 billion issued by

eight States in the previous year². The total secondary market trading volume (face value) of UDAY bonds



² The spread on UDAY bonds during 2016-17 declined to 35-75 bps over the corresponding tenor/10-year FIMMDA G-sec yield as compared with a fixed spread of 75 bps in 2015-16. Approximately 45 per cent of total UDAY bond issuances in 2016-17 were concentrated in Q4. The large volume of SDL issuances, including UDAY, was one of the major factors that resulted in a widening of weighted average spread on SDLs to 83 bps in Q4 of 2016-17.

¹ On September 28, 2017, the limits for FPI investment in G-secs and SDLs for the October-December quarter were increased by ₹80 billion and ₹62 billion, respectively.

during H1 of 2017-18 (up to September 29, 2017) was ₹626 billion.

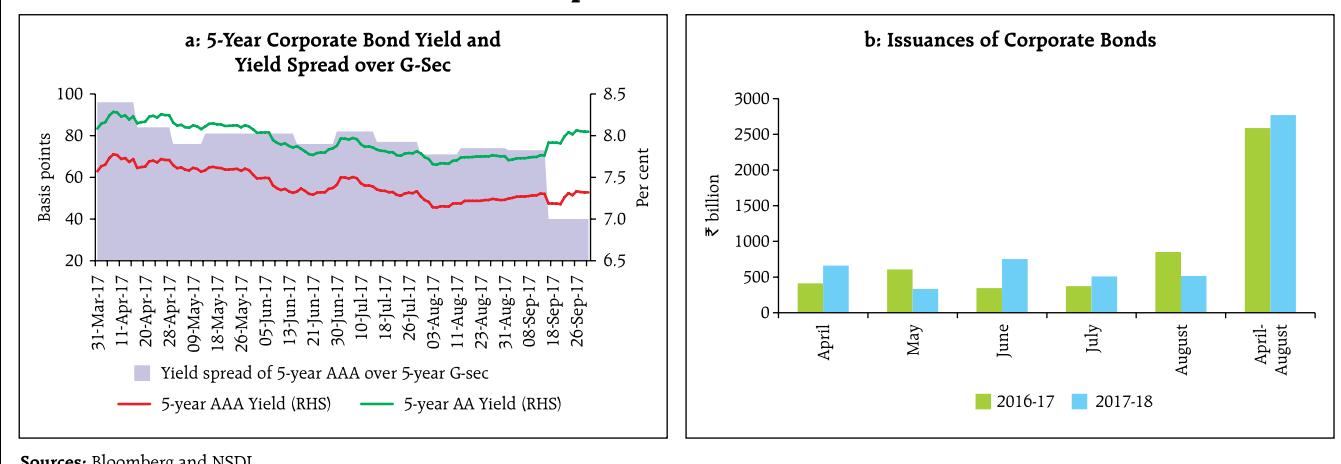
There is no significant relationship between the borrowing spreads on SDLs and States' fiscal deficits and debt positions. The inter-State spread was, on average, within 9 bps during H1 of 2017-18 as against 7 bps in 2016-17 and 2015-16. Cost considerations have drastically reduced the dependence of State Governments on the National Small Savings Fund (NSSF). Following the recommendations of the 14th Finance Commission (FC), all States (barring four³) have been allowed to be excluded from the NSSF financing facility beginning 2016-17. The share of market borrowings, which can be raised at relatively lower costs, particularly when markets do not differentiate between States on the basis of their respective fiscal deficits and debt, has increased, including for discharging past NSSF liabilities.

IV.1.3 Corporate Bond Market: Corporate bond yields softened during H1 of 2017-18, tracking the decline in G-sec yields (Chart IV.11a). The decline in 5-year AAA corporate yield was, however, interspersed with occasional spikes at the end of June and in early-July. The spread of 5-year AAA rated corporate bonds over 5-year G-secs declined by 56 bps, possibly reflecting

improvement in overall credit risk perceptions on expectation of faster resolution of stressed assets under the Banking Regulation (Amendment) Ordinance promulgated on May 4, 2017. The average daily turnover in the corporate bond market increased sharply to ₹73.2 billion during April-August 2017 from ₹47.5 billion during the corresponding period of last year. Resources mobilised through issuances of corporate bonds in the primary market increased by 7.1 per cent to ₹2,770 billion during April-August 2017 from ₹2,588 billion a year ago. Of the total resources mobilised from the private corporate bond market, private placements constituted 98.6 per cent (Chart IV.11b).

Foreign portfolio investment (FPI) in corporate bonds increased to ₹2.42 trillion as on September 28, 2017 from ₹1.86 trillion at end-March 2017. As a result, the utilisation of the approved limit rose to 99.2 per cent from about 76 per cent at end-March 2017. On September 22, 2017, the Reserve Bank announced the removal of *Masala* bonds or rupee denominated bonds issued overseas from the corporate bond investment limit effective October 3, 2017. This will release additional space for investment by FPIs in corporate bonds. The total investment in *Masala* bonds

Chart IV.11: Corporate Bond Yields and Issuances



Sources: Bloomberg and NSDL.

³ Delhi, Madhya Pradesh, Kerala and Arunachal Pradesh.

amounted to ₹440 billion at end-September 2017. The stable exchange rate of the rupee, uncertainty around policies of the US administration, and market expectations of a more gradual Fed normalisation increased the attractiveness of Indian bonds.

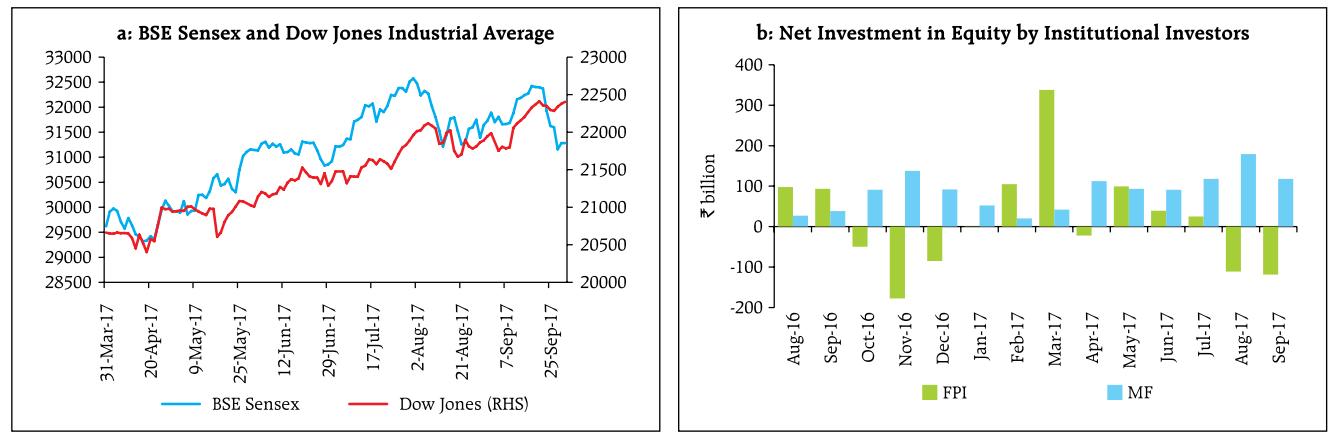
IV.1.4 Stock Market: The equity market remained buoyant through the greater part of H1 of 2017-18, with the BSE Sensex crossing the 32,000 mark on July 13, 2017 and the NSE Nifty crossing the 10,000 mark on July 26, 2017. Upbeat market sentiment appeared impervious to the perception of overvaluation in terms of a high price to earnings ratio (about 23.4) at end-September 2017 relative to AEs (21.0) and EMEs (15.8). Market ebullience was largely generated by domestic factors: expectations of reform intensification after introduction of the GST; the resolution of bank stressed assets and smooth progress of the insolvency regime; satisfactory monsoon; and lower inflation in May and June. The BSE Sensex gained 5.6 per cent during H1 of 2017-18 (Chart IV.12a). Net buying by domestic institutional investors, particularly by mutual funds, overwhelmed volatile foreign portfolio flows and sustained the rally (Chart IV.12b).

After a late April recovery from downside global cues and sporadic volatility in June, stock markets surged in July 2017, with both the BSE Sensex and

the NSE Nifty touching historic highs. In August 2017, markets corrected somewhat amidst volatility following the SEBI's directions to stock exchanges to ban shell companies, concerns over high valuations, lower than expected corporate earnings results for Q1 of 2017-18, downside risks to growth in 2017-18, uncertainty over the GST rollout, net selling by foreign portfolio investors and global sell-offs over geopolitical tensions in the Korean peninsula.

Reduction in deposit interest rates by banks and the decline in gold prices enhanced the relative attractiveness of mutual fund schemes. Resources mobilised under equity oriented schemes during April-August 2017 were higher at ₹614 billion than ₹185 billion during the corresponding period last year. Mutual funds are emerging as a counterweight to foreign institutional investors in the equity market. Net investment by mutual funds in equity during April-September 2017 was at ₹752.7 billion as against outflows of ₹87.7 billion by foreign portfolio investors. The post-demonetisation shift in the composition of financial saving of households into financial assets expanded assets under management (AUM) of mutual funds sizably from about ₹17.5 trillion at end-March 2017 to a record of ₹20.6 trillion at end-August 2017 as against assets under custody of FPIs of ₹30.4 trillion.

Chart IV.12: Stock Market Performance and FPI Investment in Equity

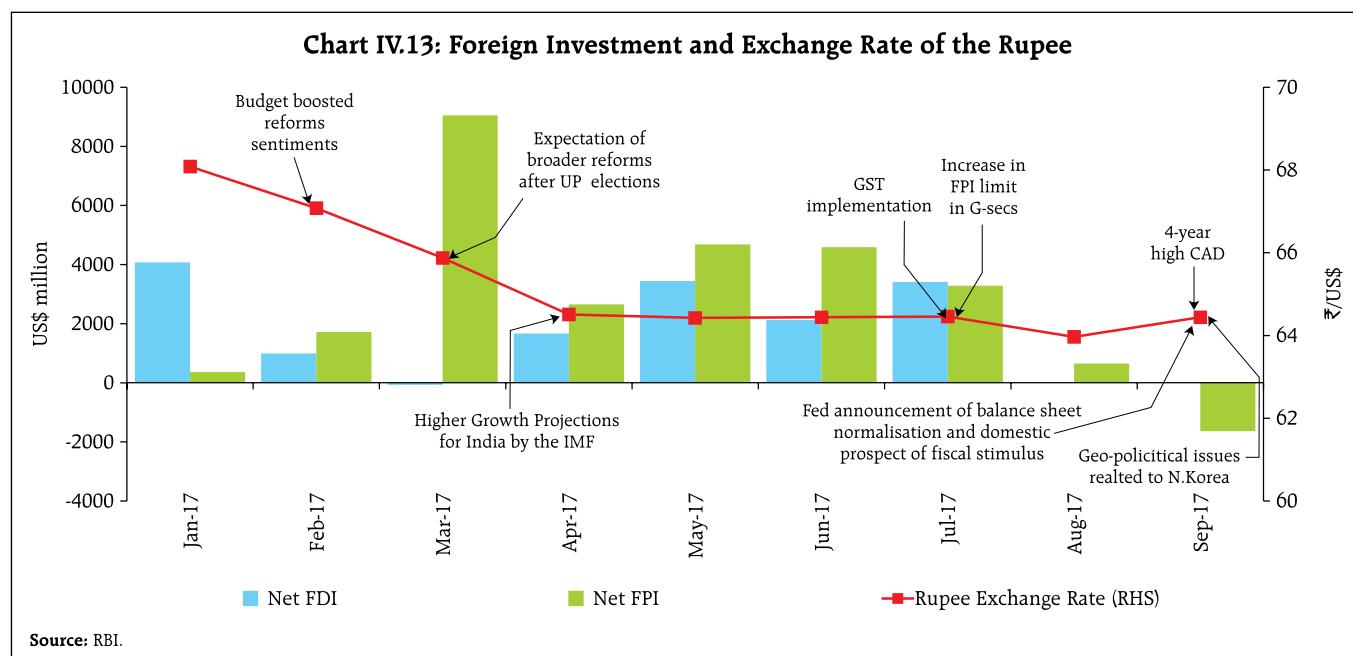


In the primary market, resources mobilised through public issues of equity (initial public offers and rights issues) increased by 9.0 per cent during April-August 2017 over the corresponding period a year ago. Companies mobilised a total of ₹104.7 billion through 53 initial public offer (IPO) issues of which 41 were listed on the Small and Medium Enterprise (SME) platform of the BSE and the NSE. Financial entities accounted for 32.8 per cent of the total resources mobilised through public issues of equity. Among non-financial entities, the healthcare sector raised the largest amount of ₹19.5 billion, accounting for 26.1 per cent of the total, followed by engineering (20.1 per cent) and consumer service (10.6 per cent) sectors. The IPOs in the pipeline suggest that the upbeat primary market conditions are likely to continue in the short run.

IV.1.5 Foreign Exchange Market: The rupee traded with an appreciating bias against the US dollar, strengthening by around 4 per cent in H1 of 2017-18 after six consecutive years of depreciation. A weaker US dollar and strong inflows drawn in by the resilience

of macro fundamentals, especially the narrowing of inflation differentials, also provided sustained upside to the rupee, as in the case of the EME currencies (Chart IV.13). Expectations of bolder reforms after the State election results, the narrowing of the current account deficit in 2016-17 – in its July 2017 External Sector Report, the IMF assessed India's external positions as "broadly in line" with medium-term fundamentals – and the implementation of the GST combined to lend an upside bias to the rupee. Notably, exchange rate volatility declined considerably: the coefficient of variation⁴ of the INR/USD exchange rate at 0.6 per cent during the first half of 2017-18 was lowest since 2005-06.

In terms of both the 36-currency nominal effective exchange rate (NEER) and the real effective exchange rate (REER), the rupee depreciated by 0.7 per cent and 0.6 per cent, respectively, between September 2017 and March 2017 (Table IV.1). Currencies of several major AEs and EMEs have appreciated against the US dollar since January 2017, largely reflecting the weakness of the US dollar, with the US dollar index



⁴ The coefficient of variation (CV) is a standardised measure of dispersion of a probability distribution or frequency distribution and can be calculated as a ratio of standard deviation to the mean.

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

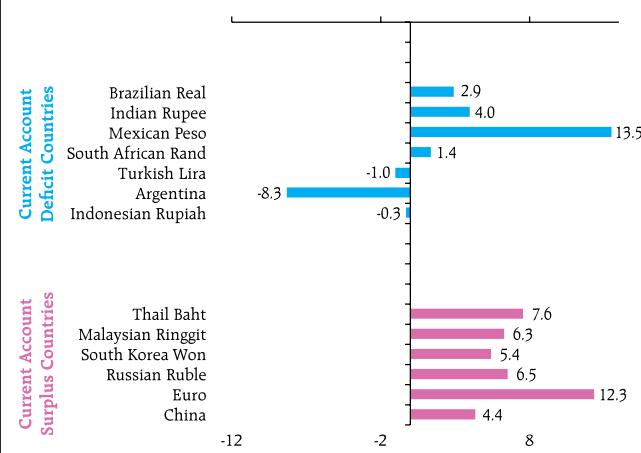
Item	Index: September 29, 2017 (P)	Appreciation (+) / Depreciation (-) (Per cent)	
		September 2017 over March 2017	March 2017 over March 2016
36-currency REER	116.0	-0.6	6.3
36-currency NEER	76.1	-0.7	4.8
6-currency REER	130.3	0.1	8.0
6-currency NEER	67.2	-2.7	5.5
₹/ US\$ (As on September 29, 2017)	65.4	2.2	1.7

P: Provisional.

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

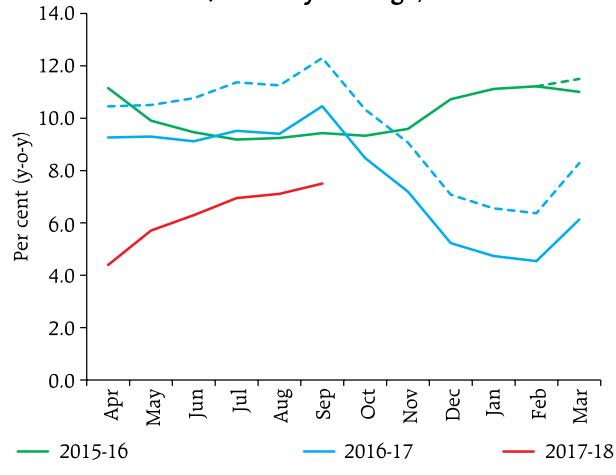
depreciating by 8.9 per cent over end-December 2016 (Chart IV.14).

IV.1.6 Credit Market: In the credit market, activity remained subdued although non-food credit staged a modest recovery during H1 of 2017-18, after a sharp deceleration in the preceding six months (Chart IV.15). A part of the credit slowdown in H2 of 2016-17 was overstated by the swapping of loans into UDAY bonds and the use of demonetised currency

Chart IV.14: Exchange Rate Changes of Major AEs and EMEs Against the US Dollar

(+) Appreciation and (-) Depreciation (September 29, 2017 over end-December, 2016).

Sources: Thomson Reuters Eikon and RBI.

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

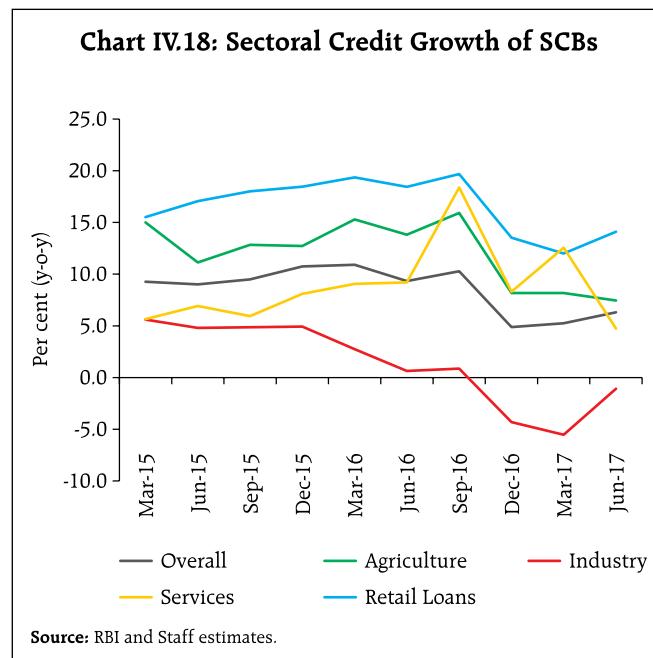
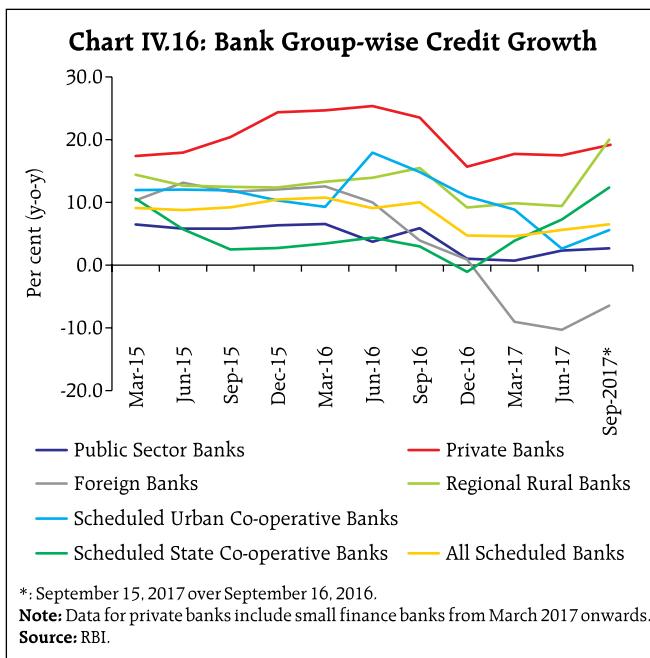
Note: Data for September 2017-18 are up to mid-September.

Source: RBI and Staff estimates.

notes for repaying bank loans. As stated in the MPR of April 2017, stressed assets – gross NPAs of scheduled commercial banks (SCBs) at 10.3 per cent of total advances and the stressed advances ratio at 12.6 per cent as on June 30, 2017 – and capital constraints, particularly in public sector banks, have hindered a robust revival in the flow of bank credit. The large divergence in credit growth across bank groups is striking, suggesting the role of several factors at play from both demand side and supply side (Chart IV.16).

The adverse impact of stressed assets in the banking system is also visible in the sectoral deployment of credit (Chart IV.17). Industry has the largest share of stressed assets in the banking system and, correspondingly, credit growth to industry remains in contraction mode. Within industry, sectors facing acute stress are also experiencing the largest declines in bank credit exposure, reflecting stepped-up efforts to deleverage and free up balance sheets from impairment (Chart IV.18).

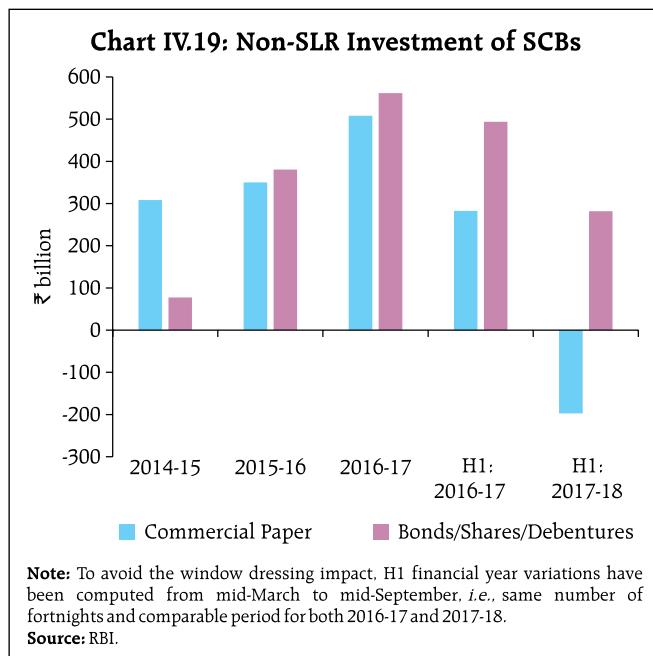
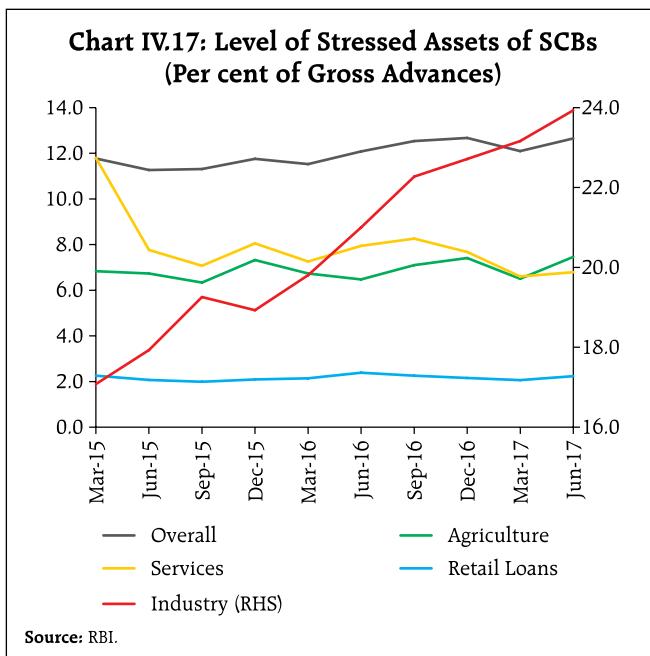
Banks also extend finance to the commercial sector of the economy by way of non-SLR investments, mainly in the form of investment in CPs and bonds/

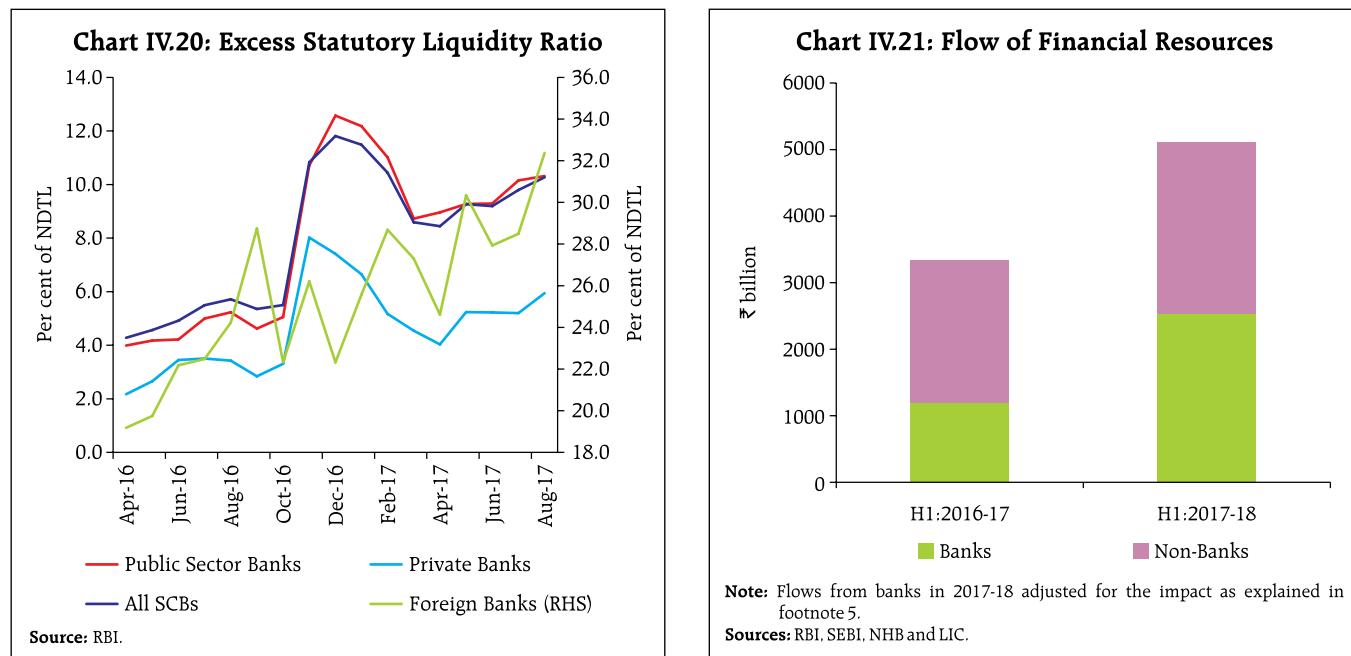


shares/debentures issued by non-financial corporates. In H1 of 2017-18, however, banks' non-SLR investment was lower than in previous years (Chart IV.19).

With the gradual reduction in surplus liquidity in the system and the pick-up in credit growth, the level of excess maintenance under the Statutory Liquidity Ratio (SLR) by the banking system declined from a high of 11.8 per cent in December 2016 to 9.2

per cent by June 2017 (Chart IV.20). The prescribed SLR was reduced by 50 bps to 20.0 per cent of NDTL effective the fortnight beginning June 24, 2017, aimed at freeing up resources of banks for lending to productive sectors of the economy. After the reduction in the SLR, however, excess SLR increased in July to 9.8 per cent and further to 10.3 per cent in August, reflecting banks' reluctance to lend in the face





of their asset quality concerns and capital constraints, lacklustre investment demand and stalled progress in unlocking stranded investment. The increase in excess SLR occurred across bank groups, but was the sharpest for foreign banks. Private banks, which have the lowest excess SLR among SCBs, also registered a sharp increase in August to 5.9 per cent of NDTL. High excess SLR has enabled banks to comfortably meet the liquidity coverage ratio (LCR) norms, relative to their counterparts in other jurisdictions.

The total flow of financial resources to the commercial sector was much higher during H1 of 2017-18 than in the comparable period of last year⁵, with both bank and non-bank funding being higher (Chart IV.21). Among non-bank sources of funding, the increase was mainly on account of foreign sources, particularly FDI. Among domestic non-bank sources,

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

(Amount in ₹ billion)

Item	April to August			
	2016-17		2017-18	
	Amount	Per cent of total	Amount	Per cent of total
A. Flow from Non-banks (A1+A2)	2,266	100.0	2,575	100.0
A1. Domestic Sources	1,802	79.6	1,616	62.8
1 Public issues by non-financial entities	60	2.6	80	3.1
2 Gross private placement by non-financial entities	615	27.2	449	17.4
3 Net issuance of CPs subscribed by non-banks #	720	31.8	148	5.7
4 Net credit by housing finance companies \$	332	14.7	510	19.8
5 Total accommodation by 4 RBI regulated AIFIs	4	0.2	-5	-0.2
6 NBFCs-ND-SI (net of bank credit) #	35	1.5	285	11.1
7 LIC's net investment in corporate debt, infrastructure and social sector	36	1.6	148	5.8
A2. Foreign Sources	463	20.4	959	37.2
1 External commercial borrowings / FCCB \$	-204	-9.0	47	1.8
2 Foreign direct investment to India \$	667	29.4	912	35.4

#: Up to June 2017 \$: Up to July 2017.

Sources: RBI, SEBI, NHB and LIC.

⁵ Financial year variations for banking aggregates are computed over the last reporting Friday of the previous financial year. In the case of 2017-18, however, the last reporting Friday of the previous year was March 31, 2017, which was also the balance sheet date. The financial year flow from the banking sector has therefore been computed from the penultimate reporting Friday of 2016-17. This avoids the impact of year-end balance sheet adjustments for computing the credit flows in 2017-18. If credit flows are computed from March 31, 2017, they will typically be negative for almost the entire H1.

Table IV.3: Transmission to Deposit and Lending Rates

(Variation in percentage points)

Period	Repo Rate	Term Deposit Rates		Lending Rates			
		Median Term Deposit Rate	WADTDR	Median Base Rate	WALR - Outstanding Rupee Loans	WALR - Fresh Rupee Loans	1-year Median MCLR
Sep. 15, 2017 over Dec. 2014	-2.00	-1.58	-1.95	-0.75	-1.25	-1.93	-1.10
Pre-Demonetisation (Dec. 2014 to Oct. 2016)	-1.75	-0.99	-1.26	-0.61	-0.75	-0.97	-0.15
Post-Demonetisation (since Nov. 2016)	-0.25	-0.59	-0.69	-0.14	-0.50	-0.96	-0.95

WADTDR: Weighted Average Domestic Term Deposit Rate. WALR: Weighted Average Lending Rate. MCLR: Marginal Cost of Funds Based Lending Rate. MCLR was introduced on April 1, 2016. Data on Median Term Deposit Rate, WADTDR and WALR on outstanding and fresh rupee loans pertain to August 2017. 1-year Median MCLR data relate to September 15, 2017.

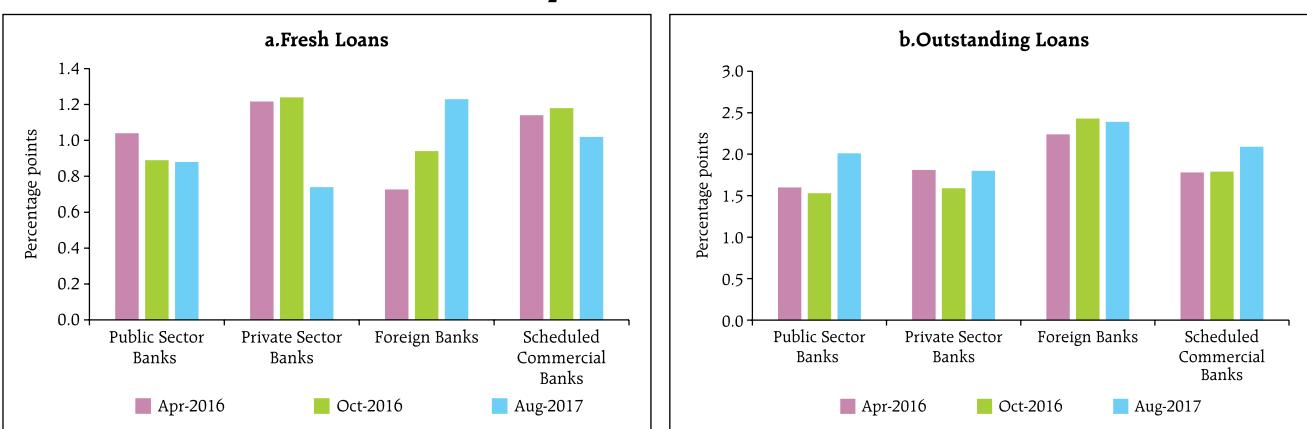
Source: RBI.

credit extended by housing finance companies and NBFCs increased (Table IV.2).

IV.2 Monetary Policy Transmission

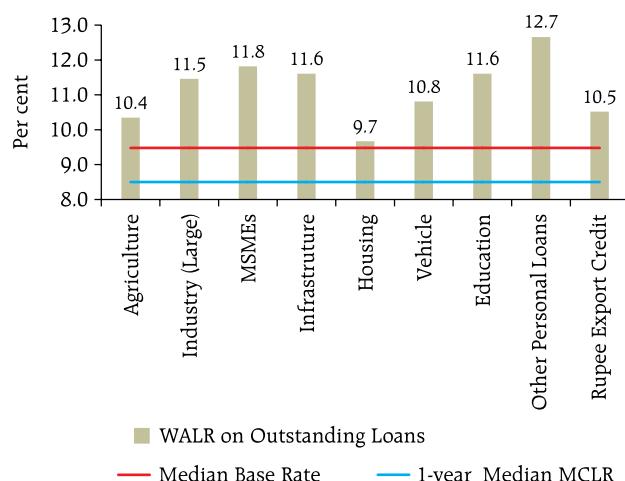
The massive influx of current account and savings account (CASA) deposits into the banking system post-demonetisation brought about an appreciable reduction in the cost of funds of banks and helped strengthen the transmission of monetary policy to lending rates. While transmission was relatively stronger to deposit rates before demonetisation, the transmission to marginal cost of funds based lending rate (MCLR) gained significant traction post-demonetisation (Table IV.3). Across bank groups, the spread between weighted average

lending rate (WALR) and MCLR remained higher in respect of outstanding rupee loans than in the case of fresh rupee loans, suggesting that transmission to rates on outstanding rupee loans was incomplete as they were contracted at a relatively higher cost and much of the legacy portfolios is linked to the base rate (which moved slower than the MCLR) (Chart IV.22). There also appears to have been divergence in base rate adjustments by banks to preserve margins on legacy portfolios given their weak balance sheets. Since December 2014, the median base rate of banks has declined by only about 75 bps as against the cumulative decline in the policy repo rate by 200 bps, suggesting that faster transmission to the entire loan book after the introduction of

Chart IV.22: Spread between WALR and MCLR

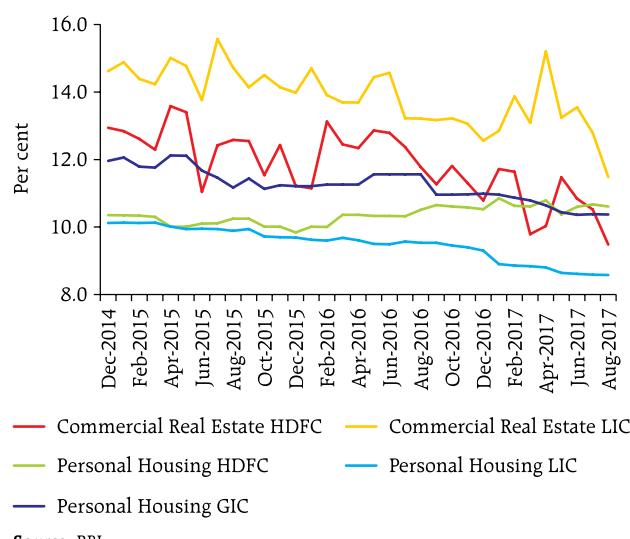
Source: RBI.

Chart IV.23: Sector-wise WALR (outstanding loans) relative to 1-year Median MCLR and Median Base rate – August 2017



Source: RBI.

Chart IV.24: NBFCs: WALR on Fresh Loans to Personal and Commercial Housing Segment



Source: RBI.

MCLR has not materialised. Overall, the transmission of policy rate cuts of 200 bps since January 2015 to fresh rupee loans has been to the tune of 193 bps under the MCLR regime. However, the transmission to outstanding rupee loans remained muted at only 125 bps, suggesting that there is further scope for banks to reduce rates on their legacy portfolios.

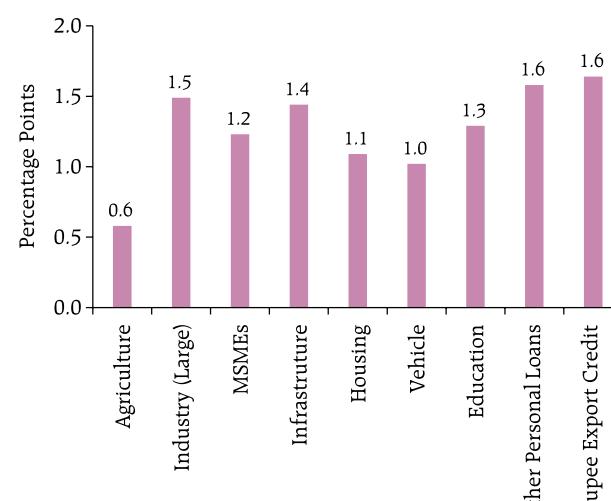
The WALR on outstanding housing loans are closest to the one year median MCLR as well as the base rate, suggesting that banks charge lower spreads on such loans. This could be due to lower credit defaults in the sector and also due to competition from non-banks (Charts IV.23 and IV.24).

The impact of competition is also evident from the greater transmission to large industry, which has access to alternative sources of funds, including the corporate bond market (Chart IV.25). Highly rated corporate bond yields, for example, have all along remained below the MCLR (Chart IV.26).

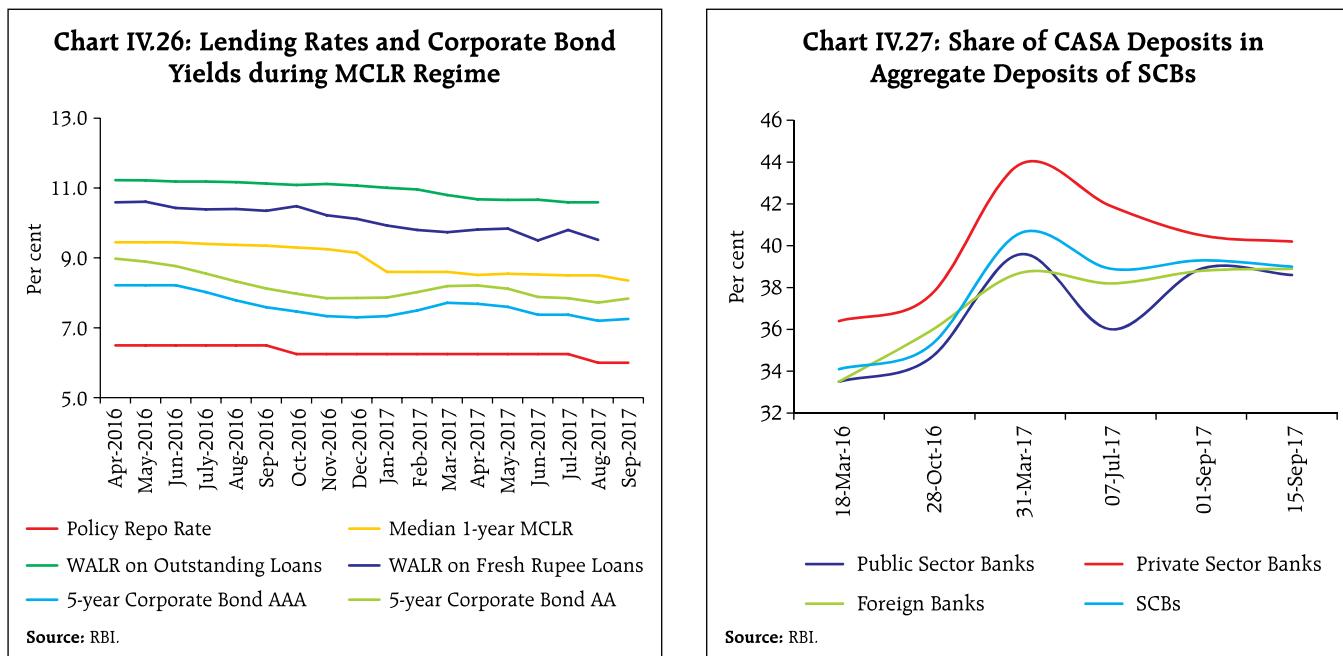
Since July 31, 2017, several banks have reduced savings bank deposit rates, breaking the "cartelised" rigidity which had made saving deposit rates highly insensitive to monetary policy impulses even after

banks were given full flexibility to set rates in October 2011. Flexible resetting of saving deposit rates, based on changing market clearing conditions and shifts in the stance of monetary policy, is important for greater flexibility in price setting behaviour on the asset side, given the high share of CASA deposits in total deposits (Chart IV.27). Competition from small savings on which the interest rates have generally been higher

**Chart IV.25: Sectoral Transmission
(Decline in WALR since December 2014)**



Source: RBI.



than term deposit rates, and which are not adjusted as per the announced formula by the Government, has also constrained transmission (Table IV.4).

The overall experience with the transmission of monetary policy since the switch over to the MCLR

regime from the base rate in April 2016 has not been fully satisfactory. Therefore, as indicated in the Statement on Developmental and Regulatory Policies of August 2, 2017, an internal Study Group (Chairman: Dr. Janak Raj) was constituted by the Reserve Bank to

Table IV.4: Interest Rates on Small Savings Instruments for Q3: 2017-18

(Per cent)

Small Saving Scheme	Maturity (years)	Spread \$ (Percentage point)	Average G-sec yield (%) of corresponding maturity (Jun to Aug 2017)	Formula based rate of interest (%) (applicable for Oct to Dec 2017)	GoI announced rate of interest (%) (applicable for Oct- Dec 2017)	Difference (Percentage point) not transmitted
(1)	(2)	(3)	(4)	(5) = (3) + (4)	(6)	(7) = (6) - (5)
Savings Deposit	-	-	-	-	4.00	-0.00
Public Provident Fund	15	0.25	6.70	6.95	7.80	0.85
Term Deposits						
1 Year	1	0	6.17	6.17	6.80	0.63
2 Year	2	0	6.25	6.25	6.90	0.65
3 Year	3	0	6.32	6.32	7.10	0.78
5 Year	5	0.25	6.48	6.73	7.60	0.87
Post Office Recurring Deposit Account	5	0	6.32	6.32	7.10	0.78
Post Office Monthly Income Scheme	5	0.25	6.44	6.69	7.50	0.81
Kisan Vikas Patra	115 Months	0	6.70	6.70	7.50	0.80
NSC VIII issue	5	0.25	6.63	6.88	7.80	0.92
Senior Citizens Saving Scheme	5	1.00	6.48	7.48	8.30	0.82
Sukanya Samridhi Account Scheme	21	0.75	6.70	7.45	8.30	0.85

\$ Spreads for fixing small saving rates as per GoI Press Release of Feb 2016.

Note: GoI decided to keep interest rates on small saving schemes for Q3:2017-18 unchanged.

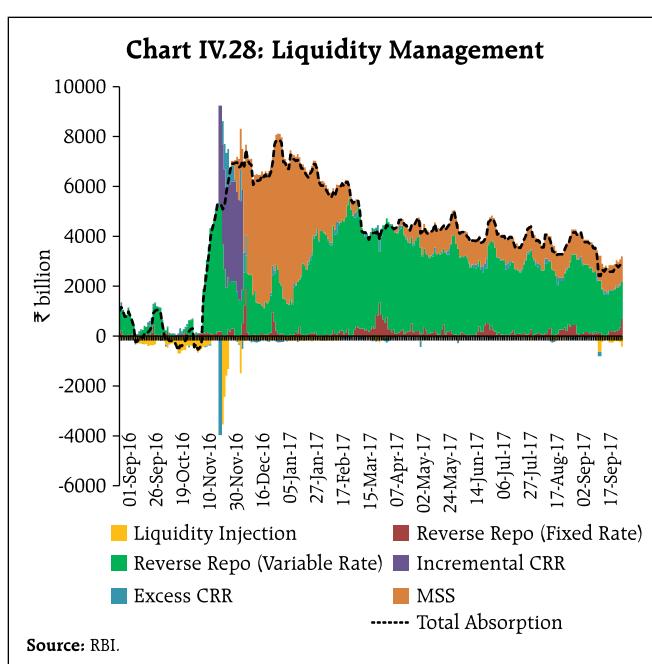
study various aspects of the MCLR system from the perspective of improving monetary transmission. The Study Group, which submitted its report on September 25, 2017, observed that internal benchmarks such as the base rate/MCLR have not delivered effective transmission of monetary policy. Arbitrariness in calculating the base rate/MCLR and spreads charged over them has undermined the integrity of the interest rate setting process. The base rate/MCLR regime is also not in sync with global practices on pricing of bank loans. The Study Group has, therefore, recommended a switchover to an external benchmark in a time-bound manner. (Please see the Report of the Study Group for further details).

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

The amended RBI Act 1934 requires the Reserve Bank 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. The RBI's approach to managing persistent large surplus liquidity in the post-demonetisation period using a mix of conventional and unconventional instruments was presented in the Monetary Policy Report of April 2017. Anticipating that surplus liquidity conditions may persist through 2017-18, the RBI provided forward guidance on liquidity in April 2017: (a) variable reverse repo auctions with a preference for longer term tenors to be used as the key instrument for absorbing the remaining post-demonetisation liquidity surplus; (b) issuances of T-Bills and dated securities under the MSS up to ₹1 trillion; (c) issuances of CMBs of appropriate tenors of up to ₹1 trillion in accordance with the memorandum of understanding (MoU) with the Government of India to manage enduring surpluses due to government operations; (d) open market operations with a view to moving system level liquidity to neutrality; and (e) fine tuning reverse repo/repo operations to modulate day-to-day liquidity.

In pursuance of this mandate, the Reserve Bank auctioned T-Bills (tenors ranging from 312 days to 329 days) aggregating ₹1 trillion under the MSS in April and May 2017. Incremental expansion in currency in circulation due to rapid remonetisation drained about ₹2 trillion of surplus liquidity during Q1 of 2017-18. However, this was more than offset by front-loaded expenditure by the Government and large redemption of Government securities. The average daily absorption of liquidity increased to ₹4,562 billion (including LAF, MSS and CMBs) during Q1 of 2017-18 from ₹3,141 billion at end-March 2017 (Chart IV.28).

In Q2, frequent recourse to WMAs and ODs by the Government augmented market liquidity even as currency in circulation absorbed up to ₹569 billion. In addition to regular 7-day, 14-day and 28-day variable rate reverse repo auctions, the Reserve Bank conducted open market operations to absorb ₹600 billion on a durable basis (₹200 billion each in July, August and September). With the Government's cash balance position improving during August, the net average daily absorption of liquidity declined from ₹5,126 billion (including LAF, MSS and CMBs) in the first week of August to ₹4,417 billion by end-August 2017. With advance tax outflows in mid-September, the



government cash balances increased to about ₹1,322 billion. Consequently, the surplus liquidity in the system declined to ₹2,771 billion by end-September. The combining of conventional and unconventional

instruments into a pro-active liquidity management strategy could have been influential in averting potential risks to inflation, both upside and downside (Box IV.2).

Box IV.2: Managing the Post-demonetisation Liquidity Glut: Minimising Risks to Inflation

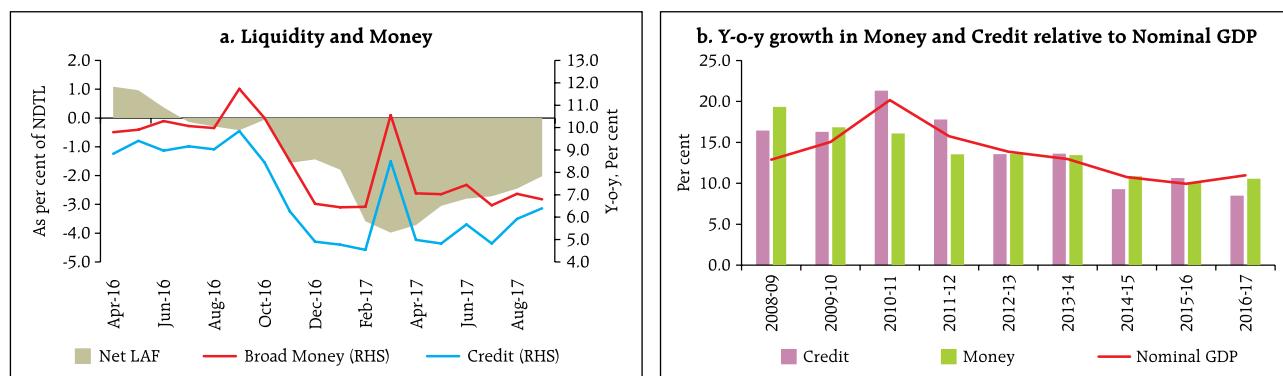
A causal relationship running from excess liquidity in the banking system to inflation draws from the Friedmanesque proposition: "*inflation is always and everywhere a monetary phenomenon*". For modern central banks conducting monetary policy by setting interest rates consistent with the price stability objective, monetary expansion is endogenous – the operating procedure that fully accommodates demand for liquidity (or demand for bank reserves) to keep the overnight money market rates aligned to the policy rate internalises the central bank's balance sheet. In the face of inadequate credit demand, there has been an involuntary build-up of excess reserves in the banking system since November 2016 reflecting the return of specified bank notes (SBNs) as deposits with banks. Pro-active liquidity management ensured that the WACR did not fall significantly below the LAF floor under the pressure of the resulting liquidity glut.

The variable that congeals all lead information about inflation is the monetary aggregate (or broad money), not central bank liquidity that only squares the daily system level mismatch. In fact, even though the net

liquidity surplus [as percentage of net demand and time liabilities (NDTL)] in India has been persistently high since demonetisation, broad money (M_3) and bank credit growth in the system have remained subdued (Chart IV.B.1). Thus, inflationary pressure could have emerged only if, illustratively, banks had leveraged on easing liquidity to expand credit at a rate faster than the growth in nominal GDP, leading to higher demand for money and stronger growth in broad money. A similar dynamic appears to be playing out under quantitative easing. Advanced economies, in fact, experienced deflation risks despite large surpluses of liquidity sloshing around (Reis, 2016).

In the literature, empirical evidence shows that excess liquidity has stoked equity price inflation (Balatti *et al*, 2017). It has also been found, however, that the dynamic effects of excess liquidity shocks on inflation and asset prices may depend on the state of the economy, in particular, on the state of the business cycle, the credit cycle, the starting position in the inflation and asset price cycles and the monetary policy stance (Baumeister *et al*, 2008). Drawing on this empirical literature, two

Chart IV.B.1: Liquidity Position and Monetary Aggregates

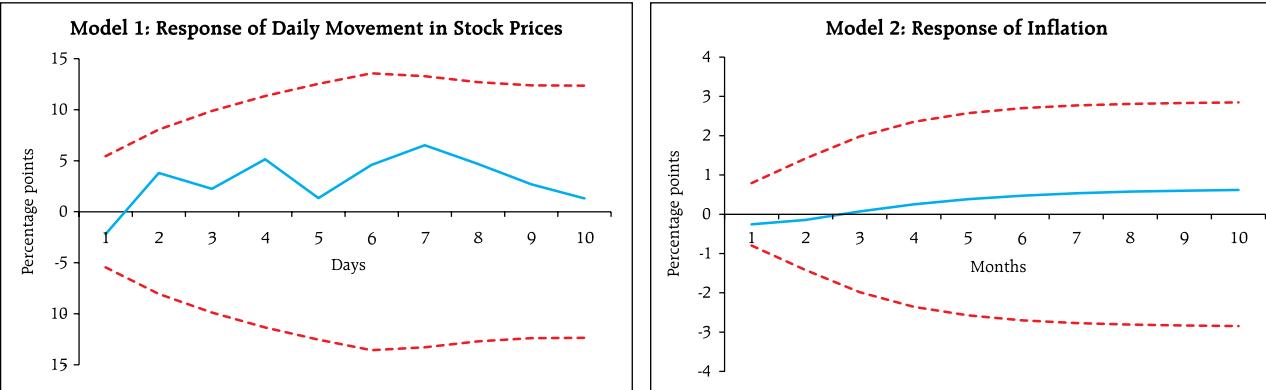


Notes: 1. In chart (a), liquidity injection is positive; absorption is negative.
2. Credit in both charts refers to the credit extended by the banking system, as captured in M_3 .

Sources: RBI and CSO.

(contd...)

Chart IV.B.2: Accumulated Response to Generalised One Standard Deviation Innovation to Excess Liquidity +/- 2 Standard Errors



Source: Staff Calculations.

vector auto-regression (VAR) models were used with four variables each, taking into account the frequency of data availability.

While daily data covering the period from July 2010 to July 2017 are used in the first model (daily net LAF as proportion to banks' NDTL; daily changes in the spread of the WACR over the effective Fed funds rate, daily changes in the BSE Sensex; and daily net FPI inflows into equity), monthly data covering the period from January 2011 to July 2017 are used in the second model (monthly change in net LAF as proportion to NDTL; spread of the WACR over the repo rate; annualised m-o-m changes in the headline CPI index; and annualised m-o-m changes in broad money as the four variables). All variables used in the two models are stationary, and the VAR lag length is determined by the standard Akaike information criterion/Schwarz information criterion.

Impulse response functions suggest that excess liquidity does not have a statistically significant impact on the paths of either equity price changes or CPI inflation (Chart IV.B.2). However, a standard deviation shock to broad money (*i.e.*, an increase) is found to be inflationary, as expected. This reflects that when excess

liquidity does not lead to higher money growth, it is not inflationary. An exogenous shock to liquidity in the model does not cause either broad money growth to increase or interest rates to fall. It is, therefore, not surprising that post-demonetisation surplus liquidity has not had any impact on inflation in India so far.

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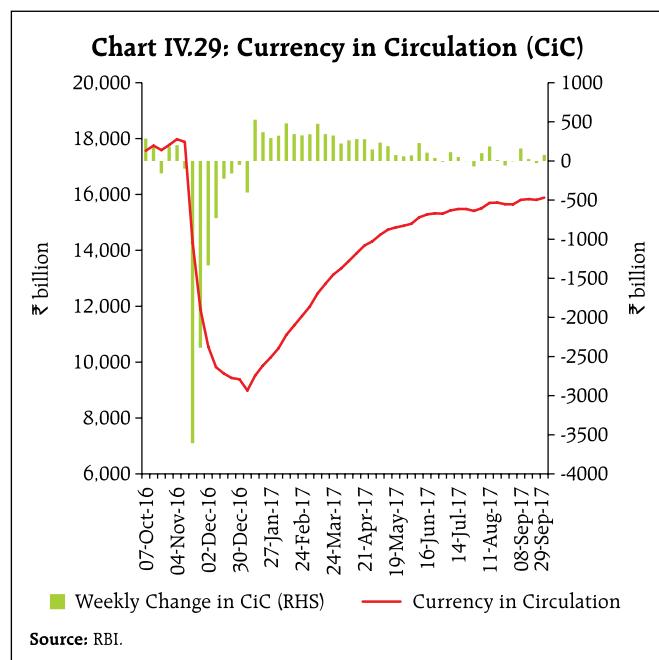
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With remonetisation, currency in circulation has steadily moved closer to the pre-demonetisation level (Chart IV.29), reaching about 88 per cent of the level

(₹17.97 trillion) prevailing around the immediate pre-demonetisation period.



Looking forward, surplus liquidity conditions are likely to persist in the second half of 2017-18, which will test the goals and instrumentation of the Reserve

Bank's liquidity management framework in its resolve to align the operating target of monetary policy – the WACR – with the policy repo rate and to enable the seamless evolution of other rates in the money market spectrum. Equity and bond markets will likely have to contend with volatility from investor sentiment shifts in response to both global and domestic factors. In the forex market too, the outlook for capital flows and the likely path of the US dollar would interact with domestic fundamentals and the current account deficit to impinge on fair values of the exchange rate and deviations therefrom. A robust revival in credit growth hinges on resolution of stressed assets in the banking system, early and adequate recapitalisation of public sector banks, and a durable pick-up in private investment demand. Ongoing efforts to determine a suitable external benchmark for bank lending rates should bring greater transparency in due course in the setting of interest rates by banks and help improve monetary policy transmission.

V. External Environment

Global growth has broadened to encompass several advanced and emerging market economies. World trade has also picked up and is likely to outpace global GDP growth. Inflationary pressures remain subdued across geographies, supported by soft commodity prices.

Since the MPR of April 2017, global growth has strengthened, spreading to several AEs and some commodity exporting EMEs as well, lifting the latter out of recession. Global trade has been buoyed by gradually firming demand, and exports and imports have risen in several economies. Crude prices have firmed up in Q3 on the easing supply glut. Metal prices have rallied, fuelled by resurgent Chinese demand, but have moderated in recent weeks. Growing risk appetite for financial assets led to a fall in bullion prices to multi-month lows, before a recent rally in September. Inflation remains below target levels in many AEs and subdued across several EMEs.

International financial markets have been buoyed by these global growth prospects and the accommodative monetary policy stance in major AEs. Financial markets have remained resilient to geopolitical events and more recently to the US Fed's decision to reduce the size of its balance sheet. Equity markets rallied in most AEs, while some correction has been witnessed in a few EMEs. Bond yields in major AEs hardened on expectations of monetary policy normalisation, but generally declined in EMEs with softening inflation and neutral or accommodative policy rates. The US dollar weakened to a multi-month low in September, while the euro rallied further. Movements in EME currencies were mixed but with a general tendency to appreciate.

V.1 Global Economic Conditions

The US economy expanded at a solid pace in Q2 after a weak performance in Q1. Buoyant labour market conditions, upbeat consumer confidence,

softer than expected inflation and a robust housing market supported consumer spending. Industrial production showed an upswing, while non-residential investment growth made a turnaround. Retail sales and business spending suggest that the growth momentum has been sustained in early Q3. However, recent hurricanes could temporarily weigh on economic activity.

In the Euro area, economic recovery has gained traction and broadened across constituent economies. GDP growth in Q2 improved over and above the relatively strong outturn in Q1. Unemployment fell consistently, and retail sales rose, lifting both business and consumer sentiment. Strengthening external demand and receding political uncertainty in the region supported the recovery.

In Japan, economic expansion accelerated in Q2 from its modest pace in the previous five quarters. Domestic demand – both consumption and investment – rose to a three-year peak. In spite of a weak currency and stronger global demand, net exports turned negative as imports rose, indicating resilient domestic activity. Industrial production accelerated and the labour market steadily tightened, even as financial conditions remained highly accommodative (Table V.1).

Among EMEs, some convergence in growth dynamics took place during H1:2017 as the economic performance of large commodity exporting economies and of several middle-income countries picked up. In China, growth regained some lost momentum in Q2, supported by fiscal stimulus and growing global demand. However, investment slowed down as lending costs rose and the property market cooled off, though manufacturing continued to expand in spite of tighter financial conditions. China's debt-fuelled growth remains a potential source of financial instability, triggering a rating downgrade by S&P Global Ratings for the first time since 1999.

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

(Per cent)

Country	Q2-2016	Q3-2016	Q4-2016	Q1-2017	Q2-2017	2017 (P)	2018 (P)
Advanced Economies (AEs)							
Canada	-1.4	4.1	2.7	3.7	4.5	2.5	1.9
Euro area	1.2	2.0	2.4	2.0	2.4	1.9	1.7
Japan	2.0	0.9	1.6	1.2	2.5	1.3	0.6
South Korea	3.6	2.0	2.0	4.4	2.4	2.7	2.8
UK	2.0	1.6	2.4	1.2	1.2	1.7	1.5
US	2.2	2.8	1.8	1.2	3.1	2.1	2.1
Emerging Market Economies (EMEs)							
Brazil	-1.6	-2.3	-1.8	4.1	1.0	0.3	1.3
China	7.6	7.2	6.8	5.2	6.8	6.7	6.4
Malaysia	4.4	5.6	5.2	7.2	5.2	4.5	4.7
Mexico	0.4	4.2	2.9	2.6	2.3	1.9	2.0
Russia*	-0.5	-0.4	0.3	0.5	2.5	1.4	1.4
South Africa	3.1	0.4	-0.3	-0.6	2.5	1.0	1.2
Thailand	3.8	2.0	2.1	5.3	5.4	3.0	3.3
<i>Memo:</i>	2016E		2017P		2018P		
World Output	3.2		3.5		3.6		
World Trade Volume	2.3		4.0		3.9		

E : Estimate, P : Projection, *: GDP y-o-y.

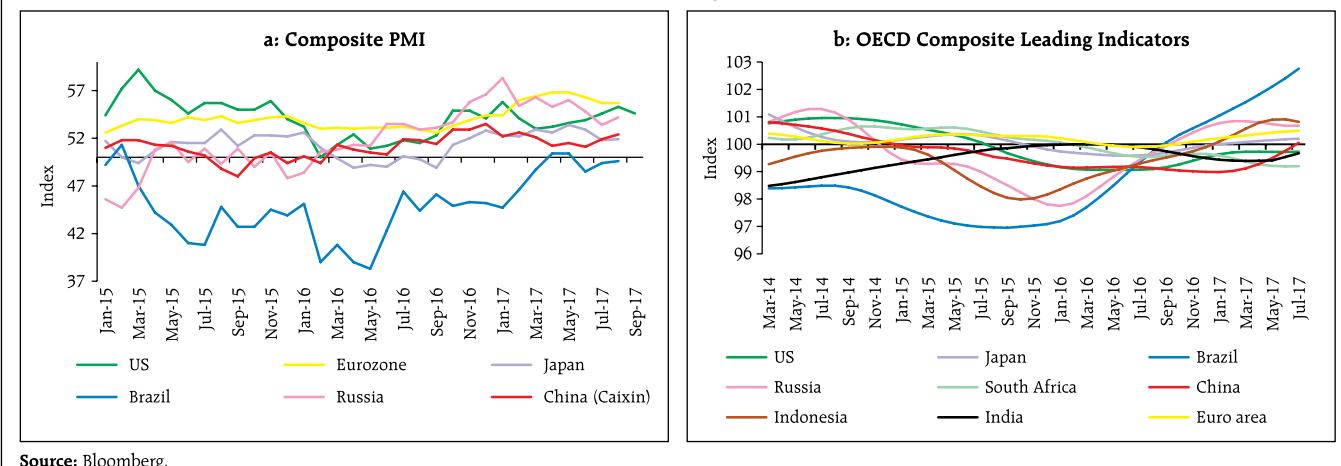
Sources: Bloomberg and IMF

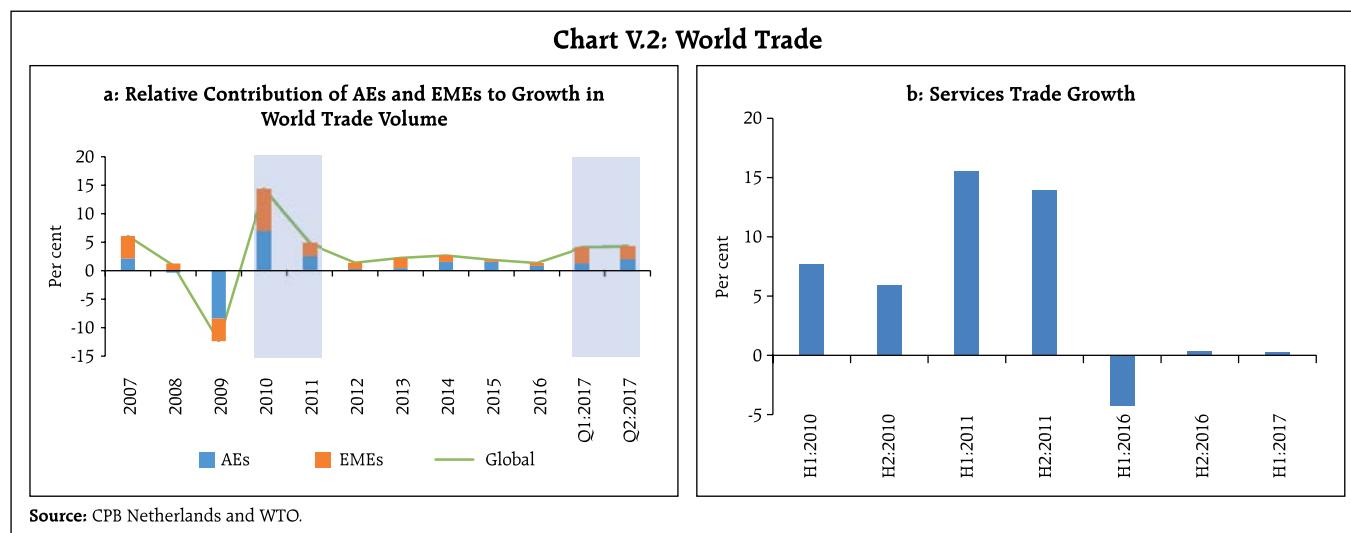
The Brazilian economy expanded for two consecutive quarters in Q2, but growth dynamics remained fragile due to the depressed labour market and political uncertainty. The Russian economy emerged out of two years of recession, supported by the strengthening

global environment and improving macroeconomic fundamentals. Middle-income Asian economies such as Indonesia, Malaysia and Thailand improved their growth performance during H1:2017, riding on stronger demand at home and from abroad. Growth in South Korea, which has risen markedly in Q1, decelerated in Q2 due to a sharp fall in Chinese tourism following a heightening of geopolitical tensions. South Africa exited recession in Q2, however, it continues to face economic and political challenges.

Composite purchasing managers' indices (PMI) indicate economic growth gaining momentum in the US, Eurozone and China, an ebbing of contractionary forces in Brazil and the rate of expansion slowing in the UK and Russia. The OECD's composite leading indicators (CLIs) point to prospects of growth gaining momentum in China and Brazil, and stable momentum in the US, Euro area and Japan (Chart V.1).

Growth in global merchandise trade volume accelerated in Q2:2017 from the lacklustre performance in 2016. Recent data suggest that this upturn has been broad-based as countries accounting for more than two-thirds of world trade (Brazil, China, EU, India, Japan Russia, and the USA) recorded higher trade activity than a year ago. However, it remains far below its level in 2010 (Chart V.2a).

Chart V.1: Leading Indicators



Services trade registered some deceleration in Q2:2017 in major economies (Chart V2.b), except the US. The World Trade Outlook Indicator (WTOI) of the World Trade Organisation (WTO) points to a modest pick-up in global services trade in Q3:2017. According to the WTO, this would crucially depend on the performance of travel, financial and business services, though the recovery in merchandise trade could also provide some impetus. Multilateral organisations, *viz.*, the IMF, the World Bank and the WTO project global trade volume rising in 2017 and 2018. However, major economies could face a tough policy environment with the imposition of Section 301 of US trade law that allows unilateral imposition of tariffs which, in turn, could attract geopolitical and retaliatory repercussions.

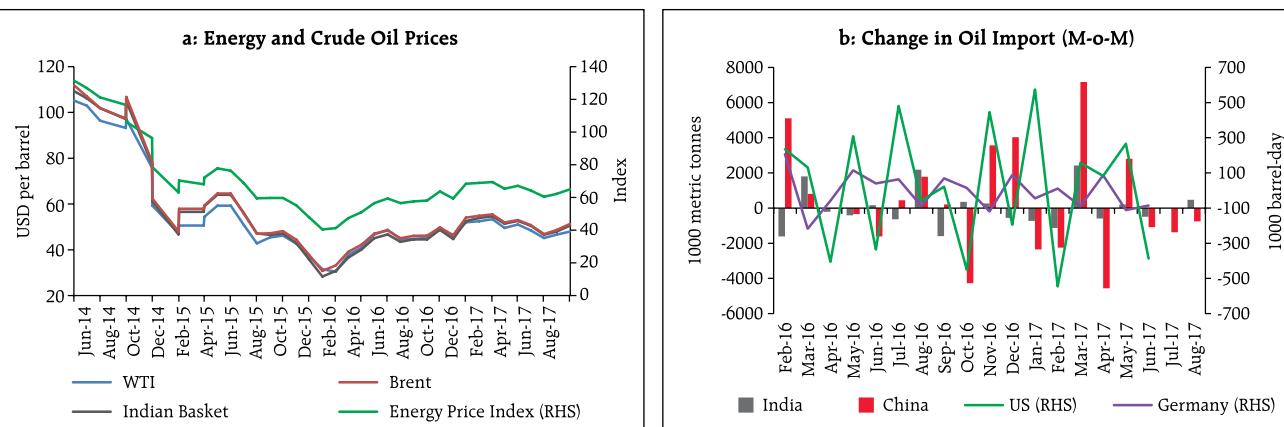
V.2 Commodity Prices and Global Inflation

Global commodity prices were affected by demand and supply imbalances, geopolitical tensions and commodity-specific factors, including weather conditions in respect of agricultural commodities. Commodity prices measured by the Bloomberg commodity index declined by 1.0 per cent during April to September 2017, despite some pick-up in late June-July on the upsurge in Chinese demand. Crude

oil prices declined by over 8.0 percent in Q2:2017 on account of high inventories, though supply cuts agreed by the OPEC led to some firming up in May. In late Q3, Brent crude prices hit a two-year high in September due to OPEC cuts, declining US crude oil inventories, adverse climatic conditions and geo-political concerns (Chart V.3). Although the recent hurricanes in the US have not impacted crude and gasoline production, the slowdown in localised refinery activity did cause supply disruptions for a short duration.

Base metal prices rose by 10.1 per cent during April to September 2017, led by copper, zinc, nickel, aluminium and tin, while prices of iron declined. Metal prices, particularly of copper, have rallied since mid-July, driven by increased demand from China where production itself was disrupted as a fallout of environmental inspections, however, some moderation was witnessed in recent weeks.

Gold and silver prices fell by about 1 per cent and 9 per cent, respectively, during Q2:2017 on increased risk appetite that reduced safe haven demand and also due to the weaker US dollar. During Q3:2017, precious metal prices, particularly of gold, have shown some recovery, hitting a 12-month high as tensions sparked between the US and North Korea.

Chart V.3: Oil Prices and Demand

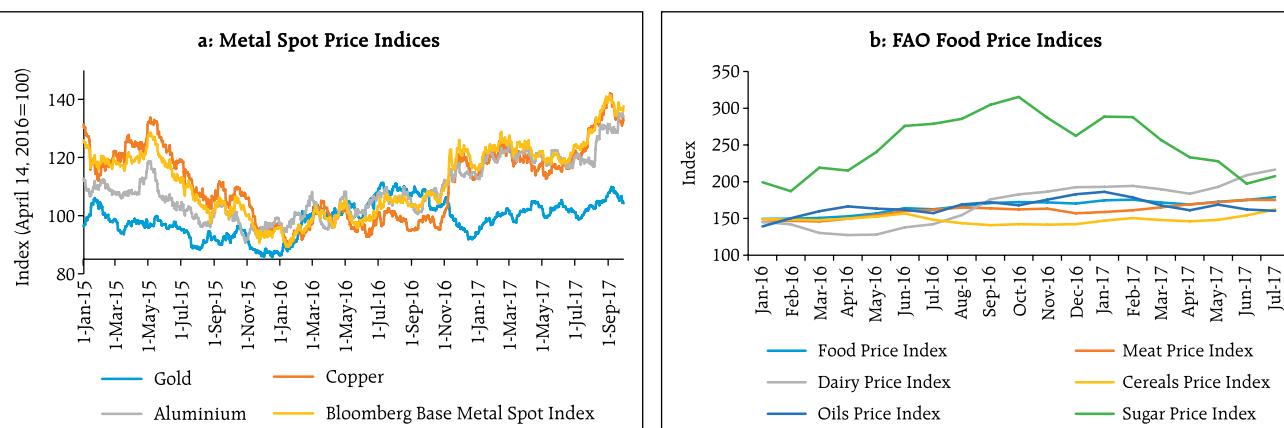
Sources: Bloomberg, World Bank and Petroleum Planning & Analysis Cell (PPAC).

The Food and Agriculture Organisation (FAO)'s food price index grew by over 2 per cent during Q2:2017, driven predominantly by dairy and meat prices. In contrast, edible oil and sugar price indices declined beginning January 2017. Cereal and sugar prices have started firming up from July (Chart V.4).

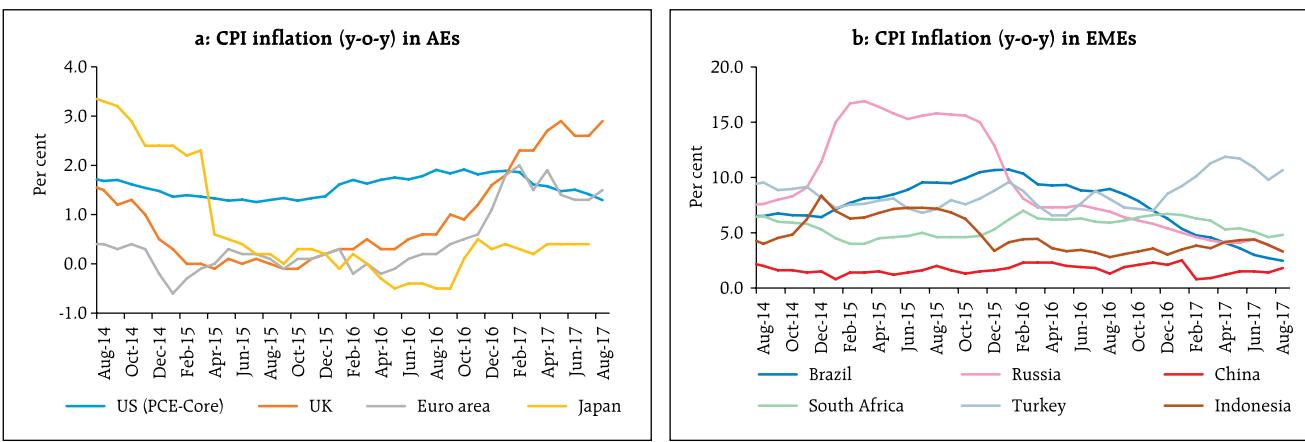
Soft commodity prices have kept inflation expectations quiescent in most AEs, even as economic activity and job creation have strengthened. Inflation in the US has remained well below the target in 2017. Euro area inflation has remained below the target due to still persisting slack in the labour market, despite

the sharp increase in energy prices in August. In Japan, inflation continued to be low at less than 0.5 per cent, though deflationary fears have disappeared (Chart V.5a).

Inflationary pressures in EMEs continued to be divergent (Chart V.5b). In China, inflation inched up in Q2 following a significant fall in Q1 and touched a seven-month high in September on account of strong domestic demand and increase in the prices of non-food items. In Russia, inflation fell for the first time below the target of 4 per cent in July, while in Brazil, it touched the lower band of the target of 3 per cent

Chart V.4: Metal and Food Prices

Sources: Bloomberg, FAO and World Bank.

Chart V.5: CPI Inflation in Select Economies

Source: Bloomberg.

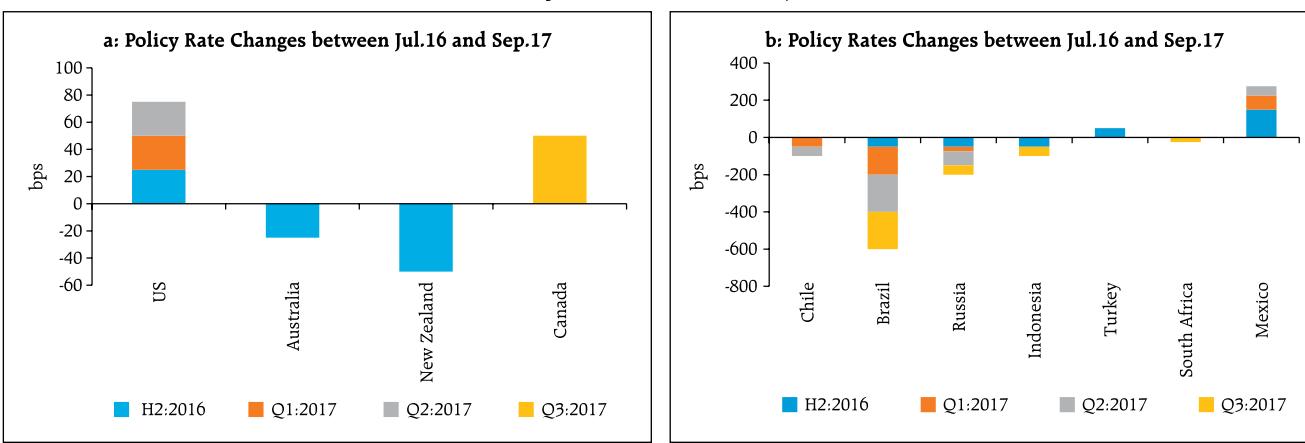
in June. In South Africa, inflation eased during 2017, primarily due to falling food inflation.

By contrast, Turkey has continued to face double digit inflation since February 2017, driven by high food, transport and housing prices. Inflation in Indonesia surpassed the target of 4 per cent in Q2 on upward revisions in administered electricity prices and festival-related hikes in food prices; however price pressures have moderated recently.

V.3 Monetary Policy Stance

The monetary policy stance has remained accommodative globally, though systemic central

banks are increasingly communicating an intent towards policy normalisation. In AEs, the US Fed and Bank of Canada raised policy rates. The US has announced balance sheet normalisation beginning October 2017. Sustained economic expansion and job gains have prompted the US Fed to raise policy rates four times in eighteen months, the last being in June. In its September policy meeting, the ECB kept its policy stance unchanged as inflation remains subdued and reaffirmed continuance of its ultra-easy policy stance. Similarly, the Bank of England kept its policy rate unchanged in August, but sounded hawkish as inflation remained above the target due

Chart V.6: Policy Rates in Select Major Economies

Source: Bloomberg.

to a weak currency. The Bank of Japan, however, has continued with its ultra-accommodative stance as inflation has remained low with growth still modest (Chart V.6a).

Even though monetary policy stances remained diverse in EMEs, several of them either reduced policy rates or kept them unchanged. In Brazil, the policy rate was cut for the sixth time in a row in 2017 so far, as the inflationary situation improved and remained resilient to political uncertainty, while the currency strengthened. South Africa cut its policy rate for the first time in five years in July as the economy slipped into recession in Q1 while inflation pressures eased. Russia cut its policy rate four times in 2017 so far, to support economic recovery, as inflation continued to decline.

Although China has kept key policy rates unchanged since October 2015 to control excessive debt financing, liquidity in the system has been tightened through measures such as open market operations. Chile has kept the policy rate unchanged since the rate cut effected in May to support

economic activity. Indonesia cut its policy rate twice in Q3 of 2017 on falling inflation and lower current account deficit. Turkey left its tight monetary policy stance unchanged as inflation remained elevated. By contrast, Mexico raised the policy rate in tandem with the US, given close economic linkages (Chart V.6b).

V.4 Global Financial Markets

Changing expectations about the course of monetary policy in AEs and improving economic prospects influenced risk perceptions of investors and drove global financial markets. Although markets have remained relatively calm and stable, the unwinding of the expansion in Fed's balance sheet since the global financial crisis is a potential vortex of tension going forward. With its massive holdings of government and mortgage-backed securities (MBS), the Fed is the most dominant player in the US bond market. Furthermore, a reduction of the Fed's balance sheet would echo growing confidence in the US economy. In turn, this has some implications for financial markets in EMEs (Box V.1).

Box V.1: Implications of Unwinding of US Fed Balance Sheet

Three rounds of quantitative easing (QE) in the aftermath of the global financial crisis swelled the Fed's balance sheet from US\$ 0.7 trillion in 2008 to the current level of US\$ 4.2 trillion, consisting of government securities of around US\$ 2.0 trillion, mortgage backed securities (MBS) of US\$ 1.7 trillion and other assets. This has had large spillover effects on EMEs through capital flows, though they remained smaller in countries with better fundamentals (Chen *et al.*, 2014). With the strengthening of economic growth in the US, the Federal Open Market Committee (FOMC) indicated a state-contingent unwinding of the balance sheet in June 2017 and outlined the broad principle: government securities and MBS would be allowed to roll off without reinvesting in a graduated manner, which would translate to an annual average reduction

of about US\$ 270 billion in government securities and US\$ 180 billion in MBS over the next two years. In its meeting held on September 20, 2017, the FOMC announced that it would initiate the balance sheet normalisation programme from October 2017.

A reversal of QE may involve standard channels of transmission. First, long-term bond yields could increase due to a rise in the term premium induced by higher supply for bonds, leading to steepening of the yield curve. The rise in bond yields, along with tightening of financial conditions, would lead to portfolio rebalancing from equity and risky assets to bonds. Second, a combination of portfolio substitution, risk aversion and safe haven demand could cause a rise in bond yields in the US which could, in turn,

(contd.)

induce large capital outflows from EMEs – the larger the external deficit and debt of a country, the higher could be capital outflows and the resultant currency depreciation *vis-à-vis* the US dollar.

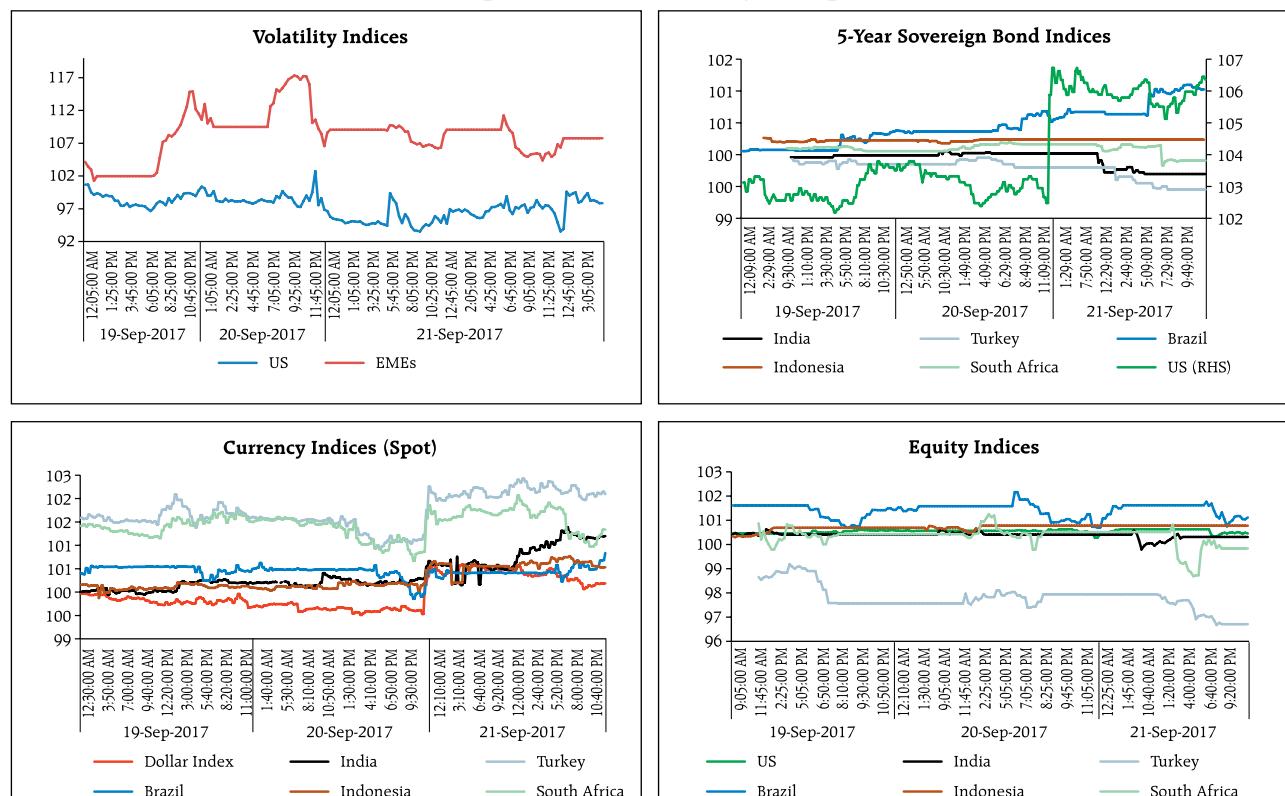
Third, consequent upon reallocation of funds by investors towards AEs, financial conditions in EMEs could tighten. Lower asset prices and increased cost of borrowing could adversely affect balance sheets of corporates and banks in these countries, potentially causing rollover problems on debt issued in international markets. Fourth, the exchange rate regime would play an important role in the spillover to the real economy and domestic financial markets. In the case of India, assuming a symmetric reversal of capital inflows during QE, Patra *et al.*, (2016) found that capital outflows could primarily take place through

the portfolio rebalancing channel (about 35 per cent of inflow during QE), followed by the liquidity channel¹.

A hypothetical exercise assuming Fed balance sheet reduction by about one-third to one-half and impacts that are symmetric to that of QE estimated in Bhattacharya *et al.*, (2015) in a Bayesian vector autoregression (BVAR) framework indicates the following: (i) in the US, bond yields could harden in the range of 40-60 bps, while the exchange rate could appreciate by about 1-3 per cent and equity prices could fall by about 4-6 per cent; and (ii) spillovers to financial markets in EMEs (including India) could result in bond yields firming up by 12-18 bps, the effective exchange rate depreciating by 0.3-1.0 per cent and equity prices falling by 2.7-5.3 per cent.

An event study based on 20 minutes interval data for a two-day window on September 20, 2017 was

Chart V.B.1: Impact of FOMC Meeting in September 2017

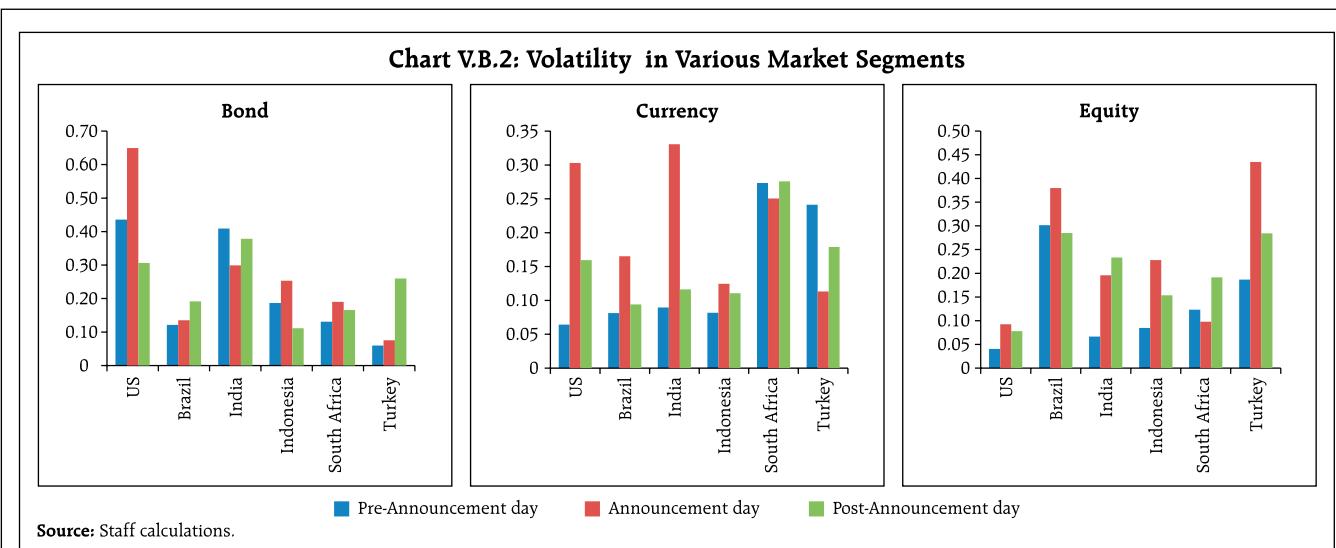


Note: Countries' time has been normalised to Indian Standard time (GMT +05:30 hours).

Source: Bloomberg.

(contd.)

¹ The liquidity channel of QE transmission refers to the higher availability of reserves that brings about a decline in liquidity premium, a reduction in borrowing costs and an increase in lending by *hitherto* credit-constrained lenders.



conducted to gauge the market reaction to the FOMC announcement of Fed balance sheet normalisation in five select economies, *viz.*, Brazil, India, Indonesia, South Africa and Turkey. Financial market volatility, as measured by the coefficient of variation² (CV), in various market segments, *viz.*, bond, currency and equity markets in the US and other five economies, increased generally. The immediate effect of the announcement was more pronounced on the bond market in the US, especially for the short tenor securities, while the impact on bond markets in other countries was muted (Chart V.B.1). In currency markets, the impact fell largely on the Turkish lira and the South African rand. The Indian rupee was also impacted to some extent. The impact on other currencies was muted. No significant impact was felt on equity markets.

The volatility triggered by the FOMC statement in EMEs was mixed (Chart V.B.2). While volatility in bond markets remained higher on the post-announcement

day in Brazil, South Africa and Turkey, it declined in Indonesia. In currency markets, volatility increased in all other countries, barring Turkey, and especially for India. In equity markets, volatility remained higher than the pre-announcement day for all other countries, barring Brazil.

References:

Bhattarai, Saroj, Arpita Chatterjee, and Woong Yong Park (2015), "Effects of US Quantitative Easing on Emerging Market Economies", Federal Reserve Bank of Dallas, Working Paper No. 255.

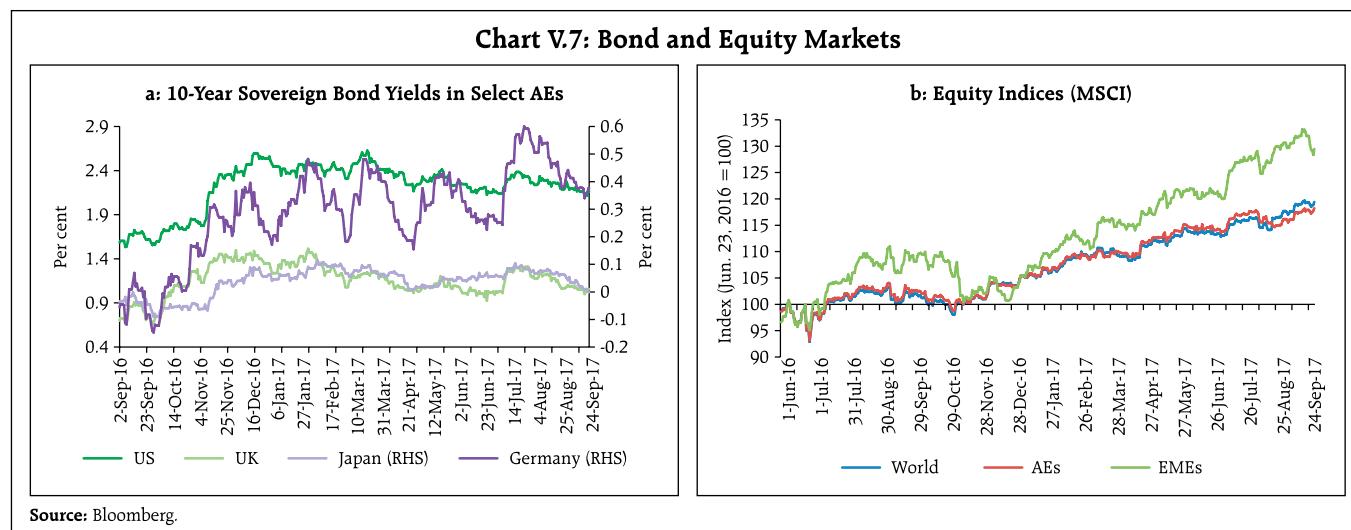
Chen, Jiaqian, Tommaso Mancini-Griffoli, and Ratna Sahay (2014), "Spillovers from United States Monetary Policy on Emerging Markets: Different This Time"? IMF Working Paper WP/14/240.

Patra M. D., J. K. Khundrakpam, S. Gangadaran, R. Kavediya and J. M. Anthony (2016), "Responding to QE Taper from the Receiving End", *Macroeconomics and Finance in Emerging Market Economies*, 9:2, 167-189.

Meanwhile, sovereign bond yields in many AEs rose in recent months, although they remain low by historical standards, given the still low policy rates and term premia suppressed by large assets holdings of central banks. Furthermore, in the US, yields are still trading lower than at the beginning of 2017, as

inflation has undershot expectations. In the Euro area, the benchmark 10-year German bond yield rose to a peak level in June as markets began to anticipate the possibility of reversal in monetary easing by the ECB. In the UK, a higher future policy path combined with an inflation rate above target led to a rise in bond yields. In Japan, however, bond yields remained close to zero under the active yield control policy of the Bank of Japan (Chart V.7a).

² The coefficient of variation (CV) is a standardised measure of dispersion of a probability distribution or frequency distribution and can be calculated as a ratio of standard deviation to the mean.



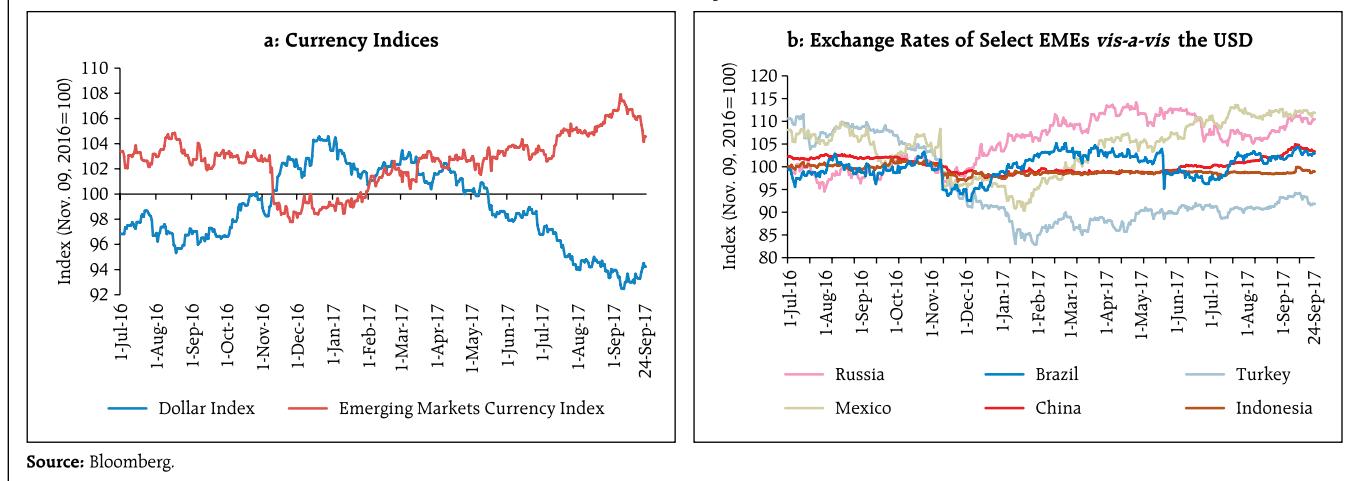
In emerging markets, falling inflation and generally unchanged policy rates led to a fall in yields of local currency denominated bonds. Improvement in economic prospects also led to a softening in bond yields in EMEs as risk premia declined and induced capital inflows into bond markets.

Equity prices have risen significantly across economies due to a combination of better global economic prospects, higher corporate earnings and increased risk appetite of investors. The Morgan Stanley Capital International (MSCI) World Index, which measures global equity prices, increased by 8.5 per cent between April and September 2017. Across the world, information technology (IT) share prices have gained the most. Bank share prices have also gained on the back of the rise in long-term government bond yields, which has raised the prospects of banks' interest earnings. In the US, the Fed's favourable stress test results further boosted share prices of banks. Similarly, in the Euro area, bank share prices were helped by national reform programmes undertaken by the European Commission. In Japan, a rally in share prices during 2017 was driven by stronger economic performance and higher corporate earnings, partly due to a weaker currency and a lower corporate tax. Equity prices in EMEs gained even

more on the positive outlook on economic growth. The gain has been particularly notable for emerging Asia, largely driven by equity prices of IT firms (Chart V.7b).

Currency markets were driven by expectations that monetary policy in some AEs would become less accommodative. However, the US dollar continued to depreciate against several currencies since Q1:2017, despite the raising of the policy rate by the Fed in June (Chart V.8a). On the other hand, the euro appreciated significantly against the US dollar and the Japanese yen, driven by a change in the forward guidance of the ECB on reviving economic conditions and marked reduction in political uncertainty. The Japanese yen has continued to fluctuate against the US dollar, but with a depreciating bias, driven by movements in 10-year government bond yield differentials between these two countries.

In EMEs, currency movements against the US dollar have been mixed, with country-specific factors playing a significant role (Chart V.8b). The Russian ruble, which strengthened in Q1, depreciated in Q2 due to falling crude oil prices. The Brazilian real depreciated sharply in Q2 and shed all the gains during Q1, following domestic political developments, but recouped in Q3. Most other EME currencies appreciated against the US dollar on surges of capital

Chart V.8: Currency Movements

inflows driven by varied factors such as stronger macroeconomic fundamentals (China, Thailand and emerging European economies); search for yields (South Africa where fundamentals remained weak); and easing of border tensions (Mexico).

In sum, a cyclical global economic recovery has gained some momentum which could likely be sustained in 2017. While economic growth has firmed

up in some major AEs, it is also showing a turnaround in EMEs. Although inflation pressures remain contained, the recent uptick in commodity prices pose an upside risk. The monetary policy stance will likely shift towards normalisation in major AEs and will be a critical factor in shaping the behaviour of global financial markets with concomitant implications for EMEs.

SPEECH

The Unfinished Agenda: Restoring Public Sector Bank Health in India
Viral V. Acharya

The Unfinished Agenda: Restoring Public Sector Bank Health in India*

Viral V. Acharya

Good evening, friends. I am grateful to the Indian Institute of Banking and Finance (IIBF) for inviting me to deliver the 8th R K Talwar Memorial Lecture. Every institution must remember, venerate and celebrate the immense contributions of those who helped lay down and solidify its character for future generations to build upon. Principles, careers and lives such as those of Mr Talwar inspire us, as in Henry Wadsworth Longfellow's *The Psalm of Life*:

*Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time;

Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.*

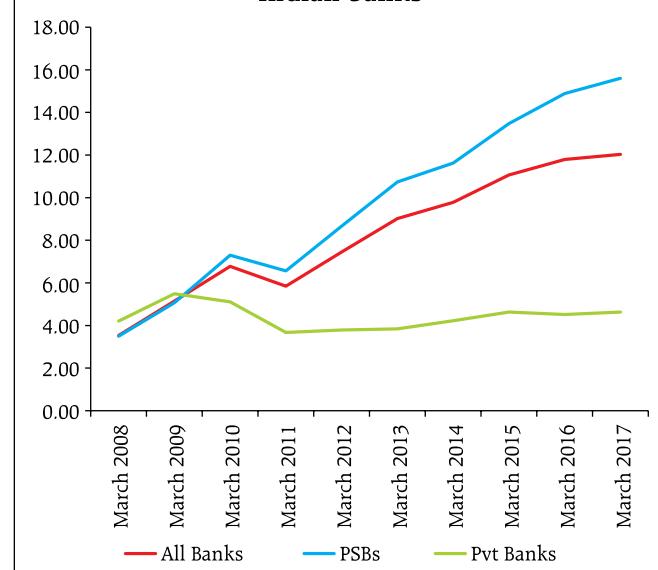
I hope that I can do some justice today to the rich legacy left behind by Mr Talwar, considered as the State Bank of India (SBI)'s greatest Chairman, the father of Small Scale Industries in India, a banker ahead of his time who put tremendous emphasis on a comprehensive credit appraisal culture at SBI, and someone who had the courage to stand up against political pressure on his bank to undertake targeted lending to undeserving borrowers (an episode

recollected in a booklet by another stalwart of Indian banking, Mr Narayanan Vaghul).

I was originally planning to speak on '**Monetary Transmission in India: Issues and Possible Remedies**', but I have since had a change of heart. The Reserve Bank's internal committee on improving monetary policy transmission will be finishing its report by the last week of September. I should neither pre-judge nor pre-announce its findings. Therefore, and at the cost of belabouring some of my remarks earlier in the year, I will focus on what remains, to my mind, the most important unfinished agenda in the journey we have embarked upon to resolve our stressed assets problem, *viz.*, that of restoring public sector bank health in India. I will indirectly end up conveying why bank credit growth and transmission are weak at the present.

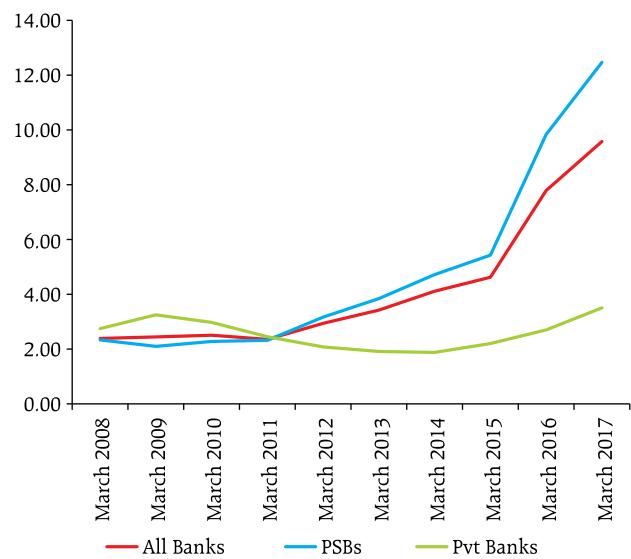
I would like to contend that a primary cause for the recent slowdown in our growth is the stress on the banking sector's balance-sheet, especially of public sector banks. As Figures A and B show using the Reserve Bank's data, the stress in bank assets has been mounting since 2011 and has now materially

Figure A: Stressed Assets Ratio (%) for Indian banks



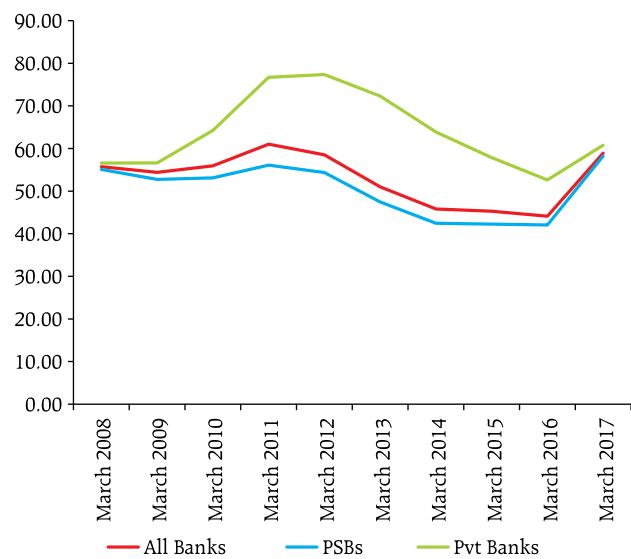
* Speech delivered at the 8th R K Talwar Memorial Lecture organised by the Indian Institute of Banking and Finance on September 7, 2017 at Hotel Trident, Mumbai. I would like to thank Vaibhav Chaturvedi, B Nethaji and Vineet Srivastava for valuable inputs, as well as my co-authors, Tim Eisert, Christian Eufinger and Christian Hirsch (parts of the Japanese and the European stories are based on joint work with them). All errors remain my own. Views expressed do not necessarily reflect those of the Reserve Bank of India.

Figure B: Gross NPA Ratio (%) for Indian Banks



crystallised in the form of non-performing assets (NPAs). Some banks are under the Reserve Bank's Prompt Corrective Action (PCA) having failed to meet asset-quality, capitalisation and/or profitability thresholds; others meet these thresholds for now but are precariously placed in case the provisioning cover for loan losses against their gross non-performing assets (Figure C) is raised to international standards

Figure C: Provision Coverage Ratio (%) for Indian Banks



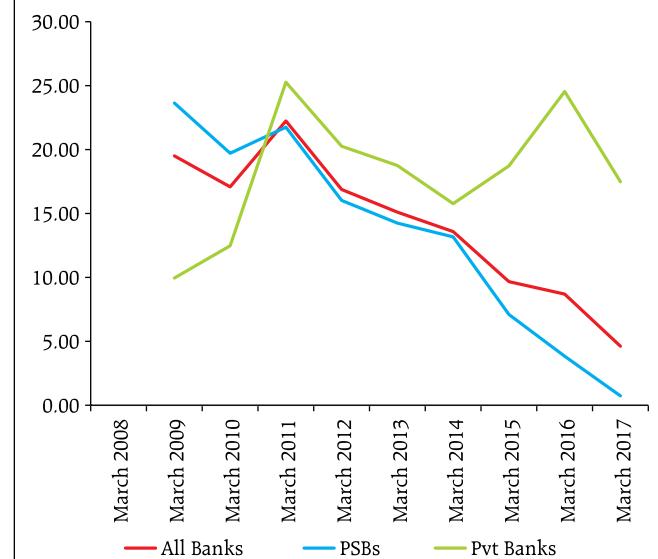
and made commensurate with the low loan recoveries in India.

When bank balance-sheets are so weak, they cannot support healthy credit growth. Put simply, under-capitalised banks have capital only to survive, not to grow; those banks barely meeting the capital requirements will want to generate capital quickly, focusing on high interest margins at the cost of high loan volumes. The resulting weak loan supply (see in Figure D, the steady decline in loan advances growth since 2011 for public-sector banks), and the low efficiency of financial intermediation, have created significant headwinds for economic activity.

A decisive and adequate bank recapitalisation, options for which I will lay out (again) at the end of my remarks, is a critical intervention necessary to address this balance-sheet malaise.

In a recent study from the Bank for International Settlements, Leonardo Gambacorta and Hyun-Song Shin (2016) document that bank capitalisation has a strong effect on bank loan supply: a one percentage point increase in a bank's equity-to-total assets ratio is associated with a 0.6 percentage point increase in its yearly loan growth. In fact, if a banking system

Figure D: Growth in Advances (% YoY) for Indian Banks



remains systematically undercapitalised and new lending is not kept under a tight supervisory watch, then the economy can suffer significantly from a credit misallocation problem, now commonly known as 'loan ever-greening' or 'zombie lending'. In particular, undercapitalised banks have an incentive to roll over loans to financially struggling existing borrowers so as to avoid having to declare these outstanding loans as non-performing. With these zombie loans, the impaired borrowers acquire enough liquidity to be able to meet their payments on outstanding loans. Banks thus avoid the short-run outcome that these borrowers might default on their loan payments, which would lower their net operating income, force them to raise provisioning levels, and increase the likelihood of them violating the minimum regulatory capital requirements. By ever-greening these loans, banks effectively delay taking a balance-sheet hit, while taking on significant risk that their borrowers might not regain solvency and remain unable to repay, now even larger loan payments. While unproductive firms receive subsidised credit to be just kept alive, loan supply is shifted away from more creditworthy firms.

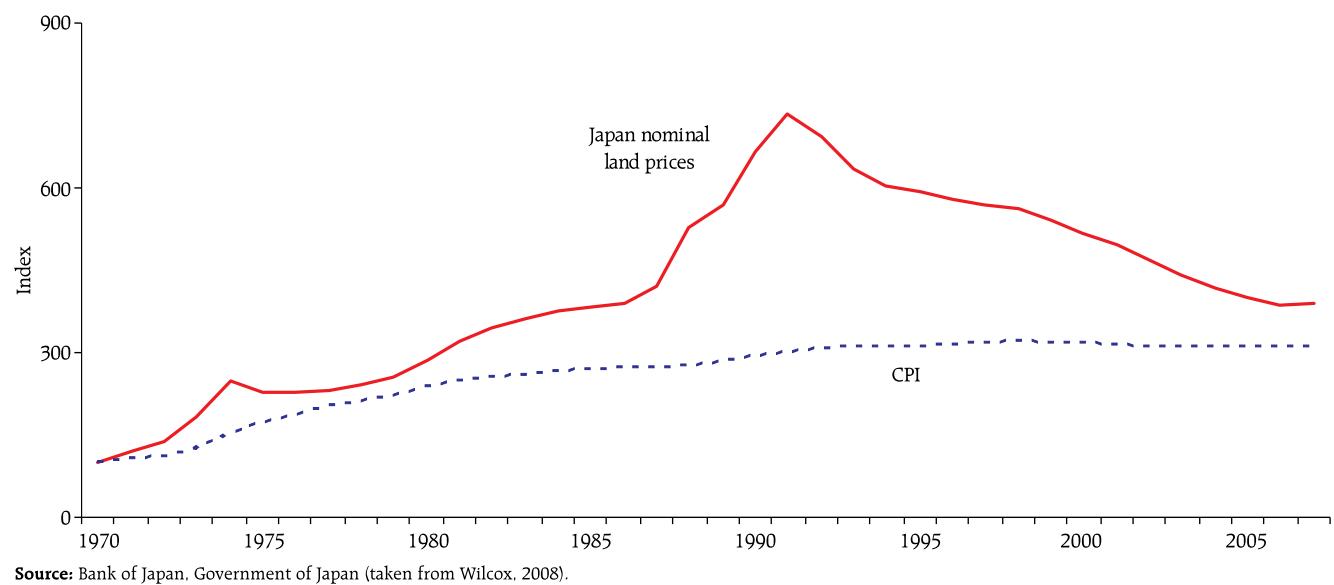
Adequate bank, more generally, financial intermediary, capitalisation is thus a pre-requisite for efficient supply and allocation of credit. Its central role in supporting economic growth is consistent with what other economies and regulators have experienced in the past episodes of banking sector stress. I will cover briefly the Japanese crisis in the 1990s and early 2000s, and the European crisis since 2009. Professor Ed Kane (1989), Boston College, had reached similar conclusions for the United States based on the Savings and Loans crisis of the 1980s.

The Japanese story

In the early 1990s, a massive real estate bubble collapsed in Japan (see Figure 1). This caused problems for Japanese banks in two ways: first, real estate assets were often used as collateral; second, banks held the affected assets directly, so that the decline in asset prices had an immediate impact on their balance sheets. These problems in the banking system quickly translated into negative real effects for borrowing firms along the lines I laid out above.

Subsequently, the Japanese government introduced several measures to stabilise the banking

Figure 1: Nominal Residential Land Prices and the Consumer Price Index (CPI) in Japan



**Table 1. Capital injection programmes in Japan
(in trillions of yen)**

Legislation	Date of injection	Amount injected
Financial Function Stabilisation Act	3/1998	1.816
Prompt Recapitalisation Act	3/1999-3/2002	8.605
Financial Reorganisation Promotion Act	9/2003	0.006
Deposit Insurance Act	6/2003	1.960
Act for Strengthening Financial Functions	11/2006-3/2009	0.162

Source: Hoshi and Kashyap (2010).

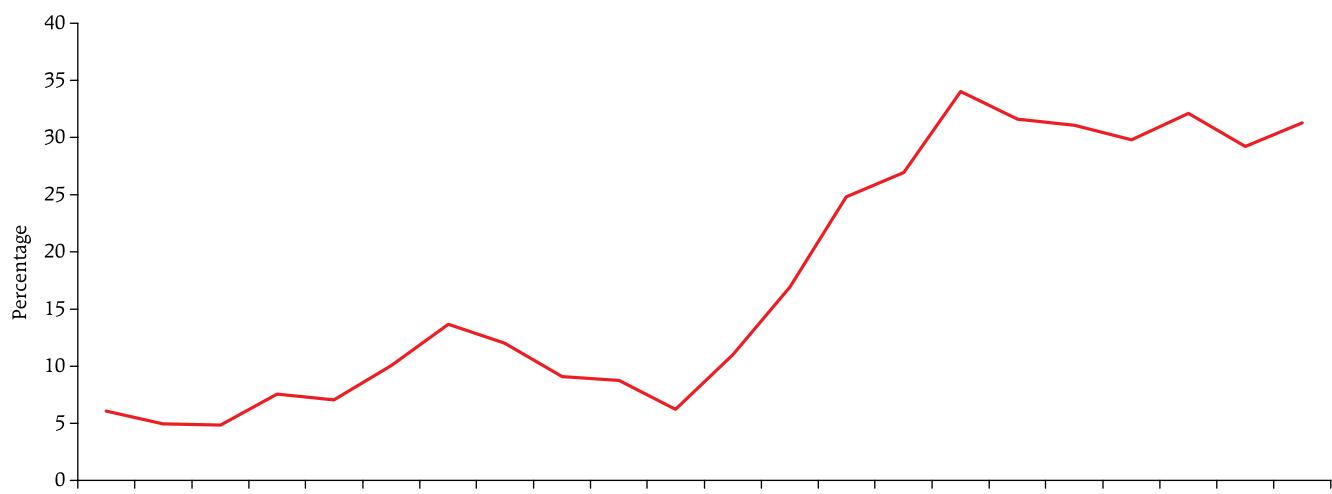
sector and spur economic growth. Among these measures were a series of direct public capital injections into impaired banks, mostly in the form of preferred equity or subordinated debt. However, as conclusively shown by Table 1 from Takeo Hoshi and Anil Kashyap (2010), bulk of the injections came after 1999, close to a decade after the collapse; the economic scale of earlier recapitalisations was small relative to that of banking sector's real estate exposure so that these half-hearted measures failed to adequately recapitalise the Japanese banking sector.

Joe Peek and Eric Rosengren (2005) were among the first to provide evidence that this inadequate recapitalisation of the Japanese banking sector had

major consequences for the allocation of credit to the real economy. Specifically, they showed that firms were more likely to receive additional loans if they were in fact in poor financial condition. They interpreted this finding as being consistent with the 'zombie lending' incentives of undercapitalised banks. Figure 2 shows that the percentage of zombie firms increased from roughly 5 per cent in 1991 to roughly 30 per cent in 1996. In related work, Mariassunta Giannetti and Andrei Simonov (2013) found that banks that remained weakly capitalised after the introduction of the recapitalisation programmes provided loans to impaired borrowers, while well-capitalised banks increased credit to healthy firms. The authors estimated that the credit supply to healthy firms could have been 2.5 times higher in 1998 if banks had been recapitalised sufficiently.

In turn, this misallocation of loans translated into significant negative effects for the real economy. Because zombie lending kept distressed borrowers alive artificially, the respective labor and supply markets remained congested; for example, product market prices were depressed and market wages remained high. Sectoral capacity utilisation also remained low,

Figure 2: Prevalence of Firms Receiving Subsidised Loans in Japan



Source: Caballero et al. (2008).

which destroyed the pricing power and attractiveness of investments for healthy firms competing in the same sectors. Ricardo Caballero, Takeo Hoshi and Anil Kashyap (2008) showed that, as a result of these spillover effects, healthy firms that were operating in industries with a high prevalence of zombie firms had lower employment and investment growth than healthy firms in those industries that did not suffer from zombie firm distortions. They estimated that due to the rise in the number of zombie firms, typical non-zombie firm in the real estate industry experienced a 9.5 per cent loss in employment and a whopping 28.4 per cent loss in investment during the Japanese crisis period.

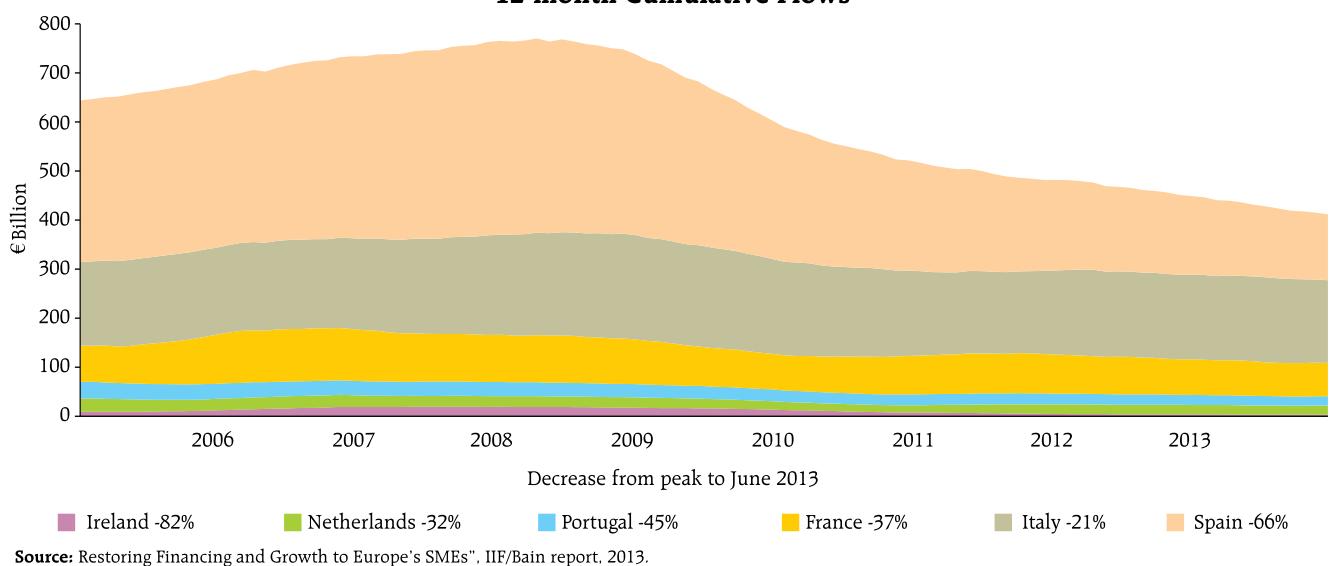
The European story

In recent years, the Eurozone has been following a similar path to that of the Japanese economy in the 1990s and early 2000s. Starting in 2009, countries on the periphery of the Eurozone drifted into a severe sovereign debt crisis. At the peak of the European debt crisis, in 2012, anxiety over excessive levels of national debt led to interest rates on government bonds issued by countries in the European periphery

that were considered unsustainable. For instance, from mid-2011 to mid-2012, the spreads of Italian and Spanish 10-year government bonds increased by 200 and 250 basis points, respectively, relative to German government bonds. Since this deterioration in the sovereigns' creditworthiness fed back into the financial sector (Acharya *et al.*, 2015), lending to the private sector contracted substantially in Greece, Ireland, Italy, Portugal, and Spain (the 'GIIPS' countries), as shown in Figure 3. In Ireland, Spain, and Portugal, for example, the volume of newly issued loans fell by 82 per cent, 66 per cent, and 45 per cent over the 2008–13 period, respectively.

However, the impact of the European debt crisis on bank lending is more complex than in the case of the Japanese banking crisis, which was mainly caused by the bursting of an asset price bubble and the resulting impairment of banks' financial health. While the European debt crisis also caused a hit on banks' balance sheets due to the substantial losses on their sovereign bond-holdings, in addition it created gambling-for-resurrection incentives for weakly capitalised banks from countries in the European periphery. These banks sought to increase their risky

Figure 3: Volume of New Loans to Non-financial Corporations up to 1 Million Euro, 12-month Cumulative Flows



domestic sovereign bond-holdings even further as they were an attractive bet to rebuild capital quickly given zero risk-weights. This incentive led to a crowding-out of lending to the real economy, thereby intensifying the credit crunch (Acharya and Steffen, 2014).

This vicious cycle of poor bank health and sovereign indebtedness became a matter of great concern for the European Central Bank (ECB), as this cycle endangered the monetary union as a whole. As a result, the ECB began to introduce unconventional monetary policy measures to stabilise the Eurozone and to restore trust in the periphery of Europe. Especially important in restoring trust in the viability of the Eurozone was the ECB's Outright Monetary Transactions (OMT) programme, which ECB President Mario Draghi announced in his famous speech in July of 2012, saying that "*the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough.*"

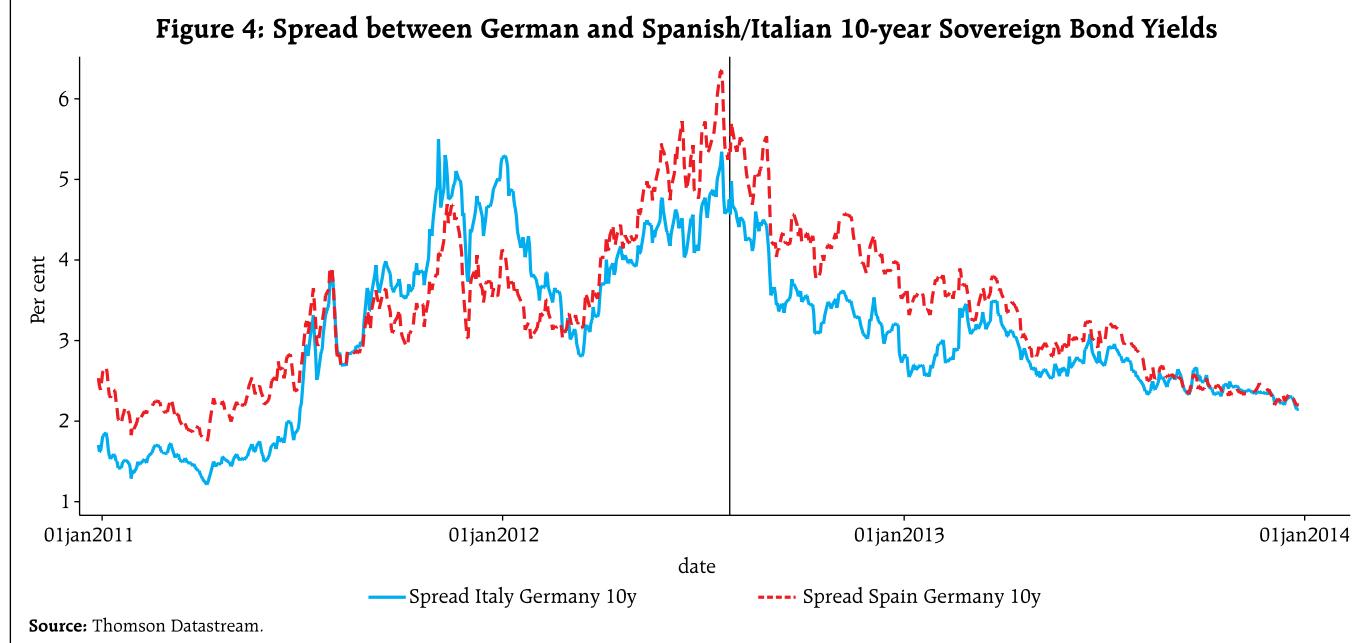
There is now ample empirical evidence that the announcement of the OMT programme significantly lowered sovereign bond spreads, as shown by Figure 4. By substantially reducing sovereign yields, the OMT

programme improved the asset side, the capitalisation, and the access to financing of banks with large GIIPS sovereign debt holdings.

Due to its positive effect on banks' capital, it was expected that the OMT announcement would lead to an increase in bank loan supply, thus benefiting the real economy. However, when Mario Draghi reflected on the impact of the OMT programme on the real economy during a speech in November 2014, he noted that *"[T]hese positive developments in the financial sphere have not transferred fully into the economic sphere. The economic situation in the euro area remains difficult. The euro area exited recession in the second quarter of 2013, but underlying growth momentum remains weak. Unemployment is only falling very slowly. And confidence in the overall economic prospects is fragile and easily disrupted, feeding into low investment."*

An important reason why the positive financial developments did not fully transfer into economic growth is as follows: An indirect recapitalisation measure like the OMT programme produced Treasury gains for banks (much like our policy-rate cuts do); such a measure allows the central bank to benefit

Figure 4: Spread between German and Spanish/Italian 10-year Sovereign Bond Yields



banks that hold troublesome assets, but it does not tailor the recapitalisation to banks' specific needs. As a result, some European banks remained significantly undercapitalised from an economic standpoint even post-OMT.

In joint work with Tim Eisert, Christian Eufinger and Christian Hirsch (Acharya *et al.*, 2016), I have confirmed that zombie lending is indeed the likely explanation for why the OMT programme did not fully translate into economic growth. Our study shows that banks that benefited more from the announcement but remained nevertheless weakly capitalised, extended loans to existing low-quality borrowers at interest rates that were below the rates paid by the most creditworthy European borrowers (high-quality public borrowers in non-GIIPS European countries, *e.g.*, Germany), a strong indication of the zombie lending behaviour.

Such lending did not have a positive impact on real economic activity of the zombie firms: neither investment, nor employment, nor return on assets changed significantly for firms that were connected to the under-capitalised banks. Similar to the spillovers during the Japanese crisis, the post-OMT rise in zombie firms had a negative impact on healthy firms operating in the same industries due to the misallocation of loans and distorted market competition. In particular, healthy firms in industries with an average increase in the proportion of zombie firms invested up to 13 per cent less capital and experienced employment growth rates that were about 4 per cent lower compared to a scenario in which the proportion of zombies stayed at its pre-OMT level. At extremis, for an industry in the 95th percentile increase in zombie firms, healthy firms invested up to 40 per cent less capital and experienced employment growth rates up to 15 per cent lower.

The Indian story: Can we end it differently?

In many ways, the problems experienced in Japan and Europe have been rather similar. Both regions went through a period of severe banking sector stress (although triggered by different causes) and failed to adequately recapitalise their struggling banking sectors. Bank and other stressed balance-sheet problems were neither fully recognised nor addressed expediently.

In Japan, a likely explanation for the cautious introduction of recapitalisation measures is that the authorities were afraid of strong public resistance when announcing large-scale recapitalisation, as initial smaller support measures had already caused public outrage. In addition, Japanese officials generally feared sparking a panic on financial markets when disclosing more transparent information about the health of banks.

In Europe, introducing proper recapitalisation measures has been challenging due to the political circumstances and constraints of the Eurozone. In contrast to a single country like Japan, 19 member states have to come together in the Eurozone and decide on a particular policy measure. In addition, even if a particular policy is helping the Eurozone as a whole, it might not be optimal for each individual country experiencing divergent economic outcomes.

While our initial conditions look ominously similar to these episodes and there are many parallels with how things have played out at our end, we may be fortunate in not having many of these constraints. Hence, I believe we can, we should, and in fact, we must do better. We are at a substantially lower per capita GDP than these countries and a sustained growth slowdown has the potential to really hurt economic prospects of the common man.

With this overall objective, let me first turn to what I consider the positives of the balance-sheet resolution agenda that the Reserve Bank and the Government of India have embarked upon. I will then highlight the unfinished part of this agenda – its Achilles' heel – the lack of a clear and concrete plan for restoring public sector bank health.

Resolution of Stressed Assets

To address cross-bank information asymmetry and inconsistencies in asset classification, the Reserve Bank created the Central Repository of Information on Large Credits (CRILC) in early 2014. To end the asset classification forbearance for restructured accounts, the Reserve Bank announced the Asset Quality Review (AQR) from April 1, 2015. The objective was to get the banks to recognise the hitherto masked stress in their balance sheets. The AQR is now complete. The Reserve Bank is neither denying the scale of the NPAs nor trying to forbear on them. Instead, it is fully focused on resolving the assets recognised as NPAs.

In the absence of an effective, time-bound statutory resolution framework, various schemes were introduced by the Reserve Bank to facilitate viable resolution of stressed assets. While the schemes were designed, and later modified, to address some of the specific issues flagged by various stakeholders in individual deals, the final outcomes have not been too satisfactory. The schemes were cherry-picked by banks to keep loan-loss provisions low rather than to resolve stressed assets. It is in this context that enactment of the Insolvency and Bankruptcy Code (IBC) in December 2016 can be considered to have significantly changed the rules of the game. It is still early days but the number of bankruptcy cases which have been filed by operational as well as financial creditors is encouraging. Many cases have been admitted and the 180 day clock (extendable by further 90 days) for these cases to resolve has already started.

The promulgation of the Banking Regulation (Amendment) Ordinance 2017 (since notified as an Act) and the subsequent actions taken thereunder, have made the IBC a lynchpin of the new resolution framework. There were legitimate concerns that if the Reserve Bank directs banks to file accounts under the IBC, it would enter the tricky domain of commercial judgments on specific cases. However, the approach recommended by the Internal Advisory Committee (IAC) constituted by the Reserve Bank for this purpose has been objective and has allayed these misgivings. The IAC recommended that the Reserve Bank should initially focus on stressed assets which are large, material and aged, in that they have eluded a viable resolution plan despite being classified as NPAs for a significant amount of time. Accordingly, the Reserve Bank directed banks to file insolvency applications against 12 large accounts comprising about 25 per cent of the total NPAs. The Reserve Bank has now advised banks to resolve some of the other accounts by December 2017; if banks fail to put in place a viable resolution plan within the timelines, these cases also will be referred for resolution under the IBC.

The Reserve Bank has also advised banks to make higher provisions for these accounts to be referred under the IBC. This is intended to improve bank provision coverage ratios (see Figure C) and to ensure that banks are fully protected against likely losses in the resolution process. The higher regulatory minimum provisions should enable banks to focus on what the borrowing company requires to turnaround rather than on narrowly minimising their own balance-sheet impacts. This should also help transition to higher, and more countercyclical, provisioning norms in due course.

Going forward, the Reserve Bank hopes that banks utilise the IBC extensively and file for insolvency proceedings on their own without waiting for regulatory directions. Ideally, in line with international

best practice, out-of-court restructuring may be the right medicine at 'pre-default' stage, as soon as the first signs of incipient stress are evident or when covenants in bank loans are tripped by the borrowers. Once a default happens, the IBC allows for filing for insolvency proceedings, time-bound restructuring, and failing that, liquidation. This would provide the sanctity that the payment 'due date' deserves and improve credit discipline all around, from bank supply as well as borrower demand standpoints, as borrowers might lose control in IBC to competing bidders.

Whither are we headed on restoring public sector bank health?

So far so good. Oft when on my couch I lie in vacant or in pensive mood, the realisation that we have put in place a process that not just addresses the current NPA issues, but is also likely to serve as a blueprint for future resolutions, becomes the bliss of my solitude! A whole ecosystem is evolving around the IBC and the Reserve Bank's steps have contributed to this structural reform. I smile and rest peacefully at night with this thought... But every few days, I wake up with a sense of restlessness that time is running out; we have created a due process for stressed assets to resolve but there is no concrete plan in place for public sector bank balance-sheets; how will they withstand the losses during resolution and yet have enough capital buffers to intermediate well the huge proportion of economy's savings that they receive as deposits; can we end the Indian story differently from that of Japan and Europe?

The Government of India has been infusing capital on a regular basis into the public sector banks, to enable them to meet regulatory capital requirements and maintain the government stake in the PSBs at a benchmark level (set at 58 per cent in December 2010, but subsequently lowered to 52 per cent in December 2014). In 2015, the Government announced the "*Indradhanush*" plan to revamp the

public sector banks. As part of that plan, a program of capitalisation to ensure the public-sector banks remain BASEL – III compliant was also announced. However, given the correctly recognised scale of NPAs in the books of public sector banks and the lower internal capital augmentation given their tepid, now almost moribund, credit growth, substantial additional capital infusion is almost surely required. This is necessary even after tapping into other avenues, including the sale of non-core assets, raising of public equity, and divestments by the government.

The Cabinet Committee on Economic Affairs has recently authorised an Alternative Mechanism to take decision on the divestment in respect of public sector banks through exchange-traded funds or other methods subject to the government retaining 52 per cent stake. Synergistic mergers may also be part of the broader scheme of things. The Union Cabinet has also authorised an Alternative Mechanism for approving amalgamation of public sector banks. The framework envisages initiation of merger proposal by the Bank Boards based on commercial considerations, which will be considered for in-principle approval by the Alternative Mechanism. This could provide an opportunity to strengthen the balance sheets, management and boards of banks and enable capital raising by the amalgamated entity from the market at better valuations in case synergies eventually materialise.

All of this is good in principle. There are several options on the table and they would have to work together to address various constraints. What worries me, however, is the glacial pace at which all this is happening.

Having embarked on the NPA resolution process, indeed having catalysed the likely haircuts on banks, can we delay the bank resolution process any further?

Can we articulate a feasible plan to address the massive recapitalisation need of banks and publicly

announce this plan to provide clarity to investors and restore confidence in the markets about our banking system?

Why aren't the bank board approvals of public capital raising leading to immediate equity issuances at a time when liquidity chasing stock markets is plentiful? What are the bank chairmen waiting for, the elusive improvement in market-to-book which will happen only with a better capital structure and could get impaired by further growth shocks to the economy in the meantime?

Can the government divest its stakes in public sector banks right away, to 52 per cent? And, for banks whose losses are so large that divestment to 52 per cent won't suffice, how do we tackle the issue?

Can the valuable and sizable deposit franchises be sold off to private capital providers so that they can operate as healthy entities rather than be in the intensive care unit under the Reserve Bank's Prompt Corrective Action (PCA)? Can we start with the relatively smaller banks under PCA as test cases for a decisive overhaul?

These questions keep me awake at nights. I fear time is running out. I worry for the small scale industries that Mr Talwar cared the most about, which are reliant on relationship-based bank credit. The *Indradhanush* was a good plan, but to end the Indian story differently, we need soon a much more powerful plan – "*Sudarshan Chakra*" – aimed at swiftly, within months if not weeks, for restoring public sector bank health, in current ownership structure or otherwise.

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ARTICLES

Non-Banking Finance Companies in India's Financial Landscape

Consumer Confidence Survey – Q2:2016-17 to Q1:2017-18

Non-Banking Finance Companies in India's Financial Landscape*

Non-Banking Finance Companies (NBFCs) have played an important role in the Indian financial system by complementing and competing with banks, and by bringing in efficiency and diversity into financial intermediation. NBFCs have evolved considerably in terms of operations, heterogeneity, asset quality and profitability, and regulatory architecture. Going forward, the growing systemic importance and interconnectedness of this sector calls for regulatory vigil.

Section 1: Introduction

The world over, non-banking financial entities complement the mainstream banking system in the process of financial intermediation. Regarded as shadow banks by the Financial Stability Board (FSB) – "entities and activities (fully or partially) outside the regular banking system"¹ (FSB, 2017), these specialised intermediaries leverage on lower transaction costs, financial innovations and regulatory arbitrage. In emerging economies, they often play an important role because of their ability to (a) reach out to inaccessible areas; and (b) act as not just complements but also substitutes to banks when the banks are confronted with stricter regulatory constraints. Customers tend to

find the non-banking entities convenient due to their quicker decision-making ability, prompt provision of services and expertise in niche segments. Apart from widening the ambit of and access to financial services, they also enhance the resilience of the financial system by acting as backup institutions when banks come under stress.

Given the nature of their operations, NBFCs also carry inherent risks including, excess leverage, amplification of procyclicality and over-reliance on wholesale funding (Ghosh, et al, 2012). Given their exposure to niche segments, they may also suffer from concentration of risks. They are often not allowed the benefit from the central bank as lender of last resort and from deposits insurance institutions.

The shadow banking sector in India primarily includes NBFCs and collective investment vehicles such as money market funds, fixed income funds, mixed funds, real estate funds, and securitisation-based credit intermediation like securitisation vehicles and structured finance vehicles. NBFCs are, however, distinctly different from shadow banking entities in other countries. They are regulated by the Reserve Bank of India (RBI) with priority being assigned to calibrating regulations to harmonise them with those of the banking sector regulations to minimise the scope of regulatory arbitrage. NBFCs are gaining increasing importance in the Indian financial system, accounting for about 9 per cent of the total assets of the financial sector – the third largest segment after scheduled commercial banks or SCBs (64 per cent) and insurance companies (14 per cent) (RBI, 2014).² Mapping of the degree of interconnectedness showed that NBFCs had the third largest bilateral exposures after banks and mutual funds. Also, they were the biggest receivers of funds, on a net basis, surpassing

* This article is prepared by Smt. K.M. Neelima and Shri Anand Kumar under the guidance of Dr. Pallavi Chavan and Dr. Jai Chander in the Division of Non-Bank Financial Studies of the Department of Economic and Policy Research, Reserve Bank of India. The valuable insights as well as data support from the Department of Non-Banking Supervision are gratefully acknowledged. The views expressed in this article are those of the authors and do not represent the views of the Reserve Bank of India.

¹ All financial institutions not classified as banks, insurance corporations, pension funds, public financial institutions, central banks or financial auxiliaries; and as a narrow measure, finance companies, leasing companies, factoring companies, money market mutual funds, fixed income funds, real estate funds and securitisation vehicles. Financial auxiliaries consist of financial corporations that are principally engaged in activities associated with transactions or with providing the regulatory context for these transactions but in circumstances that do not involve the auxiliary taking ownership of the financial assets and liabilities being transacted (System of National Accounts, 2008).

² The remaining segments are mutual funds with a share of about 6 per cent, specialised financial institutions (3 per cent), urban cooperative banks and regional rural banks (4 per cent) (RBI, 2014).

banks, signifying their systemic importance. In the context of the slowdown in bank credit in the wake of asset quality stress in recent years, double-digit growth in credit by NBFCs has distinctly emphasised their role as credit provider in India's financial system.

Against this backdrop, this article explores recent developments in the operations of NBFCs in India across time as well as in a cross-country perspective, based on data from the FSB database and supervisory returns filed by NBFCs with the Reserve Bank. The rest of the article is divided into seven sections. Section 2 provides a comparative perspective of the Indian non-banking financial sector relative to counterparts in other countries. Section 3 provides an overview of the structure of the non-banking financial institutions (NBFIs) sector in India. Section 4 discusses salient regulatory developments in this sector in recent years, particularly those aimed at addressing stability and inclusion. Section 5 analyses key indicators of the NBFCs sector's balance sheet, particularly of the NBFC-Non-Deposit taking Systemically Important

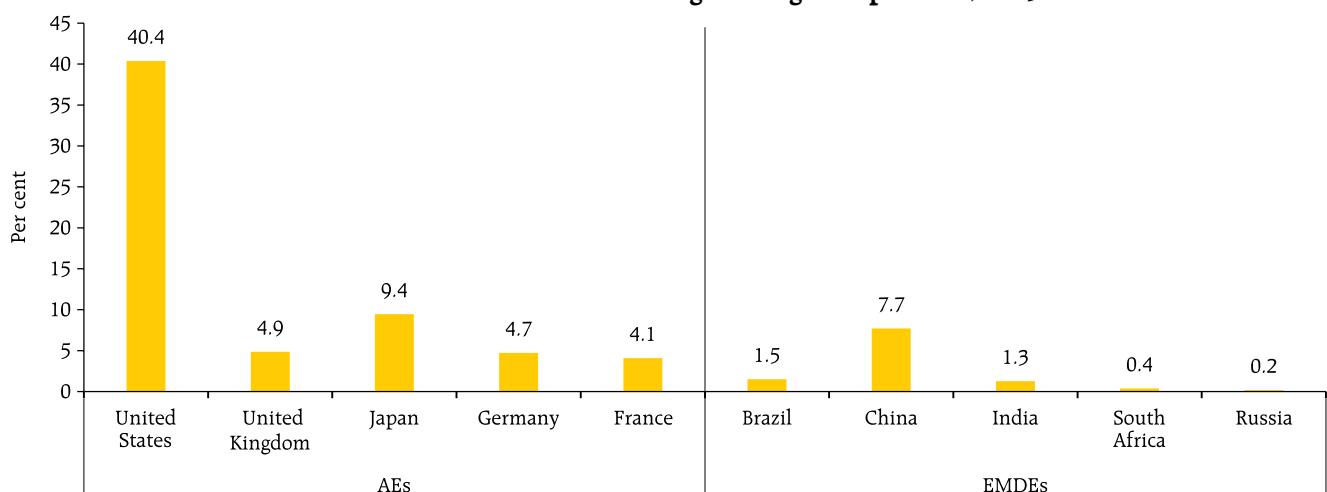
(ND-SI) segment. Section 6 presents the sectoral distribution of credit from NBFCs and implications for the process of financial inclusion. Section 7 presents salient indicators of the financial health of NBFCs and wherever possible compares them with the banking system.³ Section 8 provides concluding observations and the way forward.

Section 2: A Cross Country Perspective

There has been a steady expansion in the size of the global shadow banking sector in recent years from US\$ 31 trillion in 2010 to US\$ 34 trillion in 2015 (FSB, 2017). The size of India's shadow banking sector stood at US\$ 436 billion, accounting for 1.3 per cent of the total global shadow banking assets in 2015 (Chart 1). Shadow banking assets were placed at about 14 per cent of total domestic financial assets in 2015 (Chart 2).

Global shadow banking assets were primarily concentrated in the advanced economies (AEs), particularly the United States and the United Kingdom.

Chart 1: Share of shadow banking assets-global position, 2015

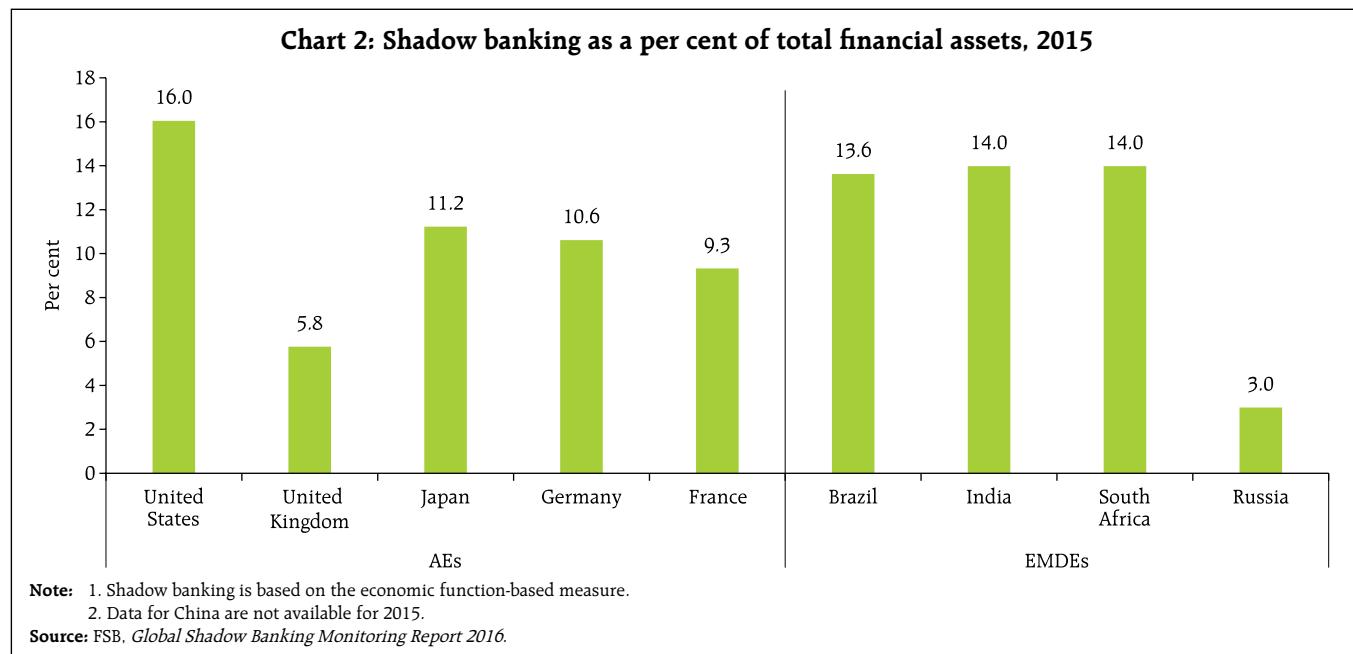


Note: 1. Shadow banking is based on the economic function-based measure of 28 jurisdictions, which together accounted for about 80 per cent of global GDP and 90 per cent of global financial assets.

2. Data for China pertain to 2014.

Source: Computed from FSB, *Global Shadow Banking Monitoring Report 2016*.

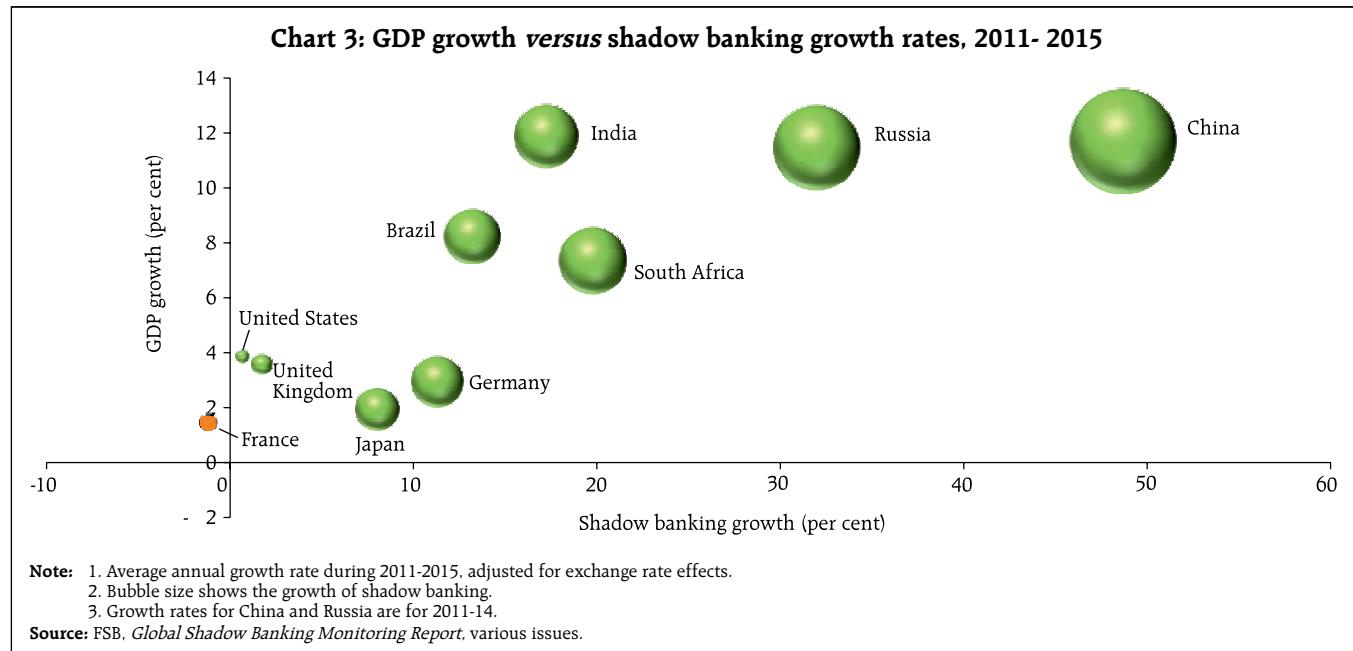
³ The business models of banks and NBFCs are inherently different. Banks lend to multiple segments, while generally, NBFCs specialise in lending to a specific segment.



AEs accounted for about three-fourth of the global shadow banking assets. The higher share of AEs in shadow banking activities could partly be attributed to tighter regulation of mainstream banks and low interest rates. Although securitisation declined in

these economies, less risky shadow banking activities such as those undertaken by investment funds have expanded rapidly in recent years (Monaghan, 2014).

Despite being a small player in the global shadow banking business, India has stood out among both



AEs and emerging market and developing economies (EMDEs) in terms of high growth, after China and Russia which reported growth rates exceeding 10 per cent in shadow banking assets between 2011 and 2015 (Chart 3). The surge in growth of shadow banking in China was primarily demand-driven, emanating from developers, local governments and small and medium enterprises (SMEs), as access to bank credit became restricted (Bottelier, 2015).

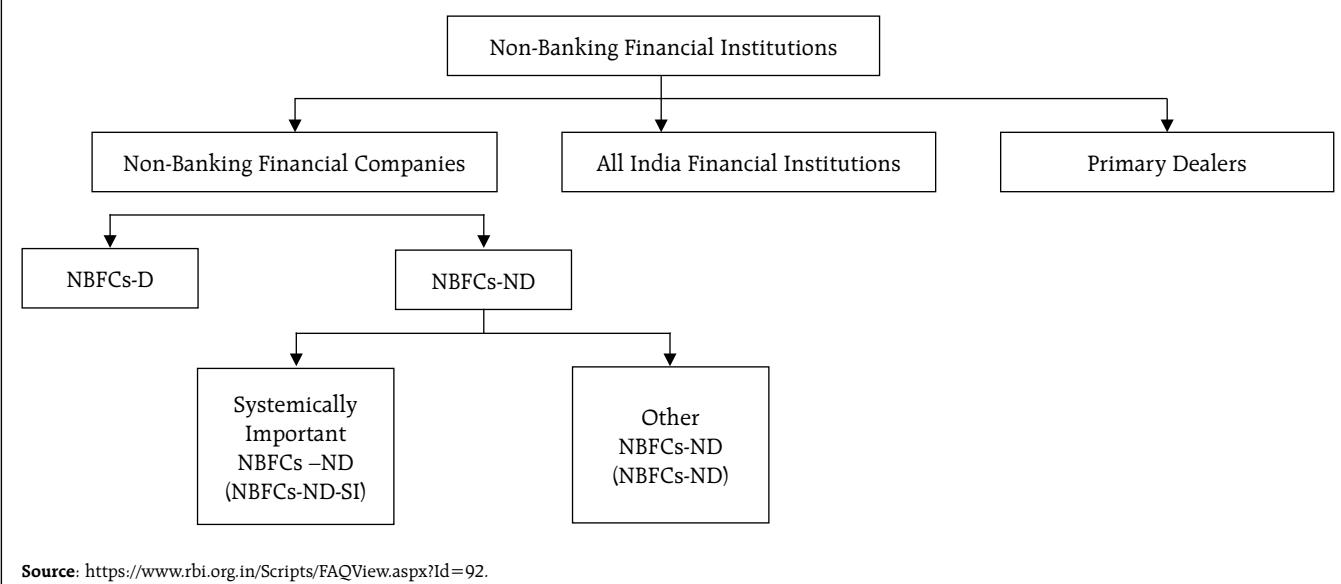
Section 3: Structure of the NBFIs Sector in India

The Reserve Bank regulates and supervises three categories of NBFIs, *viz.* All-India financial institutions (AIFIs), primary dealers (PDs) and NBFCs (Chart 4).⁴

Based on deposit mobilisation, NBFCs are classified into two major categories: NBFCs-D (deposit taking) and NBFCs-ND (non-deposit taking).⁵ In view of the phenomenal increase in their number and deposits, a comprehensive legislative framework

for NBFCs-D was introduced in 1997 to protect the interests of depositors. A conscious policy was pursued to discourage acceptance of deposits by NBFCs so that only banks accept public deposits. Hence, no new license has been given to NBFCs-D after 1997. NBFCs-ND were sub-divided into two categories in 2006 - Systemically Important Non-Deposit taking NBFCs (NBFCs-ND-SI) and other Non-Deposit taking NBFCs (NBFCs-ND) based on asset size.⁶ NBFCs with an asset size greater than ₹1 billion were considered as NBFC-ND-SI. The threshold for recognition of NBFCs-ND-SI was increased to ₹5 billion in 2014. This classification was made in order to ensure greater regulatory control over NBFCs-ND-SI, which were expected to pose greater systemic risks on account of their larger size. NBFCs-ND-SI, as a result, were subjected to stricter prudential regulations as compared to NBFCs-ND.⁷

Chart 4: Non-banking financial institutions regulated by RBI



⁴ There are some other NBFIs regulated by different regulators other than the Reserve Bank, which are not covered in this article.

⁵ Residuary non-banking finance companies (RNBCs) constitute another category of NBFCs. The two RNBCs have stopped accepting deposits and are in the process of repaying old deposits. Hence, they have not been mentioned separately in this article.

⁶ Data on other NBFCs-ND are not readily available. Henceforth, analysis of financial performance is focussed on NBFC-D and NBFC-ND-SI categories.

⁷ Illustratively, NBFCs-ND-SI were required to maintain minimum capital to risk-weighted assets ratio (CRAR).

The number of NBFCs-ND-SI increased till 2014 due to increased licences given to these entities following notification of newer categories. Thereafter, there was a decline in their number mainly reflecting the increase in threshold asset size for defining NBFCs-ND-SI (Table 1). NBFCs-ND-SI have become significantly larger than NBFCs-D – their share in total assets of the two categories taken together was about 86 per cent in 2017 (Chart 5).

Based on activities undertaken, NBFCs are classified into 12 major categories⁸ (Table 2). While loan companies and investment companies have traditionally been the two core categories of the NBFC sector, newer categories have been added to this sector over time in recognition of the growing diversification of financial intermediation and the need for better regulatory oversight. Illustratively, in 2006, 'hire purchase' and 'equipment leasing' categories were merged and categorised as Asset Finance Companies (AFCs) – the third major category

Table 1: Number of different types of NBFCs in India: end-March position

Year	NBFC-D	NBFC-ND-SI	NBFC-ND	Total
2012	273	375	12,010	12,385
2013	254	418	11,553	12,225
2014	241	465	11,323	12,029
2015	220	420	11,202	11,842
2016	202	209	11,271	11,682
2017 (P)	178	218	11,126	11,522

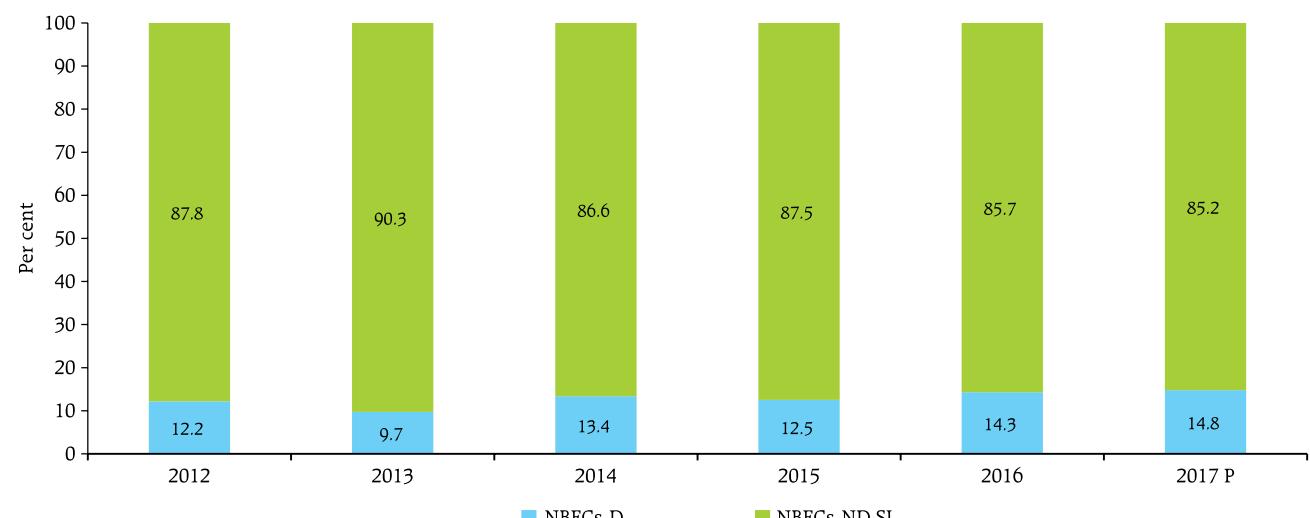
P: Provisional.

Sources: 1. Report of Trend and Progress of Banking in India, various issues.

2. Supervisory returns, RBI.

in the NBFC sector. Infrastructure Finance Companies (NBFC-IFC) were defined as a separate category in 2010. NBFC-IDFs were set up in 2011 to increase long-term debt financing of infrastructure projects as well as to alleviate asset liability mismatches arising out of financing such projects. They were envisaged to take over loans provided for infrastructure projects based on Public Private Partnership (PPP) route which had completed one year of commercial operation.⁹ NBFCs-MFI were also set up in 2011 in order to serve

Chart 5: Distribution of assets across NBFCs-ND-SI and NBFCs-D: end-March position



⁸ Asset Reconstruction Companies (ARCs), set up for resolving Non-Performing Assets (NPAs) of banks and financial institutions, are also given registration by the Reserve Bank under the provisions of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act). Hence, their business model is inherently different from other NBFCs. They are, therefore, not captured in Table 2.

⁹ Subsequently, in 2015, they were also allowed to undertake investments in non-PPP projects.

Table 2: Classification of NBFCs based on activities undertaken

Types of NBFCs	Activity
1. Asset Finance Company (AFC)	Financing of physical assets supporting productive/economic activity, including automobiles, tractors and generators.
2. Loan Company	Providing finance by extending loans or otherwise for any activity other than its own but does not include an AFC.
3. Investment Company	Acquiring securities for the purposes of selling.
4. Infrastructure Finance Company (NBFC-IFC)	Providing infrastructure loans.
5. Systemically Important Core Investment Company (CIC-ND-SI)	Acquiring shares and securities for investment in mainly equity shares.
6. Infrastructure Debt Fund (NBFC-IDF)	For facilitating flow of long-term debt into infrastructure projects.
7. Micro Finance Institution (NBFC-MFI)	Extending credit to economically disadvantaged groups as well support Micro, Small and Medium Enterprises (MSMEs).
8. Factor (NBFC-Factor)	Undertaking the business of acquiring receivables of an assignor or extending loans against the security interest of the receivables at a discount.
9. NBFC- Non-Operative Financial Holding Company (NOFHC)	For permitting promoter / promoter groups to set up a new bank.
10. Mortgage Guarantee Company (MGC)	Undertaking mortgage activities.
11. Account Aggregator (NBFC-AA)	Collecting and providing the information of customers' financial assets in a consolidated, organised and retrievable manner to the customer or others as specified by the customer.
12. Non-Banking Financial Company – Peer to Peer Lending Platform (NBFC-P2P)	Providing an online platform to bring lenders and borrowers together to help mobilise unsecured finance.

Source: <https://www.rbi.org.in/Scripts/FAQView.aspx?Id=92>.

the needs of the micro finance sector and the under-served segments more effectively. The focus of the regulations was more on strengthening the lending and recovery practices in the sector, especially with regard to the pricing of credit and multiple lending operations leading to over borrowing. NBFC-Factors were notified in accordance with the Factoring Act, 2011 as they were required to be registered with the Reserve Bank as NBFCs to commence their operations.

Notwithstanding the addition of newer categories over time, loan companies remain the single largest category, with a share of 36.2 per cent in total assets of NBFCs at end-March 2017. NBFCs-IFC emerged as the second-largest category following the growing thrust on infrastructure financing. AFCs occupied the third position constituting 13.7 per cent of total assets of NBFCs followed by investment companies. NBFCs-MFI, although accounting for only about 3 per cent of the NBFC sector's assets at end-March 2017, have shown a steady rise in its share since their inception (Table 3).

Table 3: Shares of NBFCs classified by activities in total assets of the NBFC sector: end-March position

(Per cent)

Category	2012	2013	2014	2015	2016	2017
1. Loan companies	31.2	28.9	28.6	28.0	33.2	36.2
2. NBFCs-IFC	30.8	32.1	34.0	35.4	27.1	31.5
3. AFCs	12.6	14.2	14.3	13.9	13.2	13.7
4. Investment companies	22.3	21.4	19.7	17.7	22.4	12.6
5. NBFCs-MFI	1.6	1.9	1.9	2.4	2.8	3.0
6. CICs-ND-SI	1.0	1.2	1.2	2.2	0.9	2.2
7. NBFCs-Factor	0.5	0.3	0.3	0.2	0.2	0.1
8. IDF-NBFCs	0.0	0.0	0.0	0.1	0.3	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: 1. Data are provisional.

2. NOFHC, MGC and NBFC-AA data are not captured in the Table as they have a minuscule share in the total assets of the NBFC sector.

Source: Supervisory returns, RBI.

Section 4: Regulatory Environment for NBFCs

NBFCs were brought under the regulation of the Reserve Bank in 1964 by inserting Chapter III B in the Reserve Bank of India Act, 1934. In more recent years, regulatory measures have been motivated by

the objectives of financial stability, financial inclusion and harnessing of specialised domain expertise.

As alluded to in the preceding section, one of the key regulatory initiatives by the Reserve Bank to improve the role of NBFCs in financial inclusion was the creation of NBFCs-MFI in 2011, following the recommendations by the Sub-Committee of the Central Board of the Reserve Bank (Chairman: Shri Y. H. Malegam). In 2015, guidelines for this segment were revised, including the enhancement of the annual income limit for availing microfinance loans, increasing the limit of total indebtedness of the borrower and rationalisation of income generation criteria following the recommendations of the Committee on Comprehensive Financial Services for Small Businesses and Low Income Households (Chairman: Shri Nachiket Mor). As regards financial stability related concerns, a revised regulatory framework was introduced in 2014 to ensure that only strong entities exist in the NBFC sector. Accordingly, the minimum amount of net owned funds (NOF) for NBFCs registered before April 21, 1999 was stepped up to ₹20 million from ₹2.5 million and the capital adequacy framework was further strengthened.¹⁰ Furthermore, only rated NBFCs-D were allowed to accept public deposits for enhanced depositors' protection. In order to plug regulatory gaps to minimise regulatory arbitrage, the prudential norms for NBFCs, including asset classification and provisioning norms, were harmonised with those for banks in a phased manner. In September 2016, the Reserve Bank allowed the establishment of a new category of NBFCs NBFC-Account Aggregator (AA) to provide a consolidated view of individual investors' financial asset holdings on a single platform, even for entities falling under the purview of different financial sector regulators. Recently, the Reserve Bank issued guidelines for regulating the NBFCs undertaking peer-to-peer (P2P) lending activities.

¹⁰ All NBFCs-ND-SI and NBFCs-D were mandated to increase their Tier 1 capital in a phased manner to 10 per cent by March 2017.

Table 4: Key indicators of NBFCs

(Amount in ₹ billion)

Item	2014	2015	2016	2017
1. Share Capital	737	851	761	921
2. Reserves & Surplus	2,723	3,117	3,033	3,538
3. Public Deposits	131	205	271	306
4. Borrowings	10,142	12,237	12,263	13,748
5. Others	766	875	904	1,159
Total Liabilities/Assets	14,499 (12.9)	17,284 (13.9)	17,231 (12.6)	19,671 (12.9)
1. Loans & Advances	10,782	12,875	13,169	14,846
2. Investments	2,159	2,603	2,253	2,673
3. Cash & Bank Balances	548	668	585	778
4. Others	1,010	1,138	1,225	1,375
Financial Ratios (per cent)				
1. Income to total assets	11.8	11.6	12.4	11.7
2. Cost to income ratio	52.9	52.1	50.4	49.4
3. Gross NPA to total advances	3.9	4.1	4.5	5.0
4. Net NPA to total advances	2.5	2.5	2.5	2.3
5. Return on equity	9.0	10.3	7.9	6.8

Note: 1. Data are provisional.

2. Figures in parentheses are percentages to GDP.

Source: 1. *Financial Stability Report*, various issues.

2. Supervisory returns, RBI.

3. *Handbook of Statistics on the Indian Economy*, various issues.

Section 5: Key Indicators of the NBFCs Sector

Reflecting their ability to evolve as well as innovate, NBFCs have recorded robust growth in recent years. Moreover, their balance sheet performance has been better than banks on various parameters (Table 4). Credit by NBFCs-ND-SI has risen strongly in recent years with a growth of 13 per cent in 2016-17 (Table 5). This is in contrast to the slowdown in bank credit

Table 5: Credit growth of NBFCs and banks

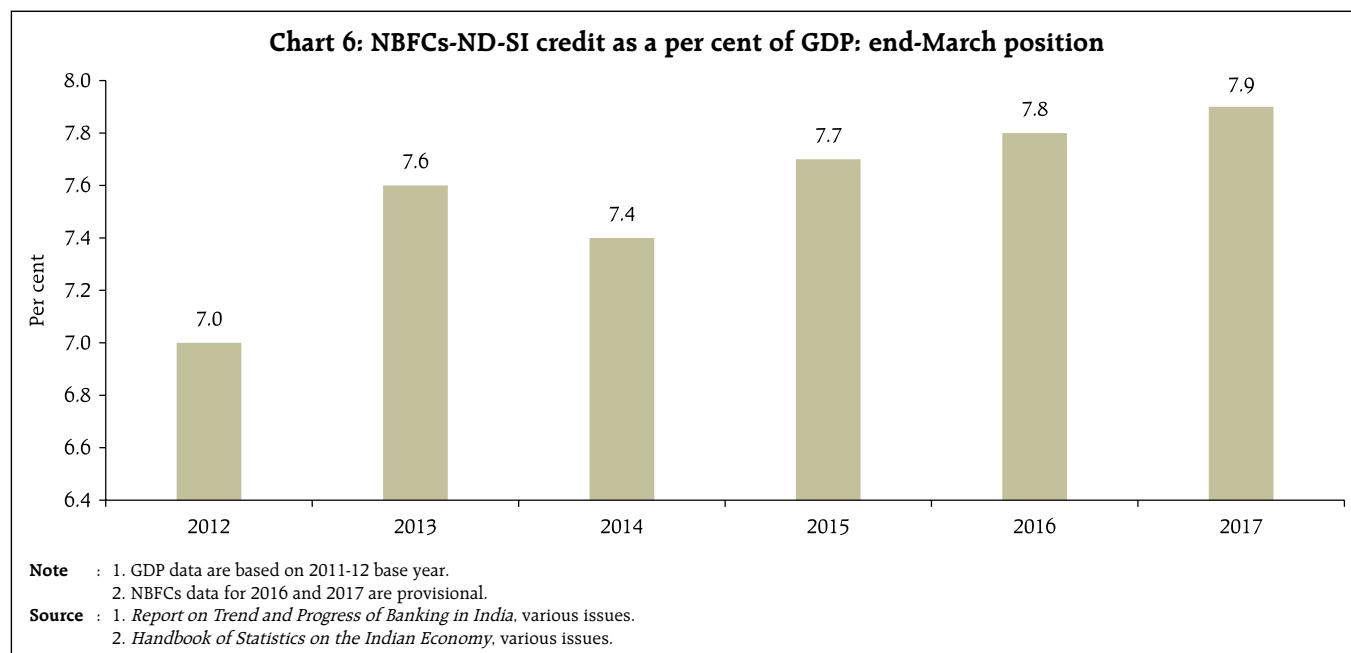
(per cent)

Year	NBFCs-ND-SI	Banks	Private Sector Banks	Public Sector Banks
2011-12	30.5	16.8	21.8	16.4
2012-13	23.7	14.0	18.5	12.0
2013-14	8.8	14.2	16.1	13.9
2014-15	15.0	9.3	18.6	7.8
2015-16	12.4	10.9	25.7	1.4
2016-17 (P)	13.0	5.4	17.1	0.6

P: Provisional.

Source: 1. *Report on Trend and Progress of Banking in India*, Various Issues.2. *Handbook of Statistics on the Indian Economy*, RBI.

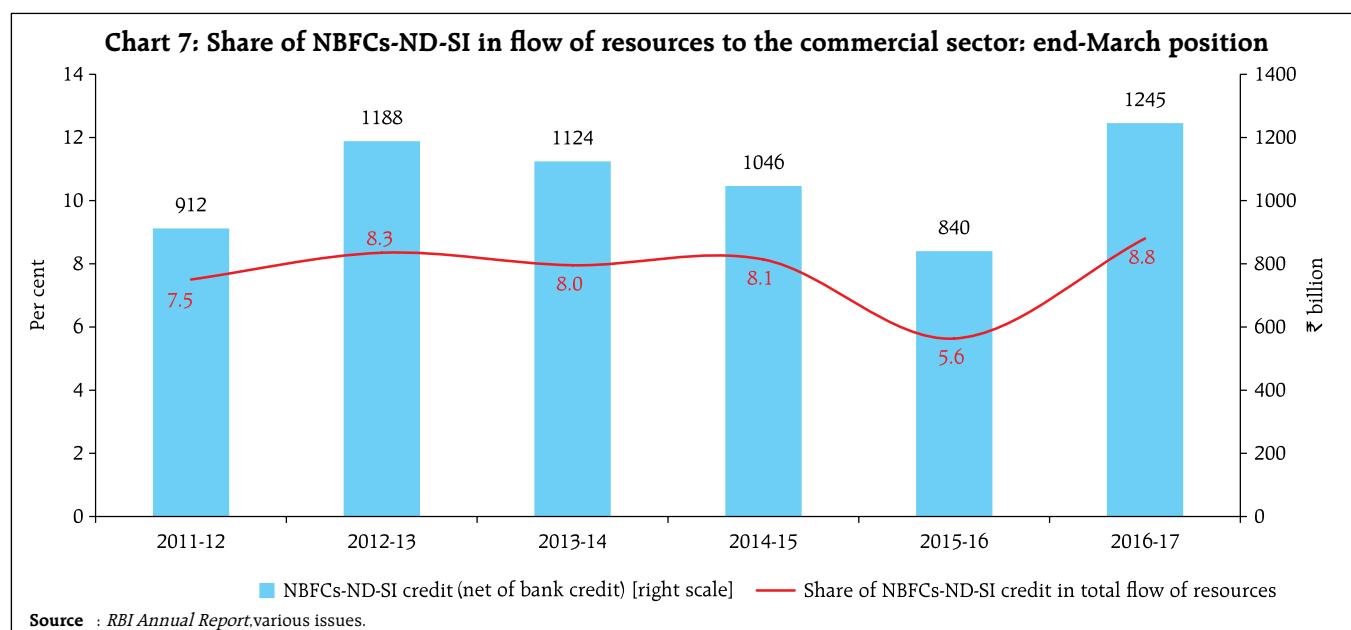
3. Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, RBI.



growth, especially in respect of public sector banks. As a result, the credit intensity, *i.e.*, credit as per cent of GDP, of NBFCs-ND-SI has shown a steady increase, reaching 8 per cent in 2017 (Chart 6).

NBFCs-ND-SI credit has maintained a steady share in total credit to the commercial sector barring

a dip in 2015-16 due to a pick-up in bank credit as well as the conversion of Bandhan Financial Services and Infrastructure Development Finance Corporation (IDFC), two major players in the NBFC sector, into universal banks (Chart 7).¹¹ Their share went up sharply in 2016-17 reflecting growing intermediation.



¹¹ The various bank and non-bank sources included: private placements by non-financial entities, housing finance companies and commercial papers subscribed to by non-banks.

Among NBFCs-ND-SI, credit extension is the main business for loan companies, NBFCs-IFC, NBFCs-MFI, and AFCs. While all these categories of NBFCs posted double-digit growth till 2015-16, they showed divergent patterns in 2016-17. Loan companies and NBFCs-IFC maintained positive credit growth, whereas NBFCs-MFI and AFCs shrank their asset portfolios mainly due to conversion of large NBFCs-MFI into small finance banks during the year (Table 6). AFCs, which mainly lend to finance vehicles and retail loans, were affected by the postponement of purchase decisions by their customers due to uncertainty in the wake of demonetisation (RBI, 2017).

Protection of depositors' interests has been a dominant objective of the Reserve Bank and, therefore, there has been a conscious move to contain deposit mobilisation by NBFCs-D. Nevertheless, amount of public deposits mobilised by NBFCs-D has grown over time (Chart 8). As a share of total liabilities of NBFCs sector, it increased from 0.5 per cent in 2012 to 1.6 per cent by end-March 2017. In absolute terms, the total deposit mobilisation by these institutions stood

Table 6: Growth rate of credit of major categories of NBFCs

Category	2012-13	2013-14	2014-15	2015-16	2016-17
Loan Companies	11.3	7.7	20.5	22.7	22.1
NBFCs-IFC	24.4	17.8	24.6	7.6	5.6
NBFCs-MFI	34.3	21.3	47.6	36.3	-3.4
AFCs	30.0	10.4	13.2	23.1	-17.1

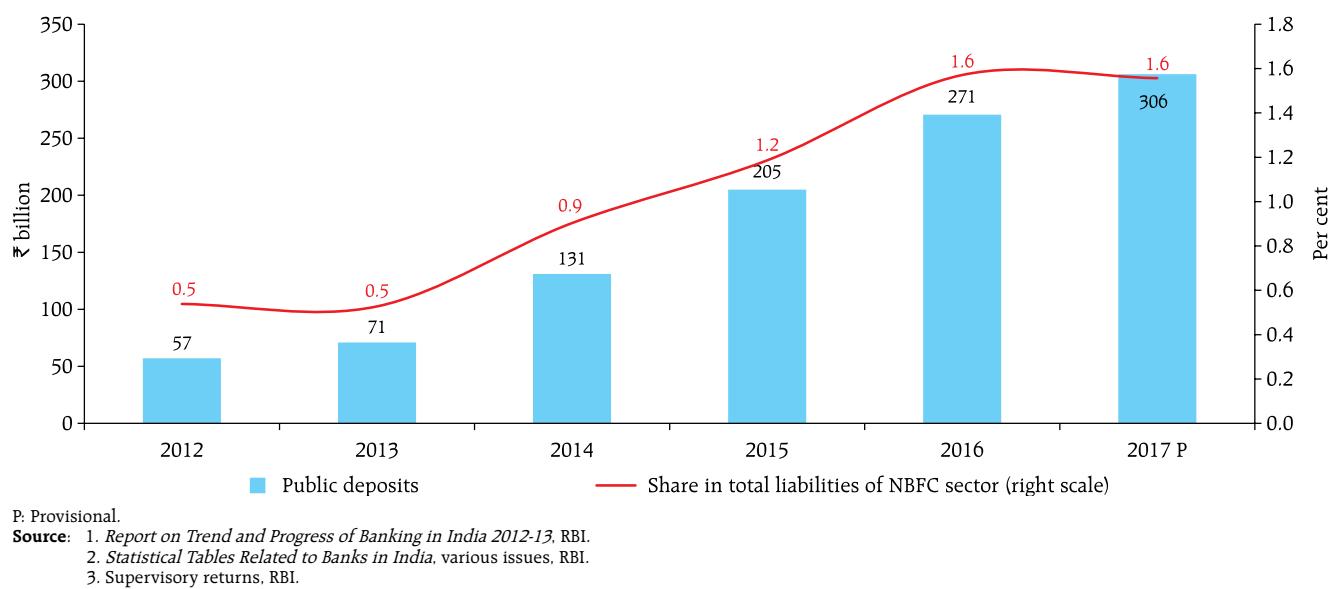
Note: Data are provisional.

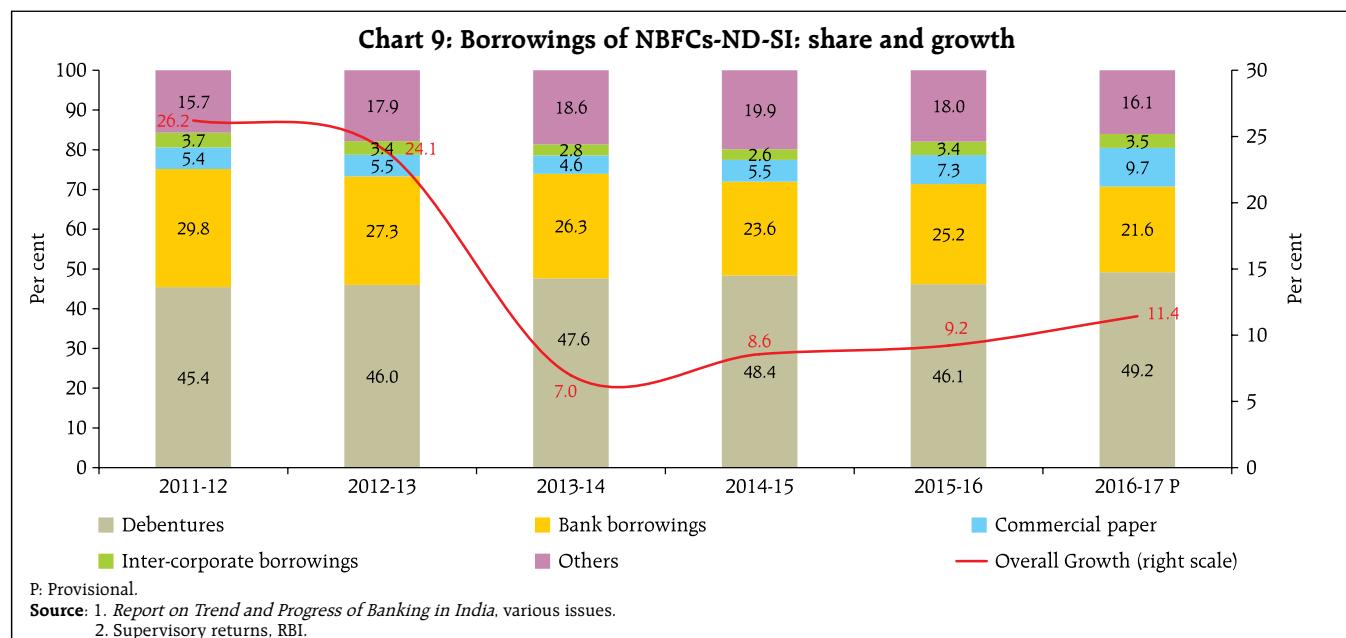
Source: Supervisory returns, RBI.

at ₹306 billion at end-March 2017, though less than one per cent of bank deposits.

Borrowings constitute about 71 per cent of total liabilities of NBFCs-ND-SI. While banks have been the main source of borrowings for NBFCs-ND-SI, they have been increasingly replaced with market-based instruments in recent years. In 2016-17, NBFCs-ND-SI largely borrowed through debentures, which constituted nearly half of their total borrowings. Borrowing through commercial paper too has increased over time, reflecting lower cost of raising funds through these instruments (Chart 9).

Chart 8: Public deposits of NBFCs-D - amount and share in total liabilities: end-March position

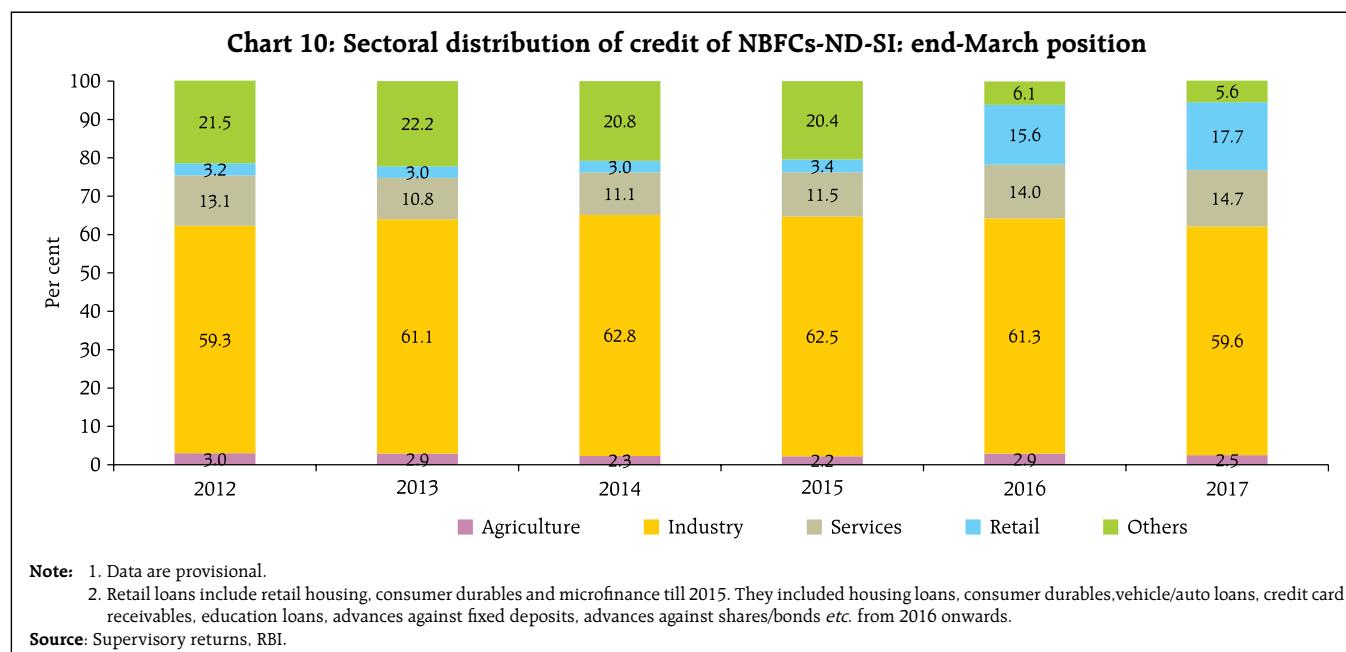




Section 6: Sectoral Distribution of NBFCs Credit

NBFCs-ND-SI have traditionally funded both the industrial sector and the retail segment. While industry has received about two-thirds of the total

credit by these companies, the share of retail credit has increased from 3.4 per cent in 2014-15 to 15.6 per cent in 2015-16 and 17.7 per cent in 2016-17 (Chart 10).¹²

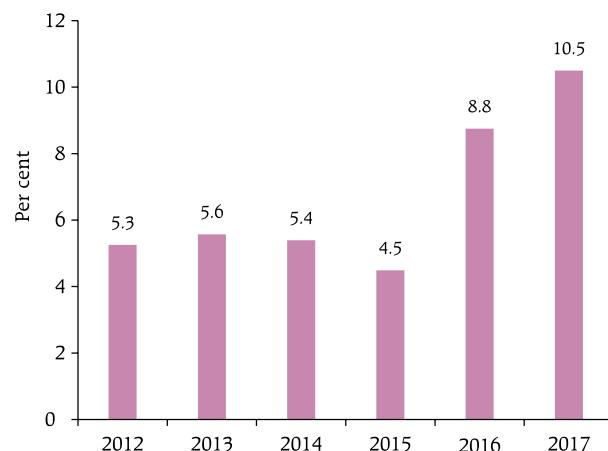


¹² It may be mentioned that there was a significant change in December 2015 in the sectoral classification prescribed in the returns filed by NBFCs-ND-SI. Thus, the data on sectoral credit before and after 2016 are not strictly comparable. The change in classification mainly pertained to retail loans, which included only retail housing, consumer durables and microfinance till 2015. From 2016 onwards, retail loans include many new categories, such as vehicle/auto loans, credit card receivables, education loans, advances against fixed deposits and advances against shares/bonds. The jump in the share of retail loans with a corresponding fall in the share of 'others' – a miscellaneous category, needs to be seen in light of the change in the sectoral classification.

Several NBFCs-ND-SI specialise in financing niche segments, including the micro and small enterprises (MSE), which particularly figure prominently in the loan portfolios of NBFCs-MFI and loan companies. Over recent years, there has been a steady growth in the credit to MSE sector from these two categories (Chart 11). This was mainly on account of the revision in December 2015 in the returns filed by NBFCs, as mentioned earlier.

NBFCs-IFC and NBFC-IDFs are the two major categories within NBFCs-ND-SI which specialise in infrastructure financing. In line with bank credit, infrastructure credit growth of NBFCs-IFC and NBFC-IDFs has decelerated in recent years (Chart 12), attributed to industrial slowdown, particularly in the power sector as well as the conversion of IDFC into a universal bank.¹³ Nevertheless, growth in infrastructure credit by NBFCs-IFC and NBFCs-IDF was higher than by banks, which, in fact, reported credit contraction in 2016-17.¹⁴

Chart 11: Share of MSEs in total credit: end-March position



Notes: 1. Data are provisional.

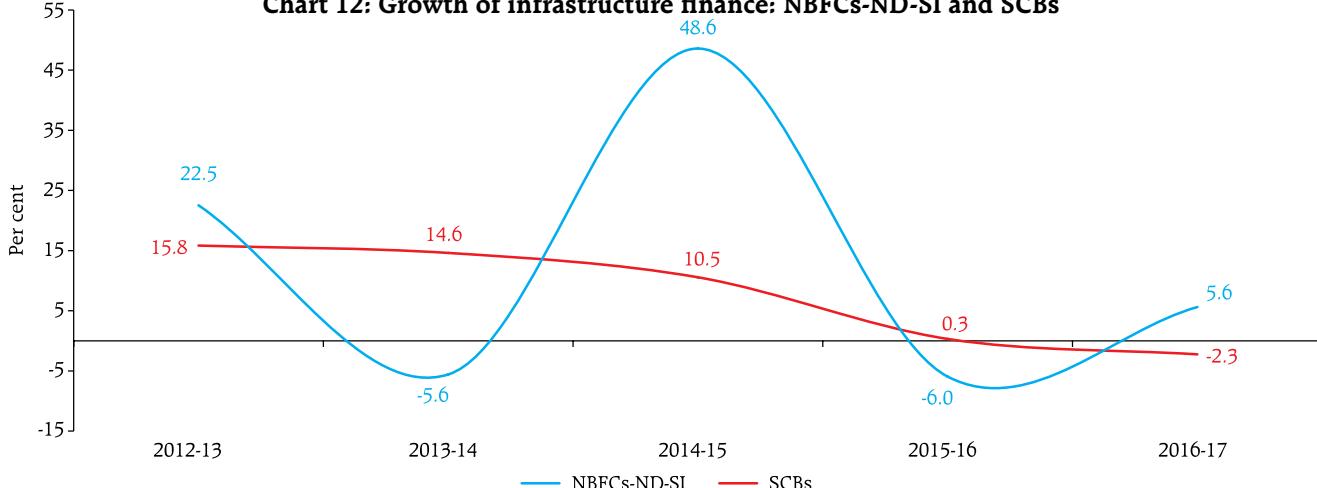
2. Data relate to NBFCs-MFI and loan companies only.

Source: Supervisory returns, RBI.

Section 7: Key Soundness Indicators of NBFCs

There has been a steady deterioration in asset quality of NBFCs in recent years. Gross non-performing assets (GNPA) ratio for NBFCs increased to 5.0 per

Chart 12: Growth of infrastructure finance: NBFCs-ND-SI and SCBs



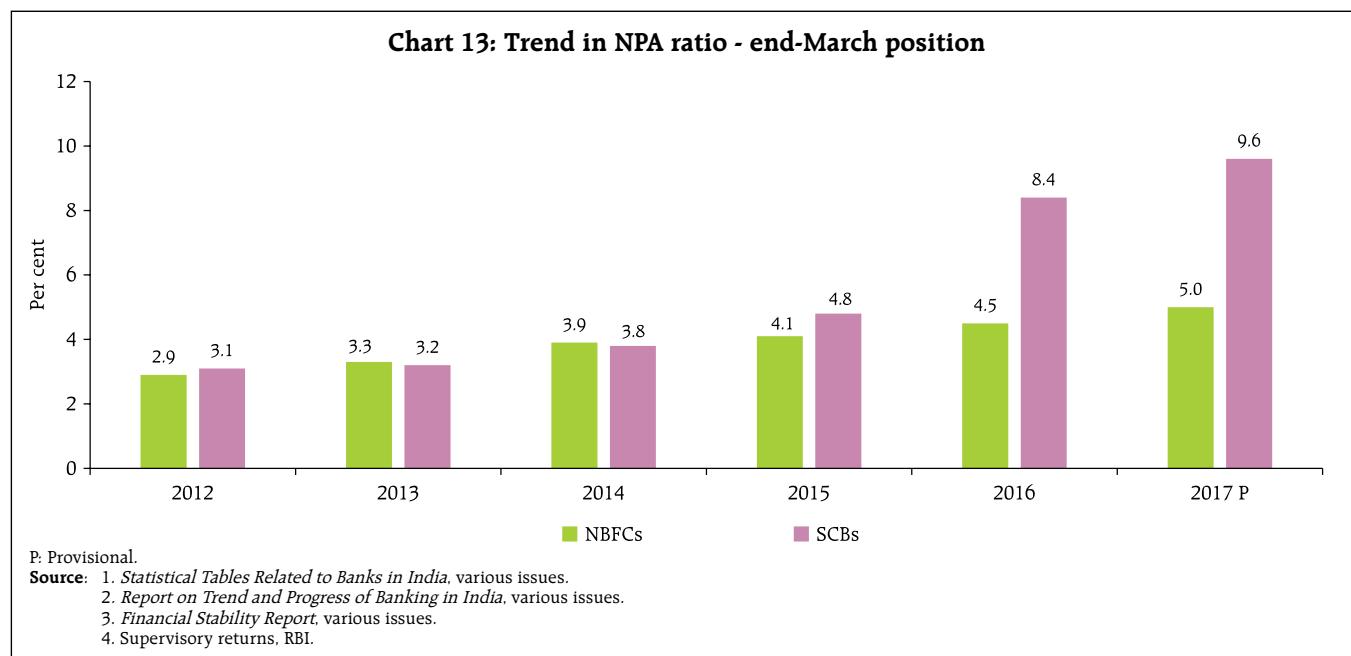
Note: Data relate to NBFC-IFCs and NBFC-IDFs only.

Source: 1. Supervisory returns, RBI.

2. *Handbook of Statistics on the Indian Economy*, RBI.

¹³ *Economic Survey*, Government of India, various issues.

¹⁴ As highlighted in the Reserve Bank's Annual Report 2016-17, the negative growth in bank credit to infrastructure was owing mainly to the high incidence of stressed assets resulting in reduced lending to this sector following risk aversion.

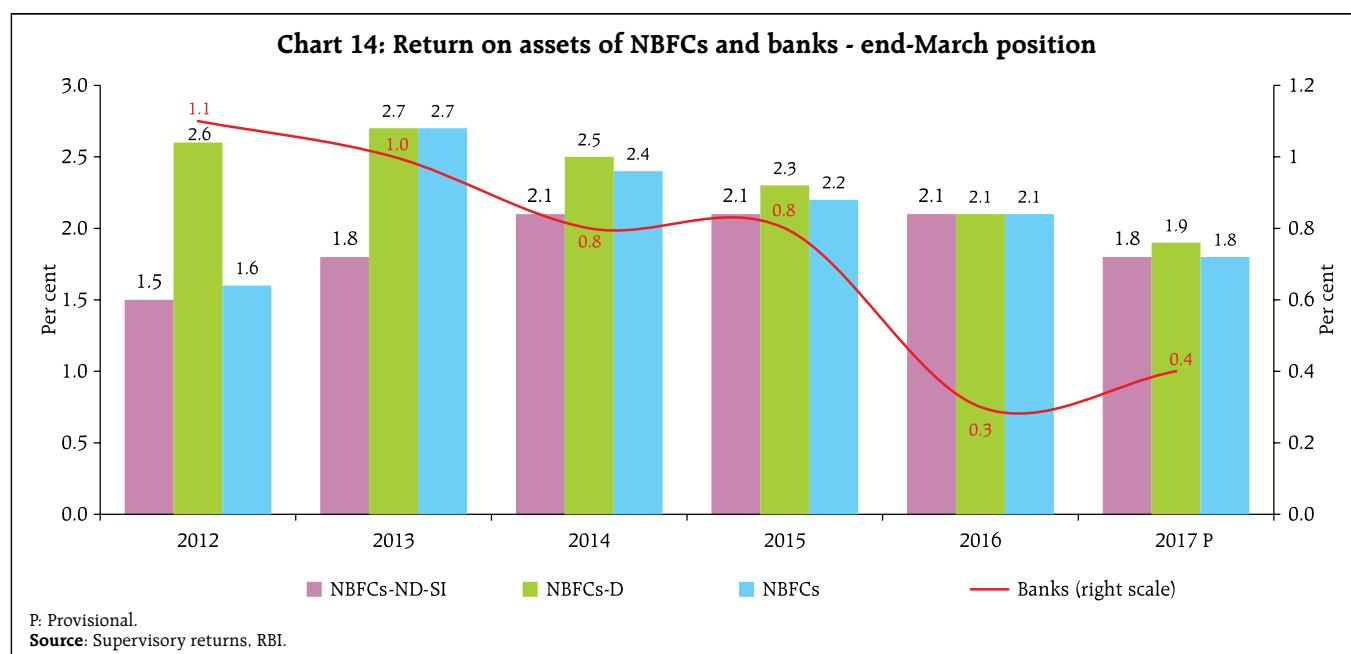


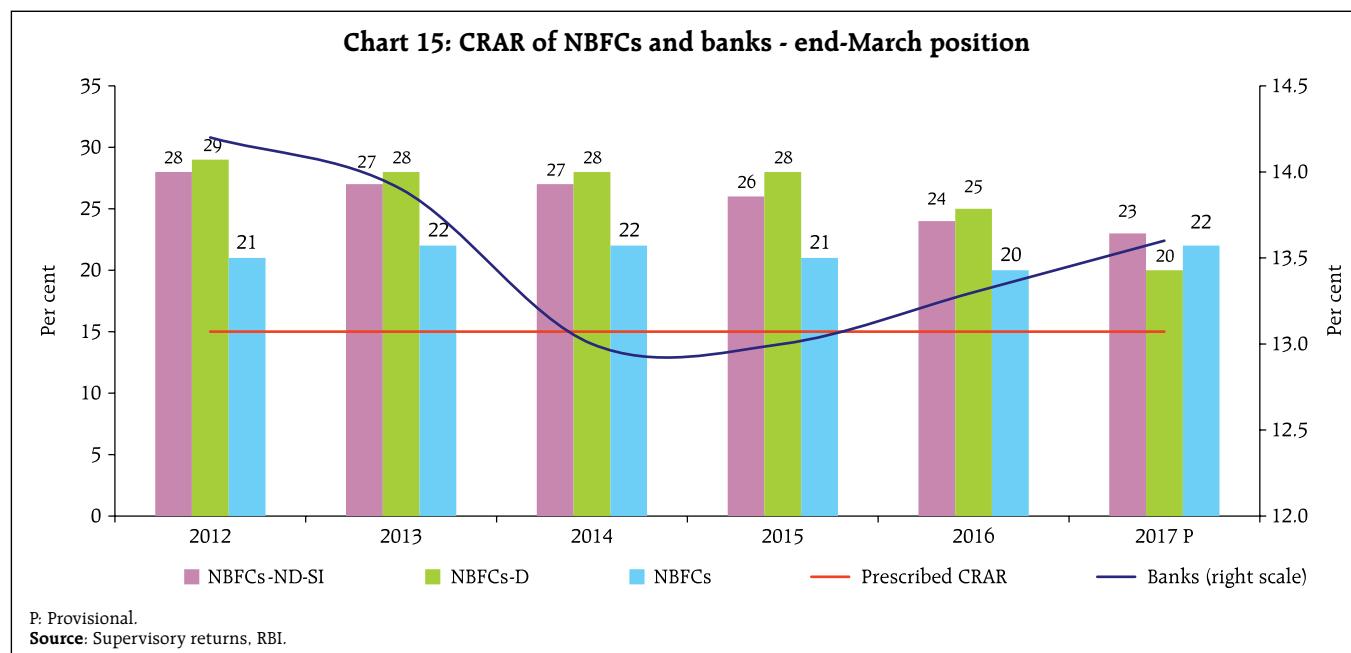
cent at end-March 2017 from 2.9 per cent at end-March 2012. The deterioration in asset quality could partly be attributed to the change in NPA recognition norms. Notwithstanding the recent deterioration, their asset quality remained better than that of banks (Chart 13).

Return on Assets (RoA) of NBFCs declined from 2013 onwards in tandem with the asset quality

deterioration in the financial system (Chart 14). Compared to banks, however, NBFCs reported a fairly higher RoA.

The capital to risk-weighted assets ratio (CRAR) of NBFCs has declined in recent years although it was higher than the prescribed regulatory level of 15 per cent, symbolising the soundness of the sector (Chart 15).





8. Conclusions and the Way Forward

India's NBFC sector, which has shown robust growth in the recent years, is generically different from shadow banks operating elsewhere in the world, as this article has argued.

The regulatory framework for NBFCs in India has evolved over time in line with the growing functional diversification of the sector while keeping in view the objectives of depositors' interest, financial inclusion and financial stability. At the same time, the shaping and calibration of regulatory initiatives have been influenced by considerations of harnessing sector-specific expertise and the proven abilities of these institutions to serve niche segments. The creation of different categories of NBFCs signifies this intention. While allowing for diversification of the sector, harmonisation of the regulatory framework for NBFCs, both within the sector and with that for banks, is being pursued to minimise regulatory arbitrage.

An assessment of the recent financial performance of NBFCs suggests that they are emerging as an important source of credit to micro and small enterprises and infrastructure. Although the capital position of NBFC sector remains strong, the gradual deterioration in their asset quality points to the need for greater monitoring. The growth of financial technology (fintech) platforms presage even greater scope and opportunities for the NBFC sector. New players in the field of P2P/business-to-business (B2B)/business-to-consumers (B2C) lending offer novel opportunities for NBFCs to evolve further and emerge as an increasingly important component of India's financial landscape.

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Consumer Confidence Survey – Q2:2016-17 to Q1:2017-18*

1. Introduction

Consumer confidence is a measure of sentiment about the state of the economy as reflected in the perceptions of a key economic agent – the consumer. By polling consumers' opinions about macroeconomic conditions – as for example, employment; income; the price situation; and the outlook- it is possible to obtain a reasonable gauge of consumption spending, which is a major component of aggregate demand in the economy. The literature provides robust evidence of indicators of consumer confidence being good predictors of consumer spending with a lead content of four to five months (Gelper *et. al.* 2007). Consequently, economic agents that influence aggregate supply – manufacturers; retailers; investors; builders; government agencies - rely on measures of consumer confidence to make an assessment of consumption expenditure which, in turn, forms their production decisions. These indicators also provide useful insights to wielders of monetary and fiscal policies who have to make decisions on modulating aggregate demand in the economy around the path of productive capacity in the economy in order to ensure macroeconomic stability. Consequently, several central banks conduct their own consumer confidence surveys¹, while others depend on surveys carried out by independent organisations (the Consumer Confidence Index of the Conference Board

and Consumer Sentiment Index of the University of Michigan for the US; Consumer Confidence Index of the Conference Board of Canada).

The Reserve Bank has been a pioneer in propagating the use of consumer confidence surveys in India on a large scale - its own quarterly survey was introduced in June 2010². At present, the survey is conducted in six major cities – Bengaluru; Chennai; Hyderabad; Kolkata; Mumbai; and New Delhi - covering 5,400 respondents in each round (approximately 900 per city). A hybrid two-stage sampling design is adopted. In the first stage, polling booths in a city are selected by systematic random sampling after arranging all polling booths according to their constituencies. About 45 polling booths spread over the entire city are selected in order to ensure the widest geographical coverage. In the second stage, 20 respondents are selected from each polling booth area by following the right hand rule#.

In the survey, responses are canvassed around two reference points in time, *viz*, the current situation as compared with a year ago and expectations for a year ahead, with reference to five parameters - economic conditions; income; spending; the price level; and employment. Net responses *i.e.*, the difference between positive and negative perceptions on the five parameters are combined to create a current situation index (CSI), which seeks to capture consumer sentiments about the prevailing state of affairs, and the future expectations index (FEI), which gauges the near-term outlook of consumers on these parameters (Annex). The CSI and the FEI can take values between 0 and 200.

* This article is prepared by Smt. Sangeetha Mathews 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 Dr. Snehal Herwadkar, Monetary Policy Department for her 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 An illustrative list of central banks that conduct their own consumer confidence surveys includes Bank of Japan, Bank of Korea, Bank Indonesia and the Central Bank of the Republic of Turkey

² Two other agencies in India conduct consumer confidence surveys. While Thomson-Reuters initiated a survey in March 2010, it was an online poll restricted to 500 adults. The survey conducted by the Centre for Monitoring the Indian Economy (CMIE) through its consumer pyramids panel was introduced in 2015.

A method in which the first household from each polling booth area is selected randomly and the subsequent respondent is selected from the 11th household by moving in the right hand direction and skipping 10 houses. The process is continued till the sample size for each polling booth is achieved.

The rest of this article is organised into four sections. The next section *i.e.*, Section II presents a snapshot of the four rounds of the surveys carried out between September 2016 and June 2017. Section III evaluates these results with a view to gauging coherence in responses and in the CSI/FEI. Section IV investigates the predictive power of the FEI *vis-à-vis* private consumption and, thereby, its usefulness as an input for policy decision-making. Section V sets out some concluding observations.

2. Survey Results

As mentioned earlier, the survey solicits consumer sentiment around five key parameters which are discussed below.

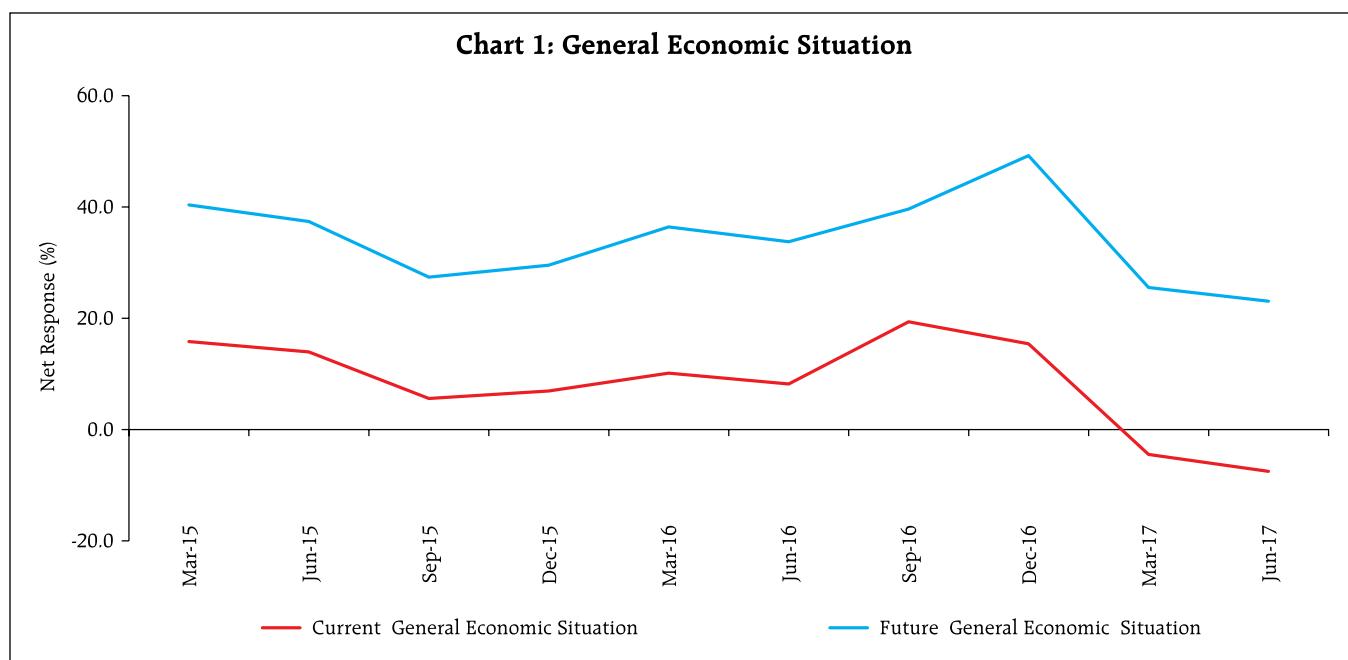
2.1. General Economic Situation

Respondents were optimistic about the general economic situation during the major part of 2016, with net responses gradually picking up between December

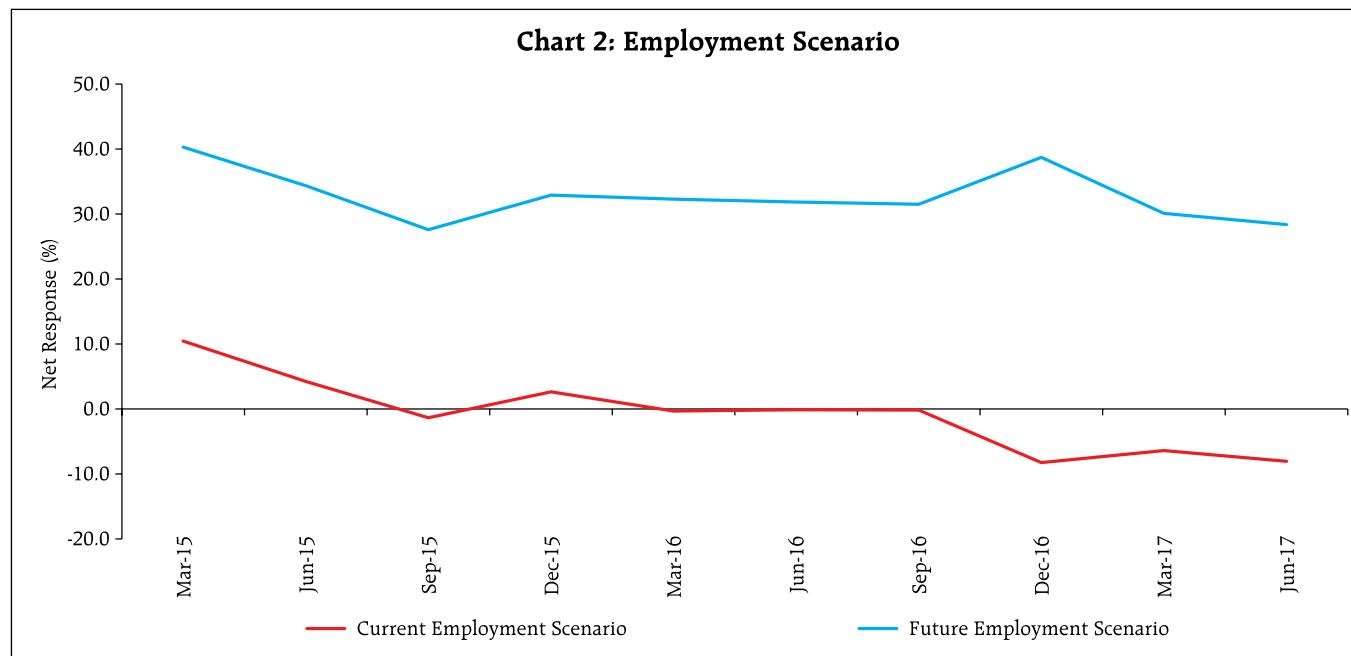
2015 and September 2016. However, net responses slipped into the pessimistic zone since March 2017. Consumers' expectations about the future economic situation also reached a turning point in December 2016 and worsened thereafter, but they seem to be stabilising in the current survey round (Chart 1; Table 1).

2.2. Employment Scenario

Consumer sentiment on the current employment situation stayed subdued, regressing further in the December 2016 round. In the first half of 2017, net responses have remained in the pessimistic zone, with 39 per cent of respondents perceiving a worsening of the employment scenario in relation to a year ago. In contrast, expectations regarding the future employment situation remained buoyant, with half of the respondents expressing optimism on future employment which largely co-moved with the income outlook³ (Chart 2; Table 2).



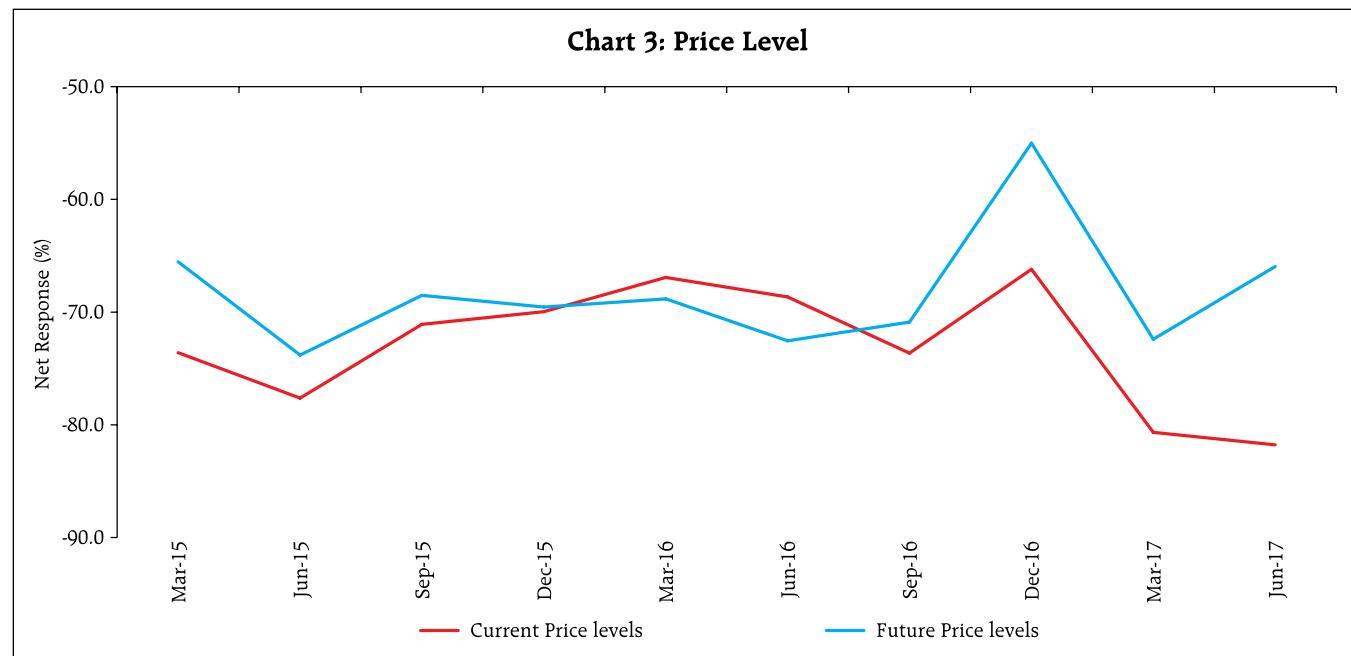
³ The coherence coefficient between the employment outlook and the income outlook varied between 52-57 per cent during the last four quarters. Coherence coefficient is the sum of similar responses on two variables as a proportion to total responses.

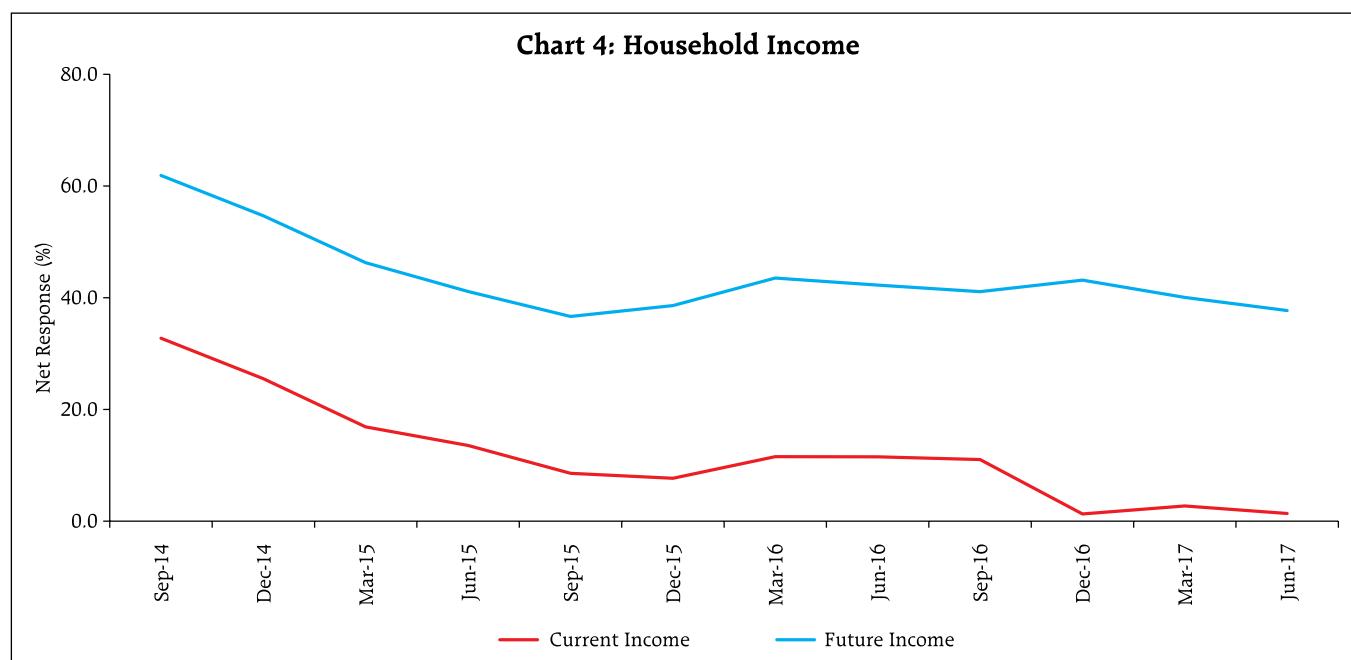


2.3. Price Situation

The improvement in households' perceptions about the current price level during 2015-16 was interrupted in the March 2016 round of the survey and since then, there has been a steady deterioration extending up to the current round, barring in December 2016. Although expectations on the future

price level have remained largely unchanged, there was a dramatic improvement in December 2016 - when prices of perishables crashed following demonetization - and again in the current round, which was largely driven by continuing optimism about spending (Chart 3; Table 3). As regards inflation, consumers' perceptions and outlook worsened in the first half of





2017, reversing the improvement polled in the second half of 2016 (Table 4).

2.4. Household Income

Households' assessments about current income levels have continued to remain sluggish, with no improvement perceived since December 2016. This has closely co-moved with their perceptions on the employment situation - in various rounds of the survey between September 2016 and June 2017, 34 to 39 percent of respondents felt that the employment situation has worsened as compared with the previous year and that their income levels had, in fact, fallen. Respondents' level of optimism on future income has continued to dip in the first half of 2017, although it remains in the expansion zone (Chart 4; Table 5).

2.5. Spending

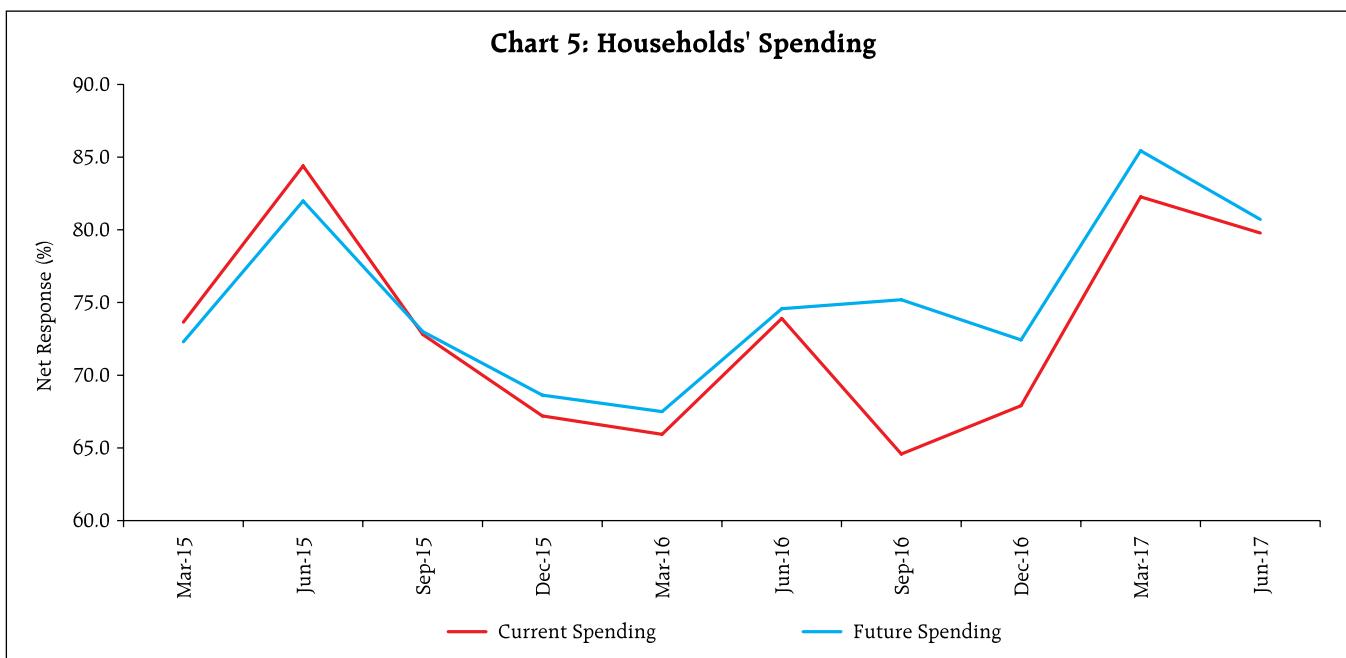
Consumer sentiment on spending turned down marginally in the current round of the survey, although it has generally remained buoyant, with 70-80 per cent of the respondents perceiving an increase in current spending over the previous year (Chart 5; Table 6; Table 7). Notably, the outlook on non-essential

(i.e., discretionary) spending has steadily picked up (Table 8), but 90 per cent of the respondents attributed it to the increase in prices of goods and services.

3. Coherence between the General Economic Situation and Other Parameters

With the steady worsening of respondents' perceptions about the general economic situation, it is insightful to delve into which parameter(s) influenced consumer confidence the most. Their optimism on the general economic situation last year was mainly driven by perceptions on inflation as it plunged in the post-demonetisation period. In 2017, however, this sense of well-being appears to have been eroded by the worsening employment scenario. Of the respondents who believed that the employment situation has worsened, more than half also reported that the economic situation has deteriorated.

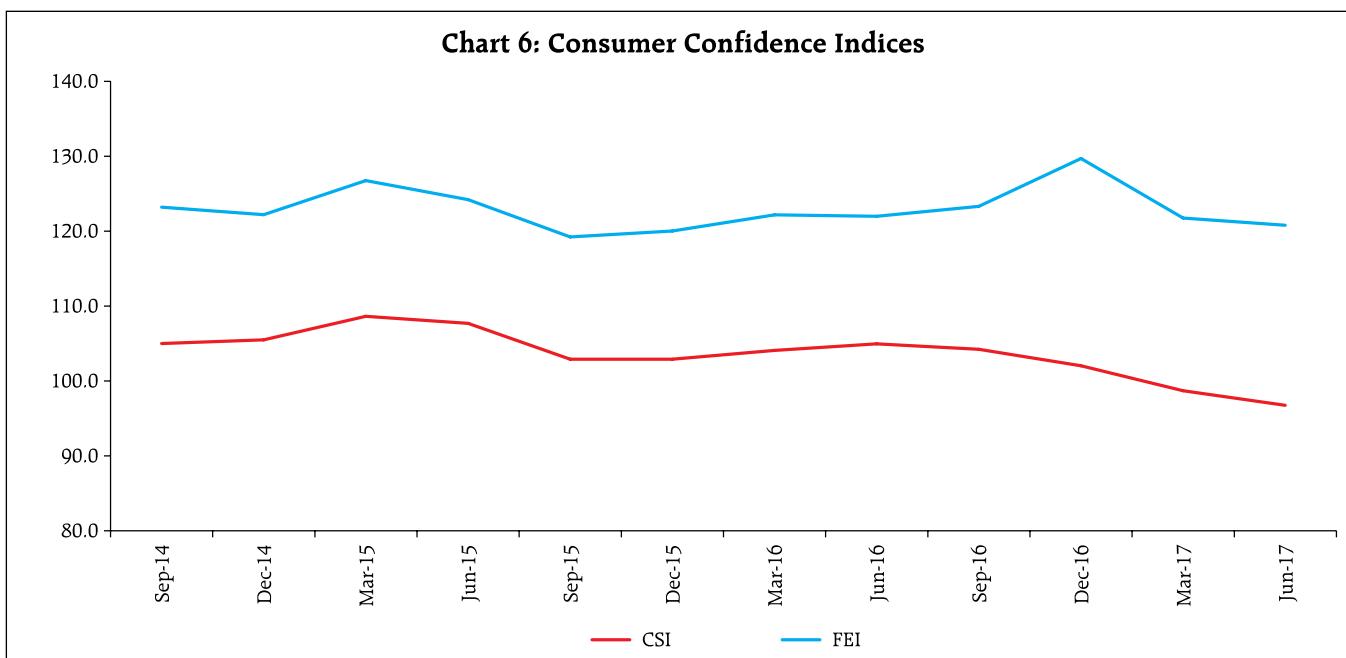
These diverse sentiments on the current state of the Indian economy and its near-term outlook are encapsulated in the CSI and the FEI. The CSI has declined for three consecutive quarters between December 2016 and June 2017; it entered the



pessimistic zone in March 2017 as sentiments on the general economic situation, the price level and income worsened. The Future Expectations Index (FEI) had been expanding steadily between September 2015 and September 2016 to reach an all-time high in the history of the survey in December 2016 on post-demonetisation effects. Since then, however, it has

been ebbing (up to June), although it remains in the expansion zone (Chart 6).

Based on 10,000 re-samples selected through simple random sampling with replacement (SRSWR), the 99 per cent bootstrap confidence intervals for CSI and FEI were quite low (Table 9), attesting to the robustness of the findings of the survey round.



4. Predictive Power of Future Expectations Index

With a reasonably long time series on consumer sentiment indices now available, an examination of their predictive power with respect to the goal variable – consumer spending – becomes feasible and worthwhile. In particular, it is of interest to evaluate whether or not the FEI offers relevant and timely insights into future consumption levels in India. If consumers feel confident about the actual and future economic and financial situation, they would be willing to increase their consumption. In contrast, if consumers are pessimistic, they would be inclined to delay their consumption and engage in precautionary saving. The empirical literature is inconclusive, however, with some studies indicating little information for forecasting consumption (Gosselin and Desroches, 2002; Roberts and Simon, 2001) and others detecting leading indicator properties (Gelper, *et. al.* 2007; Batchelor and Dua 1998). In the context of the Reserve Bank's survey and its FEI, augmented Dickey-Fuller tests on the FEI and private final consumption expenditure to test the presence of a unit root suggest that both the series are I(1) and their first differences are stationary.

The ability of FEI to provide insights into future consumption levels has been examined by using

Granger causality test between FEI and nominal private final consumption expenditure (PFCE) (Table 10). Pairwise tests indicate that the FEI Granger causes PFCE with three to five quarters lag. Thus, the FEI can be usefully employed to forecast future values of private final consumption. This highlights the importance of FEI as an input for policy formulation.

5. Summary

Indicators of consumer confidence provide key insights into the state of the economy by profiling the perceptions of the consumer and thereby consumption spending. This article finds that the future expectations index predicts private final consumption expenditure with three to five quarters lag, offering exploitable potential as an input for forward looking policy formulation. In this context, it is useful to note that consumers' reading of the general economic situation has turned pessimistic in 2017, mainly reflecting a worsening of perceptions on employment and inflation. Although consumers remain somewhat more optimistic on spending, this may reflect their expectations of higher prices. These perceptions may be transient, as expectations on all these parameters captured in the future expectations index remain in the expansion zone.

Annex A: Data and Results

Table 1: Perceptions and Expectations on General Economic Situation

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Improved	Remained Same	Worsened	Net Response	Will Improve	Will Remain Same	Will Worsen	Net Response
Mar-15	41.7	32.4	25.9	15.8	56.8	26.8	16.4	40.4
Jun-15	43.1	27.8	29.1	14.0	57.6	22.3	20.2	37.4
Sep-15	36.5	32.7	30.9	5.6	47.7	32.1	20.3	27.4
Dec-15	38.0	30.9	31.1	6.9	51.0	27.6	21.4	29.6
Mar-16	39.9	30.3	29.8	10.1	54.6	27.2	18.2	36.4
Jun-16	40.2	27.9	31.9	8.3	54.2	25.5	20.4	33.8
Sep-16	44.6	30.1	25.3	19.3	57.7	24.3	18.0	39.7
Dec-16	45.7	24.1	30.3	15.4	66.3	16.6	17.1	49.2
Mar-17	35.6	24.4	40.0	-4.5	52.1	21.4	26.5	25.6
Jun-17	32.4	27.7	39.9	-7.5	48.6	25.9	25.5	23.1

Table 2: Perceptions and Expectations on Employment

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Improved	Remained Same	Worsened	Net Response	Will Improve	Will Remain Same	Will Worsen	Net Response
Mar-15	37.6	35.3	27.2	10.4	55.8	28.7	15.5	40.3
Jun-15	36.0	32.2	31.8	4.2	53.7	26.9	19.4	34.3
Sep-15	31.9	34.8	33.3	-1.4	47.1	33.4	19.5	27.6
Dec-15	34.0	34.7	31.3	2.7	51.6	29.8	18.7	32.9
Mar-16	34.3	31.1	34.6	-0.3	50.4	31.4	18.1	32.3
Jun-16	35.6	28.7	35.7	-0.1	51.1	29.6	19.3	31.8
Sep-16	31.7	36.4	31.9	-0.2	50.5	30.5	19.0	31.5
Dec-16	31.0	29.8	39.2	-8.3	57.3	24.1	18.6	38.7
Mar-17	32.6	28.4	39.0	-6.4	52.8	24.5	22.7	30.1
Jun-17	30.8	30.3	38.9	-8.1	49.6	29.3	21.2	28.4

Table 3: Perceptions and Expectations on Price Level

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	78.8	16.0	5.2	-73.6	73.9	17.7	8.4	-65.5
Jun-15	84.3	9.1	6.6	-77.7	82.3	9.1	8.5	-73.8
Sep-15	80.9	9.4	9.8	-71.1	78.0	12.4	9.5	-68.5
Dec-15	79.5	10.9	9.6	-69.9	78.9	11.7	9.4	-69.5
Mar-16	77.3	12.4	10.4	-66.9	78.6	11.7	9.7	-68.9
Jun-16	78.1	12.5	9.4	-68.7	80.5	11.5	8.0	-72.5
Sep-16	78.2	17.2	4.6	-73.6	77.8	15.2	6.9	-70.9
Dec-16	73.9	18.3	7.7	-66.2	69.5	16.0	14.5	-55.0
Mar-17	85.8	9.1	5.1	-80.7	81.0	10.4	8.6	-72.4
Jun-17	85.2	11.4	3.4	-81.8	76.1	13.8	10.1	-66.0

Table 4: Perceptions and Expectations on Rate of Change in Price Level (Inflation)

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	82.5	13.7	3.8	-78.7	83.5	12.7	3.7	-79.8
Jun-15	87.9	9.7	2.4	-85.5	83.8	12.9	3.3	-80.5
Sep-15	82.7	14.6	2.7	-80.0	81.1	16.3	2.6	-78.5
Dec-15	86.3	10.8	2.9	-83.4	85.4	11.7	2.8	-82.6
Mar-16	82.7	13.9	3.4	-79.3	82.4	13.2	4.4	-78.0
Jun-16	85.3	12.4	2.3	-83.0	83.3	13.0	3.7	-79.6
Sep-16	61.8	22.4	15.8	-46.0	64.3	22.4	13.3	-51.0
Dec-16	57.8	18.0	24.2	-33.6	62.4	17.1	20.6	-41.8
Mar-17	80.5	12.5	7.0	-73.5	79.9	13.8	6.3	-73.6
Jun-17	79.9	11.5	8.5	-71.4	78.7	13.5	7.9	-70.8

Table 5: Perceptions and Expectations on Income

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	35.4	46.1	18.5	16.9	55.4	35.5	9.1	46.3
Jun-15	34.9	43.7	21.4	13.5	52.7	35.6	11.6	41.1
Sep-15	29.1	50.4	20.5	8.6	47.1	42.4	10.5	36.6
Dec-15	28.7	50.2	21.1	7.6	49.1	40.4	10.5	38.6
Mar-16	31.3	48.9	19.8	11.5	52.1	39.3	8.6	43.5
Jun-16	29.9	51.8	18.4	11.5	51.2	39.9	8.9	42.3
Sep-16	31.2	48.6	20.2	11.0	52.3	36.4	11.3	41.0
Dec-16	27.1	47.1	25.8	1.3	54.8	33.5	11.7	43.1
Mar-17	27.7	47.3	25.0	2.7	51.8	36.5	11.7	40.1
Jun-17	23.8	53.8	22.4	1.4	47.1	43.5	9.4	37.7

Table 6: Perceptions and Expectations on Spending

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	80.0	13.7	6.3	73.7	78.3	15.8	6.0	72.3
Jun-15	87.4	9.5	3.1	84.3	86.2	9.6	4.2	82.0
Sep-15	81.0	10.7	8.2	72.8	80.9	11.2	7.9	73.0
Dec-15	78.7	9.8	11.5	67.2	79.3	10.1	10.6	68.7
Mar-16	78.0	9.9	12.1	65.9	78.5	10.6	11.0	67.5
Jun-16	82.7	8.4	8.8	73.9	82.2	10.2	7.6	74.6
Sep-16	70.3	24.1	5.7	64.6	79.1	17.0	3.9	75.2
Dec-16	73.5	20.8	5.6	67.9	78.3	15.8	5.9	72.4
Mar-17	84.4	13.4	2.1	82.3	88.5	8.3	3.1	85.4
Jun-17	81.3	17.2	1.5	79.8	83.5	13.7	2.8	80.7

Table 7: Perceptions and Expectations on Spending-Essential Items

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	85.7	10.9	3.4	82.3	80.5	14.4	5.2	75.3
Jun-15	91.8	6.1	2.1	89.7	87.0	8.8	4.2	82.8
Sep-15	82.0	9.7	8.4	73.6	80.1	11.6	8.3	71.8
Dec-15	81.4	9.0	9.6	71.8	81.5	9.4	9.1	72.4
Mar-16	79.6	9.3	11.1	68.5	78.6	11.9	9.6	69.0
Jun-16	83.0	8.2	8.8	74.2	81.1	10.6	8.3	72.8
Sep-16	79.1	16.9	4.0	75.1	82.5	12.7	4.8	77.7
Dec-16	76.9	18.4	4.7	72.2	77.5	14.9	7.7	69.8
Mar-17	85.8	11.1	3.1	82.7	87.0	9.2	3.8	83.2
Jun-17	82.2	15.3	2.5	79.7	81.9	13.5	4.6	77.2

Table 8: Perceptions and Expectations on Spending-Non-Essential Items

(Percentage responses)

Survey Round	Compared with 1-year ago				1-year ahead			
	Increased	Remained Same	Decreased	Net Response	Will Increase	Will Remain Same	Will Decrease	Net Response
Mar-15	41.9	28.4	29.7	12.2	43.6	28.7	27.7	15.9
Jun-15	46.9	25.5	27.6	19.3	52.3	24.3	23.4	28.9
Sep-15	41.2	35.0	23.8	17.4	44.0	34.2	21.8	22.2
Dec-15	45.3	28.9	25.8	19.5	49.2	28.6	22.2	27.1
Mar-16	37.7	31.7	30.6	7.1	44.7	33.2	22.1	22.6
Jun-16	43.9	32.3	23.8	20.1	51.2	30.3	18.5	32.7
Sep-16	50.2	37.6	12.2	38.0	60.6	29.5	9.9	50.7
Dec-16	37.3	44.7	18.1	19.2	49.6	35.8	14.7	34.9
Mar-17	48.9	36.4	14.7	34.2	57.8	30.3	11.8	46.0
Jun-17	51.6	35.5	13.0	38.6	56.3	32.6	11.1	45.2

Table 9: 99% Bootstrap Confidence Intervals (BCI) Based on 10,000 Resamples

Survey Round	CSI			FEI		
	CSI	99% BCI	Interval width	FEI	99% BCI	Interval width
Mar-15	108.6	(107.4, 110.0)	2.6	126.7	(125.5, 128.0)	2.6
Jun-15	107.7	(106.5, 109.0)	2.5	124.2	(122.9, 125.6)	2.6
Sep-15	102.9	(101.9, 103.9)	1.9	119.2	(118.3, 120.2)	1.9
Dec-15	102.9	(101.9, 103.9)	2.0	120.0	(119.0, 121.0)	2.0
Mar-16	104.1	(103.1, 105.0)	1.9	122.2	(121.3, 123.1)	1.8
Jun-16	105.0	(104.0, 105.9)	1.9	122.0	(121.0, 122.9)	1.9
Sep-16	104.2	(100.6, 103.5)	2.9	123.3	(128.3, 130.1)	1.8
Dec-16	102.0	(100.6, 103.5)	2.9	129.7	(128.3, 129.9)	1.6
Mar-17	98.7	(97.3, 100.1)	2.8	121.7	(120.3, 121.7)	1.4
Jun-17	96.8	(95.5, 98.1)	2.6	120.8	(119.4, 121.2)	1.8

Table 10: Pairwise Granger Causality Tests

Lags: 3			
Null Hypothesis:	Obs	F-Statistic	Prob.
PFCE does not Granger Cause FEI	25	0.38772	0.7632
FEI does not Granger Cause PFCE		4.09643	0.0222

Lags: 4			
Null Hypothesis:	Obs	F-Statistic	Prob.
PFCE does not Granger Cause FEI	24	0.28319	0.8843
FEI does not Granger Cause PFCE		4.25579	0.0169

Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
PFCE does not Granger Cause FEI	23	0.24482	0.9345
FEI does not Granger Cause PFCE		2.53574	0.0867

Annex B

1. Sample Coverage and Survey Questionnaire

The survey is conducted in six metropolitan cities *viz.* Bengaluru, Chennai, Hyderabad, Kolkata, Mumbai and New Delhi. In each round of the survey, 5,400 respondents are selected (900 respondents from each city), using a hybrid two stage sampling design. At the first stage in a city, the polling booths are selected by systematic random sampling after arranging all polling booths according to their constituencies. In order to ensure wide geographical coverage, 45 polling booths spread over the entire city are selected. In second stage, from each selected polling booth area, 20 respondents are selected following the right hand rule. From Q4:2014-15 onwards, information relating to expenditure on essential and non-essential items, and households' current financial situation are also being collected.

2. Current Situation Index & Future Expectations Index

In standard opinion surveys, respondents generally have three reply options such as up/same/down; or above-normal/normal/ below-normal; or increase/remain-same/decrease. Because of the difficulty of interpreting all three percentages, the survey results are normally converted into a single quantitative number. One of the most common way of doing

this is to use 'Net-Responses' (also called 'Balances' or 'Net Balances'). It is defined as the percentage of the respondents reporting a decrease (negative), subtracted from the percentage reporting an increase (positive). Net Responses can take values from -100 to +100. In this survey, Net Response is used to analyse the Consumer Confidence Survey results. To combine the consumer confidence perceptions on various factors, two indices are worked out. These are Current Situation Index for reflecting current situation as compared to one year ago and Future Expectations Index to reflect the expectations one year ahead. For calculating the index, the following formula has been used.

Overall Index = 100 + Average (Net Response of selected factors)

Where Net Response = Positive perceptions (%) – Negative perception (%)

The average net responses on the current perception on various factors, *viz.* economic conditions, income, spending, price level and employment are used for the calculation of the Current Situation Index.

The average net responses on the future perceptions on various factors, *viz.* economic conditions, income, spending, price level and employment are used for the calculation of the Future Expectations Index.

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PRESS RELEASE

Phillips Curve Relationship in India: Evidence from State-Level Analysis

Phillips Curve Relationship in India: Evidence from State-Level Analysis

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***Garima Wahi and
Muneesh Kapur***

The Working Paper titled "Phillips Curve Relationship in India: Evidence from State-Level Analysis" is published under the Reserve Bank of India Working Paper Series on July 3, 2017. The paper is co-authored by Harendra Behera, Garima Wahi and Muneesh Kapur.

This paper revisits the issue of determinants of inflation in India in a Phillips curve framework

and makes two key contributions in relation to existing studies. First, in the context of the Reserve Bank moving towards a flexible inflation targeting framework based on consumer price index (CPI) inflation, this paper attempts to model dynamics of the CPI inflation. Second, the paper explores the Phillips curve relationship in India using sub-national data in a panel-approach. The estimates in the paper confirm the presence of a conventional Phillips curve, both for core inflation and headline inflation. Excess demand conditions have the expected hardening effect on inflation, with the impact being more pronounced on core inflation. Exchange rate movements are also found to have a significant impact on inflation. Overall, the paper's findings provide support for the role of a counter-cyclical monetary policy to stabilise inflation and inflation expectations.

CURRENT STATISTICS

Select Economic Indicators

Reserve Bank of India

Money and Banking

Prices and Production

Government Accounts and Treasury Bills

Financial Markets

External Sector

Payment and Settlement Systems

Occasional Series

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

No. 1: Select Economic Indicators

Item	2016-17	2015-16		2016-17		2017-18	
		Q4		Q1	Q4	Q1	
		1	2	3	4	5	
1 Real Sector (% Change)							
1.1 GVA at Basic Prices		6.6	8.7	7.6	5.6	5.6	
1.1.1 Agriculture		4.9	1.5	2.5	5.2	2.3	
1.1.2 Industry		7.0	11.9	9.0	5.5	1.5	
1.1.3 Services		6.9	9.4	8.2	5.7	7.8	
1.1a Final Consumption Expenditure		10.5	8.7	9.8	10.2	8.5	
1.1b Gross Fixed Capital Formation		2.4	8.3	7.4	-2.1	1.6	
	2016-17	2016		2017			
		Jul.	Aug.	Jul.	Aug.		
		1	1	2	3	4	
1.2 Index of Industrial Production		4.6	4.5	4.0	1.2	-	
2 Money and Banking (% Change)							
2.1 Scheduled Commercial Banks							
2.1.1 Deposits		11.3	8.3	8.9	9.5	9.4	
2.1.2 Credit		4.5	8.4	8.9	5.7	6.7	
2.1.2.1 Non-food Credit		5.2	8.6	9.1	6.5	7.5	
2.1.3 Investment in Govt. Securities		17.4	4.7	5.3	16.1	17.1	
2.2 Money Stock Measures							
2.2.1 Reserve Money (M0)		-12.9	15.2	15.1	-6.2	-4.7	
2.2.2 Broad Money (M3)		10.6	10.1	10.0	6.5	7.1	
3 Ratios (%)							
3.1 Cash Reserve Ratio		4.00	4.00	4.00	4.00	4.00	
3.2 Statutory Liquidity Ratio		20.50	21.00	21.00	20.00	20.00	
3.3 Cash-Deposit Ratio		5.3	4.8	4.8	4.8	5.0	
3.4 Credit-Deposit Ratio		72.9	74.9	74.4	72.3	72.6	
3.5 Incremental Credit-Deposit Ratio		41.4	2.0	-2.2	**	**	
3.6 Investment-Deposit Ratio		28.2	28.8	29.0	30.5	31.0	
3.7 Incremental Investment-Deposit Ratio		28.4	46.3	49.3	*	*	
4 Interest Rates (%)							
4.1 Policy Repo Rate		6.25	6.50	6.50	6.25	6.00	
4.2 Reverse Repo Rate		5.75	6.00	6.00	6.00	5.75	
4.3 Marginal Standing Facility (MSF) Rate		6.75	7.00	7.00	6.50	6.25	
4.4 Bank Rate		6.75	7.00	7.00	6.50	6.25	
4.5 Base Rate		9.25/9.60	9.30/9.70	9.30/9.70	9.00/9.55	9.00/9.55	
4.6 MCLR (Overnight)		7.75/8.20	8.90/9.15	8.85/9.15	7.75/8.10	7.75/8.10	
4.7 Term Deposit Rate >1 Year		6.50/7.00	7.00/7.50	7.00/7.50	6.25/6.90	6.25/6.75	
4.8 Savings Deposit Rate		4.00	4.00	4.00	4.00	3.50/4.00	
4.9 Call Money Rate (Weighted Average)		5.97	6.39	6.40	6.08	5.93	
4.10 91-Day Treasury Bill (Primary) Yield		5.82	6.56	6.56	6.15	6.11	
4.11 182-Day Treasury Bill (Primary) Yield		6.05	6.69	6.67	6.25	6.22	
4.12 364-Day Treasury Bill (Primary) Yield		6.14	6.74	6.67	6.29	6.25	
4.13 10-Year G-Sec Par Yield (FIMMDA)		7.00	7.27	7.13	6.56	6.65	
5 RBI Reference Rate and Forward Premiums							
5.1 INR-US\$ Spot Rate (Rs. Per Foreign Currency)		64.84	67.03	67.03	64.15	64.07	
5.2 INR-Euro Spot Rate (Rs. Per Foreign Currency)		69.25	74.27	75.74	74.98	75.58	
5.3 Forward Premium of US\$ 1-month (%)		5.09	6.35	6.44	4.68	4.68	
3-month (%)		4.97	6.24	6.24	4.61	4.53	
6-month (%)		4.90	6.03	5.85	4.60	4.48	
6 Inflation (%)							
6.1 All India Consumer Price Index		4.5	6.1	5.1	2.4	3.4	
6.2 Consumer Price Index for Industrial Workers		4.1	6.5	5.3	1.8	2.5	
6.3 Wholesale Price Index		1.7	0.6	1.1	1.9	3.2	
6.3.1 Primary Articles		3.4	6.0	4.8	0.5	2.7	
6.3.2 Fuel and Power		-0.3	-9.7	-7.4	4.4	10.0	
6.3.3 Manufactured Products		1.3	0.4	0.9	2.2	2.5	
7 Foreign Trade (% Change)							
7.1 Imports		0.5	-19.4	-13.8	16.2	21.0	
7.2 Exports		5.4	-16.7	0.1	3.0	10.3	

Note: * Denominator negative.

**Denominator and numerator negative.

Reserve Bank of India

No. 2: RBI - Liabilities and Assets *

Item	(₹ Billion)						
	As on the Last Friday/ Friday						
	2016-17	2016		2017			
		Sep.	Aug. 25	Sep. 8	Sep. 15	Sep. 22	Sep. 29
		1	2	3	4	5	6
1 Issue Department							
1.1 Liabilities							
1.1.1 Notes in Circulation	13,101.81	17,046.05	15,400.49	15,556.70	15,580.92	15,555.00	15,632.51
1.1.2 Notes held in Banking Department	0.12	0.13	0.15	0.16	0.29	0.16	0.17
1.1/1.2 Total Liabilities (Total Notes Issued) or Assets	13,101.93	17,046.18	15,400.65	15,556.86	15,581.21	15,555.16	15,632.67
1.2 Assets							
1.2.1 Gold Coin and Bullion	675.08	759.65	669.69	694.14	694.14	694.14	694.14
1.2.2 Foreign Securities	12,422.35	16,274.60	14,725.82	14,857.77	14,882.23	14,856.35	14,930.00
1.2.3 Rupee Coin	4.50	1.47	5.14	4.95	4.84	4.67	8.53
1.2.4 Government of India Rupee Securities	—	10.46	—	—	—	—	—
2 Banking Department							
2.1 Liabilities							
2.1.1 Deposits	10,389.43	6,301.63	8,843.46	8,800.23	8,832.64	8,938.61	8,890.26
2.1.1.1 Central Government	50.00	1.00	13.93	1.01	1.00	1.01	28.91
2.1.1.2 Market Stabilisation Scheme	—	—	946.73	946.73	946.73	946.73	946.73
2.1.1.3 State Governments	0.42	0.42	8.38	0.42	0.42	0.42	0.42
2.1.1.4 Scheduled Commercial Banks	5,087.73	4,124.06	4,535.45	4,332.04	4,626.15	4,454.56	4,534.06
2.1.1.5 Scheduled State Co-operative Banks	55.13	35.40	37.76	35.33	36.15	34.80	35.17
2.1.1.6 Non-Scheduled State Co-operative Banks	18.92	14.01	17.54	18.14	17.98	17.17	16.78
2.1.1.7 Other Banks	279.49	225.11	257.96	252.87	252.07	252.96	258.75
2.1.1.8 Others	4,897.74	1,901.63	3,025.70	3,213.69	2,952.14	3,230.95	3,069.43
2.1.1.9 Financial Institution Outside India	—	—	—	—	—	—	—
2.1.2 Other Liabilities	8,411.18	9,399.12	8,428.05	8,574.22	8,697.79	9,016.35	9,043.04
2.1/2.2 Total Liabilities or Assets	18,800.61	15,700.75	17,271.50	17,374.45	17,530.43	17,954.96	17,933.30
2.2 Assets							
2.2.1 Notes and Coins	0.12	0.13	0.15	0.16	0.29	0.16	0.17
2.2.2 Balances held Abroad	10,263.49	6,997.77	9,265.92	9,403.77	9,573.91	9,917.59	9,825.65
2.2.3 Loans and Advances							
2.2.3.1 Central Government	—	—	—	—	—	—	—
2.2.3.2 State Governments	12.62	32.09	11.29	64.28	4.13	16.54	16.36
2.2.3.3 Scheduled Commercial Banks	218.10	343.67	32.70	25.90	166.69	236.12	405.30
2.2.3.4 Scheduled State Co-op.Banks	—	—	—	—	—	—	—
2.2.3.5 Industrial Dev. Bank of India	—	—	—	—	—	—	—
2.2.3.6 NABARD	—	—	—	—	—	—	—
2.2.3.7 EXIM Bank	—	—	—	—	—	—	—
2.2.3.8 Others	39.91	43.86	43.78	36.78	42.15	39.60	40.86
2.2.3.9 Financial Institution Outside India	—	—	—	—	—	—	—
2.2.4 Bills Purchased and Discounted							
2.2.4.1 Internal	—	—	—	—	—	—	—
2.2.4.2 Government Treasury Bills	—	—	—	—	—	—	—
2.2.5 Investments	7,528.11	7,445.73	7,285.96	7,184.03	7,079.40	7,080.04	6,976.11
2.2.6 Other Assets	738.26	837.50	631.70	659.53	663.86	664.91	668.85
2.2.6.1 Gold	613.19	679.19	608.25	630.46	630.46	630.46	630.46

* Data are provisional

No. 3: Liquidity Operations by RBI

Date	Liquidity Adjustment Facility				MSF	Standing Liquidity Facilities	Market Stabilisation Scheme	OMO (Outright)		(₹ Billion) Net Injection (+)/ Absorption (-) (1+3+5+6+9-2-4-7-8)
	Repo	Reverse Repo	Variable Rate Repo	Variable Rate Reverse Repo				Sale	Purchase	
	1	2	3	4	5	6	7	8	9	10
Aug. 1, 2017	37.10	64.75	4.50	350.06	5.00	—	—	—	—	-368.21
Aug. 2, 2017	32.30	67.13	—	474.60	25.00	—	—	—	—	-484.43
Aug. 3, 2017	21.65	118.29	—	364.61	7.75	—	—	—	—	-453.50
Aug. 4, 2017	33.10	257.27	10.00	307.58	22.15	—	—	—	—	-499.60
Aug. 5, 2017	—	44.10	—	—	—	—	—	—	—	-44.10
Aug. 7, 2017	80.40	27.92	—	78.22	8.30	—	—	—	—	-17.44
Aug. 8, 2017	86.20	70.65	4.75	24.52	—	—	—	—	—	-4.22
Aug. 9, 2017	93.60	101.94	—	28.69	2.00	—	—	—	—	-35.03
Aug. 10, 2017	23.55	127.80	—	350.41	3.00	-2.79	—	—	—	-454.45
Aug. 11, 2017	22.80	115.18	6.80	407.77	10.30	4.34	—	100.00	—	-578.71
Aug. 14, 2017	26.20	50.33	4.25	132.20	9.50	—	—	—	—	-142.58
Aug. 16, 2017	21.80	114.25	—	908.00	0.11	-2.75	—	—	—	-1,003.09
Aug. 17, 2017	—	201.17	—	—	1.20	—	—	—	—	-199.97
Aug. 18, 2017	31.55	289.38	10.00	570.05	3.45	2.75	—	—	—	-811.68
Aug. 19, 2017	94.50	41.87	—	—	6.50	—	—	—	—	59.13
Aug. 21, 2017	119.14	45.98	—	3.71	9.00	—	—	—	—	78.45
Aug. 22, 2017	112.80	32.98	6.75	59.60	36.15	-1.70	—	—	—	61.42
Aug. 23, 2017	168.78	57.80	—	156.78	—	1.70	—	—	—	-44.10
Aug. 24, 2017	26.35	90.46	6.00	496.90	—	—	—	—	—	-555.01
Aug. 25, 2017	—	165.90	—	—	5.00	—	—	—	—	-160.90
Aug. 28, 2017	25.75	350.82	—	298.32	3.05	—	—	—	—	-620.34
Aug. 29, 2017	25.75	213.44	4.25	430.14	—	—	—	—	—	-613.58
Aug. 30, 2017	25.75	473.50	—	455.80	—	—	—	100.00	—	-1,003.55
Aug. 31, 2017	20.35	382.05	—	509.31	—	—	—	—	—	-871.01

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

i) Operations in OTC segment

ii) Operations in currency futures segment

Item	2016-17	2016	2017		
		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 (+)		10,456.00	0.00	0.00	0.00
1.2 Sale (-)		10,456.00	0.00	0.00	0.00
2 Outstanding Net Currency Futures Sales (-)/ Purchase (+) at the end of month (US \$ Million)		0.00	0.00	0.00	0.00

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

Item	As on August 31, 2017		
	Long (+)	Short (-)	Net (1-2)
	1	2	3
1. Upto 1 month	1,934	5	1,929
2. More than 1 month and upto 3 months	3,952	78	3,874
3. More than 3 months and upto 1 year	29,084	1	29,083
4. More than 1 year	70	2,133	-2,063
Total (1+2+3+4)	35,040	2,217	32,823

No. 5: RBI's Standing Facilities

(₹ Billion)

Item	As on the Last Reporting Friday							
	2016-17	2016		2017				
		Sep. 30	Apr. 28	May 26	Jun. 23	Jul. 21	Aug. 18	Sep. 29
	1	2	3	4	5	6	7	8
1 MSF	19.3	1.8	2.9	0.4	2.5	6.8	3.5	194.8
2 Export Credit Refinance for Scheduled Banks								
2.1 Limit	—	—	—	—	—	—	—	—
2.2 Outstanding	—	—	—	—	—	—	—	—
3 Liquidity Facility for PDs								
3.1 Limit	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
3.2 Outstanding	14.8	16.7	11.6	17.8	16.7	15.4	18.1	19.3
4 Others								
4.1 Limit	—	—	—	—	—	—	—	—
4.2 Outstanding	—	—	—	—	—	—	—	—
5 Total Outstanding (1+2.2+3.2+4.2)	34.1	18.4	14.5	18.2	19.2	22.1	21.5	214.1

Money and Banking

No. 6: Money Stock Measures

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2016	2017		
		Aug. 19	Jul. 21	Aug. 4	Aug. 18
	1	2	3	4	5
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	12,637.1	16,738.8	14,691.8	14,754.4	14,891.3
1.1 Notes in Circulation	13,101.8	17,219.5	15,226.7	15,258.8	15,457.6
1.2 Circulation of Rupee Coin	243.4	222.3	245.7	245.7	245.7
1.3 Circulation of Small Coins	7.4	7.4	7.4	7.4	7.4
1.4 Cash on Hand with Banks	715.6	710.4	788.0	757.5	819.4
2 Deposit Money of the Public	14,317.2	10,094.1	12,085.3	12,616.2	12,472.7
2.1 Demand Deposits with Banks	14,106.3	9,954.1	11,905.7	12,424.1	12,267.9
2.2 ‘Other’ Deposits with Reserve Bank	210.9	140.0	179.6	192.1	204.8
3 M₁ (1 + 2)	26,954.3	26,832.9	26,777.1	27,370.6	27,364.0
4 Post Office Saving Bank Deposits	915.6	707.6	915.6	915.6	915.6
5 M₂ (3 + 4)	27,869.9	27,540.5	27,692.6	28,286.2	28,279.6
6 Time Deposits with Banks	101,489.5	93,923.8	101,130.5	102,570.3	101,900.0
7 M₃ (3 + 6)	128,443.9	120,756.6	127,907.6	129,940.9	129,264.1
8 Total Post Office Deposits	2,557.0	2,237.4	2,557.0	2,557.0	2,557.0
9 M₄ (7 + 8)	131,000.9	122,994.1	130,464.6	132,497.9	131,821.1

No. 7: Sources of Money Stock (M₃)

(₹ Billion)

Sources	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2016	2017		
		Aug. 19	Jul. 21	Aug. 4	Aug. 18
	1	2	3	4	5
1 Net Bank Credit to Government	38,690.9	36,973.8	41,002.9	42,074.7	41,674.2
1.1 RBI's net credit to Government (1.1.1–1.1.2)	6,208.1	6,931.3	6,462.7	7,000.7	6,448.3
1.1.1 Claims on Government	7,512.0	7,274.7	7,410.8	7,948.9	7,396.5
1.1.1.1 Central Government	7,499.4	7,247.5	7,401.9	7,915.6	7,352.8
1.1.1.2 State Governments	12.6	27.2	9.0	33.3	43.7
1.1.2 Government deposits with RBI	1,303.9	343.4	948.2	948.2	948.2
1.1.2.1 Central Government	1,303.5	343.0	947.7	947.7	947.7
1.1.2.2 State Governments	0.4	0.4	0.4	0.4	0.4
1.2 Other Banks' Credit to Government	32,482.8	30,042.5	34,540.3	35,073.9	35,225.9
2 Bank Credit to Commercial Sector	84,514.3	78,113.3	81,861.4	82,950.1	82,741.0
2.1 RBI's credit to commercial sector	72.9	70.9	68.7	74.2	75.3
2.2 Other banks' credit to commercial sector	84,441.4	78,042.3	81,792.7	82,875.9	82,665.7
2.2.1 Bank credit by commercial banks	78,815.3	72,477.2	76,178.6	77,279.5	77,055.5
2.2.2 Bank credit by co-operative banks	5,548.9	5,514.6	5,530.0	5,513.0	5,526.8
2.2.3 Investments by commercial and co-operative banks in other securities	77.2	50.5	84.1	83.4	83.4
3 Net Foreign Exchange Assets of Banking Sector (3.1 + 3.2)	25,582.3	25,973.6	26,766.9	26,674.1	26,818.4
3.1 RBI's net foreign exchange assets (3.1.1–3.1.2)	23,972.1	24,467.7	25,156.7	25,063.9	25,208.2
3.1.1 Gross foreign assets	23,974.1	24,469.8	25,158.6	25,065.8	25,210.1
3.1.2 Foreign liabilities	2.0	2.1	1.9	1.9	1.9
3.2 Other banks' net foreign exchange assets	1,610.2	1,505.9	1,610.2	1,610.2	1,610.2
4 Government's Currency Liabilities to the Public	250.9	229.7	253.1	253.1	253.1
5 Banking Sector's Net Non-monetary Liabilities	20,594.6	20,533.7	21,976.8	22,011.1	22,222.7
5.1 Net non-monetary liabilities of RBI	8,333.5	9,320.7	8,810.5	8,605.8	8,423.5
5.2 Net non-monetary liabilities of other banks (residual)	12,261.1	11,213.0	13,166.4	13,405.3	13,799.1
M₃ (1+2+3+4–5)	128,443.9	120,756.6	127,907.6	129,940.9	129,264.1

No. 8: Monetary Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17	2016		2017	
		Aug. 19	Jul. 21	Aug. 4	Aug. 18
	1	2	3	4	5
Monetary Aggregates					
NM ₁ (1.1 + 1.2.1+1.3)	26,954.4	26,832.9	26,777.1	27,370.6	27,364.0
NM ₂ (NM ₁ + 1.2.2.1)	72,005.3	67,717.7	71,667.0	72,918.4	72,622.4
NM ₃ (NM ₂ + 1.2.2.2 + 1.4 = 2.1 + 2.2 + 2.3 – 2.4 – 2.5)	130,222.1	120,731.4	129,387.2	131,520.4	130,909.3
1 Components					
1.1 Currency with the Public	12,637.1	16,738.8	14,691.8	14,754.4	14,891.3
1.2 Aggregate Deposits of Residents	114,219.5	100,809.3	111,661.1	113,641.4	112,842.0
1.2.1 Demand Deposits	14,106.3	9,954.1	11,905.7	12,424.1	12,267.9
1.2.2 Time Deposits of Residents	100,113.2	90,855.2	99,755.5	101,217.3	100,574.1
1.2.2.1 Short-term Time Deposits	45,050.9	40,884.8	44,890.0	45,547.8	45,258.3
1.2.2.1.1 Certificates of Deposit (CDs)	1,570.6	1,606.9	1,239.6	1,211.8	1,162.1
1.2.2.2 Long-term Time Deposits	55,062.2	49,970.3	54,865.5	55,669.5	55,315.8
1.3 ‘Other’ Deposits with RBI	210.9	140.0	179.6	192.1	204.8
1.4 Call/Term Funding from Financial Institutions	3,154.5	3,043.3	2,854.6	2,932.5	2,971.2
2 Sources					
2.1 Domestic Credit	129,709.2	121,411.7	129,822.9	132,025.6	131,322.1
2.1.1 Net Bank Credit to the Government	38,691.0	36,973.8	41,002.9	42,074.7	41,674.2
2.1.1.1 Net RBI credit to the Government	6,208.1	6,931.3	6,462.7	7,000.7	6,448.3
2.1.1.2 Credit to the Government by the Banking System	32,482.9	30,042.5	34,540.3	35,073.9	35,225.9
2.1.2 Bank Credit to the Commercial Sector	91,018.3	84,437.9	88,819.9	89,951.0	89,647.9
2.1.2.1 RBI Credit to the Commercial Sector	72.9	70.9	68.7	74.2	75.3
2.1.2.2 Credit to the Commercial Sector by the Banking System	90,945.4	84,367.0	88,751.2	89,876.8	89,572.5
2.1.2.2.1 Other Investments (Non-SLR Securities)	6,462.5	6,238.8	6,883.6	6,924.6	6,837.7
2.2 Government’s Currency Liabilities to the Public	250.9	229.7	253.1	253.1	253.1
2.3 Net Foreign Exchange Assets of the Banking Sector	23,819.8	22,669.5	24,623.8	24,586.5	24,734.8
2.3.1 Net Foreign Exchange Assets of the RBI	23,972.1	24,467.7	25,156.7	25,063.9	25,208.2
2.3.2 Net Foreign Currency Assets of the Banking System	-152.3	-1,798.2	-532.9	-477.4	-473.4
2.4 Capital Account	18,195.5	18,942.8	19,198.8	18,957.0	19,245.5
2.5 Other items (net)	5,362.3	4,636.7	6,113.9	6,387.9	6,155.1

No. 9: Liquidity Aggregates

(₹ Billion)

Aggregates	2016-17	2016		2017	
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 NM₃	130,222.1	120,731.4	129,639.8	129,387.2	130,909.3
2 Postal Deposits	2,557.0	2,237.4	2,557.0	2,557.0	2,557.0
3 L₁ (1 + 2)	132,779.1	122,968.8	132,196.8	131,944.2	133,466.4
4 Liabilities of Financial Institutions	29.3	29.3	29.3	29.3	29.3
4.1 Term Money Borrowings	26.6	26.6	26.6	26.6	26.6
4.2 Certificates of Deposit	0.3	0.3	0.3	0.3	0.3
4.3 Term Deposits	2.5	2.5	2.5	2.5	2.5
5 L₂ (3 + 4)	132,808.4	122,998.1	132,226.1	131,973.5	133,495.7
6 Public Deposits with Non-Banking Financial Companies	451.5	..	451.5
7 L₃ (5 + 6)	133,259.9	..	132,677.6

No. 10: Reserve Bank of India Survey

(₹ Billion)

Item	Outstanding as on March 31/last reporting Fridays of the month/reporting Fridays				
	2016-17		2016	2017	
			Aug. 19	Jul. 21	Aug. 4
	1	2		3	4
1 Components					
1.1 Currency in Circulation	13,352.7	17,449.2	15,479.8	15,511.9	15,710.8
1.2 Bankers' Deposits with the RBI	5,441.3	4,154.8	4,612.2	4,704.2	4,719.9
1.2.1 Scheduled Commercial Banks	5,087.7	3,888.0	4,306.3	4,396.5	4,409.8
1.3 'Other' Deposits with the RBI	210.9	140.0	179.6	192.1	204.8
Reserve Money (1.1 + 1.2 + 1.3 = 2.1 + 2.2 + 2.3 - 2.4 - 2.5)	19,004.8	21,744.0	20,271.6	20,408.2	20,635.5
2 Sources					
2.1 RBI's Domestic Credit	3,115.3	6,367.4	3,672.2	3,697.0	3,597.7
2.1.1 Net RBI credit to the Government	6,208.1	6,931.3	6,462.7	7,000.7	6,448.3
2.1.1.1 Net RBI credit to the Central Government (2.1.1.1 + 2.1.1.2 + 2.1.1.3 + 2.1.1.4 - 2.1.1.5)	6,195.9	6,904.6	6,454.1	6,967.8	6,405.1
2.1.1.1.1 Loans and Advances to the Central Government	-	-	46.9	554.1	96.0
2.1.1.1.2 Investments in Treasury Bills	-	-	-	-	-
2.1.1.1.3 Investments in dated Government Securities	7,494.9	7,245.1	7,349.3	7,356.1	7,251.6
2.1.1.1.3.1 Central Government Securities	7,494.9	7,234.6	7,349.3	7,356.1	7,251.6
2.1.1.1.4 Rupee Coins	4.5	2.5	5.7	5.4	5.2
2.1.1.1.5 Deposits of the Central Government	1,303.5	343.0	947.7	947.7	947.7
2.1.1.2 Net RBI credit to State Governments	12.2	26.8	8.5	32.9	43.2
2.1.2 RBI's Claims on Banks	-3,165.7	-634.9	-2,859.2	-3,377.9	-2,925.9
2.1.2.1 Loans and Advances to Scheduled Commercial Banks	-3,165.7	-634.9	-2,859.2	-3,377.9	-2,925.9
2.1.3 RBI's Credit to Commercial Sector	72.9	70.9	68.7	74.2	75.3
2.1.3.1 Loans and Advances to Primary Dealers	14.8	19.1	15.4	16.5	18.1
2.1.3.2 Loans and Advances to NABARD	-	-	-	-	-
2.2 Government's Currency Liabilities to the Public	250.9	229.7	253.1	253.1	253.1
2.3 Net Foreign Exchange Assets of the RBI	23,972.1	24,467.7	25,156.7	25,063.9	25,208.2
2.3.1 Gold	1,288.3	1,446.9	1,317.4	1,277.9	1,277.9
2.3.2 Foreign Currency Assets	22,684.0	23,021.0	23,839.5	23,786.1	23,930.4
2.4 Capital Account	7,512.8	8,731.1	7,784.5	7,548.5	7,800.1
2.5 Other Items (net)	820.6	589.7	1,026.0	1,057.3	623.4

No. 11: Reserve Money - Components and Sources

(₹ Billion)

Item	Outstanding as on March 31/ last Fridays of the month/ Fridays						
	2016-17		2016	2017			
			Aug. 19	Jul. 28	Aug. 4	Aug. 11	Aug. 18
	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)							
1 Components	19,004.8	21,744.0	20,330.9	20,408.2	20,496.9	20,635.5	20,685.3
1.1 Currency in Circulation	13,352.7	17,449.2	15,410.9	15,511.9	15,699.1	15,710.8	15,653.6
1.2 Bankers' Deposits with RBI	5,441.3	4,154.8	4,738.8	4,704.2	4,616.5	4,719.9	4,848.7
1.3 'Other' Deposits with RBI	210.9	140.0	181.2	192.1	181.4	204.8	183.0
2 Sources							
2.1 Net Reserve Bank Credit to Government	6,208.1	6,931.3	6,269.3	7,000.7	6,199.0	6,448.3	5,716.3
2.2 Reserve Bank Credit to Banks	-3,165.7	-634.9	-2,639.1	-3,377.9	-2,812.9	-2,925.9	-2,174.2
2.3 Reserve Bank Credit to Commercial Sector	72.9	70.9	70.1	74.2	73.7	75.3	77.3
2.4 Net Foreign Exchange Assets of RBI	23,972.1	24,467.7	25,197.5	25,063.9	25,245.6	25,208.2	25,267.7
2.5 Government's Currency Liabilities to the Public	250.9	229.7	253.1	253.1	253.1	253.1	253.1
2.6 Net Non- Monetary Liabilities of RBI	8,333.5	9,320.7	8,820.0	8,605.8	8,461.6	8,423.5	8,454.9

No. 12: Commercial Bank Survey

Item	(₹ Billion)				
	Outstanding as on last reporting Fridays of the month/ reporting Fridays of the month				
	2016-17	2016	2017		
		Aug. 19	Jul. 21	Aug. 4	Aug. 18
	1	2	3	4	5
1 Components					
1.1 Aggregate Deposits of Residents	106,728.9	93,713.9	104,210.8	106,196.6	105,401.0
1.1.1 Demand Deposits	12,953.3	8,905.5	10,761.2	11,283.5	11,129.3
1.1.2 Time Deposits of Residents	93,775.6	84,808.4	93,449.6	94,913.1	94,271.7
1.1.2.1 Short-term Time Deposits	42,199.0	38,163.8	42,052.3	42,710.9	42,422.3
1.1.2.1.1 Certificates of Deposits (CDs)	1,570.6	1,606.9	1,239.6	1,211.8	1,162.1
1.1.2.2 Long-term Time Deposits	51,576.6	46,644.6	51,397.3	52,202.2	51,849.4
1.2 Call/Term Funding from Financial Institutions	3,154.5	3,043.3	2,854.6	2,932.5	2,971.2
2 Sources					
2.1 Domestic Credit	115,665.6	106,812.1	115,515.1	117,178.2	117,006.3
2.1.1 Credit to the Government	30,422.4	28,080.6	32,446.0	32,970.1	33,113.7
2.1.2 Credit to the Commercial Sector	85,243.2	78,731.4	83,069.2	84,208.2	83,892.6
2.1.2.1 Bank Credit	78,815.3	72,477.2	76,178.6	77,279.5	77,055.5
2.1.2.1.1 Non-food Credit	78,279.6	71,442.0	75,654.3	76,728.2	76,512.1
2.1.2.2 Net Credit to Primary Dealers	44.2	88.4	77.5	78.9	71.7
2.1.2.3 Investments in Other Approved Securities	10.9	16.6	19.1	14.8	17.2
2.1.2.4 Other Investments (in non-SLR Securities)	6,372.9	6,149.2	6,794.0	6,835.0	6,748.1
2.2 Net Foreign Currency Assets of Commercial Banks (2.2.1–2.2.2–2.2.3)	-152.3	-1,798.2	-532.9	-477.4	-473.4
2.2.1 Foreign Currency Assets	1,983.5	2,221.5	1,541.4	1,589.4	1,591.1
2.2.2 Non-resident Foreign Currency Repatriable Fixed Deposits	1,376.3	3,068.6	1,375.1	1,353.0	1,325.9
2.2.3 Overseas Foreign Currency Borrowings	759.5	951.2	699.2	713.8	738.6
2.3 Net Bank Reserves (2.3.1+2.3.2–2.3.3)	8,871.2	5,140.2	7,849.6	8,429.6	8,053.5
2.3.1 Balances with the RBI	5,087.7	3,888.0	4,306.3	4,396.5	4,409.8
2.3.2 Cash in Hand	617.7	617.3	684.1	655.1	717.8
2.3.3 Loans and Advances from the RBI	-3,165.7	-634.9	-2,859.2	-3,377.9	-2,925.9
2.4 Capital Account	10,441.0	9,970.1	11,172.6	11,166.7	11,203.7
2.5 Other items (net) (2.1+2.2+2.3–2.4–1.1–1.2)	4,060.1	3,426.8	4,593.8	4,834.6	5,010.6
2.5.1 Other Demand and Time Liabilities (net of 2.2.3)	3,995.0	3,820.4	4,053.4	4,169.5	4,268.4
2.5.2 Net Inter-Bank Liabilities (other than to PDs)	-108.8	-62.6	-463.1	-430.8	-464.0

No. 13: Scheduled Commercial Banks' Investments

Item	As on March 31, 2017	(₹ Billion)				
		2016		2017		
		Aug. 19	Jul. 21	Aug. 4	Aug. 18	
		1	2	3	4	5
1 SLR Securities	30,309.6	28,097.3	32,609.0	32,984.9	33,131.0	
2 Commercial Paper	1,159.6	1,065.2	1,136.5	1,106.9	1,083.8	
3 Shares issued by						
3.1 PSUs	91.9	77.3	97.3	107.9	107.1	
3.2 Private Corporate Sector	567.3	461.5	643.1	663.5	670.2	
3.3 Others	51.8	43.4	46.8	41.9	41.8	
4 Bonds/Debentures issued by						
4.1 PSUs	1,118.5	1,176.5	1,063.5	1,036.7	1,045.6	
4.2 Private Corporate Sector	1,680.0	1,373.5	1,616.9	1,666.9	1,650.0	
4.3 Others	810.9	657.9	735.1	714.6	684.2	
5 Instruments issued by						
5.1 Mutual funds	134.0	790.8	794.9	786.9	745.2	
5.2 Financial institutions	844.3	610.6	771.5	709.7	720.2	

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

(₹ Billion)

Item	As on the Last Reporting Friday (in case of March)/ Last Friday							
	All Scheduled Banks			All Scheduled Commercial Banks				
	2016-17	2016	2017	2016-17	2016	2017	Aug.	Jul.
		Aug.	Jul.		Aug.	Jul.		
	1	2	3	4	5	6	7	8
Number of Reporting Banks	221	219	215	215	150	148	144	144
1 Liabilities to the Banking System	2,397.7	2,262.8	2,102.7	2,076.8	2,330.7	2,194.6	2,045.2	2,020.7
1.1 Demand and Time Deposits from Banks	1,765.5	1,568.0	1,574.2	1,524.3	1,698.6	1,500.4	1,518.6	1,470.8
1.2 Borrowings from Banks	573.6	619.9	482.5	492.7	573.5	619.3	482.0	492.3
1.3 Other Demand and Time Liabilities	58.6	74.9	46.0	59.8	58.6	74.9	44.6	57.6
2 Liabilities to Others	118,405.4	108,266.0	117,086.6	118,391.4	115,376.9	105,500.3	114,155.8	115,340.3
2.1 Aggregate Deposits	110,485.7	99,924.9	108,930.8	109,383.1	107,576.6	97,269.7	106,114.0	106,452.9
2.1.1 Demand	13,104.8	9,396.2	11,391.6	11,341.7	12,814.4	9,172.2	11,119.1	11,055.8
2.1.2 Time	97,381.0	90,528.7	97,539.1	98,041.2	94,762.2	88,097.5	94,994.9	95,397.0
2.2 Borrowings	3,192.8	3,307.0	3,462.9	3,503.0	3,163.2	3,282.0	3,429.5	3,467.7
2.3 Other Demand and Time Liabilities	4,726.9	5,034.1	4,692.9	5,505.4	4,637.1	4,948.6	4,612.4	5,419.7
3 Borrowings from Reserve Bank	218.1	50.9	17.4	32.7	218.1	50.9	17.4	32.7
3.1 Against Usance Bills /Promissory Notes	—	—	—	—	—	—	—	—
3.2 Others	218.1	50.9	17.4	32.7	218.1	50.9	17.4	32.7
4 Cash in Hand and Balances with Reserve Bank	5,869.3	4,745.8	5,244.7	5,440.0	5,701.3	4,621.4	5,101.0	5,294.6
4.1 Cash in Hand	630.5	666.4	692.1	779.5	613.60	652.6	668.4	759.2
4.2 Balances with Reserve Bank	5,238.8	4,079.5	4,552.6	4,660.5	5,087.7	3,968.9	4,432.6	4,535.5
5 Assets with the Banking System	2,934.5	2,525.4	2,768.2	3,039.7	2,437.3	2,109.3	2,344.0	2,595.8
5.1 Balances with Other Banks	1,898.0	1,588.2	1,874.0	2,115.4	1,700.1	1,425.6	1,684.9	1,918.3
5.1.1 In Current Account	197.3	167.8	129.2	134.8	160.6	149.5	108.0	115.7
5.1.2 In Other Accounts	1,700.7	1,420.3	1,744.8	1,980.6	1,539.5	1,276.1	1,576.9	1,802.6
5.2 Money at Call and Short Notice	296.9	295.7	259.3	333.1	77.0	104.1	113.9	169.1
5.3 Advances to Banks	380.4	270.2	327.1	296.6	379.5	267.9	326.3	288.9
5.4 Other Assets	359.1	371.3	307.8	294.6	280.7	311.7	218.9	219.6
6 Investment	31,161.1	29,016.2	33,290.4	34,005.7	30,309.6	28,227.4	32,416.6	33,045.5
6.1 Government Securities	31,144.8	28,991.1	33,265.6	33,941.8	30,297.5	28,210.9	32,398.0	33,028.7
6.2 Other Approved Securities	16.4	25.1	24.8	63.9	12.2	16.5	18.6	16.9
7 Bank Credit	80,817.8	74,632.5	79,007.7	79,684.9	78,414.7	72,409.6	76,702.2	77,242.5
7a Food Credit	652.4	1,182.1	739.6	670.9	539.3	1,019.4	547.2	479.4
7.1 Loans, Cash-credits and Overdrafts	78,490.1	72,579.9	76,923.6	77,520.3	76,148.5	70,412.1	74,678.8	75,248.8
7.2 Inland Bills-Purchased	263.5	233.1	198.4	306.5	246.0	217.4	184.5	183.7
7.3 Inland Bills-Discounted	1,402.8	1,223.7	1,314.5	1,284.7	1,365.9	1,189.4	1,273.0	1,242.2
7.4 Foreign Bills-Purchased	248.6	212.6	207.4	213.0	246.4	212.0	206.1	211.6
7.5 Foreign Bills-Discounted	412.7	383.2	363.9	360.4	407.9	378.6	359.8	356.2

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

(₹ Billion)

Item	Outstanding as on				Growth (%)	
	Mar. 31, 2017	2016	2017		Financial year so far	Y-o-Y
		Aug. 19	Jul. 21	Aug. 18	2017-18	2017
	1	2	3	4	5	6
1 Gross Bank Credit	71,347	66,287	69,452	69,599	-2.5	5.0
1.1 Food Credit	400	771	456	482	20.3	-37.5
1.2 Non-food Credit	70,947	65,515	68,996	69,117	-2.6	5.5
1.2.1 Agriculture & Allied Activities	9,924	9,177	9,743	9,777	-1.5	6.5
1.2.2 Industry	26,800	26,181	26,280	26,112	-2.6	-0.3
1.2.2.1 Micro & Small	3,697	3,543	3,593	3,571	-3.4	0.8
1.2.2.2 Medium	1,048	1,079	1,005	989	-5.7	-8.3
1.2.2.3 Large	22,055	21,559	21,681	21,552	-2.3	0.0
1.2.3 Services	18,022	15,594	16,316	16,375	-9.1	5.0
1.2.3.1 Transport Operators	1,104	1,055	1,107	1,103	-0.2	4.5
1.2.3.2 Computer Software	179	183	174	176	-1.7	-3.8
1.2.3.3 Tourism, Hotels & Restaurants	375	385	360	363	-3.2	-5.6
1.2.3.4 Shipping	84	100	72	71	-14.7	-28.6
1.2.3.5 Professional Services	1,377	1,128	1,322	1,284	-6.7	13.8
1.2.3.6 Trade	4,279	3,912	4,059	4,096	-4.3	4.7
1.2.3.6.1 Wholesale Trade	1,932	1,761	1,773	1,754	-9.2	-0.4
1.2.3.6.2 Retail Trade	2,347	2,151	2,286	2,342	-0.2	8.9
1.2.3.7 Commercial Real Estate	1,856	1,817	1,774	1,761	-5.1	-3.1
1.2.3.8 Non-Banking Financial Companies (NBFCs)	3,910	3,395	3,375	3,405	-12.9	0.3
1.2.3.9 Other Services	4,859	3,619	4,073	4,115	-15.3	13.7
1.2.4 Personal Loans	16,200	14,563	16,657	16,854	4.0	15.7
1.2.4.1 Consumer Durables	208	191	172	172	-17.2	-9.8
1.2.4.2 Housing	8,601	7,869	8,636	8,906	3.5	13.2
1.2.4.3 Advances against Fixed Deposits	661	595	579	600	-9.3	0.9
1.2.4.4 Advances to Individuals against share & bond	48	57	52	53	11.2	-7.5
1.2.4.5 Credit Card Outstanding	521	431	568	571	9.6	32.6
1.2.4.6 Education	701	701	701	706	0.8	0.8
1.2.4.7 Vehicle Loans	1,705	1,589	1,726	1,735	1.7	9.2
1.2.4.8 Other Personal Loans	3,755	3,131	4,224	4,111	9.5	31.3
1.2A Priority Sector	24,357	22,646	23,547	23,642	-2.9	4.4
1.2A.1 Agriculture & Allied Activities	9,909	9,139	9,725	9,753	-1.6	6.7
1.2A.2 Micro & Small Enterprises	9,020	8,392	8,726	8,741	-3.1	4.2
1.2A.2.1 Manufacturing	3,697	3,543	3,593	3,571	-3.4	0.8
1.2A.2.2 Services	5,322	4,849	5,132	5,170	-2.9	6.6
1.2A.3 Housing	3,683	3,516	3,572	3,625	-1.6	3.1
1.2A.4 Micro-Credit	189	184	150	150	-20.8	-18.7
1.2A.5 Education Loans	604	615	587	593	-1.8	-3.5
1.2A.6 State-Sponsored Orgs. for SC/ST	6	6	3	3	-60.2	-57.5
1.2A.7 Weaker Sections	5,546	4,994	5,502	5,312	-4.2	6.4
1.2A.8 Export Credit	425	459	412	415	-2.3	-9.5

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

(₹ Billion)

Industry	Outstanding as on				Growth (%)	
	Mar. 31, 2017	2016		2017		Financial year so far
		Aug. 19	Jul. 21	Aug. 18	2017-18	2017
	1	2	3	4	5	6
1 Industry	26,800	26,181	26,280	26,112	-2.6	-0.3
1.1 Mining & Quarrying (incl. Coal)	345	340	333	318	-7.7	-6.3
1.2 Food Processing	1,455	1,401	1,446	1,402	-3.7	0.0
1.2.1 Sugar	327	348	285	280	-14.3	-19.6
1.2.2 Edible Oils & Vanaspati	184	182	184	183	-0.3	0.5
1.2.3 Tea	35	37	43	42	19.8	14.8
1.2.4 Others	909	834	934	896	-1.5	7.5
1.3 Beverage & Tobacco	173	161	174	168	-2.7	4.5
1.4 Textiles	1,963	1,946	1,933	1,932	-1.6	-0.7
1.4.1 Cotton Textiles	964	942	971	968	0.4	2.7
1.4.2 Jute Textiles	23	20	27	27	18.0	35.5
1.4.3 Man-Made Textiles	204	193	222	222	8.8	14.7
1.4.4 Other Textiles	773	791	713	715	-7.4	-9.6
1.5 Leather & Leather Products	107	105	106	107	0.1	2.4
1.6 Wood & Wood Products	105	103	101	102	-2.7	-1.0
1.7 Paper & Paper Products	326	337	318	310	-4.9	-8.0
1.8 Petroleum, Coal Products & Nuclear Fuels	596	481	548	486	-18.5	0.9
1.9 Chemicals & Chemical Products	1,724	1,512	1,550	1,554	-9.9	2.7
1.9.1 Fertiliser	335	219	263	241	-28.1	10.0
1.9.2 Drugs & Pharmaceuticals	464	490	449	452	-2.5	-7.8
1.9.3 Petro Chemicals	507	366	432	437	-13.8	19.5
1.9.4 Others	419	437	406	424	1.2	-3.1
1.10 Rubber, Plastic & their Products	392	365	386	387	-1.1	6.0
1.11 Glass & Glassware	79	85	76	79	0.2	-6.3
1.12 Cement & Cement Products	542	536	546	543	0.1	1.4
1.13 Basic Metal & Metal Product	4,211	4,172	4,155	4,166	-1.1	-0.1
1.13.1 Iron & Steel	3,192	3,109	3,241	3,246	1.7	4.4
1.13.2 Other Metal & Metal Product	1,018	1,063	914	920	-9.6	-13.4
1.14 All Engineering	1,496	1,513	1,474	1,460	-2.4	-3.5
1.14.1 Electronics	336	357	318	314	-6.7	-12.1
1.14.2 Others	1,160	1,157	1,156	1,146	-1.2	-0.9
1.15 Vehicles, Vehicle Parts & Transport Equipment	736	699	708	707	-3.9	1.2
1.16 Gems & Jewellery	690	687	680	709	2.6	3.2
1.17 Construction	822	761	816	811	-1.4	6.5
1.18 Infrastructure	9,064	9,014	8,884	8,859	-2.3	-1.7
1.18.1 Power	5,254	5,207	5,247	5,217	-0.7	0.2
1.18.2 Telecommunications	851	861	830	820	-3.6	-4.7
1.18.3 Roads	1,800	1,838	1,710	1,713	-4.8	-6.8
1.18.4 Other Infrastructure	1,160	1,108	1,098	1,109	-4.3	0.1
1.19 Other Industries	1,973	1,964	2,045	2,012	1.9	2.5

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

(₹ Billion)

Item	Last Reporting Friday (in case of March)/Last Friday/ Reporting Friday					
	2016-17	2016		2017		
		May, 27	Apr, 14	Apr, 28	May, 12	May, 26
		1	2	3	4	5
Number of Reporting Banks		31	32	31	30	31
1 Aggregate Deposits (2.1.1.2+2.2.1.2)	508.7	428.5	520.7	509.6	518.6	517.4
2 Demand and Time Liabilities						
2.1 Demand Liabilities	181.4	152.2	169.0	162.4	160.8	166.9
2.1.1 Deposits						
2.1.1.1 Inter-Bank	45.0	28.4	38.9	36.3	31.5	37.1
2.1.1.2 Others	104.4	81.4	98.5	91.0	94.2	94.8
2.1.2 Borrowings from Banks	2.0	10.2	2.2	1.2	0.7	0.5
2.1.3 Other Demand Liabilities	30.0	32.1	29.4	33.9	34.4	34.5
2.2 Time Liabilities	930.5	846.3	948.4	943.3	935.4	915.0
2.2.1 Deposits						
2.2.1.1 Inter-Bank	512.6	482.4	517.7	516.2	502.5	485.2
2.2.1.2 Others	404.3	347.1	422.1	418.6	424.4	422.6
2.2.2 Borrowings from Banks	4.4	10.0	0.0	0.0	0.0	0.0
2.2.3 Other Time Liabilities	9.2	6.8	8.6	8.5	8.5	7.2
3 Borrowing from Reserve Bank	0.0	0.0	0.0	0.0	0.4	0.4
4 Borrowings from a notified bank / Government	517.2	410.2	501.1	487.5	480.9	475.0
4.1 Demand	180.4	134.9	171.1	171.1	171.8	172.0
4.2 Time	336.8	275.3	330.0	316.4	309.1	302.9
5 Cash in Hand and Balances with Reserve Bank	66.5	42.0	49.0	51.2	48.4	47.9
5.1 Cash in Hand	3.7	2.5	3.0	3.2	2.9	3.0
5.2 Balance with Reserve Bank	62.9	39.6	46.0	48.0	45.5	44.9
6 Balances with Other Banks in Current Account	16.8	6.6	8.5	7.2	7.3	7.2
7 Investments in Government Securities	327.1	300.1	329.1	321.2	323.0	323.7
8 Money at Call and Short Notice	254.1	190.7	267.9	255.9	246.2	235.9
9 Bank Credit (10.1+11)	458.7	474.6	477.6	483.8	493.5	482.9
10 Advances						
10.1 Loans, Cash-Credits and Overdrafts	458.6	474.6	477.6	483.7	493.5	482.9
10.2 Due from Banks	777.0	673.0	756.8	746.0	737.6	734.9
11 Bills Purchased and Discounted	0.1	0.0	0.0	0.0	0.0	0.0

Prices and Production

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

Group/Sub group	2016-17			Rural			Urban			Combined		
	Rural	Urban	Combined	Aug. 16	Jul. 17	Aug. 17	Aug. 16	Jul. 17	Aug. 17	Aug. 16	Jul. 17	Aug. 17
	1	2	3	4	5	6	7	8	9	10	11	12
1 Food and beverages	135.3	134.9	135.2	138.0	138.5	140.6	137.6	139.8	140.5	137.9	139.0	140.6
1.1 Cereals and products	130.8	128.9	130.2	130.1	134.0	134.8	127.6	132.8	133.2	129.3	133.6	134.3
1.2 Meat and fish	137.9	140.1	138.7	138.8	144.2	143.2	140.3	148.4	143.9	139.3	145.7	143.4
1.3 Egg	128.9	130.7	129.6	130.3	129.8	130.1	133.7	129.4	128.3	131.6	129.6	129.4
1.4 Milk and products	135.2	132.4	134.1	135.3	139.0	139.3	132.2	137.7	138.3	134.1	138.5	138.9
1.5 Oils and fats	120.3	112.0	117.3	119.9	120.9	120.5	111.8	113.4	114.1	116.9	118.1	118.1
1.6 Fruits	138.1	132.8	135.6	140.2	143.9	147.8	135.8	139.4	142.7	138.1	141.8	145.4
1.7 Vegetables	139.2	144.8	141.1	156.9	151.5	163.3	163.5	175.1	179.8	159.1	159.5	168.9
1.8 Pulses and products	165.6	170.3	167.2	172.2	138.1	137.4	182.3	124.7	123.5	175.6	133.6	132.7
1.9 Sugar and confectionery	112.1	114.9	113.0	112.1	120.0	120.8	114.6	121.5	122.1	112.9	120.5	121.2
1.10 Spices	135.1	143.8	138.0	134.9	133.9	134.8	144.6	137.8	137.5	138.1	135.2	135.7
1.11 Non-alcoholic beverages	128.1	122.4	125.7	128.1	131.4	131.6	121.9	124.4	124.6	125.5	128.5	128.7
1.12 Prepared meals, snacks, sweets	141.7	139.2	140.5	140.7	147.7	148.7	138.1	143.7	144.5	139.5	145.8	146.8
2 Pan, tobacco and intoxicants	140.1	144.2	141.2	138.9	147.4	148.9	143.6	150.5	152.1	140.2	148.2	149.8
3 Clothing and footwear	137.9	127.8	133.9	137.1	143.5	144.5	127.3	130.4	131.4	133.2	138.3	139.3
3.1 Clothing	138.6	128.9	134.8	137.8	144.3	145.3	128.3	131.6	132.7	134.1	139.3	140.3
3.2 Footwear	133.7	121.7	128.7	133.0	138.1	139.3	121.4	123.7	124.3	128.2	132.1	133.1
4 Housing	--	128.0	128.0	--	--	--	127.3	132.6	134.4	127.3	132.6	134.4
5 Fuel and light	130.1	116.4	124.9	129.1	135.3	136.3	114.7	119.7	118.9	123.6	129.4	129.7
6 Miscellaneous	125.0	120.6	122.9	124.2	128.6	129.7	119.9	123.0	123.8	122.1	125.9	126.8
6.1 Household goods and services	131.3	124.3	128.0	130.6	136.1	137.3	123.9	127.2	127.7	127.4	131.9	132.8
6.2 Health	128.1	121.6	125.6	127.0	132.1	133.0	121.2	125.0	125.7	124.8	129.4	130.2
6.3 Transport and communication	117.4	112.8	114.9	116.0	119.1	120.3	110.4	113.2	114.6	113.1	116.0	117.3
6.4 Recreation and amusement	125.9	121.0	123.2	125.5	130.6	131.3	120.6	123.5	124.1	122.7	126.6	127.2
6.5 Education	132.3	131.1	131.6	131.9	138.6	140.1	131.5	135.5	135.7	131.7	136.8	137.5
6.6 Personal care and effects	121.7	120.3	121.1	122.0	124.4	125.5	120.9	122.4	123.3	121.5	123.6	124.6
General Index (All Groups)	132.4	127.9	130.3	133.5	136.2	137.9	128.4	131.8	132.7	131.1	134.2	135.5

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

No. 19: Other Consumer Price Indices

Item	Base Year	Linking Factor	2016-17		2016		2017	
			1	2	3	4	5	6
1 Consumer Price Index for Industrial Workers	2001	4.63		276		278	285	
2 Consumer Price Index for Agricultural Labourers	1986-87	5.89		870		876	884	
3 Consumer Price Index for Rural Labourers	1986-87	—		875		881	890	

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

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

Item	2016-17	2016		2017	
		1	2	Aug.	Jul.
				3	4
1 Standard Gold (₹ per 10 grams)		29,665		31,270	
2 Silver (₹ per kilogram)		42,748		46,614	
				28,170	28,893
				37,404	38,637

Source: Business Standard/Business Line/The Economic Times, Mumbai for Gold and Silver prices in Mumbai.

No. 21: Wholesale Price Index

(Base: 2011-12 = 100)

Commodities	Weight	2016-17	2016		2017	
			Aug.	Jun.	Jul. (P)	Aug. (P)
			1	2	3	4
1 ALL COMMODITIES	100.000	111.6	111.2	112.7	113.9	114.8
1.1 PRIMARY ARTICLES	22.618	128.9	131.4	126.5	132.4	134.9
1.1.1 FOOD ARTICLES	15.256	140.3	142.6	139.2	147.6	150.8
1.1.1.1 Food Grains (Cereals+Pulses)	3.462	152.0	153.6	143.5	142.8	142.5
1.1.1.2 Fruits & Vegetables	3.475	138.7	149.8	137.3	176.8	191.5
1.1.1.3 Milk	4.440	134.3	134.4	139.2	138.9	139.7
1.1.1.4 Eggs, Meat & Fish	2.402	133.0	129.7	138.3	137.6	134.8
1.1.1.5 Condiments & Spices	0.529	140.5	145.9	118.3	119.6	122.9
1.1.1.6 Other Food Articles	0.948	150.5	144.8	143.7	140.3	140.4
1.1.2 NON-FOOD ARTICLES	4.119	122.2	125.1	118.0	118.5	120.6
1.1.2.1 Fibres	0.839	117.1	122.9	120.3	119.6	118.3
1.1.2.2 Oil Seeds	1.115	136.0	143.1	126.2	124.7	127.1
1.1.2.3 Other non-food Articles	1.960	114.9	114.8	112.0	114.0	114.3
1.1.2.4 Floriculture	0.204	137.4	134.3	120.3	124.3	155.2
1.1.3 MINERALS	0.833	113.1	128.1	118.2	119.6	118.2
1.1.3.1 Metallic Minerals	0.648	98.4	118.4	103.3	107.0	103.3
1.1.3.2 Other Minerals	0.185	164.4	162.1	170.2	163.8	170.2
1.1.4 CRUDE PETROLEUM & NATURAL GAS	2.410	73.1	72.7	64.0	64.0	64.3
1.2 FUEL & POWER	13.152	86.3	81.1	89.6	88.4	89.2
1.2.1 COAL	2.138	109.0	107.0	117.5	117.5	117.5
1.2.1.1 Coking Coal	0.647	108.2	101.4	135.5	135.5	135.5
1.2.1.2 Non-Coking Coal	1.401	110.5	110.7	110.7	110.7	110.7
1.2.1.3 Lignite	0.090	90.2	88.8	95.0	95.0	95.0
1.2.2 MINERAL OILS	7.950	73.3	65.7	77.3	75.3	76.6
1.2.3 ELECTRICITY	3.064	104.2	103.2	102.0	102.0	102.0
1.3 MANUFACTURED PRODUCTS	64.231	110.7	110.2	112.6	112.7	112.9
1.3.1 MANUFACTURE OF FOOD PRODUCTS	9.122	125.4	125.0	127.1	126.9	127.3
1.3.1.1 Processing and Preserving of meat	0.134	137.1	136.4	135.0	134.7	134.8
1.3.1.2 Processing and Preserving of fish, Crustaceans, Molluscs and products thereof	0.204	127.7	129.0	124.9	126.3	120.7
1.3.1.3 Processing and Preserving of fruit and Vegetables	0.138	120.2	120.8	120.0	120.1	119.4
1.3.1.4 Vegetable and Animal oils and Fats	2.643	107.0	105.8	105.9	105.6	106.9
1.3.1.5 Dairy products	1.165	132.3	130.2	143.3	142.8	142.5
1.3.1.6 Grain mill products	2.010	136.2	135.7	136.0	135.9	137.3
1.3.1.7 Starches and Starch products	0.110	114.6	119.4	113.5	112.9	112.2
1.3.1.8 Bakery products	0.215	127.0	126.9	130.6	130.9	129.2
1.3.1.9 Sugar, Molasses & honey	1.163	124.8	122.8	132.2	132.5	133.4
1.3.1.10 Cocoa, Chocolate and Sugar confectionery	0.175	125.5	129.4	126.7	129.0	126.0
1.3.1.11 Macaroni, Noodles, Couscous and Similar farinaceous products	0.026	137.1	141.5	134.4	136.2	131.0
1.3.1.12 Tea & Coffee products	0.371	125.9	129.5	133.1	129.0	130.4
1.3.1.13 Processed condiments & salt	0.163	124.5	126.8	116.3	116.5	114.0
1.3.1.14 Processed ready to eat food	0.024	126.3	126.1	127.3	127.7	126.6
1.3.1.15 Health supplements	0.225	143.2	145.1	144.2	144.2	141.9
1.3.1.16 Prepared animal feeds	0.356	165.4	171.2	155.6	155.6	154.0
1.3.2 MANUFACTURE OF BEVERAGES	0.909	116.1	115.4	117.5	117.4	119.1
1.3.2.1 Wines & spirits	0.408	113.3	112.9	114.4	114.1	114.2
1.3.2.2 Malt liquors and Malt	0.225	114.2	114.2	116.6	116.6	117.6
1.3.2.3 Soft drinks; Production of mineral waters and Other bottled waters	0.275	121.8	120.1	123.0	122.9	127.5
1.3.3 MANUFACTURE OF TOBACCO PRODUCTS	0.514	141.6	140.9	144.3	143.6	147.7
1.3.3.1 Tobacco products	0.514	141.6	140.9	144.3	143.6	147.7
1.3.4 MANUFACTURE OF TEXTILES	4.881	111.2	112.2	113.6	113.4	112.7
1.3.4.1 Preparation and Spinning of textile fibres	2.582	103.3	104.9	106.6	106.6	105.4
1.3.4.2 Weaving & Finishing of textiles	1.509	120.9	122.0	121.3	121.0	120.7
1.3.4.3 Knitted and Crocheted fabrics	0.193	107.1	106.9	109.2	108.9	109.3
1.3.4.4 Made-up textile articles, Except apparel	0.299	121.7	121.4	124.6	124.6	124.8
1.3.4.5 Cordage, Rope, Twine and Netting	0.098	143.0	144.7	145.7	142.3	141.9
1.3.4.6 Other textiles	0.201	112.9	109.4	117.5	117.0	116.4
1.3.5 MANUFACTURE OF WEARING APPAREL	0.814	131.0	129.9	134.7	136.0	136.5
1.3.5.1 Manufacture of Wearing Apparel (woven), Except fur Apparel	0.593	133.9	133.5	137.1	138.9	137.8
1.3.5.2 Knitted and Crocheted apparel	0.221	123.3	120.3	128.4	128.2	133.2

No. 21: Wholesale Price Index (Contd.)

(Base: 2011-12 = 100)

Commodities	Weight	2016-17	2016		2017		
			Aug.	Jun.	Jul. (P)	Aug. (P)	
			1	2	3	4	5
1.3.6 MANUFACTURE OF LEATHER AND RELATED PRODUCTS	0.535	122.6	123.3	119.7	119.5	120.9	
1.3.6.1 Tanning and Dressing of leather; Dressing and Dyeing of fur	0.142	119.9	120.8	113.5	111.0	114.0	
1.3.6.2 Luggage, Handbags, Saddlery and Harness	0.075	132.3	135.0	130.4	131.6	128.8	
1.3.6.3 Footwear	0.318	121.5	121.7	120.0	120.4	122.1	
1.3.7 MANUFACTURE OF WOOD AND PRODUCTS OF WOOD AND CORK	0.772	129.8	130.7	131.8	131.7	132.1	
1.3.7.1 Saw milling and Planing of wood	0.124	122.9	124.5	119.6	119.9	119.8	
1.3.7.2 Veneer sheets; Manufacture of plywood, Laminboard, Particle board and Other panels and Boards	0.493	127.3	128.3	131.1	131.1	131.7	
1.3.7.3 Builder's carpentry and Joinery	0.036	153.8	151.7	164.5	159.9	163.3	
1.3.7.4 Wooden containers	0.119	140.3	140.7	137.9	137.9	137.7	
1.3.8 MANUFACTURE OF PAPER AND PAPER PRODUCTS	1.113	113.6	113.1	118.5	117.5	118.5	
1.3.8.1 Pulp, Paper and Paperboard	0.493	117.7	116.6	122.2	122.0	120.9	
1.3.8.2 Corrugated paper and Paperboard and Containers of paper and Paperboard	0.314	114.7	115.0	116.0	115.4	117.1	
1.3.8.3 Other articles of paper and Paperboard	0.306	105.9	105.5	115.0	112.3	116.0	
1.3.9 PRINTING AND REPRODUCTION OF RECORDED MEDIA	0.676	141.1	139.2	144.4	143.6	144.3	
1.3.9.1 Printing	0.676	141.1	139.2	144.4	143.6	144.3	
1.3.10 MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	6.465	111.0	110.7	111.5	111.3	111.2	
1.3.10.1 Basic chemicals	1.433	104.7	104.2	107.4	107.1	107.3	
1.3.10.2 Fertilizers and Nitrogen compounds	1.485	118.7	119.1	116.4	116.6	116.3	
1.3.10.3 Plastic and Synthetic rubber in primary form	1.001	113.7	113.3	111.0	111.4	112.3	
1.3.10.4 Pesticides and Other agrochemical products	0.454	116.8	116.0	116.9	117.8	115.3	
1.3.10.5 Paints, Varnishes and Similar coatings, Printing ink and Mastics	0.491	108.5	107.2	111.3	108.7	108.8	
1.3.10.6 Soap and Detergents, Cleaning and Polishing preparations, Perfumes and Toilet preparations	0.612	113.7	113.5	116.2	116.3	116.2	
1.3.10.7 Other chemical products	0.692	106.5	106.6	109.5	108.6	108.5	
1.3.10.8 Man-made fibres	0.296	94.1	92.8	94.8	94.8	95.2	
1.3.11 MANUFACTURE OF PHARMACEUTICALS, MEDICINAL CHEMICAL AND BOTANICAL PRODUCTS	1.993	119.7	120.1	119.9	120.0	120.9	
1.3.11.1 Pharmaceuticals, Medicinal chemical and Botanical products	1.993	119.7	120.1	119.9	120.0	120.9	
1.3.12 MANUFACTURE OF RUBBER AND PLASTICS PRODUCTS	2.299	107.5	106.7	108.0	107.9	107.2	
1.3.12.1 Rubber Tyres and Tubes; Retreading and Rebuilding of Rubber Tyres	0.609	101.4	100.6	103.4	103.2	100.0	
1.3.12.2 Other Rubber Products	0.272	90.4	90.6	91.6	91.0	91.8	
1.3.12.3 Plastics products	1.418	113.3	112.3	113.0	113.1	113.2	
1.3.13 MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS	3.202	109.8	110.0	112.7	112.8	111.9	
1.3.13.1 Glass and Glass products	0.295	116.6	117.2	116.3	116.2	117.4	
1.3.13.2 Refractory products	0.223	116.2	117.3	117.6	119.8	112.6	
1.3.13.3 Clay Building Materials	0.121	94.3	91.6	98.6	98.4	88.5	
1.3.13.4 Other Porcelain and Ceramic Products	0.222	111.8	111.7	112.0	112.0	112.3	
1.3.13.5 Cement, Lime and Plaster	1.645	110.6	111.4	114.9	114.8	113.5	
1.3.13.6 Articles of Concrete, Cement and Plaster	0.292	115.3	113.7	118.7	119.0	119.2	
1.3.13.7 Cutting, Shaping and Finishing of Stone	0.234	117.4	116.3	117.4	117.4	116.7	
1.3.13.8 Other Non-Metallic Mineral Products	0.169	70.9	70.7	73.0	73.0	82.4	
1.3.14 MANUFACTURE OF BASIC METALS	9.646	91.1	87.8	96.3	97.0	97.8	
1.3.14.1 Inputs into steel making	1.411	82.9	76.3	92.6	94.2	93.9	
1.3.14.2 Metallic Iron	0.653	79.4	70.9	88.3	89.8	94.8	
1.3.14.3 Mild Steel - Semi Finished Steel	1.274	89.8	88.9	89.5	90.2	91.6	
1.3.14.4 Mild Steel - Long Products	1.081	85.3	81.5	89.8	90.5	91.2	
1.3.14.5 Mild Steel - Flat products	1.144	89.4	83.5	97.4	98.0	98.6	
1.3.14.6 Alloy steel other than Stainless Steel- Shapes	0.067	85.6	79.6	92.0	92.4	92.2	
1.3.14.7 Stainless Steel - Semi Finished	0.924	84.1	82.0	94.0	94.3	95.5	
1.3.14.8 Pipes & tubes	0.205	107.8	105.2	110.3	109.4	112.2	
1.3.14.9 Non-ferrous metals incl. precious metals	1.693	100.1	98.0	103.7	104.3	105.3	
1.3.14.10 Castings	0.925	102.2	103.6	103.1	103.2	101.3	
1.3.14.11 Forgings of steel	0.271	118.2	117.7	117.5	118.0	117.5	
1.3.15 MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT	3.155	105.1	103.4	107.2	107.8	107.5	
1.3.15.1 Structural Metal Products	1.031	102.5	100.2	103.9	105.1	104.3	
1.3.15.2 Tanks, Reservoirs and Containers of Metal	0.660	109.2	105.9	117.3	117.3	117.5	
1.3.15.3 Steam generators, Except Central Heating Hot Water Boilers	0.145	108.5	110.7	107.8	107.8	109.4	
1.3.15.4 Forging, Pressing, Stamping and Roll-Forming of Metal; Powder Metallurgy	0.383	94.7	96.7	89.8	90.9	90.0	
1.3.15.5 Cutlery, Hand Tools and General Hardware	0.208	111.5	112.7	112.9	111.3	109.7	
1.3.15.6 Other Fabricated Metal Products	0.728	108.1	105.2	110.0	110.8	111.3	
1.3.16 MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS	2.009	108.3	108.8	109.1	109.3	108.9	
1.3.16.1 Electronic Components	0.402	106.7	108.8	105.9	106.1	104.6	
1.3.16.2 Computers and Peripheral Equipment	0.336	127.3	127.3	127.5	127.5	127.4	

No. 21: Wholesale Price Index (Concl.)

(Base: 2011-12 = 100)

Commodities	Weight	2016-17	2016		2017	
					Aug.	Jun.
			1	2	3	4
1.3.16.3 Communication Equipment	0.310	104.1	104.1	104.1	104.1	104.7
1.3.16.4 Consumer Electronics	0.641	100.0	100.2	101.6	101.6	101.0
1.3.16.5 Measuring, Testing, Navigating and Control equipment	0.181	103.1	101.5	106.6	109.0	109.0
1.3.16.6 Watches and Clocks	0.076	137.9	140.0	139.4	136.5	137.2
1.3.16.7 Irradiation, Electromedical and Electrotherapeutic equipment	0.055	104.3	105.5	103.5	103.5	102.4
1.3.16.8 Optical instruments and Photographic equipment	0.008	96.6	97.7	98.2	103.4	106.8
1.3.17 MANUFACTURE OF ELECTRICAL EQUIPMENT	2.930	108.2	108.0	109.0	108.4	109.3
1.3.17.1 Electric motors, Generators, Transformers and Electricity distribution and Control apparatus	1.298	105.0	104.9	106.4	105.4	106.0
1.3.17.2 Batteries and Accumulators	0.236	120.4	118.7	119.2	120.8	115.0
1.3.17.3 Fibre optic cables for data transmission or live transmission of images	0.133	118.8	119.3	114.3	113.2	121.3
1.3.17.4 Other electronic and Electric wires and Cables	0.428	99.7	98.2	102.5	102.4	103.1
1.3.17.5 Wiring devices, Electric lighting & display equipment	0.263	108.5	110.4	105.7	104.5	111.4
1.3.17.6 Domestic appliances	0.366	119.4	119.1	120.7	120.6	121.3
1.3.17.7 Other electrical equipment	0.206	104.4	105.8	106.4	106.1	105.7
1.3.18 MANUFACTURE OF MACHINERY AND EQUIPMENT	4.789	107.9	107.5	108.5	108.1	108.4
1.3.18.1 Engines and Turbines, Except aircraft, Vehicle and Two wheeler engines	0.638	104.1	104.4	102.7	102.8	103.3
1.3.18.2 Fluid power equipment	0.162	114.3	114.5	115.5	115.8	115.1
1.3.18.3 Other pumps, Compressors, Taps and Valves	0.552	106.6	106.4	108.2	108.0	108.4
1.3.18.4 Bearings, Gears, Gearing and Driving elements	0.340	104.5	103.7	105.0	103.6	106.8
1.3.18.5 Ovens, Furnaces and Furnace burners	0.008	77.8	75.5	79.2	79.2	79.4
1.3.18.6 Lifting and Handling equipment	0.285	103.2	103.2	104.1	103.6	103.6
1.3.18.7 Office machinery and Equipment	0.006	130.2	130.2	130.2	130.2	130.2
1.3.18.8 Other general-purpose machinery	0.437	124.9	124.6	126.8	125.1	126.7
1.3.18.9 Agricultural and Forestry machinery	0.833	112.3	112.0	112.3	111.9	111.5
1.3.18.10 Metal-forming machinery and Machine tools	0.224	100.1	98.2	102.4	101.5	98.8
1.3.18.11 Machinery for mining, Quarrying and Construction	0.371	79.6	80.3	76.1	76.3	75.7
1.3.18.12 Machinery for food, Beverage and Tobacco processing	0.228	116.9	112.3	120.4	119.3	121.8
1.3.18.13 Machinery for textile, Apparel and Leather production	0.192	116.2	116.3	117.7	116.9	116.2
1.3.18.14 Other special-purpose machinery	0.468	115.8	115.0	118.4	119.7	118.8
1.3.18.15 Renewable electricity generating equipment	0.046	73.7	75.4	71.1	69.8	71.1
1.3.19 MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS	4.969	110.4	110.8	111.6	111.1	111.9
1.3.19.1 Motor vehicles	2.600	113.4	113.3	114.3	114.3	115.3
1.3.19.2 Parts and Accessories for motor vehicles	2.368	107.2	108.0	108.7	107.5	108.2
1.3.20 MANUFACTURE OF OTHER TRANSPORT EQUIPMENT	1.648	107.7	107.8	109.3	111.0	109.5
1.3.20.1 Building of ships and Floating structures	0.117	158.7	158.8	158.8	158.8	158.8
1.3.20.2 Railway locomotives and Rolling stock	0.110	100.6	103.4	101.3	102.8	102.1
1.3.20.3 Motor cycles	1.302	102.8	102.7	104.3	106.7	104.7
1.3.20.4 Bicycles and Invalid carriages	0.117	118.0	117.4	122.5	118.4	119.8
1.3.20.5 Other transport equipment	0.002	116.5	116.2	118.8	120.3	120.7
1.3.21 MANUFACTURE OF FURNITURE	0.727	114.1	113.1	117.7	117.8	119.5
1.3.21.1 Furniture	0.727	114.1	113.1	117.7	117.8	119.5
1.3.22 OTHER MANUFACTURING	1.064	119.7	126.0	113.9	115.9	113.7
1.3.22.1 Jewellery and Related articles	0.996	118.4	125.1	111.9	114.1	111.5
1.3.22.2 Musical instruments	0.001	158.0	162.2	147.2	147.2	148.2
1.3.22.3 Sports goods	0.012	124.7	124.5	127.1	127.1	126.0
1.3.22.4 Games and Toys	0.005	125.2	127.0	126.8	127.9	126.3
1.3.22.5 Medical and Dental instruments and Supplies	0.049	143.3	144.5	148.0	148.0	153.5
2 FOOD INDEX	24.378	134.7	136.0	134.7	139.9	142.0

Source: Office of the Economic Adviser, Ministry of Commerce and Industry, Government of India.

No. 22: Index of Industrial Production (Base:2011-12=100)

Industry	Weight	2015-16	2016-17	April-July		July	
				2016-17	2017-18	2016	2017
	1	2	3	4	5	6	7
General Index	100.00	114.7	120.0	117.9	119.9	116.8	118.2
1 Sectoral Classification							
1.1 Mining	14.37	97.3	102.5	96.0	98.0	88.4	92.6
1.2 Manufacturing	77.63	115.9	121.0	119.2	120.7	119.4	119.5
1.3 Electricity	7.99	133.8	141.6	143.9	152.0	142.5	151.8
2 Use-Based Classification							
2.1 Primary Goods	34.05	112.0	117.5	115.2	117.7	113.2	115.8
2.2 Capital Goods	8.22	98.4	101.5	99.7	96.2	97.6	96.6
2.3 Intermediate Goods	17.22	118.4	122.3	120.7	121.2	123.2	121.0
2.4 Infrastructure/ Construction Goods	12.34	120.3	125.0	124.7	127.3	119.5	123.9
2.5 Consumer Durables	12.84	119.1	122.6	121.7	120.6	119.9	118.4
2.6 Consumer Non-Durables	15.33	117.2	126.5	121.9	129.9	123.3	127.5

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**

(Amount in ₹ Billion)

Item	Financial Year	April - Aug			
		2017-18 (Budget Estimates)	2017-18 (Actuals)	2016-17 (Actuals)	Percentage to Budget Estimates
					2017-18
	1	2	3	4	5
1 Revenue Receipts		15,157.7	4,098.7	3,853.2	27.0
1.1 Tax Revenue (Net)		12,270.1	3,406.1	2,802.6	27.8
1.2 Non-Tax Revenue		2,887.6	692.6	1,050.7	24.0
2 Capital Receipts		6,309.6	5,405.8	4,163.4	85.7
2.1 Recovery of Loans		119.3	55.6	53.4	46.6
2.2 Other Receipts		725.0	99.7	31.8	13.8
2.3 Borrowings and Other Liabilities		5,465.3	5,250.5	4,078.2	96.1
3 Total Receipts (1+2)		21,467.4	9,504.5	8,016.6	44.3
4 Revenue Expenditure		18,369.3	8,408.0	7,103.3	45.8
4.1 Interest Payments		5,230.8	1,963.9	1,744.7	37.5
5 Capital Expenditure		3,098.0	1,096.5	913.3	35.4
6 Total Expenditure (4+5)		21,467.4	9,504.5	8,016.6	44.3
7 Revenue Deficit (4-1)		3,211.6	4,309.3	3,250.1	134.2
8 Fiscal Deficit {6-(1+2.1+2.2)}		5,465.3	5,250.5	4,078.2	96.1
9 Gross Primary Deficit (8-4.1)		234.5	3,286.5	2,333.5	1,401.3
					565.9

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

No. 24: Treasury Bills – Ownership Pattern

(₹ Billion)

Item	2016-17	2016		2017					
		Aug. 26	Jul. 21	Jul. 28		Aug. 4	Aug. 11	Aug. 18	Aug. 25
				1	2				
1 91-day									
1.1 Banks		323.7	211.3	249.0	260.5	287.8	335.3	338.4	392.2
1.2 Primary Dealers		243.5	162.2	164.5	167.0	154.3	156.7	170.1	191.9
1.3 State Governments		146.2	645.4	722.7	676.8	727.6	735.1	730.1	664.5
1.4 Others		343.4	895.7	812.2	819.1	823.8	793.2	796.6	742.0
2 182-day									
2.1 Banks		216.2	390.6	377.3	372.2	368.2	362.4	354.0	389.8
2.2 Primary Dealers		316.5	260.1	219.2	242.7	217.2	269.5	273.8	274.4
2.3 State Governments		193.6	106.0	218.7	218.8	218.8	213.3	213.3	194.0
2.4 Others		120.9	128.7	87.9	99.4	128.9	112.9	117.0	111.3
3 364-day									
3.1 Banks		512.3	605.6	596.4	595.5	506.8	542.1	477.3	526.6
3.2 Primary Dealers		551.8	602.3	456.3	476.8	488.8	496.3	511.6	522.9
3.3 State Governments		26.3	25.2	29.7	29.7	29.7	29.7	29.7	29.7
3.4 Others		326.4	322.4	336.7	317.3	392.6	351.0	394.1	333.4
4 14-day Intermediate									
4.1 Banks		—	—	—	—	—	—	—	—
4.2 Primary Dealers		—	—	—	—	—	—	—	—
4.3 State Governments		1,560.6	900.0	1,309.9	1,421.0	1,472.3	1,349.1	1,263.1	1,532.7
4.4 Others		5.1	6.0	6.5	5.2	6.1	6.2	4.7	4.4
Total Treasury Bills (Excluding 14 day Intermediate T Bills) #		3,320.8	4,355.6	4,270.8	4,275.9	4,344.6	4,397.5	4,406.1	4,372.6

14D intermediate T-Bills are non-marketable unlike 91D, 182D and 364D T-Bills. These bills are ‘intermediate’ by nature as these are liquidated to replenish shortfall in the daily minimum cash balances of State Governments

No. 25: Auctions of Treasury Bills

(Amount in ₹ Billion)

Date of Auction	Notified Amount	Bids Received			Bids Accepted			Total Issue (6+7)	Cut-off Price	Implicit Yield at Cut-off Price (per cent)			
		Number	Total Face Value		Number	Total Face Value							
			Competitive	Non-Competitive		Competitive	Non-Competitive						
		1	2	3	4	5	6	7	8	9	10		
91-day Treasury Bills													
2017-18													
Aug. 2	100	60	487.98	221.62	38	100.00	221.62	321.62	98.49	6.1495			
Aug. 9	100	59	887.93	130.56	51	100.00	130.56	230.56	98.49	6.1495			
Aug. 16	100	55	1,603.11	30.61	48	100.00	30.61	130.61	98.49	6.1495			
Aug. 23	100	52	1,559.97	36.62	12	100.00	36.62	136.62	98.50	6.1081			
Aug. 30	100	57	1,495.51	70.30	20	100.00	70.30	170.30	98.50	6.1081			
182-day Treasury Bills													
2017-18													
Jul. 26	70	54	365.30	—	29	70.00	—	70.00	96.98	6.2452			
Aug. 9	70	60	277.71	5.00	39	70.00	5.00	75.00	96.99	6.2239			
Aug. 23	70	54	365.27	—	21	70.00	—	70.00	96.99	6.2239			
364-day Treasury Bills													
2017-18													
Jul. 19	60	83	428.32	—	11	60.00	—	60.00	94.10	6.2872			
Aug. 2	60	68	261.09	—	20	60.00	—	60.00	94.14	6.2419			
Aug. 16	60	50	218.49	—	13	60.00	—	60.00	94.14	6.2419			
Aug. 30	60	51	223.70	—	25	60.00	—	60.00	94.13	6.2532			

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, 2017	5.00-6.25	6.10
August	2, 2017	5.00-6.30	6.05
August	3, 2017	4.90-6.00	5.83
August	4, 2017	4.90-6.00	5.88
August	5, 2017	4.60-5.90	5.64
August	7, 2017	4.90-6.05	5.94
August	8, 2017	4.90-6.10	5.91
August	9, 2017	4.90-6.05	5.91
August	10, 2017	4.90-6.00	5.85
August	11, 2017	4.90-6.00	5.84
August	14, 2017	4.90-6.18	5.86
August	16, 2017	4.90-6.10	5.84
August	18, 2017	4.80-6.00	5.85
August	19, 2017	4.60-6.00	5.60
August	21, 2017	5.00-6.12	5.98
August	22, 2017	5.00-6.25	5.94
August	23, 2017	5.00-6.05	5.91
August	24, 2017	5.00-6.10	5.90
August	28, 2017	5.00-6.02	5.85
August	29, 2017	5.00-6.00	5.85
August	30, 2017	5.00-6.10	5.85
August	31, 2017	5.00-6.05	5.83
September	1, 2017	5.00-6.00	5.83
September	4, 2017	5.00-6.00	5.85
September	5, 2017	5.00-6.00	5.83
September	6, 2017	5.00-6.00	5.83
September	7, 2017	5.00-6.00	5.84
September	8, 2017	5.00-6.00	5.86
September	11, 2017	5.00-6.05	5.84
September	12, 2017	5.00-6.05	5.83
September	13, 2017	5.00-6.00	5.84
September	14, 2017	5.00-6.00	5.83
September	15, 2017	4.90-6.35	5.98

Note: Includes Notice Money.

No. 27: Certificates of Deposit

Item	2016		2017		
	Aug. 19		Jul. 7	Jul. 21	Aug. 4
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	1,634.1	1,102.2	1,226.2	1,133.4	1,147.1
1.1 Issued during the fortnight (₹ Billion)	84.5	55.2	200.7	63.7	121.3
2 Rate of Interest (per cent)	6.65-7.36	6.32-6.68	6.25-6.75	6.17-6.60	6.16-6.70

No. 28: Commercial Paper

Item	2016		2017		
	Aug. 31		Jul. 15	Jul. 31	Aug. 15
	1	2	3	4	5
1 Amount Outstanding (₹ Billion)	3,883.1	3,584.0	3,255.2	3,595.0	3,695.8
1.1 Reported during the fortnight (₹ Billion)	1,149.9	845.9	329.4	1,195.9	996.5
2 Rate of Interest (per cent)	6.51-13.92	6.02-11.97	6.11-11.96	6.10-13.92	6.05-11.25

No. 29: Average Daily Turnover in Select Financial Markets

(₹ Billion)

Item	2016-17	2016		2017				
		Aug. 26	Jul. 21	Jul. 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25
	1	2	3	4	5	6	7	8
1 Call Money	259.0	231.3	260.4	211.4	193.2	250.7	180.9	210.3
2 Notice Money	46.8	9.2	3.8	54.0	89.4	8.4	159.9	10.2
3 Term Money	8.4	6.1	4.0	9.1	5.4	6.9	9.0	23.9
4 CBLO	1,700.2	1,760.0	1,674.1	2,204.8	1,633.7	1,924.8	2,070.4	1,955.2
5 Market Repo	1,753.3	1,609.9	1,646.7	1,821.7	2,045.9	1,884.2	2,709.5	1,461.9
6 Repo in Corporate Bond	2.5	2.0	2.9	3.0	2.1	2.9	5.5	4.6
7 Forex (US \$ million)	55,345	45,546	50,839	59,928	61,848	55,381	58,768	52,956
8 Govt. of India Dated Securities	1,249.1	1,744.5	886.5	1,170.2	1,148.8	730.8	656.8	602.1
9 State Govt. Securities	50.7	39.1	58.2	94.4	76.1	50.4	24.1	72.7
10 Treasury Bills								
10.1 91-Day	45.1	48.2	48.4	44.4	59.6	64.2	71.9	29.4
10.2 182-Day	11.8	23.5	12.6	8.1	7.2	17.7	12.8	17.6
10.3 364-Day	18.5	11.7	12.5	2.4	19.5	16.9	10.7	13.5
10.4 Cash Management Bills	13.8	—	33.0	26.8	36.6	45.3	30.7	2.1
11 Total Govt. Securities (8+9+10)	1388.8	1,867.0	1,051.2	1,346.4	1,347.8	925.3	807.1	737.4
11.1 RBI	—	0.0	20.2	6.3	1.0	20.1	1.8	0.0

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

(Amount in ₹ Billion)

Security & Type of Issue	2016-17		2016-17 (Apr.-Aug.)		2017-18 (Apr.-Aug.)*		Aug. 2016		Aug. 2017*	
	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount	No. of Issues	Amount
	1	2	3	4	5	6	7	8	9	10
1 Equity Shares	116	303.6	30	91.9	55	84.9	8	26.4	10	2.6
1A Premium	113	291.3	29	87.4	54	81.3	8	25.2	9	2.2
1.1 Public	105	280.7	28	86.2	51	78.0	7	21.4	10	2.6
1.1.1 Premium	102	270.4	27	81.8	50	75.1	7	20.3	9	2.2
1.2 Rights	11	22.9	2	5.8	4	6.9	1	5.0	—	—
1.2.1 Premium	11	20.9	2	5.6	4	6.2	1	4.9	—	—
2 Preference Shares	—	—	—	—	—	—	—	—	—	—
2.1 Public	—	—	—	—	—	—	—	—	—	—
2.2 Rights	—	—	—	—	—	—	—	—	—	—
3 Debentures	16	295.5	8	166.0	4	39.0	3	142.0	1	2.1
3.1 Convertible	—	—	—	—	—	—	—	—	—	—
3.1.1 Public	—	—	—	—	—	—	—	—	—	—
3.1.2 Rights	—	—	—	—	—	—	—	—	—	—
3.2 Non-Convertible	16	295.5	8	166.0	4	39.0	3	142.0	1	2.1
3.2.1 Public	16	295.5	8	166.0	4	39.0	3	142.0	1	2.1
3.2.2 Rights	—	—	—	—	—	—	—	—	—	—
4 Bonds	—	—	—	—	—	—	—	—	—	—
4.1 Public	—	—	—	—	—	—	—	—	—	—
4.2 Rights	—	—	—	—	—	—	—	—	—	—
5 Total (1+2+3+4)	132	599.0	38	257.9	59	123.9	11	168.4	11	4.8
5.1 Public	121	576.1	36	252.2	55	117.0	10	163.4	11	4.8
5.2 Rights	11	22.9	2	5.8	4	6.9	1	5.0	—	—

* : Data is Provisional

Source : Securities and Exchange Board of India

External Sector

No. 31: Foreign Trade

Item	Unit	2016-17	2016		2017			
			Aug.	Apr.	May	Jun.	Jul.	Aug.
		1	2	3	4	5	6	7
1 Exports	₹ Billion	18,541.0	1,445.7	1,589.1	1,551.1	1,513.5	1,452.9	1,523.7
	US \$ Million	276,547.0	21,597.1	24,635.0	24,075.9	23,486.1	19,989.3	23,818.8
1.1 Oil	₹ Billion	2,120.3	166.6	190.1	165.1	167.0	192.1	217.4
	US \$ Million	31,622.3	2,488.2	2,947.2	2,562.3	2,590.9	2,921.7	3,397.8
1.2 Non-oil	₹ Billion	16,420.7	1,279.1	1,399.0	1,386.0	1,346.6	1,260.8	1,306.3
	US \$ Million	244,924.7	19,108.9	21,687.8	21,513.6	20,895.2	17,067.6	20,421.1
2 Imports	₹ Billion	25,668.2	1,961.5	2,455.9	2,442.2	2,329.2	2,196.3	2,268.5
	US \$ Million	382,740.9	29,303.2	38,071.8	37,907.8	36,144.0	34,075.1	35,462.8
2.1 Oil	₹ Billion	5,825.6	454.5	476.5	497.2	499.6	500.3	496.1
	US \$ Million	86,865.7	6,789.5	7,386.2	7,718.0	7,753.0	7,761.3	7,754.8
2.2 Non-oil	₹ Billion	19,842.6	1,507.1	1,979.4	1,945.0	1,829.6	1,696.1	1,772.4
	US \$ Million	295,875.2	22,513.7	30,685.5	30,189.7	28,391.0	26,313.9	27,708.0
3 Trade Balance	₹ Billion	-7,127.2	-515.8	-866.8	-891.1	-815.7	-743.5	-744.8
	US \$ Million	-106,193.9	-7,706.1	-13,436.8	-13,831.9	-12,657.9	-14,085.8	-11,644.0
3.1 Oil	₹ Billion	-3,705.4	-287.9	-286.4	-332.2	-332.7	-308.1	-278.7
	US \$ Million	-55,243.4	-4,301.3	-4,439.1	-5,155.7	-5,162.1	-4,839.6	-4,357.0
3.2 Non-oil	₹ Billion	-3,421.9	-227.9	-580.4	-559.0	-483.1	-435.3	-466.1
	US \$ Million	-50,950.6	-3,404.8	-8,997.7	-8,676.1	-7,495.8	-9,246.2	-7,287.0

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

No. 32: Foreign Exchange Reserves

Item	Unit	2016	2017					
			Sep. 23	Aug. 18	Aug. 25	Sep. 1	Sep. 8	Sep. 15
		1	2	3	4	5	6	7
1 Total Reserves	₹ Billion	24,611	25,215	25,274	25,469	25,593	25,787	26,105
	US \$ Million	370,766	393,402	394,550	398,123	400,727	402,509	402,247
1.1 Foreign Currency Assets	₹ Billion	22,903	23,695	23,755	23,902	24,024	24,218	24,533
	US \$ Million	345,242	369,691	370,833	373,641	376,210	378,011	377,751
1.2 Gold	₹ Billion	1,450	1,278	1,278	1,325	1,325	1,325	1,325
	US \$ Million	21,643	19,944	19,944	20,692	20,692	20,692	20,692
1.3 SDRs	SDRs Million	1,066	1,063	1,063	1,063	1,063	1,063	1,063
	₹ Billion	99	96	96	96	97	97	98
1.4 Reserve Tranche Position in IMF	US \$ Million	1,491	1,498	1,500	1,506	1,521	1,513	1,512
	₹ Billion	159	146	146	146	147	147	149
	US \$ Million	2,391	2,270	2,273	2,283	2,304	2,293	2,292

No. 33: NRI Deposits

(US\$ Million)

Scheme	Outstanding					Flows	
	2016-17	2016		2017		2016-17	2017-18
		Aug.	Jul.	Aug.	Apr.-Aug.	Apr.-Aug.	Apr.-Aug.
	1	2	3	4	5	6	7
1 NRI Deposits	116,867	130,165	119,245	118,463	3,841	434	
1.1 FCNR(B)	21,002	45,459	20,830	20,223	143	-779	
1.2 NR(E)RA	83,213	74,249	85,541	85,762	3,310	1,539	
1.3 NRO	12,652	10,457	12,873	12,478	388	-327	

No. 34: Foreign Investment Inflows

(US\$ Million)

Item	2016-17	2016-17		2017-18		2016		2017	
		Apr.-Aug.	Apr.-Aug.	Apr.-Aug.	Aug.	Jul.	Aug.	Jul.	Aug.
	1	2	3	4	5	6			
1.1 Net Foreign Direct Investment (1.1.1–1.1.2)	35,612	14,628	19,784	6,036	3,969	8,579			
1.1.1 Direct Investment to India (1.1.1.1–1.1.1.2)	42,215	14,746	23,394	4,786	4,702	8,438			
1.1.1.1 Gross Inflows/Gross Investments	60,220	23,320	30,378	6,146	6,040	9,635			
1.1.1.1.1 Equity	44,701	16,954	23,683	4,901	4,925	8,102			
1.1.1.1.1.1 Government (SIA/FIPB)	5,900	1,961	6,288	1,148	125	5,897			
1.1.1.1.2 RBI	30,417	11,080	14,000	3,468	3,935	1,604			
1.1.1.1.3 Acquisition of shares	7,161	3,434	2,951	187	767	503			
1.1.1.1.4 Equity capital of unincorporated bodies	1,223	480	444	98	98	98			
1.1.1.1.2 Reinvested earnings	12,343	5,085	4,834	958	958	958			
1.1.1.1.3 Other capital	3,176	1,280	1,861	288	158	576			
1.1.1.2 Repatriation/Disinvestment	18,005	8,573	6,984	1,360	1,338	1,197			
1.1.1.2.1 Equity	17,318	8,386	6,829	1,301	1,334	1,167			
1.1.1.2.2 Other capital	687	187	156	59	4	30			
1.1.2 Foreign Direct Investment by India (1.1.2.1+1.1.2.2+1.1.2.3–1.1.2.4)	6,603	118	3,610	-1,250	733	-141			
1.1.2.1 Equity capital	9,792	3,612	2,277	345	300	209			
1.1.2.2 Reinvested Earnings	2,925	1,219	1,246	244	244	244			
1.1.2.3 Other Capital	4,450	1,713	1,688	161	352	137			
1.1.2.4 Repatriation/Disinvestment	10,564	6,426	1,601	2,001	163	730			
1.2 Net Portfolio Investment (1.2.1+1.2.2+1.2.3–1.2.4)	7,612	5,489	16,242	1,339	3,218	572			
1.2.1 GDRs/ADRs	—	—	—	—	—	—			
1.2.2 FIIs	7,766	5,065	15,852	1,558	3,282	648			
1.2.3 Offshore funds and others	—	—	—	—	—	—			
1.2.4 Portfolio investment by India	154	-424	-391	219	64	76			
1 Foreign Investment Inflows	43,224	20,117	36,026	7,374	7,187	9,151			

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

(US\$ Million)

Item	2016-17	2016		2017	
		Aug.	Jun.	Jul.	Aug.
	1	2	3	4	5
1 Outward Remittances under the LRS	8,170.7	829.4	905.1	880.0	1,096.8
1.1 Deposit	283.8	18.9	26.3	23.3	28.7
1.2 Purchase of immovable property	92.9	7.0	10.1	3.6	8.8
1.3 Investment in equity/debt	443.6	37.8	44.3	28.0	30.2
1.4 Gift	749.5	65.3	83.5	77.9	81.3
1.5 Donations	8.8	0.2	0.3	0.5	0.8
1.6 Travel	2,568.0	290.3	352.6	342.8	450.2
1.7 Maintenance of close relatives	2,169.5	187.4	229.5	211.8	240.7
1.8 Medical Treatment	17.3	1.6	2.4	1.7	2.1
1.9 Studies Abroad	1,536.4	190.5	144.8	179.0	240.7
1.10 Others	300.8	30.3	11.3	11.4	13.2

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

Item	2015-16	2016-17	2016		2017	
			September	August	September	August
	1	2	3	4	5	
36-Currency Export and Trade Based Weights (Base: 2004-05=100)						
1 Trade-Based Weights						
1.1 NEER		74.76	74.66	74.31	77.67	76.70
1.2 REER		112.07	114.50	114.39	118.32	116.83
2 Export-Based Weights						
2.1 NEER		76.45	76.39	75.87	79.60	78.65
2.2 REER		114.44	116.44	116.21	120.51	119.07
6-Currency Trade Based Weights						
1 Base: 2004-05 (April-March)=100						
1.1 NEER		67.52	66.86	66.36	68.62	67.60
1.2 REER		122.71	125.17	124.89	131.37	129.42
2 Base: 2016-17 (April-March)=100						
2.1 NEER		101.00	100.00	99.26	102.63	101.11
2.2 REER		98.04	100.00	99.77	104.95	103.40

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

(Amount in US\$ Million)

Item	2016-17	2016		2017	
		Aug.	Jul.	Aug.	Aug.
	1	2	3	4	
1 Automatic Route					
1.1 Number		729	66	55	80
1.2 Amount		16,247	2,587	1,244	1,541
2 Approval Route					
2.1 Number		37	3	2	2
2.2 Amount		5,738	586	650	102
3 Total (1+2)					
3.1 Number		766	69	57	82
3.2 Amount		21,985	3,173	1,894	1,643
4 Weighted Average Maturity (in years)		5.30	7.10	7.10	4.70
5 Interest Rate (per cent)					
5.1 Weighted Average Margin over 6-month LIBOR or reference rate for Floating Rate Loans		1.62	1.80	1.11	1.29
5.2 Interest rate range for Fixed Rate Loans		0.00-14.75	0.00-12.05	0.00-11.00	0.00-11.00

No. 38: India's Overall Balance of Payments

Item	(US \$ Million)					
	Apr-Jun 2016 (PR)			Apr-Jun 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	254,325	247,356	6,969	296,104	284,699	11,405
1 CURRENT ACCOUNT (1.1+ 1.2)	124,970	125,371	-401	140,515	154,856	-14,341
1.1 MERCHANDISE	66,618	90,453	-23,835	73,659	114,881	-41,222
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	58,352	34,918	23,434	66,857	39,976	26,881
1.2.1 Services	39,381	23,636	15,745	45,916	27,701	18,215
1.2.1.1 Travel	4,803	4,562	241	6,242	4,845	1,396
1.2.1.2 Transportation	3,897	3,678	219	4,178	4,072	106
1.2.1.3 Insurance	516	287	229	625	352	272
1.2.1.4 G.n.i.e.	130	162	-32	156	152	4
1.2.1.5 Miscellaneous	30,035	14,948	15,087	34,716	18,280	16,436
1.2.1.5.1 Software Services	18,246	674	17,573	18,439	1,136	17,304
1.2.1.5.2 Business Services	8,058	8,005	53	8,467	8,265	202
1.2.1.5.3 Financial Services	1,403	1,268	135	1,174	1,218	-44
1.2.1.5.4 Communication Services	539	209	331	548	237	310
1.2.2 Transfers	15,306	1,304	14,002	16,148	1,690	14,458
1.2.2.1 Official	58	217	-159	92	237	-145
1.2.2.2 Private	15,248	1,087	14,161	16,056	1,453	14,603
1.2.3 Income	3,665	9,977	-6,312	4,792	10,585	-5,793
1.2.3.1 Investment Income	2,753	9,278	-6,525	3,650	10,040	-6,391
1.2.3.2 Compensation of Employees	912	700	212	1,143	544	598
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	129,166	121,985	7,181	155,226	129,843	25,383
2.1 Foreign Investment (2.1.1+2.1.2)	72,114	66,129	5,985	92,709	73,021	19,688
2.1.1 Foreign Direct Investment	14,173	10,291	3,881	15,410	8,174	7,236
2.1.1.1 In India	11,748	5,852	5,895	14,702	4,449	10,253
2.1.1.1.1 Equity	7,874	5,784	2,090	10,656	4,327	6,329
2.1.1.1.2 Reinvested Earnings	3,169	—	3,169	2,919	—	2,919
2.1.1.1.3 Other Capital	705	69	636	1,127	122	1,006
2.1.1.2 Abroad	2,425	4,439	-2,014	708	3,725	-3,017
2.1.1.2.1 Equity	2,425	2,427	-2	708	1,768	-1,060
2.1.1.2.2 Reinvested Earnings	0	731	-731	0	758	-758
2.1.1.2.3 Other Capital	0	1,281	-1,281	0	1,199	-1,199
2.1.2 Portfolio Investment	57,941	55,838	2,103	77,299	64,847	12,452
2.1.2.1 In India	56,260	55,020	1,241	76,134	64,213	11,921
2.1.2.1.1 FIIs	56,260	55,020	1,241	76,134	64,213	11,921
2.1.2.1.1.1 Equity	45,591	43,227	2,365	57,312	56,625	687
2.1.2.1.1.2 Debt	10,669	11,793	-1,124	18,823	7,588	11,234
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	1,681	818	863	1,165	634	530
2.2 Loans (2.2.1+2.2.2+2.2.3)	26,222	27,822	-1,600	34,691	33,722	968
2.2.1 External Assistance	1,860	1,137	723	1,826	1,179	647
2.2.1.1 By India	15	58	-43	14	70	-56
2.2.1.2 To India	1,846	1,079	767	1,812	1,110	702
2.2.2 Commercial Borrowings	3,362	5,376	-2,013	6,391	6,650	-259
2.2.2.1 By India	974	493	482	2,438	2,283	156
2.2.2.2 To India	2,388	4,883	-2,495	3,953	4,367	-414
2.2.3 Short Term to India	21,000	21,310	-310	26,474	25,893	580
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	21,000	21,121	-122	25,735	25,893	-159
2.2.3.2 Suppliers' Credit up to 180 days	0	189	-189	739	0	739
2.3 Banking Capital (2.3.1+2.3.2)	21,139	21,288	-148	21,607	15,441	6,166
2.3.1 Commercial Banks	21,112	21,287	-175	21,607	14,383	7,225
2.3.1.1 Assets	9,426	8,569	856	7,589	1,217	6,373
2.3.1.2 Liabilities	11,687	12,718	-1,031	14,018	13,166	852
2.3.1.2.1 Non-Resident Deposits	11,573	10,195	1,378	12,799	11,561	1,237
2.3.2 Others	27	0	27	0	1,059	-1,059
2.4 Rupee Debt Service	0	35	-35	0	23	-23
2.5 Other Capital	9,692	6,712	2,980	6,219	7,635	-1,416
3 Errors & Omissions	189	—	189	362	—	362
4 Monetary Movements (4.1+ 4.2)	0	6,969	-6,969	0	11,405	-11,405
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	6,969	-6,969	0	11,405	-11,405

No. 39: India's Overall Balance of Payments

Item	(₹ Billion)					
	Apr-Jun 2016 (PR)			Apr-Jun 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
Overall Balance of Payments(1+2+3)	17,012	16,546	466	19,086	18,351	735
1 CURRENT ACCOUNT (1.1+ 1.2)	8,359	8,386	-27	9,057	9,982	-924
1.1 MERCHANDISE	4,456	6,051	-1,594	4,748	7,405	-2,657
1.2 INVISIBLES (1.2.1+1.2.2+1.2.3)	3,903	2,336	1,568	4,309	2,577	1,733
1.2.1 Services	2,634	1,581	1,053	2,960	1,786	1,174
1.2.1.1 Travel	321	305	16	402	312	90
1.2.1.2 Transportation	261	246	15	269	262	7
1.2.1.3 Insurance	35	19	15	40	23	18
1.2.1.4 G.n.i.e.	9	11	-2	10	10	0
1.2.1.5 Miscellaneous	2,009	1,000	1,009	2,238	1,178	1,059
1.2.1.5.1 Software Services	1,221	45	1,175	1,189	73	1,115
1.2.1.5.2 Business Services	539	535	4	546	533	13
1.2.1.5.3 Financial Services	94	85	9	76	78	-3
1.2.1.5.4 Communication Services	36	14	22	35	15	20
1.2.2 Transfers	1,024	87	937	1,041	109	932
1.2.2.1 Official	4	15	-11	6	15	-9
1.2.2.2 Private	1,020	73	947	1,035	94	941
1.2.3 Income	245	667	-422	309	682	-373
1.2.3.1 Investment Income	184	621	-436	235	647	-412
1.2.3.2 Compensation of Employees	61	47	14	74	35	39
2 CAPITAL ACCOUNT (2.1+2.2+2.3+2.4+2.5)	8,640	8,160	480	10,006	8,369	1,636
2.1 Foreign Investment (2.1.1+2.1.2)	4,824	4,423	400	5,976	4,707	1,269
2.1.1 Foreign Direct Investment	948	688	260	993	527	466
2.1.1.1 In India	786	391	394	948	287	661
2.1.1.1.1 Equity	527	387	140	687	279	408
2.1.1.1.2 Reinvested Earnings	212	0	212	188	0	188
2.1.1.1.3 Other Capital	47	5	43	73	8	65
2.1.1.2 Abroad	162	297	-135	46	240	-194
2.1.1.2.1 Equity	162	162	-	46	114	-68
2.1.1.2.2 Reinvested Earnings	0	49	-49	0	49	-49
2.1.1.2.3 Other Capital	0	86	-86	0	77	-77
2.1.2 Portfolio Investment	3,876	3,735	141	4,983	4,180	803
2.1.2.1 In India	3,763	3,680	83	4,907	4,139	768
2.1.2.1.1 FIIs	3,763	3,680	83	4,907	4,139	768
2.1.2.1.1.1 Equity	3,050	2,891	158	3,694	3,650	44
2.1.2.1.1.2 Debt	714	789	-75	1,213	489	724
2.1.2.1.2 ADR/GDRs	0	0	0	0	0	0
2.1.2.2 Abroad	112	55	58	75	41	34
2.2 Loans (2.2.1+2.2.2+2.2.3)	1,754	1,861	-107	2,236	2,174	62
2.2.1 External Assistance	124	76	48	118	76	42
2.2.1.1 By India	1	4	-3	1	5	-4
2.2.1.2 To India	123	72	51	117	72	45
2.2.2 Commercial Borrowings	225	360	-135	412	429	-17
2.2.2.1 By India	65	33	32	157	147	10
2.2.2.2 To India	160	327	-167	255	281	-27
2.2.3 Short Term to India	1,405	1,425	-21	1,706	1,669	37
2.2.3.1 Suppliers' Credit > 180 days & Buyers' Credit	1,405	1,413	-8	1,659	1,669	-10
2.2.3.2 Suppliers' Credit up to 180 days	0	13	-13	48	0	48
2.3 Banking Capital (2.3.1+2.3.2)	1,414	1,424	-10	1,393	995	397
2.3.1 Commercial Banks	1,412	1,424	-12	1,393	927	466
2.3.1.1 Assets	630	573	57	489	78	411
2.3.1.2 Liabilities	782	851	-69	904	849	55
2.3.1.2.1 Non-Resident Deposits	774	682	92	825	745	80
2.3.2 Others	2	0	2	0	68	-68
2.4 Rupee Debt Service	0	2	-2	0	1	-1
2.5 Other Capital	648	449	199	401	492	-91
3 Errors & Omissions	13	0	13	23	0	23
4 Monetary Movements (4.1+ 4.2)	0	466	-466	0	735	-735
4.1 I.M.F.	0	0	0	0	0	0
4.2 Foreign Exchange Reserves (Increase - / Decrease +)	0	466	-466	0	735	-735

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

(US \$ Million)

Item	Apr-Jun 2016 (PR)			Apr-Jun 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)						
1.A Goods and Services (1.A.a+1.A.b)						
1.A.a Goods (1.A.a.1 to 1.A.a.3)						
1.A.a.1 General merchandise on a BOP basis	124,969	125,351	-382	140,509	154,834	-14,324
1.A.a.2 Net exports of goods under merchanting	105,999	114,089	-8,090	119,575	142,582	-23,007
1.A.a.3 Nonmonetary gold	66,618	90,453	-23,835	73,659	114,881	-41,222
1.A.b Services (1.A.b.1 to 1.A.b.13)	66,200	86,533	-20,333	73,627	103,615	-29,988
1.A.b.1 Manufacturing services on physical inputs owned by others	418	0	418	32	0	32
1.A.b.2 Maintenance and repair services n.i.e.	—	3,920	-3,920	—	11,266	-11,266
1.A.b.3 Transport	39,381	23,636	15,745	45,916	27,701	18,215
1.A.b.4 Travel	45	13	33	26	9	17
1.A.b.5 Construction	33	78	-45	57	153	-96
1.A.b.6 Insurance and pension services	3,897	3,678	219	4,178	4,072	106
1.A.b.7 Financial services	4,803	4,562	241	6,242	4,845	1,396
1.A.b.8 Charges for the use of intellectual property n.i.e.	463	233	230	675	286	388
1.A.b.9 Telecommunications, computer, and information services	516	287	229	625	352	272
1.A.b.10 Other business services	1,403	1,268	135	1,174	1,218	-44
1.A.b.11 Personal, cultural, and recreational services	171	1,628	-1,456	162	1,954	-1,792
1.A.b.12 Government goods and services n.i.e.	18,848	989	17,859	19,056	1,476	17,581
1.A.b.13 Others n.i.e.	8,058	8,005	53	8,467	8,265	202
1.B Primary Income (1.B.1 to 1.B.3)	381	672	-291	402	467	-65
1.B.1 Compensation of employees	130	162	-32	156	152	4
1.B.2 Investment income	633	2,064	-1,431	4,698	4,452	246
1.B.2.1 Direct investment	467	236	231	925	167	759
1.B.2.2 Portfolio investment	912	700	212	1,143	544	598
1.B.2.3 Other investment	2,286	9,042	-6,756	2,724	9,874	-7,149
1.B.2.4 Reserve assets	1,401	4,017	-2,616	1,549	4,681	-3,132
1.B.3 Other primary income	52	2,039	-2,009	70	2,298	-2,228
1.C Secondary Income (1.C.1+1.C.2)	803	2,985	-2,933	186	2,894	-2,708
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	467	1	802	919	0	919
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	15,304	1,284	14,020	16,142	1,667	14,475
1.C.1.2 Other current transfers	15,248	1,087	14,161	16,056	1,453	14,603
1.C.2 General government	14,683	863	13,820	15,504	1,121	14,382
2 Capital Account (2.1+2.2)	565	225	341	553	332	221
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	56	197	-140	86	214	-128
2.2 Capital transfers	221	62	159	114	105	8
3 Financial Account (3.1 to 3.5)	32	8	24	75	39	35
3.1 Direct Investment (3.1A+3.1B)	189	54	135	39	66	-27
3.1.A Direct Investment in India	128,947	128,913	35	155,119	141,165	13,954
3.1.A.1 Equity and investment fund shares	14,173	10,291	3,881	15,410	8,174	7,236
3.1.A.1.1 Equity other than reinvestment of earnings	11,748	5,852	5,895	14,702	4,449	10,253
3.1.A.1.2 Reinvestment of earnings	11,043	5,784	5,259	13,575	4,327	9,248
3.1.A.2 Debt instruments	7,874	5,784	2,090	10,656	4,327	6,329
3.1.A.2.1 Direct investor in direct investment enterprises	3,169	—	3,169	2,919	—	2,919
3.1.B Direct Investment by India	705	69	636	1,127	122	1,006
3.1.B.1 Equity and investment fund shares	2,425	4,439	-2,014	708	3,725	-3,017
3.1.B.1.1 Equity other than reinvestment of earnings	2,425	3,158	-733	708	2,526	-1,818
3.1.B.1.2 Reinvestment of earnings	2,425	2,427	-2	708	1,768	-1,060
3.1.B.2 Debt instruments	—	731	-731	—	758	-758
3.1.B.2.1 Direct investor in direct investment enterprises	0	1,281	-1,281	0	1,199	-1,199
3.1.B.2.2 Debt instruments	—	1,281	-1,281	—	1,199	-1,199
3.1.B.3 Portfolio Investment by India	57,941	55,838	2,103	77,299	64,847	12,452
3.2.A Portfolio Investment in India	56,260	55,020	1,241	76,134	64,213	11,921
3.2.1 Equity and investment fund shares	45,591	43,227	2,365	57,312	56,625	687
3.2.2 Debt securities	10,669	11,793	-1,124	18,823	7,588	11,234
3.2.B Portfolio Investment by India	1,681	818	863	1,165	634	530
3.3 Financial derivatives (other than reserves) and employee stock options	6,861	3,878	2,983	4,737	5,946	-1,209
3.4 Other investment	49,973	51,937	-1,964	57,672	50,793	6,880
3.4.1 Other equity (ADRs/GDRs)	0	0	0	0	0	0
3.4.2 Currency and deposits	11,600	10,195	1,405	12,799	12,620	179
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	27	0	27	0	1,059	-1,059
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	11,573	10,195	1,378	12,799	11,561	1,237
3.4.2.3 General government	—	—	—	—	—	—
3.4.2.4 Other sectors	—	—	—	—	—	—
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	14,762	17,605	-2,843	17,026	10,650	6,375
3.4.3.A Loans to India	13,773	17,055	-3,281	14,573	8,298	6,275
3.4.3.B Loans by India	989	550	438	2,453	2,352	100
3.4.4 Insurance, pension, and standardized guarantee schemes	145	279	-134	14	589	-575
3.4.5 Trade credit and advances	21,000	21,310	-310	26,474	25,893	580
3.4.6 Other accounts receivable/payable - other	2,466	2,548	-81	1,361	1,041	320
3.4.7 Special drawing rights	—	—	—	—	—	—
3.5 Reserve assets	0	6,969	-6,969	0	11,405	-11,405
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	6,969	-6,969	0	11,405	-11,405
4 Total assets/liabilities	128,947	128,913	35	155,119	141,165	13,954
4.1 Equity and investment fund shares	67,745	57,143	10,602	77,510	70,647	6,863
4.2 Debt instruments	58,735	62,252	-3,517	76,248	58,073	18,175
4.3 Other financial assets and liabilities	2,466	9,517	-7,050	1,361	12,445	-11,085
5 Net errors and omissions	189	—	189	362	—	362

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

(₹ Billion)

Item	Apr-Jun 2016 (PR)			Apr-Jun 2017 (P)		
	Credit	Debit	Net	Credit	Debit	Net
	1	2	3	4	5	6
1 Current Account (1.A+1.B+1.C)						
1.A Goods and Services (1.A.a+1.A.b)						
1.A.a Goods (1.A.a.1 to 1.A.a.3)	8,359	8,385	-26	9,057	9,980	-923
1.A.a.1 General merchandise on a BOP basis	7,090	7,632	-541	7,708	9,191	-1,483
1.A.a.2 Net exports of goods under merchanting	4,456	6,051	-1,594	4,748	7,405	-2,657
1.A.a.3 Nonmonetary gold	4,428	5,788	-1,360	4,746	6,679	-1,933
1.A.b Services (1.A.b.1 to 1.A.b.13)	28	0	28	2	0	2
1.A.b.1 Manufacturing services on physical inputs owned by others	—	262	-262	0	726	-726
1.A.b.2 Maintenance and repair services n.i.e.	2,634	1,581	1,053	2,960	1,786	1,174
1.A.b.3 Transport	3	1	2	2	1	1
1.A.b.4 Travel	2	5	-3	4	10	-6
1.A.b.5 Construction	261	246	15	269	262	7
1.A.b.6 Insurance and pension services	321	305	16	402	312	90
1.A.b.7 Financial services	35	19	15	40	23	18
1.A.b.8 Charges for the use of intellectual property n.i.e.	94	85	9	76	78	-3
1.A.b.9 Telecommunications, computer, and information services	11	109	-97	10	126	-116
1.A.b.10 Other business services	1,261	66	1,195	1,228	95	1,133
1.A.b.11 Personal, cultural, and recreational services	539	535	4	546	533	13
1.A.b.12 Government goods and services n.i.e.	25	45	-19	26	30	-4
1.A.b.13 Others n.i.e.	9	11	-2	10	10	0
1.B Primary Income (1.B.1 to 1.B.3)	42	138	-96	303	287	16
1.B.1 Compensation of employees	245	667	-422	309	682	-373
1.B.2 Investment income	61	47	14	74	35	39
1.B.2.1 Direct investment	153	605	-452	176	636	-461
1.B.2.2 Portfolio investment	94	269	-175	100	302	-202
1.B.2.3 Other investment	2	136	-134	5	148	-144
1.B.2.4 Reserve assets	3	200	-196	12	187	-175
1.B.3 Other primary income	54	0	54	59	0	59
1.C Secondary Income (1.C.1+1.C.2)	31	16	15	60	11	49
1.C.1 Financial corporations, nonfinancial corporations, households, and NPISHs	1,024	86	938	1,040	107	933
1.C.1.1 Personal transfers (Current transfers between resident and/ non-resident households)	1,020	73	947	1,035	94	941
1.C.1.2 Other current transfers	982	58	924	999	72	927
1.C.2 General government	38	15	23	36	21	14
2 Capital Account (2.1+2.2)	4	13	-9	6	14	-8
2.1 Gross acquisitions (DR.)/disposals (CR.) of non-produced nonfinancial assets	15	4	11	7	7	1
2.2 Capital transfers	2	1	2	5	3	2
3 Financial Account (3.1 to 3.5)	13	4	9	3	4	-2
3.1 Direct Investment (3.1A+3.1B)	8,625	8,623	2	9,999	9,099	899
3.1.A Direct Investment in India	948	688	260	993	527	466
3.1.A.1 Equity and investment fund shares	786	391	394	948	287	661
3.1.A.1.1 Equity other than reinvestment of earnings	739	387	352	875	279	596
3.1.A.1.2 Reinvestment of earnings	527	387	140	687	279	408
3.1.A.2 Debt instruments	212	0	212	188	0	188
3.1.A.2.1 Direct investor in direct investment enterprises	47	5	43	73	8	65
3.1.B Direct Investment by India	162	297	-135	46	240	-194
3.1.B.1 Equity and investment fund shares	162	211	-49	46	163	-117
3.1.B.1.1 Equity other than reinvestment of earnings	162	162	-0	46	114	-68
3.1.B.1.2 Reinvestment of earnings	0	49	-49	0	49	-49
3.1.B.2 Debt instruments	0	86	-86	0	77	-77
3.1.B.2.1 Direct investor in direct investment enterprises	0	86	-86	0	77	-77
3.2 Portfolio Investment	3,876	3,735	141	4,983	4,180	803
3.2.A Portfolio Investment in India	3,763	3,680	83	4,907	4,139	768
3.2.A.1 Equity and investment fund shares	3,050	2,891	158	3,694	3,650	44
3.2.A.2 Debt securities	714	789	-75	1,213	489	724
3.2.B Portfolio Investment by India	112	55	58	75	41	34
3.3 Financial derivatives (other than reserves) and employee stock options	459	259	200	305	383	-78
3.4 Other investment	459	259	200	305	383	-78
3.4.1 Other equity (ADRs/GDRs)	3,343	3,474	-131	3,717	3,274	443
3.4.2 Currency and deposits	0	0	0	0	0	0
3.4.2.1 Central bank (Rupee Debt Movements; NRG)	776	682	94	825	813	12
3.4.2.2 Deposit-taking corporations, except the central bank (NRI Deposits)	2	0	2	0	68	-68
3.4.2.3 General government	774	682	92	825	745	80
3.4.2.4 Other sectors	—	—	—	—	—	—
3.4.3 Loans (External Assistance, ECBs and Banking Capital)	987	1,178	-190	1,097	686	411
3.4.3.A Loans to India	921	1,141	-219	939	535	404
3.4.3.B Loans by India	66	37	29	158	152	6
3.4.4 Insurance, pension, and standardized guarantee schemes	66	19	-9	1	38	-37
3.4.5 Trade credit and advances	10	19	-9	1	38	-37
3.4.6 Other accounts receivable/payable - other	1,405	1,425	-21	1,706	1,669	37
3.4.7 Special drawing rights	165	170	-5	88	67	21
3.5 Reserve assets	—	—	—	—	—	—
3.5.1 Monetary gold	0	466	-466	0	735	-735
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	466	-466	0	735	-735
4 Total assets/liabilities	8,625	8,623	2	9,999	9,099	899
4.1 Equity and investment fund shares	4,532	3,822	709	4,996	4,554	442
4.2 Debt instruments	3,929	4,164	-235	4,915	3,743	1,172
4.3 Other financial assets and liabilities	165	637	-472	88	802	-714
5 Net errors and omissions	13	—	13	23	—	23

No. 42: International Investment Position

(US\$ Million)

Item	As on Financial Year /Quarter End							
	2016-17		2016		2017			
			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	148,229	342,659	143,640	294,110	148,229	342,659	151,246	353,406
1.1 Equity Capital and Reinvested Earnings	99,114	327,845	97,694	280,149	99,114	327,845	100,932	337,563
1.2 Other Capital	49,115	14,814	45,946	13,961	49,115	14,814	50,314	15,843
2 Portfolio Investment	2,615	238,604	1,598	220,551	2,615	238,604	2,084	251,142
2.1 Equity	1,593	153,978	1,596	141,510	1,593	153,978	2,022	154,901
2.2 Debt	1,022	84,626	2	79,040	1,022	84,626	63	96,241
3 Other Investment	43,433	377,449	45,840	390,676	43,433	377,449	37,058	378,767
3.1 Trade Credit	1,794	88,895	2,413	82,130	1,794	88,895	1,623	89,576
3.2 Loan	7,305	159,887	4,748	170,334	7,305	159,887	5,146	158,732
3.3 Currency and Deposits	20,073	117,110	21,603	126,455	20,073	117,110	16,083	118,476
3.4 Other Assets/Liabilities	14,261	11,557	17,077	11,758	14,261	11,557	14,206	11,984
4 Reserves	369,955	—	363,506	—	369,955	—	386,539	—
5 Total Assets/ Liabilities	564,231	958,712	554,584	905,338	564,231	958,712	576,928	983,316
6 IIP (Assets - Liabilities)		-394,480		-350,753		-394,480		-406,388

Payment and Settlement Systems

No. 43: Payment System Indicators

System	Volume (Million)				Value (₹ Billion)			
	2016-17	2017			2016-17	2017		
		Jun.	Jul.	Aug.		Jun.	Jul.	Aug.
	1	2	3	4	5	6	7	8
1 RTGS	107.86	9.83	9.38	9.46	1,253,652.08	116,200.57	110,562.10	113,827.58
1.1 Customer Transactions	103.66	9.51	9.07	9.16	849,950.51	83,330.95	77,675.80	79,157.81
1.2 Interbank Transactions	4.17	0.32	0.31	0.30	131,953.25	9,481.63	9,473.46	10,005.58
1.3 Interbank Clearing	0.018	0.002	0.002	0.002	271,748.31	23,387.99	23,412.84	24,664.19
2 CCIL Operated Systems	3.65	0.30	0.30	0.27	1,056,173.36	90,919.03	86,663.63	87,499.01
2.1 CBLO	0.22	0.02	0.02	0.02	229,528.33	21,892.28	21,736.46	22,784.18
2.2 Govt. Securities Clearing	1.51	0.12	0.11	0.08	404,389.08	36,913.97	34,047.29	31,959.78
2.2.1 Outright	1.34	0.11	0.10	0.07	168,741.46	13,709.92	13,400.47	9,795.75
2.2.2 Repo	0.168	0.017	0.016	0.017	235,647.62	23,204.05	20,646.82	22,164.03
2.3 Forex Clearing	1.93	0.16	0.17	0.17	422,255.95	32,112.78	30,879.88	32,755.05
3 Paper Clearing	1,206.69	95.47	95.35	94.81	80,958.15	6,669.43	6,572.52	6,403.59
3.1 Cheque Truncation System (CTS)	1,111.86	91.85	92.20	92.05	74,035.22	6,409.95	6,342.50	6,224.34
3.2 MICR Clearing	—	—	—	—	—	—	—	—
3.2.1 RBI Centres	—	—	—	—	—	—	—	—
3.2.2 Other Centres	—	—	—	—	—	—	—	—
3.3 Non-MICR Clearing	94.83	3.61	3.15	2.76	6,922.93	259.48	230.02	179.25
4 Retail Electronic Clearing	4,204.96	426.75	432.20	442.79	132,250.12	14,113.17	13,471.67	13,988.09
4.1 ECS DR	8.76	0.13	0.14	0.12	39.14	0.89	0.93	0.83
4.2 ECS CR (includes NECS)	10.10	0.64	0.43	0.63	144.08	10.49	10.90	10.96
4.3 EFT/NEFT	1,622.10	152.34	148.14	151.61	120,039.68	12,694.20	12,011.60	12,500.38
4.4 Immediate Payment Service (IMPS)	506.73	65.84	69.07	75.66	4,111.06	596.55	604.76	651.49
4.5 National Automated Clearing House (NACH)	2,057.27	207.79	214.42	214.77	7,916.17	811.05	843.47	824.43
5 Cards	12,055.87	1,032.50	1,070.22	1,097.79	30,214.00	2,989.67	2,956.25	3,072.12
5.1 Credit Cards	1,093.51	110.03	111.38	115.99	3,312.21	357.50	342.15	366.03
5.1.1 Usage at ATMs	6.37	0.55	0.61	0.66	28.39	2.67	2.85	3.05
5.1.2 Usage at POS	1,087.13	109.47	110.76	115.33	3,283.82	354.83	339.30	362.99
5.2 Debit Cards	10,962.36	922.47	958.85	981.81	26,901.79	2,632.17	2,614.11	2,706.09
5.2.1 Usage at ATMs	8,563.06	667.81	703.23	716.36	23,602.73	2,256.93	2,268.42	2,351.96
5.2.2 Usage at POS	2,399.30	254.66	255.61	265.45	3,299.07	375.24	345.68	354.13
6 Prepaid Payment Instruments (PPIs)	1,963.66	255.65	270.24	261.14	838.01	85.07	98.56	102.88
6.1 m-Wallet	1,629.98	221.63	235.46	225.43	532.42	53.10	69.34	72.62
6.2 PPI Cards	333.11	33.97	34.74	35.67	277.52	29.87	27.07	28.53
6.3 Paper Vouchers	0.51	0.05	0.04	0.03	25.36	2.10	2.15	1.72
7 Mobile Banking	976.85	115.73	102.40	99.64	13,104.76	1,807.65	801.36	799.13
8 Cards Outstanding	884.72	825.31	836.11	843.51	—	—	—	—
8.1 Credit Card	29.84	31.48	32.06	32.65	—	—	—	—
8.2 Debit Card	854.87	793.83	804.05	810.87	—	—	—	—
9 Number of ATMs (in actuals)	222475	222926	222653	222568	—	—	—	—
10 Number of POS (in actuals)	2529141	2776949	2840113	2882422	—	—	—	—
11 Grand Total (1.1+1.2+2+3+4+5+6)	19,542.66	1,820.50	1,877.69	1,906.25	2,282,337.40	207,588.96	196,911.89	200,229.08

Note : Data for latest 12 month period is provisional.

Occasional Series

No. 44: Small Savings

Scheme		2015-16	2016		2017			
			Feb.	Dec.	Jan.	Feb.		
			1	2	3	4	5	
1 Small Savings			Receipts	3,224.88	375.07	343.80	342.41	418.42
			Outstanding	6,805.58	6,689.88	7,225.59	7,225.05	7,244.24
1.1 Total Deposits			Receipts	2,820.87	326.76	316.96	308.23	307.76
1.1.1 Post Office Saving Bank Deposits			Outstanding	4,287.13	4,224.29	4,666.13	4,655.88	4,661.62
			Receipts	1,574.15	197.89	200.71	186.83	183.34
			Outstanding	615.67	606.63	937.48	930.92	926.38
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	0.51	0.05	-0.29	0.00	0.04
			Outstanding	34.97	34.68	32.95	32.82	32.73
1.1.4 National Saving Scheme, 1992			Receipts	0.06	0.00	0.00	0.00	0.00
			Outstanding	1.21	1.22	-0.30	-0.33	-0.36
1.1.5 Monthly Income Scheme			Receipts	315.26	35.20	30.95	31.48	32.40
			Outstanding	1,938.08	1,935.86	1,814.62	1,805.97	1,800.78
1.1.6 Senior Citizen Scheme			Receipts	103.21	12.87	8.92	9.59	10.23
			Outstanding	228.76	213.51	269.25	275.25	284.14
1.1.7 Post Office Time Deposits			Receipts	424.53	43.12	38.96	43.48	44.02
			Outstanding	706.35	678.18	768.60	773.99	782.52
1.1.7.1 1 year Time Deposits			Outstanding	498.16	482.51	514.47	513.63	514.82
1.1.7.2 2 year Time Deposits			Outstanding	29.96	27.77	34.42	34.99	35.66
1.1.7.3 3 year Time Deposits			Outstanding	47.82	45.96	50.46	50.80	51.22
1.1.7.4 5 year Time Deposits			Outstanding	130.41	121.94	169.25	174.57	180.82
1.1.8 Post Office Recurring Deposits			Receipts	403.15	37.63	37.71	36.85	37.83
			Outstanding	761.79	753.85	843.13	836.86	835.13
1.1.9 Post Office Cumulative Time Deposits			Outstanding	0.08	0.08	0.18	0.18	0.08
1.1.10 Other Deposits			Receipts	0.05	0.00	0.00	0.00	0.00
			Outstanding	0.22	0.28	0.22	0.22	0.22
1.2 Saving Certificates			Receipts	326.10	39.44	22.75	28.06	34.64
			Outstanding	1,942.42	1,916.46	1,963.89	1,969.04	1,976.30
1.2.1 National Savings Certificate VIII issue			Receipts	98.26	12.94	10.88	13.47	18.11
			Outstanding	881.39	877.22	870.82	869.41	869.85
1.2.2 Indira Vikas Patras			Receipts	0.00	0.00	0.00	0.00	0.00
			Outstanding	8.91	8.87	8.89	8.90	8.89
1.2.3 Kisan Vikas Patras			Receipts	14.66	1.49	0.04	0.33	0.04
			Outstanding	648.58	675.76	566.44	558.15	548.69
1.2.4 Kisan Vikas Patras - 2014			Receipts	213.18	25.01	11.83	14.26	16.49
			Outstanding	291.18	242.81	404.87	419.00	435.58
1.2.5 National Saving Certificate VI issue			Receipts	0.04	-	-	-	-
			Outstanding	-0.89	-0.89	-1.06	-1.08	-1.09
1.2.6 National Saving Certificate VII issue			Outstanding	-0.57	-0.59	-0.61	-0.63	-0.63
1.2.7 Other Certificates			Outstanding	113.82	113.28	114.54	115.29	115.01
1.3 Public Provident Fund			Receipts	77.91	8.87	4.09	6.12	76.02
			Outstanding	576.03	549.13	595.57	600.13	606.32

Source: Accountant General, Post and Telegraphs.

TABLE 45 : OWNERSHIP PATTERN OF CENTRAL AND STATE GOVERNMENTS SECURITIES

(Per cent)

Category	Central Government Dated Securities				
	2016			2017	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(A) Total (in ₹. Billion)	46422.34	47967.49	49246.98	49109.75	50430.94
1 Commercial Banks	39.90	40.00	40.92	40.46	39.68
2 Non-Bank PDs	0.45	0.14	0.28	0.16	0.31
3 Insurance Companies	22.63	22.68	22.55	22.90	23.13
4 Mutual Funds	2.09	2.13	1.96	1.49	1.44
5 Co-operative Banks	2.68	2.47	2.63	2.70	2.65
6 Financial Institutions	0.71	0.84	0.86	0.81	0.73
7 Corporates	1.31	1.09	1.05	1.05	1.29
8 Foreign Portfolio Investors	3.63	3.82	3.13	3.53	4.29
9 Provident Funds	5.89	6.25	6.24	6.27	6.13
10 RBI	14.88	14.80	14.61	14.65	14.29
11. Others	5.83	5.79	5.77	5.98	6.07
11.1 State Governments	1.84	1.84	1.83	1.92	1.91

Category	State Governments Securities				
	2016			2017	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(B) Total (in ₹. Billion)	17277.70	18114.95	19343.91	20893.41	21467.07
1 Commercial Banks	41.20	40.22	41.25	39.01	37.94
2 Non-Bank PDs	0.38	0.35	0.30	0.39	0.38
3 Insurance Companies	32.53	32.67	31.87	32.50	33.53
4 Mutual Funds	1.36	1.62	1.36	2.42	1.89
5 Co-operative Banks	4.01	4.21	4.47	4.75	4.82
6 Financial Institutions	0.25	0.27	0.29	0.30	0.27
7 Corporates	0.13	0.14	0.13	0.17	0.11
8 Foreign Portfolio Investors	0.22	0.08	0.06	0.07	0.08
9 Provident Funds	16.39	16.84	16.81	17.27	18.10
10 RBI	0.02	0.01	0.03	0.06	0.06
11. Others	3.52	3.59	3.43	3.05	2.81
11.1 State Governments	-	-	-	-	-

Category	Treasury Bills				
	2016			2017	
	Jun.	Sep.	Dec.	Mar.	Jun.
	1	2	3	4	5
(C) Total (in ₹. Billion)	4310.09	4202.40	4366.47	3320.80	6135.01
1 Commercial Banks	54.41	52.58	50.47	57.85	53.96
2 Non-Bank PDs	1.85	1.38	1.80	1.25	1.09
3 Insurance Companies	1.83	1.91	2.02	4.58	3.20
4 Mutual Funds	11.77	16.06	12.91	7.85	15.31
5 Co-operative Banks	2.23	3.52	3.28	5.62	2.48
6 Financial Institutions	3.09	2.75	2.76	4.57	2.60
7 Corporates	2.22	1.21	1.81	1.83	1.54
8 Foreign Portfolio Investors	-	-	-	-	-
9 Provident Funds	0.03	0.45	0.43	0.35	0.06
10 RBI	0.25	0.16	0.09	0.02	0.05
11. Others	22.30	19.96	24.44	16.09	19.72
11.1 State Governments	18.26	15.98	20.51	11.02	16.71

Notes : "-" represents nil or negligible

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

2. State Government Securities include special bonds issued under Ujwal DISCOM Assurance Yojana (UDAIS) scheme.

3. Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

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

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

Item	(₹ Billion)					
	2012-13 1	2013-14 2	2014-15 3	2015-16 4	2016-17 RE 5	2017-18 BE 6
1 Total Disbursements	26,949.34	30,002.99	32,852.10	33,782.60	40,599.68	43,957.96
1.1 Developmental	15,741.62	17,142.21	18,720.62	19,429.44	24,271.15	26,194.51
1.1.1 Revenue	12,807.14	13,944.26	14,830.18	14,971.45	18,457.92	19,701.57
1.1.2 Capital	2,446.11	2,785.08	3,322.62	3,400.51	4,471.03	5,515.05
1.1.3 Loans	488.38	412.88	567.82	1,057.49	1,342.20	977.89
1.2 Non-Developmental	10,850.47	12,427.83	13,667.69	13,984.15	15,870.24	17,261.83
1.2.1 Revenue	9,991.40	11,413.65	12,695.20	12,739.11	15,031.91	16,430.73
1.2.1.1 Interest Payments	4,543.06	5,342.30	5,845.42	6,134.74	6,881.68	7,536.87
1.2.2 Capital	837.14	990.37	946.87	1,207.71	816.42	807.16
1.2.3 Loans	21.93	23.81	25.63	37.33	21.92	23.94
1.3 Others	357.24	432.95	463.79	369.01	458.29	501.62
2 Total Receipts	27,690.29	30,013.72	31,897.37	34,487.63	39,810.09	42,551.06
2.1 Revenue Receipts	19,716.19	22,114.75	23,876.93	24,504.58	30,356.58	33,511.38
2.1.1 Tax Receipts	16,879.59	18,465.45	20,207.28	20,754.42	23,917.47	27,066.67
2.1.1.1 Taxes on commodities and services	10,385.91	11,257.81	12,123.48	12,912.47	15,168.50	16,914.54
2.1.1.2 Taxes on Income and Property	6,462.73	7,176.34	8,051.76	7,803.16	8,706.20	10,105.34
2.1.1.3 Taxes of Union Territories (Without Legislature)	30.94	31.30	32.04	38.78	42.77	46.79
2.1.2 Non-Tax Receipts	2,836.60	3,649.30	3,669.65	3,750.16	6,439.11	6,444.71
2.1.2.1 Interest Receipts	355.43	401.62	396.22	347.38	322.08	275.25
2.2 Non-debt Capital Receipts	389.20	391.13	609.55	588.52	595.33	1,245.96
2.2.1 Recovery of Loans & Advances	129.29	93.85	220.72	155.86	136.03	519.12
2.2.2 Disinvestment proceeds	259.91	297.28	388.83	432.66	459.30	726.84
3 Gross Fiscal Deficit [1 - (2.1 + 2.2)]	6,843.95	7,497.11	8,365.63	8,689.51	9,647.78	9,200.62
3A Sources of Financing: Institution-wise						
3A.1 Domestic Financing	6,771.94	7,424.19	8,236.30	8,562.02	9,499.05	9,042.73
3A.1.1 Net Bank Credit to Government	3,352.80	3,358.58	-374.76	2,310.90	6,306.09	...
3A.1.1.1 Net RBI Credit to Government	548.40	1,081.30	-3,341.85	604.72	1,958.16	...
3A.1.2 Non-Bank Credit to Government	3,419.14	4,065.61	8,611.06	6,251.12	3,192.96	...
3A.2 External Financing	72.01	72.92	129.33	127.48	148.73	157.89
3B Sources of Financing: Instrument-wise						
3B.1 Domestic Financing	6,771.94	7,424.19	8,236.30	8,562.02	9,499.05	9,042.73
3B.1.1 Market Borrowings (net)	6,536.94	6,391.99	6,640.58	6,354.19	6,472.74	6,970.13
3B.1.2 Small Savings (net)	-85.70	-142.81	-565.80	-785.15	-1,091.76	-941.16
3B.1.3 State Provident Funds (net)	329.94	312.90	343.39	298.82	326.18	332.03
3B.1.4 Reserve Funds	-4.12	34.63	51.09	-33.22	-82.42	-10.45
3B.1.5 Deposits and Advances	27.22	255.45	275.45	134.70	386.99	502.14
3B.1.6 Cash Balances	-740.96	-10.72	954.74	-705.03	789.59	1,406.90
3B.1.7 Others	708.62	582.75	536.84	3,297.71	2,697.73	783.13
3B.2 External Financing	72.01	72.92	129.33	127.48	148.73	157.89
4 Total Disbursements as per cent of GDP	27.1	26.7	26.4	24.7	26.7	26.1
5 Total Receipts as per cent of GDP	27.8	26.7	25.6	25.2	26.2	25.3
6 Revenue Receipts as per cent of GDP	19.8	19.7	19.2	17.9	20.0	19.9
7 Tax Receipts as per cent of GDP	17.0	16.4	16.2	15.2	15.8	16.1
8 Gross Fiscal Deficit as per cent of GDP	6.9	6.7	6.7	6.4	6.4	5.5

Source : Budget Documents of Central and State Governments.

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

Explanatory Notes to the Current Statistics

Table No. 1

- 1.2 & 6: Annual data are averages of months.
3.5 & 3.7: Relate to ratios of increments over financial year so far.
4.1 to 4.4, 4.8, 4.12 & 5: Relate to the last day of the month/financial year.
4.5, 4.6 & 4.7: Relate to five major banks on the last Friday of the month/financial year.
4.9 to 4.11: Relate to the last auction day of the month/financial year.

Table No. 2

- 2.1.2: Include paid-up capital, reserve fund and Long-Term Operations Funds.
2.2.2: Include cash, fixed deposits and short-term securities/bonds, e.g., issued by IIFC (UK).

Table No. 4

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

Table No. 5

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

Table No. 6

- For scheduled banks, March-end data pertain to the last reporting Friday.
2.2: Exclude balances held in IMF Account No.1, RBI employees' provident fund, pension fund, gratuity and superannuation fund.

Table Nos. 7 & 11

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

Table No. 8

- 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 against column Nos. (1), (2) & (3) are Final (including RRBs) and for column Nos. (4) & (5) data are Provisional (excluding RRBs)

Table No. 15 & 16

Data are provisional and relate to select 41 scheduled commercial banks, accounting for about 95 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 2012-13 is a moving one, which gets updated every year. REER figures are based on Consumer Price Index (combined). Methodological details are available in December 2005 and April 2014 issues of the Bulletin.

Table No. 37

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

Table Nos. 38, 39, 40 & 41

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

Table No. 43

1.3: Pertain to multiateral net settlement batches.

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

3.3: Pertain to clearing houses managed by 21 banks.

6: Available from December 2010.

7: Include IMPS transactions.

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

Table No. 45

(-): represents nil or negligible

The table format incorporates the ownership pattern of State Governments Securities and Treasury Bills along with the Central Government Securities. In addition, State Governments' holding of securities are shown as a separate category for the first time.

State Government Securities include special bonds issued under Ujwal DISCOM Assurance Yojana (UDAY) scheme.

Bank PDs are clubbed under Commercial Banks. However, they form very small fraction of total outstanding securities.

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

Table No. 46

GDP data from 2011-12 onwards are based on 2011-12 base. Data from year 2015-16 pertains to 26 states.

Total receipts and total expenditure exclude National Calamity Contingency Fund expenditure.

1 & 2: Data are net of repayments of the Central Government (including repayments to the NSSF) and State Governments.

1.3: Represents compensation and assignments by States to local bodies and Panchayati Raj institutions.

2: Data are net of variation in cash balances of the Central and State Governments and includes borrowing receipts of the Central and State Governments.

3A.1.1: Data as per RBI records.

3B.1.1: Includes borrowings through dated securities and 364-day Treasury Bills.

3B.1.2: Represent net investment in Central and State Governments' special securities by the National Small Savings Fund (NSSF).

3B.1.6: Include Ways and Means Advances by the Centre to the State Governments.

3B.1.7: Include Treasury Bills (excluding 364-day Treasury Bills), loans from financial institutions, insurance and pension funds, remittances, cash balance investment account.

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

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

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10. Bank Me Rajbhasha Niti Ka Karyanvayan: Dasha Aur Disha (Hindi)	₹150 per copy (over the counter) ₹200 per copy (inclusive of postal charges)	

Notes

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